DESIGN DESIGNATION

A.A.D.T. I-44 (2025) = 56,859
A.A.D.T. I-44 (2050) = 75,782
TRUCKS = 27.2%
DHV = 30.0%
DESIGN SPEED = 60 M.P.H.
D = 50.7%

FUNCTIONAL CLASSIFICATION - INTERSTATE

FULLY CONTROLLED ACCESS HIGHWAY

THIS SHALL BE A FULLY CONTROLLED ACCESS HIGHWAY. NO ABUTTING OWNERSHALL HAVE THE RIGHT OF DIRECT ACCESS TO SAID HIGHWAY ORITS RIGHT-OF-WAY EXCEPT THAT ACCESS WILL BE PERMITTED TOANY ADJACENT OUTER ROADWAY OR SERVICE ROAD TO WHICH ACCESS IS NOT SPECIFICALLY PROHIBITED BY THE SPECIAL SYMBOL DENOTING "NO RIGHT OF ACCESS" AS SHOWN ON THE PLANS. NO ACCESS WILL BE PERMITTED FROM OUTER ROADWAYS AND SERVICE ROADS TO THROUGHWAYS EXCEPT ALONG ROUTES CONSTRUCTED FOR THAT PURPOSE. OUTER ROADWAYS AND SERVICE ROADS, AS THE CASE MAY BE, ARE SO DESIGNATED ON THE PLANS.

- BEGINNING AND ENDING OF CONTROLLED ACCESS
- CONTROLLED ACCESS
- NO RIGHT OF ACCESS OR CROSSING OF LINES BEARING THIS SYMBOL WILL BE PERMITTED UNDER ANY CIRCUMSTANCES.
- TEMPORARY ACCESS THROUGH FUTURE NO RIGHT OF ACCESS

NO NEW ROW

CONVENTIONAL SYMBOLS

(USED IN PLANS)

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
GUARD CABLE		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS	-FO-	FO
OVERHEAD CABLE TV	-OTV-	OTV
UNDERGROUND CABLE TV	-UTV-	UTV
OVERHEAD TELEPHONE	-OT-	OT
UNDERGROUND TELEPHONE	-UT-	UT
OVERHEAD POWER	-OE-	OE
UNDERGROUND POWER	-UE-	UE
SANITARY SEWER	-S-	S
STORM SEWER	-SS-	SS
GAS	-G-	G
WATER	-W-	W
MANHOLE	SAN	
FIRE HYDRANT	HYD	
WATER VALVE	WV	
WATER METER	WM	
DROP INLET	DI	
DITCH BLOCK		
GROUND MOUNTED SIGN	SIGN	
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL	PED	
FENCE		
CHAIN LINK	-V-	
WOVEN WIRE	-X-	
GATE POST		
BENCHMARK	BM	
REMOVE	(R)	
USE IN PLACE	(UIP)	
ADJUST TO GRADE	(ATG)	
DO NOT DISTURB	(DND)	
BY OTHERS	(BO)	
TO BE ABANDONED	(TBA)	
SLOPE LIMITS	SL	

NOTE: DASHED OR OPEN SYMBOLS INDICATE (E) EXISTING FEATURES

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

PLANS FOR PROPOSED

STATE HIGHWAY

GREENE COUNTY

N.T.S.

JOB JST0088B

JOB J8I3044C

SECTION 01 T29N R22W SECTION 02 T29N R22W
SECTION 03 T29N R22W SECTION 06 T29N R21W

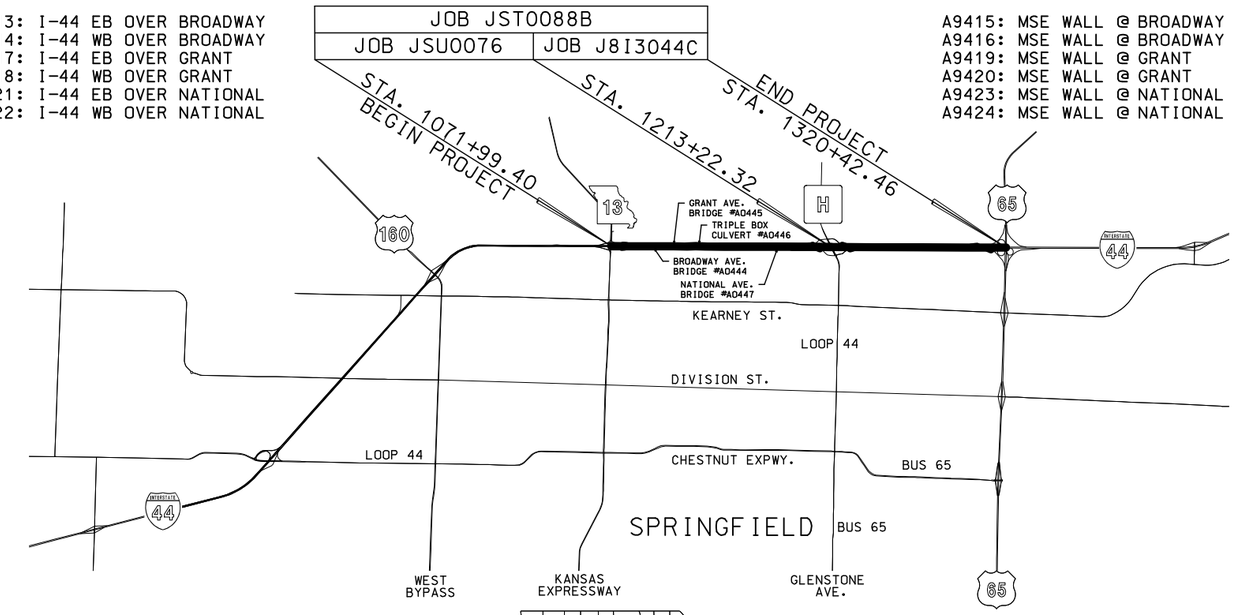
JOB JSU0076

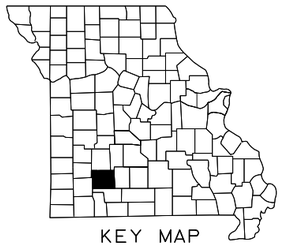
SECTION 03 T29N R21W SECTION 04 T29N R21W
SECTION 05 T29N R21W SECTION 06 T29N R21W

PROJECT LIMITS - GRADING, PAVING, DRAINAGE, BRIDGE, MSE WALL, LIGHTING, SIGNING

A9413: I-44 EB OVER BROADWAY
A9414: I-44 WB OVER BROADWAY
A9417: I-44 EB OVER GRANT
A9418: I-44 WB OVER GRANT
A9421: I-44 EB OVER NATIONAL
A9422: I-44 WB OVER NATIONAL

A9415: MSE WALL @ BROADWAY
A9416: MSE WALL @ BROADWAY
A9419: MSE WALL @ GRANT
A9420: MSE WALL @ GRANT
A9423: MSE WALL @ NATIONAL
A9424: MSE WALL @ NATIONAL





KEY MAP
SHOWING LOCATION OF GREENE COUNTY

THE EXISTENCE AND APPROXIMATE LOCATION OF UTILITY FACILITIES KNOWN TO EXIST, AS SHOWN ON THE PLANS, ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE COMMISSION AT THIS TIME. THIS INFORMATION IS PROVIDED BY THE COMMISSION "AS-IS" AND THE COMMISSION EXPRESSLY DISCLAIMS ANY REPRESENTATION OR WARRANTY AS TO THE COMPLETENESS, ACCURACY, OR SUITABILITY OF THE INFORMATION FOR ANY USE. RELIANCE UPON THIS INFORMATION IS DONE AT THE RISK AND PERIL OF THE USER, AND THE COMMISSION SHALL NOT BE LIABLE FOR ANY DAMAGES THAT MAY ARISE FROM ANY ERROR IN THE INFORMATION.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (38 SHEETS)	2
QUANTITIES (QU) (55 SHEETS)	3
PLAN PROFILE SHEETS (PP)	4-25
REFERENCE POINTS (RP)	26-27
COORDINATE POINTS (CP)	28-29
SPECIAL SHEETS (SS)	30-49
TRAFFIC CONTROL (TC)	50-188
EROSION CONTROL (EC)	189-215
LIGHTING (LT)	216-232
CITY UTILITIES (CU)	E1
IT SYSTEMS (IT)	233-237
SIGNING (SN)	238-274
PAVEMENT MARKING (PM)	275-283
CULVERT SECTIONS (CS)	284-317
BRIDGE DRAWINGS (B)	
A9413	1-31
A9414	1-30
A9415	1-9
A9416	1-8
A9417	1-31
A9418	1-32
A9419	1-9
A9420	1-10
A9421	1-30
A9422	1-30
A9423	1-9
A9424	1-9
CROSS SECTIONS (XS)	1-198

LENGTH OF PROJECT

I-44 JST0088B		
BEGINNING OF PROJECT	STA. 1071+99.40	
END OF PROJECT	STA. 1320+42.46	
APPARENT LENGTH	24,843.06	FEET
EQUATIONS AND EXCEPTIONS:	12.35	FEET
NET LENGTH	24,830.71	FEET
I-44 JSU0076		
BEGINNING OF PROJECT	STA. 1071+99.40	
END OF PROJECT	STA. 1213+22.32	
APPARENT LENGTH	14,122.92	FEET
EQUATIONS AND EXCEPTIONS:	6.76	FEET
NET LENGTH	14,116.16	FEET
I-44 J8I3044C		
BEGINNING OF PROJECT	STA. 1213+22.32	
END OF PROJECT	STA. 1320+42.46	
APPARENT LENGTH	10,720.14	FEET
EQUATIONS AND EXCEPTIONS:	5.59	FEET
NET LENGTH	10,714.55	FEET

PROJECT		
APPARENT LENGTH OF PROJECT	24,843.06	FEET
TOTAL PROJECT CORRECTIONS	12.35	FEET
NET LENGTH OF PROJECT	24,830.71	FEET
STATE LENGTH	4.703	MILES

PROJECT EQUATIONS
STA. 1092+80.28 BK = STA. 1092+83.20 AH
STA. 1190+00.00 BK = STA. 1190+03.84 AH
STA. 1279+56.21 BK = STA. 1279+61.80 AH

ESTIMATED DISTURBED AREA		
I-44 JSU0076	65.78	ACRES
I-44 J8I3044C	45.20	ACRES

RYAN STEHN
NUMBER PE-2020000089
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 1
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\001_TITLE_J8I3044C_JSU0076_i1000.dgn 7:26:00 AM 11/4/2024

EQUIVALENT PAVEMENT DESIGNS				
CATEGORY	BASE TYPE ✳	HMA DESIGN	PCCP DESIGN	SHOULDERS
I-44 MAINLINE & RAMPS	12" ROCK BASE ✳	15.0" HMA 2" SP125BSM W/PG 76-22 OVER 2" SP125B W/PG 76-22 OVER 11" SP250C W/PG 64-22	11.5" PCCP 15' JOINTS 1 1/2" DOWELS	A2 OR FULL DEPTH
	18" ROCK BASE ✳	14.0" HMA 2" SP125BSM W/PG 76-22 OVER 2" SP125B W/PG 76-22 OVER 10" SP250C W/PG 64-22	11.5" PCCP 15' JOINTS 1 1/2" DOWELS	A2 OR FULL DEPTH

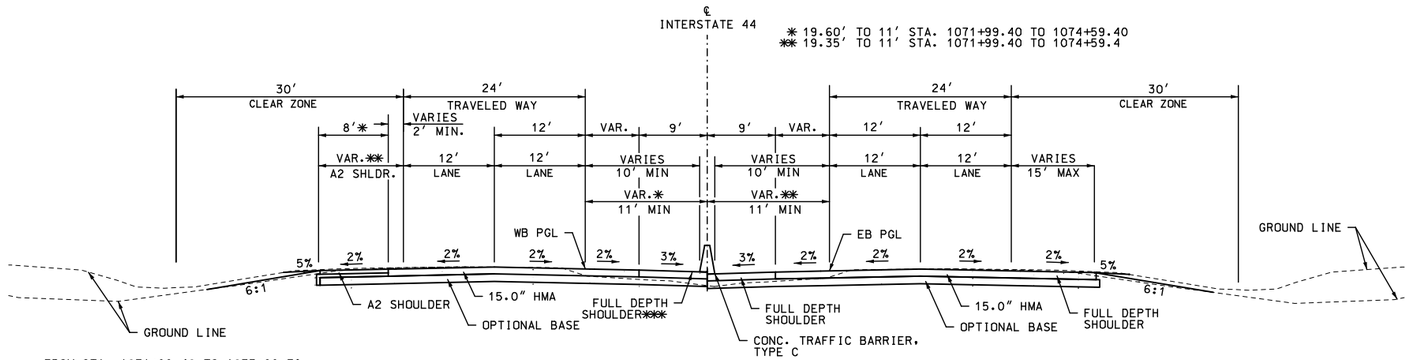
✳ DESIGNS FOR ALTERNATE PAVEMENT DESIGNS - GRADING, BASE AND PAVING, SEE JSPS.

ASPHALT APPLICATION RATES:
ASPHALTIC CONCRETE MIXTURE PG 76-22 (SP125BSM MIX)= 1.950 TON/C.Y. @ 6.3%
ASPHALTIC CONCRETE MIXTURE PG 76-22 (SP125B MIX)= 1.985 TON/C.Y. @ 5.4%
ASPHALTIC CONCRETE MIXTURE PG 64-22 (SP250C MIX)= 2.005 TON/C.Y. @ 4.3%

TACK COAT 0.05 GAL/S.Y.

NOTE: STATE FUNDS ARE ONLY UTILIZED FOR EXISTING THROUGH LANE PAVEMENT REMOVAL, REPLACEMENT, & NEW OPTIONAL ROCK BASE.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



✳ 5' FROM STA. 1071+99.40 TO 1073+92.78
5' TO 8' FROM STA. 1073+92.78 TO 1074+82.78
8' FROM STA. 1074+82.78 TO 1076+44.05
6' FROM STA. 1076+44.05 TO 1079+16.45

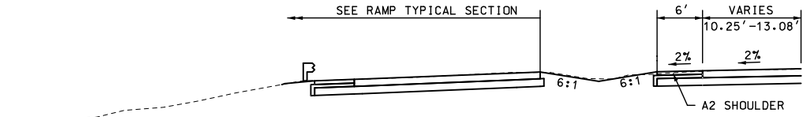
✳✳ 4' TO 13.08' FROM STA. 1076+44.05 TO 1079+16.45

✳✳✳ FULL DEPTH WB MEDIAN SHOULDER STA. 1071+99.40 TO 1078+99.87

1 INTERSTATE 44

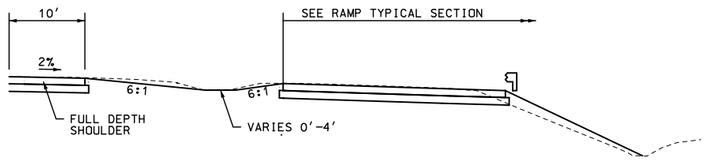
STA. 1071+99.40 TO STA. 1079+79.40

SEE PLANS FOR GUARDRAIL LOCATIONS



INTERSTATE 44 - PARTIAL SECTION

GRADING WITH WB I-44 OFF RAMP (@ ROUTE 13)
STA. 1078+31.67 TO STA. 1079+16.45



INTERSTATE 44 - PARTIAL SECTION

GRADING WITH EB I-44 ON RAMP (@ ROUTE 13)
STA. 1078+75.00 TO STA. 1079+76.54

NOTES:

1. SEE PLAN SHEETS FOR SAWCUT LOCATIONS. NO DIRECT PAY FOR PAVEMENT SAWCUTS.

2. WHEN CONCRETE OPTIONAL PAVEMENT IS USED, CONTRAST PAVEMENT MARKINGS ARE REQUIRED. NO DIRECT PAYMENT WILL BE MADE FOR CONTRAST MARKINGS.

3. THE THINNER PAVEMENT OPTION OF EACH OPTIONAL PAIR WAS USED IN THE COMPUTATION OF EARTHWORK FOR THIS PROJECT.

ASPHALT
ALTERNATES A & C

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
1 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

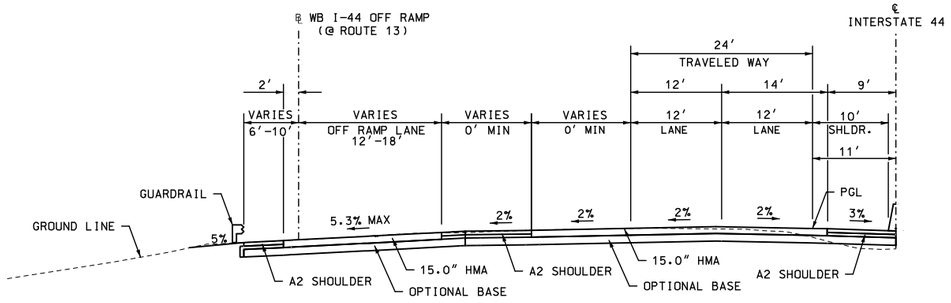
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

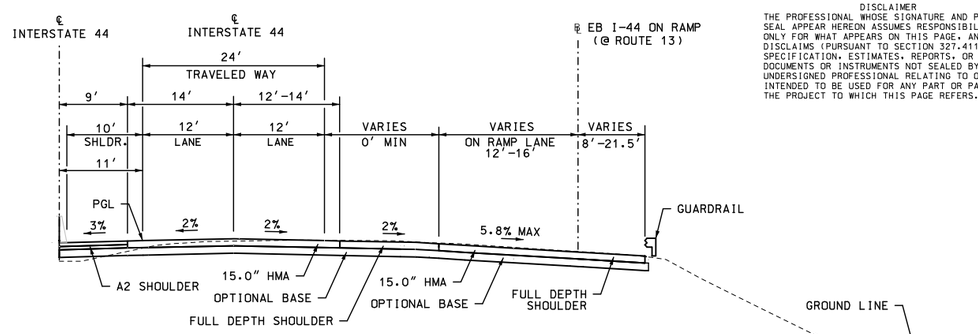
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.



INTERSTATE 44 – PARTIAL SECTION

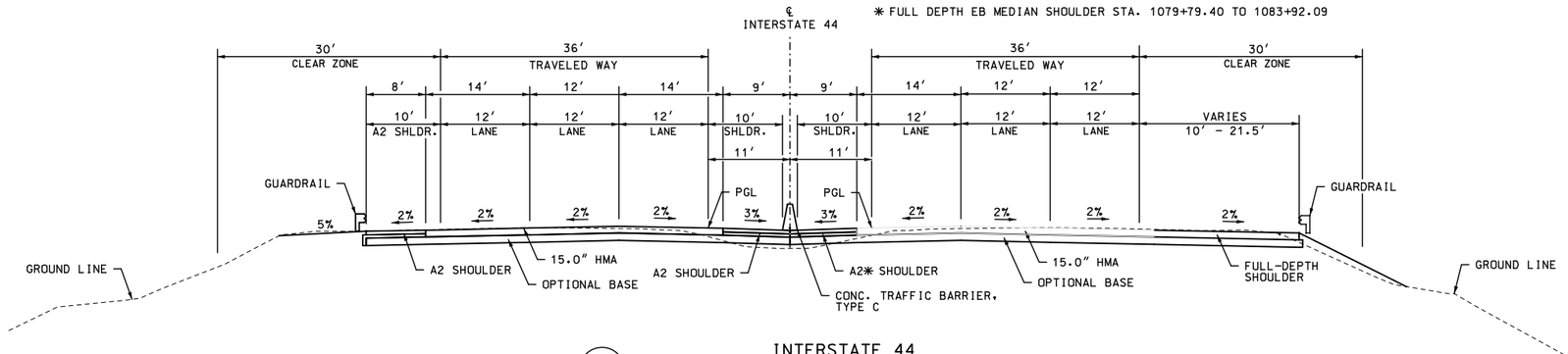
WB I-44 OFF RAMP (@ ROUTE 13)
STA. 1079+16.45 TO STA. 1081+41.03



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

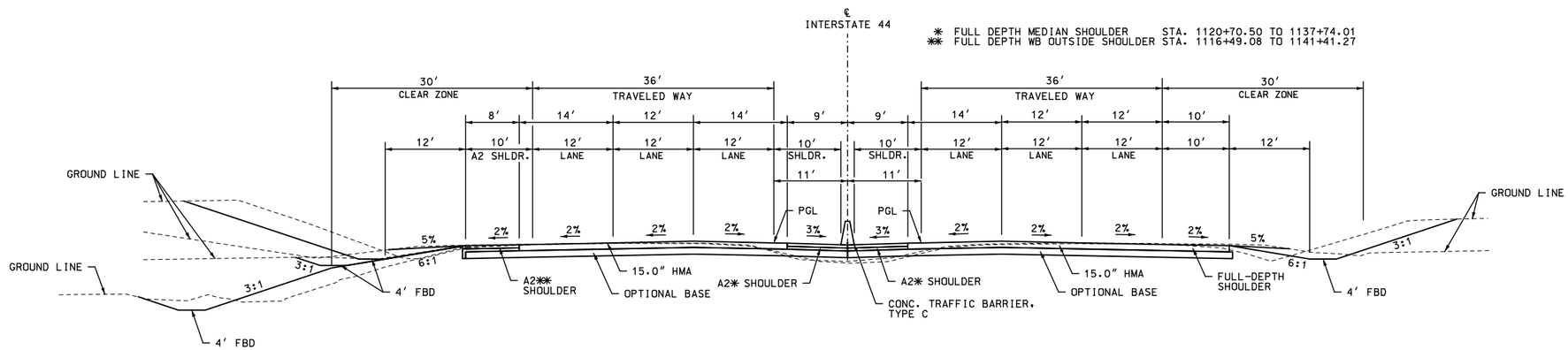
INTERSTATE 44 – PARTIAL SECTION

EB I-44 ON RAMP (@ ROUTE 13)
STA. 1079+79.54 TO STA. 1081+80.56



(2) INTERSTATE 44

STA. 1079+79.40 TO STA. 1090+03.53



(3) INTERSTATE 44

STA. 1090+03.53 TO STA. 1094+19.40
STA. 1104+23.40 TO STA. 1107+39.16
STA. 1117+66.31 TO STA. 1125+29.57
STA. 1136+25.00 TO STA. 1152+53.81

SEE PLANS FOR GUARDRAIL LOCATIONS

ASPHALT
ALTERNATES A & C

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
2 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
11/4/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

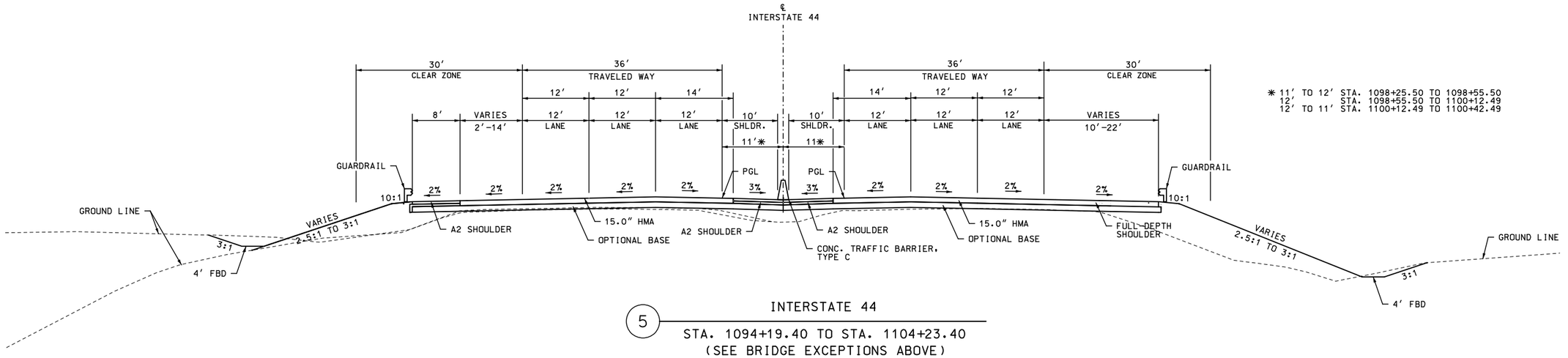
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_!JSU0076_i50.dgn 7:26:38 AM 11/4/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

4 BRIDGE EXCEPTIONS

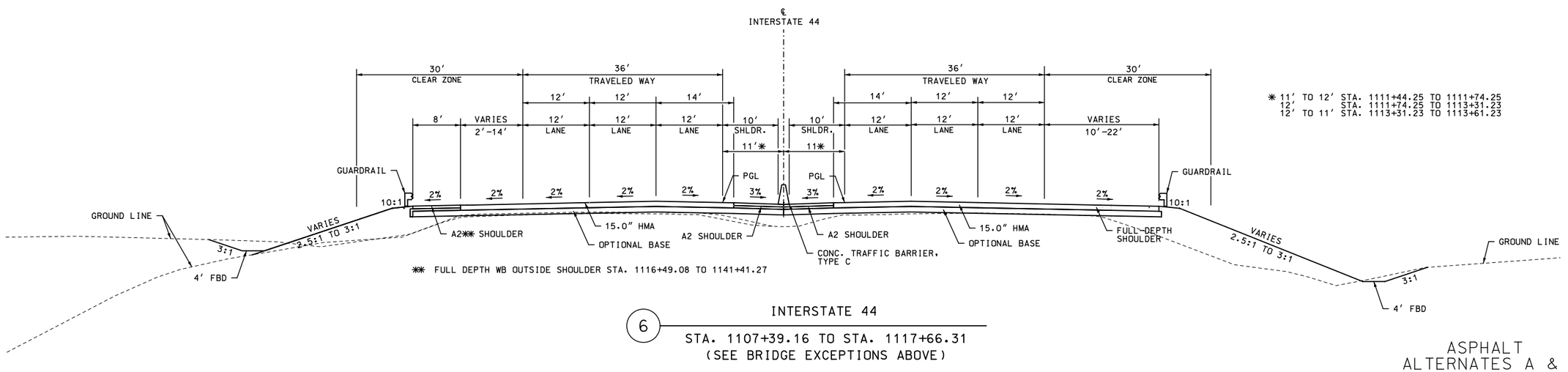
STA. 1098+92.36 EB PGL/ STA. 1098+93.13 WB PGL TO STA. 1099+74.86 EB PGL/ STA. 1099+75.63 WB PGL	BR A9413 & A9414
STA. 1112+11.10 EB PGL/ STA. 1112+11.87 WB PGL TO STA. 1112+93.60 EB PGL/ STA. 1112+94.37 WB PGL	BR A9417 & A9418
STA. 1178+31.04 EB PGL/ STA. 1178+31.81 WB PGL TO STA. 1179+13.54 EB PGL/ STA. 1179+14.31 WB PGL	BR A9421 & A9422



5 INTERSTATE 44

STA. 1094+19.40 TO STA. 1104+23.40
(SEE BRIDGE EXCEPTIONS ABOVE)

SEE PLANS FOR GUARDRAIL LOCATIONS



6 INTERSTATE 44

STA. 1107+39.16 TO STA. 1117+66.31
(SEE BRIDGE EXCEPTIONS ABOVE)

SEE PLANS FOR GUARDRAIL LOCATIONS

ASPHALT
ALTERNATES A & C

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
3 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

REV.	DESCRIPTION	DATE

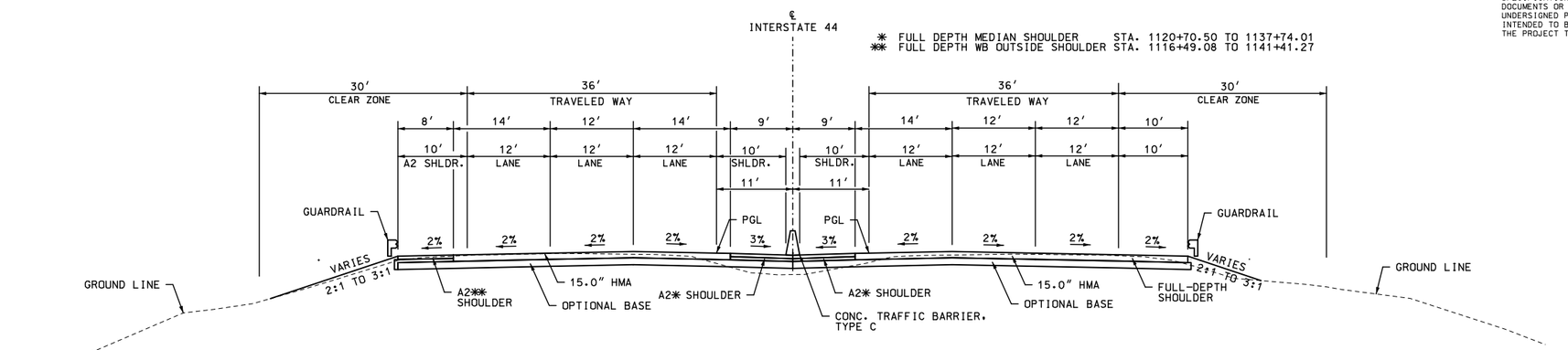
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

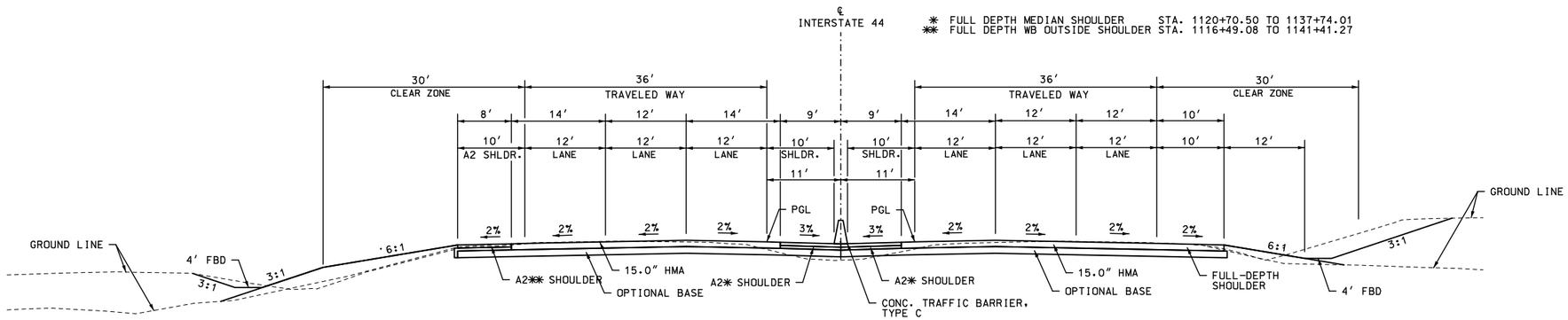
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_!JSU0076_i50.dgn 7:26:38 AM 11/4/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



7 INTERSTATE 44

STA. 1125+29.57 TO STA. 1131+80.61



8 INTERSTATE 44

STA. 1131+80.61 TO STA. 1136+25.00

SEE PLANS FOR GUARDRAIL LOCATIONS

ASPHALT
ALTERNATES A & C

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
4 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

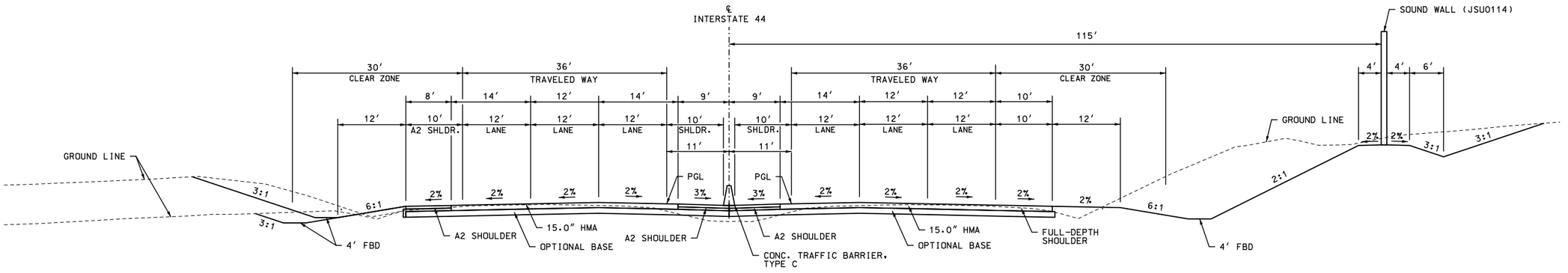
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

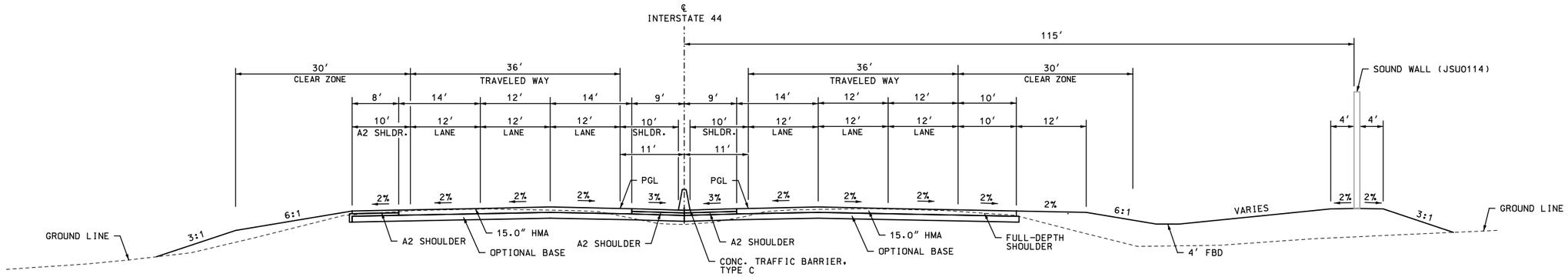
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_!JSU0076_i50.dgn 7:26:38 AM 11/4/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



9 INTERSTATE 44

STA. 1152+53.81 TO STA. 1162+00.00



10 INTERSTATE 44

STA. 1162+00.00 TO STA. 1167+75.00

SEE PLANS FOR GUARDRAIL LOCATIONS

NOTE:

SEE JSU0114 FOR SOUND WALL DESIGN PLANS.

ASPHALT
ALTERNATES A & C

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
5 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

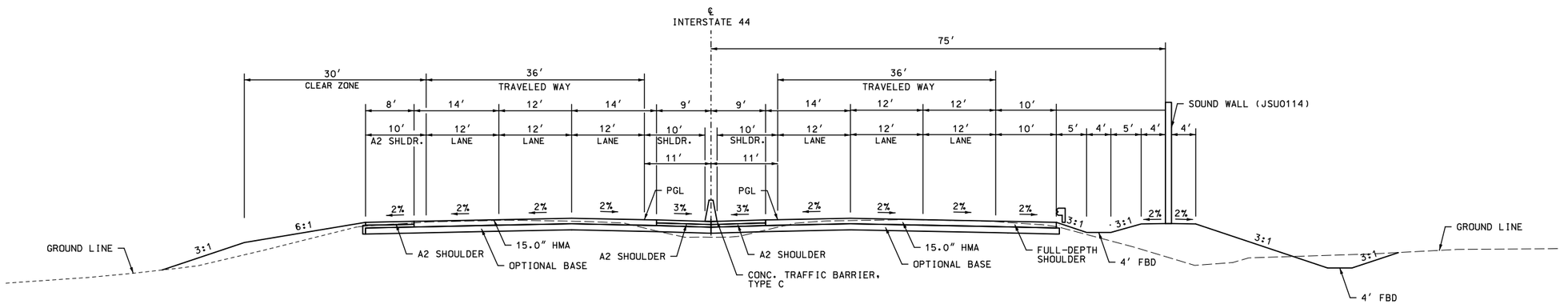
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_!JSU0076_i50.dgn 7:26:39 AM 11/4/2024

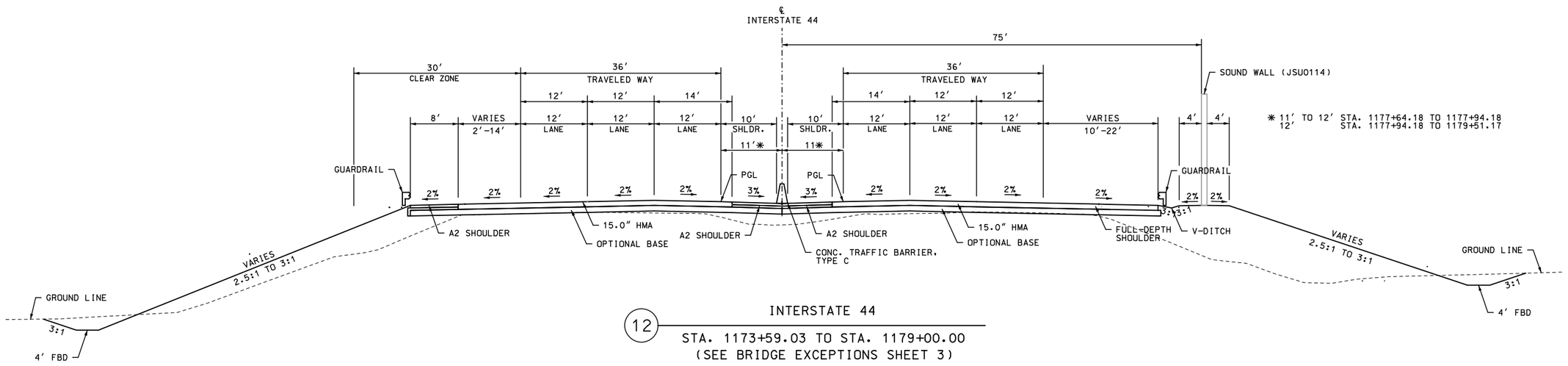
DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



11 INTERSTATE 44

STA. 1167+75.00 TO STA. 1173+59.03

SEE PLANS FOR GUARDRAIL LOCATIONS



12 INTERSTATE 44

STA. 1173+59.03 TO STA. 1179+00.00
(SEE BRIDGE EXCEPTIONS SHEET 3)

SEE PLANS FOR GUARDRAIL LOCATIONS

NOTE:

SEE JSU0114 FOR SOUND WALL DESIGN PLANS.

ASPHALT
ALTERNATES A & C

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
6 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

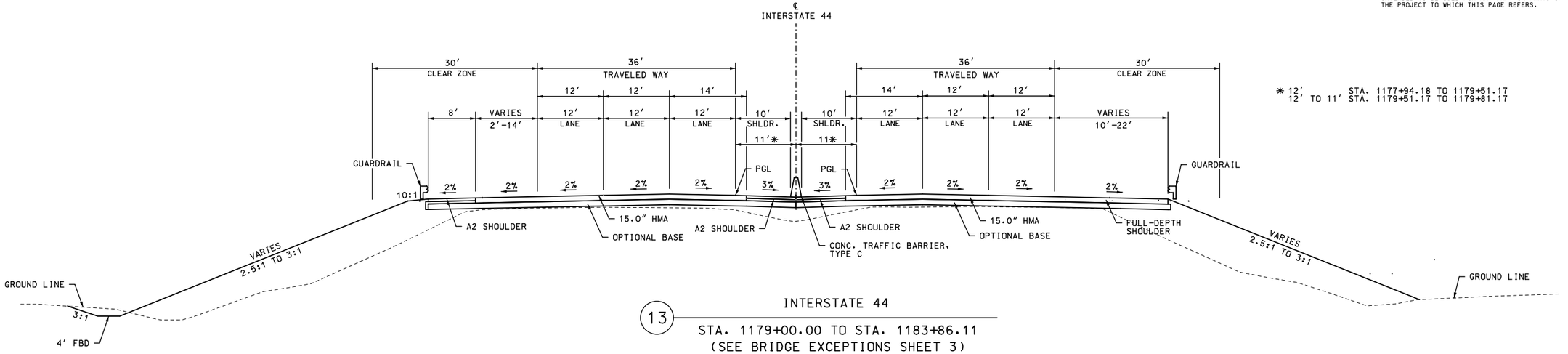
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_!JSU0076_i50.dgn 7:26:39 AM 11/4/2024

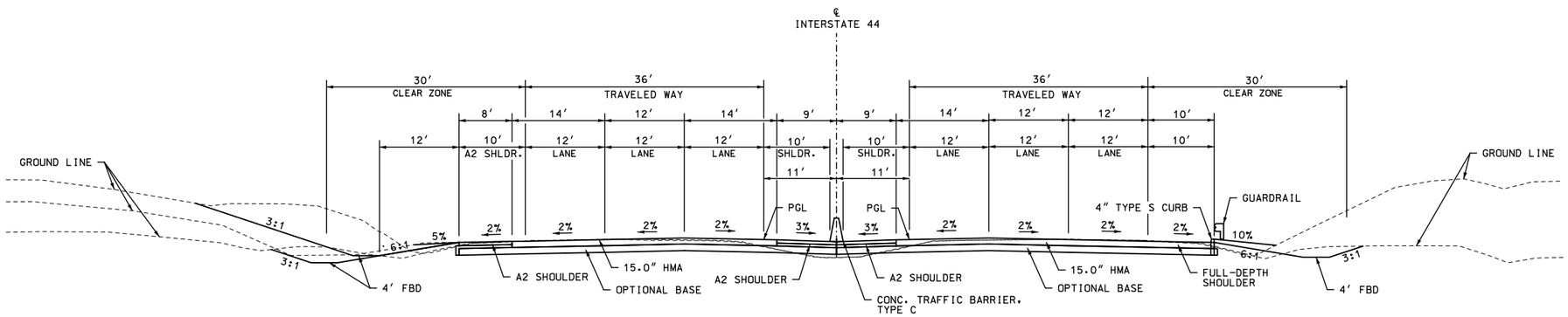
DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



13 INTERSTATE 44

STA. 1179+00.00 TO STA. 1183+86.11
(SEE BRIDGE EXCEPTIONS SHEET 3)

SEE PLANS FOR GUARDRAIL LOCATIONS



14 INTERSTATE 44

STA. 1183+86.11 TO STA. STA. 1191+53.16

ASPHALT
ALTERNATES A & C

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
7 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

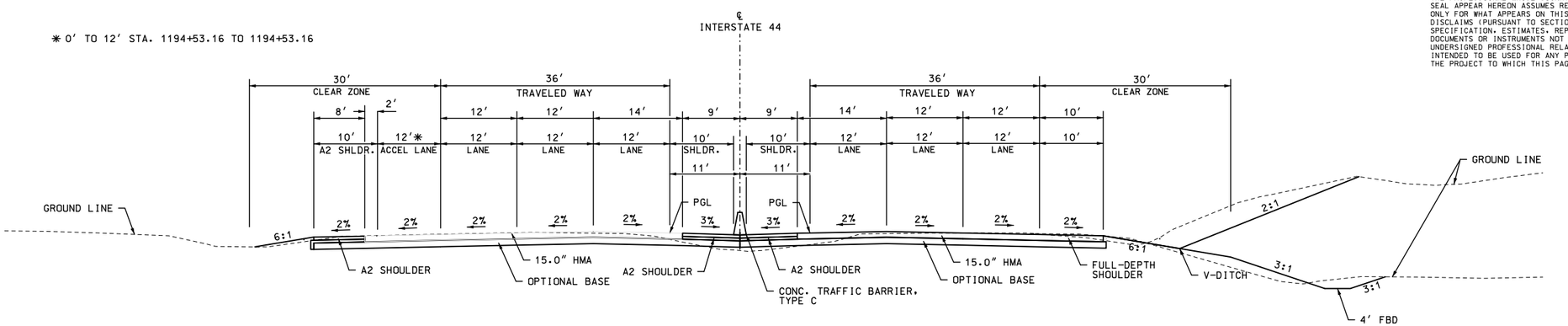
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

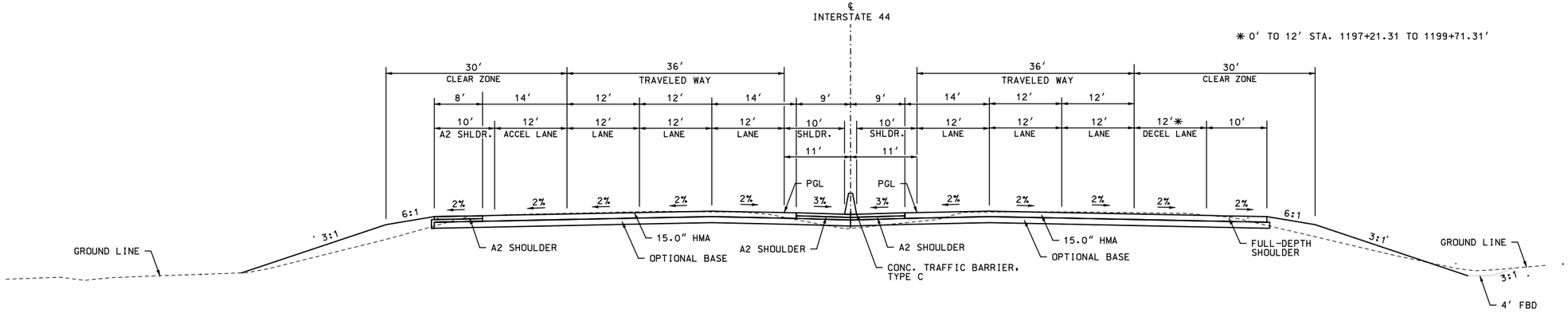
DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



15 INTERSTATE 44

STA. 1191+53.16 TO STA. 1197+21.31

SEE PLANS FOR GUARDRAIL LOCATIONS



16 INTERSTATE 44

STA. 1197+21.31 TO STA. 1201+97.04

SEE PLANS FOR GUARDRAIL LOCATIONS

ASPHALT
ALTERNATES A & C

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
8 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

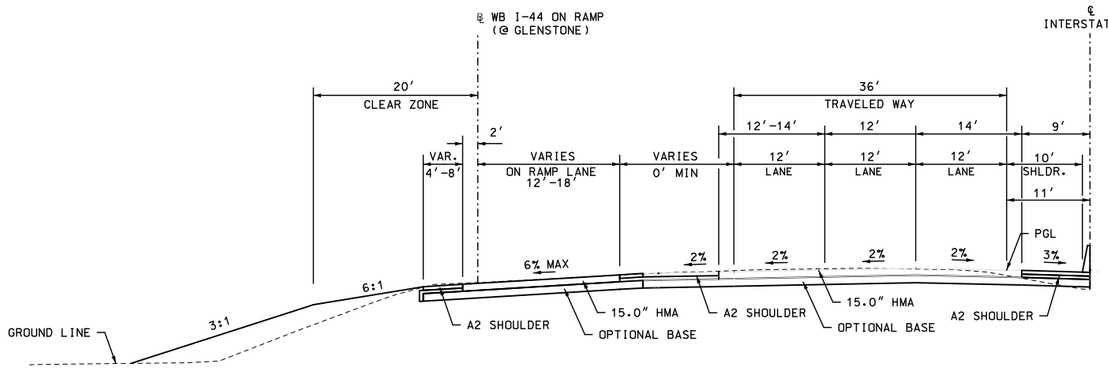
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

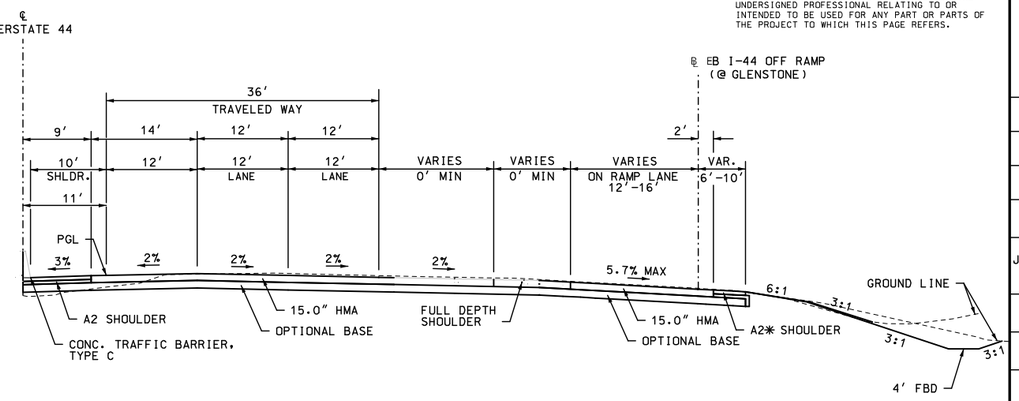
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



INTERSTATE 44 – PARTIAL SECTION

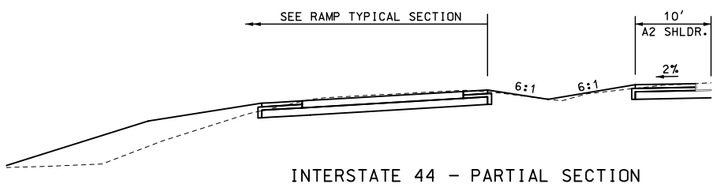
WB I-44 ON RAMP (@ GLENSTONE)
STA. 1198+73.14 TO STA. 1200+43.68



INTERSTATE 44 – PARTIAL SECTION

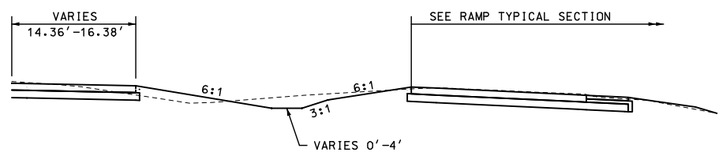
EB I-44 OFF RAMP (@ GLENSTONE)
STA. 1203+21.29 TO STA. 1205+16.71

* FULL DEPTH SHOULDER 1203+21.29 TO 1204+47.13



INTERSTATE 44 – PARTIAL SECTION

GRADING WITH WB I-44 ON RAMP (@ GLENSTONE)
STA. 1200+43.68 TO STA. 1201+91.32



INTERSTATE 44 – PARTIAL SECTION

GRADING WITH EB I-44 OFF RAMP (@ GLENSTONE)
STA. 1205+16.71 TO STA. 1206+60.50

ASPHALT
ALTERNATES A & C

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
9 OF 38

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C,
& JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

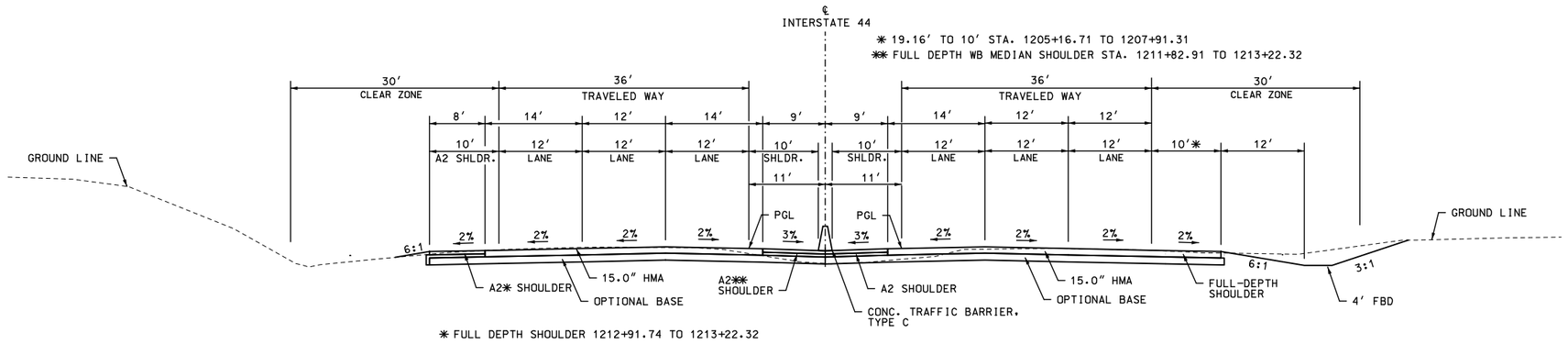
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_!JSU0076_i50.dgn 7:26:40 AM 11/4/2024

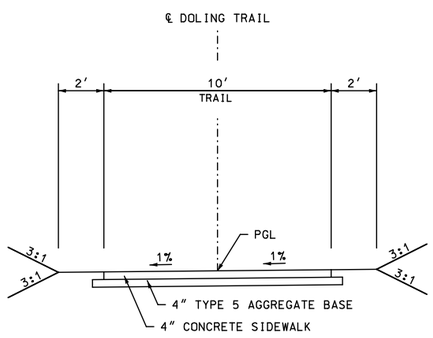
DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



17 INTERSTATE 44

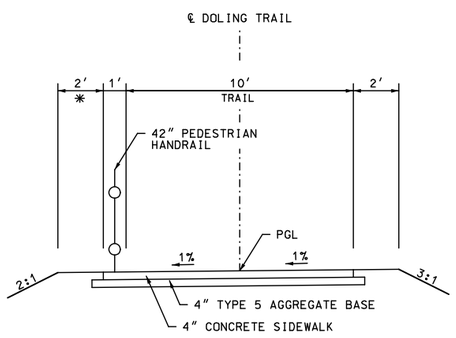
STA. 1201+97.04 TO STA. STA. 1213+22.32

SEE PLANS FOR GUARDRAIL LOCATIONS



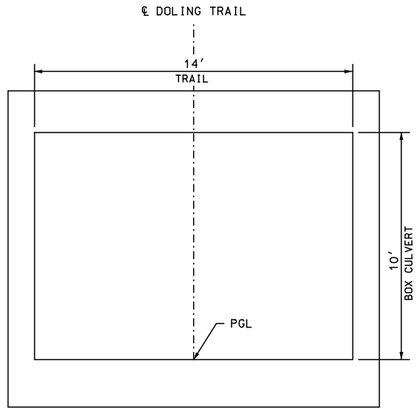
18 DOLING TRAIL

STA. 0+00.00 TO STA. 5+64.48



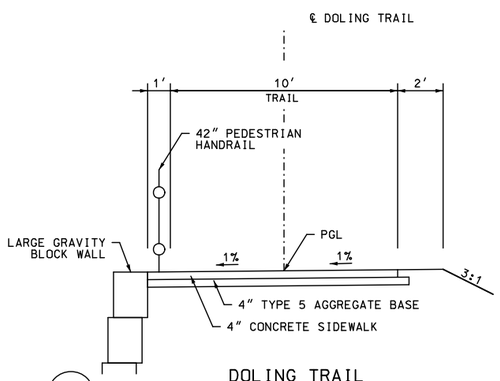
19 DOLING TRAIL

STA. 5+64.48 TO STA. 6+33.88
STA. 13+01.00 TO STA. 13+15.56
✳ 0′ FROM STA. 13+01.00 TO STA. 13+15.56



20 DOLING TRAIL UNDERPASS

STA. 6+33.88 TO STA. 9+35.70



21 DOLING TRAIL

STA. 9+35.70 TO STA. 13+01.00

ASPHALT
ALTERNATES A & C

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
10 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

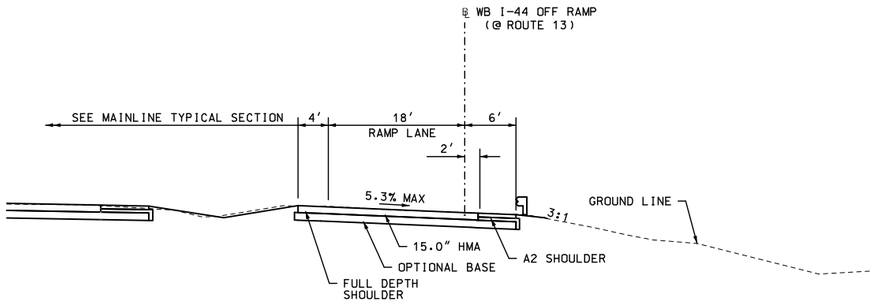
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

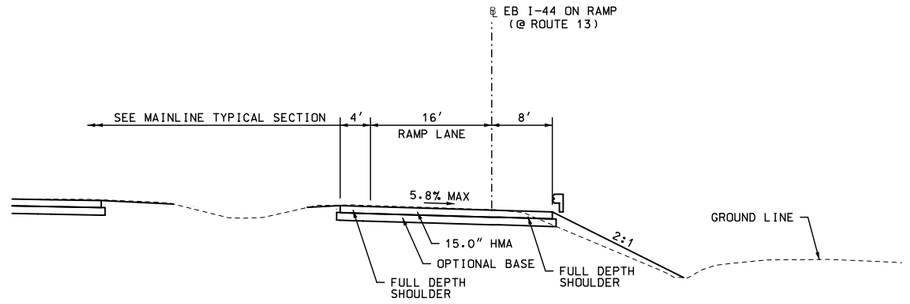
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
© Copyright CMT, Inc.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



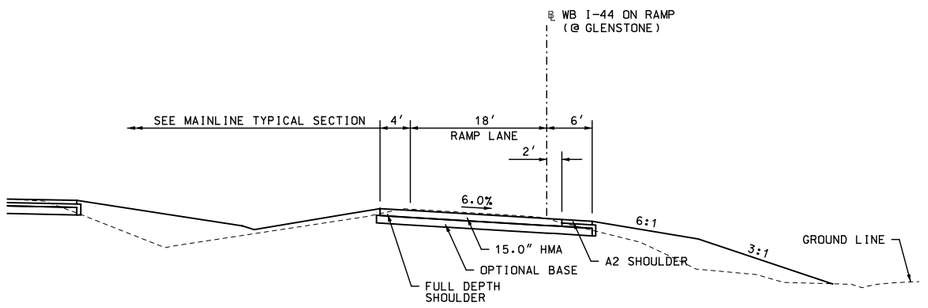
22 WB I-44 OFF RAMP (@ ROUTE 13)

STA. 2+21.42 TO STA. 3+09.04



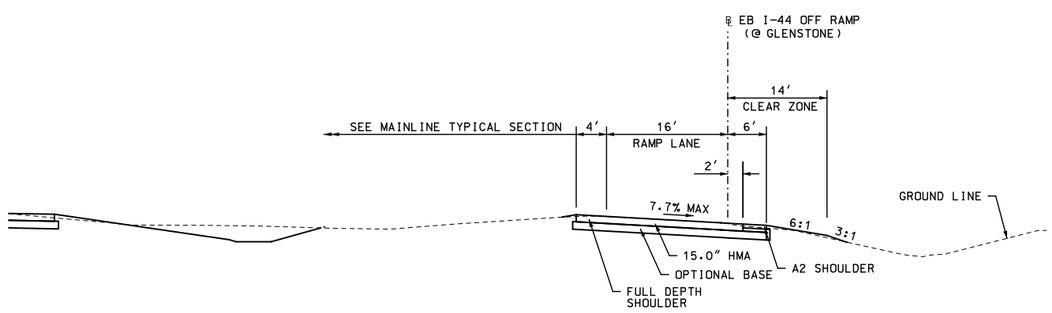
23 EB I-44 ON RAMP (@ ROUTE 13)

STA. 2+06.55 TO STA. 3+91.49



24 WB I-44 ON RAMP (@ GLENSTONE)

STA. 3+17.00 TO STA. 4+77.13



25 EB I-44 OFF RAMP (@ GLENSTONE)

STA. 1+92.46 TO STA. 3+45.04

ASPHALT
ALTERNATES A & C

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
11 OF 38

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C,
& JST0088B

PROJECT NO.

BRIDGE NO.

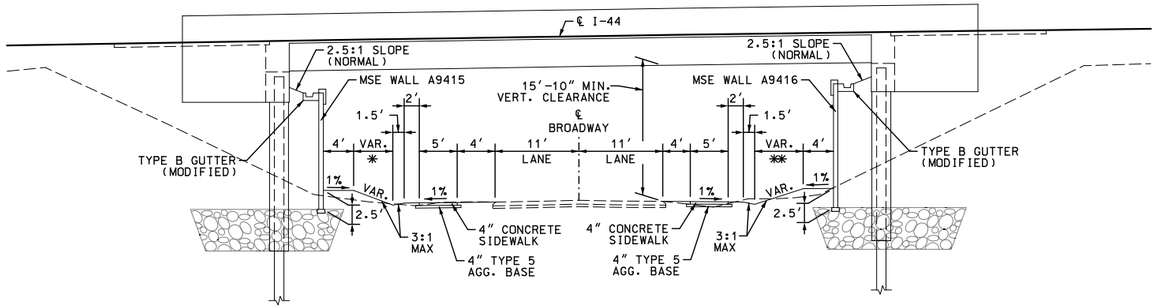
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

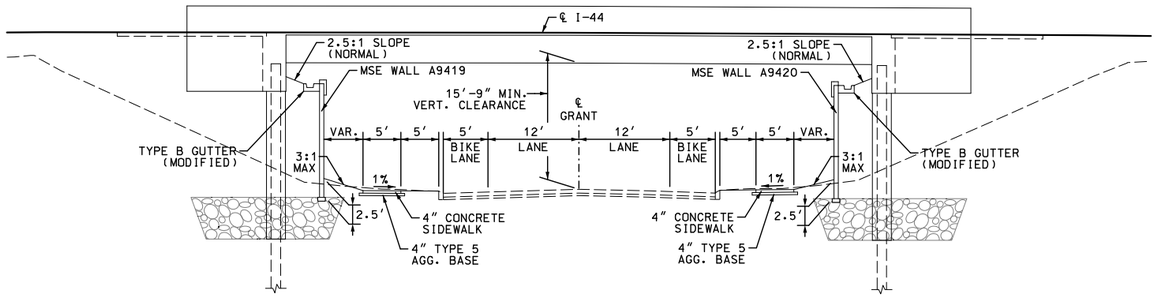
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



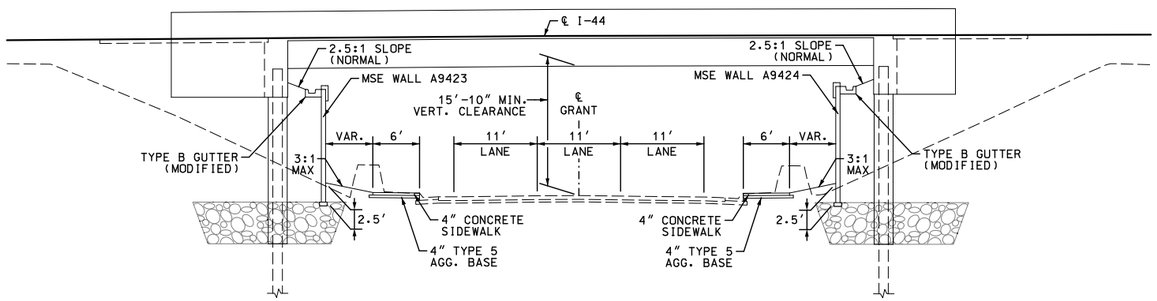
26 BROADWAY AVE UNDER PROPOSED I-44

STA. 1099+33.99



27 GRANT AVE UNDER PROPOSED I-44

STA. 1112+51.80



28 NATIONAL AVE UNDER PROPOSED I-44

STA. 1178+74.80

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

ASPHALT
ALTERNATES A & C

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
12 OF 38

EQUIVALENT PAVEMENT DESIGNS				
CATEGORY	BASE TYPE ✳	HMA DESIGN	PCCP DESIGN	SHOULDERS
I-44 MAINLINE & RAMPS	12" ROCK BASE ✳	15.0" HMA 2" SP125BSM W/PG 76-22 OVER 2" SP125B W/PG 76-22 OVER 11" SP250C W/PG 64-22	11.5" PCCP 15" JOINTS 1 1/2" DOWELS	A2 OR FULL DEPTH
	18" ROCK BASE ✳	14.0" HMA 2" SP125BSM W/PG 76-22 OVER 2" SP125B W/PG 76-22 OVER 10" SP250C W/PG 64-22	11.5" PCCP 15" JOINTS 1 1/2" DOWELS	A2 OR FULL DEPTH

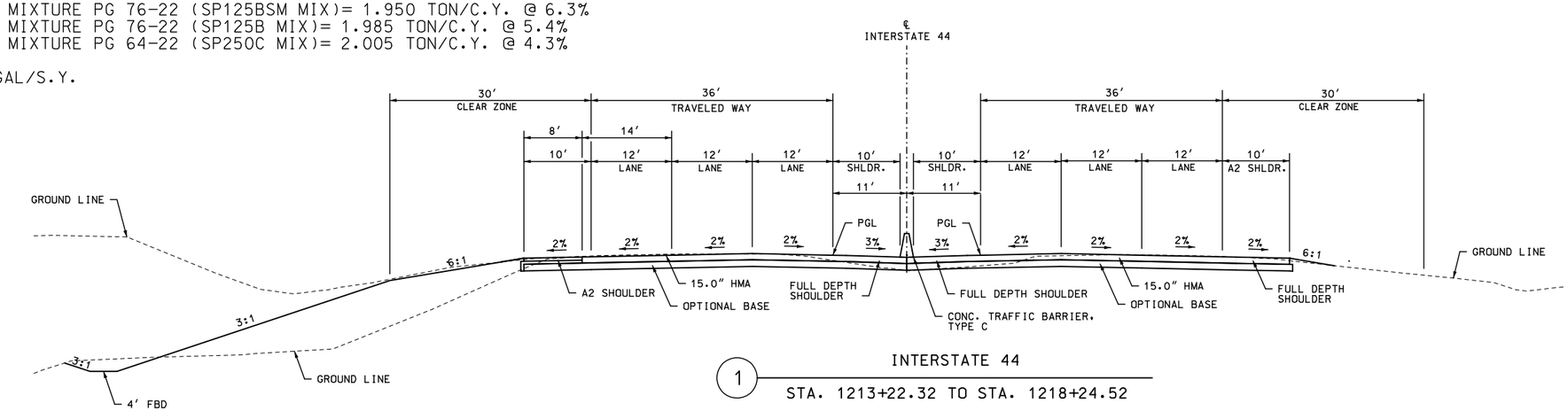
✳ DESIGNS FOR ALTERNATE PAVEMENT DESIGNS - GRADING, BASE AND PAVING, SEE JSPS.

ASPHALT APPLICATION RATES:
ASPHALTIC CONCRETE MIXTURE PG 76-22 (SP125BSM MIX)= 1.950 TON/C.Y. @ 6.3%
ASPHALTIC CONCRETE MIXTURE PG 76-22 (SP125B MIX)= 1.985 TON/C.Y. @ 5.4%
ASPHALTIC CONCRETE MIXTURE PG 64-22 (SP250C MIX)= 2.005 TON/C.Y. @ 4.3%

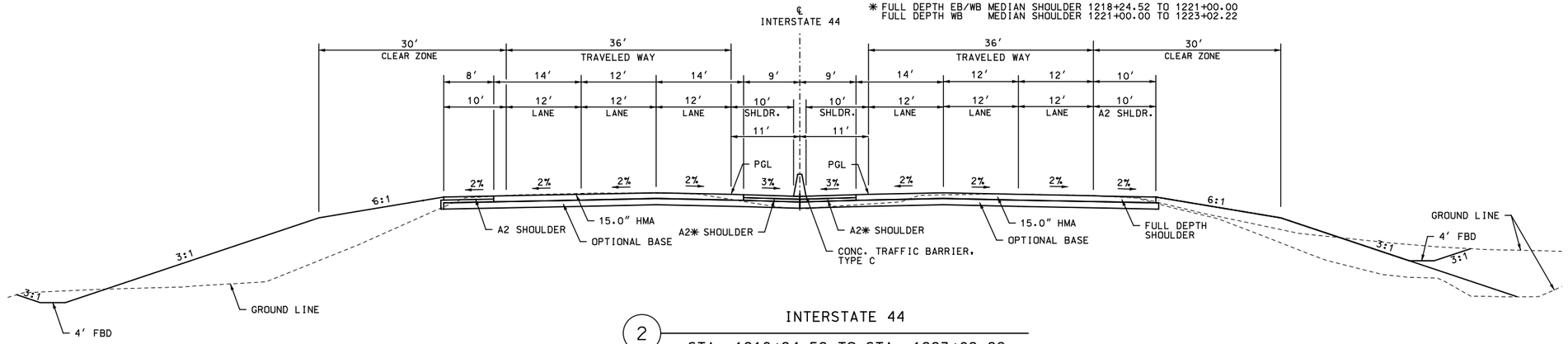
TACK COAT 0.05 GAL/S.Y.

NOTE: STATE FUNDS ARE ONLY UTILIZED FOR EXISTING THROUGH LANE PAVEMENT REMOVAL, REPLACEMENT, & NEW OPTIONAL ROCK BASE.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



1 INTERSTATE 44
STA. 1213+22.32 TO STA. 1218+24.52



2 INTERSTATE 44
STA. 1218+24.52 TO STA. 1223+02.22

NOTES:

1. SEE PLAN SHEETS FOR SAWCUT LOCATIONS. NO DIRECT PAY FOR PAVEMENT SAWCUTS.

2. WHEN CONCRETE OPTIONAL PAVEMENT IS USED, CONTRAST PAVEMENT MARKINGS ARE REQUIRED. NO DIRECT PAYMENT WILL BE MADE FOR CONTRAST MARKINGS.

3. THE THINNER PAVEMENT OPTION OF EACH OPTIONAL PAIR WAS USED IN THE COMPUTATION OF EARTHWORK FOR THIS PROJECT.

ASPHALT
ALTERNATES A & C

I-44 WIDENING
J8I3044C & JST0088B

TYPICAL SECTIONS
13 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

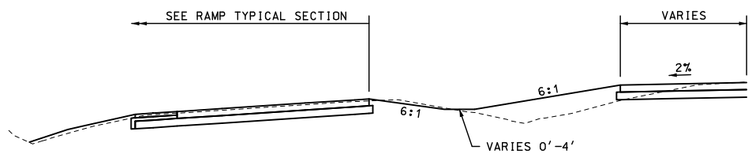
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

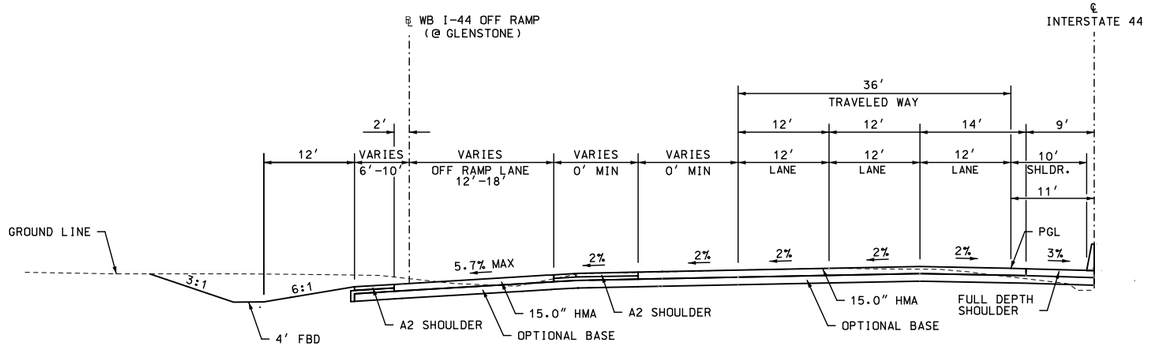
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_J8I3044C_i50.dgn 7:26:59 AM 11/4/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



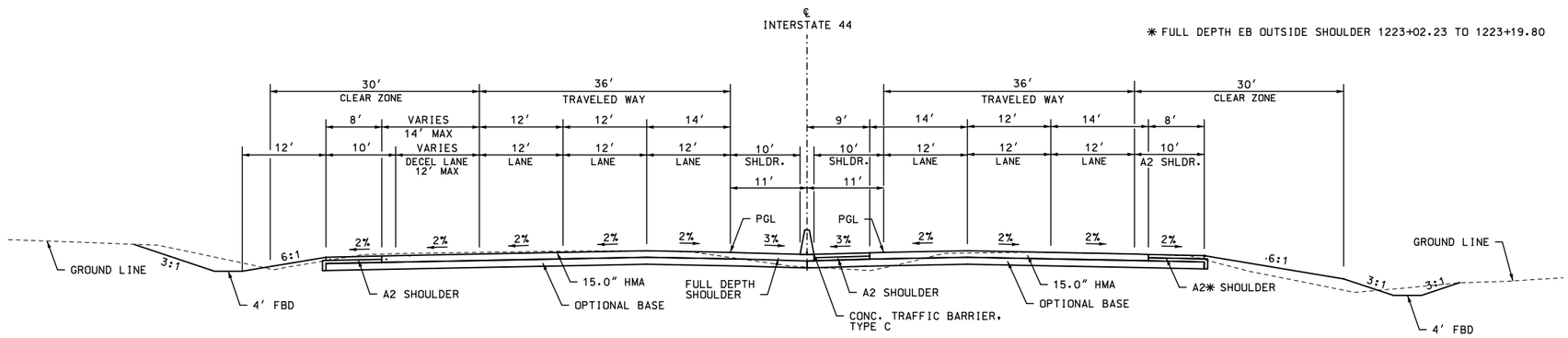
INTERSTATE 44 – PARTIAL SECTION

GRADING WITH WB I-44 OFF RAMP (@ GLENSTONE)
STA. 1219+92.00 TO STA. 1220+99.90



INTERSTATE 44 – PARTIAL SECTION

WB I-44 OFF RAMP (@ GLENSTONE)
STA. 1220+99.90 TO STA. 1223+02.23



3

INTERSTATE 44

STA. 1223+02.23 TO STA. 1227+96.49

SEE PLANS FOR GUARDRAIL LOCATIONS

ASPHALT
ALTERNATES A & C

I-44 WIDENING
J8I3044C & JST0088B

TYPICAL SECTIONS
14 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 2
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

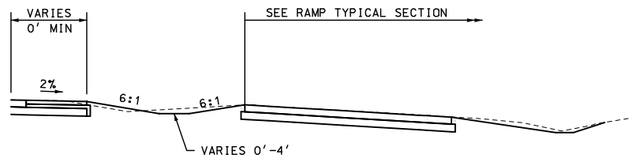
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

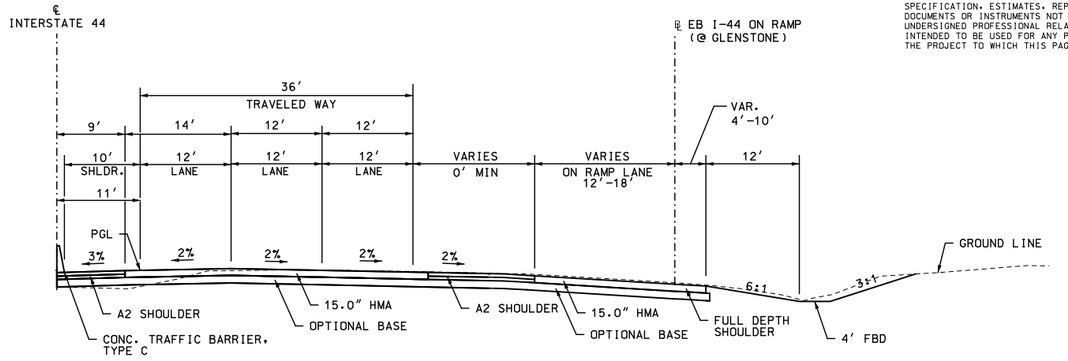
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_J8I3044C_i50.dgn 7:27:00 AM 11/4/2024



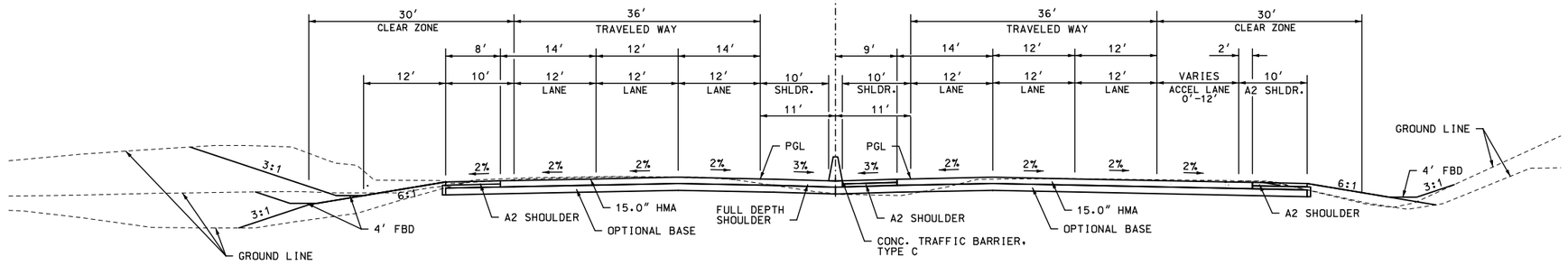
INTERSTATE 44 – PARTIAL SECTION

GRADING WITH EB I-44 ON RAMP (@ GLENSTONE)
STA. 1224+85.39 TO STA. 1225+96.28



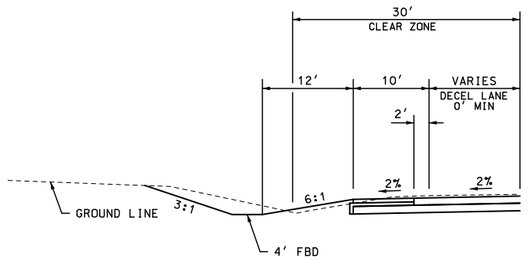
INTERSTATE 44 – PARTIAL SECTION

EB I-44 ON RAMP (@ GLENSTONE)
STA. 1225+96.28 TO STA. 1227+96.49



4 INTERSTATE 44

STA. 1227+96.49 TO STA. 1238+41.73



INTERSTATE 44 – PARTIAL SECTION

DECEL LANE FOR WB I-44 OFF RAMP (@ GLENSTONE)
STA. 1227+96.49 TO STA. 1229+02.21

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

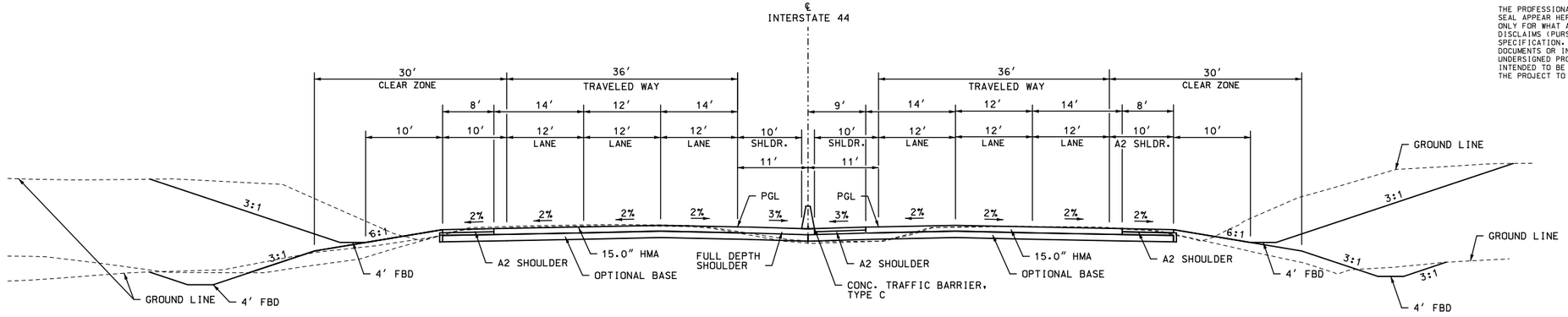
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

ASPHALT
ALTERNATES A & C

I-44 WIDENING
J8I3044C & JST0088B

TYPICAL SECTIONS
15 OF 38

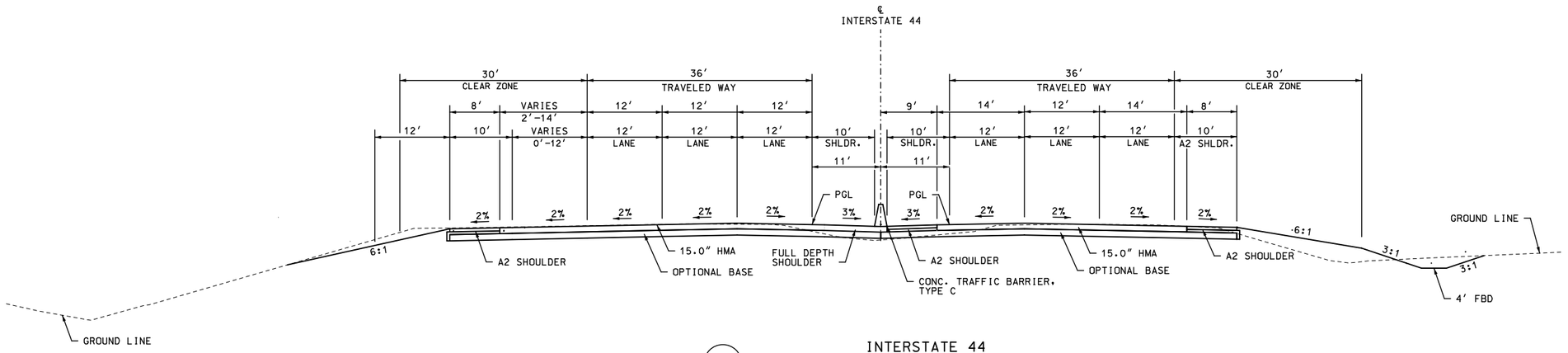
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_J8I3044C_i50.dgn 7:27:00 AM 11/4/2024



5 INTERSTATE 44

STA. 1238+41.73 TO STA. 1292+72.22

SEE PLANS FOR GUARDRAIL LOCATIONS



6 INTERSTATE 44

STA. 1292+72.22 TO STA. 1302+12.43

ASPHALT
ALTERNATES A & C

I-44 WIDENING
J8I3044C & JST0088B

TYPICAL SECTIONS
16 OF 38

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

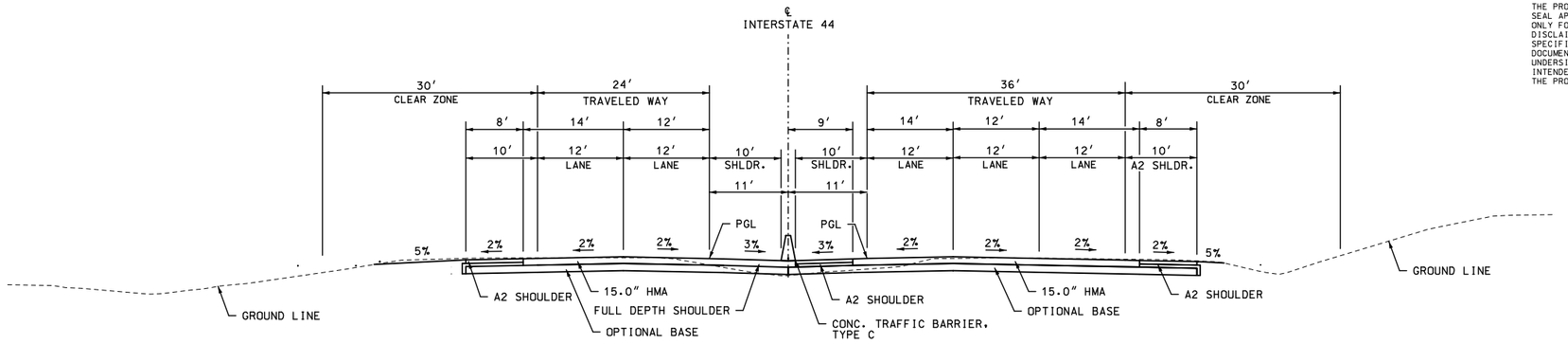
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

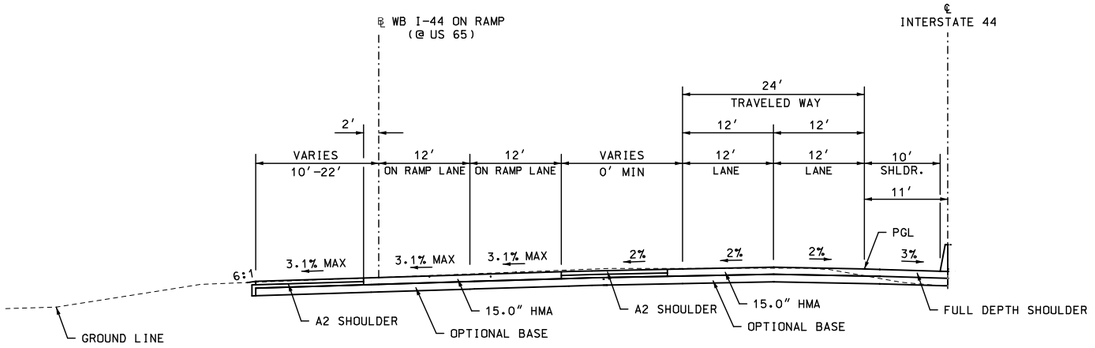
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_J8I3044C_i50.dgn 7:27:00 AM 11/4/2024



INTERSTATE 44

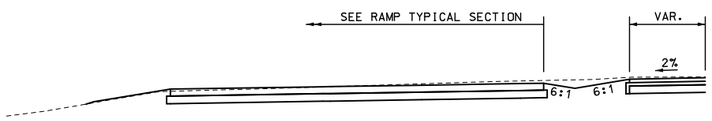
STA. 1302+12.43 TO STA. 1314+00.00

SEE PLANS FOR GUARDRAIL LOCATIONS



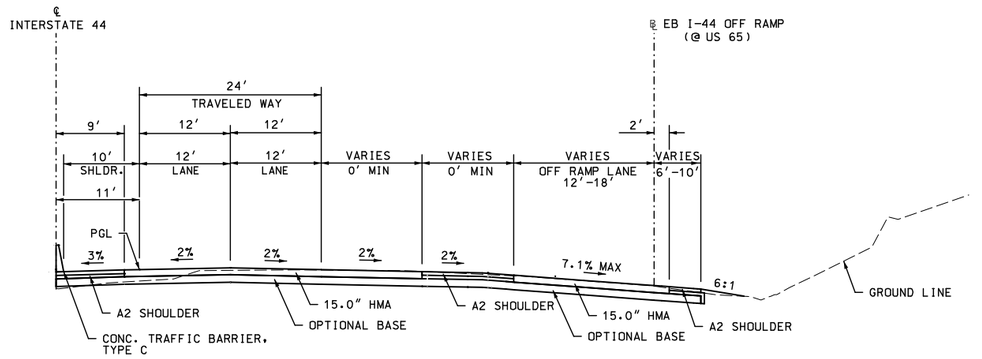
INTERSTATE 44 – PARTIAL SECTION

WB I-44 ON RAMP (@ US 65)
STA. 1302+12.43 TO STA. 1305+57.59



INTERSTATE 44 – PARTIAL SECTION

GRADING WITH WB I-44 ON RAMP (@ US 65)
STA. 1305+57.59 TO STA. 1306+71.54



INTERSTATE 44 – PARTIAL SECTION

EB I-44 OFF RAMP (@ US 65)
STA. 1310+21.30 TO STA. 1312+90.28

ASPHALT
ALTERNATES A & C

I-44 WIDENING
J8I3044C & JST0088B

TYPICAL SECTIONS
17 OF 38

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

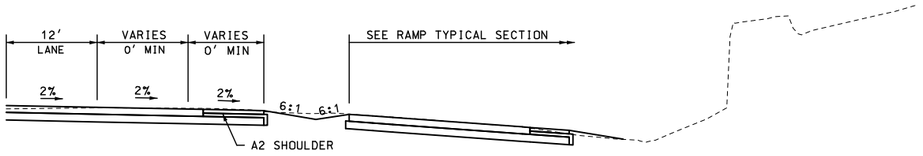
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

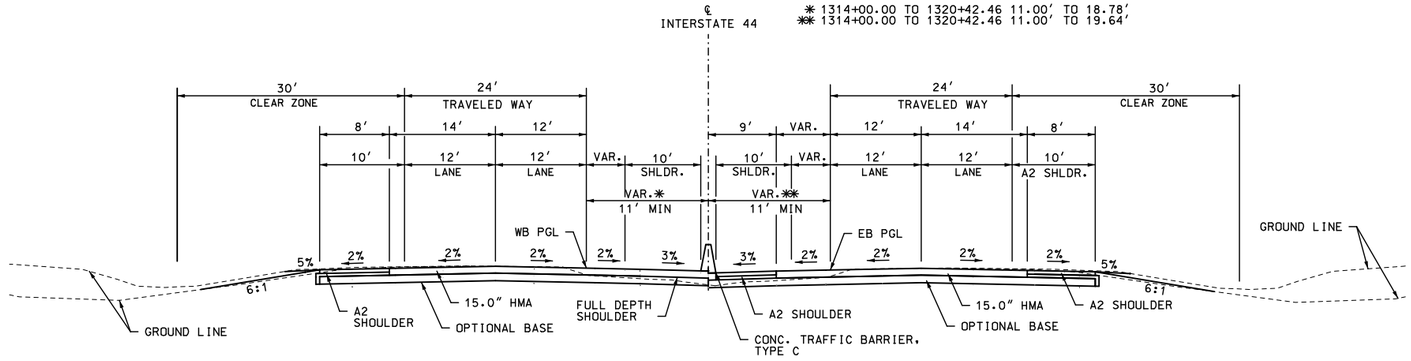
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_J8I3044C_i50.dgn 7:27:01 AM 11/4/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



INTERSTATE 44 – PARTIAL SECTION

GRADING WITH EB I-44 OFF RAMP (@ US 65)
STA. 1312+90.92 TO STA. 1314+28.49



8 INTERSTATE 44

STA. 1314+00.00 TO STA. 1320+42.46

ASPHALT
ALTERNATES A & C

I-44 WIDENING
J8I3044C & JST0088B

TYPICAL SECTIONS
18 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

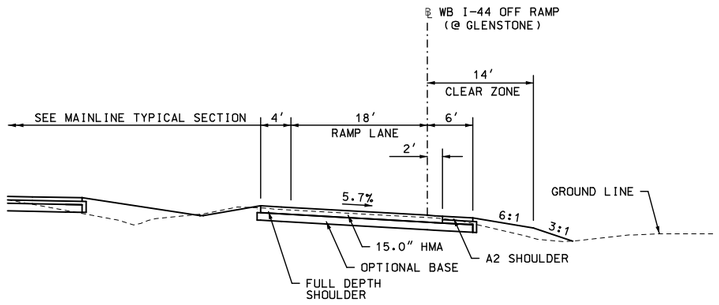
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

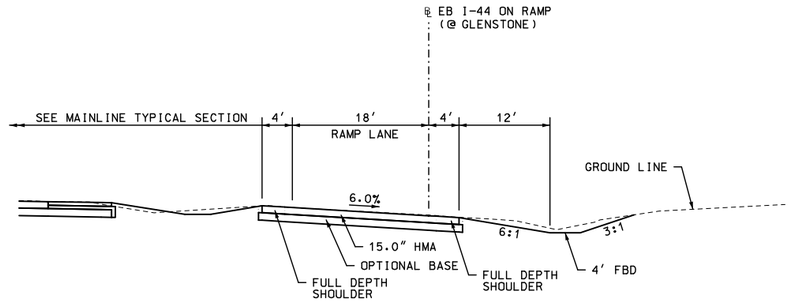
REV.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



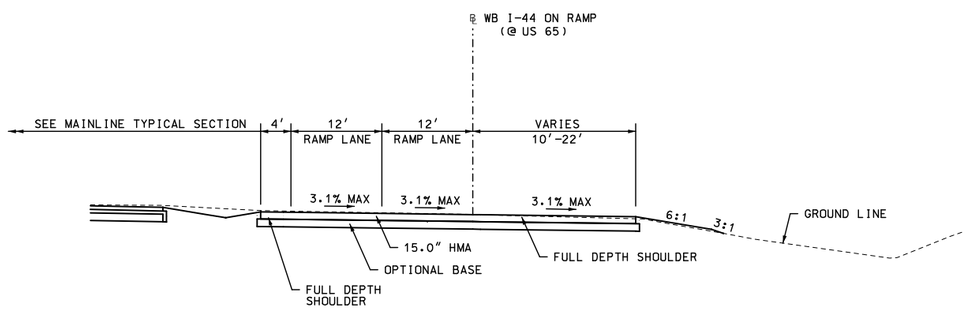
9 WB I-44 OFF RAMP (@ GLENSTONE)

STA. 1+98.79 TO STA. 3+18.62



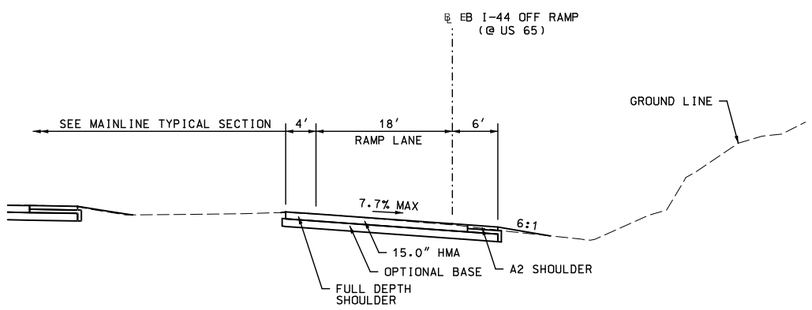
10 EB I-44 ON RAMP (@ GLENSTONE)

STA. 3+98.21 TO STA. 5+15.77



11 WB I-44 ON RAMP (@ US 65)

STA. 3+65.00 TO STA. 4+82.34



12 EB I-44 OFF RAMP (@ US 65)

STA. 2+66.95 TO STA. 4+12.42

ASPHALT
ALTERNATES A & C

I-44 WIDENING
J8I3044C & JST0088B

TYPICAL SECTIONS
19 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C,
& JST0088B

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

EQUIVALENT PAVEMENT DESIGNS				
CATEGORY	BASE TYPE ✳	HMA DESIGN	PCCP DESIGN	SHOULDERS
I-44 MAINLINE & RAMPS	12" ROCK BASE ✳	15.0" HMA 2" SP125BSM W/PG 76-22 OVER 2" SP125B W/PG 76-22 OVER 11" SP250C W/PG 64-22	11.5" PCCP 15' JOINTS 1 1/2" DOWELS	A2 OR FULL DEPTH
	18" ROCK BASE ✳	14.0" HMA 2" SP125BSM W/PG 76-22 OVER 2" SP125B W/PG 76-22 OVER 10" SP250C W/PG 64-22	11.5" PCCP 15' JOINTS 1 1/2" DOWELS	A2 OR FULL DEPTH

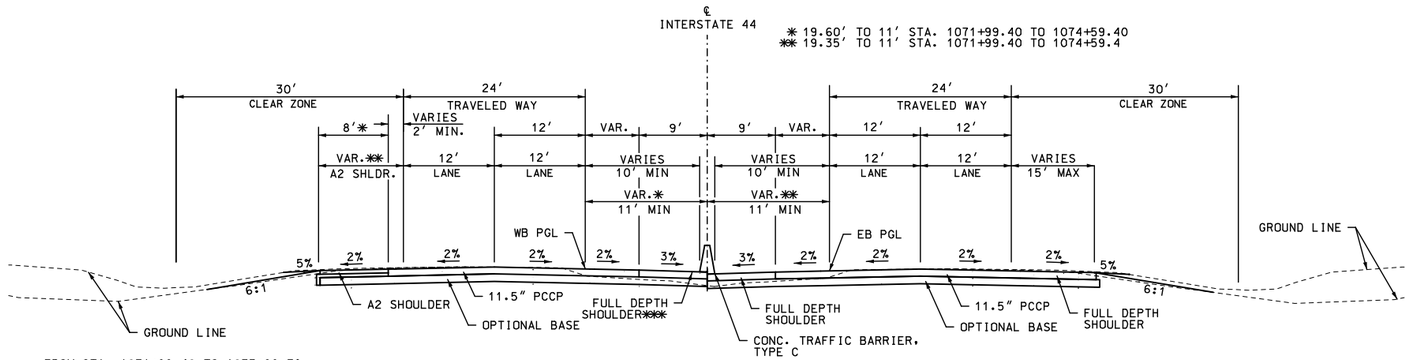
✳ DESIGNS FOR ALTERNATE PAVEMENT DESIGNS - GRADING, BASE AND PAVING, SEE JSPS.

ASPHALT APPLICATION RATES:
ASPHALTIC CONCRETE MIXTURE PG 76-22 (SP125BSM MIX)= 1.950 TON/C.Y. @ 6.3%
ASPHALTIC CONCRETE MIXTURE PG 76-22 (SP125B MIX)= 1.985 TON/C.Y. @ 5.4%
ASPHALTIC CONCRETE MIXTURE PG 64-22 (SP250C MIX)= 2.005 TON/C.Y. @ 4.3%

TACK COAT 0.05 GAL/S.Y.

NOTE: STATE FUNDS ARE ONLY UTILIZED FOR EXISTING THROUGH LANE PAVEMENT REMOVAL, REPLACEMENT, & NEW OPTIONAL ROCK BASE.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



✳ 19.60' TO 11' STA. 1071+99.40 TO 1074+59.40
✳✳ 19.35' TO 11' STA. 1071+99.40 TO 1074+59.4

✳ 5' FROM STA. 1071+99.40 TO 1073+92.78
5' TO 8' FROM STA. 1073+92.78 TO 1074+82.78
8' FROM STA. 1074+82.78 TO 1076+44.05
6' FROM STA. 1076+44.05 TO 1079+16.45

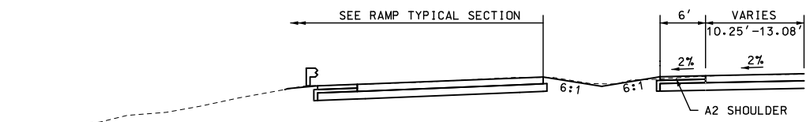
✳✳ 4' TO 13.08' FROM STA. 1076+44.05 TO 1079+16.45

✳✳✳ FULL DEPTH WB MEDIAN SHOULDER STA. 1071+99.40 TO 1078+99.87

1 INTERSTATE 44

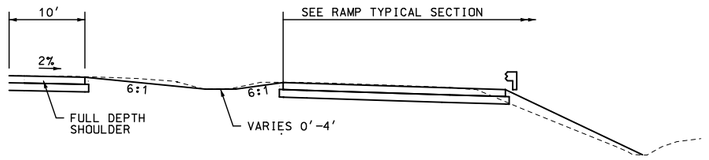
STA. 1071+99.40 TO STA. 1079+79.40

SEE PLANS FOR GUARDRAIL LOCATIONS



INTERSTATE 44 - PARTIAL SECTION

GRADING WITH WB I-44 OFF RAMP (@ ROUTE 13)
STA. 1078+31.67 TO STA. 1079+16.45



INTERSTATE 44 - PARTIAL SECTION

GRADING WITH EB I-44 ON RAMP (@ ROUTE 13)
STA. 1078+75.00 TO STA. 1079+76.54

NOTES:

1. SEE PLAN SHEETS FOR SAWCUT LOCATIONS. NO DIRECT PAY FOR PAVEMENT SAWCUTS.

2. WHEN CONCRETE OPTIONAL PAVEMENT IS USED, CONTRAST PAVEMENT MARKINGS ARE REQUIRED. NO DIRECT PAYMENT WILL BE MADE FOR CONTRAST MARKINGS.

3. THE THINNER PAVEMENT OPTION OF EACH OPTIONAL PAIR WAS USED IN THE COMPUTATION OF EARTHWORK FOR THIS PROJECT.

CONCRETE ALTERNATES B & D

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
20 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

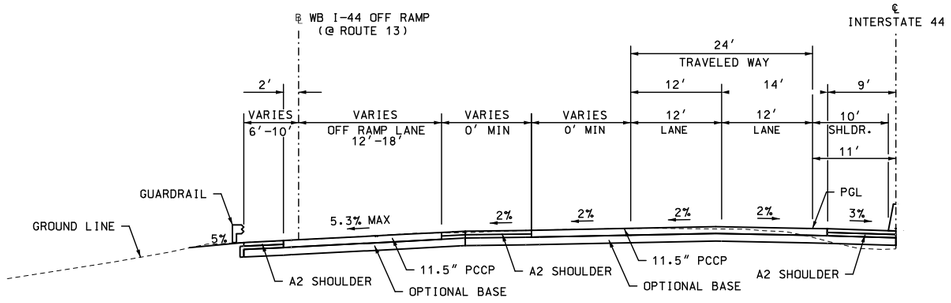
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

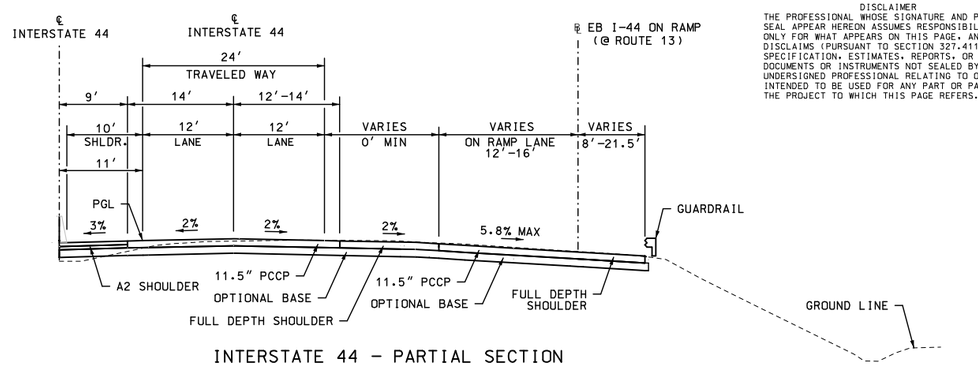
REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_!JSU0076_i50.dgn 7:27:16 AM 11/4/2024



INTERSTATE 44 – PARTIAL SECTION

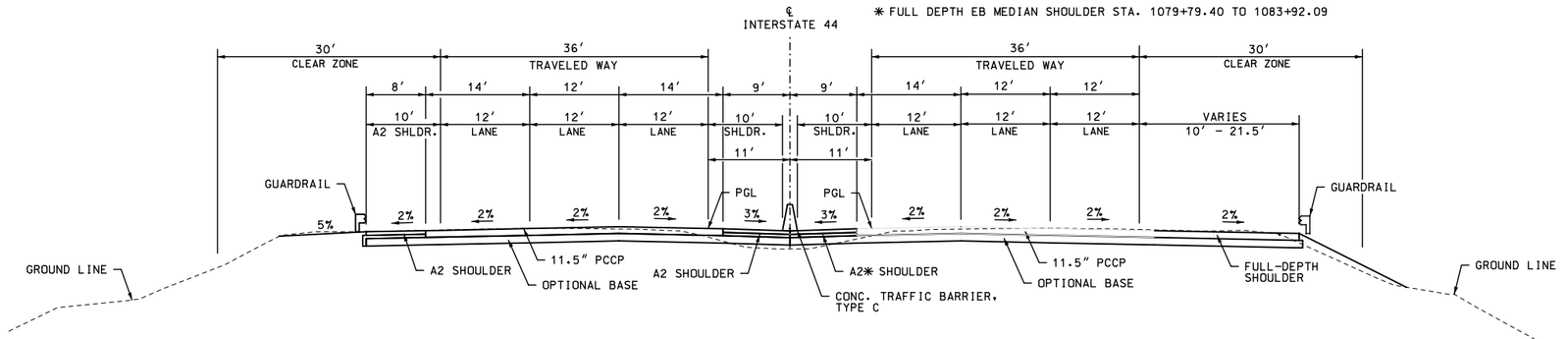
WB I-44 OFF RAMP (@ ROUTE 13)
STA. 1079+16.45 TO STA. 1081+41.03



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

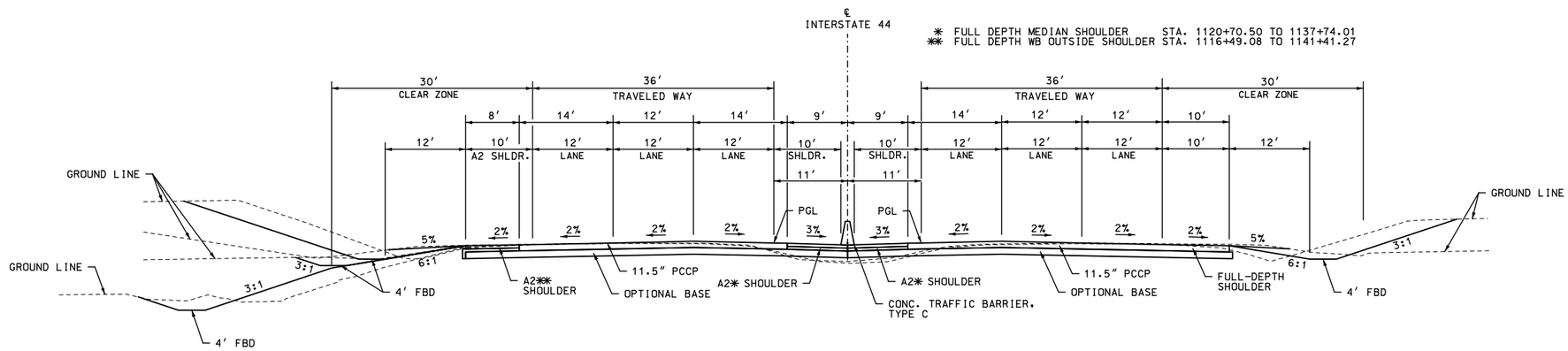
INTERSTATE 44 – PARTIAL SECTION

EB I-44 ON RAMP (@ ROUTE 13)
STA. 1079+79.54 TO STA. 1081+80.56



(2) INTERSTATE 44

STA. 1079+79.40 TO STA. 1090+03.53



(3) INTERSTATE 44

STA. 1090+03.53 TO STA. 1094+19.40
STA. 1104+23.40 TO STA. 1107+39.16
STA. 1117+66.31 TO STA. 1125+29.57
STA. 1136+25.00 TO STA. 1152+53.81

SEE PLANS FOR GUARDRAIL LOCATIONS

CONCRETE
ALTERNATES B & D

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
21 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

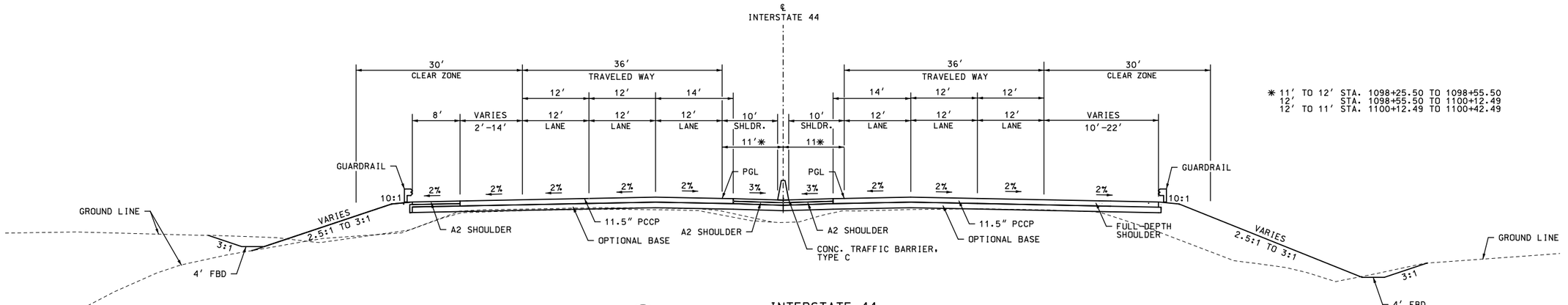
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_!JSU0076_i50.dgn 7:27:17 AM 11/4/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

4 BRIDGE EXCEPTIONS

STA. 1098+92.36 EB PGL/ STA. 1098+93.13 WB PGL TO STA. 1099+74.86 EB PGL/ STA. 1099+75.63 WB PGL	BR A9413 & A9414
STA. 1112+11.10 EB PGL/ STA. 1112+11.87 WB PGL TO STA. 1112+93.60 EB PGL/ STA. 1112+94.37 WB PGL	BR A9417 & A9418
STA. 1178+31.04 EB PGL/ STA. 1178+31.81 WB PGL TO STA. 1179+13.54 EB PGL/ STA. 1179+14.31 WB PGL	BR A9421 & A9422

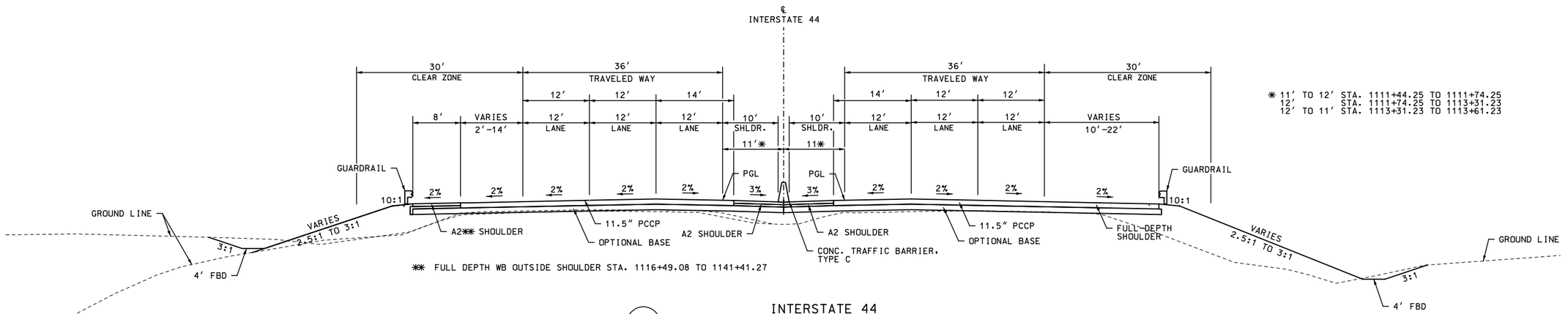


* 11′ TO 12′ STA. 1098+25.50 TO 1098+55.50
12′ STA. 1098+55.50 TO 1100+12.49
12′ TO 11′ STA. 1100+12.49 TO 1100+42.49

5 INTERSTATE 44

STA. 1094+19.40 TO STA. 1104+23.40
(SEE BRIDGE EXCEPTIONS ABOVE)

SEE PLANS FOR GUARDRAIL LOCATIONS



* 11′ TO 12′ STA. 1111+44.25 TO 1111+74.25
12′ STA. 1111+74.25 TO 1113+31.23
12′ TO 11′ STA. 1113+31.23 TO 1113+61.23

** FULL DEPTH WB OUTSIDE SHOULDER STA. 1116+49.08 TO 1141+41.27

6 INTERSTATE 44

STA. 1107+39.16 TO STA. 1117+66.31
(SEE BRIDGE EXCEPTIONS ABOVE)

SEE PLANS FOR GUARDRAIL LOCATIONS

CONCRETE
ALTERNATES B & D

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
22 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 2
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

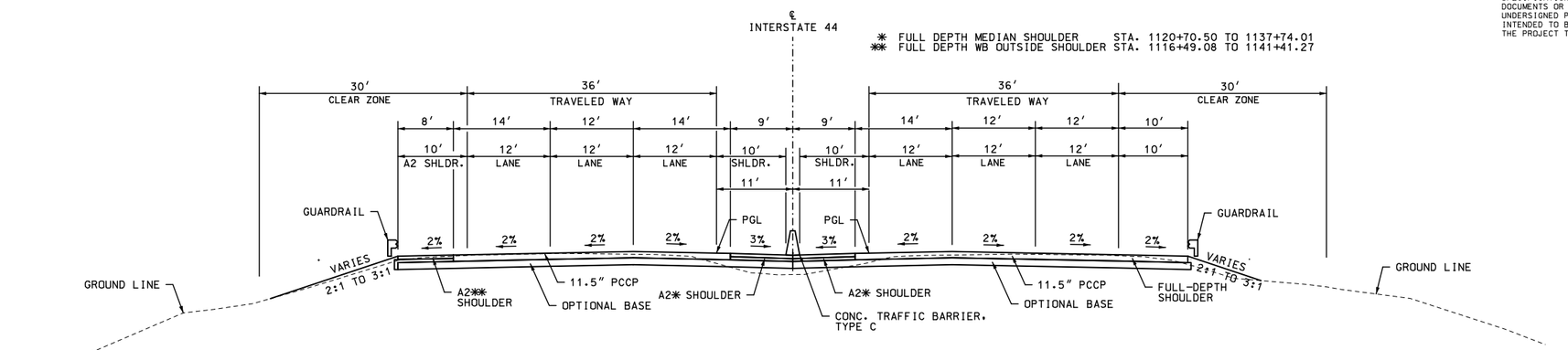
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

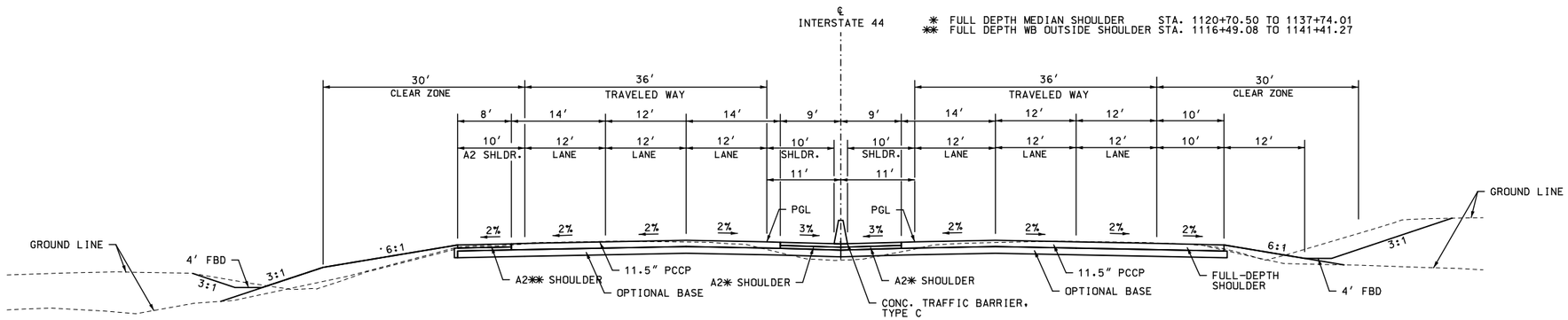
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_1JSU0076_i50.dgn 7:27:17 AM 11/4/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



7 INTERSTATE 44

STA. 1125+29.57 TO STA. 1131+80.61



8 INTERSTATE 44

STA. 1131+80.61 TO STA. 1136+25.00

SEE PLANS FOR GUARDRAIL LOCATIONS

CONCRETE
ALTERNATES B & D

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
23 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

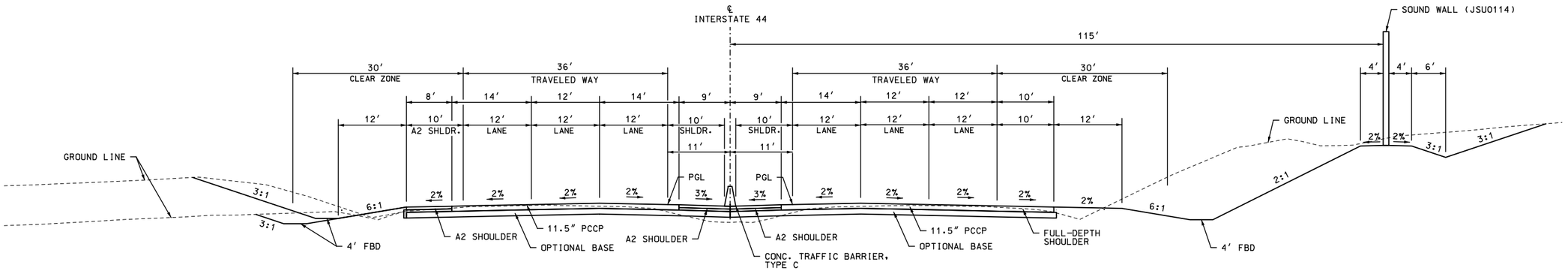
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

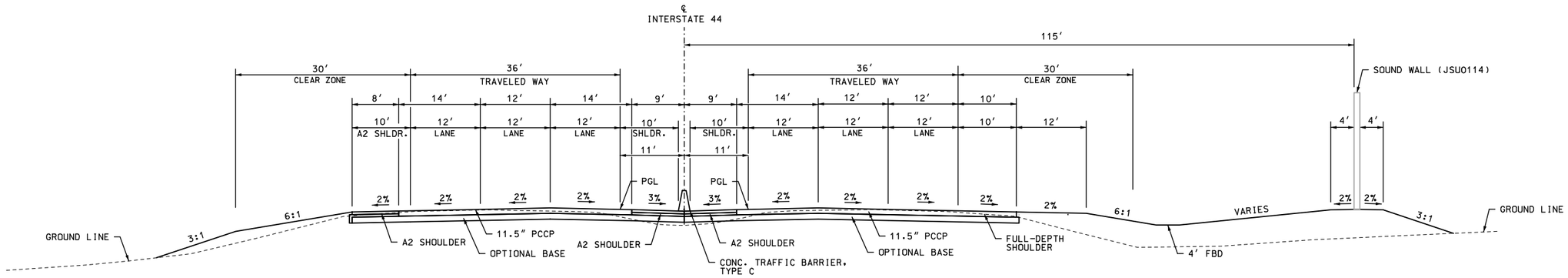
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_!JSU0076_i50.dgn 7:27:17 AM 11/4/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



9 INTERSTATE 44

STA. 1152+53.81 TO STA. 1162+00.00



10 INTERSTATE 44

STA. 1162+00.00 TO STA. 1167+75.00

SEE PLANS FOR GUARDRAIL LOCATIONS

NOTE:

SEE JSU0114 FOR SOUND WALL DESIGN PLANS.

CONCRETE ALTERNATES B & D

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
24 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

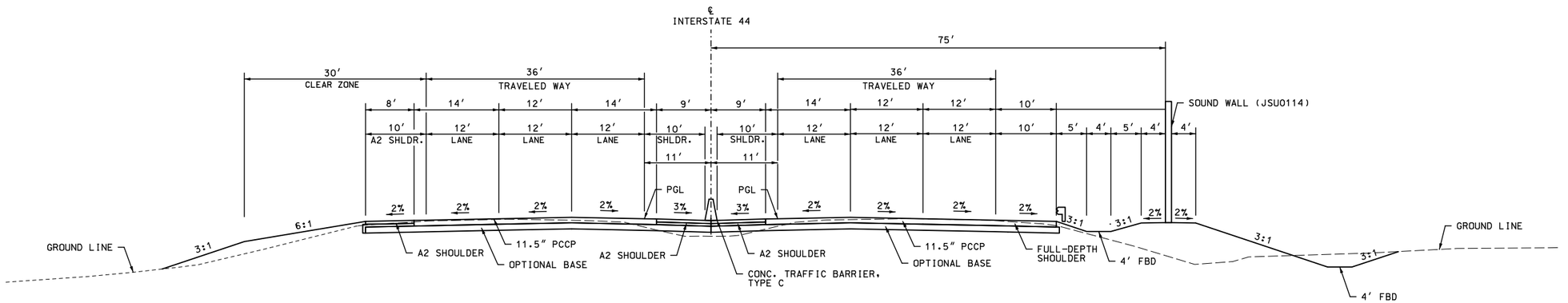
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_!JSU0076_i50.dgn 7:27:18 AM 11/4/2024

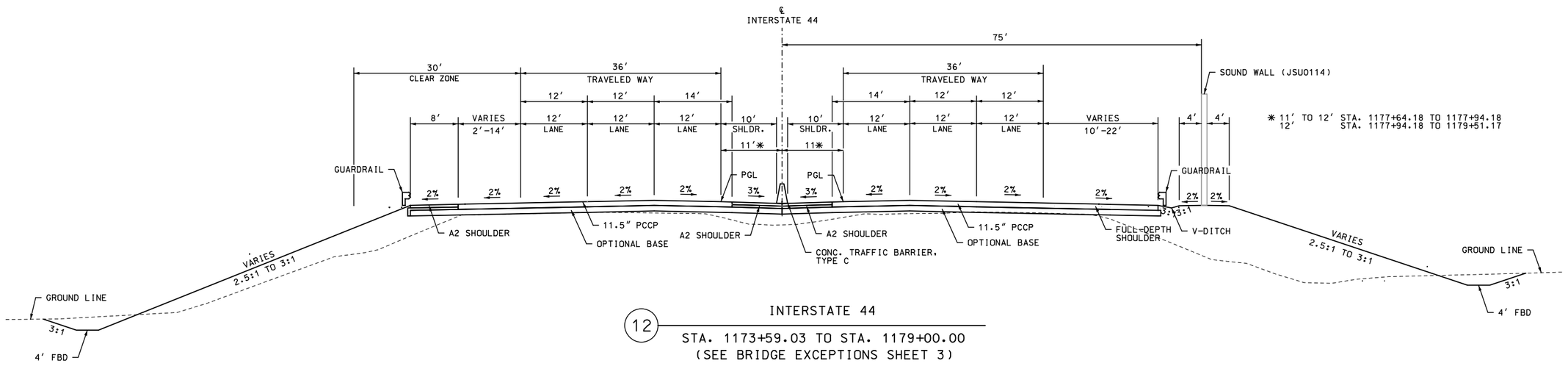
DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



11 INTERSTATE 44

STA. 1167+75.00 TO STA. 1173+59.03

SEE PLANS FOR GUARDRAIL LOCATIONS



12 INTERSTATE 44

STA. 1173+59.03 TO STA. 1179+00.00
(SEE BRIDGE EXCEPTIONS SHEET 3)

SEE PLANS FOR GUARDRAIL LOCATIONS

NOTE:

SEE JSU0114 FOR SOUND WALL DESIGN PLANS.

CONCRETE ALTERNATES B & D

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
25 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

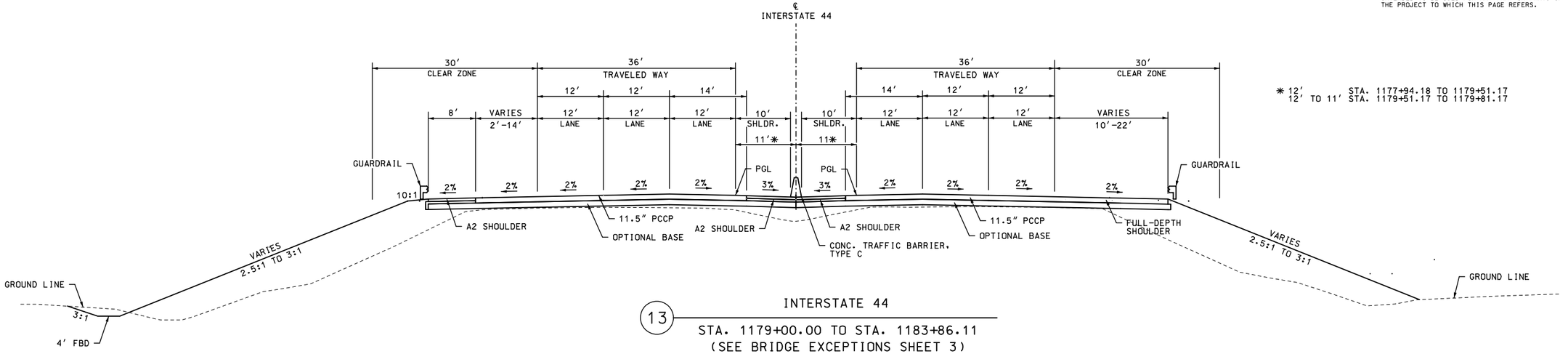
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_!JSU0076_i50.dgn 7:27:18 AM 11/4/2024

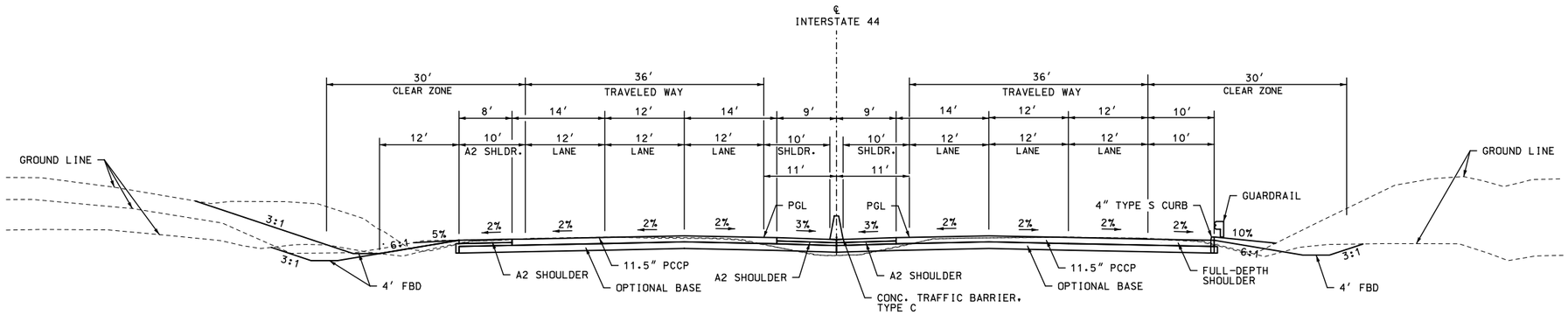
DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



13 INTERSTATE 44

STA. 1179+00.00 TO STA. 1183+86.11
(SEE BRIDGE EXCEPTIONS SHEET 3)

SEE PLANS FOR GUARDRAIL LOCATIONS



14 INTERSTATE 44

STA. 1183+86.11 TO STA. STA. 1191+53.16

CONCRETE
ALTERNATES B & D

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
26 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

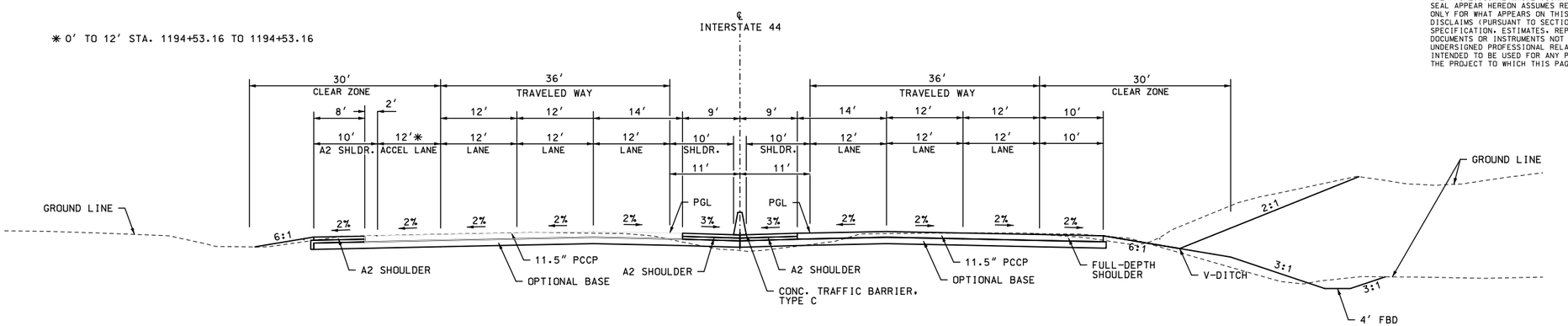
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

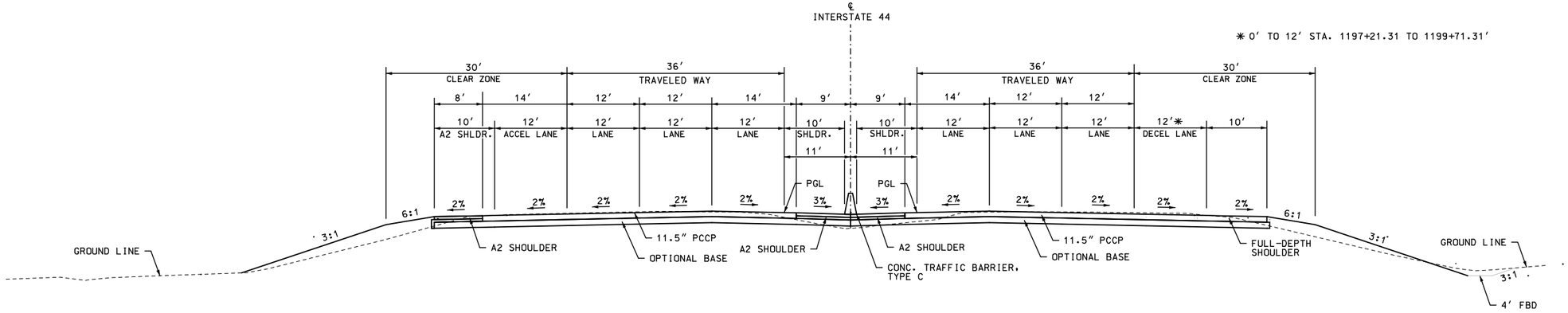
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_!JSU0076_i50.dgn 7:27:18 AM 11/4/2024



15 INTERSTATE 44

STA. 1191+53.16 TO STA. 1197+21.31

SEE PLANS FOR GUARDRAIL LOCATIONS



16 INTERSTATE 44

STA. 1197+21.31 TO STA. 1201+97.04

SEE PLANS FOR GUARDRAIL LOCATIONS

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

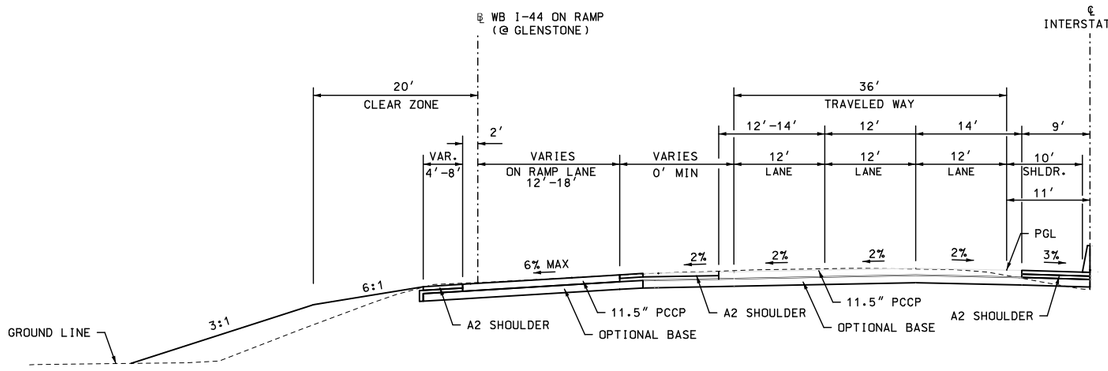
CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

CONCRETE ALTERNATES B & D

I-44 WIDENING
JSU0076 & JST0088B

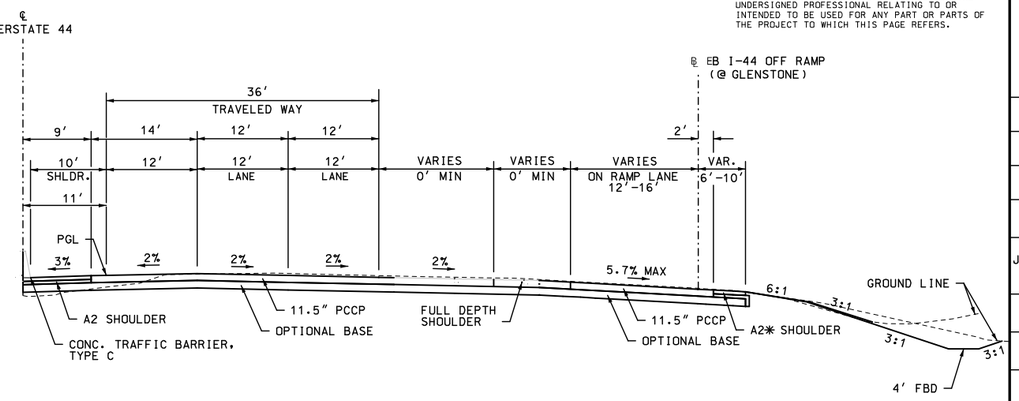
TYPICAL SECTIONS
27 OF 38

REV.



INTERSTATE 44 – PARTIAL SECTION

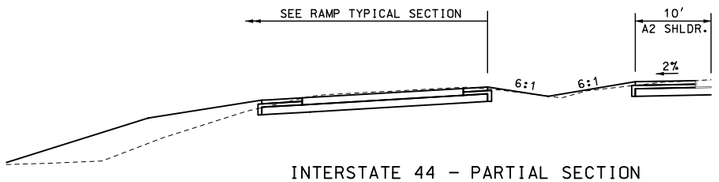
WB I-44 ON RAMP (@ GLENSTONE)
STA. 1198+73.14 TO STA. 1200+43.68



INTERSTATE 44 – PARTIAL SECTION

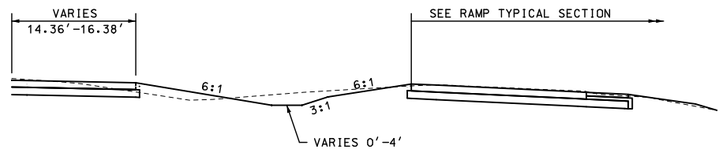
EB I-44 OFF RAMP (@ GLENSTONE)
STA. 1203+21.29 TO STA. 1205+16.71

* FULL DEPTH SHOULDER 1203+21.29 TO 1204+47.13



INTERSTATE 44 – PARTIAL SECTION

GRADING WITH WB I-44 ON RAMP (@ GLENSTONE)
STA. 1200+43.68 TO STA. 1201+91.32



INTERSTATE 44 – PARTIAL SECTION

GRADING WITH EB I-44 OFF RAMP (@ GLENSTONE)
STA. 1205+16.71 TO STA. 1206+60.50

CONCRETE
ALTERNATES B & D

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
28 OF 38

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C,
& JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

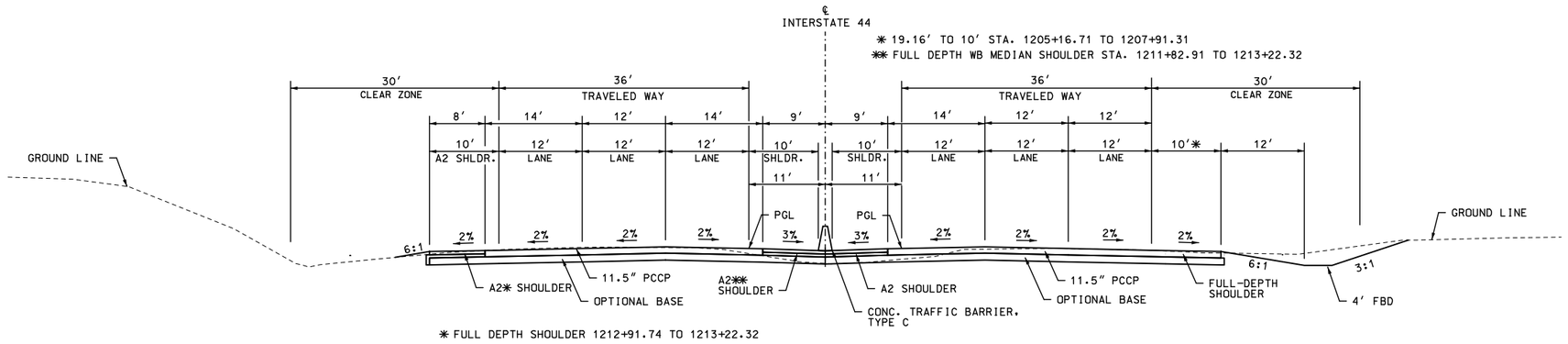
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_!JSU0076_i50.dgn 7:27:19 AM 11/4/2024

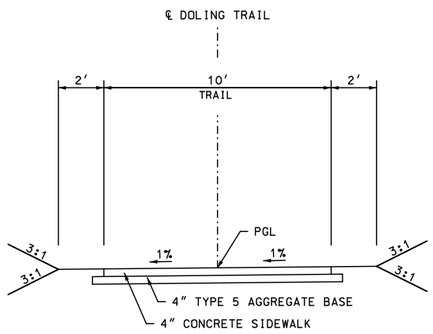
DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



17 INTERSTATE 44

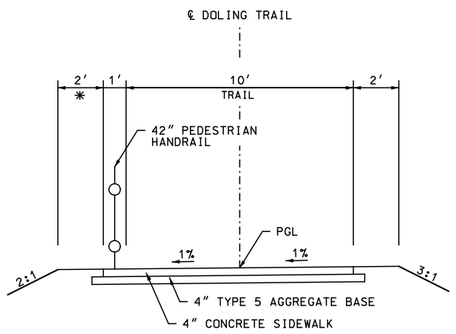
STA. 1201+97.04 TO STA. STA. 1213+22.32

SEE PLANS FOR GUARDRAIL LOCATIONS



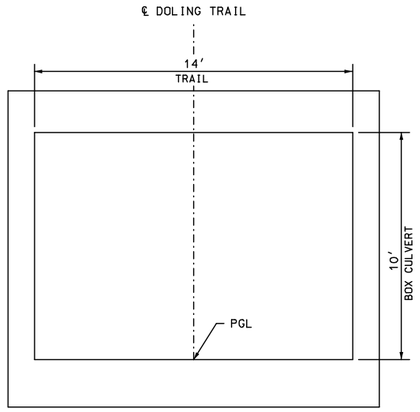
18 DOLING TRAIL

STA. 0+00.00 TO STA. 5+64.48



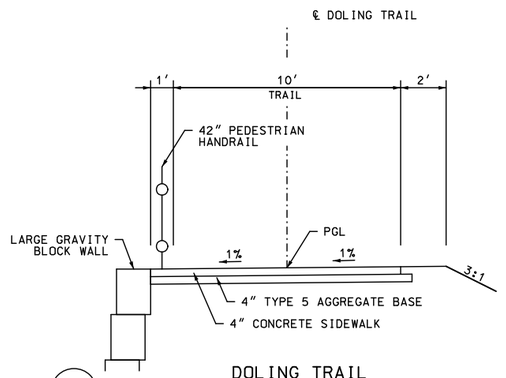
19 DOLING TRAIL

STA. 5+64.48 TO STA. 6+33.88
STA. 13+01.00 TO STA. 13+15.56
✳ 0′ FROM STA. 13+01.00 TO STA. 13+15.56



20 DOLING TRAIL UNDERPASS

STA. 6+33.88 TO STA. 9+35.70



21 DOLING TRAIL

STA. 9+35.70 TO STA. 13+01.00

CONCRETE
ALTERNATES B & D

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
29 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

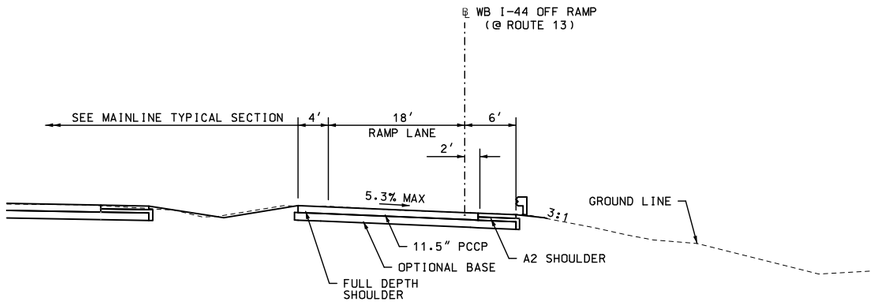
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

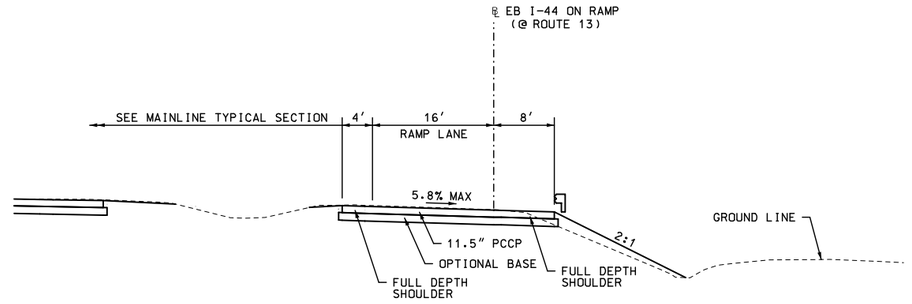
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_!JSU0076_i50.dgn 7:27:19 AM 11/4/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



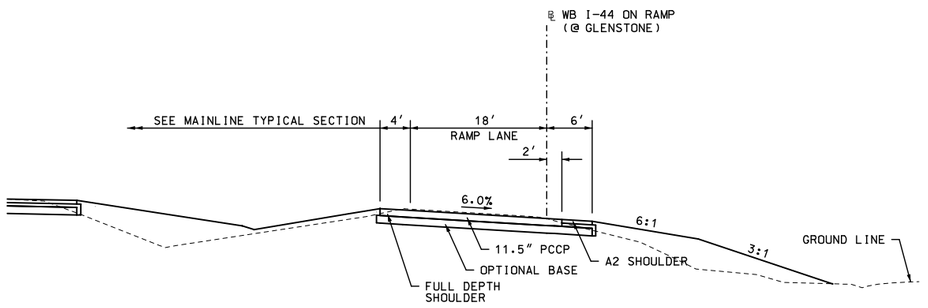
22 WB I-44 OFF RAMP (@ ROUTE 13)

STA. 2+21.42 TO STA. 3+09.04



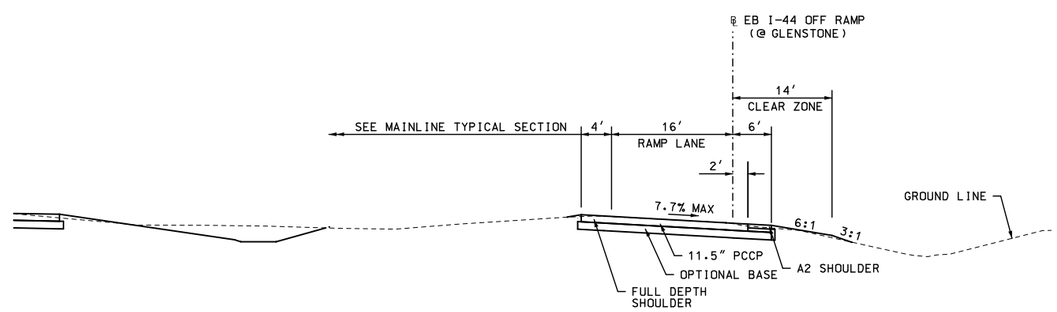
23 EB I-44 ON RAMP (@ ROUTE 13)

STA. 2+06.55 TO STA. 3+91.49



24 WB I-44 ON RAMP (@ GLENSTONE)

STA. 3+17.00 TO STA. 4+77.13



25 EB I-44 OFF RAMP (@ GLENSTONE)

STA. 1+92.46 TO STA. 3+45.04

CONCRETE
ALTERNATES B & D

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
30 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

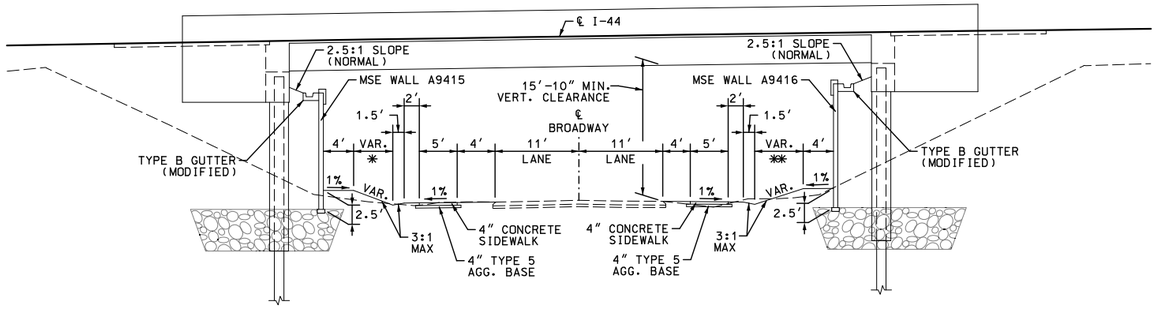
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

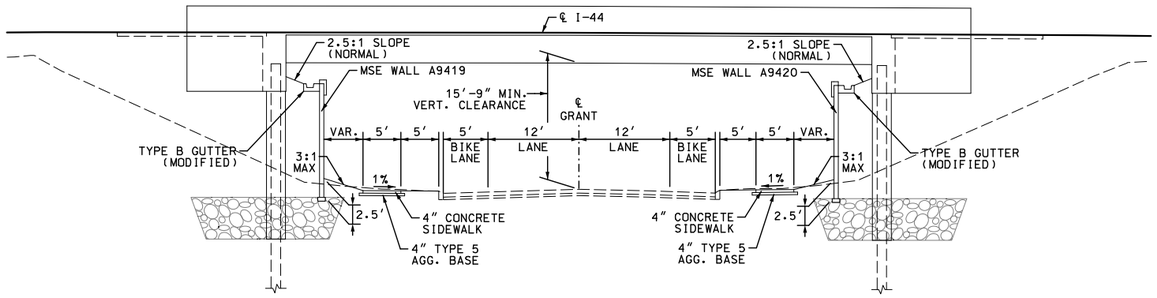
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_!JSU0076_i50.dgn 7:27:20 AM 11/4/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



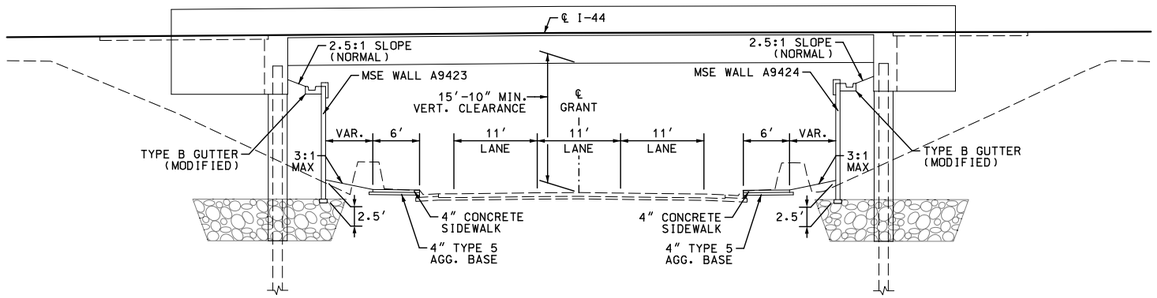
26 BROADWAY AVE UNDER PROPOSED I-44

STA. 1099+33.99



27 GRANT AVE UNDER PROPOSED I-44

STA. 1112+51.80



28 NATIONAL AVE UNDER PROPOSED I-44

STA. 1178+74.80

CONCRETE
ALTERNATES B & D

I-44 WIDENING
JSU0076 & JST0088B

TYPICAL SECTIONS
31 OF 38

RYAN STEHN
NUMBER PE-2020000089
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.

EQUIVALENT PAVEMENT DESIGNS				
CATEGORY	BASE TYPE ✳	HMA DESIGN	PCCP DESIGN	SHOULDERS
I-44 MAINLINE & RAMPS	12" ROCK BASE ✳	15.0" HMA 2" SP125BSM W/PG 76-22 OVER 2" SP125B W/PG 76-22 OVER 11" SP250C W/PG 64-22	11.5" PCCP 15" JOINTS 1 1/2" DOWELS	A2 OR FULL DEPTH
	18" ROCK BASE ✳	14.0" HMA 2" SP125BSM W/PG 76-22 OVER 2" SP125B W/PG 76-22 OVER 10" SP250C W/PG 64-22	11.5" PCCP 15" JOINTS 1 1/2" DOWELS	A2 OR FULL DEPTH

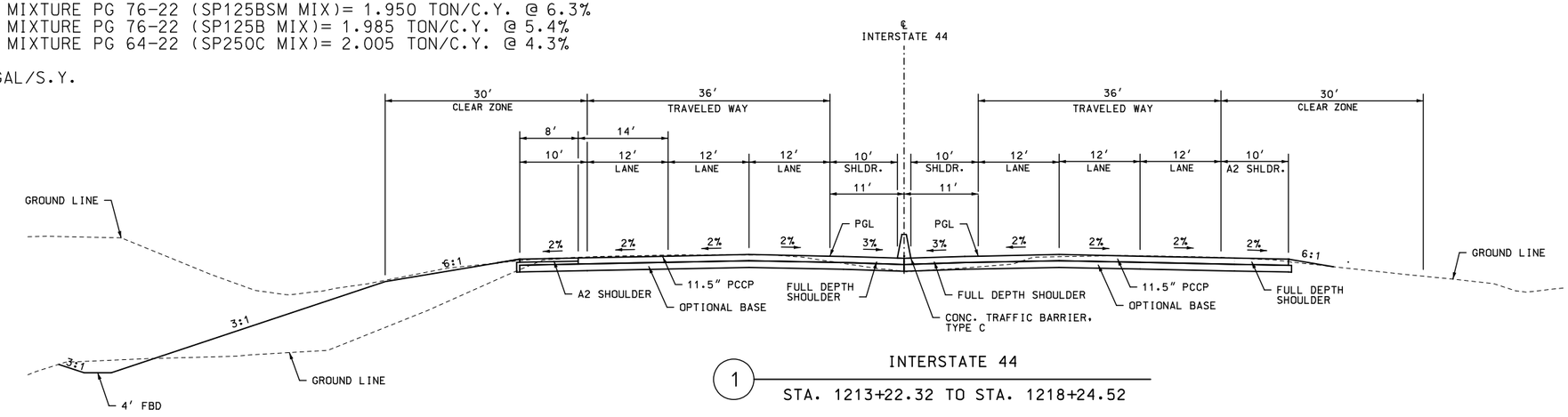
✳ DESIGNS FOR ALTERNATE PAVEMENT DESIGNS - GRADING, BASE AND PAVING, SEE JSPS.

ASPHALT APPLICATION RATES:
ASPHALTIC CONCRETE MIXTURE PG 76-22 (SP125BSM MIX)= 1.950 TON/C.Y. @ 6.3%
ASPHALTIC CONCRETE MIXTURE PG 76-22 (SP125B MIX)= 1.985 TON/C.Y. @ 5.4%
ASPHALTIC CONCRETE MIXTURE PG 64-22 (SP250C MIX)= 2.005 TON/C.Y. @ 4.3%

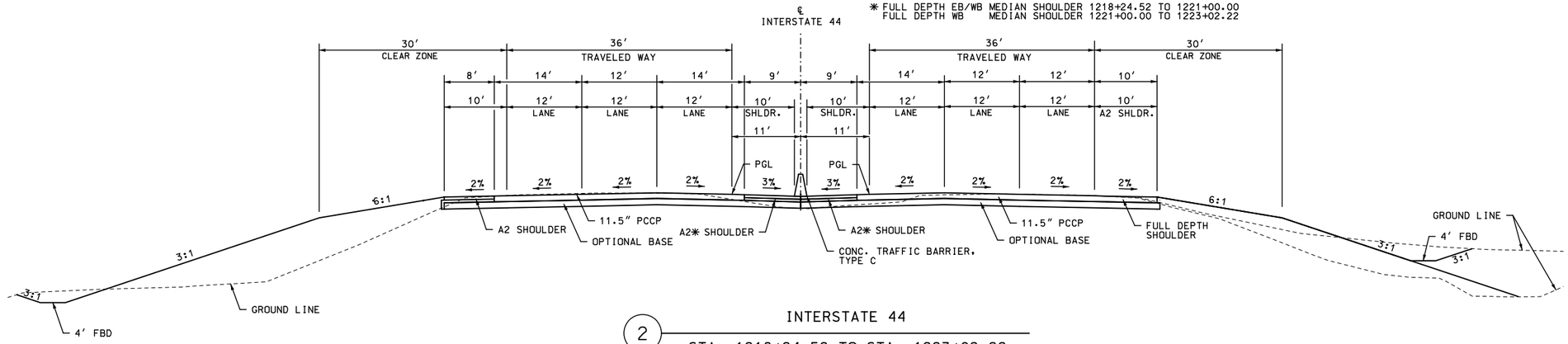
TACK COAT 0.05 GAL/S.Y.

NOTE: STATE FUNDS ARE ONLY UTILIZED FOR EXISTING THROUGH LANE PAVEMENT REMOVAL, REPLACEMENT, & NEW OPTIONAL ROCK BASE.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE. AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



1 INTERSTATE 44
STA. 1213+22.32 TO STA. 1218+24.52



2 INTERSTATE 44
STA. 1218+24.52 TO STA. 1223+02.22

NOTES:

1. SEE PLAN SHEETS FOR SAWCUT LOCATIONS. NO DIRECT PAY FOR PAVEMENT SAWCUTS.

2. WHEN CONCRETE OPTIONAL PAVEMENT IS USED, CONTRAST PAVEMENT MARKINGS ARE REQUIRED. NO DIRECT PAYMENT WILL BE MADE FOR CONTRAST MARKINGS.

3. THE THINNER PAVEMENT OPTION OF EACH OPTIONAL PAIR WAS USED IN THE COMPUTATION OF EARTHWORK FOR THIS PROJECT.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/4/2024
ROUTE I-44 | STATE MO
DISTRICT SW | SHEET NO. 2
COUNTY GREENE
JOB NO. JSU0076, J8I3044C, & JST0088B
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

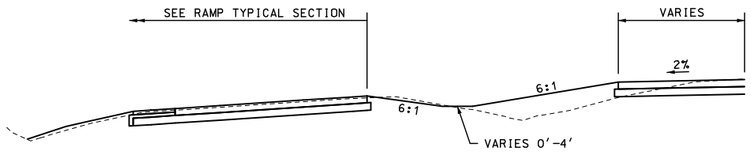
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

CONCRETE ALTERNATES B & D
I-44 WIDENING
J8I3044C & JST0088B
TYPICAL SECTIONS
32 OF 38

REV.

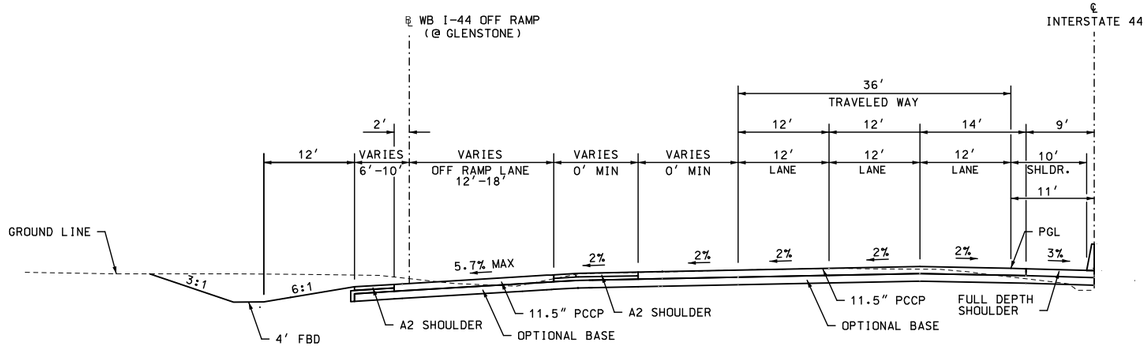
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_J8I3044C_i50.dgn 7:27:37 AM 11/4/2024



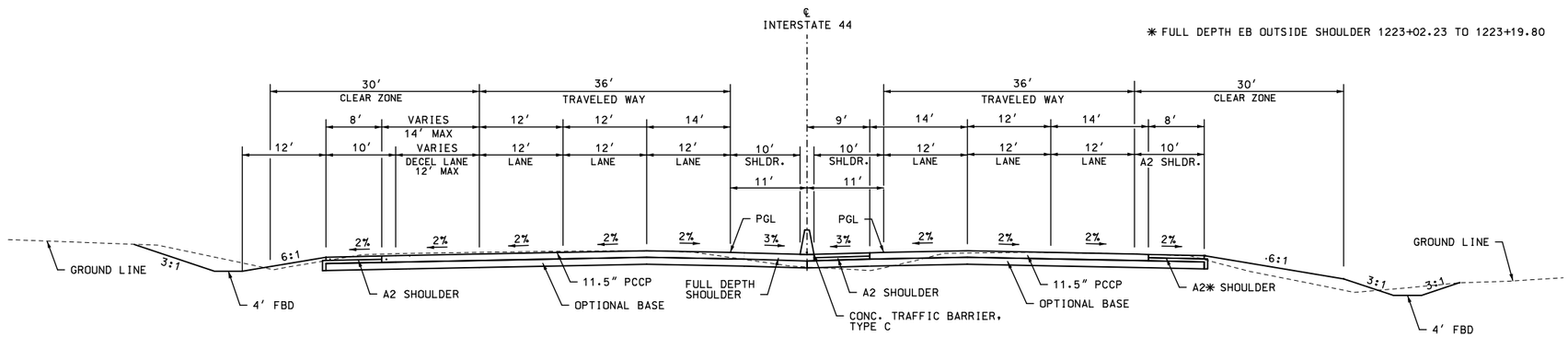
INTERSTATE 44 – PARTIAL SECTION

GRADING WITH WB I-44 OFF RAMP (@ GLENSTONE)
STA. 1219+92.00 TO STA. 1220+99.90



INTERSTATE 44 – PARTIAL SECTION

WB I-44 OFF RAMP (@ GLENSTONE)
STA. 1220+99.90 TO STA. 1223+02.23



3

INTERSTATE 44

STA. 1223+02.23 TO STA. 1227+96.49

SEE PLANS FOR GUARDRAIL LOCATIONS

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

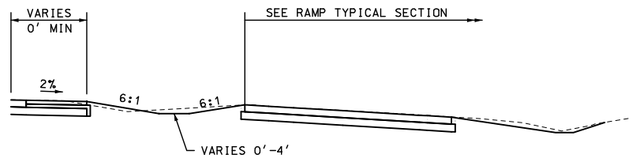
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

CONCRETE ALTERNATES B & D

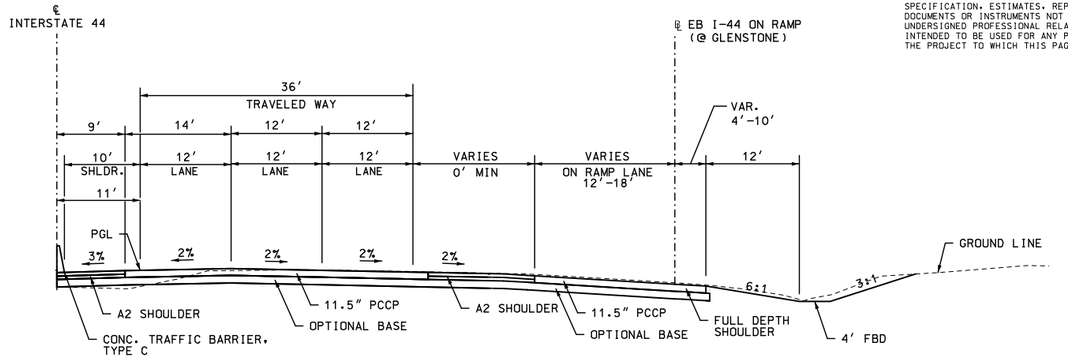
I-44 WIDENING
J8I3044C & JST0088B

TYPICAL SECTIONS
33 OF 38



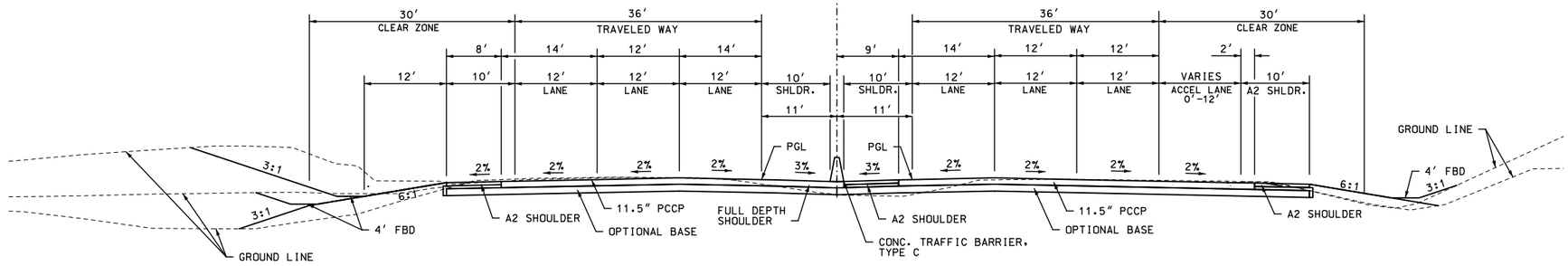
INTERSTATE 44 – PARTIAL SECTION

GRADING WITH EB I-44 ON RAMP (@ GLENSTONE)
STA. 1224+85.39 TO STA. 1225+96.28



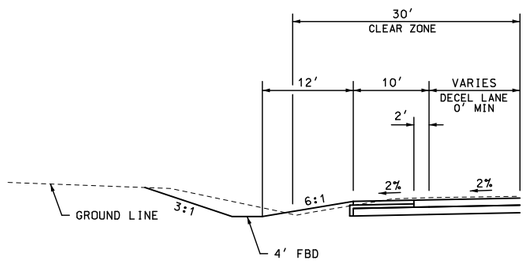
INTERSTATE 44 – PARTIAL SECTION

EB I-44 ON RAMP (@ GLENSTONE)
STA. 1225+96.28 TO STA. 1227+96.49



4 INTERSTATE 44

STA. 1227+96.49 TO STA. 1238+41.73



INTERSTATE 44 – PARTIAL SECTION

DECEL LANE FOR WB I-44 OFF RAMP (@ GLENSTONE)
STA. 1227+96.49 TO STA. 1229+02.21

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

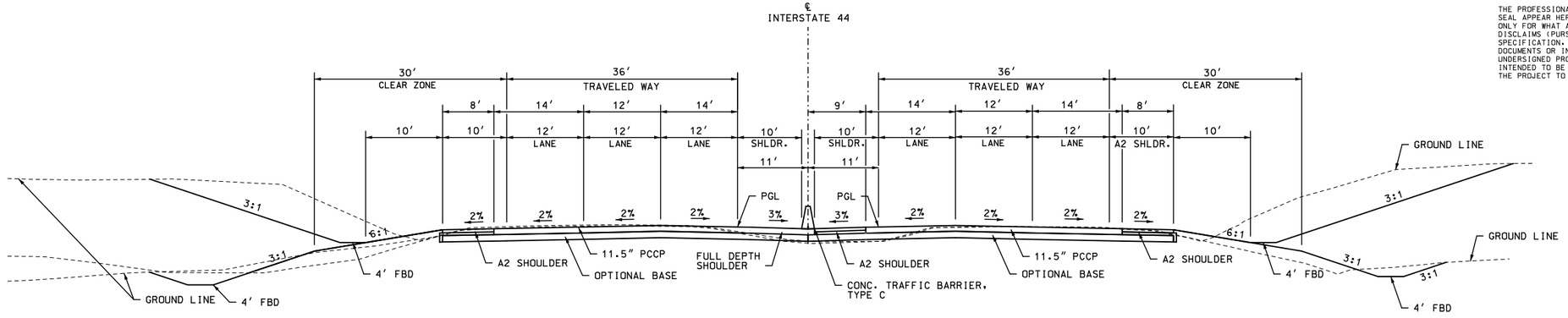
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

CONCRETE
ALTERNATES B & D

I-44 WIDENING
J8I3044C & JST0088B

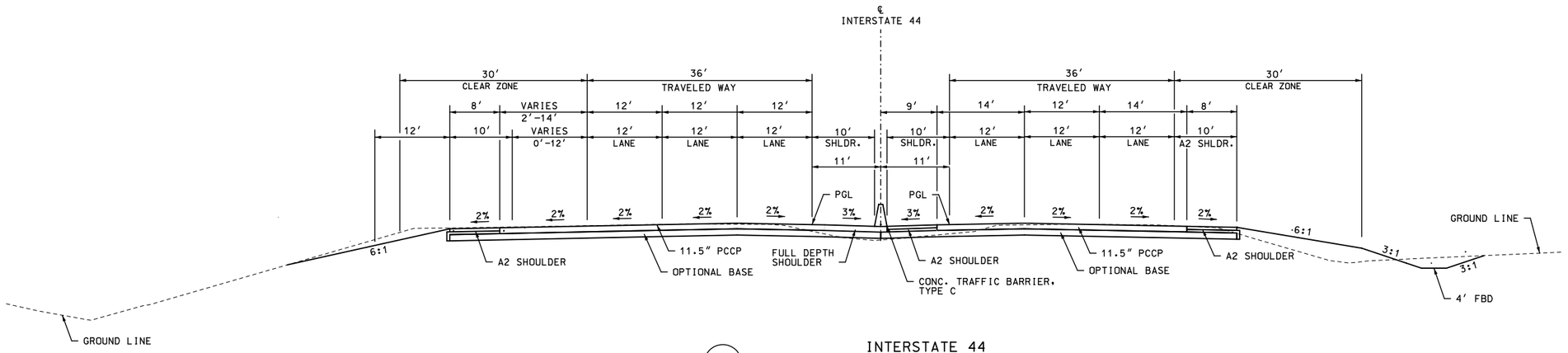
TYPICAL SECTIONS
34 OF 38



5 INTERSTATE 44

STA. 1238+41.73 TO STA. 1292+72.22

SEE PLANS FOR GUARDRAIL LOCATIONS



6 INTERSTATE 44

STA. 1292+72.22 TO STA. 1302+12.43

CONCRETE
ALTERNATES B & D

I-44 WIDENING
J8I3044C & JST0088B

TYPICAL SECTIONS
35 OF 38

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

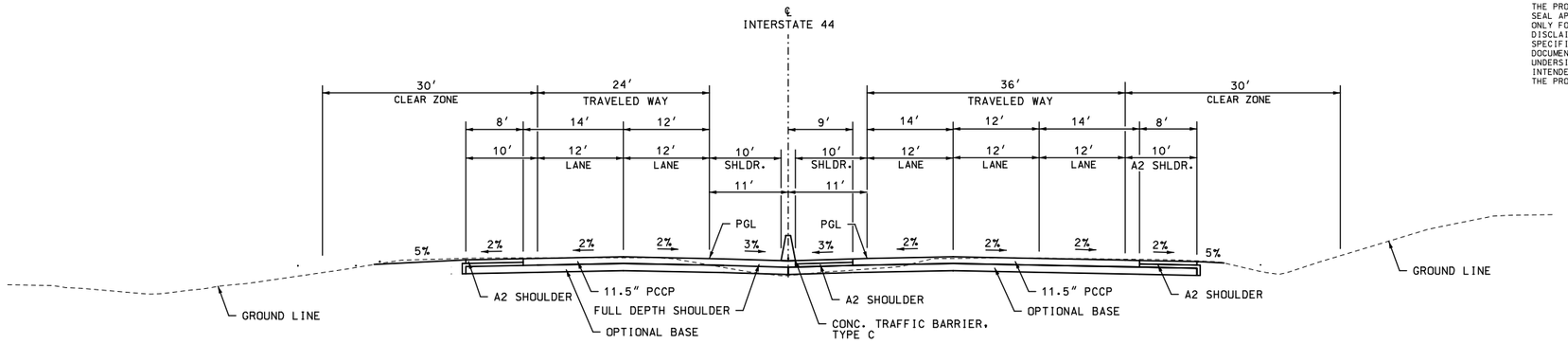
BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

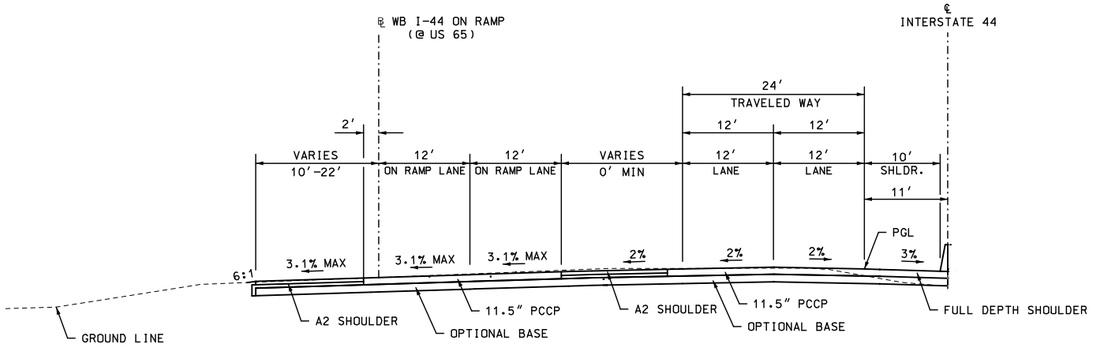
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



INTERSTATE 44

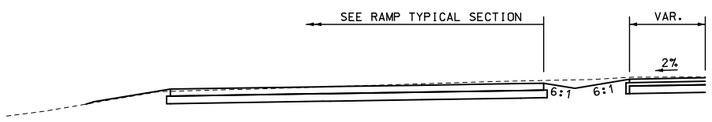
STA. 1302+12.43 TO STA. 1314+00.00

SEE PLANS FOR GUARDRAIL LOCATIONS



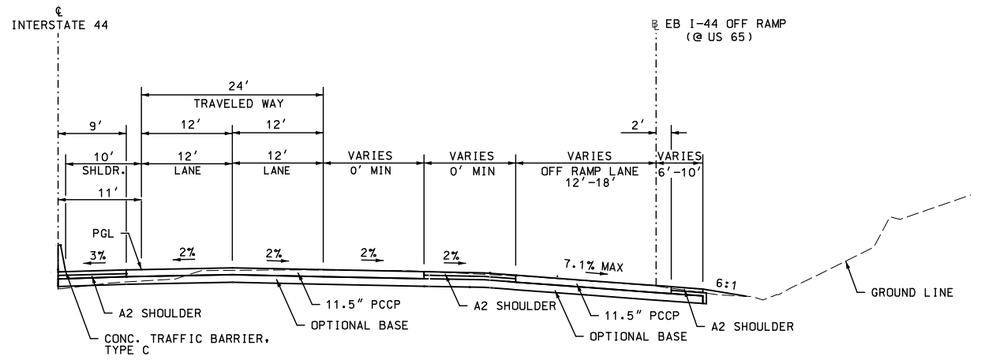
INTERSTATE 44 – PARTIAL SECTION

WB I-44 ON RAMP (@ US 65)
STA. 1302+12.43 TO STA. 1305+57.59



INTERSTATE 44 – PARTIAL SECTION

GRADING WITH WB I-44 ON RAMP (@ US 65)
STA. 1305+57.59 TO STA. 1306+71.54



INTERSTATE 44 – PARTIAL SECTION

EB I-44 OFF RAMP (@ US 65)
STA. 1310+21.30 TO STA. 1312+90.28

CONCRETE
ALTERNATES B & D

I-44 WIDENING
J8I3044C & JST0088B

TYPICAL SECTIONS
36 OF 38

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

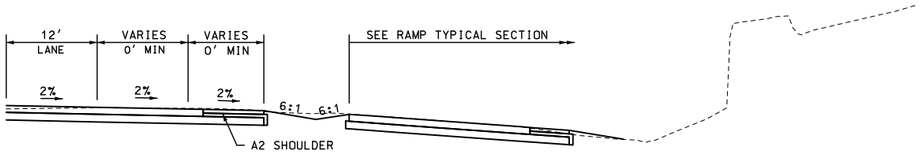
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

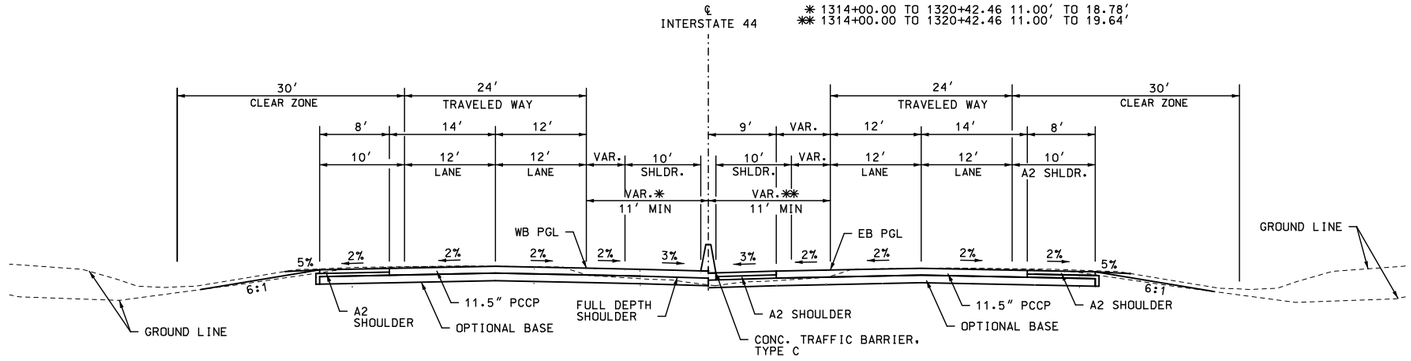
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\002_TS_J8I3044C_i50.dgn 7:27:38 AM 11/4/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



INTERSTATE 44 – PARTIAL SECTION

GRADING WITH EB I-44 OFF RAMP (@ US 65)
STA. 1312+90.92 TO STA. 1314+28.49



8 INTERSTATE 44

STA. 1314+00.00 TO STA. 1320+42.46

CONCRETE
ALTERNATES B & D

I-44 WIDENING
J8I3044C & JST0088B

TYPICAL SECTIONS
37 OF 38

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

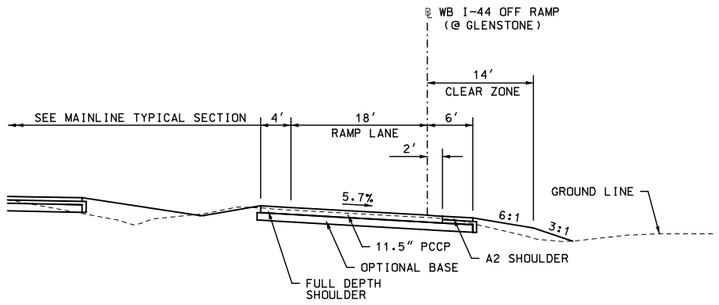
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

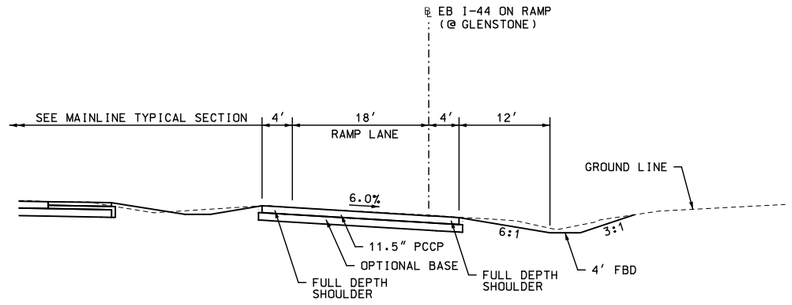
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

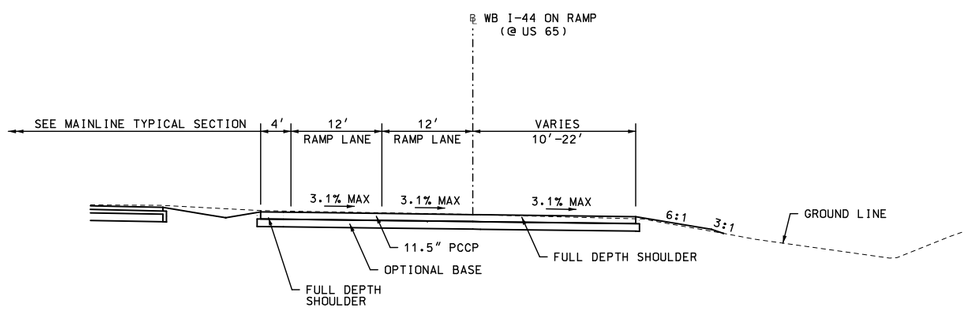
DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



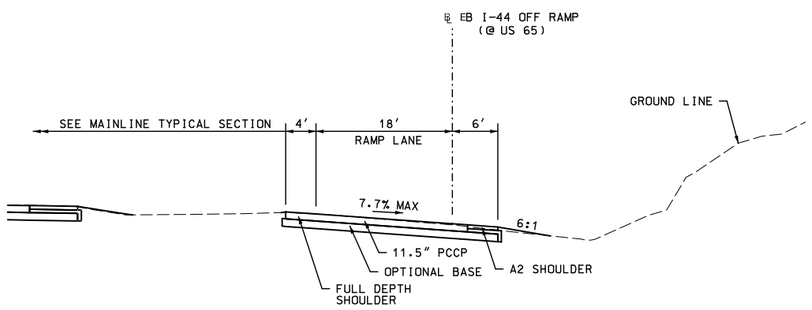
9 WB I-44 OFF RAMP (@ GLENSTONE)
STA. 1+98.79 TO STA. 3+18.62



10 EB I-44 ON RAMP (@ GLENSTONE)
STA. 3+98.21 TO STA. 5+15.77



11 WB I-44 ON RAMP (@ US 65)
STA. 3+65.00 TO STA. 4+82.34



12 EB I-44 OFF RAMP (@ US 65)
STA. 2+66.95 TO STA. 4+12.42

CONCRETE
ALTERNATES B & D

I-44 WIDENING
J8I3044C & JST0088B

TYPICAL SECTIONS
38 OF 38

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C,
& JST0088B

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

JSU0076 MOBILIZATION

1 LUMP SUM

JSU0076 CONTRACTOR FURNISHED SURVEYING AND STAKING

1 LUMP SUM

JSU0076 SAWCUTS FOR PAVEMENT REMOVAL

ALL SAWCUTS NOT SHOWN ARE INCIDENTAL TO REMOVAL OF IMPROVEMENTS

JSU0076 TEMPORARY SHORING

1 LUMP SUM

JSU0076 MOBILIZATION (COST SHARE)

1 LUMP SUM

JSU0076 CONTRACTOR FURNISHED SURVEYING AND STAKING (COST SHARE)

1 LUMP SUM

JSU0076 SAWCUTS FOR PAVEMENT REMOVAL (COST SHARE)

ALL SAWCUTS NOT SHOWN ARE INCIDENTAL TO REMOVAL OF IMPROVEMENTS

JSU0076 ADDITIONAL MOBILIZATION FOR SEEDING (COST SHARE)

1 EACH

JSU0076 TEMPORARY SHORING (COST SHARE)

1 LUMP SUM

JSU0076 REMOVAL OF IMPROVEMENTS

PLAN SHEET	FROM STATION	TO STATION	BASELINE	OFFSET	DESCRIPTION	UNITS	QUANTITY	REMARKS
4	1071+99.40	1085+00.00	I-44	LT.	EB SHOULDER & RAMP PAVEMENT	SY	3106.7	INCLUDES OFF-RAMP AND DECELERATION PAVEMENT
4	1071+99.40	1085+00.00	I-44	RT.	WB SHOULDER & RAMP PAVEMENT	SY	3319.5	INCLUDES ON-RAMP AND ACCELERATION PAVEMENT
4	1071+55.24	1075+40.37	I-44	LT.	GUARDRAIL	LF	385.2	EXTERIOR OF WB
4	1072+55.98	1076+90.61	I-44	RT.	GUARDRAIL	LF	434.6	INTERIOR OF WB
4	1071+99.40	1073+60.06	I-44	RT.	GUARDRAIL	LF	160.5	INTERIOR OF EB
4	1071+99.40	1074+59.95	I-44	LT.	GUARDRAIL	LF	260.5	EXTERIOR OF EB
4	1071+99.40	1085+00.00	I-44	LT.	GUARDCABLE	LF	1300.6	
4	1071+99.41		I-44	LT.	HEADWALL	EACH	1.0	
4	1072+36.26	1072+56.23	I-44	LT.	18" PIPE	LF	23.2	
4	1072+36.26	1074+06.05	I-44	LT.	18" PIPE	LF	169.1	
4	1074+06.13		I-44	RT.	18" FES	EACH	1.0	
4	1075+31.66		I-44	RT.	SIGN	EACH	1.0	
4	1075+97.06		I-44	RT.	SIGN	EACH	2.0	
4	1076+02.08		I-44	LT.	SIGN	EACH	1.0	
4	1078+93.76		I-44	LT.	SIGN	EACH	1.0	
4	1080+32.04		I-44	LT.	SIGN	EACH	1.0	
4	1083+98.66		I-44	RT.	SIGN	EACH	2.0	
4	1078+46.40	1085+00.00	I-44	LT.	GUARDRAIL	LF	659.7	EXTERIOR OF EXIT RAMP
4	1078+52.45	1079+40.58	I-44	RT.	CONCRETE DITCH	SY	57.5	
4	1078+71.56	1085+00.00	I-44	RT.	GUARDRAIL	LF	632.2	EXTERIOR OF ENTRANCE RAMP
4	1080+43.36	1081+64.30	I-44	RT.	CONCRETE DITCH	SY	78.9	
6	1085+00.00	1099+00.00	I-44	LT.	WB PAVEMENT & SHOULDER	SY	4716.2	INCLUDES OFF-RAMP, DECELERATION LANE PAVEMENT, & PAVEMENT IN PROFILE ADJUSTMENT AREAS (WEST OF BR A9414)
6	1085+00.00	1099+00.00	I-44	RT.	EB PAVEMENT & SHOULDER	SY	4649.3	INCLUDES ON-RAMP, ACCELERATION LANE PAVEMENT, & PAVEMENT IN PROFILE ADJUSTMENT AREAS (WEST OF BR A9413)
6	1085+00.00	1098+42.23	I-44	LT.	GUARDCABLE	LF	1339.3	
6	1085+00.00	1090+31.30	I-44	LT.	GUARDRAIL	LF	531.3	EXTERIOR OF WB
6	1085+00.00	1090+03.53	I-44	RT.	GUARDRAIL	LF	503.5	EXTERIOR OF EB
6	1088+62.06	1089+50.07	I-44	LT.	15" PIPE	LF	126.4	ABANDON
6	1088+62.06		I-44	LT.	FES	EACH	1.0	
6	1089+50.07		I-44	LT.	INLET	EACH	1.0	BETWEEN EB AND WB
6	1086+05.03		I-44	RT.	SIGN	EACH	1.0	
6	1086+08.35		I-44	LT.	SIGN	EACH	1.0	
6	1091+81.44		I-44	RT.	LIGHT POLE	EACH	1.0	
6	1092+27.00		I-44	LT.	SIGN	EACH	2.0	
6	1093+48.95		I-44	RT.	LIGHT POLE	EACH	1.0	
6	1096+54.56		I-44	RT.	SIGN	EACH	1.0	
6	1096+60.43		I-44	LT.	SIGN	EACH	1.0	
6	1098+61.03		I-44	RT.	SIGN	EACH	1.0	
6	1094+74.90	1098+66.70	I-44	RT.	GUARDRAIL	LF	391.8	INTERIOR OF EB
6	1095+67.38	1098+65.50	I-44	RT.	GUARDRAIL	LF	298.2	EXTERIOR OF WEB
6	1098+14.86		I-44	RT.	PULLBOX	EACH	1.0	
6	1098+26.58		I-44	RT.	PULLBOX	EACH	1.0	
6	1098+51.29	1098+58.26	I-44	RT.	CONCRETE DITCH	SY	8.6	
6	1098+54.09	1098+69.25	I-44	LT.	CONCRETE DITCH	SY	13.5	
6	1098+95.95		I-44	RT.	INLET	EACH	1.0	
6	1098+95.95	1099+00.00	I-44	RT.	18" PIPE	LF	12.3	
7	1100+02.68	1111+84.13	I-44	LT.	WB PAVEMENT & SHOULDER	SY	4109.1	INCLUDES PAVEMENT IN PROFILE ADJUSTMENT AREAS (EAST OF BR A9414 & WEST OF BR A9418)
7	1100+00.26	1111+82.05	I-44	RT.	EB PAVEMENT & SHOULDER	SY	4094.4	INCLUDES PAVEMENT IN PROFILE ADJUSTMENT AREAS (EAST OF BR A9413 & WEST OF BR A9417)
7	1100+00.79	1099+08.38	I-44	LT & RT	42" PIPE	LF	188.3	
7	1099+10.78	1099+23.14	I-44	LT & RT	SIDEWALK	SY	105.4	#A0444
7	1099+44.21	1099+56.86	I-44	LT & RT	SIDEWALK	SY	116.9	#A0444
7	1099+55.53	1100+49.71	I-44	RT.	CONCRETE DITCH	LF	14.7	
7	1100+04.00	1100+04.33	I-44	RT.	18" PIPE	LF	89.6	
7	1100+04.33		I-44	RT.	FES	EACH	1.0	
7	1100+04.00		I-44	RT.	INLET	EACH	1.0	
7	1100+04.00	1102+99.8707	I-44	LT.	GUARDRAIL	LF	295.9	EXTERIOR WB
7	1100+02.80	1103+87.34	I-44	LT.	GUARDRAIL	LF	384.6	INTERIOR WB
7	1100+13.74		I-44	LT.	SIGN	EACH	1.0	
7	1100+67.44		I-44	RT.	SIGN	EACH	1.0	
7	1105+58.17		I-44	RT.	SIGN	EACH	1.0	

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 1 OF 55

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
MoDOT
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

JSU0076 REMOVAL OF IMPROVEMENTS

PLAN SHEET	FROM STATION	TO STATION	BASELINE	OFFSET	DESCRIPTION	UNITS	QUANTITY	REMARKS
7	1107+04.45		I-44	RT.	SIGN	EACH	1.0	
7	1107+22.75		I-44	LT.	SIGN	EACH	1.0	
7	1110+34.40		I-44	RT.	DMS BOX	EACH	1.0	
7	1110+39.70		I-44	RT.	PULLBOX	EACH	1.0	
7	1110+70.11		I-44	RT.	DMS BOARD	EACH	1.0	
7	1111+78.09		I-44	RT.	SIGN	EACH	1.0	
7	1103+30.94	1111+63.95	I-44	LT.	GUARDCABLE	LF	833.1	
7	1107+87.79	1111+82.26	I-44	RT.	GUARDRAIL	LF	394.5	INTERIOR OF EB
7	1107+47.94	1111+81.09	I-44	RT.	GUARDRAIL	LF	433.2	EXTERIOR OF EB
7	1111+79.78	1111+81.93	I-44	RT.	PERMANENT BARRIER	LF	77.7	#A0445
7	1112+21.49	1112+34.34	I-44	LT & RT	SIDEWALK	SY	104.9	#A0445
7	1112+72.80	1112+84.04	I-44	LT & RT	SIDEWALK	SY	102.5	#A0445
$PS3$ TO $PS4$	1112+79.94	1125+04.88	I-44	RT.	ROW FENCE	LF	1224.7	
8	1113+22.67	1127+00.00	I-44	LT.	WB PAVEMENT & SHOULDER	SY	3795.8	INCLUDES PAVEMENT IN PROFILE ADJUSTMENT AREAS (EAST OF BR A9418)
8	1113+20.94	1127+00.00	I-44	RT.	EB PAVEMENT & SHOULDER	SY	3880.6	INCLUDES PAVEMENT IN PROFILE ADJUSTMENT AREAS (EAST OF BR A9417)
8	1113+14.99	1113+17.99	I-44	RT.	PERMANENT BARRIER	LF	48.0	#A0445
8	1113+66.10		I-44	RT.	HEADWALL	EACH	1.0	
8	1114+16.62		I-44	LT.	HEADWALL	EACH	1.0	
8	1113+32.47	1113+35.18	I-44	RT.	CONCRETE FLUME	SY	7.7	
8	1113+31.00		I-44	LT.	SIGN	EACH	1.0	
8	1118+12.35		I-44	LT.	SIGN	EACH	1.0	
8	1118+13.50		I-44	RT.	SIGN	EACH	1.0	
8	1125+13.00		I-44	LT.	SIGN	EACH	2.0	
8	1113+23.96	1118+30.87	I-44	LT.	GUARDRAIL	LF	506.9	EXTERIOR OF WB
8	1113+22.57	1117+06.16	I-44	LT.	GUARDRAIL	LF	383.6	INTERIOR OF WB
8	1116+64.26	1124+69.73	I-44	LT.	GUARDCABLE	LF	805.6	
8	1125+21.85	1127+00.00	I-44	RT.	GUARDCABLE	LF	178.2	
8	1125+80.63	1127+00.00	I-44	RT.	GUARDRAIL	LF	119.4	
8	1124+73.32		I-44	LT.	INLET	EACH	1.0	
8	1124+73.32	1124+73.45	I-44	LT.	24" PIPE	LF	72.5	
8	1124+73.45		I-44	LT.	FES	EACH	1.0	
$PS4$ TO $PS5$	1124+67.62	1127+75.71	I-44	LT.	CONCRETE DITCH	LF	309.3	
9	1127+00.00	1141+00.00	I-44	LT.	WB SHOULDER	SY	2066.6	
9	1127+00.00	1141+00.00	I-44	RT.	EB SHOULDER	SY	1866.9	
9	1127+00.00	1141+00.00	I-44	RT.	GUARDCABLE	LF	1400.0	
9	1127+00.00	1131+80.53	I-44	RT.	GUARDRAIL	LF	480.5	
9	1128+57.42		I-44	LT.	SIGN	EACH	1.0	
9	1128+54.38		I-44	RT.	SIGN	EACH	1.0	
9	1135+30.18		I-44	LT.	SIGN	EACH	2.0	
9	1137+99.48		I-44	LT.	SIGN	EACH	1.0	
9	1139+08.65		I-44	RT.	SIGN	EACH	1.0	
9	1139+09.03		I-44	LT.	SIGN	EACH	1.0	
9	1134+49.43		I-44	LT.	INLET	EACH	1.0	
9	1134+49.43	1134+49.69	I-44	LT.	24" PIPE	LF	68.8	
9	1134+49.69		I-44	LT.	FES	EACH	1.0	
10	1141+00.00	1155+00.00	I-44	LT.	WB SHOULDER	SY	2146.0	
10	1141+00.00	1155+00.00	I-44	RT.	EB SHOULDER	SY	2129.9	
10	1141+00.00	1155+00.00	I-44	RT.	GUARDCABLE	LF	1400.0	
10	1150+44.34		I-44	LT.	FES	EACH	1.0	
10	1150+44.34	1151+00.00	I-44	LT.	24" PIPE	LF	81.6	
10	1151+00.00		I-44	LT.	INLET	EACH	1.0	
10	1149+63.88		I-44	LT.	SIGN	EACH	1.0	
10	1149+63.69		I-44	RT.	SIGN	EACH	1.0	
11	1155+00.00	1169+00.00	I-44	LT.	WB SHOULDER	SY	2080.6	
11	1155+00.00	1169+00.00	I-44	RT.	EB SHOULDER	SY	2035.3	
11	1155+00.00	1169+00.00	I-44	RT.	GUARDCABLE	LF	1400.0	
11	1157+71.48	1157+80.87	I-44	RT.	CONCRETE	SY	19.4	
11	1160+21.13		I-44	RT.	SIGN	EACH	1.0	
11	1160+20.09		I-44	LT.	SIGN	EACH	1.0	
11	1165+43.22	1165+53.90	I-44	RT.	CONCRETE DITCH	SY	76.9	
11	1166+78.40		I-44	RT.	SIGN	EACH	2.0	
11	1167+24.77		I-44	LT	SIGN	EACH	1.0	
11	1165+49.42		I-44	RT.	HEADWALL	EACH	1.0	
11	1165+50.81	1165+59.57	I-44	LT & RT	24" PIPE	LF	8.8	
11	1165+51.31		I-44	RT.	TYPE A PIPE COLLAR	EACH	1.0	
11	1165+60.18		I-44	LT & RT	INLET	EACH	1.0	
12	1169+00.00	1178+07.05	I-44	LT.	WB PAVEMENT & SHOULDER	SY	2992.2	INCLUDES PAVEMENT IN PROFILE ADJUSTMENT AREAS (WEST OF BRIDGE A9422)
12	1169+00.00	1178+04.49	I-44	RT.	EB PAVEMENT & SHOULDER	SY	2846.4	INCLUDES PAVEMENT IN PROFILE ADJUSTMENT AREAS (WEST OF BR A9421)
12	1179+41.32	1183+00.00	I-44	LT.	WB PAVEMENT & SHOULDER	SY	1563.3	INCLUDES PAVEMENT IN PROFILE ADJUSTMENT AREAS (EAST OF BRIDGE A9422)
12	1179+38.82	1183+00.00	I-44	RT.	EB PAVEMENT & SHOULDER	SY	1680.0	INCLUDES PAVEMENT IN PROFILE ADJUSTMENT AREAS (EAST OF BR A9421)
12	1169+00.00	1176+05.23	I-44	RT.	GUARDCABLE	LF	543.4	
12	1170+80.26	1179+26.16	I-44	RT.	GUARDRAIL	LF	846.0	EXTERIOR OF EB
12	1170+77.22		I-44	LT.	SIGN	EACH	1.0	
12	1170+77.13		I-44	RT.	SIGN	EACH	1.0	
12	1177+98.81		I-44	RT.	SIGN	EACH	1.0	
12	1179+54.84		I-44	LT	SIGN	EACH	1.0	
12	1181+31.89		I-44	LT	SIGN	EACH	1.0	
12	1181+34.28		I-44	RT.	SIGN	EACH	1.0	
12	1171+91.06		I-44	LT.	HEADWALL	EACH	1.0	
12	1171+91.36		I-44	RT.	HEADWALL	EACH	1.0	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2010000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT

© Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 2 OF 55

JSU0076 REMOVAL OF IMPROVEMENTS

PLAN SHEET	FROM STATION	TO STATION	BASELINE	OFFSET	DESCRIPTION	UNITS	QUANTITY	REMARKS
12	1174+30.24	1179+26.16	I-44	RT.	GUARDRAIL	LF	496.0	INTERIOR OF EB
12	1177+11.54		I-44	LT.	PULLBOX	EACH	1.0	
12	1177+18.69		I-44	LT.	PULLBOX	EACH	1.0	
12	1177+92.31	1177+95.41	I-44	LT.	CONCRETE DITCH	SY	9.3	
12	1178+39.23	1178+47.08	I-44	LT	PERMANENT BARRIER	LF	87.7	#A0447
12	1178+28.08	1178+43.96	I-44	RT.	PERMANENT BARRIER	LF	96.7	#A0447
12	1178+40.25		I-44	LT	INLET	EACH	1.0	
12	1178+41.82	1178+54.59	I-44	LT & RT	SIDEWALK	SY	128.5	#A0447
12	1178+42.18	1178+50.91	I-44	LT	24" PIPE	LF	8.7	
12	1178+91.13	1179+03.05	I-44	LT & RT	SIDEWALK	SY	123.4	#A0447
12	1179+02.50	1179+14.76	I-44	LT	PERMANENT BARRIER	LF	87.4	#A0447
12	1178+97.70	1179+05.26	I-44	RT.	PERMANENT BARRIER	LF	96.8	#A0447
12	1178+27.88	1182+24.96	I-44	LT.	GUARDRAIL	LF	397.1	EXTERIOR OF WB
12	1178+27.88	1182+74.96	I-44	LT.	GUARDRAIL	LF	447.1	INTERIOR OF WB
12	1182+19.96	1183+00.00	I-44	LT.	GUARDCABLE	LF	80.0	
12	1179+26.88		I-44	RT.	FES	EACH	1.0	
12	1179+10.39	1179+26.88	I-44	RT.	24" PIPE	LF	16.4	
12	1180+47.58		I-44	LT.	FES	EACH	1.0	
12	1180+47.58	1180+47.88	I-44	LT.	15" PIPE	LF	89.0	ABANDON
12	1180+47.88		I-44	LT.	INLET	EACH	1.0	
12	1171+86.88	1171+97.56	I-44	RT.	CONCRETE DITCH	SY	47.4	
12	1177+87.35	1177+90.94	I-44	RT.	CONCRETE DITCH	SY	10.7	
12	1179+42.48		I-44	RT.	PULLBOX	EACH	1.0	
13	1183+00.00	1197+00.00	I-44	LT.	GUARDCABLE	LF	1396.2	
13	1183+00.00	1197+00.00	I-44	LT.	WB PAVEMENT & SHOULDER	SY	2824.2	INCLUDES ACCELERATION LANE PAVEMENT
13	1183+00.00	1197+00.00	I-44	RT.	EB SHOULDER	SY	2136.2	
13	1184+04.53		I-44	RT.	SIGN	EACH	1.0	
13	1191+62.72		I-44	RT.	SIGN	EACH	1.0	
13	1191+65.41		I-44	LT	SIGN	EACH	1.0	
13	1193+50.24		I-44	RT.	PULLBOX	EACH	1.0	
13	1193+60.95		I-44	RT.	PULLBOX	EACH	1.0	
13	1196+79.14		I-44	RT.	SIGN	EACH	2.0	
14	1197+00.00	1211+00.00	I-44	LT.	WB PAVEMENT & SHOULDER	SY	2897.8	INCLUDES ON-RAMP & ACCELERATION LANE PAVEMENT
14	1197+00.00	1211+00.00	I-44	RT.	EB PAVEMENT & SHOULDER	SY	3253.2	INCLUDES OFF-RAMP & DECELERATION LANE PAVEMENT
14	1197+00.00	1211+00.00	I-44	LT.	GUARDCABLE	LF	1400.0	
14	1197+01.73		I-44	LT.	INLET	EACH	1.0	
14	1197+01.73	1197+01.98	I-44	LT.	PIPE	LF	82.1	
14	1197+01.98		I-44	LT.	FES	EACH	1.0	
14	1198+91.48	1199+24.09	I-44	LT & RT	CONCRETE DITCH	LF	190.8	
14	1199+11.05	1199+17.89	I-44	LT & RT	HEADWALL	EACH	2.0	
14	1201+33.11	1201+58.55	I-44	LT.	HEADWALL	EACH	2.0	
14	1201+33.12	1201+59.55	I-44	LT.	PIPE	LF	64.5	ABANDON
14	1201+89.45		I-44	LT.	INLET	EACH	1.0	
14	1203+18.12	1203+30.51	I-44	LT & RT	HEADWALL	EACH	1.0	
14	1203+30.99	1204+81.79	I-44	LT & RT	18" PIPE	LF	152.3	
14	1204+81.57	1204+86.56	I-44	LT & RT	HEADWALL	EACH	1.0	
14	1209+14.42	1211+00.00	I-44	RT.	GUARDRAIL	LF	185.6	INTERIOR OF EB
14	1205+45.73	1205+66.52	I-44	RT.	HEADWALL	EACH	2.0	
14	1205+45.73	1205+66.52	I-44	RT.	PIPE	LF	58.9	ABANDON
14	1203+67.37		I-44	RT.	SIGN	EACH	1.0	
14	1202+20.40		I-44	LT	SIGN	EACH	1.0	
14	1203+86.49		I-44	RT.	SIGN	EACH	1.0	
14	1205+35.31		I-44	RT.	SIGN	EACH	1.0	
14	1205+66.57		I-44	RT.	INLET	EACH	1.0	
16	1211+00.00	1213+22.32	I-44	LT.	WB SHOULDER	SY	295.8	END OF JSU0076
16	1211+00.00	1213+22.32	I-44	RT.	EB SHOULDER	SY	302.1	END OF JSU0076
16	1211+00.00	1213+22.32	I-44	LT.	GUARDCABLE	LF	222.3	
16	1211+00.00	1213+22.32	I-44	RT.	GUARDRAIL	LF	222.3	
16	1212+44.45	1213+22.32	I-44	LT.	GUARDRAIL	LF	77.9	
16	1212+24.74		I-44	LT.	SIGN	EACH	1.0	
16	1212+24.75		I-44	RT.	SIGN	EACH	1.0	
					TOTAL:	**1 LUMP SUM**		

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 3 OF 55

REV.

REMOVAL OF IMPROVEMENTS (BY OTHERS)

SHEET	ROADWAY	FROM STATION	TO STATION	LOCATION	DESCRIPTION	UNIT	QUANTITY	REMARKS
4	I-44	1071+99.40	1085+00.00	CL.	UNDERGROUND FIBER	LF	1400.9	
6	I-44	1085+00.00	1099+00.00	CL.	UNDERGROUND FIBER	LF	1399.0	
6	I-44	1090+33.44		LT.	SIGN	EACH	1.0	RELOCATE
7	I-44	1099+00.00	1113+00.00	CL.	UNDERGROUND FIBER	LF	1402.8	
7	I-44	1102+01.91		LT.	SIGN	EACH	1.0	RELOCATE
7	I-44	1110+63.80		RT.	SIGN	EACH	1.0	REPLACE
8	I-44	1113+00.00	1127+00.00	CL.	UNDERGROUND FIBER	LF	1400.3	
8	I-44	1121+41.59		RT.	SIGN	EACH	1.0	RELOCATE
8	I-44	1125+16.03		RT.	SIGN	EACH	1.0	RELOCATE
9	I-44	1127+00.00	1141+00.00	CL.	UNDERGROUND FIBER	LF	1400.5	
9	I-44	1129+88.31		RT.	SIGN	EACH	1.0	RELOCATE
9	I-44	1137+52.50		RT.	SIGN	EACH	1.0	RELOCATE
10	I-44	1141+00.00	1155+00.00	CL.	UNDERGROUND FIBER	LF	1400.4	
10	I-44	1152+31.98	1152+39.04	LT. & RT.	UNDERGROUND FIBER	LF	283.4	
10	I-44	1152+33.52	1152+40.68	LT. & RT.	UNDERGROUND FIBER	LF	284.0	
10	I-44	1152+35.07	1152+42.49	LT. & RT.	UNDERGROUND FIBER	LF	292.1	
11	I-44	1155+00.00	1169+00.00	CL.	UNDERGROUND FIBER	LF	1400.4	
11	I-44	1156+92.76		RT.	SIGN	EACH	1.0	RELOCATE
12	I-44	1169+00.00	1183+00.00	CL.	UNDERGROUND FIBER	LF	1400.5	
12	I-44	1177+78.19		RT.	SIGN	EACH	1.0	RELOCATE
13	I-44	1183+00.00	1197+00.00	CL.	UNDERGROUND FIBER	LF	1396.9	
14	I-44	1197+00.00	1211+00.00	CL.	UNDERGROUND FIBER	LF	1400.1	
16	I-44	1211+00.00	1213+22.32	CL.	UNDERGROUND FIBER	LF	222.4	
				TOTAL	**1 LUMP SUM**			

JSU0076 CLEARING AND GRUBBING

SHEET	FROM STATION	TO STATION	ROADWAY	LOCATION	CLEARING AND GRUBBING (ACRE)	REMARKS
5 TO 6	1080+87.49	1086+95.01	I-44	LT	0.2	
6	1097+90.35	1098+58.19	I-44	LT	0.4	
7	1101+00.80		I-44	RT	0.01	SINGLE TREE
7	1107+19.42		I-44	RT	0.01	SINGLE TREE
7	1107+59.03		I-44	RT	0.01	SINGLE TREE
7	1107+95.81		I-44	RT	0.01	SINGLE TREE
7	1108+37.91		I-44	RT	0.01	SINGLE TREE
7	1108+78.34		I-44	RT	0.01	SINGLE TREE
8	1119+15.92	1119+91.71	I-44	LT	0.1	
8	1121+02.12		I-44	LT	0.01	SINGLE TREE
8	1122+55.04		I-44	RT	0.01	SINGLE TREE
9	1138+82.39		I-44	RT	0.01	SINGLE TREE
10	1147+97.64		I-44	RT	0.01	SINGLE TREE
10	1148+77.58	1150+46.73	I-44	RT	0.2	
11	1164+73.19		I-44	RT	0.01	SINGLE TREE
11	1164+73.21	1167+19.87	I-44	RT	0.2	
11 TO 12	1167+56.23	1170+19.20	I-44	RT	0.2	
12	1173+09.75		I-44	RT	0.01	SINGLE TREE
12	1174+05.40		I-45	RT	0.01	SINGLE TREE
12	1174+92.30		I-46	RT	0.01	SINGLE TREE
				TOTAL	**2**	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE: I-44 | STATE: MO

DISTRICT: SW | SHEET NO.: 3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 4 OF 55

JSU0076 CLEARING AND GRUBBING (COST SHARE)

SHEET	FROM STATION	TO STATION	ROADWAY	LOCATION	CLEARING AND GRUBBING (ACRE)	REMARKS
45	0+00.00	6+78.46	DOLING TRAIL	LT & RT	0.3	
45	8+83.45	13+07.44	DOLING TRAIL	LT & RT	0.2	
				TOTAL	**1**	

JSU0076 CULVERT CLEANOUT

PLAN SHEET	STATION	ROUTE	LOCATION	CULVERT CLEANOUT (EA)	REMARKS
8	1113+90.5	I-44	LT. & RT.	1	EX. 42" PIPE
11	1157+48.5	I-44	LT. & RT.	1	EX. 30" PIPE
11	1165+49.5	I-44	LT. & RT.	1	EX. 30" PIPE
12	1171+91.2	I-44	LT. & RT.	1	EX. 48" PIPE
14	1199+14.8	I-44	LT. & RT.	1	EX. 6'X5' BOX CULVERT
			TOTAL	**5**	

JSU0076 EARTHWORK

ROADWAY	CUT	EARTH CUT	ROCK CUT	FILL	EXCAVATION TO BE USED IN EMBANKMENT (CUYD)	UNCLASSIFIED EXCAVATION (CUYD)	EMBANKMENT IN PLACE (CUYD)	COMPACTING EMBANKMENT (CUYD)	COMPACTING IN CUT (STA)	REMARKS
I-44	136,415	102,311	34,104	49,540					130.0	
I-44 PAVEMENT REMOVAL	-36,938	-36,938								
BROADWAY (INCLUDES WALLS)	2,075	1,868	208	0						10% OF TOTAL CUT ASSUMED TO BE ROCK CUT
WALL A9415										10% OF TOTAL CUT ASSUMED TO BE ROCK CUT
WALL A9416										10% OF TOTAL CUT ASSUMED TO BE ROCK CUT
GRANT (INCLUDES WALLS)	2,442	2,198	244	0						10% OF TOTAL CUT ASSUMED TO BE ROCK CUT
WALL A9419										10% OF TOTAL CUT ASSUMED TO BE ROCK CUT
WALL A9420										10% OF TOTAL CUT ASSUMED TO BE ROCK CUT
NATIONAL (INCLUDES WALLS)	3,005	2,705	301	0						10% OF TOTAL CUT ASSUMED TO BE ROCK CUT
WALL A9423										10% OF TOTAL CUT ASSUMED TO BE ROCK CUT
WALL A9424										10% OF TOTAL CUT ASSUMED TO BE ROCK CUT
GROUND IMPROVEMENT	5,594	2,797	2,797							50% OF TOTAL CUT ASSUMED TO BE ROCK CUT
SUBTOTALS	**112,593**	**74,940**	**37,653**	**49,540**	**103,271**					
					TOTALS	**112,593**	**0**	**49,540**	**130.0**	

JSU0076 EARTHWORK (COST SHARE)

ROADWAY	CUT	EARTH CUT	ROCK CUT	FILL	EXCAVATION TO BE USED IN EMBANKMENT (CUYD)	UNCLASSIFIED EXCAVATION (CUYD)	EMBANKMENT IN PLACE (CUYD)	COMPACTING EMBANKMENT (CUYD)	COMPACTING IN CUT (STA)	REMARKS
DOLING TRAIL	3,256	2,442	814	2,617					3.0	
SUBTOTALS	**3,256**	**2,442**	**814**	**2,617**	**2,849**					
					TOTALS	**3,256**	**0**	**2,617**	**3.0**	

NOTE: 25% SHRINK AND SWELL ASSUMED DURING COMPACTION

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 5 OF 55

REV.

JSU0076 ALTERNATE A (ASPHALT) PAVEMENT

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	15 INCHES, ASPHALTIC CONCRETE PAVEMENT SP125BLP OR SP125BSM (SQYD)	BITUMINOUS SHOULDER RUMBLE STRIP (STA)	REMARKS
4	1071+99.40	1074+59.40	I44	RT	562.5	5.2	INCLUDES FULL DEPTH INSIDE SHOULDER
4	1071+99.40	1078+99.80	I44	LT	1,520.4	14.0	INCLUDES FULL DEPTH INSIDE SHOULDER
4	1074+59.40	1083+92.09	I44	RT	3,542.9	18.7	INCLUDES FULL DEPTH SHOULDERS
4	1078+99.80	1085+00.00	I44	LT	1,252.1	12.0	INCLUDES FULL DEPTH INSIDE SHOULDER
4	1083+92.09	1085+00.00	I44	RT	402.6	2.2	INCLUDES FULL DEPTH OUTSIDE SHOULDER
4	2+21.42	3+09.04	WB I44 OFF RAMP @ ROUTE 13	LT & RT	240.5		INCLUDES FULL DEPTH INSIDE SHOULDER
4	2+06.55	3+69.42	EB I44 ON RAMP @ ROUTE 13	LT & RT	508.7		INCLUDES FULL DEPTH SHOULDERS
6	1085+00.00	1098+56.50	I44	LT	4,024.7	27.1	INCLUDES PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
6	1085+00.00	1098+56.50	I44	RT	5,632.0	27.1	INCLUDES FULL DEPTH OUTSIDE SHOULDER & PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
7	1100+12.49	1111+74.25	I44	LT	4,413.3	23.2	INCLUDES PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
7	1100+12.49	1111+74.25	I44	RT	5,642.4	23.2	INCLUDES FULL DEPTH OUTSIDE SHOULDER & PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
8	1113+31.23	1116+49.08	I44	LT	1,620.0	6.4	INCLUDES PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
8	1113+31.23	1120+70.50	I44	RT	3,825.1	14.8	INCLUDES FULL DEPTH OUTSIDE SHOULDER & PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
8	1116+49.08	1120+70.50	I44	LT	1,818.1	8.4	INCLUDES FULL DEPTH OUTSIDE SHOULDER & PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
8	1120+70.50	1127+00.00	I44	LT	2,129.3	12.6	INCLUDES FULL DEPTH SHOULDERS
8	1120+70.50	1127+00.00	I44	RT	2,120.1	12.6	INCLUDES FULL DEPTH SHOULDERS
9	1127+00.00	1137+74.01	I44	LT	3,643.4	21.5	INCLUDES FULL DEPTH SHOULDERS
9	1127+00.00	1137+74.01	I44	RT	3,616.5	21.5	INCLUDES FULL DEPTH SHOULDERS
9	1137+74.01	1141+00.00	I44	LT	788.1	6.5	INCLUDES FULL DEPTH OUTSIDE SHOULDER
9	1137+74.01	1141+00.00	I44	RT	766.4	6.5	INCLUDES FULL DEPTH OUTSIDE SHOULDER
10	1141+00.00	1141+41.27	I44	LT	99.1	0.8	INCLUDES FULL DEPTH OUTSIDE SHOULDER
10	1141+00.00	1155+00.00	I44	RT	3,306.9	28.0	INCLUDES FULL DEPTH OUTSIDE SHOULDER
10	1141+41.27	1155+00.00	I44	LT	2,035.3	27.2	
11	1155+00.00	1169+00.00	I44	LT	2,070.7	28.0	
11	1155+00.00	1169+00.00	I44	RT	3,285.3	28.0	INCLUDES FULL DEPTH OUTSIDE SHOULDER
12	1169+00.00	1177+94.18	I44	LT	3,001.0	17.9	INCLUDES PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
12	1169+00.00	1177+94.18	I44	RT	3,920.0	17.9	INCLUDES FULL DEPTH OUTSIDE SHOULDER & PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
12	1179+51.17	1183+00.00	I44	LT	1,757.8	7.0	INCLUDES PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
12	1179+51.17	1183+00.00	I44	RT	2,162.1	7.0	INCLUDES FULL DEPTH OUTSIDE SHOULDER & PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
13	1183+00.00	1197+00.00	I44	LT	2,618.0	28.0	
13	1183+00.00	1197+00.00	I44	RT	3,370.5	28.0	INCLUDES FULL DEPTH OUTSIDE SHOULDER
14	1197+00.00	1211+00.00	I44	LT	2,662.2	28.0	
14	1197+00.00	1211+00.00	I44	RT	4,490.8	28.0	INCLUDES FULL DEPTH OUTSIDE SHOULDER
14	3+17.00	4+77.13	WB I44 ON RAMP @ GLENSTONE	LT & RT	433.4		INCLUDES FULL DEPTH INSIDE SHOULDER
14	1+92.46	3+45.04	EB I44 OFF RAMP @ GLENSTONE	LT & RT	378.0		INCLUDES FULL DEPTH INSIDE SHOULDER
16	1211+00.00	1211+82.91	I44	LT	129.7	1.7	
16	1211+82.91	1213+22.32	I44	LT	397.6	2.8	INCLUDES FULL DEPTH INSIDE SHOULDER
16	1211+00.00	1213+22.32	I44	RT	532.4	4.4	INCLUDES FULL DEPTH OUTSIDE SHOULDER
				TOTALS	**84,719.7**	**546.2**	

SHEETS 6 & 7: BREAK FROM STATION 1098+55.50 TO STATION 1100+12.49 FOR BRIDGES A9413 & A9414

SHEETS 7 & 8: BREAK FROM STATION 1111+74.25 TO STATION 1113+31.23 FOR BRIDGES A9417 & A9418

SHEET 12: BREAK FROM STATION 1177+94.18 TO STATION 1179+51.17 FOR BRIDGES A9421 & A9422

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 6 OF 55

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\003_QU_!JSU0076_i1.dgn 7:27:51 AM 11/4/2024

JSU0076 ALTERNATE B (CONCRETE) PAVEMENT

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	CONCRETE PAVEMENT (11 ½ IN. NON-REINFORCED, 15 FT. JOINTS) (SQYD)	PORTLAND CEMENT CONCRETE SHOULDER RUMBLE STRIP (STA)	REMARKS
4	1071+99.40	1074+59.40	I44	RT	562.5	5.2	INCLUDES FULL DEPTH INSIDE SHOULDER
4	1071+99.40	1078+99.80	I44	LT	1,520.4	14.0	INCLUDES FULL DEPTH INSIDE SHOULDER
4	1074+59.40	1083+92.09	I44	RT	3,542.9	18.7	INCLUDES FULL DEPTH SHOULDERS
4	1078+99.80	1085+00.00	I44	LT	1,252.1	12.0	INCLUDES FULL DEPTH INSIDE SHOULDER
4	1083+92.09	1085+00.00	I44	RT	402.6	2.2	INCLUDES FULL DEPTH OUTSIDE SHOULDER
4	2+21.42	3+09.04	WB I44 OFF RAMP @ ROUTE 13	LT & RT	240.5		INCLUDES FULL DEPTH INSIDE SHOULDER
4	2+06.55	3+69.42	EB I44 ON RAMP @ ROUTE 13	LT & RT	508.7		INCLUDES FULL DEPTH SHOULDERS
6	1085+00.00	1098+56.50	I44	LT	4,024.7	27.1	INCLUDES PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
6	1085+00.00	1098+56.50	I44	RT	5,632.0	27.1	INCLUDES FULL DEPTH OUTSIDE SHOULDER & PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
7	1100+12.49	1111+74.25	I44	LT	4,413.3	23.2	INCLUDES PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
7	1100+12.49	1111+74.25	I44	RT	5,642.4	23.2	INCLUDES FULL DEPTH OUTSIDE SHOULDER & PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
8	1113+31.23	1116+49.08	I44	LT	1,620.0	6.4	INCLUDES PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
8	1113+31.23	1120+70.50	I44	RT	3,825.1	14.8	INCLUDES FULL DEPTH OUTSIDE SHOULDER & PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
8	1116+49.08	1120+70.50	I44	LT	1,818.1	8.4	INCLUDES FULL DEPTH OUTSIDE SHOULDER & PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
8	1120+70.50	1127+00.00	I44	LT	2,129.3	12.6	INCLUDES FULL DEPTH SHOULDERS
8	1120+70.50	1127+00.00	I44	RT	2,120.1	12.6	INCLUDES FULL DEPTH SHOULDERS
9	1127+00.00	1137+74.01	I44	LT	3,643.4	21.5	INCLUDES FULL DEPTH SHOULDERS
9	1127+00.00	1137+74.01	I44	RT	3,616.5	21.5	INCLUDES FULL DEPTH SHOULDERS
9	1137+74.01	1141+00.00	I44	LT	788.1	6.5	INCLUDES FULL DEPTH OUTSIDE SHOULDER
9	1137+74.01	1141+00.00	I44	RT	766.4	6.5	INCLUDES FULL DEPTH OUTSIDE SHOULDER
10	1141+00.00	1141+41.27	I44	LT	99.1	0.8	INCLUDES FULL DEPTH OUTSIDE SHOULDER
10	1141+00.00	1155+00.00	I44	RT	3,306.9	28.0	INCLUDES FULL DEPTH OUTSIDE SHOULDER
10	1141+41.27	1155+00.00	I44	LT	2,035.3	27.2	
11	1155+00.00	1169+00.00	I44	LT	2,070.7	28.0	
11	1155+00.00	1169+00.00	I44	RT	3,285.3	28.0	INCLUDES FULL DEPTH OUTSIDE SHOULDER
12	1169+00.00	1177+94.18	I44	LT	3,001.0	17.9	INCLUDES PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
12	1169+00.00	1177+94.18	I44	RT	3,920.0	17.9	INCLUDES FULL DEPTH OUTSIDE SHOULDER & PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
12	1179+51.17	1183+00.00	I44	LT	1,757.8	7.0	INCLUDES PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
12	1179+51.17	1183+00.00	I44	RT	2,162.1	7.0	INCLUDES FULL DEPTH OUTSIDE SHOULDER & PAVEMENT REPLACEMENT IN PROFILE ADJUSTMENT AREAS
13	1183+00.00	1197+00.00	I44	LT	2,618.0	28.0	
13	1183+00.00	1197+00.00	I44	RT	3,370.5	28.0	INCLUDES FULL DEPTH OUTSIDE SHOULDER
14	1197+00.00	1211+00.00	I44	LT	2,662.2	28.0	
14	1197+00.00	1211+00.00	I44	RT	4,490.8	28.0	INCLUDES FULL DEPTH OUTSIDE SHOULDER
14	3+17.00	4+77.13	WB I44 ON RAMP @ GLENSTONE	LT & RT	433.4		INCLUDES FULL DEPTH INSIDE SHOULDER
14	1+92.46	3+45.04	EB I44 OFF RAMP @ GLENSTONE	LT & RT	378.0		INCLUDES FULL DEPTH INSIDE SHOULDER
16	1211+00.00	1211+82.91	I44	LT	129.7	1.7	
16	1211+82.91	1213+22.32	I44	LT	397.6	2.8	INCLUDES FULL DEPTH INSIDE SHOULDER
16	1211+00.00	1213+22.32	I44	RT	532.4	4.4	INCLUDES FULL DEPTH OUTSIDE SHOULDER
				TOTALS	**84,719.7**	**546.2**	

SHEETS 6 & 7: BREAK FROM STATION 1098+55.50 TO STATION 1100+12.49 FOR BRIDGES A9413 & A9414

SHEETS 7 & 8: BREAK FROM STATION 1111+74.25 TO STATION 1113+31.23 FOR BRIDGES A9417 & A9418

SHEET 12: BREAK FROM STATION 1177+94.18 TO STATION 1179+51.17 FOR BRIDGES A9421 & A9422

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 7 OF 55

JSU0076 ALTERNATE C (ASPHALT) SHOULDERS

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	TYPE A2 SHOULDER (SQYD)	CONCRETE CURB (6 IN. HEIGHT AND UNDER) TYPE S (LF)	REMARKS
4	1071+99.40	1074+59.40	I44	RT	214.6		
4	1071+99.40	1079+44.05	I44	LT	519.6		
4	1078+99.80	1083+92.09	I44	LT	437.6		
4	1079+23.08	1085+00.00	I44	LT	440.4		
4	1083+92.09	1085+00.00	I44	LT & RT	215.8		
4	2+21.42	3+09.04	WB I44 OFF RAMP @ ROUTE 13	RT	38.9		
6	1085+00.00	1098+56.50	I44	LT & RT	2,708.3		
6	1085+00.00	1098+56.50	I44	LT	1,202.6		
7	1100+11.49	1111+74.23	I44	LT & RT	2,330.0		
7	1100+11.49	1111+74.23	I44	LT	1,033.3		
8	1113+31.25	1116+49.08	I44	LT	282.8		
8	1113+31.25	1120+70.50	I44	LT & RT	1,481.9		
9	1137+74.01	1141+00.00	I44	LT & RT	652.0		
10	1141+00.00	1155+00.00	I44	LT & RT	2,800.0		
10	1141+41.27	1155+00.00	I44	LT	1,207.8		
11	1155+00.00	1169+00.00	I44	LT & RT	2,800.0		
11	1155+00.00	1169+00.00	I44	LT	1,244.4		
12	1169+00.00	1177+94.03	I44	LT & RT	1,791.7		
12	1169+00.00	1177+94.03	I44	LT	795.1		
12	1179+51.05	1183+00.00	I44	LT & RT	701.0		
12	1179+51.05	1183+00.00	I44	LT	310.4		
13	1183+00.00	1197+00.00	I44	LT & RT	2,792.3		
13	1183+00.00	1197+00.00	I44	LT	1,241.2		
13	1184+50.00	1192+00.00	I44	RT		750	
14	1197+00.00	1211+00.00	I44	LT & RT	2,800.0		
14	1197+00.00	1200+37.59	I44	LT	248.8		
14	1199+88.29	1211+00.00	I44	LT	985.8		
14	1204+46.36	1205+10.36	I44	RT	28.9		
14	3+17.00	4+77.13	WB I44 ON RAMP @ GLENSTONE	RT	70.7		
14	1+92.46	3+45.04	EB I44 OFF RAMP @ GLENSTONE	RT	67.4		
16	1211+00.00	1211+82.91	I44	LT & RT	165.8		
16	1211+00.00	1212+91.73	I44	LT	197.6		
16	1211+82.91	1212+91.73	I44	RT	100.8		
				TOTALS	**31,907.5**	**750**	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 3
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 8 OF 55

REV.

JSU0076 ALTERNATE D (CONCRETE) SHOULDERS

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	TYPE A2 SHOULDER (SQYD)	INTEGRAL CURB (6 IN. HEIGHT AND UNDER) TYPE A (LF)	REMARKS
4	1078+99.80	1074+59.40	I44	RT	214.6		
4	1078+99.80	1079+44.05	I44	LT	519.6		
4	1078+99.80	1083+92.09	I44	LT	437.6		
4	1079+23.08	1085+00.00	I44	LT	440.4		
4	1083+92.09	1085+00.00	I44	LT & RT	215.8		
4	2+21.42	3+09.04	WB I44 OFF RAMP @ ROUTE 13	RT	38.9		
6	1085+00.00	1098+56.50	I44	LT & RT	2,708.3		
6	1085+00.00	1098+56.50	I44	LT	1,202.6		
7	1100+11.49	1111+74.23	I44	LT & RT	2,330.0		
7	1100+11.49	1111+74.23	I44	LT	1,033.3		
8	1113+31.25	1116+49.08	I44	LT	282.8		
8	1113+31.25	1120+70.50	I44	LT & RT	1,481.9		
9	1137+74.01	1141+00.00	I44	LT & RT	652.0		
10	1141+00.00	1155+00.00	I44	LT & RT	2,800.0		
10	1141+41.27	1155+00.00	I44	LT	1,207.8		
11	1155+00.00	1169+00.00	I44	LT & RT	2,800.0		
11	1155+00.00	1169+00.00	I44	LT	1,244.4		
12	1169+00.00	1177+94.03	I44	LT & RT	1,791.7		
12	1169+00.00	1177+94.03	I44	LT	795.1		
12	1179+51.05	1183+00.00	I44	LT & RT	701.0		
12	1179+51.05	1183+00.00	I44	LT	310.4		
13	1183+00.00	1197+00.00	I44	LT & RT	2,792.3		
13	1183+00.00	1197+00.00	I44	LT	1,241.2		
13	1184+50.00	1192+00.00	I44	RT		750	
14	1197+00.00	1211+00.00	I44	LT & RT	2,800.0		
14	1197+00.00	1200+37.59	I44	LT	248.8		
14	1199+88.29	1211+00.00	I44	LT	985.8		
14	1204+46.36	1205+10.36	I44	RT	28.9		
14	3+17.00	4+77.13	WB I44 ON RAMP @ GLENSTONE	RT	70.7		
14	1+92.46	3+45.04	EB I44 OFF RAMP @ GLENSTONE	RT	67.4		
16	1211+00.00	1211+82.91	I44	LT & RT	165.8		
16	1211+00.00	1212+91.73	I44	LT	197.6		
16	1211+82.91	1212+91.73	I44	RT	100.8		
				TOTALS	**31,907.5**	**750**	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE	REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

©Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 9 OF 55

JSU0076 BASE

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	OPTIONAL BASE (SQYD)	REMARKS
4	1071+99.40	1085+00.00	I44	LT	4477	
4	1071+99.40	1085+00.00	I44	RT	4920	
4	2+21.42	3+09.04	WB I44 OFF RAMP @ ROUTE 13	LT & RT	299	
4	2+06.55	3+69.42	EB I44 ON RAMP @ ROUTE 13	LT & RT	545	
6	1085+00.00	1098+55.50	I44	LT	6732	
6	1085+00.00	1098+55.50	I44	RT	7136	
7	1100+12.49	1111+74.25	I44	LT	6741	
7	1100+12.49	1111+74.25	I44	RT	6937	
8	1113+31.23	1127+00.00	I44	LT	6743	
8	1113+31.23	1127+00.00	I44	RT	6838	
9	1127+00.00	1141+00.00	I44	LT	4913	
9	1127+00.00	1141+00.00	I44	RT	4864	
10	1141+00.00	1155+00.00	I44	LT	4898	
10	1141+00.00	1155+00.00	I44	RT	4862	
11	1155+00.00	1169+00.00	I44	LT	4871	
11	1155+00.00	1169+00.00	I44	RT	4841	
12	1169+00.00	1177+94.18	I44	LT	4791	
12	1169+00.00	1177+94.18	I44	RT	4915	
12	1179+51.17	1183+00.00	I44	LT	2457	
12	1179+51.17	1183+00.00	I44	RT	2551	
13	1183+00.00	1197+00.00	I44	LT	5410	
13	1183+00.00	1197+00.00	I44	RT	4922	
14	1197+00.00	1211+00.00	I44	LT	5452	
14	1197+00.00	1211+00.00	I44	RT	6075	
14	3+17.00	4+77.13	WB I44 ON RAMP @ GLENSTONE	LT & RT	540	
14	1+92.46	3+45.04	EB I44 OFF RAMP @ GLENSTONE	LT & RT	480	
16	1211+00.00	1213+22.32	I44	LT	794	
16	1211+00.00	1213+22.32	I44	RT	779	
				TOTALS	**128,191**	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

©Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 10 OF 55

JSU0076 BOX CULVERTS

SHEET	CENTERLINE STATION	BASELINE	LOCATION	LENGTH (FT)	CLASS 4 EXCAVATION (CUYD)	CLASS 4 EXCAVATION IN ROCK (CUYD)	CLASS B-1 CONCRETE (CULVERTS) (CUYD)	REINFORCING STEEL (CULVERTS) (LB)	REMARKS
14	1199+14.43	I-44	LEFT	34'-5 5/8"	44	3	19.3	2,930	SINGLE 6' X 5' BOX CULVERT EXTENSION
14	1199+14.43	I-44	RIGHT	35'-6 3/8"	52	3	19.9	3,000	SINGLE 6' X 5' BOX CULVERT EXTENSION
					496		5.2	1,020	FROM MEDIAN DETENTION BOXES AND END CAPS TABLE
				TOTALS	**592**	**6**	**44.4**	**6,950**	

JSU0076 BOX CULVERTS (COST SHARE)

SHEET	CENTERLINE STATION	BASELINE	LOCATION	LENGTH (FT)	CLASS 4 EXCAVATION (CUYD)	CLASS 4 EXCAVATION IN ROCK (CUYD)	CLASS B-1 CONCRETE (CULVERTS) (CUYD)	REINFORCING STEEL (CULVERTS) (LB)	REMARKS
9	1129+27.24	I-44	LEFT/RIGHT	301'-9 7/8"	4,676	520	751.9	102,140	DOLING TRAIL - SINGLE 14' X 10' BOX CULVERT UNDER I-44
				TOTALS	**4,676**	**520**	**751.9**	**102,140**	

JSU0076 MEDIAN DETENTION BOXES AND END CAPS

PLAN SHEET	CULVERT SECTION SHEET	FROM STATION	TO STATION	ROADWAY	12' X 3' BOX CULVERT (UNDERGOUND DETENTION) (LF)	12' X 4' BOX CULVERT (UNDERGROUND DETENTION) (LF)	CLASS B-1 CONCRETE (CULVERTS)* (CUYD)	REINFORCING STEEL (CULVERTS)* (LB)	CLASS 4 EXCAVATION* (CUYD)	REMARKS
9	6	1134+20.5	1135+22.5	I-44	100		2.2	430	156	
13 & 14	10	1195+56.8	1197+58.8	I-44		200	3.0	590	340	
				TOTAL	**100**	**200**	**5.2**	**1,020**	**496**	

NOTE: SEE BOX CULVERT TABLE FOR TOTAL CLASS B-1 CONCRETE (CULVERTS), REINFORCING STEEL (CULVERTS), AND CLASS 4 EXCAVATION QUANTITY TOTALS

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 11 OF 55

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

JSU0076 DRAINAGE PIPES

PLAN SHEET	CULVERT SECTION SHEET	FROM STRUCT.	TO STRUCT.	PIPE COLLAR, TYPE A (EA)	12 IN. PIPE GROUP A (LF)	15 IN. PIPE GROUP A (LF)	18 IN. PIPE GROUP A (LF)	24 IN. PIPE GROUP A (LF)	30 IN. PIPE GROUP A (LF)	42 IN. PIPE GROUP A (LF)	48 IN. PIPE GROUP A (LF)	CLASS 3 EXCAVATION (CUYD)	REMARKS
4	1	1	2					189				172	
4	1	2	3					247				164	
4	1	3	4B					247				155	
4	1 TO 2	4B	5			247						107	
4	2	5	6B			247						86	
4	2	6B	6A		2							1	
4	2	4B	4A		2							1	
6	3	7	8A			91						80	
6	3	8A	8B			2						1	
6	3	8B	9			297						115	
6	3	9	10B			297						105	
6	3	10B	10A		2							1	
7	4	12A	12C			81						37	
7	4	12C	12E			8						2	
7	4	12E	13B			363						124	
7	4	13B	14B			373						139	
7	4	14B	14A		2							1	
7	4	13B	13A		2							1	
7	4	12C	12B		2							1	
7	4	12B	12D		8							1	
8	5	17A	17B		2							1	
8	5	17B	18			247						71	
8	5	18	19B			247						87	
8	5	19B	20			247						85	
8	5	20	21			247						97	
8	5	21	22				87					79	
8	5	19B	19A		2							1	
9	6	23A	23B		2							1	
9	6	23B	24			247						87	
9	6	24	25			150						69	
9	6	25	26				100					102	
9	7	25	27					164				110	
9	7	27	28B					285				161	
9 TO 10	7	28B	29					285				157	
10	7	29	30B					285				158	
10	7 TO 8	30B	31				285					121	
10	8	31	32B				285					117	
10	8	32B	33			285						101	
10 TO 11	8	33	34B			285						98	
11	8	34B	34A		2							1	
9	8	28B	28A		2							1	
10	8	30A	30B		2							1	
10	8	32A	32B		2							1	
11	9	37	38					52				12	
11	9	38	39	1					10			2	
11	9	39	41			346						146	
			SUBTOTALS:	**1**	**34**	**4,307**	**757**	**1,754**	**10**	**0**	**0**		

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 12 OF 55

REV.

JSU0076 DRAINAGE PIPES

PLAN SHEET	CULVERT SECTION SHEET	FROM STRUCT.	TO STRUCT.	PIPE COLLAR, TYPE A (EA)	12 IN. PIPE GROUP A (LF)	15 IN. PIPE GROUP A (LF)	18 IN. PIPE GROUP A (LF)	24 IN. PIPE GROUP A (LF)	30 IN. PIPE GROUP A (LF)	42 IN. PIPE GROUP A (LF)	48 IN. PIPE GROUP A (LF)	CLASS 3 EXCAVATION (CUYD)	REMARKS
12	9	41	44B			347						117	
12	9	44B	44A		2							1	
13	10	45A	45B		2							1	
13	10	45B	46			247						94	
13	10	46	47B			247						96	
13	10	47B	48					247				142	
13	10	48	49B					248				146	
13	10	49B	50					103				77	
13	10	50	51			94						84	
13	11	47B	47A		2							1	
13	11	49B	49A		2							1	
14	11	50	52B						242			212	
14	11	52B	53A						247			211	
14	11 TO 12	53A	54B						247			241	
14	12	54B	55					247				166	
14	12	55	56					247				168	
14 + 16	12	56	57					307				250	
16	12	57	58A					187				150	
16	12	58A	59				247					134	
16	12 TO 13	59	60A				247					129	
16	13	60A	60B		2							1	
14	13	52B	52A		2							1	
14	13	54B	54A		2							1	
16	13	58A	58B		2							1	
8	14	15	–	1						28		12	
8	14	–	16	1						16		14	
11	14	36B	36A					46				22	
11	14	35B	–	1					17			1	
11	14	–	35A	1					6			2	
6 TO 7	14	11D	11C							26		27	
7	14	11C	11B							170		265	
6 TO 7	14	11B	11A				28					16	
12	15	43	–	1							13	2	
12	15	–	42	1							41	12	
12	15	95	96				58					8	
12	15	96	97				221					124	
14	16	106	107					120				130	
14	16	108	109				105					83	
13	17	98	99			123						78	
13	17	99	100			123						78	
13	17	100	101			98						61	
13	17	101	102				98					68	
13	17	102	103				133					96	
13	17	103	104				467					252	
13	17	104	105				27					6	
12	16	40	–					4				1	
12	16	–	–					2				2	
			SUBTOTALS:	**6**	**16**	**1,279**	**1,631**	**1,758**	**759**	**240**	**54**		
												6,946	SEE STRUCTURES FOR TOTAL
			TOTALS:	**7**	**50**	**5,586**	**2,388**	**3,506**	**769**	**240**	**54**		

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DATE	DESCRIPTION	REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 13 OF 55

JSU0076 FLARED END SECTIONS

PLAN SHEET	CULVERT SECTION SHEET	FROM STRUCT.	TO STRUCT.	15 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	18 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	24 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	30 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	42 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	48 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	ROCK LINING (CUYD)	REMARKS
4	1	1	1			1				3.11	
6	3	7	7	1						1.78	
7	4	12A	12A	1						6.07	
8	5	22	22		1					2.22	
9	6	26	26		1					3.11	
11	9	37	37			1				0	
13	10	51	51	1						3.11	
8	14	15	15					1		0	
8	14	16	16					1		12.59	
11	14	36B	36B			1				0	
11	14	36A	36A			1				2.22	
11	14	35B	35B				1			0	
11	14	35A	35A				1			4.15	
6	14	11D	11D					1		121.4	
12	15	43	43						1	17.78	
12	15	42	42						1	0	
12	15	95	95		1					1.82	
14	16	106	106			1				3.11	
14	16	108	108		1					1.78	
13	17	105	105		1					1.78	
12	16	40	40			1				10.00	
											SEE ROCK LINING QUANTITY TABLE FOR FINAL QUANTITY
			TOTALS:	**3**	**5**	**6**	**2**	**3**	**2**	**197**	

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 14 OF 55

REV.

JSU0076 DRAINAGE STRUCTURES

STRUCT. NO.	PLAN SHEET	CULVERT SECTION SHEET	STATION	ROADWAY	LOCATION	STD.	TYPE	ACTUAL DEPTH	PRECAST CONCRETE MANHOLE - 48 IN. (FT)	PRECAST CONCRETE MANHOLE - 72 IN. (FT)	PRECAST CONCRETE DROP INLET 3 FT X 3 FT (FT)	PRECAST CONCRETE DROP INLET 4 FT X 2 FT (FT)	PRECAST CONCRETE DROP INLET 5 FT X 3 FT (FT)	SPECIAL INLET NO. 1 (FT)	SPECIAL INLET N0. 2 (FT)	CLASS 3 EXCAVATION (CUYD)	CLASS 3 EXCAVATION IN ROCK (CUYD)	PIPE OPENINGS (NUMBER - SIZE)	REMARKS
2	4	1	1073+95.3	I44	CL		SPC1	5.79						5		20		2-24"	
3	4	1	1076+45.0	I44	RT	731.00U	4' MH	5.83	6							7		2-24"	
4B	4	1	1078+95.0	I44	RT	731.10S	A 4 X 2	5.72				5				7		1-24", 1-15", 1-12"	
5	4	2	1081+45.0	I44	RT	731.00U	4' MH	4.86	5							5		2-15"	
6B	4	2	1083+95.0	I44	RT	731.10S	A 4 X 2	4.75				4				5		1-15", 1-12"	
6A	4	2	1083+95.0	I44	LT	731.10S	A 4 X 2	4.55				4				5		1-12"	
4A	4	2	1078+95.0	I44	LT	731.10S	A 4 X 2	4.55				4				4		1-12"	
8A	6	3	1088+47.1	I44	LT	731.10S	A 4 X 2	5.11				4				6		2-15"	
8B	6	3	1088+47.1	I44	RT	731.10S	A 4 X 2	4.96				4				5		2-15"	
9	6	3	1091+47.1	I44	RT	731.00U	4' MH	4.96	5							5		2-15"	
10B	6	3	1094+50.0	I44	RT	731.10S	A 4 X 2	4.81				4				4		1-15", 1-12"	
10A	6	3	1094+50.0	I44	LT	731.10S	A 4 X 2	4.51				4				4		1-12"	
12C	7	4	1100+50.0	I44	RT	731.10S	A 4 X 2	5.60				5				4		1-12", 2-15"	
12E	7	4	1100+60.0	I44	RT	731.10S	A 4 X 2	5.38				4				4		2-15"	
13B	7	4	1104+25.0	I44	RT	731.10S	A 4 X 2	4.85				4				5		2-15", 1-12"	
14B	7	4	1108+00.0	I44	RT	731.10S	A 4 X 2	4.64				4				4		1-15", 1-12"	
14A	7	4	1108+00.0	I44	LT	731.10S	A 4 X 2	4.51				4				4		1-12"	
13A	7	4	1104+25.0	I44	LT	731.10S	A 4 X 2	4.50				4				4		1-12"	
12B	7	4	1100+50.0	I44	LT	731.10S	A 4 X 2	4.93				4				7		2-12"	
12D	7	4	1100+60.0	I44	LT	731.10S	A 4 X 2	4.50				4				2		1-12"	
17A	8	5	1115+75.0	I44	LT	731.10S	A 4 X 2	4.52				4				2		1-12"	
17B	8	5	1115+75.0	I44	RT	731.10S	A 4 X 2	4.77				4				2		1-12", 1-15"	
18	8	5	1118+25.0	I44	RT	731.00U	4' MH	4.88	5							5		2-15"	
19B	8	5	1120+75.0	I44	RT	731.10S	A 4 X 2	4.85				4				5		2-15", 1-12"	
20	8	5	1123+25.1	I44	RT	731.00U	4' MH	4.74	5							4		2-15"	
21	8	5	1125+75.0	I44	CL		SPC1	5.19						4		10		1-15", 1-18"	
19A	8	5	1120+75.0	I44	LT	731.10S	A 4 X 2	4.51				4				4		1-12"	
23A	9	6	1130+20.0	I44	LT	731.10S	A 4 X 2	4.50				4				4		1-12"	
23B	9	6	1130+20.0	I44	RT	731.10S	A 4 X 2	4.76				4				4		1-12", 1-15"	
24	9	6	1132+70.0	I44	RT	731.00U	4' MH	4.88	5							5		2-15"	
27	9	7	1136+87.5	I44	RT	731.00U	4' MH	5.63	6							7		2-24"	
28B	9	7	1139+75.0	I44	RT	731.10S	A 4 X 2	5.61				5				6		2-24", 1-12"	
29	10	7	1142+62.5	I44	RT	731.00U	4' MH	5.63	6							6		2-24"	
30B	10	7	1145+50.0	I44	RT	731.10S	A 4 X 2	5.51				5				6		1-24", 1-12", 1-18"	
31	10	8	1148+37.5	I44	RT	731.00U	4' MH	5.20	5							5		2-18"	
32B	10	8	1151+25.0	I44	RT	731.10S	A 4 X 2	5.09				4				5		1-18", 1-12", 1-15"	
33	10	8	1154+12.5	I44	RT	731.00U	4' MH	4.87	5							5		2-15"	
34B	11	8	1157+00.0	I44	RT	731.10S	A 4 X 2	4.77				4				9		1-15", 1-12"	
34A	11	8	1157+00.0	I44	LT	731.10S	A 4 X 2	4.51				4				4		1-12"	
28A	9	8	1139+75.0	I44	LT	731.10S	A 4 X 2	4.52				4				4		1-12"	
30A	9	8	1145+50.0	I44	LT	731.10S	A 4 X 2	4.50				4				4		1-12"	
32A	10	8	1151+25.0	I44	LT	731.10S	A 4 X 2	4.50				4				4		1-12"	
38	11	9	1165+49.5	I44	RT	731.10S	A 5 X 3	5.49					5			1		1-30", 1-24"	
39	10	9	1165+49.4	I44	CL		SPC2	7.55							7	32		1-15"	
41	11	9	1168+99.5	I44	RT	731.00U	4' MH	4.88	5							5		2-15"	
44B	11	9	1172+49.5	I44	RT	731.10S	A 4 X 2	4.76				4				4		1-15", 1-12"	
44A	12	9	1172+49.5	I44	LT	731.10S	A 4 X 2	4.51				4				4		1-12"	
								SUBTOTALS	**58**	**0**	**0**	**132**	**5**	**9**	**7**	**267**	**0**		

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 15 OF 55

REV.

JSU0076 DRAINAGE STRUCTURES

STRUCT. NO.	PLAN SHEET	CULVERT SECTION SHEET	STATION	ROADWAY	LOCATION	STD.	TYPE	ACTUAL DEPTH	PRECAST CONCRETE MANHOLE - 48 IN. (FT)	PRECAST CONCRETE MANHOLE - 72 IN. (FT)	PRECAST CONCRETE DROP INLET 3 FT X 3 FT (FT)	PRECAST CONCRETE DROP INLET 4 FT X 2 FT (FT)	PRECAST CONCRETE DROP INLET 5 FT X 3 FT (FT)	SPECIAL INLET NO. 1 (FT)	SPECIAL INLET N0. 2 (FT)	CLASS 3 EXCAVATION (CUYD)	CLASS 3 EXCAVATION IN ROCK (CUYD)	PIPE OPENINGS (NUMBER - SIZE)	REMARKS
45A	12	10	1184+50.0	I44	LT	731.10S	A 4 X 2	4.51				4				5		1-12"	
45B	13	10	1184+50.0	I44	RT	731.10S	A 4 X 2	4.76				4				5		1-12", 1-15"	
46	13	10	1187+00.0	I44	RT	731.00U	4' MH	4.98	5							5		2-15"	
47B	13	10	1189+50.0	I44	RT	731.10S	A 4 X 2	5.51				5				6		1-15", 1-12", 1-24"	
48	13	10	1192+03.9	I44	RT	731.00U	4' MH	5.63	6							7		2-24"	
49B	13	10	1194+54.0	I44	RT	731.10S	A 4 X 2	5.66				5				6		2-24", 1-12"	
47A	13	11	1189+50.0	I44	LT	731.10S	A 4 X 2	4.54				4				4		1-12"	
49A	13	11	1194+54.0	I44	LT	731.10S	A 4 X 2	4.50				4				5		1-12"	
52B	13	11	1200+00.0	I44	RT	731.10S	A 4 X 2	6.53				6				8		2-30", 1-12"	
53A	14	11	1202+50.0	I44	RT	731.00U	4' MH	6.50	7							9		2-30"	
54B	14	12	1205+00.0	I44	RT	731.10S	A 4 X 2	5.87				5				6		1-30", 1-24", 1-12"	
55	14	12	1207+50.0	I44	RT	731.00U	4' MH	5.84	6							8		2-24"	
56	14	12	1210+00.00	I44	CL		SPC1	5.58						5		14		2-24"	
57	15	12	1213+10.0	I44	LT	731.00U	4' MH	5.70	6							10		2-24"	
58A	16	12	1215+00.0	I44	LT	731.10S	A 4 X 2	5.56				5				8		1-24", 1-12", 1-18"	
59	16	12	1217+50.0	I44	LT	731.00U	4' MH	5.11	5							7		2-18"	
60A	16	13	1220+00.0	I44	LT	731.10S	A 4 X 2	5.01				4				6		1-18", 1-12"	
60B	16	13	1220+00.0	I44	RT	731.10S	A 4 X 2	4.51				4				5		1-12"	
52A	14	13	1200+00.0	I44	LT	731.10S	A 4 X 2	4.61				4				5		1-12"	
54A	14	13	1205+00.0	I44	LT	731.10S	A 4 X 2	4.51				4				5		1-12"	
58B	16	13	1215+00.0	I44	RT	731.10S	A 4 X 2	4.61				4				6		1-12"	
11C	7	14	1099+14.7	I44	LT	731.00U	6' MH	8.68		9						26		2-42"	
11B	7	14	1099+08.4	I44	RT	731.00U	6' MH	5.20		5						21		1-42', 1-18"	
11A	6	14	1098+94.3	I44	RT			4.59					5			14		1-18"	
96	12	15	1180+56.8	I44	RT	731.00U	4' MH	9.10	9							7		2-18"	
97	12	15	1182+80.7	I44	RT			5.81					6			16		1-18"	
107	14	16	1202+30.7	I44	LT			3.35			3					12		1-24"	
109	14	16	1206+43.7	I44	RT			4.52			5					18		1-18"	
98	13	17	1186+10.0	I44	RT	731.10S	A 4 X 2	4.76				4				9		1-15"	
99	13	17	1187+35.0	I44	RT	731.10S	A 4 X 2	4.85				4				9		2-15"	
100	13	17	1188+60.0	I44	RT	731.10S	A 4 X 2	4.89				4				9		2-15"	
101	13	17	1189+60.0	I44	RT	731.10S	A 4 X 2	4.95				4				9		2-15"	
102	13	17	1190+63.8	I44	RT	731.10S	A 4 X 2	5.08				4				9		2-15"	
103	13	17	1191+98.1	I44	RT	731.10S	A 4 X 2	5.16				4				9		2-15"	
104	13	17	1196+67.5	I44	RT	731.00U	4' MH	6.29	6							4		2-15"	
25	9	6	1134+71.50	I44	RT/LT			6.00				6						1-15", 1-18", 1-24"	
50	13 TO 14	10	1196+62.37	I44	RT/LT			6.00				6						1-24", 1-15", 1-30"	
								SUBTOTALS	**50**	**14**	**8**	**98**	**11**	**5**	**0**	**312**	**0**		
																6,943			TOTAL FROM PIPES
																	752		10% OF CLASS 3 EXC.
								TOTALS	**108**	**14**	**8**	**230**	**16**	**14**	**7**	**6,770**	**752**		

NOTE: EXCAVATION QUANTITIES ASSUME PRECAST CONCRETE STRUCTURES

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 16 OF 55

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

JSU0076 DRAINAGE STRUCTURE LIDS

STRUCT. NO.	PLAN SHEET	CULVERT SECTION SHEET	STATION	ROADWAY	LOCATION	MANHOLE FRAME AND COVER, TYPE 1B (EA)	MANHOLE FRAME AND COVER, TYPE 3 (EA)	GRATE AND BEARING PLATE (3 FT. X 3 FT. OR 914MM X 914MM) (EA)	GRATE AND BEARING PLATE (5 FT. X 3 FT. OR 1500MM X 914MM) (EA)	CURVED VANE GRATE AND FRAME (4 FT. X 2 FT. OR 1200MM X 600MM) (EA)	REMARKS
2	4	1	1073+95.3	I44	RT						
3	4	1	1076+45.0	I44	RT	1					
4B	4	1	1078+95.0	I44	RT					1	
5	4	2	1081+45.0	I44	RT	1					
6B	4	2	1083+95.0	I44	RT					1	
6A	4	2	1083+95.0	I44	LT					1	
4A	4	2	1078+95.0	I44	LT					1	
8A	6	3	1088+47.1	I44	LT					1	
8B	6	3	1088+47.1	I44	RT					1	
9	6	3	1091+47.1	I44	RT	1					
10B	6	3	1094+50.0	I44	RT					1	
10A	6	3	1094+50.0	I44	LT					1	
12C	7	4	1100+50.0	I44	RT					1	
12E	7	4	1100+60.0	I44	RT					1	
13B	7	4	1104+25.0	I44	RT					1	
14B	7	4	1108+00.0	I44	RT					1	
14A	7	4	1108+00.0	I44	LT					1	
13A	7	4	1104+25.0	I44	LT					1	
12B	7	4	1100+50.0	I44	LT					1	
12D	7	4	1100+60.0	I44	LT					1	
17A	8	5	1115+75.0	I44	LT					1	
17B	8	5	1115+75.0	I44	RT					1	
18	8	5	1118+25.0	I44	RT	1					
19B	8	5	1120+75.0	I44	RT					1	
20	8	5	1123+25.1	I44	RT	1					
21	8	5	1125+75.0	I44	LT						
19A	8	5	1120+75.0	I44	LT					1	
23A	9	6	1130+20.0	I44	LT					1	
23B	9	6	1130+20.0	I44	RT					1	
24	9	6	1132+70.0	I44	RT	1					
27	9	7	1136+87.5	I44	RT	1					
28B	9	7	1139+75.0	I44	RT					1	
29	10	7	1142+62.5	I44	RT	1					
30B	10	7	1145+50.0	I44	RT					1	
31	10	8	1148+37.5	I44	RT	1					
32B	10	8	1151+25.0	I44	RT					1	
33	10	8	1154+12.5	I44	RT	1					
34B	11	8	1157+00.0	I44	RT					1	
34A	11	8	1157+00.0	I44	LT					1	
28A	9	8	1139+75.0	I44	LT					1	
30A	9	8	1145+50.0	I44	LT					1	
32A	10	8	1151+25.0	I44	LT					1	
38	11	9	1165+49.5	I44	RT				1		
39	10	9	1165+49.4	I44	CL						
41	11	9	1168+99.5	I44	RT	1					
44B	11	9	1172+49.5	I44	RT					1	
44A	12	9	1172+49.5	I44	LT					1	
					SUBTOTALS	**11**	**0**	**0**	**1**	**32**	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE | REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 17 OF 55

JSU0076 DRAINAGE STRUCTURE LIDS

STRUCT. NO.	PLAN SHEET	CULVERT SECTION SHEET	STATION	ROADWAY	LOCATION	MANHOLE FRAME AND COVER, TYPE 1B (EA)	MANHOLE FRAME AND COVER, TYPE 3 (EA)	GRATE AND BEARING PLATE (3 FT. X 3 FT. OR 914MM X 914MM) (EA)	GRATE AND BEARING PLATE (5 FT. X 3 FT. OR 1500MM X 914MM) (EA)	CURVED VANE GRATE AND FRAME (4 FT. X 2 FT. OR 1200MM X 600MM) (EA)	REMARKS
45A	12	10	1184+50.0	I44	LT					1	
45B	13	10	1184+50.0	I44	RT					1	
46	13	10	1187+00.0	I44	RT	1					
47B	13	10	1189+50.0	I44	RT					1	
48	13	10	1192+03.9	I44	RT	1					
49B	13	10	1194+54.0	I44	RT					1	
47A	13	11	1189+50.0	I44	LT					1	
49A	13	11	1194+54.0	I44	LT					1	
52B	13	11	1200+00.0	I44	RT					1	
53A	14	11	1202+50.0	I44	RT	1					
54B	14	12	1205+00.0	I44	RT					1	
55	14	12	1207+50.0	I44	RT	1					
56	14	12	1210+00.00	I44	CL						
57	15	12	1213+10.0	I44	LT	1					
58A	16	12	1215+00.0	I44	LT					1	
59	16	12	1217+50.0	I44	LT	1					
60A	16	13	1220+00.0	I44	LT					1	
60B	16	13	1220+00.0	I44	RT					1	
52A	14	13	1200+00.0	I44	LT					1	
54A	14	13	1205+00.0	I44	LT					1	
58B	16	13	1215+00.0	I44	RT					1	
11C	7	14	1099+14.7	I44	LT		1				
11B	7	14	1099+08.4	I44	RT		1				
11A	6	14	1098+94.3	I44	RT				1		
96	12	15	1180+56.8	I44	RT		1				
97	12	15	1182+80.7	I44	RT				1		
107	14	16	1202+30.7	I44	LT			1			
109	14	16	1206+43.7	I44	RT			1			
98	13	17	1186+10.0	I44	RT					1	
99	13	17	1187+35.0	I44	RT					1	
100	13	17	1188+60.0	I44	RT					1	
101	13	17	1189+60.0	I44	RT					1	
102	13	17	1190+63.8	I44	RT					1	
103	13	17	1191+98.1	I44	RT					1	
104	13	17	1196+67.5	I44	RT		1				
25	9	6	1134+64.7	I44	RT/LT					6	Curved Vane Grate and Frame in Box
50	13 TO 14	10	1196+50.0	I44	RT/LT					6	Curved Vane Grate and Frame in Box
					SUBTOTALS	**6**	**4**	**2**	**2**	**26**	
					TOTALS	**17**	**4**	**2**	**3**	**64**	

NOTE: EXCAVATION QUANTITIES ASSUME PRECAST CONCRETE STRUCTURES

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 18 OF 55

JSU0076 DRAINAGE PIPES (COST SHARE)						
PLAN SHEET	CULVERT SECTION SHEET	FROM STRUCT.	TO STRUCT.	15 IN. PIPE GROUP A (LF)	CLASS 3 EXCAVATION (CUYD)	REMARKS
45	–	D1	D2	32	6	
45	–	D3	D4	38	6	
45	–	D5	D6	20	7	
		SUBTOTAL:		90	19	

JSU0076 FLARED END SECTIONS (COST SHARE)						
PLAN SHEET	CULVERT SECTION SHEET	FROM STRUCT.	TO STRUCT.	15 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	ROCK LINING (CUYD)	REMARKS
45	–	D1	D2	2	–	
45	–	D3	D4	2	–	
45	–	D5	D6	2	–	
		SUBTOTAL:		6	0	

JSU0076 GRAVITY WALL (COST SHARE)						
SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	GRAVITY WALL (SQFT)	REMARKS
45	9+39.04	13+01.00	DOLING TRAIL	LT	3810	
				TOTALS	3,810	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 3
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 19 OF 55

JSU0076 GUARDRAIL

PLAN SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	MGS GUARDRAIL (LF)	MGS GUARDRAIL, 8 FT. POSTS, 6 FT. - 3 IN. SPACING (LF)	MGS END ANCHOR (EA)	TYPE A CRASHWORTHY END TERMINAL (MASH) (EA)	MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR/NO CURB) (EA)	ANCHOR ASSEMBLY, GUARD CABLE 3-STRAND (EA)	REMARKS
4	1071+85.23	1071+99.40	I-44	LT						1	
4	1071+85.43	1071+99.82	I-44	RT			1				ATTACH TO EXISTING GUARDRAIL
4	1071+99.40	1075+39.90	I-44	LT	350.0						
4	1075+39.90	1075+91.45	I-44	LT				1			
4	1071+99.40	1074+59.90	I-44	RT	262.5						
4	1074+59.90	1074+74.29	I-44	RT			1				
4	1078+05.19	1078+53.82	I-44	RT				1			
4 & 6	1078+40.83	1090+31.30	I-44	LT	1200.0						ATTACH TO EXISTING GUARDRAIL
4 & 6	1078+53.82	1089+89.14	I-44	RT		1150.0					
6	1089+89.14	1090+03.51	I-44	RT			1				
6	1090+31.30	1090+82.43	I-44	LT				1			
6	1095+13.31	1095+64.42	I-44	RT				1			
6	1095+64.42	1098+78.96	I-44	RT	287.5						
6	1097+49.23	1097+63.64	I-44	LT			1				
6	1097+63.64	1098+82.51	I-44	LT	87.5						
6	1098+58.08	1098+82.51	I-44	LT & RT					2		
7	1099+89.03	1100+10.07	I-44	LT & RT					2		
7	1099+89.03	1103+03.42	I-44	LT	287.5						
7	1103+03.42	1103+54.56	I-44	LT				1			
7	1099+89.03	1102+33.75	I-44	RT		212.5					
7	1102+33.75	1102+48.15	I-44	RT			1				
7	1106+95.65	1107+46.78	I-44	RT				1			
7	1107+46.78	1111+98.70	I-44	RT	412.5						
7	1111+75.43	1111+98.70	I-44	RT					1		
7	1110+99.96	1111+14.37	I-44	LT			1				
7	1111+14.37	1112+03.27	I-44	LT	50.0						
7	1111+75.43	1112+03.27	I-44	LT					1		
8	1113+06.77	1113+29.81	I-44	LT & RT					2		
8	1113+06.77	1118+33.67	I-44	LT		487.5					
8	1118+33.67	1118+84.80	I-44	LT				1			
8	1113+06.77	1114+37.15	I-44	RT	100.0						
8	1114+37.15	1114+51.55	I-44	RT			1				
8	1125+29.57	1125+43.95	I-44	LT			1				
8	1125+29.57	1125+80.70	I-44	RT				1			
8 & 9	1125+43.95	1131+30.60	I-44	LT		587.5					
8 & 9	1125+80.70	1131+66.21	I-44	RT		587.5					
9	1131+30.60	1131+80.61	I-44	LT				1			
9	1131+66.21	1131+80.61	I-44	RT			1				
11	1165+55.83	1166+06.96	I-44	RT				1			
11 & 12	1166+06.96	1178+18.64	I-44	RT		1175.0					
12	1177+95.87	1178+18.64	I-44	RT					1		
12	1170+74.17	1170+88.56	I-44	LT			1				
12	1170+88.56	1178+23.45	I-44	LT		700.0					
12	1177+95.87	1178+23.45	I-44	LT					1		
12	1179+26.57	1179+49.85	I-44	LT & RT					2		
12 & 13	1179+26.57	1183+03.61	I-44	LT	337.5						
12 & 13	1179+26.57	1191+87.96	I-44	RT		1225.0					
13	1183+03.61	1183+54.74	I-44	LT				1			
13	1191+87.96	1192+02.03	I-44	RT			1				
								2			FROM TRAFFIC CONTROL
				TOTALS	3,375	6,125	11	13	12	1	

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 20 OF 55

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT

© Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

JSU0076 CONCRETE TRAFFIC BARRIER

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	CONCRETE TRAFFIC BARRIER, TYPE C (LF)	TYPE C BARRIER TRANSITION (LF)	REMARKS
4	1071+99.40	1085+00.00	I-44	CL	1,301		
6	1085+00.00	1098+60.74	I-44	CL	1,358		
6	1098+60.74	1098+72.74	I-44	LT & RT		24	
7	1099+95.25	1100+07.25	I-44	LT & RT		24	
7	1100+07.25	1111+79.49	I-44	CL	1,172		
7	1111+79.49	1111+91.49	I-44	LT & RT		24	
8	1113+13.99	1113+25.99	I-44	LT & RT		24	
8	1113+25.99	1127+00.00	I-44	CL	1,374		
9	1127+00.00	1141+00.00	I-44	CL	1,400		
10	1141+00.00	1155+00.00	I-44	CL	1,400		
11	1155+00.00	1169+00.00	I-44	CL	1,400		
12	1169+00.00	1177+99.42	I-44	CL	900		
12	1177+99.42	1178+11.42	I-44	LT & RT		24	
12	1179+33..93	1179+45.93	I-44	LT & RT		24	
12	1179+45.93	1183+00.00	I-44	CL	354		
13	1183+00.00	1197+00.00	I-44	CL	1,400		
14	1197+00.00	1211+00.00	I-44	CL	1,400		
16	1211+00.00	1213+22.32	I-44	CL	227		
				TOTALS	**13,686**	**144**	

JSU0076 GUARDRAIL & FENCING (COST SHARE)

PLAN SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	MGS END ANCHOR (EA)	SIDEWALK HAND-RAILING WITH BALUSTERS (LF)	PIPE BOLLARD (EA)	REMARKS
45	5+64.48	6+37.19	DOLING TRAIL	LT		79		
45	9+39.04	13+14.34	DOLING TRAIL	LT		379		
45	13+00.65		DOLING TRAIL	RT	1			
45	13+14.27		DOLING TRAIL	LT	1			
45	13+13.56		DOLING TRAIL	CL			1	
				TOTALS	**2**	**458**	**1**	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 21 OF 55

JSU0076 PAVEMENT (NON-ALTERNATE)

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	CONCRETE GUTTER TYPE B (LF)	CONCRETE APPROACH PAVEMENT (SQYD)	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK) (SQYD)	PAVED DITCH (SQYD)	REMARKS
4	2+55.00	3+35.00	EB I44 ON RAMP @ ROUTE 13	RT				40.9	
4	4+40.00	5+80.00	EB I44 ON RAMP @ ROUTE 13	RT				71.7	
6	1098+55.50	1098+74.98	I44	LT & RT		268.2	274		
6 - 7	3+82.14	4+39.35	BROADWAY	RT	120				
6 - 7	4+39.35	6+00.36	BROADWAY	RT	161				
6	6+00.36	6+39.17	BROADWAY	RT	55				
7	1099+93.00	1100+12.49	I44	LT & RT		268.2	274		
7	1111+74.25	1111+93.73	I44	LT & RT		268.2	274		
7	4+08.06	4+37.44	BROADWAY	LT	42				
7	4+37.44	5+98.76	BROADWAY	LT	161				
7	5+98.76	6+39.53	BROADWAY	LT	57				
7	8+85.86	9+16.34	GRANT	RT	43				
7	9+16.34	10+75.56	GRANT	RT	159				
7	10+75.56	11+06.13	GRANT	RT	43				
7 - 8	8+67.73	9+14.07	GRANT	LT	65				
7	9+14.07	10+73.29	GRANT	LT	159				
7 - 8	10+73.29	11+11.13	GRANT	LT	53				
8	1113+11.75	1113+31.23	I44	LT & RT		268.2	274		
12	1177+94.18	1178+13.67	I44	LT & RT		268.2	274		
12	1179+31.69	1179+51.17	I44	LT & RT		268.2	274		
12	8+74.17	9+21.33	NATIONAL	RT	66				
12	9+21.33	10+80.54	NATIONAL	RT	159				
12	10+80.54	11+14.96	NATIONAL	RT	49				
12	8+71.85	9+19.57	NATIONAL	LT	68				
12	9+19.57	10+78.78	NATIONAL	LT	159				
12	11+14.96	11+15.74	NATIONAL	LT	52				
14	1198+96.85	1199+21.46	I-44	LT				66.6	
$SP10$	1199+01.49	1199+14.19	I-44	RT				9.5	
				TOTALS	**1,671**	**1609.2**	**1,644**	**188.7**	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

©Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 22 OF 55

JSU0076 SIDEWALK							
PLAN SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK) (SQYD)	CONCRETE SIDEWALK, 4 IN. (SQYD)	REMARKS
7	4+01.26	6+17.80	BROADWAY	LT	119	118.5	
7	4+22.81	6+15.64	BROADWAY	RT	106	105.5	
7	8+97.62	10+90.43	GRANT	LT	106	105.1	
7	8+99.03	10+91.97	GRANT	RT	105	105.0	
12	9+02.91	10+95.88	NATIONAL	LT	130	129.1	
12	9+04.16	10+97.23	NATIONAL	RT	131	130.3	
					1,644		TOTAL FROM PAVEMENT NON-ALTERNATE
				TOTALS	**2,341**	**693.5**	

JSU0076 SIDEWALK (COST SHARE)							
PLAN SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK) (SQYD)	CONCRETE SIDEWALK, 4 IN. (SQYD)	REMARKS
45	0+00.00	6+33.88	DOLING TRAIL	LT & RT	730	729.9	
45	9+35.70	13+15.56	DOLING TRAIL	LT & RT	468	468.0	
				TOTALS	**1,198**	**1,197.9**	

JSU0076 MOWING						
PLAN SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	MOWING (ACRE)	REMARKS
4 - 16	1071+99.40	1213+22.32	I-44	LT & RT	60.0	10 ACRES TO BE MOWED UP TO SIX (6) TIMES
				TOTALS	**60.0**	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

© Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 23 OF 55

REV.

SUMMARY OF LIGHTING (BROADWAY, GRANT, & NATIONAL) - JSU0076 (COST SHARE)

ITEM DESCRIPTION	UNIT	QUANTITY
LUMINAIRE LED (UNDERPASS)	EA	18
BASE MOUNTED CONTROL STATION 240 VOLT-4 CIRCUIT	EA	3
18" x 18" x 6" JUNCTION BOX	EA	3
6" x 6" x 4" JUNCTION BOX	EA	18
POWER SUPPLY ASSEMBLY, TYPE 2, $^{240}/_{120}$ VOLT SERVICE, LIGHTING ONLY	EA	3
CABLE, 2 AWG 1 CONDUCTOR	FT	570
CABLE, 6 AWG 1 CONDUCTOR	FT	190
CABLE, 10 AWG 1 CONDUCTOR,	FT	4116
CONDUIT, 2 IN. RIGID, IN TRENCH	FT	390
CONDUIT, 2 IN. RIGID, EXTERNAL ON STRUCTURE	FT	1030
PULL BOX, CONCRETE, STANDARD	EA	3

JSU0076 PAVEMENT MARKING

PAVEMENT MARKING SHEET X OF 9	FROM STATION	TO STATION	ROADWAY	LOCATION	6 IN. WHITE HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS (LF)	6 IN. YELLOW HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS (LF)	12 IN. WHITE HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS (LF)	REMARKS
1 TO 6	1071+99.40	1213+22.32	I-44	LT.		14,116		WB INTERIOR
1 TO 6	1071+99.40	1213+22.32	I-44	RT.		14,116		EB INTERIOR
1 TO 6	1071+99.40	1213+22.32	I-44	LT.	3,529.1			WB INTERMEDIATE
1 TO 6	1071+99.40	1213+22.23	I-44	RT.	3,529.1			EB INTERMEDIATE
1	1071+99.40	1079+16.32	I-44	LT.	717.1			EB BEGINNING OF JSU0076
1	1079+16.32	1085+42.97	I-44	LT.			626.6	EXIT LANE TRANSITION
1	1078+32.89	1079+16.32	I-44	LT.	86.9			INTERIOR EXIT LANE
1	1079+16.32	1080+42.97	I-44	LT.			129.4	INTERIOR EXIT LANE
1 TO 6	1078+38.99	1201+86.56	I-44	LT.	12,361.6			EXTERIOR RAMP TO RAMP
1 TO 3	1085+42.97	1107+83.93	I-44	LT.			559.5	DOTTED
1 TO 6	1107+83.93	1213+22.32	I-44	LT.	2,633.7			INTERMEDIATE
1	1071+99.40	1079+76.38	I-44	RT.	777.0			EB BEGINNING OF JSU0076
1	1077+97.63	1079+76.58	I-44	RT.	186.0			INTERIOR ENTRANCE LANE
1	1079+76.58	1080+89.23	I-44	RT.			113.1	INTERIOR ENTRANCE LANE
1	1079+76.38	1081+80.56	I-44	RT.			204.5	ENTRANCE LANE TRANSITION
1 TO 6	1081+80.56	1213+22.32	I-44	RT.	3,283.8			INTERMEDIATE
1 TO 5	1078+02.53	1206+50.52	I-44	RT.	12,865.8			EXTERIOR RAMP TO RAMP
5	1191+53.16	1198+73.14	I-44	LT.	180.0			DOTTED
5	1198+73.14	1200+43.68	I-44	LT.			170.5	ENTRANCE LANE TRANSITION
5	1199+62.47	1200+43.68	I-44	LT.			82.9	INTERIOR ENTRANCE LANE
5	1200+43.68	1201+95.13	I-44	LT.	163.4			INTERIOR ENTRANCE LANE
5 TO 6	1200+43.68	1213+22.32	I-44	LT.	1,278.6			WB EXTERIOR
5	1197+21.31	1203+21.29	I-44	RT.	150.0			DOTTED
5	1203+21.29	1205+16.07	I-44	RT.			194.8	EXIT LANE TRANSITION
5	1203+94.17	1205+17.80	I-44	RT.			125.5	INTERIOR EXIT LANE
5	1205+17.80	1206+58.51	I-44	RT.	154.8			INTERIOR EXIT LANE
5 TO 6	1205+16.07	1213+22.32	I-44	RT.	806.2			EB EXTERIOR
			TOTALS		**42,703**	**28,233**	**2,207**	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2012000088
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 3
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 24 OF 55

JSU0076 ROCK FILL

PLAN SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	FURNISHING ROCK FILL (CUYD)	PLACING ROCK FILL (CUYD)	REMARKS
3 TO 4	3+80.87	6+40.18	BROADWAY	RT	1,135	1,135	MSE WALL A9415
4	4+07.05	6+43.33	BROADWAY	LT	974	974	MSE WALL A9416
4	8+84.85	11+07.13	GRANT	RT	849	849	MSE WALL A9419
4 TO 5	8+66.73	11+12.13	GRANT	LT	894	894	MSE WALL A9420
9	8+73.17	11+15.97	NATIONAL	RT	839	839	MSE WALL A9423
9	8+70.84	11+16.74	NATIONAL	LT	903	903	MSE WALL A9424
				TOTALS	**5,594**	**5,594**	

JSU0076 ROCK LINING

PLAN SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	ROCK LINING (CUYD)	REMARKS
3	1098+00.00	1099+00.00	I44	CL	94	
3	1098+50.00	1098+50.00	I44	RT	3	
4	1099+00.00	1100+00.00	I44	CL	94	
4	1100+00.00	1100+00.00	I44	LT	3	
4	1100+00.00	1100+00.00	I44	RT	3	
4	1112+00.00	1112+00.00	I44	CL	92	
4	1112+00.00	1112+00.00	I44	LT	3	
4	1112+00.00	1112+00.00	I44	RT	3	
4 TO 5	1113+00.00	1113+00.00	I44	CL	92	
5	1113+00.00	1113+00.00	I44	LT	3	
5	1113+00.00	1113+00.00	I44	RT	1	
9	1178+00.00	1178+00.00	I44	CL	92	
9	1178+00.00	1178+00.00	I44	LT	1	
9	1178+00.00	1178+00.00	I44	RT	24	
9	1179+00.00	1179+00.00	I44	CL	91	
9	1179+00.00	1179+00.00	I44	LT	3	
TOTAL FROM DRAINAGE TABLE					197	
				TOTALS	**799**	

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/4/2024

ROUTE I-44 | STATE MO

DISTRICT SW | SHEET NO. 3

COUNTY GREENE

JOB NO. JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

I-44 WIDENING
JSU0076

SUMMARY OF QUANTITIES
SHEET 25 OF 55

J8I3044C MOBILIZATION

1 LUMP SUM

J8I3044C CONTRACTOR FURNISHED SURVEYING AND STAKING

1 LUMP SUM

J8I3044C SAWCUTS FOR PAVEMENT REMOVAL

ALL SAWCUTS NOT SHOWN ARE INCIDENTAL TO REMOVAL OF IMPROVEMENTS

J8I3044C REMOVAL OF IMPROVEMENTS

PLAN SHEET	FROM STATION	TO STATION	BASELINE	OFFSET	DESCRIPTION	UNITS	QUANTITY	REMARKS
16	1213+22.32	1225+00.00	I-44	LT.	WB PAVEMENT & SHOULDER	SY	2695.6	INCLUDES OFF-RAMP AND DECELERATION PAVEMENT
16	1213+22.32	1225+00.00	I-44	RT.	EB SHOULDER	SY	1723.6	
16	1213+22.32	1217+22.51	I-44	LT.	GUARDRAIL	LF	400.2	
16	1213+22.32	1213+75.67	I-44	RT	GUARDRAIL	LF	53.4	
16	1213+22.32	1225+00.00	I-44	LT.	GUARDCABLE	LF	1177.7	
16	1213+61.83	1214+15.22	I-44	CL.	18" PIPE	LF	53.4	
16	1214+93.30		I-44	RT.	PULLBOX	EACH	1.0	
16	1217+99.25	1218+51.89	I-44	LT.	CONCRETE DITCH	SY	105.4	
16	1218+44.08	1219+88.38	I-44	LT & RT	HEADWALL	EACH	2.0	
16	1219+85.21	1220+49.39	I-44	RT.	CONCRETE DITCH	SY	120.9	
16	1220+69.47		I-44	LT.	PULLBOX	EACH	1.0	
16	1220+82.37		I-44	LT.	SIGN	EACH	1.0	
16	1220+88.31	1222+40.03	I-44	CL.	18" PIPE	LF	152.0	
16	1220+88.31	1222+40.03	I-44	CL.	HEADWALL	EACH	2.0	
16	1222+04.29		I-44	LT.	SIGN	EACH	1.0	
16	1223+35.06		I-44	LT.	SIGN	EACH	1.0	
16	1223+32.61		I-44	RT.	SIGN	EACH	1.0	
16	1224+36.33		I-44	RT.	FES	EACH	1.0	
18	1225+00.00	1239+00.00	I-44	LT.	WB PAVEMENT & SHOULDER	SY	2212.6	INCLUDES DECELERATION LANE PAVEMENT
18	1225+00.00	1239+00.00	I-44	RT.	EB PAVEMENT & SHOULDER	SY	3537.2	INCLUDES RAMP & ACCELERATION LANE PAVEMENT
18	1225+00.00		I-44	CL.	INLET	EACH	1.0	
18	1226+58.53		I-44	LT.	SIGN	EACH	2.0	
18	1227+45.27		I-44	RT.	PULLBOX	EACH	1.0	
18	1230+04.58		I-44	RT.	PULLBOX	EACH	1.0	
18	1232+52.40		I-44	RT.	PULLBOX	EACH	1.0	
18	1233+50.10		I-44	RT.	SIGN	EACH	1.0	
18	1233+86.51		I-44	LT.	SIGN	EACH	1.0	
18	1234+00.55		I-44	LT.	SIGN	EACH	1.0	
18	1225+00.00	1239+00.00	I-44	LT.	GUARDCABLE	LF	1400.0	
19	1239+00.00	1253+00.00	I-44	LT.	WB SHOULDER	SY	1818.1	
19	1239+00.00	1253+00.00	I-44	RT.	EB SHOULDER	SY	1947.8	
19	1241+56.99		I-44	RT.	HEADWALL	EACH	1.0	
19	1241+99.01		I-44	CL.	INLET	EACH	1.0	
19	1242+40.55		I-44	LT.	HEADWALL	EACH	1.0	
19	1243+97.26		I-44	LT.	SIGN	EACH	1.0	
19	1243+99.78		I-44	RT	SIGN	EACH	1.0	
19	1244+53.27		I-44	LT.	SIGN	EACH	1.0	
19	1244+54.26		I-44	RT.	SIGN	EACH	1.0	
19	1244+55.88		I-44	RT.	PULLBOX	EACH	1.0	
19	1239+00.00	1253+00.00	I-44	LT.	GUARDCABLE	LF	1400.1	
20	1253+00.00	1267+00.00	I-44	LT.	WB PAVEMENT & SHOULDER	SY	1890.3	INCLUDES ACCELERATION LANE PAVEMENT
20	1253+00.00	1267+00.00	I-44	RT.	EB SHOULDER	SY	1919.4	
20	1255+12.20		I-44	RT.	SIGN	EACH	1.0	
20	1255+15.32		I-44	LT.	SIGN	EACH	1.0	
20	1260+69.89		I-44	RT.	SIGN	EACH	2.0	
20	1265+68.50		I-44	LT.	SIGN	EACH	1.0	
20	1265+68.65		I-44	RT.	SIGN	EACH	1.0	
20	1253+00.00	1267+00.00	I-44	LT.	GUARDCABLE	LF	1400.0	
20	1257+56.41		I-44	LT.	HEADWALL	EACH	1.0	
20	1257+56.58		I-44	RT.	HEADWALL	EACH	1.0	
20	1257+56.69		I-44	CL.	INLET	EACH	1.0	
21	1267+00.00	1281+00.00	I-44	LT.	WB PAVEMENT & SHOULDER	SY	3498.9	INCLUDES ACCELERATION LANE PAVEMENT
21	1267+00.00	1281+00.00	I-44	RT.	EB SHOULDER	SY	1983.9	
21	1272+87.52		I-44	RT.	PULLBOX	EACH	1.0	
21	1275+25.32		I-44	LT.	SIGN	EACH	1.0	
21	1276+11.98	1276+36.75	I-44	CL.	18" PIPE	LF	24.8	
21	1276+11.98	1276+36.75	I-44	CL.	FES	EACH	2.0	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
J8I3044C

SUMMARY OF QUANTITIES
SHEET 26 OF 55

J8I3044C REMOVAL OF IMPROVEMENTS

PLAN SHEET	FROM STATION	TO STATION	BASELINE	OFFSET	DESCRIPTION	UNITS	QUANTITY	REMARKS
21	1276+26.68		I-44	LT.	SIGN	EACH	1.0	
21	1276+26.01		I-44	RT.	SIGN	EACH	1.0	
21	1276+42.68		I-44	CL.	SIGN	EACH	2.0	
21	1279+12.25		I-44	LT.	SIGN	EACH	2.0	
21	1280+81.80		I-44	RT.	SIGN	EACH	1.0	
21	1267+00.00	1281+00.00	I-44	LT.	GUARDCABLE	LF	1345.6	
21	1270+70.51	1273+22.80	I-44	LT.	GUARDRAIL	LF	252.3	
22	1281+00.00	1295+00.00	I-44	LT.	WB PAVEMENT & SHOULDER	SY	3697.4	INCLUDES ACCELERATION LANE PAVEMENT
22	1281+00.00	1295+00.00	I-44	RT.	EB SHOULDER	SY	1936.3	
22	1281+81.20		I-44	LT.	SIGN	EACH	2.0	
22	1284+64.31		I-44	RT.	SIGN	EACH	1.0	
22	1286+83.80		I-44	LT.	SIGN	EACH	1.0	
22	1286+89.01		I-44	RT.	SIGN	EACH	1.0	
22	1289+99.63		I-44	LT.	SIGN	EACH	1.0	
22	1290+84.09		I-44	RT.	SIGN	EACH	1.0	
22	1281+00.00	1295+00.00	I-44	LT.	GUARDCABLE	LF	1400.0	
22	1285+92.02		I-44	CL.	INLET	EACH	1.0	
22	1285+92.02	1286+39.20	I-44	CL.	24" PIPE	LF	49.8	
22	1285+94.14		I-44	RT.	HEADWALL	EACH	1.0	
23	1295+00.00	1309+00.00	I-44	LT.	WB PAVEMENT & SHOULDER	SY	5558.2	INCLUDES ON-RAMP & ACCELERATION LANE PAVEMENT
23	1295+00.00	1309+00.00	I-44	RT.	EB PAVEMENT & SHOULDER	SY	2225.4	INCLUDES DECELERATION LANE PAVEMENT
23	1295+01.67		I-44	CL.	INLET	EACH	1.0	
23	1297+26.41		I-44	LT.	SIGN	EACH	1.0	
23	1297+46.49		I-44	RT.	SIGN	EACH	1.0	
23	1299+30.88		I-44	LT.	SIGN	EACH	1.0	
23	1303+30.32		I-44	LT.	SIGN	EACH	2.0	
23	1304+63.89		I-44	RT.	SIGN	EACH	2.0	
23	1307+93.58		I-44	LT.	SIGN	EACH	1.0	
23	1307+94.49		I-44	RT.	SIGN	EACH	1.0	
23	1295+00.00	1309+00.00	I-44	LT.	GUARDCABLE	LF	1400.0	
23	1298+57.34		I-44	RT.	HEADWALL	EACH	1.0	
23	1301+18.16		I-44	RT.	PULLBOX	EACH	1.0	
23	1307+57.82	1309+00.00	I-44	RT.	GUARDRAIL	LF	142.2	
24	1309+00.00	1320+42.46	I-44	LT.	WB SHOULDER	SY	1495.1	
24	1309+00.00	1320+42.46	I-44	RT.	EB PAVEMENT & SHOULDER	SY	2563.1	INCLUDES OFF-RAMP & DECELERATION LANE PAVEMENT
24	1311+58.01		I-44	RT.	SIGN BRIDGE	EACH	5.0	
24	1311+58.33		I-44	RT.	SIGN	EACH	1.0	
24	1313+39.32		I-44	RT.	SIGN	EACH	1.0	
24	1309+00.00	1319+24.76	I-44	LT.	GUARDCABLE	LF	1024.8	
24	1309+00.00	1311+75.76	I-44	RT.	GUARDRAIL	LF	275.8	
24	1309+66.44	1311+79.98	I-44	RT.	GUARDRAIL	LF	214.2	ALONG EXIT SHOULDER
24	1310+94.99	1312+46.99	I-44	CL.	18" PIPE	LF	152.0	
24	1310+94.99	1312+46.99	I-44	CL.	FES	EACH	2.0	
24	1319+04.45	1320+50.89	I-44	LT.	GUARDRAIL	LF	146.4	END OF J8I3044C
24	1318+75.92	1320+93.76	I-44	RT.	GUARDRAIL	LF	217.8	END OF J8I3044C
					TOTAL:	**1 LUMP SUM**		

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

©Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
J8I3044C

SUMMARY OF QUANTITIES
SHEET 27 OF 55

REMOVAL OF IMPROVEMENTS (BY OTHERS)

SHEET	ROADWAY	FROM STATION	TO STATION	LOCATION	DESCRIPTION	UNIT	QUANTITY	REMARKS
16	I-44	1213+22.32	1225+00.00	CL.	UNDERGROUND FIBER	LF	1178.1	
18	I-44	1225+00.00	1239+00.00	CL.	UNDERGROUND FIBER	LF	1400.0	
18	I-44	1234+66.88		LT.	SIGN	EACH	1	RELOCATE
19	I-44	1239+00.00	1253+00.00	CL.	UNDERGROUND FIBER	LF	1400.1	
19	I-44	1242+62.32		LT.	SIGN	EACH	1	RELOCATE
20	I-44	1253+00.00	1267+00.00	CL.	UNDERGROUND FIBER	LF	1400.3	
20	I-44	1253+73.52		LT.	SIGN	EACH	1	RELOCATE
20	I-44	1261+32.18		LT.	SIGN	EACH	1	RELOCATE
20	I-44	1266+94.18		LT.	SIGN	EACH	1	RELOCATE
21	I-44	1267+00.00	12810+00.00	CL.	UNDERGROUND FIBER	LF	1394.9	
22	I-44	12810+00.00	1295+00.00	CL.	UNDERGROUND FIBER	LF	1400.8	
23	I-44	1295+00.00	1303+08.76	CL.	UNDERGROUND FIBER	LF	846.4	
23	I-44	1296+97.46	1301+59.48	LT.	UNDERGROUND ELEC.	LF	461.0	
24	I-44	1310+90.74	1313+43.37	LT. & RT.	UNDERGROUND ELEC.	LF	464.6	
				TOTAL	**1 LUMP SUM**			

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
J8I3044C

SUMMARY OF QUANTITIES
SHEET 28 OF 55

J8I3044C CULVERT CLEANOUT					
PLAN SHEET	STATION	ROUTE	LOCATION	CULVERT CLEANOUT (EA)	REMARKS
14	1219+15.0	I-44	LT. & RT.	1	EX. 9'X6' BOX CULVERT
16	1241+98.7	I-44	LT. & RT.	1	EX. 18" PIPE
17	1257+56.7	I-44	LT. & RT.	1	EX. 18" PIPE
19	1286+42.5	I-44	LT. & RT.	1	EX. 6'X6' BOX CULVERT
20	1297+92.0	I-44	LT. & RT.	1	EX. 5'X5' BOX CULVERT
			TOTAL	**5**	

J8I3044C EARTHWORK										
ROADWAY	CUT	EARTH CUT	ROCK CUT	FILL	EXCAVATION TO BE USED IN EMBANKMENT (CUYD)	UNCLASSIFIED EXCAVATION (CUYD)	EMBANKMENT IN PLACE (CUYD)	COMPACTING EMBANKMENT (CUYD)	COMPACTING IN CUT (STA)	REMARKS
I-44	96,313	72,235	24,078	12,218					107.2	25% OF TOTAL CUT ASSUMED TO BE ROCK CUT
I-44 PAVEMENT REMOVAL	-20,117	-20,117								
SUBTOTALS	**76,196**	**52,118**	**24,078**	**12,218**	**69,186**					
					TOTALS	**76,196**	**0**	**12,218**	**107.2**	

NOTE: 25% SHRINK AND SWELL ASSUMED DURING COMPACTION

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
J8I3044C

SUMMARY OF QUANTITIES
SHEET 29 OF 55

REV.

J8I3044C ALTERNATE A (ASPHALT) PAVEMENT

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	15 INCHES, ASPHALTIC CONCRETE PAVEMENT SP125BLP OR SP125BSM (SQYD)	BITUMINOUS SHOULDER RUMBLE STRIP (STA)	REMARKS
16	1213+22.32	1225+00.00	I44	LT	3,974.6	23.6	INCLUDES FULL DEPTH INSIDE SHOULDER
16	1213+22.32	1221+00.00	I44	RT	2,626.2	15.6	INCLUDES FULL DEPTH SHOULDERS
16	1221+00.00	1223+19.80	I44	RT	519.3	4.4	INCLUDES FULL DEPTH OUTSIDE SHOULDER
16	1223+19.80	1225+00.00	I44	RT	270.2	3.6	
16	1+98.79	3+18.62	WB I44 OFF RAMP @ GLENSTONE	LT & RT	324.4		INCLUDES FULL DEPTH INSIDE SHOULDER
$PS11$ & $PS12$	3+98.21	5+15.77	EB I44 ON RAMP @ GLENSTONE	LT & RT	343.0		INCLUDES FULL DEPTH SHOULDERS
18	1225+00.00	1239+00.00	I44	LT	3,889.8	28.0	INCLUDES FULL DEPTH INSIDE SHOULDER
18	1225+00.00	1239+00.00	I44	RT	3,738.4	28.0	
19	1239+00.00	1253+00.00	I44	LT	3,656.8	28.0	INCLUDES FULL DEPTH INSIDE SHOULDER
19	1239+00.00	1253+00.00	I44	RT	2,172.5	28.0	
20	1253+00.00	1267+00.00	I44	LT	3,690.7	28.0	INCLUDES FULL DEPTH INSIDE SHOULDER
20	1253+00.00	1267+00.00	I44	RT	2,179.4	28.0	
21	1267+00.00	1281+00.00	I44	LT	3,649.4	28.0	INCLUDES FULL DEPTH INSIDE SHOULDER
21	1267+00.00	1281+00.00	I44	RT	2,175.1	28.0	
22	1281+00.00	1295+00.00	I44	LT	3,704.5	28.0	INCLUDES FULL DEPTH INSIDE SHOULDER
22	1281+00.00	1295+00.00	I44	RT	2,174.5	28.0	
23	1295+00.00	1309+00.00	I44	LT	4,609.8	28.0	INCLUDES FULL DEPTH INSIDE SHOULDER
23	1295+00.00	1309+00.00	I44	RT	2,157.8	28.0	
23	3+65.00	4+82.34	WB I44 ON RAMP @ US 65	LT & RT	391.6		INCLUDES FULL DEPTH INSIDE SHOULDER
24	1309+00.00	1320+42.46	I44	LT	1,794.5	22.8	INCLUDES FULL DEPTH INSIDE SHOULDER
24	1309+00.00	1320+42.46	I44	RT	1,546.0	22.8	
24	2+66.36	4+12.42	EB I44 OFF RAMP @ US 65	LT & RT	393.2		INCLUDES FULL DEPTH INSIDE SHOULDER
				TOTALS	**49,981.8**	**428.8**	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

I-44 WIDENING
J8I3044C

SUMMARY OF QUANTITIES
SHEET 30 OF 55

REV.

J8I3044C ALTERNATE B (CONCRETE) PAVEMENT

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	CONCRETE PAVEMENT (11 ½ IN. NON-REINFORCED, 15 FT. JOINTS) (SQYD)	PORTLAND CEMENT CONCRETE SHOULDER RUMBLE STRIP (STA)	REMARKS
16	1213+22.32	1225+00.00	I44	LT	3,974.6	23.6	INCLUDES FULL DEPTH INSIDE SHOULDER
16	1213+22.32	1221+00.00	I44	RT	2,626.2	15.6	INCLUDES FULL DEPTH SHOULDERS
16	1221+00.00	1223+19.80	I44	RT	519.3	4.4	INCLUDES FULL DEPTH OUTSIDE SHOULDER
16	1223+19.80	1225+00.00	I44	RT	270.2	3.6	
16	1+98.79	3+18.62	WB I44 OFF RAMP @ GLENSTONE	LT & RT	324.4		INCLUDES FULL DEPTH INSIDE SHOULDER
$PS11$ & $PS12$	3+98.21	5+15.77	EB I44 ON RAMP @ GLENSTONE	LT & RT	343.0		INCLUDES FULL DEPTH SHOULDERS
18	1225+00.00	1239+00.00	I44	LT	3,889.8	28.0	INCLUDES FULL DEPTH INSIDE SHOULDER
18	1225+00.00	1239+00.00	I44	RT	3,738.4	28.0	
19	1239+00.00	1253+00.00	I44	LT	3,656.8	28.0	INCLUDES FULL DEPTH INSIDE SHOULDER
19	1239+00.00	1253+00.00	I44	RT	2,172.5	28.0	
20	1253+00.00	1267+00.00	I44	LT	3,690.7	28.0	INCLUDES FULL DEPTH INSIDE SHOULDER
20	1253+00.00	1267+00.00	I44	RT	2,179.4	28.0	
21	1267+00.00	1281+00.00	I44	LT	3,649.4	28.0	INCLUDES FULL DEPTH INSIDE SHOULDER
21	1267+00.00	1281+00.00	I44	RT	2,175.1	28.0	
22	1281+00.00	1295+00.00	I44	LT	3,704.5	28.0	INCLUDES FULL DEPTH INSIDE SHOULDER
22	1281+00.00	1295+00.00	I44	RT	2,174.5	28.0	
23	1295+00.00	1309+00.00	I44	LT	4,609.8	28.0	INCLUDES FULL DEPTH INSIDE SHOULDER
23	1295+00.00	1309+00.00	I44	RT	2,157.8	28.0	
23	3+65.00	4+82.34	WB I44 ON RAMP @ US 65	LT & RT	391.6		INCLUDES FULL DEPTH INSIDE SHOULDER
24	1309+00.00	1320+42.46	I44	LT	1,794.5	22.8	INCLUDES FULL DEPTH INSIDE SHOULDER
24	1309+00.00	1320+42.46	I44	RT	1,546.0	22.8	
24	2+66.36	4+12.42	EB I44 OFF RAMP @ US 65	LT & RT	393.2		INCLUDES FULL DEPTH INSIDE SHOULDER
				TOTALS	**49,981.8**	**428.8**	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
J8I3044C

SUMMARY OF QUANTITIES
SHEET 31 OF 55

J8I3044C ALTERNATE C (ASHPHALT) SHOULDERS

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	TYPE A2 SHOULDER (SQYD)	CONCRETE CURB (6 IN. HEIGHT AND UNDER) TYPE S (LF)	REMARKS
16	1213+22.32	1213+27.15	I44	RT	3.3		
16	1213+22.32	1221+24.52	I44	LT	648.6		
16	1221+00.00	1225+00.00	I44	RT	355.6		
16	1221+07.13	1225+00.00	I44	LT	284.8		
16	1223+19.80	1225+00.00	I44	RT	160.2		
16	1+98.79	3+18.62	WB I44 OFF RAMP @ GLENSTONE	RT	52.9		
18	1225+00.00	1239+00.00	I44	LT	1,244.7		
18	1225+00.00	1239+00.00	I44	RT	1,244.4		
18	1225+00.00	1226+61.29	I44	RT	140.6		
18	1226+92.97	1239+00.00	I44	RT	1,050.2		
19	1239+00.00	1253+00.00	I44	LT	1,244.4		
19	1239+00.00	1253+00.00	I44	RT	1,244.4		
19	1239+00.00	1253+00.00	I44	RT	1,244.4		
20	1253+00.00	1267+00.00	I44	LT	1,244.4		
20	1253+00.00	1267+00.00	I44	RT	1,244.4		
20	1253+00.00	1267+00.00	I44	RT	1,244.4		
20	1253+00.00	1267+00.00	I44	RT	1,244.4		
21	1267+00.00	1281+00.00	I44	LT	1,239.5		
21	1267+00.00	1281+00.00	I44	RT	1,239.5		
21	1267+00.00	1281+00.00	I44	RT	1,239.5		
22	1281+00.00	1295+00.00	I44	LT	1,244.6		
22	1281+00.00	1295+00.00	I44	RT	1,244.3		
22	1281+00.00	1295+00.00	I44	RT	1,244.6		
23	1295+00.00	1305+54.82	I44	LT	966.3		
23	1295+00.00	1309+00.00	I44	RT	1,244.3		
23	1295+00.00	1309+00.00	I44	RT	1,244.6		
23	1303+85.06	1309+00.00	I44	LT	445.0		
23	3+65.00	4+82.34	WB I44 ON RAMP @ US 65	RT	221.9		
24	1309+00.00	1312+84.84	I44	RT	254.2		
24	1309+00.00	1320+23.14	I44	LT	1,211.4		
24	1309+00.00	1320+42.46	I44	RT	1,015.4		
24	1312+57.56	1320+42.46	I44	RT	602.1		
24	2+66.36	4+12.42	EB I44 OFF RAMP @ US 65	RT	64.7		
				TOTALS	**27,373.6**	**0.0**	

RYAN STEHN
NUMBER PE-2020000088
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
J8I3044C

SUMMARY OF QUANTITIES
SHEET 32 OF 55

J8I3044C ALTERNATE D (CONCRETE) SHOULDERS

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	TYPE A2 SHOULDER (SQYD)	INTEGRAL CURB (6 IN. HEIGHT AND UNDER) TYPE A (LF)	REMARKS
16	1213+22.32	1213+27.15	I44	RT	3.3		
16	1213+22.32	1221+24.52	I44	LT	648.6		
16	1221+00.00	1225+00.00	I44	RT	355.6		
16	1221+07.13	1225+00.00	I44	LT	284.8		
16	1223+19.80	1225+00.00	I44	RT	160.2		
16	1+98.79	3+18.62	WB I44 OFF RAMP @ GLENSTONE	RT	52.9		
18	1225+00.00	1239+00.00	I44	LT	1,244.7		
18	1225+00.00	1239+00.00	I44	RT	1,244.4		
18	1225+00.00	1226+61.29	I44	RT	140.6		
18	1226+92.97	1239+00.00	I44	RT	1,050.2		
19	1239+00.00	1253+00.00	I44	LT	1,244.4		
19	1239+00.00	1253+00.00	I44	RT	1,244.4		
19	1239+00.00	1253+00.00	I44	RT	1,244.4		
20	1253+00.00	1267+00.00	I44	LT	1,244.4		
20	1253+00.00	1267+00.00	I44	RT	1,244.4		
20	1253+00.00	1267+00.00	I44	RT	1,244.4		
21	1267+00.00	1281+00.00	I44	LT	1,239.5		
21	1267+00.00	1281+00.00	I44	RT	1,239.5		
21	1267+00.00	1281+00.00	I44	RT	1,239.5		
22	1281+00.00	1295+00.00	I44	LT	1,244.6		
22	1281+00.00	1295+00.00	I44	RT	1,244.3		
22	1281+00.00	1295+00.00	I44	RT	1,244.6		
23	1295+00.00	1305+54.82	I44	LT	966.3		
23	1295+00.00	1309+00.00	I44	RT	1,244.3		
23	1295+00.00	1309+00.00	I44	RT	1,244.6		
23	1303+85.06	1309+00.00	I44	LT	445.0		
23	3+65.00	4+82.34	WB I44 ON RAMP @ US 65	RT	221.9		
24	1309+00.00	1312+84.84	I44	RT	254.2		
24	1309+00.00	1320+23.14	I44	LT	1,211.4		
24	1309+00.00	1320+42.46	I44	RT	1,015.4		
24	1312+57.56	1320+42.46	I44	RT	602.1		
24	2+66.36	4+12.42	EB I44 OFF RAMP @ US 65	RT	64.7		
				TOTALS	**27,373.6**	**0.0**	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
J8I3044C

SUMMARY OF QUANTITIES
SHEET 33 OF 55

REV.

J8I3044C BASE

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	OPTIONAL BASE (SQYD)	REMARKS
16	1213+22.32	1225+00.00	I44	LT	4.994	
16	1213+22.32	1225+00.00	I44	RT	4.110	
16	1+98.79	3+18.62	WB I44 OFF RAMP @ GLENSTONE	LT & RT	404	
$PS11$ & $PS12$	3+98.21	5+15.77	EB I44 ON RAMP @ GLENSTONE	LT & RT	369	
18	1225+00.00	1239+00.00	I44	LT	5.290	
18	1225+00.00	1239+00.00	I44	RT	6.484	
19	1239+00.00	1253+00.00	I44	LT	4.901	
19	1239+00.00	1253+00.00	I44	RT	4.973	
20	1253+00.00	1267+00.00	I44	LT	4.935	
20	1253+00.00	1267+00.00	I44	RT	4.979	
21	1267+00.00	1281+00.00	I44	LT	4.889	
21	1267+00.00	1281+00.00	I44	RT	4.964	
22	1281+00.00	1295+00.00	I44	LT	4.949	
22	1281+00.00	1295+00.00	I44	RT	4.975	
23	1295+00.00	1309+00.00	I44	LT	6.021	
23	1295+00.00	1309+00.00	I44	RT	4.958	
23	3+65.00	4+82.34	WB I44 ON RAMP @ US 65	LT & RT	640	
24	1309+00.00	1320+42.46	I44	LT	3.004	
24	1309+00.00	1320+42.46	I44	RT	3.671	
24	2+66.36	4+12.42	EB I44 OFF RAMP @ US 65	LT & RT	491	
				TOTALS	**80,000**	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

©Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

I-44 WIDENING
J8I3044C

SUMMARY OF QUANTITIES
SHEET 34 OF 55

J8I3044C BOX CULVERTS

SHEET	CENTERLINE STATION	BASELINE	LOCATION	LENGTH (FT)	CLASS 4 EXCAVATION (CUYD)	CLASS 4 EXCAVATION IN ROCK (CUYD)	CLASS B-1 CONCRETE (CULVERTS) (CUYD)	REINFORCING STEEL (CULVERTS) (LB)	REMARKS
	1219+15.25	I-44	LEFT	57'-0"	88	5	45.5	7,950	SINGLE 9' X 6' BOX CULVERT EXTENSION
	1219+15.25	I-44	RIGHT	50'-6 ⅛"	134	8	38.0	6,620	SINGLE 9' X 6' BOX CULVERT EXTENSION
	1286+42.31	I-44	RIGHT	49'-8 ⅛"	72	4	30.9	5,510	SINGLE 6' X 6' BOX CULVERT EXTENSION
	1297+91.48	I-44	RIGHT	47'-9 ¾"	64	4	24.7	3,820	SINGLE 5' X 5' BOX CULVERT EXTENSION
					258		2.2	430	FROM MEDIAN DETENTION BOXES AND END CAPS TABLE
				TOTALS	**616**	**21**	**141.3**	**24,330**	

J8I3044C MEDIAN DETENTION BOXES AND END CAPS

PLAN SHEET	CULVERT SECTION SHEET	FROM STATION	TO STATION	ROADWAY	12' X 3' BOX CULVERT (UNDERGOUND DETENTION) (LF)	CLASS B-1 CONCRETE (CULVERTS)* (CUYD)	REINFORCING STEEL (CULVERTS)* (LB)	CLASS 4 EXCAVATION* (CUYD)	REMARKS
22	27	1284+73.5	1286+15.5	I-44	140	2.2	430	258	
				TOTALS	**140**	**2.2**	**430**	**258**	

NOTE: SEE BOX CULVERT TABLE FOR TOTAL CLASS B-1 CONCRETE (CULVERTS), REINFORCING STEEL (CULVERTS), AND CLASS 4 EXCAVATION QUANTITY TOTALS

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

© Copyright CMT, Inc.

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
J8I3044C

SUMMARY OF QUANTITIES
SHEET 35 OF 55

J8I3044C DRAINAGE PIPES

PLAN SHEET	CULVERT SECTION SHEET	FROM STRUCT.	TO STRUCT.	PIPE COLLAR, TYPE A (EA)	12 IN. PIPE GROUP A (LF)	15 IN. PIPE GROUP A (LF)	18 IN. PIPE GROUP A (LF)	24 IN. PIPE GROUP A (LF)	30 IN. PIPE GROUP A (LF)	CLASS 3 EXCAVATION (CY)	REMARKS
16	21	61	62B				19			8	
18	21	62B	63				210			43	
18	21	63	64B				210			45	
18	21	64B	65			210				33	
18	21 TO 22	65	66B			210				34	
18	22	66B	67			210				34	
18	22	67	68B			210				36	
18	22	68B	68A		2					1	
18	22	62B	62A		2					1	
18	22	64B	64A		2					1	
18	22	66B	66A		2					1	
19	23	73	72			191				14	
19	23	72	71				33			6	
19	23	71	70				8			2	
19	23	70	69				9			1	
19	24	70	74			257				36	
19	24	74	75B			257				31	
19	24	75B	76			257				31	
19	24	76	77B			257				30	
19	24	77B	77A		2					1	
19	24	75B	75A		2					1	
20	25	78	–	1					7	6	
20	25	–	80	1					20	1	
21	26	81B	81A		2					1	
21	26	81A	82			272				46	
21	26	82	83A			272				48	
21	26	83A	84				273			60	
21	26 TO 27	84	85A				274			61	
21 TO 22	27	85A	86					272		89	
22	27	86	87A					141		115	
22	27	87A	EX			25				37	
21	27	83A	83B		2					1	
21	27	85A	85B		2					1	
22	28	89	88A			82				24	
22 TO 23	28	88A	90			330				56	
23	28	90	91A		330					42	
23	28	91A	91B		2					1	
22	28	88A	88B		2					1	
24	29	92B	92A		2					1	
24	29	92A	93		297					42	
24	29	93	94A		297					42	
24	29	94A	95			348				73	
24	29	94A	94B		2					1	
											SEE STRUCTURES FOR TOTAL
			TOTALS:	**2**	**950**	**3,388**	**1,036**	**413**	**27**	**–**	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

I-44 WIDENING
J8I3044C

SUMMARY OF QUANTITIES
SHEET 36 OF 55

J8I3044C FLARED END SECTIONS

PLAN SHEET	CULVERT SECTION SHEET	FROM STRUCT.	TO STRUCT.	15 IN. OF ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	18 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	30 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION (EA)	ROCK LINING (CUYD)	PAVED DITCH (SQYD)	REMARKS
16	30	–						59.9	
16	31	–						23.2	
16	21	61	61		1		2.11		
19	23	69	69		1		2.00		
19	23	73	73		1		0		
20	25	78	78			1	0		
20	25	80	80			1	4.15		
22	28	89	89	1			1.78		
			TOTALS:	**1**	**3**	**2**	**10**	**83.1**	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

©Copyright CMT, Inc.

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
J8I3044C

SUMMARY OF QUANTITIES
SHEET 37 OF 55

REV.

J8I3044C DRAINAGE STRUCTURES

STRUCT. NO.	PLAN SHEET	CULVERT SECTION SHEET	STATION	ROADWAY	LOCATION	STD.	TYPE	ACTUAL DEPTH	PRECAST CONCRETE MANHOLE - 48 IN. (FT)	PRECAST CONCRETE DROP INLET 4 FT X 2 FT (FT)	PRECAST CONCRETE DROP INLET 5 FT X 3 FT (FT)	SPECIAL INLET NO. 1 (FT)	CLASS 3 EXCAVATION (CUYD)	CLASS 3 EXCAVATION IN ROCK (CUYD)	PIPE OPENINGS (NUMBER - SIZE)	REMARKS
62B	18	21	1225+00.0	I44	RT	731.10S	A 4 X 2	4.84		4			4		1-12", 1-24"	
63	18	21	1227+12.5	I44	RT	731.00U	4' MH	5.15	5				6		2-24"	
64B	18	21	1229+25.0	I44	RT	731.10S	A 4 X 2	5.16		4			6		1-24", 1-12", 1-18"	
65	18	21	1231+37.5	I44	RT	731.00U	4' MH	4.79	5				5		2-18"	
66B	18	22	1233+50.0	I44	RT	731.10S	A 4 X 2	4.80		4			6		1-18", 1-15", 1-12"	
67	18	22	1235+62.5	I44	RT	731.00U	4' MH	4.81	5				6		2-15"	
68B	18	22	1237+75.0	I44	RT	731.10S	A 4 X 2	4.80		4			6		1-15", 1-12"	
68A	18	22	1237+75.0	I44	LT	731.10S	A 4 X 2	4.55		4			6		1-12"	
62A	18	22	1225+00.0	I44	LT	731.10S	A 4 X 2	4.21		3			4		1-12"	
64A	18	22	1229+25.0	I44	LT	731.10S	A 4 X 2	4.51		4			6		1-12"	
66A	18	22	1233+50.0	I44	LT	731.10S	A 4 X 2	4.50		4			6		1-12"	
72	19	23	1242+78.4	I44	LT			3.16			3		8		2-18"	
71	19	23	1242+40.6	I44	LT	731.00U	4' MH	3.58	4				3		1-18", 1-15"	
70	19	23	1241+97.3	I44	CL		SPC1	7.44				7	20		1-18", 1-15"	
74	19	24	1244+57.0	I44	RT	731.00U	4' MH	4.91	5				6		2-15", 1-12"	
75B	19	24	1247+17.0	I44	RT	731.10S	A 4 X 2	4.92		4			5		2-15"	
76	19	24	1249+77.0	I44	RT	731.00U	4' MH	4.90	5				5		2-15"	
77B	19	24	1252+37.0	I44	RT	731.10S	A 4 X 2	4.80		4			5		1-15", 1-12"	
77A	19	24	1252+37.0	I44	LT	731.10S	A 4 X 2	4.55		4			5		1-12"	
75A	19	24	1241+17.0	I44	LT	731.10S	A 4 X 2	4.56		4			5		1-12"	
81B	21	26	1269+50.0	I44	RT	731.10S	A 4 X 2	4.55		4			5		1-12"	
81A	21	26	1269+50.0	I44	LT	731.10S	A 4 X 2	4.80		4			5		1-12", 1-15"	
82	21	26	1272+25.0	I44	LT	731.00U	4' MH	4.90	5				7		2-15"	
83A	21	26	1275+00.0	I44	LT	731.10S	A 4 X 2	4.91		4			6		1-15",1-12", 1-18"	
84	21	26	1277+75.4	I44	LT	731.00U	4' MH	5.17	5				6		2-18"	
85A	21	27	1280+57.0	I44	LT	731.10S	A 4 X 2	5.56		5			7		1-18", 1-12", 1-24"	
86	22	27	1283+31.9	I44	LT	731.00U	4' MH	5.66	6				8		2-24"	
83B	21	27	1275+00.0	I44	RT	731.10S	A 4 X 2	4.56		4			5		1-12"	
85B	21	27	1280+57.0	I44	RT	731.10S	A 4 X 2	4.56		4			6		1-12"	
88A	22	28	1292+70.0	I44	LT	731.10S	A 4 X 2	4.90		4			6		2-15", 1-12"	
90	23	28	1296+02.5	I44	LT	731.00U	4' MH	4.90	5				6		2-15"	
91A	23	28	1299+35.0	I44	LT	731.10S	A 4 X 2	4.80		4			5		1-12" 1-15"	
91B	23	28	1299+35.0	I44	RT	731.10S	A 4 X 2	4.55		4			5		1-12"	
88B	22	28	1292+70.0	I44	RT	731.10S	A 4 X 2	4.56		4			6		1-12"	
92B	24	29	1312+00.0	I44	RT	731.10S	A 4 X 2	4.50		4			8		1-12"	
92A	24	29	1312+00.0	I44	LT	731.10S	A 4 X 2	4.78		4			9		1-12", 1-15"	
93	24	29	1315+00.0	I44	LT	731.00U	4' MH	4.89	5				6		2-15"	
94A	24	29	1318+00.0	I44	LT	731.10S	A 4 X 2	4.90		4			7		2-15", 1-12"	
94B	24	29	1318+00.0	I44	RT	731.10S	A 4 X 2	4.49		4			6		1-12"	
87A	22	27	1286+10.0	I44	RT/LT					6			250		1-24", 1-15"	1 FT EACH FOR 6 INLETS
													1,139			TOTAL FROM PIPES
														163		10% OF CLASS 3 EXC.
								TOTALS	**55**	**110**	**3**	**7**	**1,468**	**163**		

NOTE: EXCAVATION QUANTITIES ASSUME PRECAST CONCRETE STRUCTURES

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
J8I3044C

SUMMARY OF QUANTITIES
SHEET 38 OF 55

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\003_QU_J8I3044C_i1.dgn 7:28:07 AM 11/4/2024

J8I3044C DRAINAGE STRUCTURE LIDS

STRUCT. NO.	PLAN SHEET	CULVERT SECTION SHEET	STATION	ROADWAY	LOCATION	MANHOLE FRAME AND COVER, TYPE 1B (EA)	MANHOLE FRAME AND COVER, TYPE 3 (EA)	GRATE AND BEARING PLATE (5 FT. X 3 FT. OR 1500MM X 914MM)	CURVED VANE GRATE AND FRAME (4 FT. X 2 FT. OR 1200MM X 600MM) (EA)	REMARKS
62B	18	21	1225+00.0	I44	RT				1	
63	18	21	1227+12.5	I44	RT	1				
64B	18	21	1229+25.0	I44	RT				1	
65	18	21	1231+37.5	I44	RT	1				
66B	18	22	1233+50.0	I44	RT				1	
67	18	22	1235+62.5	I44	RT	1				
68B	18	22	1237+75.0	I44	RT				1	
68A	18	22	1237+75.0	I44	LT				1	
62A	18	22	1225+00.0	I44	LT				1	
64A	18	22	1229+25.0	I44	LT				1	
66A	18	22	1233+50.0	I44	LT				1	
72	19	23	1242+78.4	I44	LT			1		
71	19	23	1242+40.6	I44	LT		1			
70	19	23	1241+97.3	I44	CL					
74	19	24	1244+57.0	I44	RT	1				
75B	19	24	1247+17.0	I44	RT				1	
76	19	24	1249+77.0	I44	RT	1				
77B	19	24	1252+37.0	I44	RT				1	
77A	19	24	1252+37.0	I44	LT				1	
75A	19	24	1241+17.0	I44	LT				1	
81B	21	26	1269+50.0	I44	RT				1	
81A	21	26	1269+50.0	I44	LT				1	
82	21	26	1272+25.0	I44	LT	1				
83A	21	26	1275+00.0	I44	LT				1	
84	21	26	1277+75.4	I44	LT	1				
85A	21	27	1280+57.0	I44	LT				1	
86	22	27	1283+31.9	I44	LT	1				
83B	21	27	1275+00.0	I44	RT				1	
85B	21	27	1280+57.0	I44	RT				1	
88A	22	29	1292+70.0	I44	LT				1	
90	23	29	1296+02.5	I44	LT	1				
91A	23	29	1299+35.0	I44	LT				1	
91B	23	29	1299+35.0	I44	RT				1	
88B	22	29	1292+70.0	I44	RT				1	
92B	24	30	1312+00.0	I44	RT				1	
92A	24	30	1312+00.0	I44	LT				1	
93	24	30	1315+00.0	I44	LT	1				
94A	24	30	1318+00.0	I44	LT				1	
94B	24	30	1318+00.0	I44	RT				1	
87A	22	27	1286+10.0	I44	RT/LT				6	Curved Vane Grate and Frame in Box
					TOTALS	**10**	**1**	**1**	**32**	

NOTE: EXCAVATION QUANTITIES ASSUME PRECAST CONCRETE STRUCTURES

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
© Copyright CMT, Inc.

I-44 WIDENING
J8I3044C & JST0088B

SUMMARY OF QUANTITIES
SHEET 39 OF 55

J8I3044C GUARDRAIL

PLAN SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	MGS GUARDRAIL (LF)	MGS END ANCHOR (EA)	TYPE A CRASHWORTHY END TERMINAL (MASH) (EA)	TYPE E CRASHWORTHY END TERMINAL (MASH) (EA)	REMARKS
19	1242+75.61	1242+90.00	I-44	LT		1			
19	1242+90.00	1243+77.50	I-44	LT	87.5				
19	1243+77.50	1244+28.63	I-44	LT			1		
21	1270+70.56	1270+84.96	I-44	LT		1			
21	1270+84.96	1273+22.87	I-44	LT	238				
21	1273+22.87	1273+74.00	I-44	LT			1		
24	1319+73.76	1320+00.46	I-44	CL				1	ATTACH TO TYPE C CONCRETE BARRIER
24	1320+42.46	1320+50.92	I-44	LT		1			ATTACH TO EXISITING GUARDRAIL
24	1320+42.46	1320+93.59	I-44	RT			1		ATTACH TO EXISITING GUARDRAIL
							2		FROM TRAFFIC CONTROL
				TOTALS	325	3	5	1	

J8I3044C CONCRETE TRAFFIC BARRIER

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	CONCRETE TRAFFIC BARRIER, TYPE C (LF)	REMARKS
16	1213+22.32	1225+00.00	I-44	CL	1,178	
17	1225+00.00	1239+00.00	I-44	CL	1,400	
19	1239+00.00	1253+00.00	I-44	CL	1,400	
20	1253+00.00	1267+00.00	I-44	CL	1,400	
21	1267+00.00	1281+00.00	I-44	CL	1,400	
22	1281+00.00	1295+00.00	I-44	CL	1,400	
23	1295+00.00	1309+00.00	I-44	CL	1,400	
24	1309+00.00	1319+73.46	I-44	CL	1,074	
				TOTALS	10,652	

J8I3044C MOWING

PLAN SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	MOWING (ACRE)	REMARKS
16 - 24	1213+22.32	1320+42.46	I-44	LT & RT	22.8	7.6 ACRES TO BE MOWED UP TO THREE (3) TIMES
				TOTALS	22.8	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
J8I3044C

SUMMARY OF QUANTITIES
SHEET 40 OF 55

J8I3044C PAVEMENT MARKING

PAVEMENT MARKING SHEET X OF X	FROM STATION	TO STATION	ROADWAY	LOCATION	6 IN. WHITE HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS (LF)	6 IN. YELLOW HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS (LF)	12 IN. WHITE HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS (LF)	REMARKS
6 TO 9	1213+22.32	1313+22.39	I-44	LT.		9,994.5		SOLID
6 TO 9	1213+22.32	1313+22.40	I-44	RT.		9,994.5		SOLID
6 TO 9	1213+22.32	1313+89.43	I-44	LT.	2,515.4			INTERMEDIATE
6 TO 9	1213+22.32	1283+81.30	I-44	RT.	1,763.4			INTERMEDIATE
6 TO 9	1213+22.32	1302+12.43	I-44	LT.	2,221.1			INTERMEDIATE
6 TO 9	1213+22.32	1283+81.30	I-44	RT.	1,763.4			INTERMEDIATE
6 TO 9	1219+96.22	1306+71.74	I-44	LT.	8,684.1			EXTERIOR RAMP TO EXTERIOR RAMP
6 TO 9	1224+88.30	1314+24.88	I-44	RT.	8,946.5			EXTERIOR RAMP TO EXTERIOR RAMP
6	1213+22.32	1221+00.61	I-44	LT.	778.3			SOLID
6	1213+22.32	1225+96.28	I-44	RT.	1,248.8			SOLID
6	1219+86.44	1220+99.76	I-44	LT.	121.9			INTERIOR OF RAMP
6	1224+88.30	1225+96.28	I-44	RT.	119.0			INTERIOR OF RAMP
6	1220+99.76	1222+12.90	I-44	LT.			116.1	INTERIOR OF RAMP
6	1221+00.61	1226+52.23	I-44	LT.			201.6	EXIT LANE TRANSITION
6	1223+02.23	1226+52.23	I-44	LT.	87.5			DOTTED
6	1225+96.28	1226+91.71	I-44	RT.			96.8	INTERIOR OF RAMP
6	1225+96.28	1227+96.49	I-44	RT.			200.2	ENTRANCE LANE TRANSITION
6	1227+96.49	1235+41.71	I-44	RT.	186.3			DOTTED
8 TO 9	1292+72.22	1302+12.43	I-44	LT.	235.1			DOTTED, EXTERIOR ENTRANCE LANE
9	1302+12.43	1306+72.98	I-44	LT.	115.4			INTERMEDIATE
9	1302+12.43	1305+57.59	I-44	LT			345.7	INTERIOR OF RAMP
9	1302+12.43	1305+57.59	I-44	LT			345.2	ENTRANCE LANE TRANSITION
9	1305+57.59	1306+74.21	I-44	LT.	117.2			INTERIOR OF RAMP
9	1305+57.59	1312+57.15	I-44	LT.	699.6			SOLID, EXTERIOR LANE
8 TO 9	1283+81.30	1306+39.78	I-44	RT.	564.6			DOTTED
9	1312+57.15	1320+42.46	I-44	LT.	785.4			SOLID, END OF J8I3044C
9	1306+39.78	1312+90.47	I-44	RT.			650.7	EXIT LANE TRANSITION
9	1311+39.81	1312+91.01	I-44	RT.			151.2	INTERIOR OF RAMP
9	1312+90.47	1313+22.40	I-44	RT.	81.2			INTERIOR OF RAMP
9	1313+22.40	1314+31.37	I-44	RT.	65.7			INTERIOR OF RAMP
9	1313+89.43	1320+42.46	I-44	LT.	163.3			INTERMEDIATE
9	1313+22.39	1320+42.46	I-44	LT.		720.1		SOLID
9	1313+22.40	1320+42.46	I-44	RT.		720.1		SOLID
9	1313+89.43	1320+42.46	I-44	RT.	163.3			INTERMEDIATE
9	1312+90.47	1320+42.46	I-44	RT.	752.1			SOLID, EXTERIOR LANE
			TOTALS		**32,178**	**21,429**	**2,107**	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

©Copyright CMT, Inc.

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

I-44 WIDENING
J8I3044C

SUMMARY OF QUANTITIES
SHEET 41 OF 55

JST0088B SAWCUTS FOR PAVEMENT REMOVAL

ALL SAWCUTS NOT SHOWN ARE INCIDENTAL TO REMOVAL OF IMPROVEMENTS

JST0088B REMOVAL OF IMPROVEMENTS

PLAN SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	DESCRIPTION	UNITS	QUANTITY	REMARKS
4	1071+99.40	1085+00.00	I44	LT	WB PAVEMENT	SY	3593.4	
4	1071+99.40	1085+00.00	I44	RT	EB PAVEMENT	SY	3584.9	
6	1085+00.00	1093+00.00	I44	LT	WB PAVEMENT	SY	2190.6	WEST OF BR A9414
6	1085+00.00	1093+00.00	I44	RT	EB PAVEMENT	SY	2260.5	WEST OF BR A9413
7	1104+50.00	1108+70.00	I44	LT	WB PAVEMENT	SY	1159.8	BETWEEN BR'S A9414 & A9418
7	1104+50.00	1108+70.00	I44	RT	EB PAVEMENT	SY	1179.2	BETWEEN BR'S A9413 & A9417
8	1119+25.00	1127+00.00	I44	LT	WB PAVEMENT	SY	2287.4	EAST OF BR A9418
8	1119+25.00	1127+00.00	I44	RT	EB PAVEMENT	SY	2298.5	EAST OF BR A9417
9	1127+00.00	1141+00.00	I44	LT	WB PAVEMENT	SY	4109.1	
9	1127+00.00	1141+00.00	I44	RT	EB PAVEMENT	SY	4157.8	
10	1141+00.00	1155+00.00	I44	LT	WB PAVEMENT	SY	4124.5	
10	1141+00.00	1155+00.00	I44	RT	EB PAVEMENT	SY	4159.7	
11	1155+00.00	1169+00.00	I44	LT	WB PAVEMENT	SY	4151.6	
11	1155+00.00	1169+00.00	I44	RT	EB PAVEMENT	SY	4181.3	
12	1169+00.00	1172+95.00	I44	LT	WB PAVEMENT	SY	1173.9	WEST OF BR A9422
12	1169+00.00	1172+95.00	I44	RT	EB PAVEMENT	SY	1164.1	WEST OF BR A9421
13	1183+00.00	1197+00.00	I44	LT	WB PAVEMENT	SY	4116.3	EAST OF BR A9422
13	1183+00.00	1197+00.00	I44	RT	EB PAVEMENT	SY	4088.1	EAST OF BR A9421
14	1197+00.00	1211+00.00	I44	LT	WB PAVEMENT	SY	4106.2	
14	1197+00.00	1211+00.00	I44	RT	EB PAVEMENT	SY	4121.7	
16	1211+00.00	1225+00.00	I44	LT	WB PAVEMENT	SY	4067.2	
16	1211+00.00	1225+00.00	I44	RT	EB PAVEMENT	SY	4132.8	
18	1225+00.00	1239+00.00	I44	LT	WB PAVEMENT	SY	4102.1	
18	1225+00.00	1239+00.00	I44	RT	EB PAVEMENT	SY	4069.5	
19	1239+00.00	1253+00.00	I44	LT	WB PAVEMENT	SY	4121.0	
19	1239+00.00	1253+00.00	I44	RT	EB PAVEMENT	SY	4049.7	
20	1253+00.00	1267+00.00	I44	LT	WB PAVEMENT	SY	4087.1	
20	1253+00.00	1267+00.00	I44	RT	EB PAVEMENT	SY	4042.9	
21	1267+00.00	1281+00.00	I44	LT	WB PAVEMENT	SY	4097.2	
21	1267+00.00	1281+00.00	I44	RT	EB PAVEMENT	SY	4022.3	
22	1281+00.00	1295+00.00	I44	LT	WB PAVEMENT	SY	4188.5	
22	1281+00.00	1295+00.00	I44	RT	EB PAVEMENT	SY	4047.7	
23	1295+00.00	1309+00.00	I44	LT	WB PAVEMENT	SY	4170.6	
23	1295+00.00	1309+00.00	I44	RT	EB PAVEMENT	SY	4064.4	
24	1309+00.00	1320+42.46	I44	LT	WB PAVEMENT	SY	3399.1	
24	1309+00.00	1320+42.46	I44	RT	EB PAVEMENT	SY	3358.8	
					TOTAL:	**1 LUMP SUM**		

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

I-44 REBUILD
JST0088B

SUMMARY OF QUANTITIES
SHEET 42 OF 55

REV.

SHEETS 6 & 7: BREAK FROM STATION 1093+00.00 TO STATION 1104+50.00 FOR BRIDGES A9413 & A9414 AND PROFILE ADJUSTMENT (INCLUDED IN JSU0076 PAVEMENT)

SHEETS 7 & 8: BREAK FROM STATION 1108+70.00 TO STATION 1119+25.00 FOR BRIDGES A9417 & A9418 AND PROFILE ADJUSTMENT LOCATIONS (INCLUDED IN JSU0076 PAVEMENT)

SHEET 12: BREAK FROM STATION 1172+95.00 TO STATION 1183+00.00 FOR BRIDGES A9421 & A9422 AND PROFILE ADJUSTMENT LOCATIONS (INCLUDED IN JSU0076 PAVEMENT)

JST0088B ALTERNATE A (ASPHALT) PAVEMENT

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	15 INCHES, ASPHALTIC CONCRETE PAVEMENT SP125BLP OR SP125BSM (SQYD)	REMARKS
4	1071+99.40	1085+00.00	I44	LT	3,593.4	
4	1071+99.40	1085+00.00	I44	RT	3,584.9	
6	1085+00.00	1093+00.00	I44	LT	2,190.6	WEST OF BR A9414
6	1085+00.00	1093+00.00	I44	RT	2,260.5	WEST OF BR A9413
7	1104+50.00	1108+70.00	I44	LT	1,159.8	BETWEEN BR'S A9414 & A9418
7	1104+50.00	1108+70.00	I44	RT	1,179.2	BETWEEN BR'S A9413 & A9417
8	1119+25.00	1127+00.00	I44	LT	2,287.4	EAST OF BR A9418
8	1119+25.00	1127+00.00	I44	RT	2,298.5	EAST OF BR A9417
9	1127+00.00	1141+00.00	I44	LT	4,109.1	
9	1127+00.00	1141+00.00	I44	RT	4,157.8	
10	1141+00.00	1155+00.00	I44	LT	4,124.5	
10	1141+00.00	1155+00.00	I44	RT	4,159.7	
11	1155+00.00	1169+00.00	I44	LT	4,151.6	
11	1155+00.00	1169+00.00	I44	RT	4,181.3	
12	1169+00.00	1172+95.00	I44	LT	1,173.9	WEST OF BR A9422
12	1169+00.00	1172+95.00	I44	RT	1,164.1	WEST OF BR A9421
13	1183+00.00	1197+00.00	I44	LT	4,116.3	EAST OF BR A9422
13	1183+00.00	1197+00.00	I44	RT	4,088.1	EAST OF BR A9421
14	1197+00.00	1211+00.00	I44	LT	4,106.2	
14	1197+00.00	1211+00.00	I44	RT	4,121.7	
16	1211+00.00	1225+00.00	I44	LT	4,067.2	
16	1211+00.00	1225+00.00	I44	RT	4,132.8	
18	1225+00.00	1239+00.00	I44	LT	4,102.1	
18	1225+00.00	1239+00.00	I44	RT	4,069.5	
19	1239+00.00	1253+00.00	I44	LT	4,121.0	
19	1239+00.00	1253+00.00	I44	RT	4,049.7	
20	1253+00.00	1267+00.00	I44	LT	4,087.1	
20	1253+00.00	1267+00.00	I44	RT	4,042.9	
21	1267+00.00	1281+00.00	I44	LT	4,097.2	
21	1267+00.00	1281+00.00	I44	RT	4,022.3	
22	1281+00.00	1295+00.00	I44	LT	4,188.5	
22	1281+00.00	1295+00.00	I44	RT	4,047.7	
23	1295+00.00	1309+00.00	I44	LT	4,170.6	
23	1295+00.00	1309+00.00	I44	RT	4,064.4	
24	1309+00.00	1320+42.46	I44	LT	3,399.1	
24	1309+00.00	1320+42.46	I44	RT	3,358.8	
				TOTALS	126,229.6	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 REBUILD
JST0088B

SUMMARY OF QUANTITIES
SHEET 43 OF 55

REV.

SHEETS 6 & 7: BREAK FROM STATION 1093+00.00 TO STATION 1104+50.00 FOR BRIDGES A9413 & A9414 AND PROFILE ADJUSTMENT (INCLUDED IN JSU0076 PAVEMENT)

SHEETS 7 & 8: BREAK FROM STATION 1108+70.00 TO STATION 1119+25.00 FOR BRIDGES A9417 & A9418 AND PROFILE ADJUSTMENT LOCATIONS (INCLUDED IN JSU0076 PAVEMENT)

SHEET 12: BREAK FROM STATION 1172+95.00 TO STATION 1183+00.00 FOR BRIDGES A9421 & A9422 AND PROFILE ADJUSTMENT LOCATIONS (INCLUDED IN JSU0076 PAVEMENT)

JST0088B ALTERNATE B (CONCRETE) PAVEMENT

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	CONCRETE PAVEMENT (11 ½ IN. NON-REINFORCED, 15 FT. JOINTS) (SQYD)	REMARKS
4	1071+99.40	1085+00.00	I44	LT	3,593.4	
4	1071+99.40	1085+00.00	I44	RT	3,584.9	
6	1085+00.00	1093+00.00	I44	LT	2,190.6	WEST OF BR A9414
6	1085+00.00	1093+00.00	I44	RT	2,260.5	WEST OF BR A9413
7	1104+50.00	1108+70.00	I44	LT	1,159.8	BETWEEN BR'S A9414 & A9418
7	1104+50.00	1108+70.00	I44	RT	1,179.2	BETWEEN BR'S A9413 & A9417
8	1119+25.00	1127+00.00	I44	LT	2,287.4	EAST OF BR A9418
8	1119+25.00	1127+00.00	I44	RT	2,298.5	EAST OF BR A9417
9	1127+00.00	1141+00.00	I44	LT	4,109.1	
9	1127+00.00	1141+00.00	I44	RT	4,157.8	
10	1141+00.00	1155+00.00	I44	LT	4,124.5	
10	1141+00.00	1155+00.00	I44	RT	4,159.7	
11	1155+00.00	1169+00.00	I44	LT	4,151.6	
11	1155+00.00	1169+00.00	I44	RT	4,181.3	
12	1169+00.00	1172+95	I44	LT	1,173.9	WEST OF BR A9422
12	1169+00.00	1172+95	I44	RT	1,164.1	WEST OF BR A9421
13	1183+00.00	1197+00.00	I44	LT	4,116.3	EAST OF BR A9422
13	1183+00.00	1197+00.00	I44	RT	4,088.1	EAST OF BR A9421
14	1197+00.00	1211+00.00	I44	LT	4,106.2	
14	1197+00.00	1211+00.00	I44	RT	4,121.7	
16	1211+00.00	1225+00.00	I44	LT	4,067.2	
16	1211+00.00	1225+00.00	I44	RT	4,132.8	
18	1225+00.00	1239+00.00	I44	LT	4,102.1	
18	1225+00.00	1239+00.00	I44	RT	4,069.5	
19	1239+00.00	1253+00.00	I44	LT	4,121.0	
19	1239+00.00	1253+00.00	I44	RT	4,049.7	
20	1253+00.00	1267+00.00	I44	LT	4,087.1	
20	1253+00.00	1267+00.00	I44	RT	4,042.9	
21	1267+00.00	1281+00.00	I44	LT	4,097.2	
21	1267+00.00	1281+00.00	I44	RT	4,022.3	
22	1281+00.00	1295+00.00	I44	LT	4,188.5	
22	1281+00.00	1295+00.00	I44	RT	4,047.7	
23	1295+00.00	1309+00.00	I44	LT	4,170.6	
23	1295+00.00	1309+00.00	I44	RT	4,064.4	
24	1309+00.00	1320+42.46	I44	LT	3,399.1	
24	1309+00.00	1320+42.46	I44	RT	3,358.8	
				TOTALS	126,229.6	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

I-44 REBUILD
JST0088B

SUMMARY OF QUANTITIES
SHEET 44 OF 55

JST088B BASE

SHEET	FROM STATION	TO STATION	BASELINE	LOCATION	OPTIONAL BASE (SQYD)	REMARKS
4	1071+99.40	1085+00.00	I44	LT	3,593.4	
4	1071+99.40	1085+00.00	I44	RT	3,584.9	
6	1085+00.00	1093+00.00	I44	LT	2,190.6	WEST OF BR A9414
6	1085+00.00	1093+00.00	I44	RT	2,260.5	WEST OF BR A9413
7	1104+50.00	1108+70.00	I44	LT	1,159.8	BETWEEN BR'S A9414 & A9418
7	1104+50.00	1108+70.00	I44	RT	1,179.2	BETWEEN BR'S A9413 & A9417
8	1119+25.00	1127+00.00	I44	LT	2,287.4	EAST OF BR A9418
8	1119+25.00	1127+00.00	I44	RT	2,298.5	EAST OF BR A9417
9	1127+00.00	1141+00.00	I44	LT	4,109.1	
9	1127+00.00	1141+00.00	I44	RT	4,157.8	
10	1141+00.00	1155+00.00	I44	LT	4,124.5	
10	1141+00.00	1155+00.00	I44	RT	4,159.7	
11	1155+00.00	1169+00.00	I44	LT	4,151.6	
11	1155+00.00	1169+00.00	I44	RT	4,181.3	
12	1169+00.00	1172+95	I44	LT	1,173.9	WEST OF BR A9422
12	1169+00.00	1172+95	I44	RT	1,164.1	WEST OF BR A9421
13	1183+00.00	1197+00.00	I44	LT	4,116.3	EAST OF BR A9422
13	1183+00.00	1197+00.00	I44	RT	4,088.1	EAST OF BR A9421
14	1197+00.00	1211+00.00	I44	LT	4,106.2	
14	1197+00.00	1211+00.00	I44	RT	4,121.7	
16	1211+00.00	1225+00.00	I44	LT	4,067.2	
16	1211+00.00	1225+00.00	I44	RT	4,132.8	
18	1225+00.00	1239+00.00	I44	LT	4,102.1	
18	1225+00.00	1239+00.00	I44	RT	4,069.5	
19	1239+00.00	1253+00.00	I44	LT	4,121.0	
19	1239+00.00	1253+00.00	I44	RT	4,049.7	
20	1253+00.00	1267+00.00	I44	LT	4,087.1	
20	1253+00.00	1267+00.00	I44	RT	4,042.9	
21	1267+00.00	1281+00.00	I44	LT	4,097.2	
21	1267+00.00	1281+00.00	I44	RT	4,022.3	
22	1281+00.00	1295+00.00	I44	LT	4,188.5	
22	1281+00.00	1295+00.00	I44	RT	4,047.7	
23	1295+00.00	1309+00.00	I44	LT	4,170.6	
23	1295+00.00	1309+00.00	I44	RT	4,064.4	
24	1309+00.00	1320+42.46	I44	LT	3,399.1	
24	1309+00.00	1320+42.46	I44	RT	3,358.8	
				TOTALS	**126,230**	

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

©Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 REBUILD
JST0088B

SUMMARY OF QUANTITIES
SHEET 45 OF 55

REV.

EFFECTIVE: 07-01-2024

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
WARNING SIGNS								
WO1-1L	48X48	16.00						TURN (SYMBOL LEFT)
WO1-1R	48X48	16.00						TURN (SYMBOL RIGHT)
WO1-2L	48X48	16.00						CURVE (SYMBOL LEFT)
WO1-2R	48X48	16.00						CURVE (SYMBOL RIGHT)
WO1-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT)
WO1-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT)
WO1-4L	48X48	16.00	3	48.00			15(L)	REVERSE CURVE (SYMBOL LEFT)
WO1-4R	48X48	16.00	1	16.00			15(R)	REVERSE CURVE (SYMBOL RIGHT)
WO1-4bL	48X48	16.00	3	48.00			32(L)	DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4bR	48X48	16.00	3	48.00			32(R)	DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-6	60X30	12.50	2	25.00			16	HORIZONTAL ARROW (SYMBOL)
WO1-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)
WO1-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
WO1-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)
WO1-8	18X24	3.00						CHEVRON (SYMBOL)
WO1-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
WO3-1	48X48	16.00						STOP AHEAD (SYMBOL)
WO3-2	48X48	16.00	1	16.00			40	YIELD AHEAD (SYMBOL)
WO3-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)
WO3-4	48X48	16.00	1	16.00			11	BE PREPARED TO STOP
WO3-5	48X48	16.00						SPEED LIMIT AHEAD (45)
WO4-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)
WO4-1R	48X48	16.00	1	16.00			60	MERGE (SYMBOL FROM RIGHT)
WO4-1aL	48X48	16.00	1	16.00			6A(L)	MERGE (LEFT)
WO4-1aR	48X48	16.00	2	32.00			6A(R)	MERGE (RIGHT)
WO5-1	48X48	16.00	4	64.00			43	ROAD/BRIDGE/RAMP NARROWS
WO5-3	48X48	16.00						ONE LANE BRIDGE
WO5-5	48X48	16.00	2	32.00			34	NARROW LANES
WO6-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)
WO6-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)
WO6-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)
WO7-3a	30X24	5.00						NEXT XX MILES (PLAQUE)
WO8-1	48X48	16.00						BUMP
WO8-2	48X48	16.00						DIP
WO8-3	48X48	16.00						PAVEMENT ENDS
WO8-4	48X48	16.00						SOFT SHOULDER
WO8-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)
WO8-6	48X48	16.00						TRUCK CROSSING
WO8-6c	48X48	16.00						TRUCK ENTRANCE
WO8-7	36X36	9.00						LOOSE GRAVEL
WO8-7a	36X36	9.00						FRESH OIL / LOOSE GRAVEL
WO8-9	48X48	16.00						LOW SHOULDER
WO8-11	48X48	16.00						UNEVEN LANES
WO8-12	48X48	16.00						NO CENTER LINE
WO8-15	48X48	16.00						GROOVED PAVEMENT
WO8-15P	30X24	5.00						MOTORCYCLE (PLAQUE)
WO8-17L	48X48	16.00	2	32.00			23(L)	SHOULDER DROP-OFF (SYMBOL LEFT)
WO8-17R	48X48	16.00	2	32.00			23(R)	SHOULDER DROP-OFF (SYMBOL RIGHT)
WO8-17P	30X24	5.00	2	10.00			23(P)	SHOULDER DROP-OFF (PLAQUE)
W9-3L	48X48	16.00	2	32.00			57	LANE SPLIT
W10-1	42RND.	9.62						RAILROAD CROSSING
WO12-1	36X36	9.00	1	9.00			56	DOUBLE DOWN ARROW (SYMBOL)
WO12-2	48X48	16.00						LOW CLEARANCE (SYMBOL)
W012-2x	24X18	3.00						LOW CLEARANCE (PLAQUE)
WO12-2a	84X24	14.00						OVERHEAD LOW CLEARANCE (FEET AND INCHES)
WO12-4	120X60	50.00						LOW CLEARANCE XX FT XX IN XX MILES AHEAD
WO12-5	120X60	50.00						WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD
WO13-1	30X30	6.25	3	18.75			44	ADVISORY SPEED (PLAQUE)
WO16-2	30X24	5.00						XXX FEET (PLAQUE)
WO16-3	30X24	5.00						X MILE (PLAQUE)
WO20-1	48X48	16.00	10	160.00			18	ROAD/BRIDGE/RAMP WORK AHEAD
WO20-2	48X48	16.00	10	160.00			2	DETOUR AHEAD
WO20-3	48X48	16.00	7	112.00			20	ROAD CLOSED AHEAD
WO20-3	48X48	16.00	1	16.00			20A	ROAD CLOSED 200FT
WO20-4	48X48	16.00						ONE LANE ROAD AHEAD
WO20-5	48X48	16.00	4	64.00			5	RIGHT/CENTER/LEFT LANE CLOSED AHEAD
WO20-5a	48X48	16.00						2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
WO20-6a	48X48	16.00	2	32.00			6	RIGHT/CENTER/LEFT LANE CLOSED
WO20-7a	48X48	16.00						FLAGGER (SYMBOL)
WO21-2	36X36	9.00						FRESH OIL
WO21-5	48X48	16.00	2	32.00			21	SHOULDER WORK / SHOULDER WORK AHEAD
W024-1R	48x48	16.00	3	48.00			63	RIGHT DOUBLE REVERSE CURVE
W024-1aR	48x48	16.00	3	48.00			65(R)	DOUBLE REVERSE CURVE, RIGHT, 2 LANE
W024-1cP	30X30	6.25	2	12.50			60	DOUBLE REVERSE CURVE, RIGHT, 2 LANE

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
GUIDE SIGNS								
E05-1	36X48	12.00	2	24.00			49	GORE EXIT
E05-2	48X36	12.00	2	24.00			58	EXIT OPEN
E05-2a	48X36	12.00	1	12.00			59	EXIT CLOSED
GO20-1	60X24	10.00						ROAD WORK NEXT XX MILES
GO20-2	48X24	8.00						END ROAD WORK
GO20-5aP	36X24	6.00	4	24.00			54	WORK ZONE (PLAQUE)
MO4-8a	24X18	3.00	7	21.00			52	END DETOUR
MO4-9L	48X36	12.00						DETOUR (LEFT)
MO4-9R	48X36	12.00						DETOUR (RIGHT)
MO4-9P	48X12	4.00						STREET NAME (PLAQUE)
MO4-10L	48X18	6.00						DETOUR ARROW (LEFT)
MO4-10R	48X18	6.00						DETOUR ARROW (RIGHT)
REGULATORY SIGNS								
R1-1	48X48	13.25						STOP
R1-2	60TRI.	12.50	1	12.50			13	YIELD
R1-2a	36X36	9.00						TO ONCOMING TRAFFIC (PLAQUE)
R1-3P	30X12	2.50						ALL WAY (PLAQUE)
R2-1	36X48	12.00	8	96.00			4,25	SPEED LIMIT (4 @ 50, 4 @ 60)
R3-1	48X48	16.00	2	32.00			62	NO RIGHT TURN (SYMBOL)
R3-2	48X48	16.00	2	32.00			61	NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00						NO TURNS
R3-4	48X48	16.00						NO U-TURN (SYMBOL)
R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25						RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00						DO NOT PASS
R4-2	36X48	12.00						PASS WITH CARE
R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)
R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)
R5-1	30X30	6.25						DO NOT ENTER
R5-1a	36X24	6.00						WRONG WAY
R6-1L	54X18	6.75						ONE WAY ARROW (LEFT)
R6-1R	54X18	6.75						ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00						ONE WAY (LEFT)
R6-2R	24X30	5.00						ONE WAY (RIGHT)
R10-6	24X36	6.00						STOP HERE ON RED (45^ ARROW)
R11-2	48X30	10.00	9	90.00			29	ROAD CLOSED
R11-3a	60X30	12.50	2	25.00			66	ROAD CLOSED 1/2 MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50	3	37.50			55	ROAD CLOSED TO THRU TRAFFIC
CONST-3A	60X48	20.00						FINE SIGN
CONST-3X	56X12	4.67						SPEEDING/PASSING (PLATE)
MISCELLANEOUS SIGNS								
CONST-5	96X48	32.00	2	64.00				POINT OF PRESENCE
CONST-8	48X36	12.00	2	24.00				WORK ZONE NO PHONE ZONE
SPECIAL	36x36	9.00	1	9.00			65A	BROADWAY AVE STRAIGHT
SPECIAL	36x36	9.00	4	36.00			65B	BROADWAY AVE RIGHT
SPECIAL	36x36	9.00	4	36.00			65C	BROADWAY AVE LEFT
SPECIAL	36x36	9.00	4	36.00			66A	GRANT AVE RIGHT
SPECIAL	36x36	9.00	7	63.00			66B	GRANT AVE LEFT
SPECIAL	36x36	9.00	2	18.00			66C	GRANT AVE STRAIGHT
SPECIAL	36x36	9.00	8	72.00			67A	NATIONAL RD RIGHT
SPECIAL	36x36	9.00	6	54.00			67B	NATIONAL RD LEFT
SPECIAL	36x36	9.00	3	27.00			67C	NATIONAL RD STRAIGHT
SPECIAL	36X78	19.50	2	39.00			68A	DETOUR I-44 EAST STRAIGHT
SPECIAL	36X78	19.50	2	39.00			68B	DETOUR I-44 EAST NEXT RIGHT
SPECIAL	36X78	19.50	2	39.00			68C	DETOUR I-44 EAST RIGHT
SPECIAL	36X78	19.50	2	39.00			68D	DETOUR I-44 EAST NEXT LEFT
SPECIAL	36X78	19.50	2	39.00			68E	DETOUR I-44 EAST LEFT
SPECIAL	36X78	19.50	1	19.50			68F	DETOUR I-44 EAST NEXT EXIT
SPECIAL	36X78	19.50	3	58.50			69A	DETOUR I-44 WEST STRAIGHT
SPECIAL	36X78	19.50	2	39.00			69B	DETOUR I-44 WEST NEXT RIGHT
SPECIAL	36X78	19.50	2	39.00			69C	DETOUR I-44 WEST RIGHT
SPECIAL	36X78	19.50	2	39.00			69D	DETOUR I-44 WEST NEXT LEFT
SPECIAL	36X78	19.50	2	39.00			69E	DETOUR I-44 WEST LEFT
SPECIAL	36x60	15.00	2	30.00			70D	DETOUR RTE H NEXT LEFT
SPECIAL	36X60	15.00	2	30.00			70E	DETOUR RTE H LEFT
SPECIAL	36X60	15.00	1	15.00			70G	DETOUR RTE H EXIT RT.
SPECIAL	36X60	15.00	1	15.00			70J	DETOUR RTE H 1 MILE
SPECIAL	36X60	15.00	2	30.00			71E	DETOUR RTE 13 LT.
SPECIAL	36X60	15.00	2	30.00			71G	DETOUR RTE 13 EXIT RT.
SPECIAL	36X60	15.00	1	15.00			71J	DETOUR RTE 13 1 MILE
SPECIAL	84x24	14.00	10	140.00			G	CLOSED
616-10.05 CONSTRUCTION SIGNS				TOTAL 2632				
616-10.10 RELOCATED SIGNS						TOTAL **		

ITEM NUMBER	TOTAL QTY	DESCRIPTION
6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
6122014	*	IMPACT ATTENUATOR 60 MPH (SAND BARRELS)
6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
6122020	3	REPLACEMENT SAND BARREL
6122030	*	IMPACT ATTENUATOR (RELOCATION)
6123001	3	TRUCK MOUNTED ATTENUATOR (TMA)
6161008	4	ADVANCED WARNING RAIL SYSTEM
6161012		BUOYS (BOATS KEEP OUT)
6161013		BUOYS (NO WAKE)
6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
6161025	314	CHANNELIZER (TRIM LINE)
6161030	47	TYPE III MOVEABLE BARRICADE
6161033	28	DIRECTION INDICATOR BARRICADE
6161040	2	FLASHING ARROW PANEL
6161047		TYPE III OBJECT MARKER
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A		CHANGEABLE MESSAGE SIGN W/O COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED
6161099	8	CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002	4	TEMPORARY LONG-TERM RUMBLE STRIPS
6173600D	*	TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/RETAINED
6173602B		TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/COMMISSION RETAINED
6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6176000B		TEMPORARY TRAFFIC BARRIER COMMISSION FURNISHED/RETAINED
6177000B		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION COMMISSION FURNISHED/RETAINED
6208064A		TEMPORARY RAISED PAVEMENT MARKER
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING
6169901	1	WORK ZONE INTELLIGENT TRANSPORTATION SYS.
6191000	30273	PAVEMENT EDGE TREATMENT

* SEE QUANTITY SHEET 50 OF 55

** NO DIRECT PAY WILL BE MADE FOR RELOCATION OF CONSTRUCTION SIGNING OR DEVICES.

SUMMARY OF QUANTITIES
JSU0076
SHEET 54 OF 55

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/1/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 3
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\Quantities\JSU0076\003_QU_54_JSU0076_I1_2BS.dgn 2:32:07 PM 11/1/2024

EFFECTIVE: 07-01-2024

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
WARNING SIGNS								
WO1-1L	48X48	16.00						TURN (SYMBOL LEFT)
WO1-1R	48X48	16.00						TURN (SYMBOL RIGHT)
WO1-2L	48X48	16.00						CURVE (SYMBOL LEFT)
WO1-2R	48X48	16.00						CURVE (SYMBOL RIGHT)
WO1-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT)
WO1-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT)
WO1-4L	48X48	16.00	2	32.00			15(L)	REVERSE CURVE (SYMBOL LEFT)
WO1-4R	48X48	16.00	2	32.00			15(R)	REVERSE CURVE (SYMBOL RIGHT)
WO1-4bL	48X48	16.00	2	32.00			32(L)	DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4bR	48X48	16.00	3	48.00			32(R)	DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-6	60X30	12.50	4	50.00			16	HORIZONTAL ARROW (SYMBOL)
WO1-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)
WO1-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
WO1-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)
WO1-8	18X24	3.00						CHEVRON (SYMBOL)
WO1-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
WO3-1	48X48	16.00						STOP AHEAD (SYMBOL)
WO3-2	48X48	16.00						YIELD AHEAD (SYMBOL)
WO3-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)
WO3-4	48X48	16.00	1	16.00			11	BE PREPARED TO STOP
WO3-5	48X48	16.00						SPEED LIMIT AHEAD
WO4-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)
WO4-1R	48X48	16.00	3	48.00			60	MERGE (SYMBOL FROM RIGHT)
WO4-1aL	48X48	16.00	1	16.00			6A	MERGE (LEFT)
WO4-1aR	48X48	16.00	2	32.00			6A	MERGE (RIGHT)
WO5-1	48X48	16.00	3	48.00			43	ROAD/BRIDGE/RAMP NARROWS
WO5-3	48X48	16.00						ONE LANE BRIDGE
WO5-5	48X48	16.00	4	64.00			34	NARROW LANES
WO6-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)
WO6-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)
WO6-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)
WO7-3a	30X24	5.00						NEXT XX MILES (PLAQUE)
WO8-1	48X48	16.00						BUMP
WO8-2	48X48	16.00						DIP
WO8-3	48X48	16.00						PAVEMENT ENDS
WO8-4	48X48	16.00						SOFT SHOULDER
WO8-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)
WO8-6	48X48	16.00						TRUCK CROSSING
WO8-6c	48X48	16.00						TRUCK ENTRANCE
WO8-7	36X36	9.00						LOOSE GRAVEL
WO8-7a	36X36	9.00						FRESH OIL / LOOSE GRAVEL
WO8-9	48X48	16.00						LOW SHOULDER
WO8-11	48X48	16.00						UNEVEN LANES
WO8-12	48X48	16.00						NO CENTER LINE
WO8-15	48X48	16.00						GROOVED PAVEMENT
WO8-15P	30X24	5.00						MOTORCYCLE (PLAQUE)
WO8-17L	48X48	16.00	2	32.00				SHOULDER DROP-OFF (SYMBOL LEFT)
WO8-17R	48X48	16.00	2	32.00				SHOULDER DROP-OFF (SYMBOL RIGHT)
WO8-17P	30X24	5.00						SHOULDER DROP-OFF (PLAQUE)
W9-3L	48X48	16.00	2	32.00			57	LANE SPLIT
W10-1	42RND.	9.62						RAILROAD CROSSING
WO12-1	36X36	9.00	1	9.00			56	DOUBLE DOWN ARROW (SYMBOL)
WO12-2	48X48	16.00						LOW CLEARANCE (SYMBOL)
W012-2x	24X18	3.00						LOW CLEARANCE (PLAQUE)
WO12-2a	84X24	14.00						OVERHEAD LOW CLEARANCE (FEET AND INCHES)
WO12-4	120X60	50.00						LOW CLEARANCE XX FT XX IN XX MILES AHEAD
WO12-5	120X60	50.00						WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD
WO13-1	30X30	6.25	2	12.50			44	ADVISORY SPEED (PLAQUE)
WO16-2	30X24	5.00						XXX FEET (PLAQUE)
WO16-3	30X24	5.00						X MILE (PLAQUE)
WO20-1	48X48	16.00	5	80.00			2	ROAD/BRIDGE/RAMP WORK AHEAD
WO20-2	48X48	16.00	2	32.00			18	DETOUR AHEAD
WO20-3	48X48	16.00	4	64.00			20	ROAD CLOSED AHEAD
WO20-4	48X48	16.00						ONE LANE ROAD AHEAD
WO20-5	48X48	16.00	4	64.00			5	RIGHT/CENTER/LEFT LANE CLOSED AHEAD
WO20-5a	48X48	16.00						2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
WO20-6a	48X48	16.00	3	48.00			6	RIGHT/CENTER/LEFT LANE CLOSED
WO20-7a	48X48	16.00						FLAGGER (SYMBOL)
WO21-2	36X36	9.00						FRESH OIL
WO21-5	48X48	16.00	3	32.00			21	SHOULDER WORK / SHOULDER WORK AHEAD
WO22-1	48X48	16.00						BLASTING ZONE AHEAD
WO22-2	42X36	10.50						TURN OFF 2-WAY RADIO AND PHONE
WO22-3	42X36	10.50						END BLASTING ZONE
W024-1aR	48X48	16.00						DOUBLE REVERSE CURVE, RIGHT, 2 LANE

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
GUIDE SIGNS								
E05-1	36X48	12.00	2	24.00			49	GORE EXIT
E05-2	48X36	12.00	1	12.00			58	EXIT OPEN
E05-2a	48X36	12.00	3	36.00			59	EXIT CLOSED
GO20-1	60X24	10.00						ROAD WORK NEXT XX MILES
GO20-2	48X24	8.00						END ROAD WORK
GO20-4	36X18	4.50						PILOT CAR FOLLOW ME
GO20-4a	42X30	8.75						PILOT CAR IN USE WAIT & FOLLOW
GO20-4a	18X12	1.50						PILOT CAR IN USE WAIT & FOLLOW
GO20-5aP	36X24	6.00	4	24.00			54	WORK ZONE (PLAQUE)
MO4-8a	24X18	3.00	2	6.00			52	END DETOUR
MO4-9L	48X36	12.00						DETOUR (LEFT)
MO4-9R	48X36	12.00						DETOUR (RIGHT)
MO4-9P	48X12	4.00						STREET NAME (PLAQUE)
MO4-10L	48X18	6.00						DETOUR ARROW (LEFT)
MO4-10R	48X18	6.00						DETOUR ARROW (RIGHT)
REGULATORY SIGNS								
R1-1	48X48	13.25						STOP
R1-2	48TRI.	12.5	1	12.50			13	YIELD
R1-2a	36X36	9.00						TO ONCOMING TRAFFIC (PLAQUE)
R1-3P	30X12	2.50						ALL WAY (PLAQUE)
R2-1	36X48	12.00	4	48.00			4	SPEED LIMIT (4 @ 50)
R3-1	48X48	16.00	2	32.00			62	NO RIGHT TURN (SYMBOL)
R3-2	48X48	16.00	1	16.00			61	NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00						NO TURNS
R3-4	48X48	16.00						NO U-TURN (SYMBOL)
R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25						RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00						DO NOT PASS
R4-2	36X48	12.00						PASS WITH CARE
R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)
R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)
R5-1	30X30	6.25						DO NOT ENTER
R5-1a	36X24	6.00						WRONG WAY
R6-1L	54X18	6.75						ONE WAY ARROW (LEFT)
R6-1R	54X18	6.75						ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00						ONE WAY (LEFT)
R6-2R	24X30	5.00						ONE WAY (RIGHT)
R9-9	24X12	2.00						SIDEWALK CLOSED
R9-11L	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE
R9-11R	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE
R10-6	24X36	6.00						STOP HERE ON RED (45^ ARROW)
R11-2	48X30	10.00	2	24.00			29	ROAD CLOSED
R11-3a	60X30	12.50	1	12.50			66	ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50						ROAD CLOSED TO THRU TRAFFIC
CONST-3A	60X48	20.00						FINE SIGN
CONST-3X	56X12	4.67						SPEEDING/PASSING (PLATE)
MISCELLANEOUS SIGNS								
CONST-5	48X36	12.00						POINT OF PRESENCE
CONST-5	96X48	32.00	2	64.00			SP	POINT OF PRESENCE
CONST-8	48X36	12.00	2	24.00			SP	WORK ZONE NO PHONE ZONE
SPECIAL	36X78	19.50	2	39.00			68A	DETOUR 1-44 EAST STRAIGHT
SPECIAL	36X78	19.50	1	19.50			68B	DETOUR I-44 EAST NEXT RIGHT
SPECIAL	36X78	19.50	1	19.50			68C	DETOUR I-44 EAST RIGHT
SPECIAL	36X78	19.50	2	39.00			68D	DETOUR I-44 EAST NEXT LEFT
SPECIAL	36X78	19.50	2	39.00			68E	DETOUR I-44 EAST LEFT
SPECIAL	36X78	19.50	1	19.50			68G	DETOUR I-44 EAST EXIT
SPECIAL	36X78	19.50	2	39.00			69A	DETOUR I-44 WEST STRAIGHT
SPECIAL	36X78	19.50	3	58.50			69E	DETOUR I-44 WEST NEXT EXIT
SPECIAL	36X60	15.00	1	15.00			70A	DETOUR RTE H STRAIGHT
SPECIAL	36X60	15.00	2	30.00			70E	DETOUR RTE H LEFT
SPECIAL	36X60	15.00	2	30.00			70G	DETOUR RTE H EXIT
SPECIAL	36X60	15.00	1	15.00			70H	DETOUR RTE H 1 MILE
SPECIAL	36X78	19.50	2	39.00			72A	DETOUR US 65 SOUTH STRAIGHT
SPECIAL	36X78	19.50	2	39.00			72E	DETOUR US 65 SOUTH LEFT
SPECIAL	36X78	19.50	1	19.50			72G	DETOUR US 65 SOUTH EXIT
SPECIAL	84X24	14.00	8	112.00			G	CLOSED

616-10.05 CONSTRUCTION SIGNS	TOTAL
	1763

616-10.10 RELOCATED SIGNS	TOTAL
	**

ITEM NUMBER	TOTAL QTY	DESCRIPTION
6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
6122014	*	IMPACT ATTENUATOR 60 MPH (SAND BARRELS)
6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
6122020	5	REPLACEMENT SAND BARREL
6122030	*	IMPACT ATTENUATOR (RELOCATION)
6123001	1	TRUCK MOUNTED ATTENUATOR (TMA)
6161008	4	ADVANCED WARNING RAIL SYSTEM
6161012		BUOYS (BOATS KEEP OUT)
6161013		BUOYS (NO WAKE)
6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
6161025	250	CHANNELIZER (TRIM LINE)
6161030	8	TYPE III MOVEABLE BARRICADE
6161033	28	DIRECTION INDICATOR BARRICADE
6161040	2	FLASHING ARROW PANEL
6161047		TYPE III OBJECT MARKER
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A		CHANGEABLE MESSAGE SIGN W/O COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED
6161099	4	CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002	4	TEMPORARY LONG-TERM RUMBLE STRIPS
6173600D	*	TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/RETAINED
6173602B		TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/COMMISSION RETAINED
6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6176000B		TEMPORARY TRAFFIC BARRIER COMMISSION FURNISHED/RETAINED
6177000B		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION COMMISSION FURNISHED/RETAINED
6208064A		TEMPORARY RAISED PAVEMENT MARKER
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING
6169901	1	WORK ZONE INTELLIGENT TRANSPORTATION SYS.
6191000	23,917	PAVEMENT EDGE TREATMENT

* SEE QUANTITY SHEET 52 OF 55

** NO DIRECT PAY WILL BE MADE FOR RELOCATION OF CONSTRUCTION SIGNING OR DEVICES.

SUMMARY OF QUANTITIES
J8I3044C
SHEET 55 OF 55

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

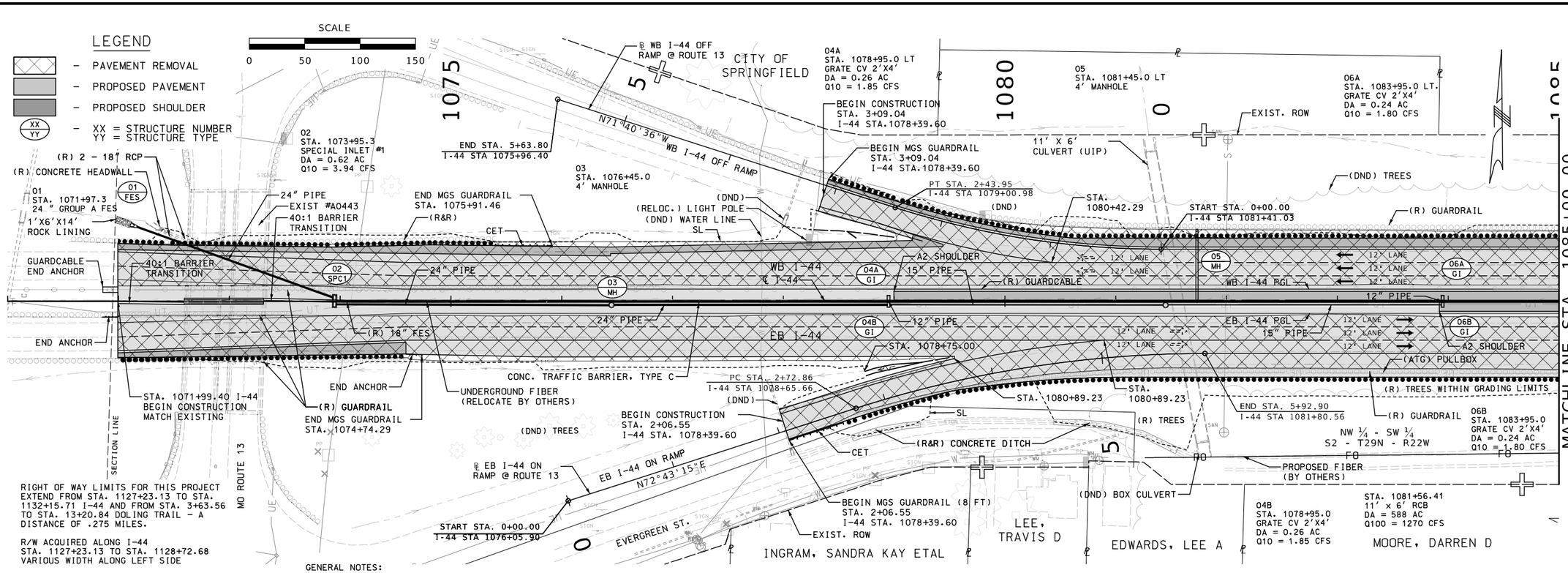
DATE PREPARED: 11/1/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 3
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
PRO. ENGINEER 2010005873

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



RIGHT OF WAY LIMITS FOR THIS PROJECT EXTEND FROM STA. 1127+23.13 TO STA. 1132+15.71 I-44 AND FROM STA. 3+63.56 TO STA. 13+20.84 DOLING TRAIL – A DISTANCE OF .275 MILES.

R/W ACQUIRED ALONG I-44
STA. 1127+23.13 TO STA. 1128+72.68
VARIOUS WIDTH ALONG LEFT SIDE

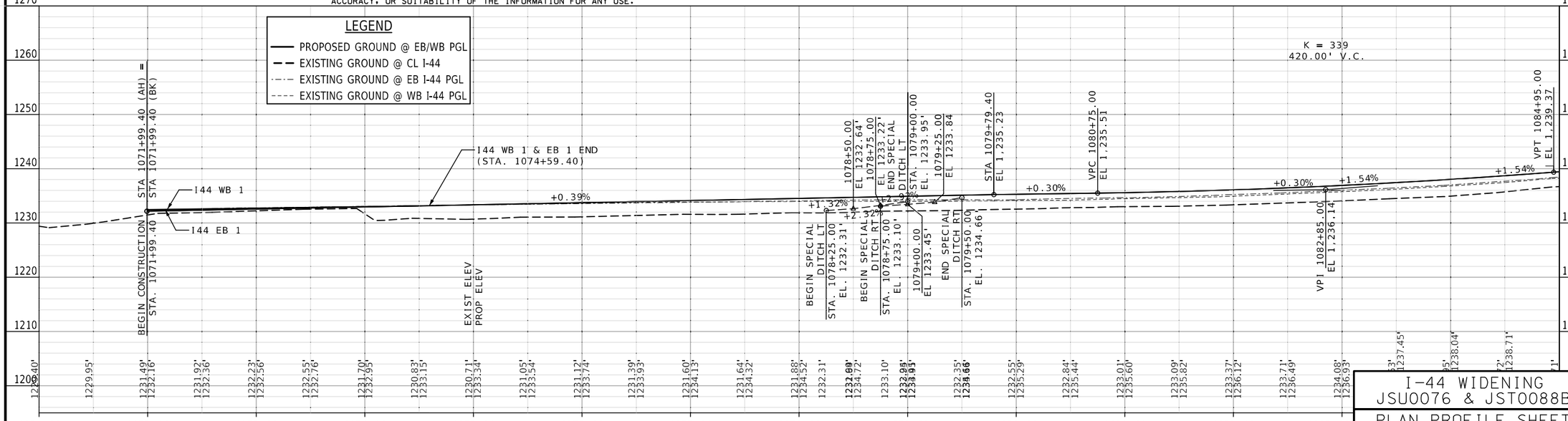
R/W ACQUIRED ALONG I-44
STA. 1129+83.71 TO STA. 1132+15.71
VARIOUS WIDTH ALONG RIGHT SIDE

R/W ACQUIRED ALONG DOLING TRAIL
STA. 3+63.56 TO STA 4+21.89
VARIOUS WIDTH ALONG LEFT SIDE

R/W ACQUIRED ALONG DOLING TRAIL
STA. 11+54.77 TO STA 13+20.84
VARIOUS WIDTH ALONG BOTH SIDES

GENERAL NOTES:

1. THE BASIS OF BEARING IS U.S. STATE PLANE NAD83 ZONE 2401 (MISSOURI CENTRAL). VERTICAL DATUM IS NAVD88.
2. ANY WORK INDICATED ON THE PLANS THAT EXTENDS BEYOND THE PROJECT LIMITS IS CONSIDERED INCIDENTAL TO AND A PART OF THE CONSTRUCTION OF THIS PROJECT.
3. SEE GEOMETRIC SHEETS FOR INTERSECTION STATION TIES, CURVE DATA, ANGLES, BEARINGS, AND COORDINATE POINT INFORMATION.
4. REFER TO THE SIGNING AND LIGHTING PLAN FOR RESPECTIVE REMOVALS.
5. THE APPROXIMATE LOCATION OF PROPERTY LINES AS SHOWN ON THE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE COMMISSION AT THIS TIME. THIS INFORMATION IS PROVIDED BY THE COMMISSION AS-IS AND THE COMMISSION EXPRESSLY DISCLAIMS AND REPRESENTATION OR WARRANTY AS TO THE COMPLETENESS, ACCURACY, OR SUITABILITY OF THE INFORMATION FOR ANY USE.



I-44 WIDENING
JSU0076 & JST0088B

PLAN PROFILE SHEET
1 OF 22

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
11/4/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	4
COUNTY	
GREENE	
JOB NO.	
JSU0076, J8I3044C, & JST0088B	
PROJECT NO.	
BRIDGE NO.	

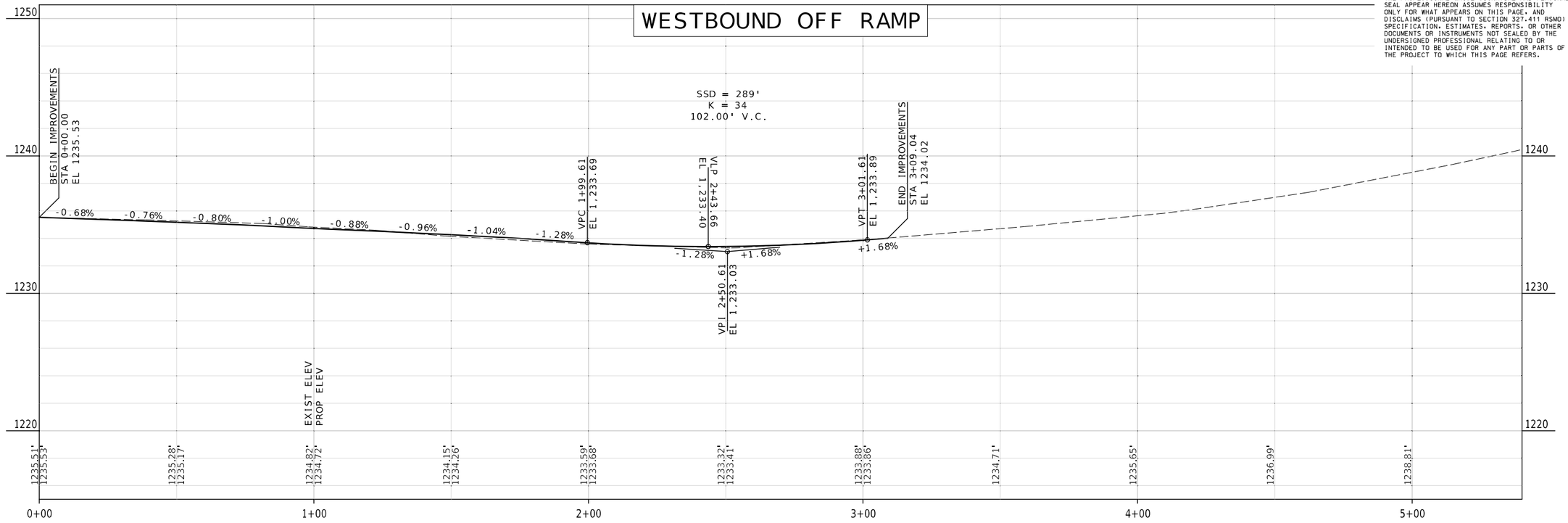
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

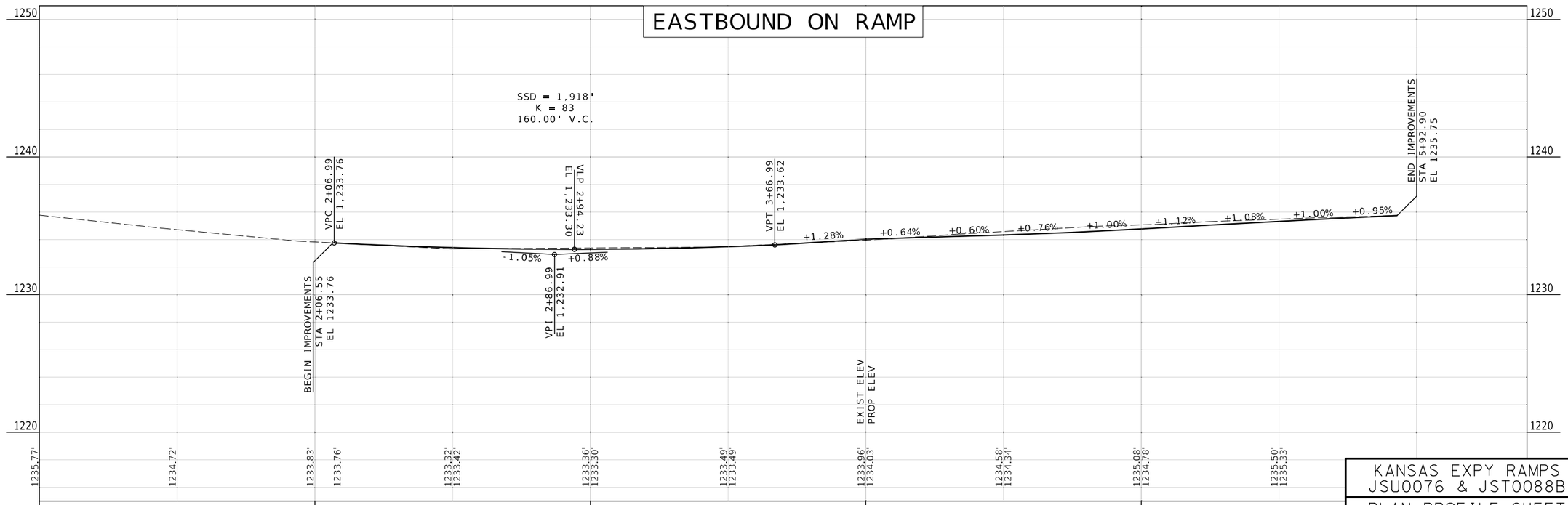
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

WESTBOUND OFF RAMP



EASTBOUND ON RAMP



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	5

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

KANSAS EXPY RAMPS
JSU0076 & JST0088B

PLAN PROFILE SHEET
2 OF 22

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\005,015,017,025_PP_J8I3044C_i50_Ramps.dgn 7:28:46 AM 11/4/2024

SCALE
0 50 100 150

MATCHLINE STA. 1085+00.00

1085

1/4 1/4 SECTION LINE

FRIENDS OF ZOO SPFD MO INC

07
STA. 1088+38.8
15" FLARED END SECTION

08A
STA. 1088+47.1 LT
GRATE CV 2'X4'
DA = 0.32 AC
Q10 = 2.39 CFS

1090

CONTRACT LODGING OF MO INC

EXIST. ROW

09
STA. 1091+47.1 LT
4' MANHOLE

HAWK PROPERTY HOLDINGS LLC ETAL

1095

10A
STA. 1094+50.0
GRATE CV 2'X4'
DA = 0.32 AC
Q10 = 2.42 CFS

CKAN SPRINGFIELD STUDIOS LLC

11D
STA. 1098+91.9
42" GROUP A FES

2'X18'X99' ROCK LINING
(R) CONCRETE FLUME
BRIDGE ANCHOR SECTION
BEGIN BRIDGE STA. 1098+93.13 WB
WALL #A9415
11D FES
(R) TREES

POT STA 1092+83.20 R3

CONC. TRAFFIC BARRIER, TYPE C
STA. 1095+93.33
SL
BEGIN MGS GUARDRAIL STA. 1097+49.23

07 FES
1'X4'X12' ROCK LINING
15" PIPE
(R) FES & ABANDON PIPE
(R) GUARDRAIL
CET
END MGS GUARDRAIL STA. 1090+82.43

END ANCHOR STA. 1098+33.33
APPROACH PAVEMENT
BEGIN BARRIER TRANSITION STA. 1098+60.74

(R) GUARDCABLE
12' LANE
08A GI
15" PIPE
WB I-44
℄ I-44
09 MH
15" PIPE
WB I-44 PGL
10A GI
(R) GUARDCABLE

A2 SHOULDER
08B GI
S89°27'07"E
15" PIPE
(R) INLET
EB I-44
(R) LIGHT POLE
EB I-44 PGL
12" PIPE
10B GI
S89°27'59"E
(R) GUARDRAIL
(R) PULLBOX
(R) CONCRETE FLUME
STA. 1097+99.00

STA. 1094+19.40
SL
(R) LIGHT POLE
BEGIN MGS GUARDRAIL STA. 1095+13.33
CET
BEGIN BRIDGE STA. 1098+92.36 EB

END ANCHOR
UNDERGROUND FIBER (RELOCATE BY OTHERS)
END MGS GUARDRAIL (8 FT) STA. 1090+03.53
PROPOSED FIBER (BY OTHERS)
(DND)

EQUATION:
STA 1092+80.28 BK =
STA 1092+83.20 AH

2' THICK ROCK LINING 94.0 CY
11A GI
(R) INLET
1'X7'X10' ROCK LINING
(R) 18" RCP

LEGEND
- PAVEMENT REMOVAL
- PROPOSED PAVEMENT
- PROPOSED SHOULDER
- XX = STRUCTURE NUMBER
- YY = STRUCTURE TYPE

NE 1/4 - SW 1/4
S2 - T29N - R22W

MITCHELL, JONATHAN

08B
STA. 1088+47.1
GRATE CV 2'X4'
DA = 0.32 AC
Q10 = 2.39 CFS

EXIST. ROW

ONISORU, GABRIEL

10B
STA. 1094+50.0
GRATE CV 2'X4'
DA = 0.32 AC
Q10 = 2.42 CFS

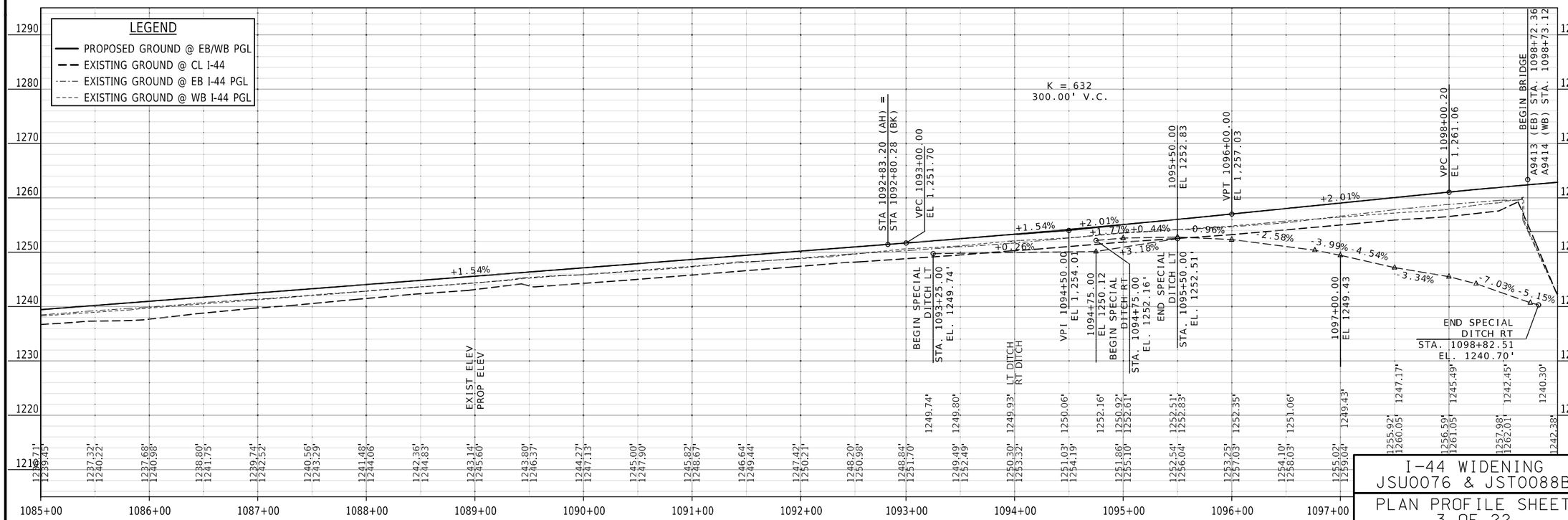
EDES, ALAN

11A
STA. 1098+94.3
BEARING GRATE 5'X3'
DA= 0.87 AC
Q10=3.01 CFS

HALL, JAMES R

1/4 SECTION LINE

MATCHLINE STA. 1099+00.00



I-44 WIDENING
JSU0076 & JST0088B

PLAN PROFILE SHEET
3 OF 22

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	6

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

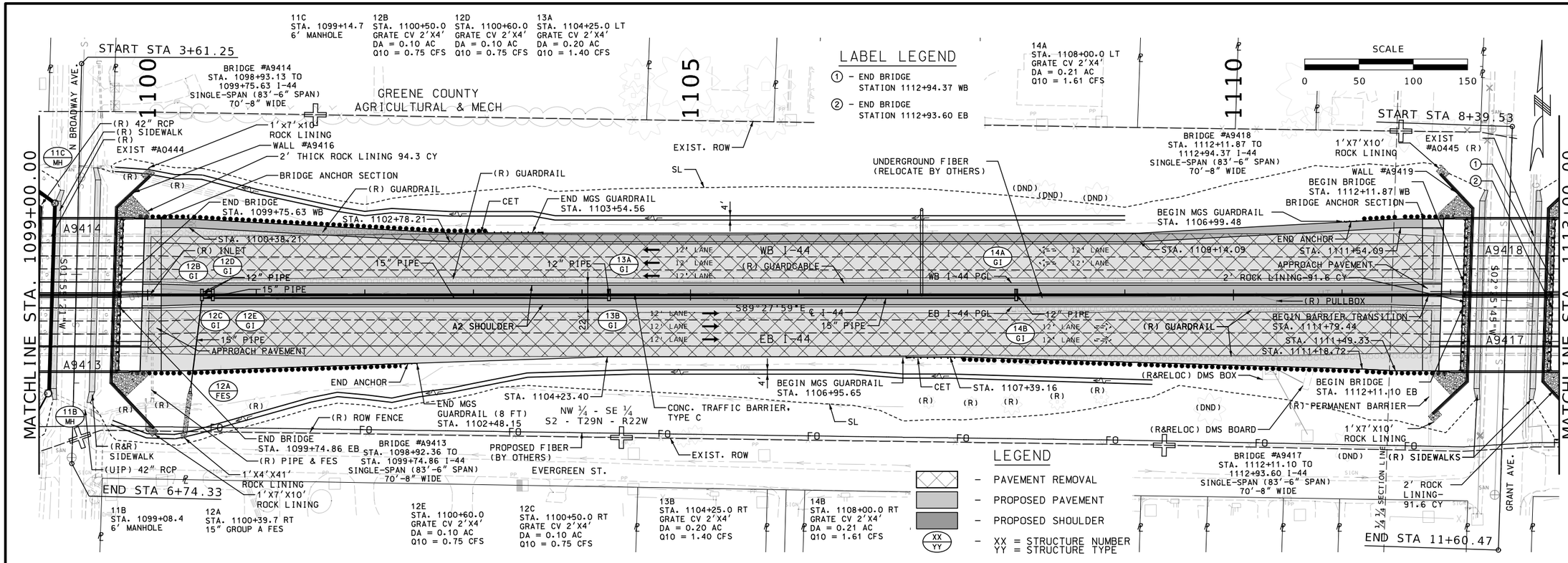
BRIDGE NO.

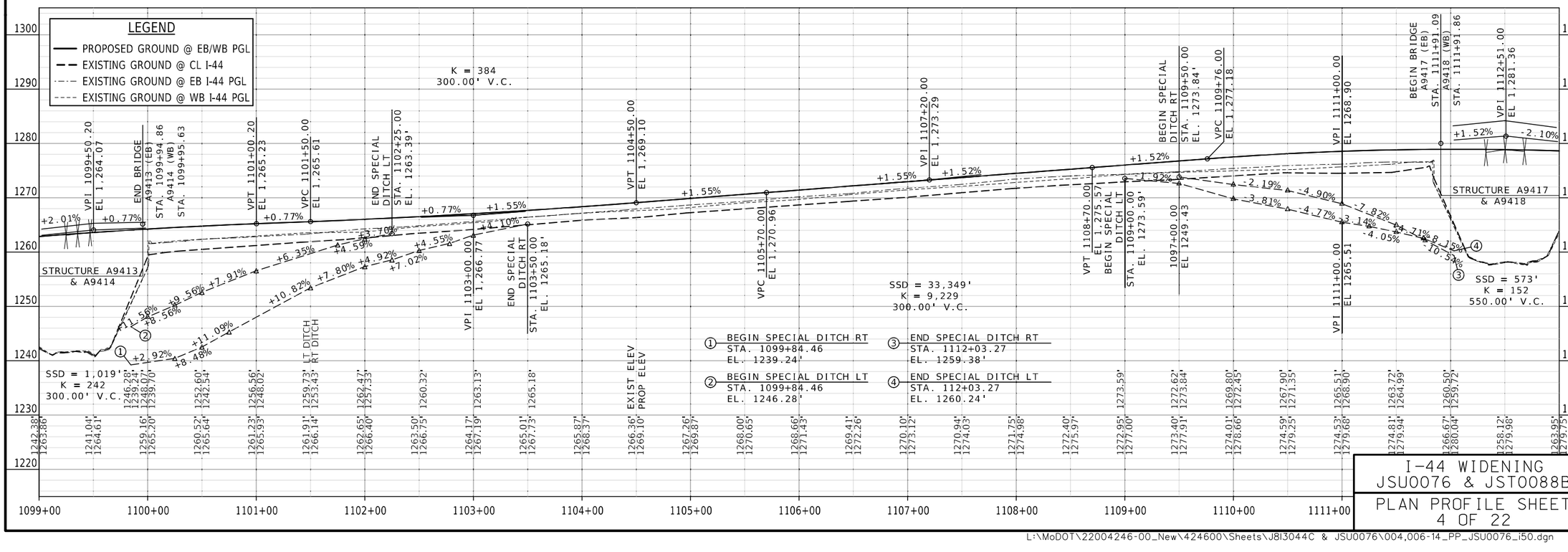
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631





I-44 WIDENING
JSU0076 & JST0088B

PLAN PROFILE SHEET
4 OF 22

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	7

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\004,006-14_PP_JSU0076_i50.dgn 7:29:10 AM 11/4/2024

SCALE 0 50 100 150

MATCHLINE STA. 1113+00.00

MATCHLINE STA. 1127+00.00

1115 1120 1125

16
STA. 1114+20.3 RT
42" FLARED END SECTION

18
STA. 1118+25.0 LT
4" MANHOLE

19A
STA. 1120+75.0 LT
GRATE CV 2'X4'
DA = 0.26 AC
Q10 = 1.95 CFS

20
STA. 1123+25.1 LT
4' MANHOLE

21
STA. 1125+75.0 LT
SPECIAL INLET #1
DA = 0.26 AC
Q10 = 1.99 CFS

22
STA. 1125+81.8 LT
18" GROUP A FES

GENERAL COUNCIL OF THE ASSEMBLIES OF GOD

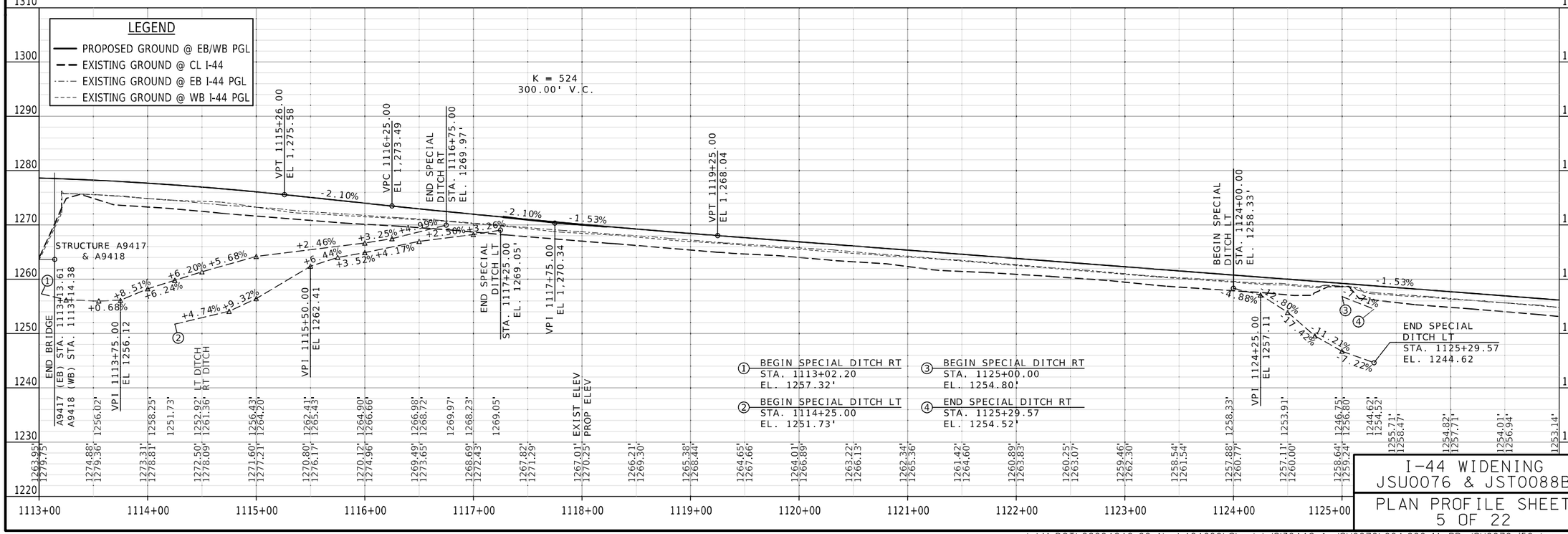
THE CITY OF SPRINGFIELD

WILLIAMS ST.

SECTION LINE

1'X7'X10' ROCK LINING
(R) CONCRETE FLUME
BRIDGE ANCHOR SECTION
2'X10'X17' ROCK LINING
16 FES
TYPE A PIPE COLLAR
(R) HEADWALL
EX. 42" PIPE
STA. 1115+95.95
(R) GUARDRAIL
17A
STA. 1115+75.0 LT
GRATE CV 2'X4'
DA = 0.20 AC
Q10 = 1.48 CFS
EXIST. ROW
SL
END MGS GUARDRAIL (8 FT)
STA. 1118+84.80
CONC. TRAFFIC BARRIER, TYPE C
CET
(R) CONCRETE DITCH
(R) FES & ABANDON UNDER PVMNT
(DND) WATERLINE
BEGIN MGS GUARDRAIL (8 F
STA. 1125+29.57
END ANCHOR
1'X4'X15' ROCK LINING
22 FES
18" PIPE
STA. 1113+56.95
APPROACH PAVEMENT
17A GI
18 MH
19A GI
20 MH
21 SPC1
12' LANE
WB I-44
12" PIPE
℄ I-44
15" PIPE
WB I-44 PGL
(R) INLET
12" PIPE
17B GI
CULVERT CLEANOUT
A2 SHOULDER
S89°27'59"E
19B GI
EB I-44 PGL
(R) GUARDCABLE
EB I-44
STA. 1111+18.72
END ANCHOR
END MGS GUARDRAIL
STA. 1114+51.55
(R) CONCRETE FLUME
STA. 1117+66.31
UNDERGROUND FIBER (RELOCATE BY OTHERS)
(R) GUARDRAIL
CET
BEGIN MGS GUARDRAIL (8 FT)
STA. 1125+29.57
15 FES
TYPE A PIPE COLLAR
(R) HEADWALL
NE ¼ - SE ¼
S2 - T29N - R22W
(R&R) ROW FENCE
(DND) TREES
1'X5'X5' ROCK LINING
(R) PERMANENT BARRIER
WALL #A9420
EVERGREEN ST.
PROPOSED FIBER (BY OTHERS)
EXIST. ROW
19B
STA. 1120+75.0 RT
GRATE CV 2'X4'
DA = 0.26 AC
Q10 = 1.95 CFS
EVERGREEN ST.
15
STA. 1113+59.1 RT
42" GROUP A FES
17B
STA. 1115+75.0 RT
GRATE CV 2'X4'
DA = 0.20 AC
Q10 = 1.48 CFS

LEGEND
- PAVEMENT REMOVAL
- PROPOSED PAVEMENT
- PROPOSED SHOULDER
- XX = STRUCTURE NUMBER
  YY = STRUCTURE TYPE



STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	8

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

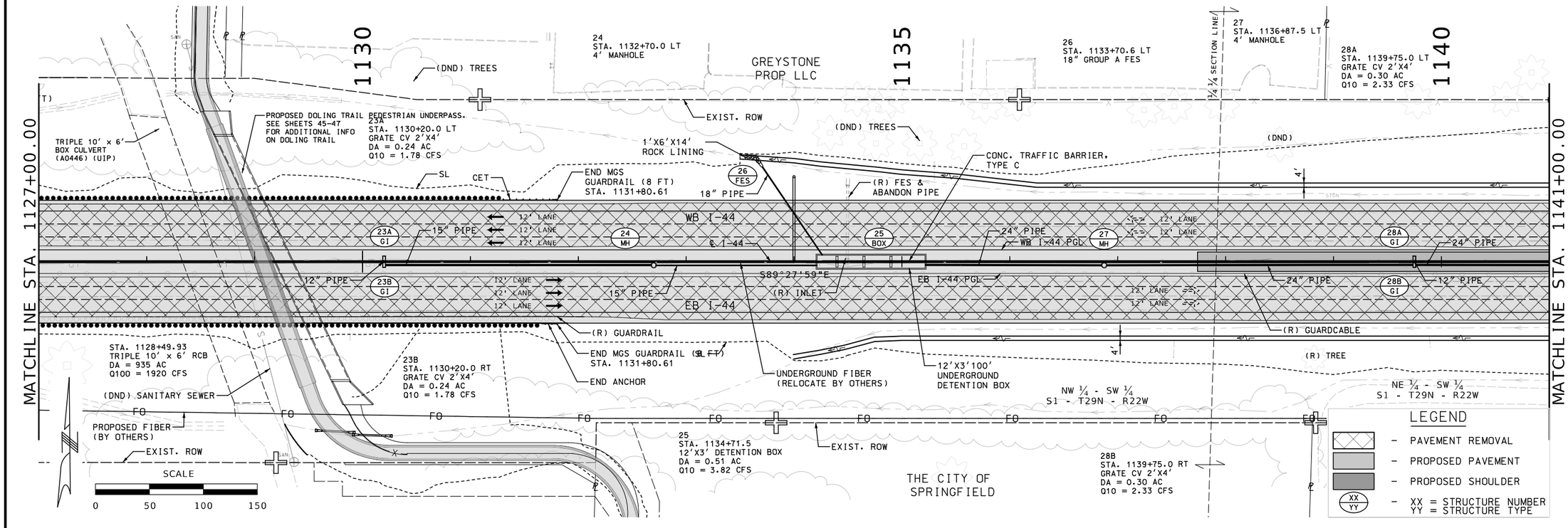
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

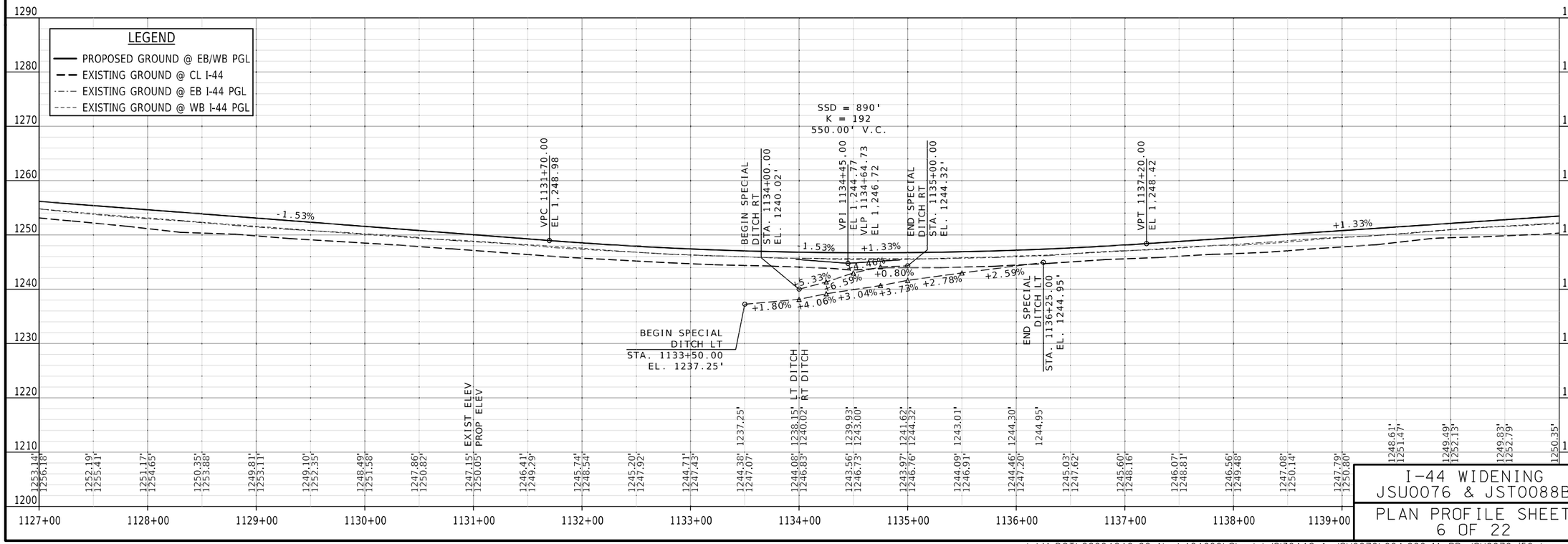
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076 & JST0088B

PLAN PROFILE SHEET 5 OF 22

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\004,006-14_PP_JSU0076_i50.dgn 7:29:12 AM 11/4/2024





I-44 WIDENING
JSU0076 & JST0088B

PLAN PROFILE SHEET
6 OF 22

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	9

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C,
& JST0088B

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\004,006-14_PP_JSU0076_i50.dgn 7:29:15 AM 11/4/2024

FOOTSTEPS LLC

29
STA. 1142+62.5 LT
4' MANHOLE

1145

30A
STA. 1145+50.0 LT
GRATE CV 2'X4'
DA = 0.30 AC
Q10 = 2.29 CFS

SPRINGER, NICHOLE D

HAWKINS, RODNEY A

TINKHAM, JAMES DEAN

31
STA. 1148+37.5 LT
4' MANHOLE

1150

J PARRISH PROP LLC

WELL SPRINGFIELD CHURCH OF THE NAZARENE

32A
STA. 1151+25.0 LT
GRATE CV 2'X4'
DA = 0.30 AC
Q10 = 2.26 CFS

1155

MATCHLINE STA. 1141+00.00

MATCHLINE STA. 1155+00.00

SL

EXIST. ROW

1/4 SECTION LINE

33
STA. 1154+12.5 LT
4' MANHOLE

CONC. TRAFFIC BARRIER, TYPE C

(R) FES & ABANDON PIPE

UNDERGROUND FIBER (RELOCATE BY OTHERS)

OVERHEAD ELEC. (RELOCATE BY OTHERS)

24" PIPE

29 MH

24" PIPE

12' LANE
12' LANE
12" PIPE

30A GI

12' LANE
12' LANE
12' LANE

WB I-44

18" PIPE

31 MH

WB I-44 PGL

32A GI

12" PIPE

15" PIPE

S89°27'59"E

30B GI

12' LANE
12' LANE
12' LANE

℄ I-44

18" PIPE

EB I-44 PGL

(R) INLET

32B GI

15" PIPE

33 MH

(R) GUARDCABLE

EB I-44

NE ¼ - SW ¼
S1 - T29N - R22W

UNDERGROUND FIBER (RELOCATE BY OTHERS)

(R) TREES

SOUND WALL
STA. 1152+53.81
(JSU0114)

NW ¼ - SE ¼
S1 - T29N - R22W

SL

EVERGREEN ST.

FO

EXIST. ROW

SCALE

0 50 100 150

BETHANY EVANGELICAL CHURCH INC

LEGEND

- PAVEMENT REMOVAL
- PROPOSED PAVEMENT
- PROPOSED SHOULDER
- XX = STRUCTURE NUMBER
  YY = STRUCTURE TYPE

30B
STA. 1145+50.0 RT
GRATE CV 2'X4'
DA = 0.30 AC
Q10 = 2.29 CFS

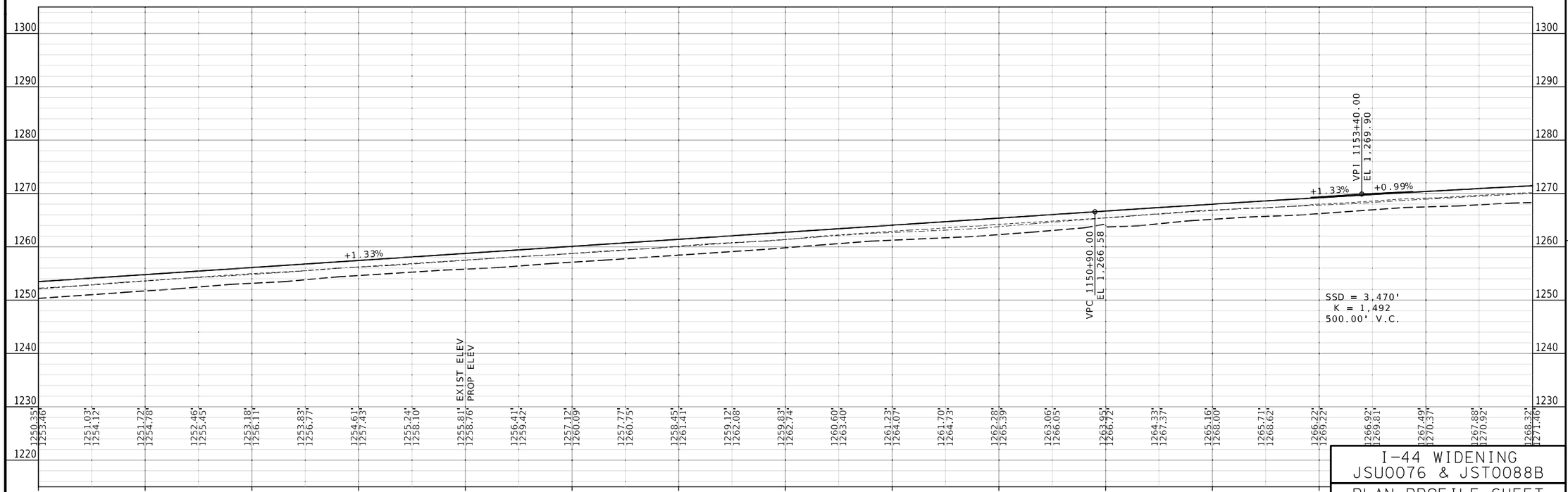
(R) TREES

PROPOSED FIBER (BY OTHERS)

32B
STA. 1151+25.0 RT
GRATE CV 2'X4'
DA = 0.30 AC
Q10 = 2.26 CFS

REYNOLDS, ALAN P

EVERGREEN ST.



I-44 WIDENING
JSU0076 & JST0088B

PLAN PROFILE SHEET
7 OF 22

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\004,006-14_PP_JSU0076_i50.dgn 7:29:18 AM 11/4/2024

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	10

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT

©Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SCALE
0 50 100 150

MATCHLINE STA. 1155+00.00

1155

1160

1165

34A
STA. 1157+00.0 LT
GRATE CV 2'X4'
DA = 0.45 AC
Q10 = 2.78 CFS

39
STA. 1165+49.4
SPECIAL INLET #2
DA = 0.37 AC
Q10 = 2.48 CFS

40
STA. 1165+49.7 LT
30" GROUP A FES

1/4 1/4 SECTION LINE

LEGEND
- PAVEMENT REMOVAL
- PROPOSED PAVEMENT
- PROPOSED SHOULDER
XX YY - XX = STRUCTURE NUMBER, YY = STRUCTURE TYPE

(DND) WATERLINE
(DND) GAS LINE
35A
STA. 1157+20.1 LT
30" GROUP A FES
1'X7'X16' ROCK LINING
TYPE A PIPE COLLAR
(R) HEADWALL
SL
EXIST. ROW
35A FES
EX. 30' PIPE (UIP)
CONC. TRAFFIC BARRIER, TYPE C
EX. 30" PIPE (UIP)
41
STA. 1168+99.5 LT
4' MANHOLE

CULVERT CLEANOUT
34A GI
15" PIPE
12' LANE
WB I-44
℄ I-44
WB I-44 PGL
CULVERT CLEANOUT
39 SPC2
15" PIPE
41 MH

12" PIPE
34B GI
S89°27'59"E
EB I-44 PGL
(R) 24" RCP
EX. 30" PIPE (UIP)
(R) INLET
CET
(R) GUARDCABLE
EB I-44

1'X6'X10' ROCK LINING
35B FES
TYPE A PIPE COLLAR
UNDERGROUND FIBER (RELOCATE BY OTHERS)
HEADWALL(R) 30" PIPE
BEGIN MGS GUARDRAIL (8 FT) STA. 1165+53.07
DITCH BLOCK
36A FES
(R) EX CONCRETE
NW 1/4 - SE 1/4 S1 - T29N - R22W
TREES (R)
DITCH BLOCK 24" PIPE
38 SPC3
TYPE A PIPE COLLAR SOUND WALL STA. 1167+75.00 (JSU0114)
SOUND WALL (SEE JSU0114 FOR SOUND WALL DESIGN PLANS)
24" PIPE
36B FES
SL
PROPOSED FIBER (BY OTHERS)
EXIST. ROW
CONCRETE DITCH (R)
(DND)
37 FES
(R) TREES
NE 1/4 - SE 1/4 S1 - T29N - R22W
FO

34B
STA. 1157+00.0 LT
GRATE CV 2'X4'
DA = 0.45 AC
Q10 = 2.78 CFS

EVERGREEN ST.

35B
STA. 1157+75.9
30" GROUP A FES

36A
STA. 1157+83.2
24" GROUP A FES

36B
STA. 1157+98.5
24" GROUP A FES

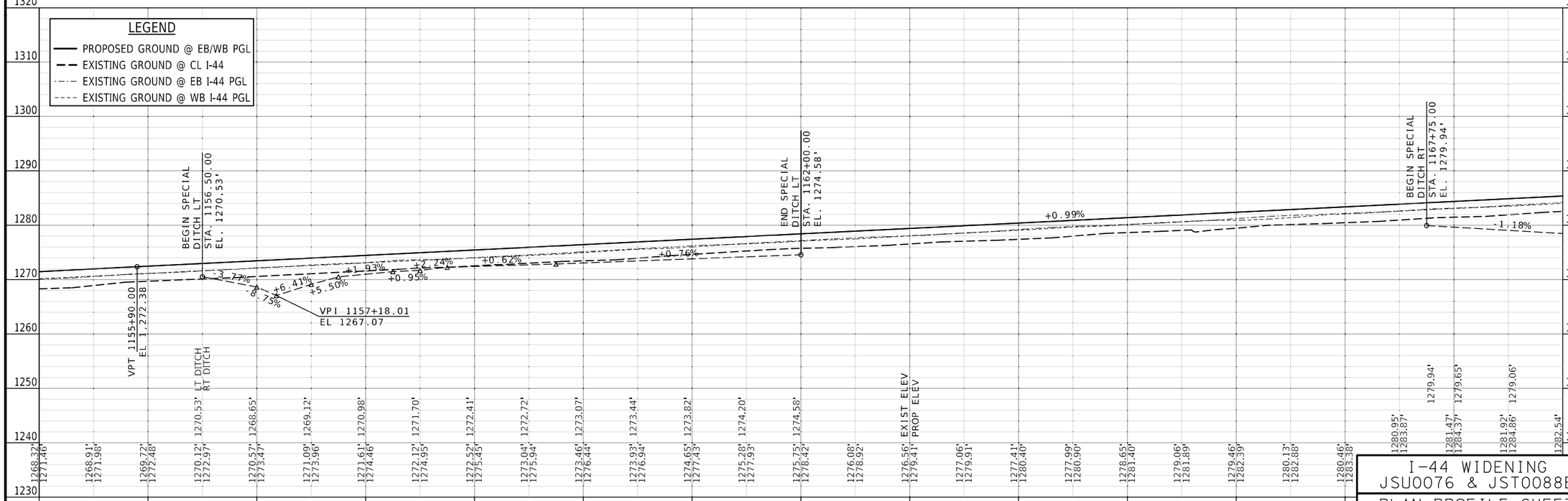
38
STA. 1165+49.5 RT
BEARING GRATE
5'x3' TYPE S-3
DA = 1.05 AC
Q10 = 3.36 CFS

37
STA. 1165+50.0 RT
24" GROUP A FES

EVERGREEN ST.

TREES (R)
SOUND WALL STA. 1167+50.42 (JSU0114)

MATCHLINE STA. 1169+00.00



I-44 WIDENING
JSU0076 & JST0088B

PLAN PROFILE SHEET
8 OF 22

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED	
11/4/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	11

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\004,006-14_PP_JSU0076_i50.dgn 7:29:20 AM 11/4/2024

SCALE
0 50 100 150

LEGEND
- PAVEMENT REMOVAL
- PROPOSED PAVEMENT
- PROPOSED SHOULDER
- XX = STRUCTURE NUMBER, YY = STRUCTURE TYPE

LABEL LEGEND
1 - (R) CONCRETE DITCH

MATCHLINE STA. 1169+00.00

1170

43
STA. 1171+90.8
48" GROUP A FES
2'X12'X20' ROCK LINING

44A
STA. 1172+49.5 LT
GRATE CV 2'X4'
DA = 0.37 AC
Q10 = 2.58 CFS

CONC. TRAFFIC BARRIER, TYPE C
END ANCHOR
BEGIN MGS GUARDRAIL (8 FT)
STA. 1170+74.17
EX. 48" PIPE (UIP)
TYPE A PIPE COLLAR
HEADWALL (R)
SL
NE ¼ - SE ¼
S1 - T29N - R22W
EXIST. ROW
UNDERGROUND FIBER (RELOCATE BY OTHERS)
STA. 1175+34.03
CULVERT CLEANOUT
15" PIPE
WB I-44 PGL
EB I-44 PGL
12" PIPE
STA. 1173+59.03
(R) GUARDCABLE
12' LANE
WB I-44
℄ I-44
EB I-44
S89°27'59"E
(R) GUARDRAIL
(R) TREES
(R) CONCRETE DITCH
DND
EXIST HEADWALL(R)
TYPE A PIPE COLLAR
V-DITCH
(R&R) CONCRETE DITCH
PROPOSED FIBER (BY OTHERS)
FO
(DND)

44B
STA. 1172+49.5 RT
GRATE CV 2'X4'
DA = 0.37 AC
Q10 = 2.58 CFS

42
STA. 1171+91.4
48" GROUP A FES

EVERGREEN ST.

1175

SECTION LINE
NATIONAL AVE.
START STA 7+94.28
(R) PERMANENT BARRIER
(R AND REPLACE) SIDEWALK
1'X5'X7' ROCK LINING
WALL #A9423
(R) INLET & ELIPTICAL PIPE
BRIDGE ANCHOR SECTION
BEGIN BRIDGE
STA. 1178+31.81 WB
A9422
A9421
STA. 1177+74.03
2' ROCK LINING
- 92.1 CY
APPROACH PAVEMENT
(R) PULLBOX
STA. 1177+99.46
STA. 1177+38.22
BEGIN BARRIER TRANSITION
END SOUND WALL STA. 1177+31.64
BEGIN BRIDGE
STA. 1178+31.04 EB
1'x18'x36' ROCK LINING
(R) CONCRETE DITCH
(R) PERMANENT BARRIERS
BRIDGE #A9421
STA. 1178+31.04 TO
1179+13.54 I-44
SINGLE-SPAN (83'-6" SPAN)
70'-8" WIDE
END STA 11+92.32

1180

FOREST COVE NORTH LLC
BRIDGE #A9422
STA. 1178+31.81 TO
1179+14.31 I-44
SINGLE-SPAN (83'-6" SPAN)
70'-8" WIDE
(UIP) 1'X7'X10' ROCK LINING
NW ¼ - SW ¼
S6 - T29N - R21W
EXIST #A0447 (R)
WALL #A9424
END BRIDGE
STA. 1179+14.31 WB
BRIDGE ANCHOR SECTION
(R) FES AND ABANDON PIPE
(R) GUARDRAIL
STA. 1179+75.89
STA. 1182+15.89
2' ROCK LINING
- 91.2 CY
(R) INLET
STA. 1179+96.68
END BRIDGE STA. 1179+13.54 EB
RELOC. POWER POLE (BY OTHERS)
(R) PIPE & FES
18" PIPE
1'X4'X12' CY ROCK LINING
13.2 CY ROCK LINING
(R AND REPLACE) SIDEWALK
18" PIPE
EXIST. ROW
EVERGREEN ST.
PERIMETER SPRINGFIELD REALTY LLC

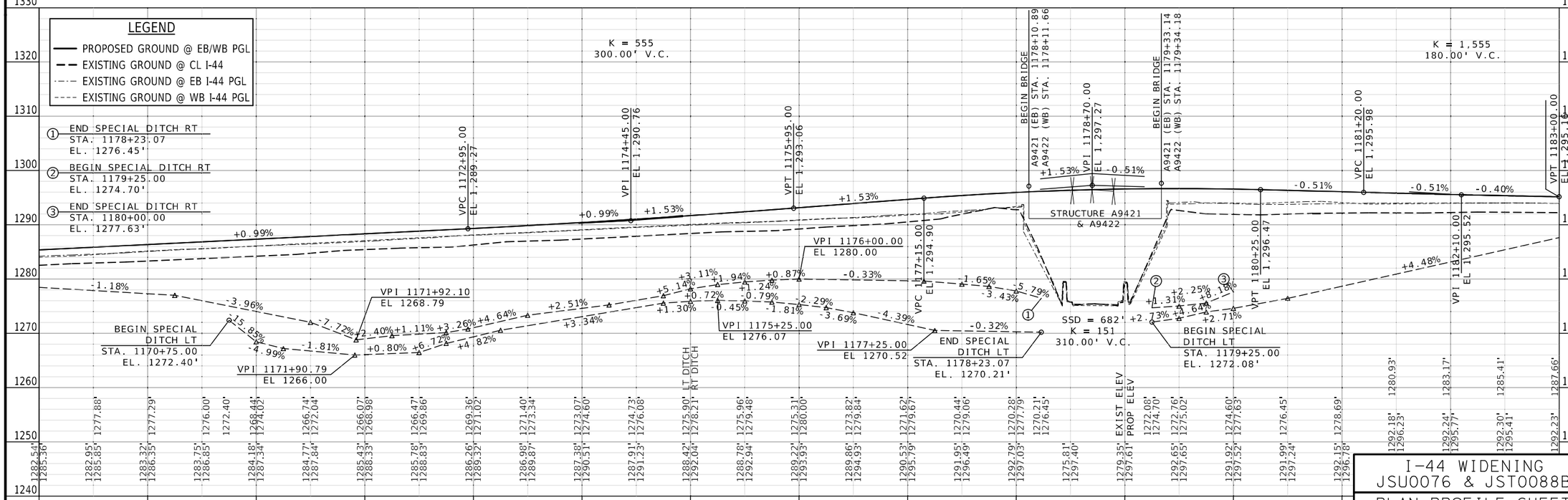
95
STA. 1180+04.5
18" GROUP A FES

96
STA. 1180+56.8
4' MANHOLE

97
STA. 1182+80.7
5'X3' BEARING GRATE
DA= 0.54 AC
Q10=2.40 CFS

40
STA. 1179+20.3
24" GROUP A FES

MATCHLINE STA. 1183+00.00



I-44 WIDENING
JSU0076 & JST0088B

PLAN PROFILE SHEET
9 OF 22

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 12
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

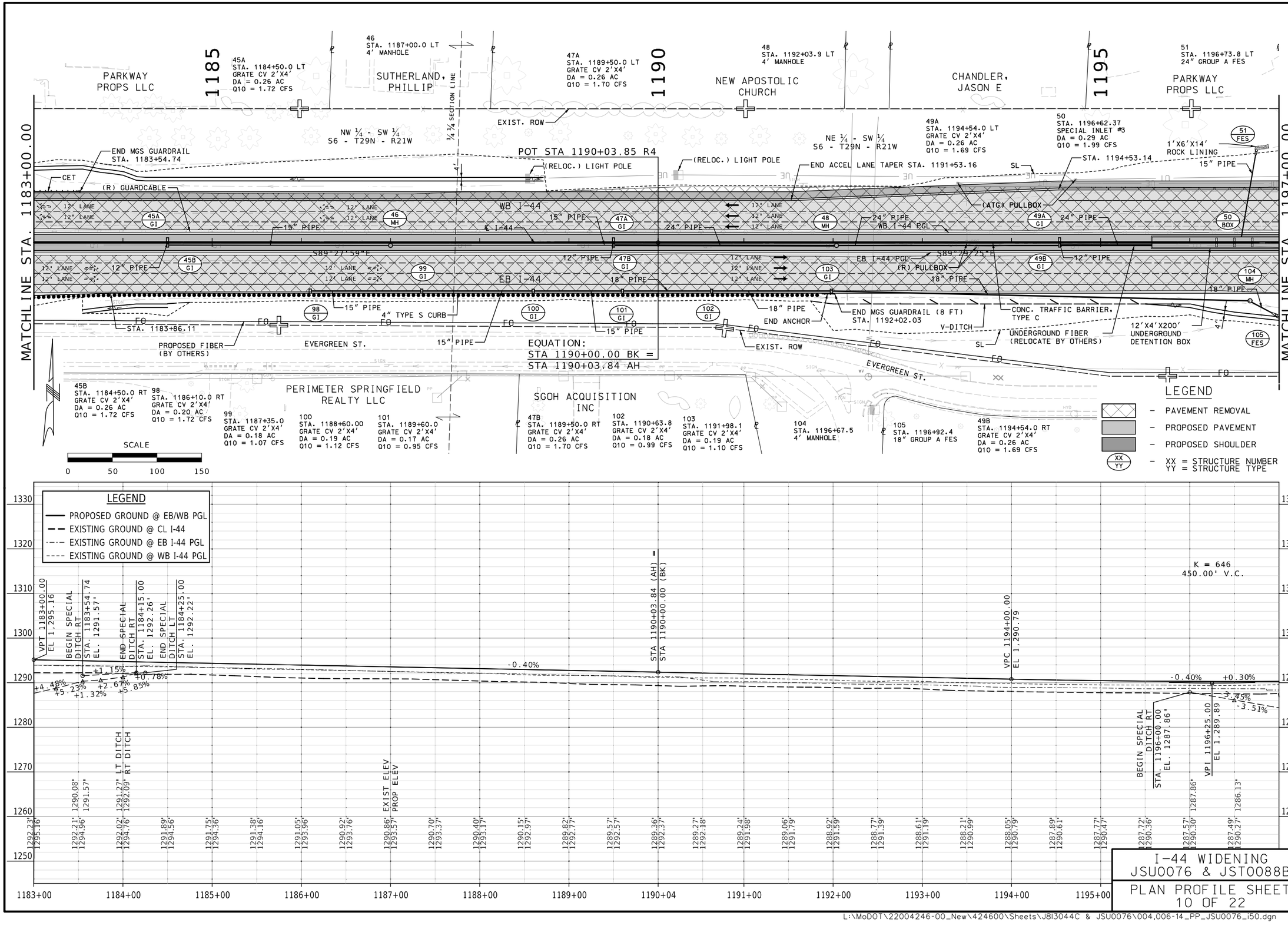
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV. | DATE | DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

© Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\004,006-14_PP_JSU0076_i50.dgn 7:29:22 AM 11/4/2024



I-44 WIDENING
JSU0076 & JST0088B

PLAN PROFILE SHEET
10 OF 22

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	13

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

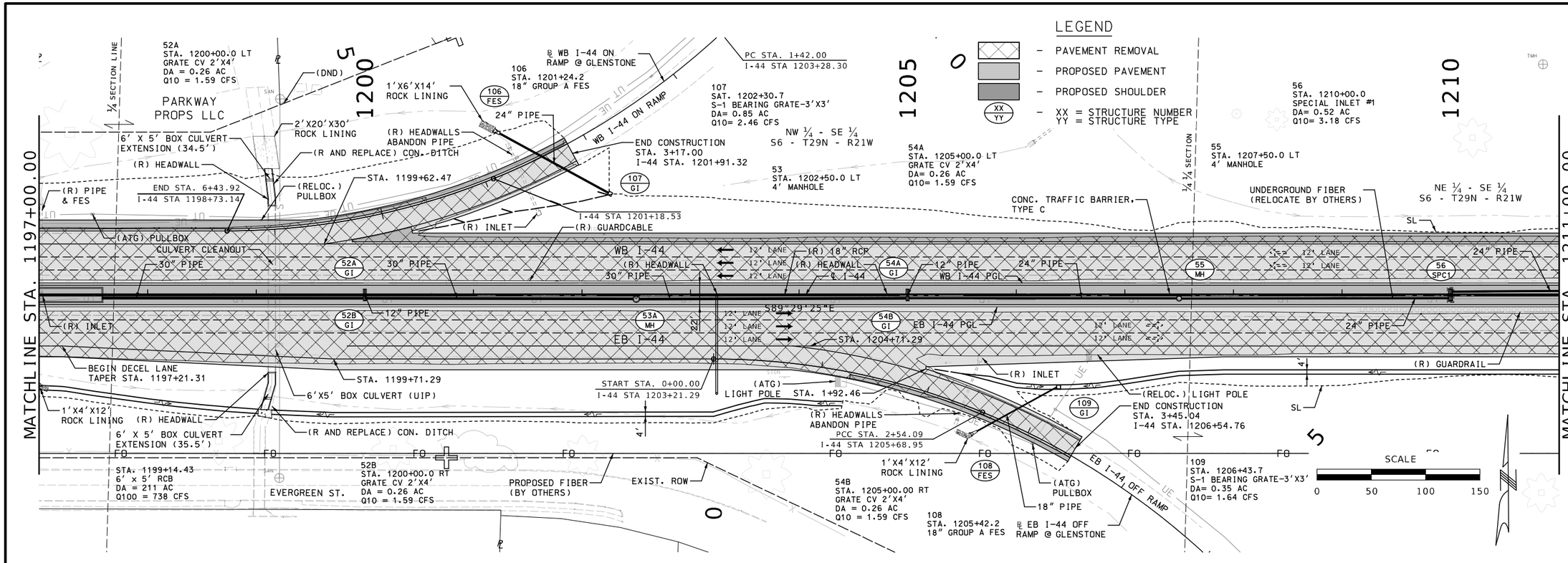
REV.	DESCRIPTION	DATE

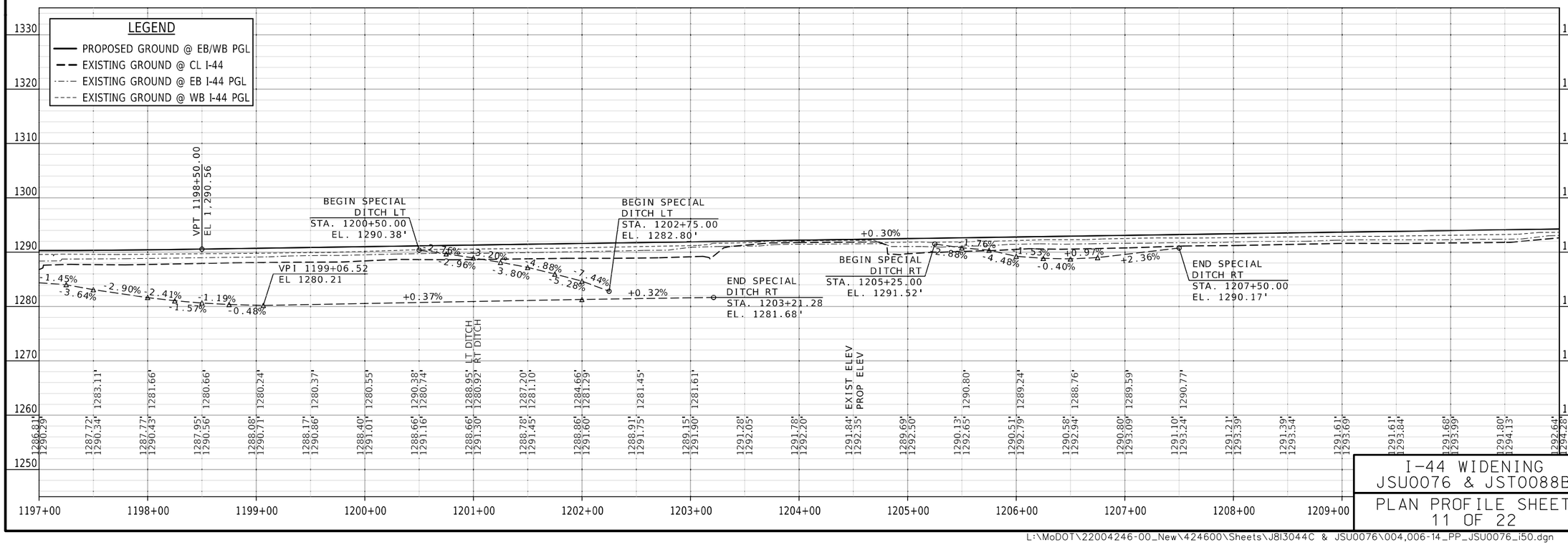
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\004,006-14_PP_JSU0076_i50.dgn 7:29:24 AM 11/4/2024





I-44 WIDENING
JSU0076 & JST0088B

PLAN PROFILE SHEET
11 OF 22

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
11/4/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	14
COUNTY	
GREENE	
JOB NO.	
JSU0076, J8I3044C, & JST0088B	
PROJECT NO.	
BRIDGE NO.	

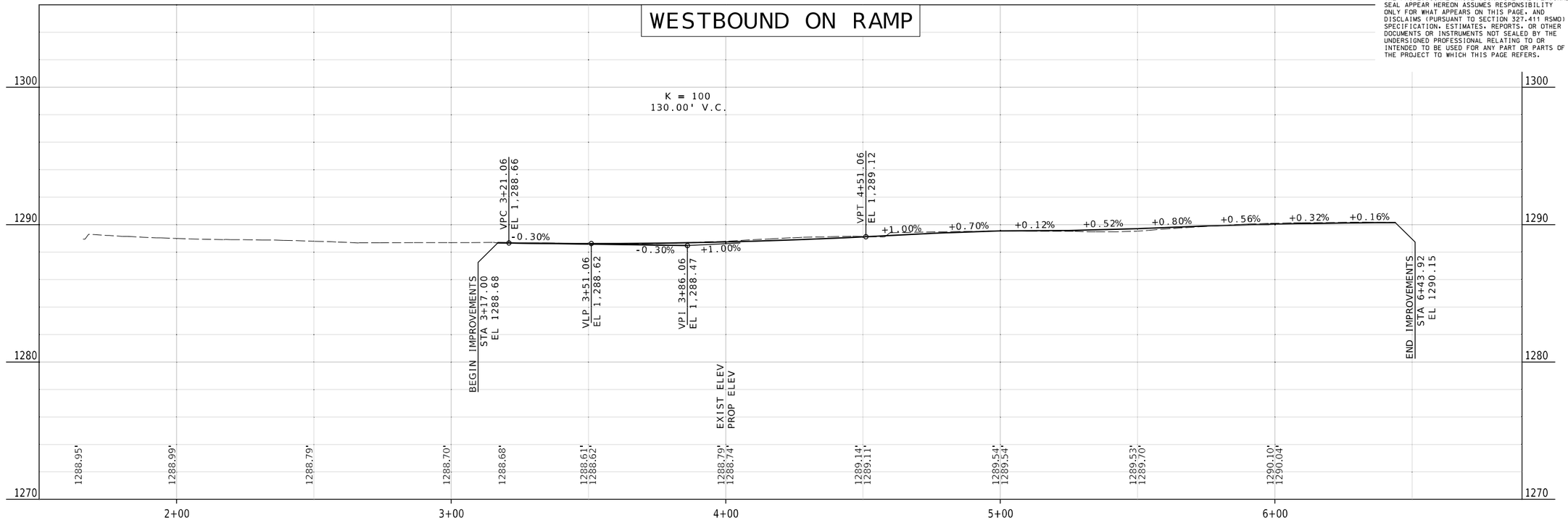
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

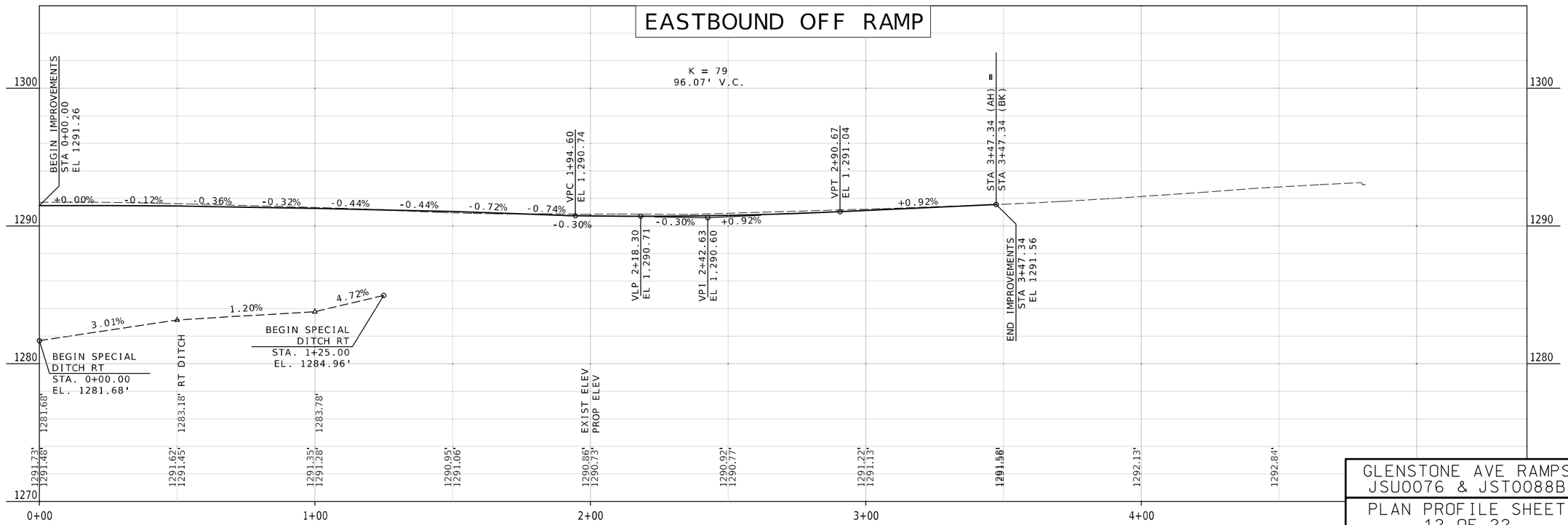
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

WESTBOUND ON RAMP



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

EASTBOUND OFF RAMP



GLENSTONE AVE RAMPS
JSU0076 & JST0088B

PLAN PROFILE SHEET
12 OF 22

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	15

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

STATION 1213+22.32
END JOB #JSU0076 BEGIN JOB #J8I3044C

MATCHLINE STA. 1211+00.00

MATCHLINE STA. 1225+00.00

1215

1220

NE ¼ - SE ¼
S6 - T29N - R21W

NW ¼ - SW ¼
S5 - T29N - R21W

57
STA. 1213+10.0 LT
4' MANHOLE

58A
STA. 1215+00.0 LT
GRATE CV 2'X4'
DA = 0.26 AC
Q10 = 1.59 CFS

58B
STA. 1215+00.0 RT
GRATE CV 2'X4'
DA = 0.26 AC
Q10 = 1.59 CFS

59
STA. 1217+50.0 LT
4' MANHOLE

60A
STA. 1220+00.0 RT
GRATE CV 2'X4'
DA = 0.27 AC
Q10 = 1.61 CFS

60B
STA. 1220+00.0 RT
GRATE CV 2'X4'
DA = 0.27 AC
Q10 = 1.61 CFS

61
STA. 1224+19.9 RT
18" GROUP A FES

EXIST #A7501

40:1 BARRIER TRANSITION

40:1 TRANSITION

SL

(R) GUARDRAIL

(R&REPLACE) CONCRETE DITCH) - 23.2 SY

31.5' BOX CULVERT EXTENSION

(R) HEADWALL

(RELOC.) LIGHT POLE

(R) PULLBOX

24" PIPE

12" PIPE

18" PIPE

WB I-44

EB I-44

12' LANE

(R) GUARDCABLE

(R) 18" RCP

CONC. TRAFFIC BARRIER,TYPE C

UNDERGROUND FIBER (RELOCATE BY OTHERS)

WB I-44 OFF RAMP

BEGIN CONSTRUCTION
STA. 3+18.62
I-44 STA. 1219+92.00

℄ WB I-44 OFF RAMP @ GLENSTONE

PCC STA. 2+92.28
I-44 STA 1220+19.71

(ATG) PULLBOX

STA. 1220+99.90

STA. 1222+12.90

(RELOC.) LIGHT POLE

START STA. 0+00.00
I-44 STA 1223+02.23

WB I-44 PGL

EB I-44 PGL

9'X 6' BOX CULVERT (UIP)

44' BOX CULVERT EXTENSION

(R&REPLACE) CONCRETE DITCH) - 59.9 SY

18" PIPE (UIP)

TYPE A PIPE COLLAR

(R) FES

(DND)

18" PIPE

1'X4'X12' ROCK LINING

PCC STA. 3+21.50
I-44 STA 1224+17.43

℄ EB I-44 ON RAMP @ GLENSTONE

EB I-44 ON RAMP

BEGIN CONSTRUCTION
STA. 3+98.21
I-44 STA. 1224+85.39

EXIST. ROW

STA. 1219+15.72
9' x 6' RCB
DA = 480 AC
Q100 = 1140 CFS

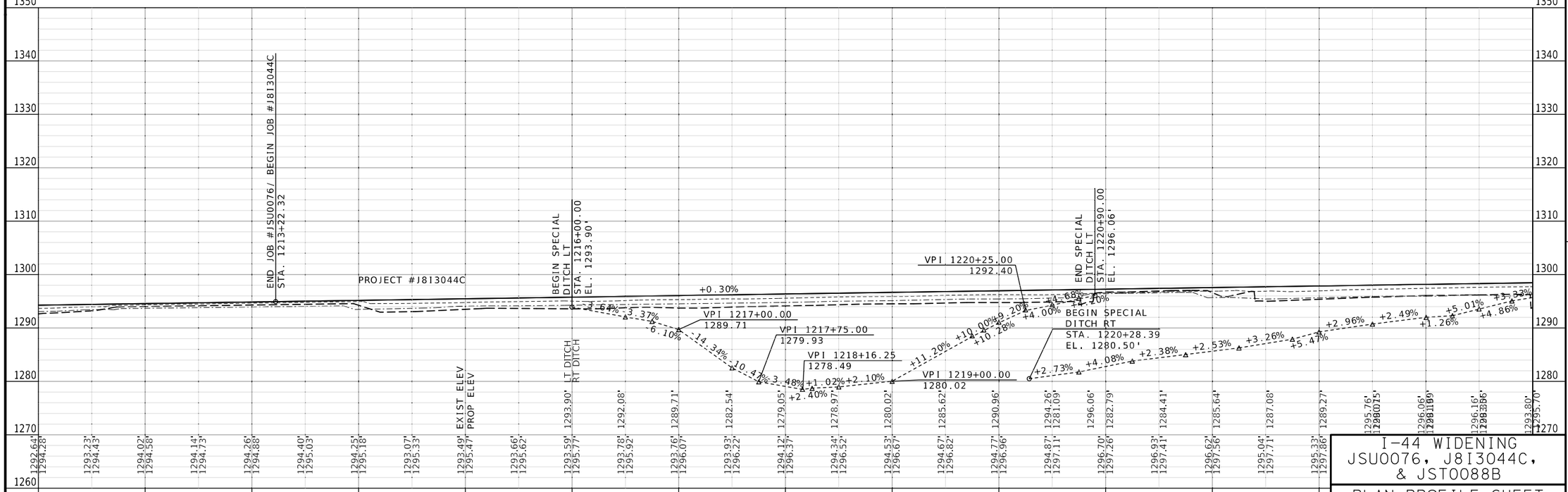
SECTION LINE

GLENSTONE AVE.

PROPOSED FIBER (BY OTHERS)

SCALE
0 50 100 150

LEGEND
- PAVEMENT REMOVAL
- PROPOSED PAVEMENT
- PROPOSED SHOULDER
XX/YY - XX = STRUCTURE NUMBER, YY = STRUCTURE TYPE



I-44 WIDENING
JSU0076, J8I3044C,
& JST0088B

PLAN PROFILE SHEET
13 OF 22

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

RYAN STEHN
NUMBER PE-2020000089
STATE OF MISSOURI
PROFESSIONAL ENGINEER

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	16

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

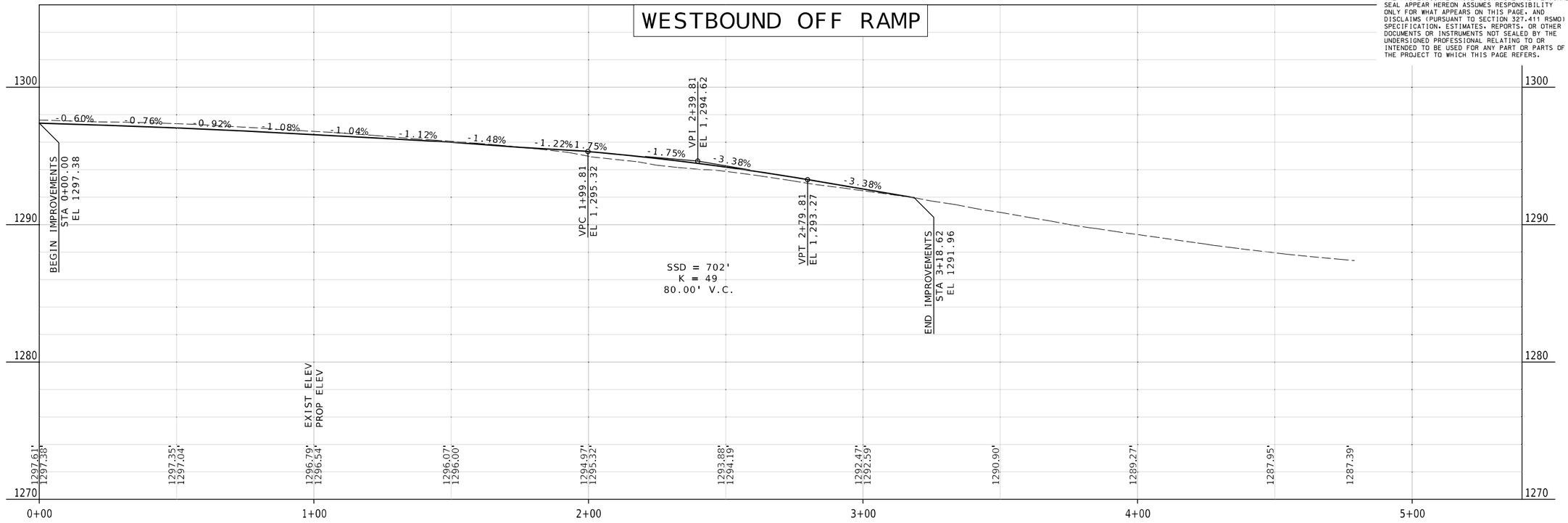
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

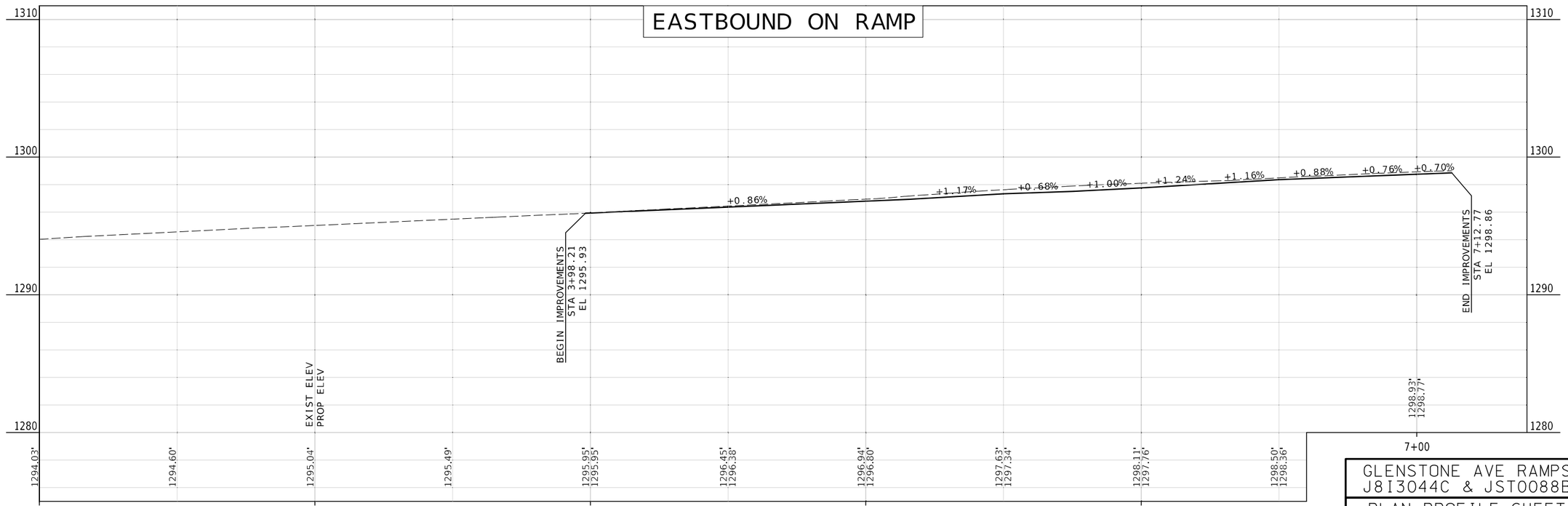
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\004,006-14_PP_JSU0076_i50.dgn 7:30:00 AM 11/4/2024

WESTBOUND OFF RAMP



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

EASTBOUND ON RAMP



GLENSTONE AVE RAMPS
J8I3044C & JST0088B

PLAN PROFILE SHEET
14 OF 22

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
11/4/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	17
COUNTY	
GREENE	
JOB NO.	
JSU0076, J8I3044C, & JST0088B	
PROJECT NO.	
BRIDGE NO.	

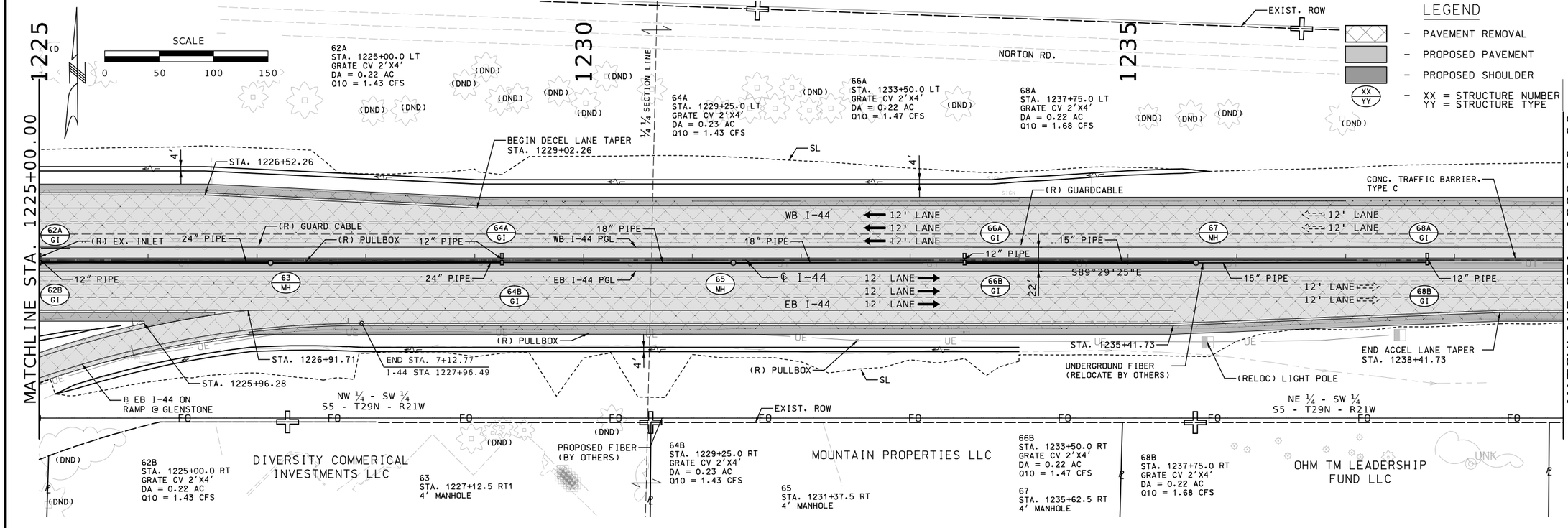
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\005,015,017,025_PP_J8I3044C_i50_Ramps.dgn 7:30:10 AM 11/4/2024



I-44 WIDENING
J8I3044C & JST0088B

PLAN PROFILE SHEET
15 OF 22

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	18

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SCALE
0 50 100 150

1240 1245 1250

CITY OF SPRINGFIELD

NORTON RD.

70
STA. 1241+97.3
SPECIAL INLET #1
DA = 0.82 AC
Q10 = 6.20 CFS

72
STA. 1242+78.2 LT
BEARING GRATE
5" x 3" TYPE S-3
DA = 0.22 AC
Q10 = 0.95 CFS

1/4 SECTION LINE

73
STA. 1244+77.2 LT
15" GROUP A FES

WATER MILL CHURCH OF CHRIST

77A
STA. 1252+37.0
GRATE CV 2'X4'
DA = 0.28 AC
Q10 = 2.01 CFS

71
STA. 1242+40.9 LT
4' MANHOLE

18" PIPE
BEGIN MGS GUARDRAIL
STA. 1242+75.61
END ANCHOR
15" PIPE (DND)
END MGS GUARDRAIL
STA. 1244+28.63

EXIST. ROW

75A
STA. 1247+17.0
GRATE CV 2'X4'
DA = 0.27 AC
Q10 = 2.00 CFS

76
STA. 1249+77.0
4' MANHOLE

SL

UNDERGROUND FIBER
(RELOCATE BY OTHERS)

(R) HEADWALL
18" PIPE (UIP)
(R) GUARD CABLE

MATCHLINE STA. 1239+00.00

MATCHLINE STA. 1253+00.00

12' LANE
12' LANE

TYPE A PIPE COLLAR
18" PIPE
(R) EX. INLET

CET
(R) PULLBOX

12' LANE WB I-44
12' LANE
12' LANE
℄ I-44
S89°29'25"E

12" PIPE
WB I-44 PGL

15" PIPE
12' LANE
12' LANE
12' LANE
EB I-44

EB I-44 PGL

15" PIPE
15" PIPE
12" PIPE

22'
4'
4'

1'X5'X12'
ROCK LINER

18" PIPE (UIP)
TYPE A PIPE COLLAR
(R) HEADWALL

CONC. TRAFFIC BARRIER,
TYPE C

PROPOSED FIBER
(BY OTHERS)

NE 1/4 - SW 1/4
S5 - T29N - R21W

69
STA. 1241+50.2 RT
18" GROUP A FES

74
STA. 1244+57.0
4' MANHOLE

EXIST. ROW

NW 1/4 - SE 1/4
S5 - T29N - R21W

FO

OHM TM LEADERSHIP
FUND LLC

REVELL, DENNIS R

75B
STA. 1247+17.0
GRATE CV 2'X4'
DA = 0.27 AC
Q10 = 2.00 CFS

CROSSWAY BAPTIST CHURCH

77B
STA. 1252+37.0
GRATE CV 2'X4'
DA = 0.28 AC
Q10 = 2.01 CFS

LEGEND
- PAVEMENT REMOVAL
- PROPOSED PAVEMENT
- PROPOSED SHOULDER
- XX = STRUCTURE NUMBER
  YY = STRUCTURE TYPE

LEGEND
- PROPOSED GROUND @ EB/WB PGL
- EXISTING GROUND @ CL I-44
- EXISTING GROUND @ EB I-44 PGL
- EXISTING GROUND @ WB I-44 PGL

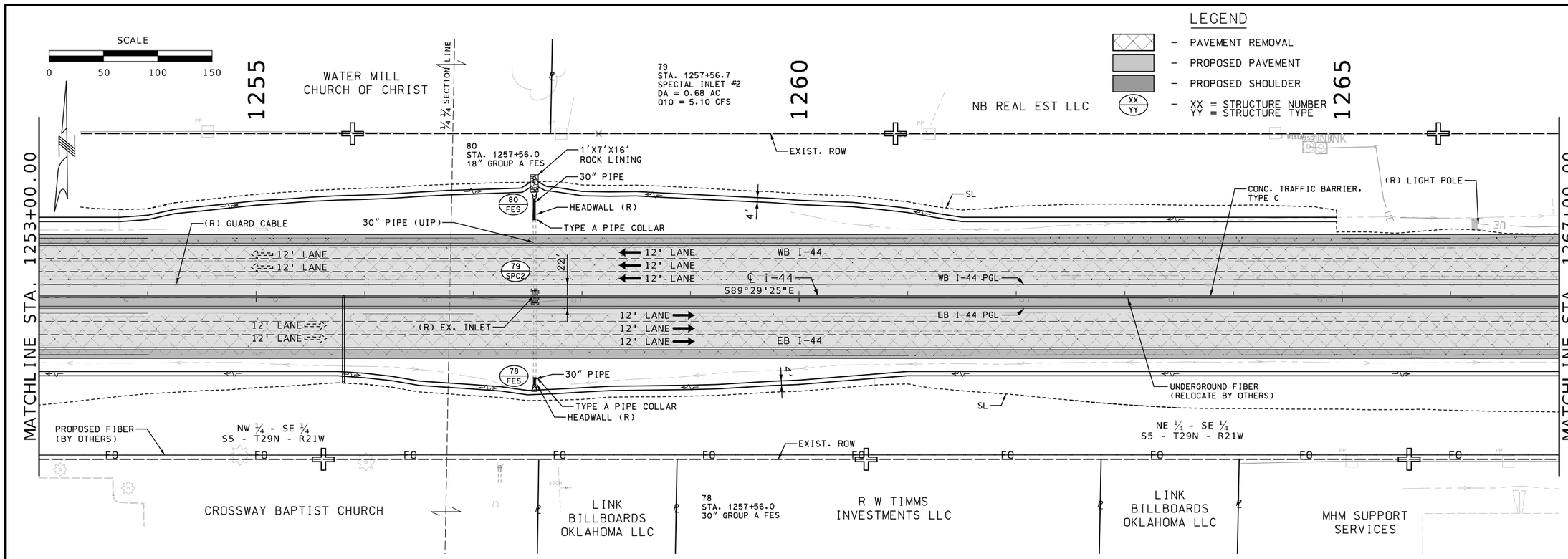
BEGIN SPECIAL DITCH RT STA. 1239+50.00 EL. 1297.17'
VPT 1240+25.00 EL 1,304.06
BEGIN SPECIAL DITCH LT STA. 1242+75.00 EL. 1301.88'
END SPECIAL DITCH RT & LT STA. 1244+75.00 EL. 1305.35'

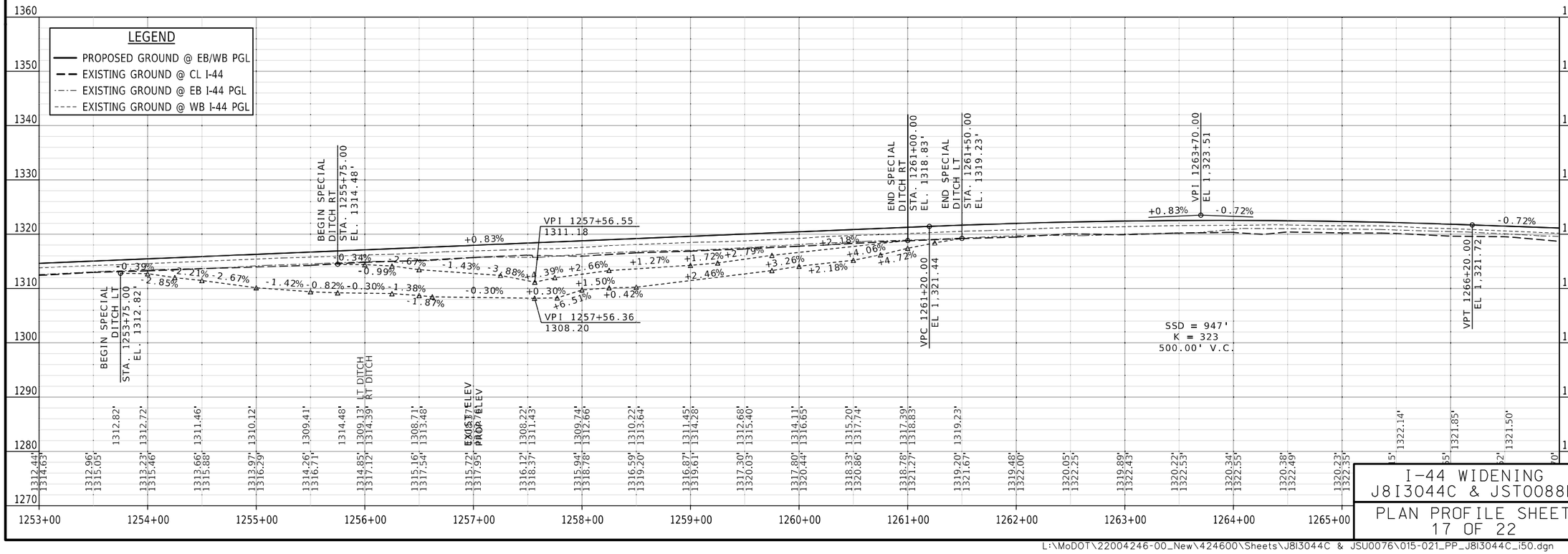
+0.09% +3.40% +1.39% +1.20% +2.06% +3.59% +4.67% +7.45% +1.33% +0.00% +0.00% +0.00% +0.00% +0.83%

LT DITCH
RT DITCH

EXIST ELEV
PROP ELEV

| | | |





I-44 WIDENING
J8I3044C & JST0088B

PLAN PROFILE SHEET
17 OF 22

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	20

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\015-021_PP_J8I3044C_i50.dgn 7:32:14 AM 11/4/2024

SCALE
0 50 100 150

MATCHLINE STA. 1267+00.00

MATCHLINE STA. 1281+00.00

NB REAL EST LLC

NE ¼ - SE ¼
S5 - T29N - R21W

81A
STA. 1269+50.0 LT
GRATE CV 2'X4'
DA = 0.29 AC
Q10 = 2.19 CFS

SECTION LINE 1270

82
STA. 1272+50.0 LT
4' MANHOLE

1275

83A
STA. 1275+00.0 LT
GRATE CV 2'X4'
DA = 0.29 AC
Q10 = 2.19 CFS

JAMES RIVER CH INC

85A
STA. 1280+57.0 LT
GRATE CV 2'X4'
DA = 0.29 AC
Q10 = 2.19 CFS

1280

POT STA 1279+61.81 R5

EXIST. ROW

BEGIN MGS GUARDRAIL
STA. 1270+70.56
END ANCHOR
DMS & CONTROL
CABINET (DND)

(R) LIGHT POLE

(R) LIGHT POLE

(R) GUARDCABLE

(R) GUARDRAIL

CET

END MGS GUARDRAIL
STA. 1273+74.00

SL

4'

UNDERGROUND FIBER
(RELOCATE BY OTHERS)

12' LANE
12' LANE

22'

WB I-44

82 MH

12' LANE
12' LANE
12' LANE

15" PIPE

℄ I-44

WB I-44 PGL

83A GI

84 MH

18" PIPE

12" PIPE

24" PIPE

85A GI

81A GI

81B GI

12" PIPE

15" PIPE
12' LANE
12' LANE

S89°29'25"E

(R) PULLBOX

12" PIPE

EB I-44 PGL

18" PIPE

(R) EX. PIPE & FES'S

S89°30'53"E

85B GI

12' LANE
12' LANE
12' LANE

EB I-44

83B GI

CONC. TRAFFIC BARRIER,
TYPE C

4'

SL

LEGEND

- PAVEMENT REMOVAL
- PROPOSED PAVEMENT
- PROPOSED SHOULDER
- XX = STRUCTURE NUMBER
  YY = STRUCTURE TYPE

PROPOSED FIBER
(BY OTHERS)

81B
STA. 1269+50.0 RT
GRATE CV 2'X4'
DA = 0.29 AC
Q10 = 2.19 CFS

EXIST. ROW

83B
STA. 1275+00.0 RT
GRATE CV 2'X4'
DA = 0.29 AC
Q10 = 2.19 CFS

NW ¼ - SW ¼
S4 - T29N - R21W

84
STA. 1277+75.0 LT
4' MANHOLE

EQUATION:
STA 1279+56.21 BK =
STA 1279+61.80 AH

85B
STA. 1280+57.0 RT
GRATE CV 2'X4'
DA = 0.29 AC
Q10 = 2.19 CFS

MHM SUPPORT
SERVICES

RUSH TRUCK CENTERS
OF MISSOURI INC

NEW PRIME INC

NEW PRIME INC

LEGEND

- PROPOSED GROUND @ EB/WB PGL
- EXISTING GROUND @ CL I-44
- EXISTING GROUND @ EB I-44 PGL
- EXISTING GROUND @ WB I-44 PGL

BEGIN SPECIAL
DITCH LT
STA. 1271+25.25
EL. 1316.47'

-0.72%

-0.84%

-0.74%

-0.58%

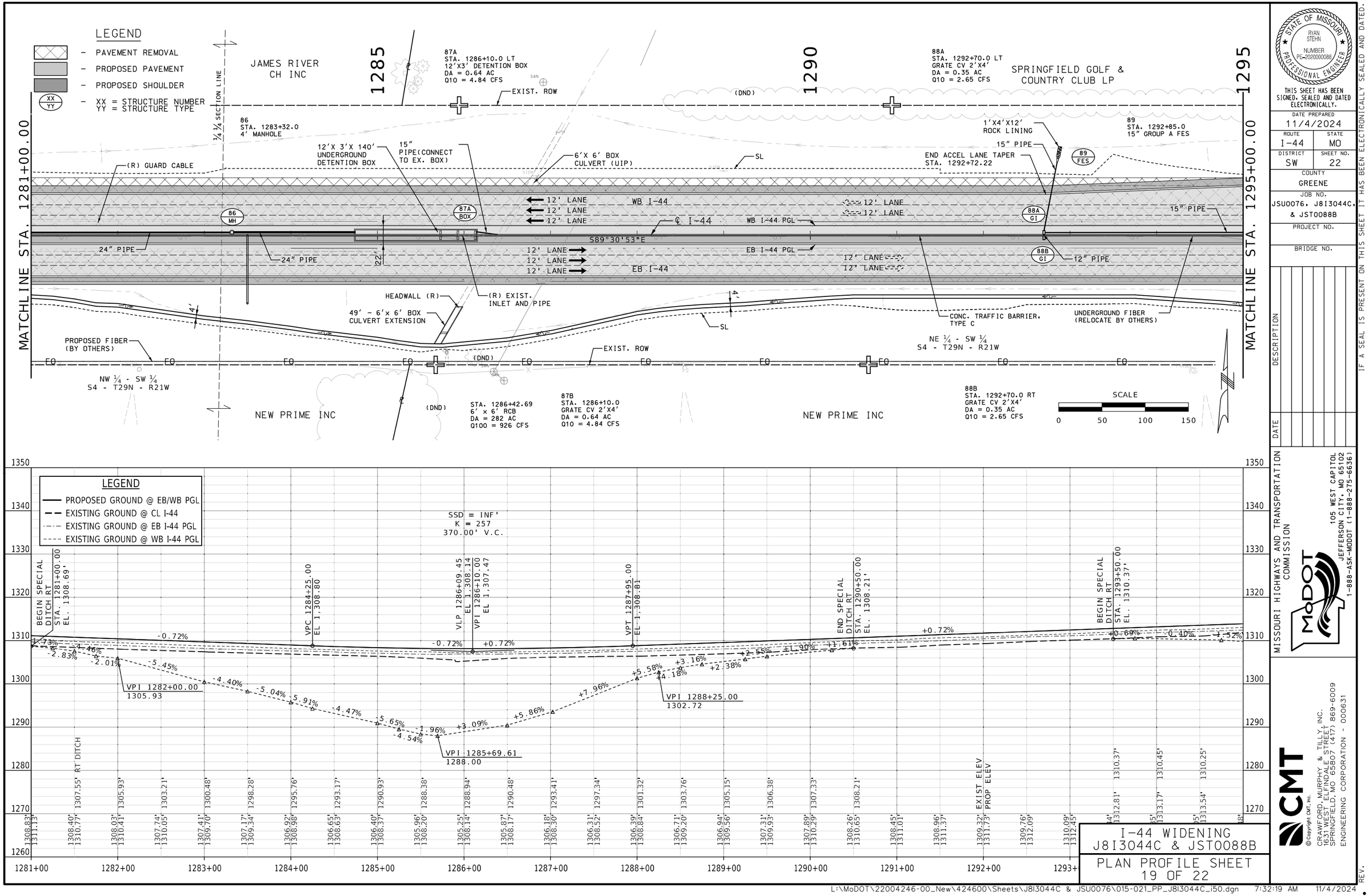
VPI 1271+50.00
1314.43

END SPECIAL
DITCH LT
STA. 1280+75.00
EL. 1307.84'

EXIST ELEV
PROP ELEV

LT DITCH
RT DITCH

| | | |



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	22

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

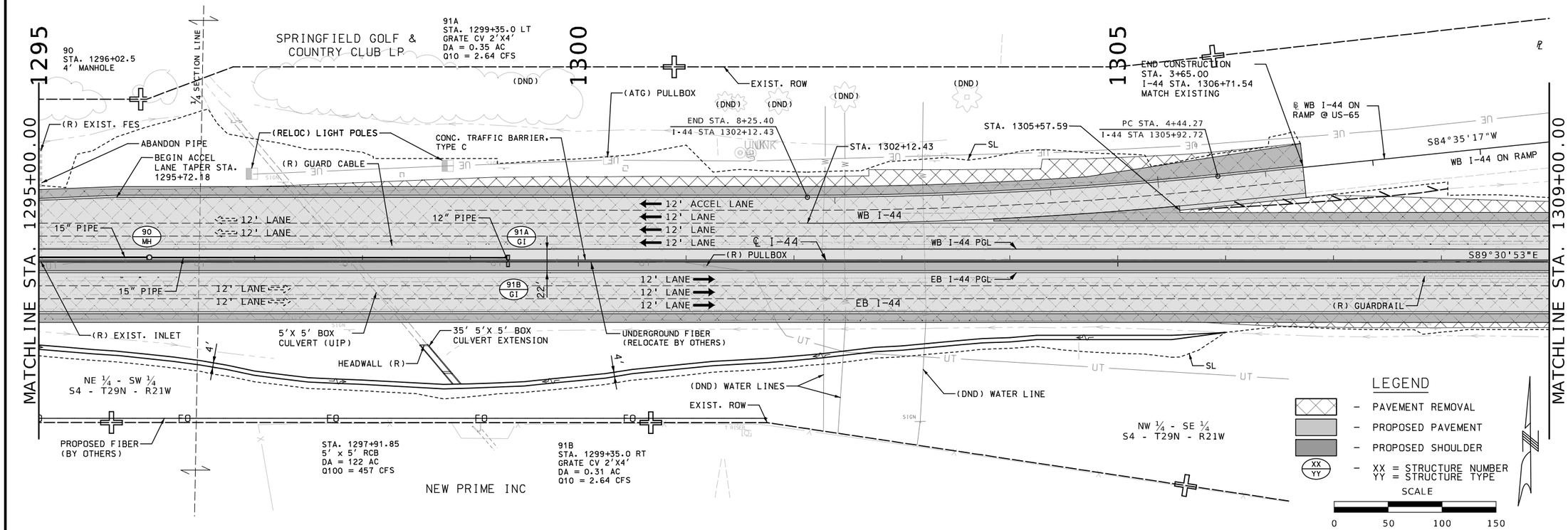
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

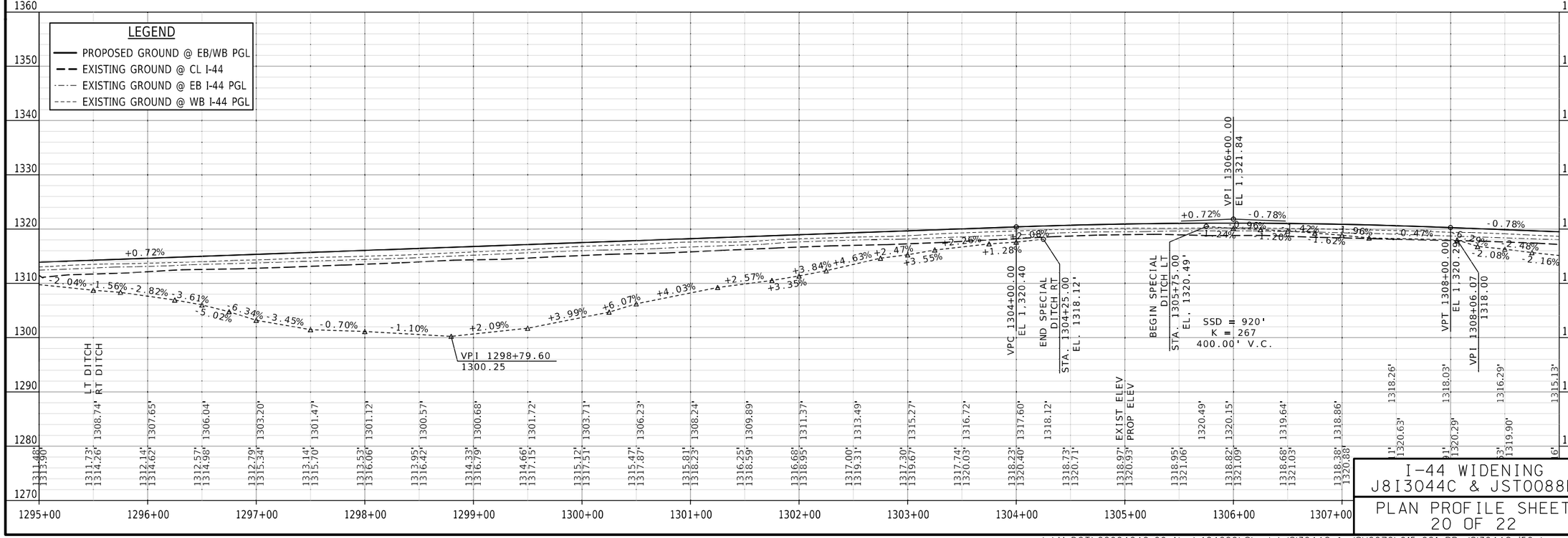
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
J8I3044C & JST0088B

PLAN PROFILE SHEET 19 OF 22

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\015-021_PP_J8I3044C_i50.dgn 7:32:19 AM 11/4/2024





I-44 WIDENING
J8I3044C & JST0088B

PLAN PROFILE SHEET
20 OF 22

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	23

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

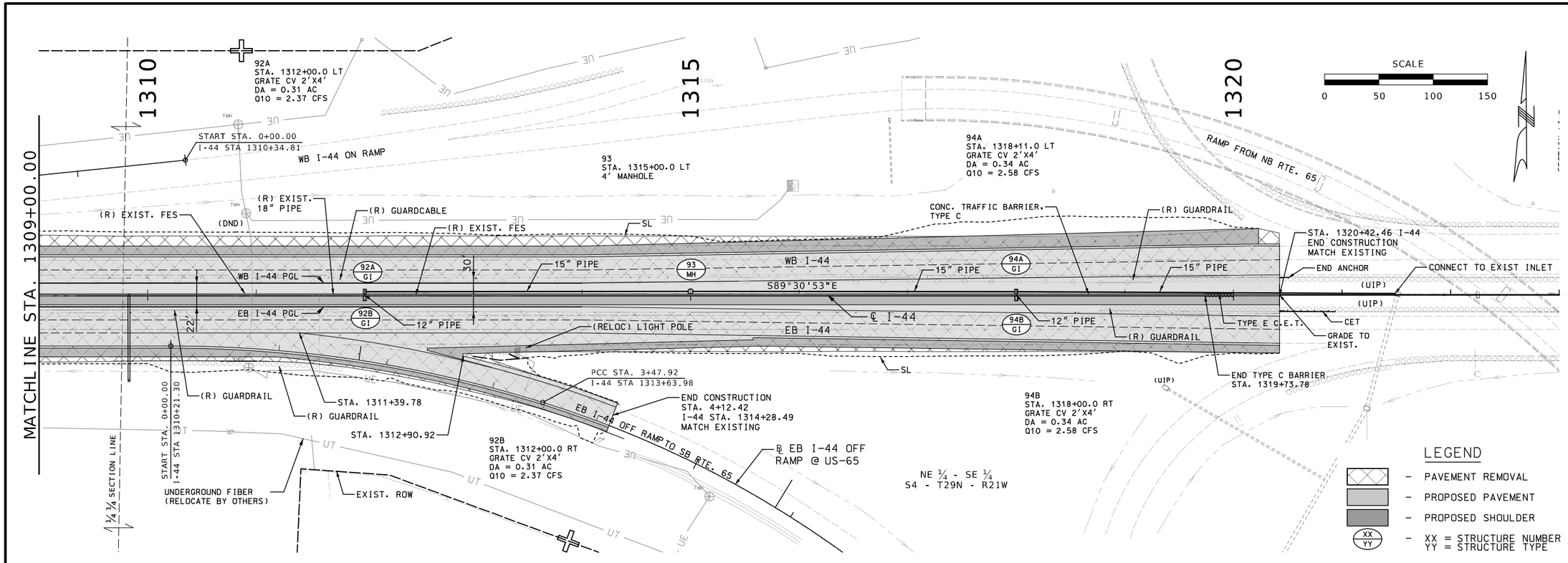
REV.	DESCRIPTION	DATE

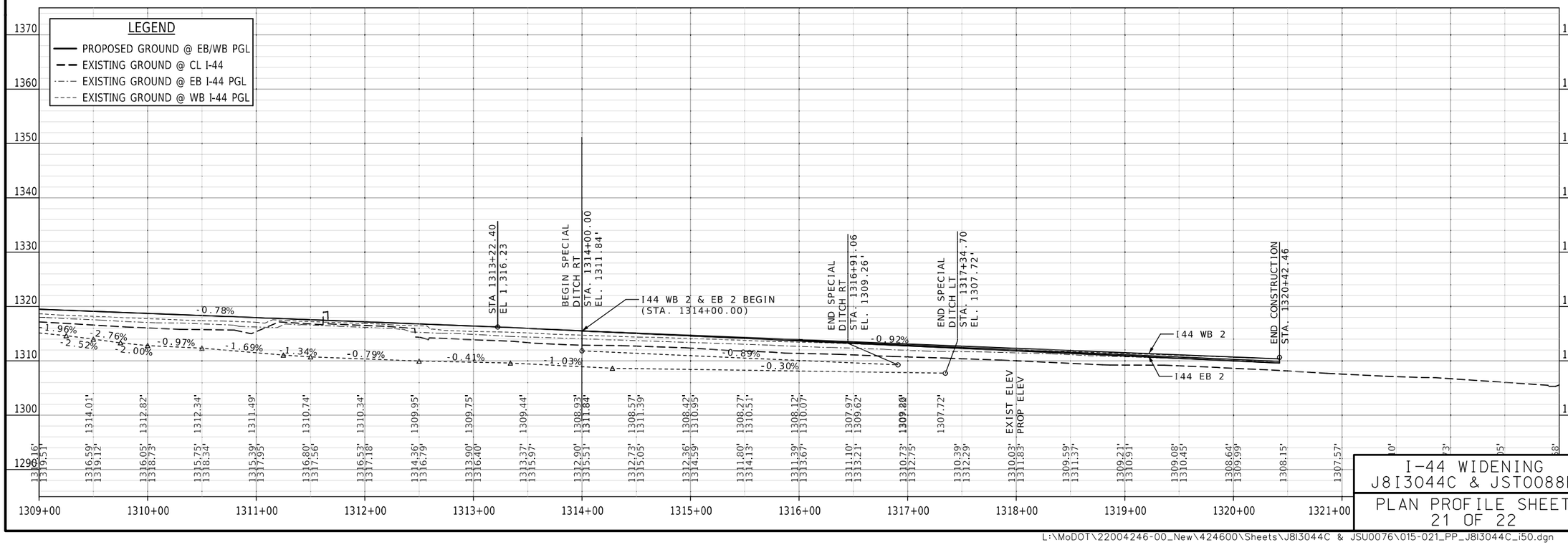
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\015-021_PP_J8I3044C_i50.dgn 7:32:21 AM 11/4/2024





I-44 WIDENING
J8I3044C & JST0088B

PLAN PROFILE SHEET
21 OF 22

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/4/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	24

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

REV.	DESCRIPTION	DATE

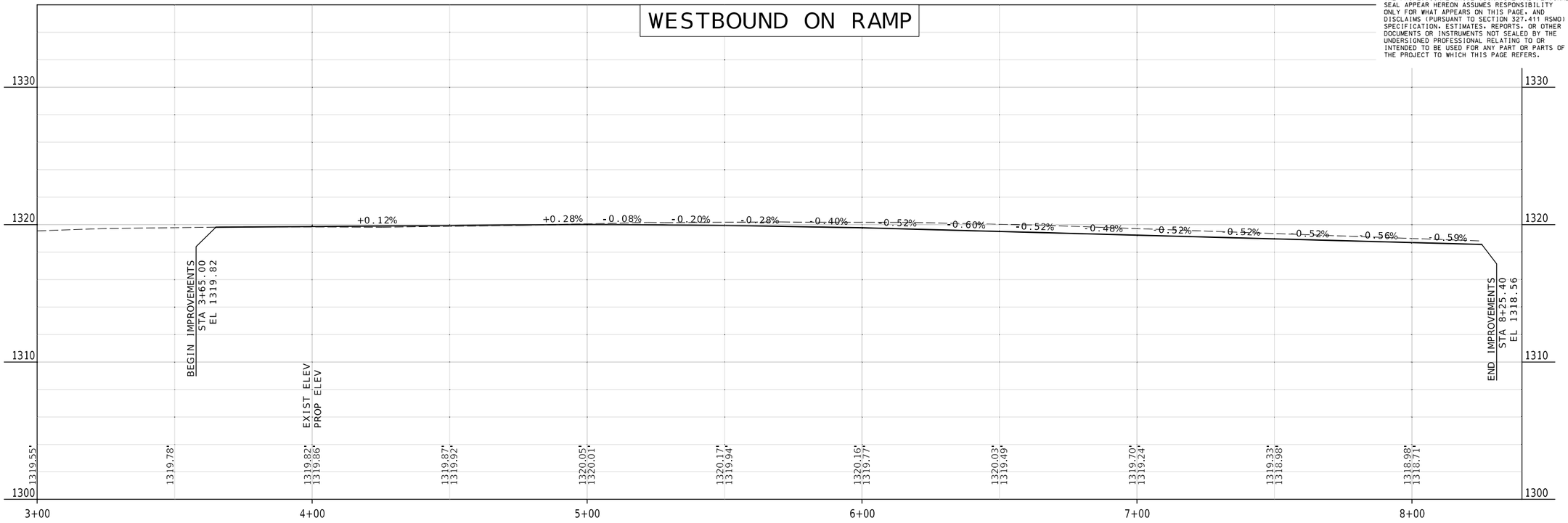
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

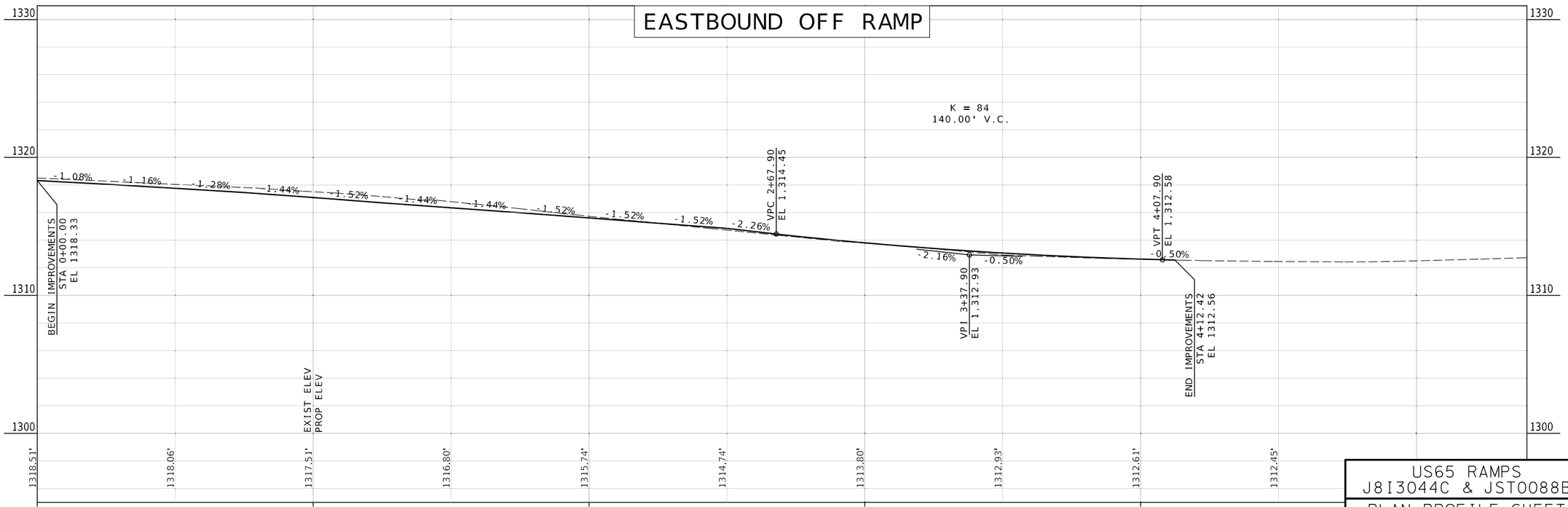
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

WESTBOUND ON RAMP



EASTBOUND OFF RAMP



US65 RAMPS
J8I3044C & JST0088B

PLAN PROFILE SHEET
22 OF 22

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
11/4/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	25
COUNTY	
GREENE	
JOB NO.	
JSU0076, J8I3044C, & JST0088B	
PROJECT NO.	
BRIDGE NO.	

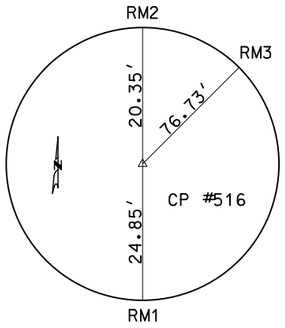
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

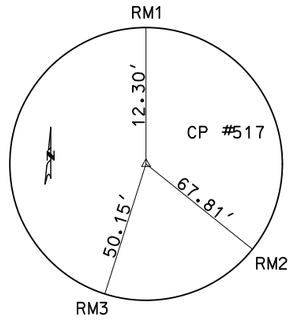
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

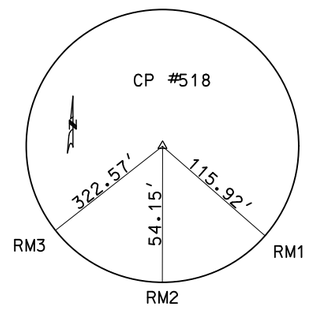
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\005,015,017,025_PP_J8I3044C_i50_Ramps.dgn 7:32:31 AM 11/4/2024



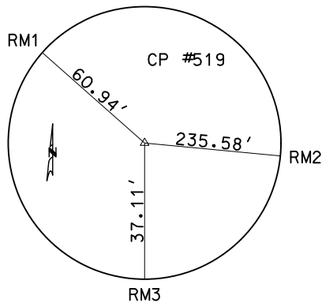
CONTROL POINT #516
N: 517010.02
E: 1402625.88
EL: 1241.093
STA. 1053+66.22 R3 OFF. -100.14' I-44
5/8" I.B. W/ ALUMINUM CAP SET S OF N
OUTER RD ON TOP ROCK OUTCROP
RM1: TOP ROCK OUTCROP N SIDE
RM2: EOP OF N OUTER RD
RM3: END GUARDRAIL



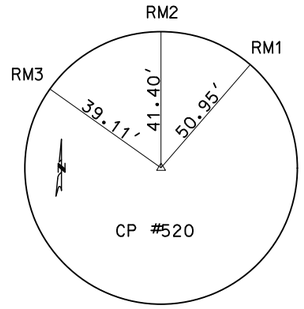
CONTROL POINT #517
N: 516798.57
E: 1404140.63
EL: 1241.083
STA. 1068+82.92 R2 OFF. 96.81' I-44
5/8" I.B. W/ ALUMINUM CAP SET TOP OF
ROCK OUTCROP S OF EB & N OF EXIT
RAMP TO HIGHWAY 13
RM1: MAC NC IN ROCK CROP
RM2: CORNER N SIGN POST
RM3: EOP INSIDE CORNER



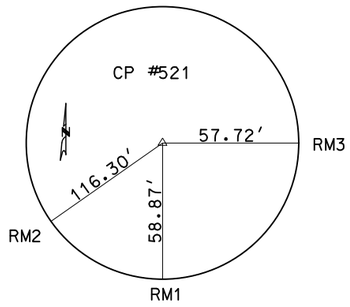
CONTROL POINT #518
N: 516970.86
E: 1407875.36
EL: 1277.588
STA. 1106+18.78 R3 OFF. -110.87' I-44
5/8" I.B. W/ ALUMINUM CAP SET 25' N
OF N TOP BANK OF WB I-44
RM1: FACE OF MM SIGN
RM2: EOP WB I-44
RM3: END GUARDRAIL



CONTROL POINT #519
N: 516936.87
E: 1409536.49
EL: 1270.576
STA. 1122+80.16 R3 OFF. -92.35' I-44
5/8" I.B. W/ ALUMINUM CAP SET TOP N
BANK I-44 WB
RM1: 6' CHAIN LINK FENCE COR POST
RM2: SIGN POST TO LODGING NEXT EXIT
SIGN
RM3: EOP WB I-44



CONTROL POINT #520
N: 516717.69
E: 1412985.72
EL: 1278.572
STA. 1157+31.28 R3 OFF. 94.7' I-44
5/8" I.B. W/ ALUMINUM CAP SET S TOP
BANK EB I-44
RM1: CONC BEAM WALL S OF EB I-44
RM2: EOP EB I-44
RM3: POST OF GAS/LODGING EXIT 80



CONTROL POINT #521
N: 516902.41
E: 1415632.78
EL: 1294.629
STA. 1183+76.50 R3 OFF. -114.67' I-44
5/8" I.B. W/ ALUMINUM CAP SET N TOP
BANK WB I-44
RM1: EOP WB I-44
RM2: END GUARDRAIL
RM3: NAIL IN S FACE 15" PINE TREE

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/20/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 26
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

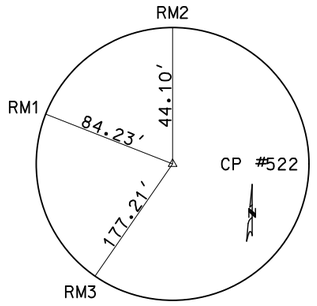
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

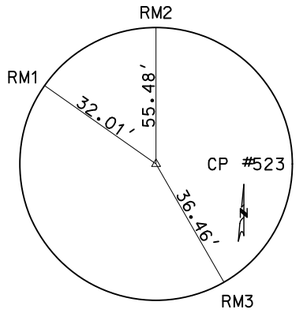
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076 & JST0088B

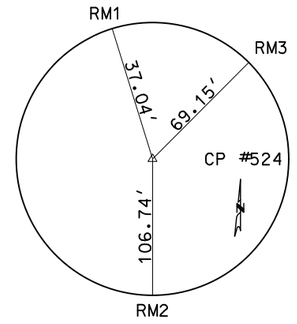
REFERENCE POINTS
1 OF 2



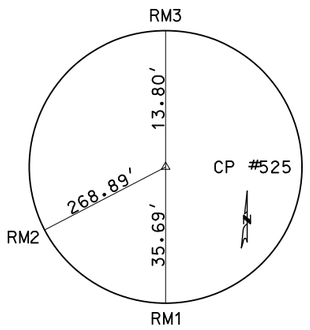
CONTROL POINT #522
N: 516659.82
E: 1418805.95
EL: 1300.485
STA. 1215+55.60 R4 OFF. 99.42' I-44
5/8" I.B. W/ ALUMINUM CAP SET S TOP BANK EB I-44
RM1: MAG NAIL SET IN TOP CONC. BRIDGE ABUTMENT WALL
RM2: EOP I-44 EB
RM3: COR MOST SOUTHERNLY GUARDRAIL POST



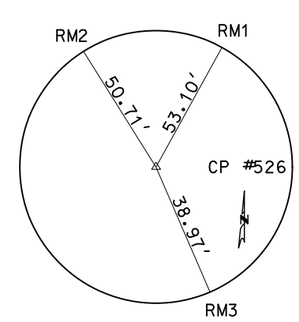
CONTROL POINT #523
N: 516625.7
E: 1420455.68
EL: 1310.752
STA. 1232+05.56 R4 OFF. 118.86' I-44
5/8" I.B. W/ ALUMINUM CAP SET S TOP SLOPE EB I-44 ABOVE ROCK OUTCROP
RM1: MAG NAIL SET IN TOP ROCK OUTCROP
RM2: EDGE CONC OF EB I-44 ENTRANCE LANE
RM3: MAG NAIL IN N FACE MOST NORTHERNLY OF 9 POSTS FOR ADV. SIGN



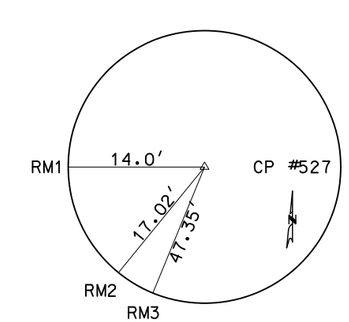
CONTROL POINT #524
N: 516621.73
E: 1423825.66
EL: 1329.677
STA. 1265+75.44 R4 OFF. 92.85' I-44
5/8" I.B. W/ ALUMINUM CAP SET S TOP SLOPE EB I-44
RM1: S FACE 81.4 MM SIGN POST
RM2: COR 2909 N NEARGARD AVE BLDS FOUNDATION
RM3: MAG NAIL SET IN TOP ROCK OUTCROP



CONTROL POINT #525
N: 516837.12
E: 1425425.7
EL: 1309.181
STA. 1281+79.15 R5 OFF. -136.67' I-44
5/8" I.B. W/ ALUMINUM CAP SET 25' N OF N TOP SLOPE OF WB I-44
RM1: FACE N POST GLENSTONE AVE EXIT 80 SIGN
RM2: FACE LANE ENDS SIGN POST
RM3: "T" POST OF BARB WIRE ROW FENCE



CONTROL POINT #526
N: 516554.15
E: 1428380.65
EL: 1334.405
STA. 1311+36.39 R5 OFF. 121.26' I-44
5/8" I.B. W/ ALUMINUM CAP SET S TOP SLOPE ABOVE ROCK OUTCROP @ BEG EXIT RAMP TO SB US65 HWY
RM1: COR OF EXPANSION SIGN BASE FOR S SUPPORT OVER EB I-44
RM2: FACE LP
RM3: COR BLACK ROD IRON FENCE POST @ NW COR FENCE



CONTROL POINT #527
N: 516780.71
E: 1429731.09
EL: 1326.828
STA. 1324+84.87 R5 OFF. -116.74' I-44
5/8" I.B. W/ ALUMINUM CAP SET E TOP SLOPE OF NB US-65 HWY
RM1: EDGE CONC SHOULDER NB US-65 HWY
RM2: COR CONC STREET LIGHTING MM PAD
RM3: COR CONC BRIDGE WALL @ NE COR US-65 BRIDGE OVER I-44 HWY

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/20/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 27
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
J8I3044C & JST0088B

REFERENCE POINTS
2 OF 2

ALL PROJECT COORDINATES HAVE BEEN PROJECTED FROM THE MISSOURI STATE PLANE COORDINATE (SPC) SYSTEM OF 1983 USING AN AVERAGE PROJECT PROJECTION (GRID TO GROUND) FACTOR. TO GET BACK TO STATE PLANE COORDINATES, MULTIPLY THE PROJECT COORDINATES BY THE AVERAGE GRID FACTOR AS SHOWN IN THE "REFERENCE CONTROL INFORMATION" PORTION OF THIS TABLE.

PROJECT COORDINATE INFORMATION

COORDINATE SYSTEM	MISSOURI STATE PLANE
HORIZONTAL DATUM	NAD83
VERTICAL DATUM	NAVD88
GEOID MODEL	GEOID 12B
ELEVATIONS DETERMINED BY	OPUS FOR PRIMARY CONTROL
PROJECT PROJECTION FACTOR	1.0000702

REFERENCE CONTROL INFORMATION

COORDINATE SYSTEM	MISSOURI STATE PLANE
CONTROL STATION	MODOT GNSS
DESIGNATION	
CORS_ID	
PID	
LATITUDE	
LONGITUDE	
NORTHING (M)	
EASTING (M)	
ZONE	CENTRAL
PROJECT AVERAGE GRID FACTOR	0.9999298073

EXAMPLE OF PROJECT COORDINATE TO S.P.C.

PROJECT NORTHING X AVERAGE GRID FACTOR
= STATE PLANE NORTHING

PROJECT EASTING X AVERAGE GRID FACTOR
= STATE PLANE EASTING

EXAMPLE: CONTROL POINT #[512]

N [514723.75] X [0.9999298073] = N [514687.62]

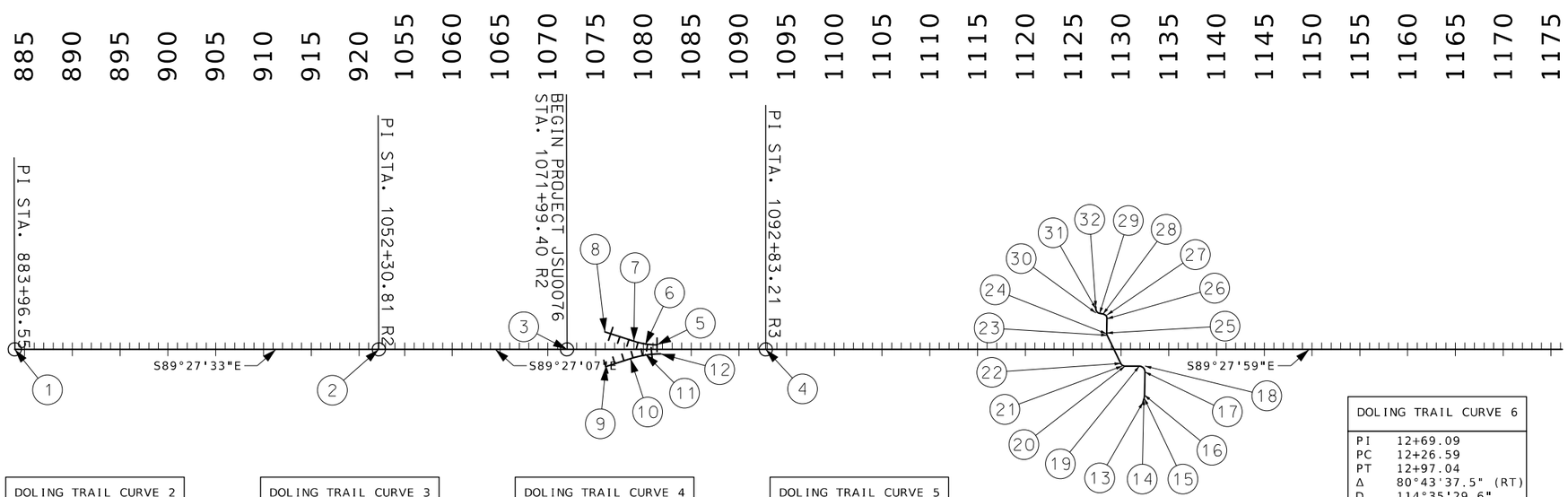
E [1393079.80] X [0.9999298073] = E [1392982.01]

LINEAR UNIT CONVERSION

1 METER = 3.280833333 US SURVEY FEET (USFT)

COORDINATE POINT LISTING

SHEET NO	STATION	LOCATION	OFFSET	STATE PLANE NORTHING (US SURVEY FEET)	STATE PLANE EASTING (US SURVEY (FEET)	MOD. STATE PLANE NORTHING (US SURVEY FEET)	MOD. STATE PLANE EASTING (US SURVEY (FEET)	MOD. STATE PLANE ELEVATION (US SURVEY (FEET)	DESCRIPTION	POINT ID
PROJECT CONTROL POINTS										
26	1053+66.22 R2	I-44	100.14 LT	516973.73	1402527.43	517010.02	1402625.88	1241.09	5/8" I.B. W/ ALUMINUM CAP	516
26	1068+82.92 R2	I-44	96.81 RT	516762.30	1404042.07	516798.57	1404140.63	1241.08	5/8" I.B. W/ ALUMINUM CAP	517
26	1106+18.78 R3	I-44	110.87 LT	516934.57	1407776.54	516970.86	1407875.36	1277.59	5/8" I.B. W/ ALUMINUM CAP	518
26	1122+80.16 R3	I-44	92.35 LT	516900.58	1409437.55	516936.87	1409536.49	1270.58	5/8" I.B. W/ ALUMINUM CAP	519
26	1157+31.28 R3	I-44	94.70 RT	516681.42	1412886.54	516717.69	1412985.72	1278.57	5/8" I.B. W/ ALUMINUM CAP	520
26	1183+76.50 R3	I-44	114.67 LT	516866.13	1415533.41	516902.41	1415632.78	1294.63	5/8" I.B. W/ ALUMINUM CAP	521
27	1215+55.60 R4	I-44	99.42 RT	516623.56	1418706.36	516659.82	1418805.95	1300.49	5/8" I.B. W/ ALUMINUM CAP	522
27	1232+05.56 R4	I-44	118.86 RT	516589.44	1420355.97	516625.70	1420455.68	1310.75	5/8" I.B. W/ ALUMINUM CAP	523
27	1265+75.44 R4	I-44	92.85 RT	516585.47	1423725.71	516621.73	1423825.66	1329.68	5/8" I.B. W/ ALUMINUM CAP	524
27	1281+79.15 R5	I-44	136.67 LT	516800.84	1425325.64	516837.12	1425425.70	1309.18	5/8" I.B. W/ ALUMINUM CAP	525
27	1311+36.39 R5	I-44	121.26 RT	516517.89	1428280.39	516554.15	1428380.65	1334.41	5/8" I.B. W/ ALUMINUM CAP	526
27	1324+84.87 R5	I-44	116.74 LT	516744.44	1429630.74	516780.71	1429731.09	1326.83	5/8" I.B. W/ ALUMINUM CAP	527
ALIGNMENTS										
28	883+96.55	I-44	00.00 RT	516910.87	1398580.84	516947.16	1398679.01	1233.07	PI I-44	1
28	1052+30.81 R2	I-44	00.00 RT	516874.90	1402391.07	516911.18	1402489.52	1233.07	PI I-44	2
28	1071+99.40 R2	I-44	00.00 RT	516856.06	1404359.43	516892.35	1404458.02	1232.40	BEGIN PROJECT	3
28	1092+83.21 R3	I-44	00.00 RT	516836.16	1406440.09	516872.44	1406538.82	1251.45	PI I-44	4
28	0+00.00	WB OFF @ ROUTE 13	00.00 RT	516894.05	1405301.41	516930.34	1405400.06	1235.23	START WB OFF RAMP @ ROUTE 13	5
28	1+22.96	WB OFF @ ROUTE 13	9.56' LT	516895.23	1405178.46	516931.51	1405277.10	1234.03	PI I-44	6
28	2+43.95	WB OFF @ ROUTE 13	00.00 RT	516933.88	1405061.74	516970.17	1405160.37	1233.22	PT I-44	7
28	5+63.80	WB OFF @ ROUTE 13	00.00 RT	517034.43	1404758.13	517070.72	1404856.74	1233.94	END WB OFF RAMP @ ROUTE 13	8
28	0+00.00	EB ON @ ROUTE 13	00.00 RT	516672.27	1404764.17	516708.54	1404862.78	1234.53	BEGIN ALIGNMENT - EB ON @ ROUTE 13	9
28	2+72.86	EB ON @ ROUTE 13	00.00 RT	516753.31	1405024.70	516789.59	1405123.33	1233.25	PC I-44	10
28	4+34.19	EB ON @ ROUTE 13	12.57' LT	516801.23	1405178.73	516837.51	1405277.37	1234.05	PI I-44	11
28	5+92.90	EB ON @ ROUTE 13	00.00 RT	516799.68	1405340.03	516835.96	1405438.68	1235.67	END ALIGNMENT - EB ON @ ROUTE 13	12
28	0+00.00	DOLING TRAIL	00.00 RT	516215.60	1410290.30	516284.44	1410478.15	1228.16	BEGIN PROJECT	13
28	0+36.26	DOLING TRAIL	00.00 RT	516250.22	1410301.32	516318.98	1410489.18	1227.08	PC DOLING TRAIL	14
28	0+57.11	DOLING TRAIL	150.00' LT	516270.08	1410307.66	516338.85	1410495.52	1226.10	PI DOLING TRAIL - CURVE 1	15
28	0+77.69	DOLING TRAIL	00.00 RT	516290.91	1410308.34	516359.68	1410496.20	1225.11	PT DOLING TRAIL	16
28	3+19.29	DOLING TRAIL	00.00 RT	516532.34	1410316.24	516601.15	1410504.10	1227.36	PC DOLING TRAIL	17
28	3+80.29	DOLING TRAIL	60.00' LT	516593.72	1410318.25	516662.53	1410506.11	1227.27	PI DOLING TRAIL - CURVE 2	18
28	4+14.93	DOLING TRAIL	00.00 RT	516594.30	1410256.85	516663.11	1410444.70	1226.09	PT DOLING TRAIL	19
28	5+64.48	DOLING TRAIL	00.00 RT	516595.70	1410107.33	516664.51	1410295.16	1221.42	PC DOLING TRAIL	20
28	5+96.01	DOLING TRAIL	50.00' RT	516596.00	1410075.80	516664.81	1410263.63	1221.27	PI DOLING TRAIL - CURVE 3	21
28	6+20.74	DOLING TRAIL	00.00 RT	516624.57	1410062.49	516693.39	1410250.31	1221.13	PT DOLING TRAIL	22
28	9+48.18	DOLING TRAIL	00.00 RT	516921.33	1409924.19	516990.18	1410111.99	1219.49	PC DOLING TRAIL	23
28	9+60.04	DOLING TRAIL	50.00' RT	516932.07	1409919.18	517000.93	1410106.99	1219.43	PI DOLING TRAIL - CURVE 4	24
28	9+71.46	DOLING TRAIL	00.00 RT	516943.92	1409919.53	517012.78	1410107.34	1219.38	PT DOLING TRAIL	25
28	11+20.24	DOLING TRAIL	00.00 RT	517092.61	1409923.92	517161.49	1410111.72	1221.82	PC DOLING TRAIL	26
28	11+63.28	DOLING TRAIL	50.00' LT	517135.63	1409925.18	517204.51	1410112.99	1222.68	PI DOLING TRAIL - CURVE 5	27
28	11+91.31	DOLING TRAIL	00.00 RT	517143.28	1409882.83	517212.17	1410070.63	1223.60	PT DOLING TRAIL	28



WB OFF RAMP @ ROUTE 13	
PI	1+22.96
PC	0+00.00
PT	2+43.95
Δ	17°46'30.4" (RT)
D	7°17'11.0"
L	243.95' (ARC)
T	122.96'
R	786.34'

EB ON RAMP @ ROUTE 13	
PI	4+34.19
PC	2+72.86
PT	5+92.90
Δ	17°49'38.4" (RT)
D	5°34'13.4"
L	320.04' (ARC)
T	161.32'
R	1,028.58'

DOLING TRAIL CURVE 1	
PI	0+57.11
PC	0+36.26
PT	0+77.69
Δ	15°49'35.7" (LT)
D	38°11'49.9"
L	41.43' (ARC)
T	20.85'
R	150.00'

DOLING TRAIL CURVE 2	
PI	3+80.70
PC	3+19.29
PT	4+14.93
Δ	91°20'11.9" (LT)
D	95°29'34.7"
L	95.65' (ARC)
T	61.42'
R	60.00'

DOLING TRAIL CURVE 3	
PI	5+96.01
PC	5+64.48
PT	6+20.74
Δ	64°28'31.2" (RT)
D	114°35'29.6"
L	56.27' (ARC)
T	31.53'
R	50.00'

DOLING TRAIL CURVE 4	
PI	9+60.04
PC	9+48.18
PT	9+71.46
Δ	26°40'30.2" (RT)
D	114°35'29.6"
L	23.28' (ARC)
T	11.85'
R	50.00'

DOLING TRAIL CURVE 5	
PI	11+63.28
PC	11+20.24
PT	11+91.31
Δ	81°26'41.8" (LT)
D	114°35'29.6"
L	71.07' (ARC)
T	43.04'
R	50.00'

DOLING TRAIL CURVE 6	
PI	12+69.09
PC	12+26.59
PT	12+97.04
Δ	80°43'37.5" (RT)
D	114°35'29.6"
L	70.45' (ARC)
T	42.50'
R	50.00'

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2012000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	28

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076 & JST0088B

COORDINATE POINTS
1 OF 2

REV.

ALL PROJECT COORDINATES HAVE BEEN PROJECTED FROM THE MISSOURI STATE PLANE COORDINATE (SPC) SYSTEM OF 1983 USING AN AVERAGE PROJECT PROJECTION (GRID TO GROUND) FACTOR. TO GET BACK TO STATE PLANE COORDINATES, MULTIPLY THE PROJECT COORDINATES BY THE AVERAGE GRID FACTOR AS SHOWN IN THE "REFERENCE CONTROL INFORMATION" PORTION OF THIS TABLE.

PROJECT COORDINATE INFORMATION

COORDINATE SYSTEM	MISSOURI STATE PLANE
HORIZONTAL DATUM	NAD83
VERTICAL DATUM	NAVD88
GEOID MODEL	GEOID 12B
ELEVATIONS DETERMINED BY	OPUS FOR PRIMARY CONTROL
PROJECT PROJECTION FACTOR	1.0000702

REFERENCE CONTROL INFORMATION

COORDINATE SYSTEM	MISSOURI STATE PLANE
CONTROL STATION	MODOT GNSS
DESIGNATION	
CORS_ID	
PID	
LATITUDE	
LONGITUDE	
NORTHING (M)	
EASTING (M)	
ZONE	CENTRAL
PROJECT AVERAGE GRID FACTOR	0.9999298073

EXAMPLE OF PROJECT COORDINATE TO S.P.C.

PROJECT NORTHING X AVERAGE GRID FACTOR
= STATE PLANE NORTHING
PROJECT EASTING X AVERAGE GRID FACTOR
= STATE PLANE EASTING

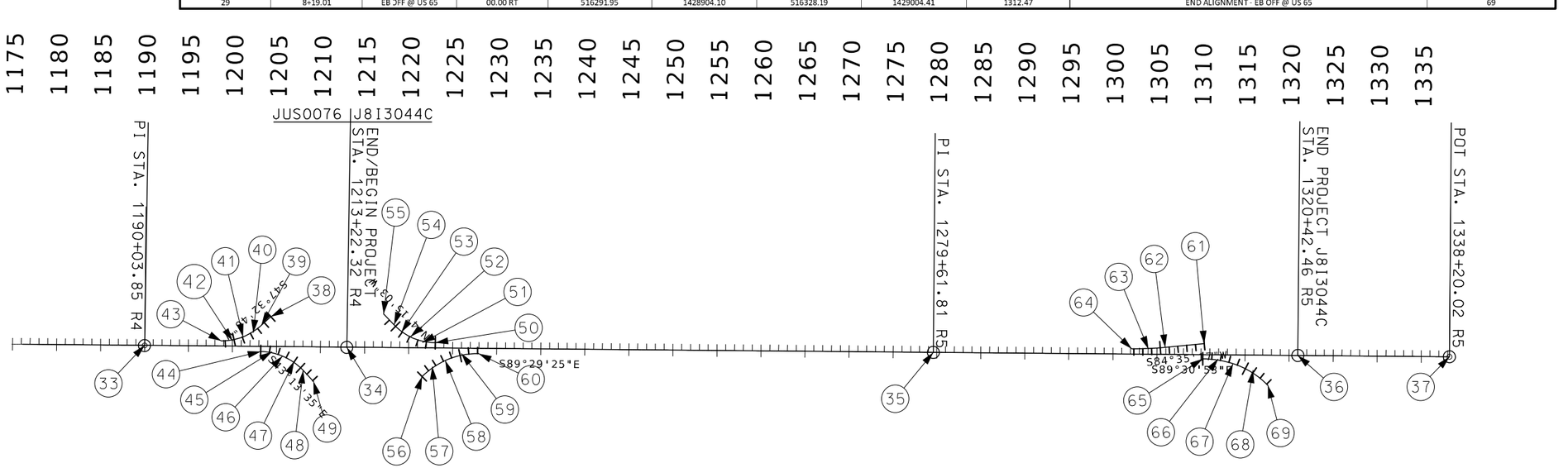
EXAMPLE: CONTROL POINT #[XXX]
N [XXXXXX.XXXX] X [X.XXXXXXXXXX] = N [XXXXXXX.XX]
E [XXXXXX.XXXX] X [X.XXXXXXXXXX] = E [XXXXXXX.XX]

LINEAR UNIT CONVERSION

1 METER = 3.280833333 US SURVEY FEET (USFT)

COORDINATE POINT LISTING

SHEET NO	STATION	LOCATION	OFFSET	STATE PLANE NORTHING (US SURVEY FEET)	STATE PLANE EASTING (US SURVEY (FEET)	MOD. STATE PLANE NORTHING (US SURVEY FEET)	MOD. STATE PLANE EASTING (US SURVEY (FEET)	MOD. STATE PLANE ELEVATION (US SURVEY (FEET)	DESCRIPTION	POINT ID
28	12+26.59	DOLING TRAIL	00.00 RT	517149.55	1409848.12	517218.44	1410035.92	1224.48	PC DOLING TRAIL	29
28	12+69.09	DOLING TRAIL	50.00' RT	517157.11	1409806.31	517226.00	1409994.10	1225.29	PI DOLING TRAIL - CURVE 6	30
28	12+97.04	DOLING TRAIL	00.00 RT	517199.60	1409807.03	517268.49	1409994.81	1225.72	PT DOLING TRAIL	31
28	13+25.12	DOLING TRAIL	00.00 RT	517218.11	1409807.34	517287.01	1409995.13	1225.90	END PROJECT	32
29	1190+03.85 R4	I-44	00.00 RT	516745.66	1416155.79	516781.94	1416255.20	1292.37	PI I-44	33
29	1213+22.32 R4	I-44	00.00 RT	516725.04	1418473.99	516761.31	1418573.57	1294.95	END JSU0076 - BEGIN J8I3044C	34
29	1279+61.81 R5	I-44	00.00 RT	516666.03	1425107.17	516702.30	1425207.21	1312.12	PI I-44	35
29	1320+42.46 R5	I-44	00.00 RT	516631.46	1429187.38	516667.73	1429287.71	1309.60	END PROJECT	36
29	1338+20.02 R5	I-44	00.00 RT	516616.40	1430964.75	516652.67	1431065.20	1310.63	POT I-44	37
29	0+00.00	GLENSTONE WB ON	00.00 RT	517070.80	1417586.99	517107.10	1417686.51	1288.64	BEGIN ALIGNMENT - WB ON @ GLENSTONE	38
29	1+42.00	GLENSTONE WB ON	00.00 RT	516974.96	1417482.23	517011.25	1417581.73	1288.64	PC RAMP - WB ON @ GLENSTONE	39
29	2+68.53	GLENSTONE WB ON	11.51' LT	516888.56	1417388.88	516925.84	1417488.37	1288.64	PI RAMP - WB ON @ GLENSTONE	40
29	3+92.29	GLENSTONE WB ON	00.00 RT	516842.83	1417271.29	516879.12	1417370.78	1288.51	PCC RAMP - WB ON @ GLENSTONE	41
29	5+19.70	GLENSTONE WB ON	12.37' LT	516795.79	1417152.90	516832.07	1417252.38	1289.14	PI RAMP - WB ON @ GLENSTONE	42
29	6+43.92	GLENSTONE WB ON	00.00 RT	516796.92	1417025.50	516833.20	1417124.98	1289.96	END ALIGNMENT - WB ON @ GLENSTONE	43
29	0+00.00	GLENSTONE EB OFF	00.00 RT	1417025.50	1417472.55	1417124.98	1417572.05	1291.13	BEGIN ALIGNMENT - EB OFF @ GLENSTONE	44
29	1+28.69	GLENSTONE EB OFF	12.62' LT	516673.80	1417601.22	516710.07	1417700.73	1290.48	PI RAMP - EB OFF @ GLENSTONE	45
29	2+54.09	GLENSTONE EB OFF	00.00 RT	516623.72	1417719.75	516659.98	1417819.27	1290.71	PCC RAMP - EB OFF @ GLENSTONE	46
29	3+99.86	GLENSTONE EB OFF	15.24' LT	516566.98	1417854.02	516603.24	1417953.55	1291.54	PI RAMP - EB OFF @ GLENSTONE	47
29	5+41.41	GLENSTONE EB OFF	00.00 RT	516466.77	1417953.85	516497.02	1418053.39	1291.54	PT RAMP - EB OFF @ GLENSTONE	48
29	7+12.78	GLENSTONE EB OFF	00.00 RT	516335.57	1418071.53	516371.82	1418171.08	1291.54	END ALIGNMENT - EB OFF @ GLENSTONE	49
29	0+00.00	GLENSTONE WB OFF	00.00 RT	516775.31	1419454.33	516811.59	1419553.97	1297.03	BEGIN ALIGNMENT - WB OFF @ GLENSTONE	50
29	1+48.65	GLENSTONE WB OFF	15.24' LT	516776.64	1419305.69	516812.91	1419405.33	1295.58	PI RAMP - WB OFF @ GLENSTONE	51
29	2+92.28	GLENSTONE WB OFF	00.00 RT	516842.43	1419172.41	516878.71	1419272.03	1292.66	PCC RAMP - WB OFF @ GLENSTONE	52
29	4+09.01	GLENSTONE WB OFF	9.94' LT	516894.10	1419067.74	516930.38	1419167.36	1290.90	PI RAMP - WB OFF @ GLENSTONE	53
29	5+23.49	GLENSTONE WB OFF	00.00 RT	516977.71	1418986.29	517014.00	1419085.90	1290.90	PT RAMP - WB OFF @ GLENSTONE	54
29	6+95.45	GLENSTONE WB OFF	00.00 RT	517100.87	1418866.31	517137.17	1418965.91	1290.90	END ALIGNMENT - WB OFF @ GLENSTONE	55
29	0+00.00	GLENSTONE EB ON	00.00 RT	516392.55	1419303.30	516428.80	1419402.93	1295.70	BEGIN ALIGNMENT - EB ON @ GLENSTONE	56
29	1+62.35	GLENSTONE EB ON	16.78' LT	516505.53	1419303.30	516541.79	1419402.93	1295.70	PI RAMP - EB ON @ GLENSTONE	57
29	3+21.50	GLENSTONE EB ON	00.00 RT	516572.59	1419567.72	516608.85	1419667.37	1295.70	PCC RAMP - EB ON @ GLENSTONE	58
29	5+20.28	GLENSTONE EB ON	9.94' LT	516654.70	1419748.73	516690.97	1419848.39	1296.70	PI RAMP - EB ON @ GLENSTONE	59
29	7+12.77	GLENSTONE EB ON	00.00 RT	516652.93	1419947.48	516689.20	1420047.16	1298.75	END ALIGNMENT - EB ON @ GLENSTONE	60
29	0+00.00	WB ON @ US 65	00.00 RT	516764.23	1428180.90	516800.50	1428281.15	1319.75	BEGIN ALIGNMENT - WB ON @ US 65	61
29	4+44.27	WB ON @ US 65	00.00 RT	516722.33	1427738.64	516758.60	1427838.87	1319.88	PC RAMP - WB ON @ US 65	62
29	6+35.00	WB ON @ US 65	4.91' LT	516704.34	1427548.77	516740.61	1427648.98	1319.55	PI RAMP - WB ON @ US 65	63
29	8+25.40	WB ON @ US 65	00.00 RT	516705.96	1427358.05	516742.23	1427458.25	1318.56	END ALIGNMENT - WB ON @ US 65	64
29	0+00.00	EB OFF @ US 65	00.00 RT	516593.12	1428165.94	516629.38	1428266.19	1318.14	BEGIN ALIGNMENT - EB OFF @ US 65	65
29	1+75.29	EB OFF @ US 65	13.23' LT	516591.63	1428341.20	516627.90	1428441.47	1316.03	PI RAMP - EB OFF @ US 65	66
29	3+47.92	EB OFF @ US 65	00.00 RT	516538.21	1428508.14	516574.47	1428608.41	1313.26	PCC RAMP - EB OFF @ US 65	67
29	5+88.36	EB OFF @ US 65	29.80' LT	516464.92	1428737.12	516501.18	1428837.41	1312.47	PI RAMP - EB OFF @ US 65	68
29	8+19.01	EB OFF @ US 65	00.00 RT	516291.95	1428904.10	516328.19	1429004.41	1312.47	END ALIGNMENT - EB OFF @ US 65	69



EB OFF RAMP @ GLENSTONE (1)	
PI	1+28.69
PC	0+00.00
PT	2+54.09
Δ	22°23'49.1" (RT)
D	8°48'53.0"
L	254.09' (ARC)
T	128.69'
R	650.00'

EB OFF RAMP @ GLENSTONE (2)	
PI	3+99.86
PC	2+54.09
PT	5+41.41
Δ	23°52'1.0" (RT)
D	8°18'23.4"
L	287.33' (ARC)
T	145.78'
R	689.77'

WB ON RAMP @ GLENSTONE (1)	
PI	2+68.53
PC	1+42.00
PT	3+92.29
Δ	20°46'59.5" (RT)
D	8°18'13.5"
L	250.29' (ARC)
T	126.53'
R	690.00'

WB ON RAMP @ GLENSTONE (2)	
PI	5+19.70
PC	3+92.29
PT	6+43.92
Δ	22°10'49.2" (RT)
D	8°48'53.0"
L	251.63' (ARC)
T	127.41'
R	650.00'

WB OFF RAMP @ GLENSTONE (1)	
PI	1+48.65
PC	0+00.00
PT	2+92.28
Δ	25°45'48.3" (RT)
D	8°48'53.0"
L	292.28' (ARC)
T	148.65'
R	650.00'

WB OFF RAMP @ GLENSTONE (2)	
PI	4+09.01
PC	2+92.28
PT	5+23.49
Δ	19°28'34.1" (RT)
D	8°25'25.0"
L	231.21' (ARC)
T	116.73'
R	680.18'

EB ON RAMP @ GLENSTONE (1)	
PI	1+62.35
PC	-0+00.00
PT	3+21.50
Δ	19°42'16.7" (RT)
D	6°7'44.4"
L	321.50' (ARC)
T	162.35'
R	934.83'

EB ON RAMP @ GLENSTONE (2)	
PI	5+20.28
PC	3+21.50
PT	7+12.77
Δ	24°54'32.9" (RT)
D	6°21'58.3"
L	391.27' (ARC)
T	198.78'
R	900.00'

EB OFF RAMP @ US 65 (1)	
PI	1+75.29
PC	0+00.00
PT	3+47.92
Δ	17°15'40.8" (RT)
D	4°57'40.8"
L	347.92' (ARC)
T	175.29'
R	1,154.84'

EB OFF RAMP @ US 65 (2)	
PI	5+88.36
PC	3+47.92
PT	8+19.01
Δ	28°15'48.0" (RT)
D	5°59'58.4"
L	471.09' (ARC)
T	240.44'
R	955.00'

WB ON RAMP @ US 65	
PI	6+35.00
PC	4+44.27
PT	8+25.40
Δ	5°53'50.1" (RT)
D	1°32'50.2"
L	381.14' (ARC)
T	190.74'
R	3,703.00'

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2010000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	29

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

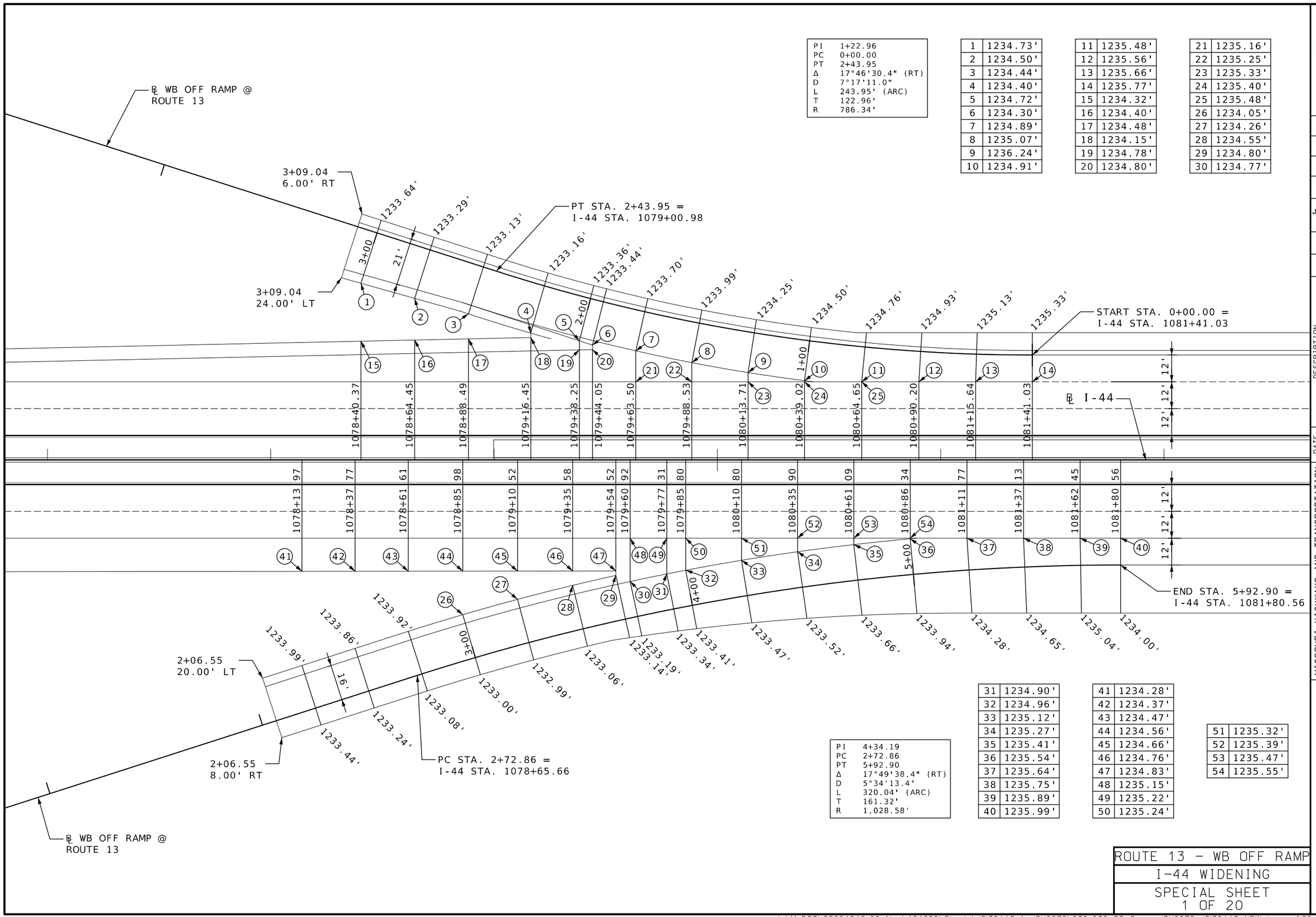
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING JSU0076, J8I3044C, & JST0088B

COORDINATE POINTS
2 OF 2

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\029_CP_JSU0076_J8I3044C_i50.dgn 11:40:29 AM 8/20/2024



PI	1+22.96
PC	0+00.00
PT	2+43.95
Δ	17°46'30.4" (RT)
D	7°17'11.0"
L	243.95' (ARC)
T	122.96'
R	786.34'

1	1234.73'
2	1234.50'
3	1234.44'
4	1234.40'
5	1234.72'
6	1234.30'
7	1234.89'
8	1235.07'
9	1236.24'
10	1234.91'

11	1235.48'
12	1235.56'
13	1235.66'
14	1235.77'
15	1234.32'
16	1234.40'
17	1234.48'
18	1234.15'
19	1234.78'
20	1234.80'

21	1235.16'
22	1235.25'
23	1235.33'
24	1235.40'
25	1235.48'
26	1234.05'
27	1234.26'
28	1234.55'
29	1234.80'
30	1234.77'

PI	4+34.19
PC	2+72.86
PT	5+92.90
Δ	17°49'38.4" (RT)
D	5°34'13.4"
L	320.04' (ARC)
T	161.32'
R	1,028.58'

31	1234.90'
32	1234.96'
33	1235.12'
34	1235.27'
35	1235.41'
36	1235.54'
37	1235.64'
38	1235.75'
39	1235.89'
40	1235.99'

41	1234.28'
42	1234.37'
43	1234.47'
44	1234.56'
45	1234.66'
46	1234.76'
47	1234.83'
48	1235.15'
49	1235.22'
50	1235.24'

51	1235.32'
52	1235.39'
53	1235.47'
54	1235.55'

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	30

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

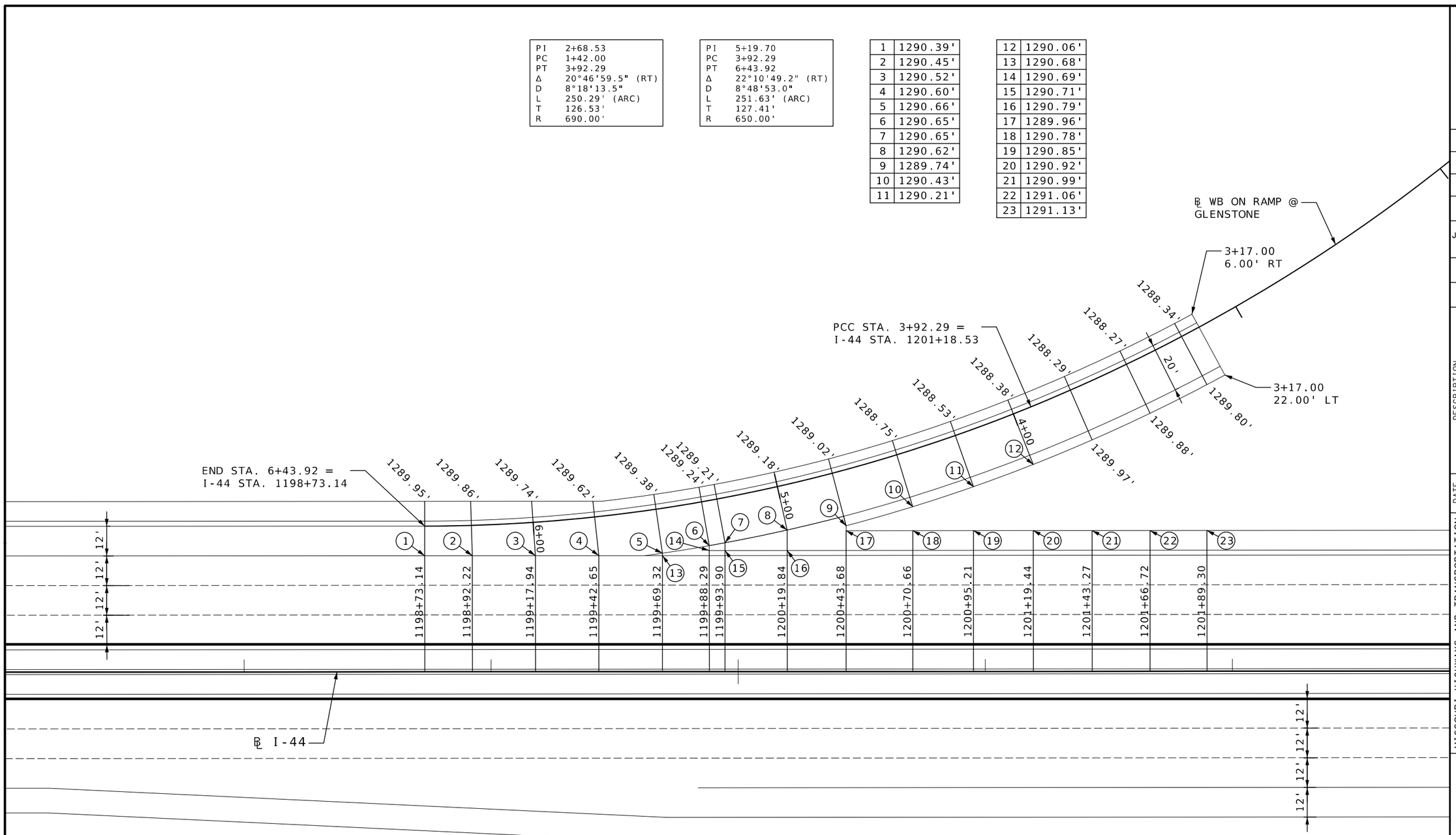
ROUTE 13 – WB OFF RAMP
I-44 WIDENING
SPECIAL SHEET 1 OF 20

PI	2+68.53
PC	1+42.00
PT	3+92.29
Δ	20°46'59.5" (RT)
D	8°18'13.5"
L	250.29' (ARC)
T	126.53'
R	690.00'

PI	5+19.70
PC	3+92.29
PT	6+43.92
Δ	22°10'49.2" (RT)
D	8°48'53.0"
L	251.63' (ARC)
T	127.41'
R	650.00'

1	1290.39'
2	1290.45'
3	1290.52'
4	1290.60'
5	1290.66'
6	1290.65'
7	1290.65'
8	1290.62'
9	1289.74'
10	1290.43'
11	1290.21'

12	1290.06'
13	1290.68'
14	1290.69'
15	1290.71'
16	1290.79'
17	1289.96'
18	1290.78'
19	1290.85'
20	1290.92'
21	1290.99'
22	1291.06'
23	1291.13'



GLENSTONE – WB ON RAMP

I-44 WIDENING

SPECIAL SHEET
2 OF 20

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	31

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION	REV.

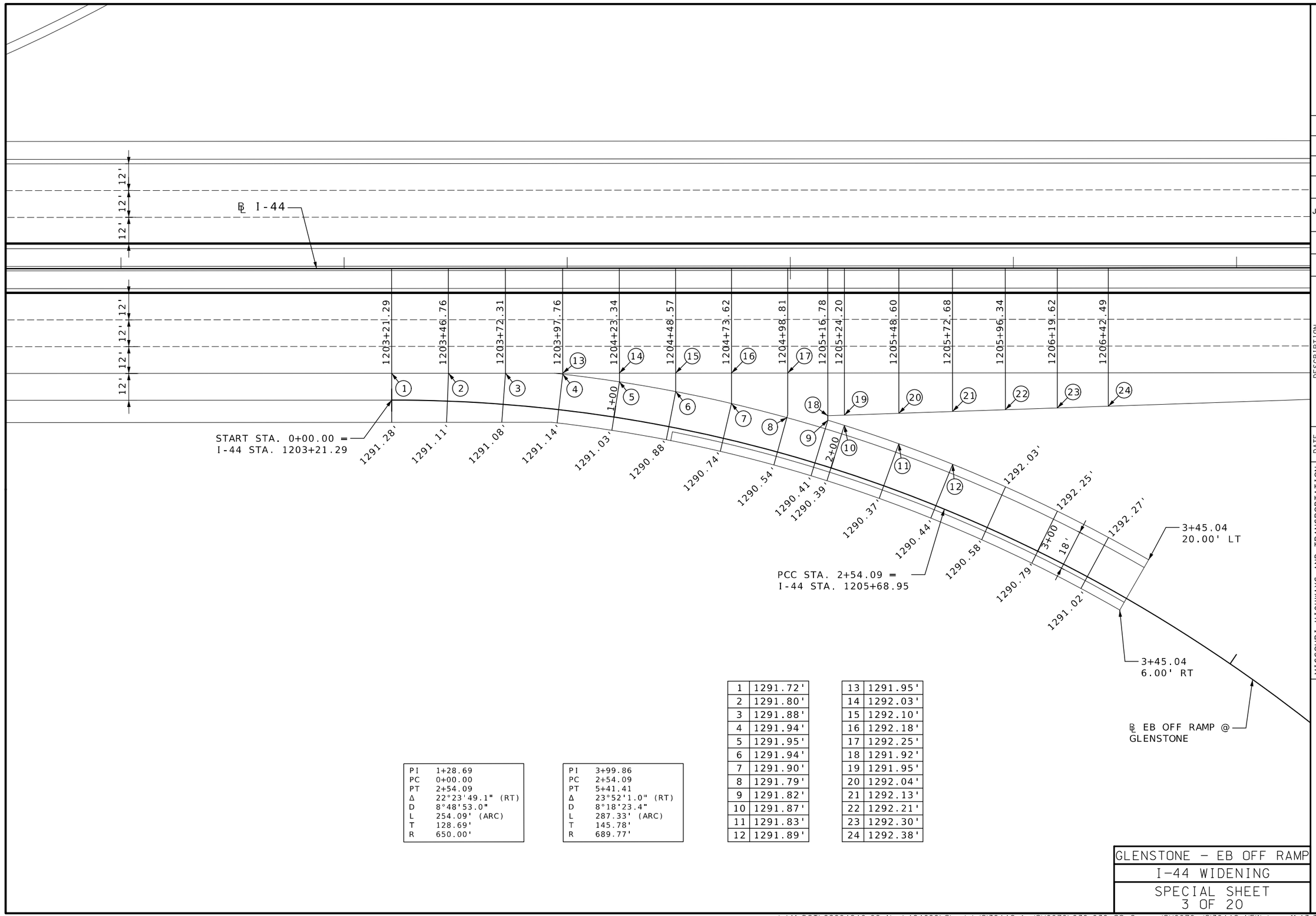
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\030-036_SS_Gores_JSU0076_J8I3044C_NEW.dgn 11:43:33 AM 8/20/2024



PI	1+28.69
PC	0+00.00
PT	2+54.09
Δ	22°23'49.1" (RT)
D	8°48'53.0"
L	254.09' (ARC)
T	128.69'
R	650.00'

PI	3+99.86
PC	2+54.09
PT	5+41.41
Δ	23°52'1.0" (RT)
D	8°18'23.4"
L	287.33' (ARC)
T	145.78'
R	689.77'

1	1291.72'
2	1291.80'
3	1291.88'
4	1291.94'
5	1291.95'
6	1291.94'
7	1291.90'
8	1291.79'
9	1291.82'
10	1291.87'
11	1291.83'
12	1291.89'

13	1291.95'
14	1292.03'
15	1292.10'
16	1292.18'
17	1292.25'
18	1291.92'
19	1291.95'
20	1292.04'
21	1292.13'
22	1292.21'
23	1292.30'
24	1292.38'

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	32

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

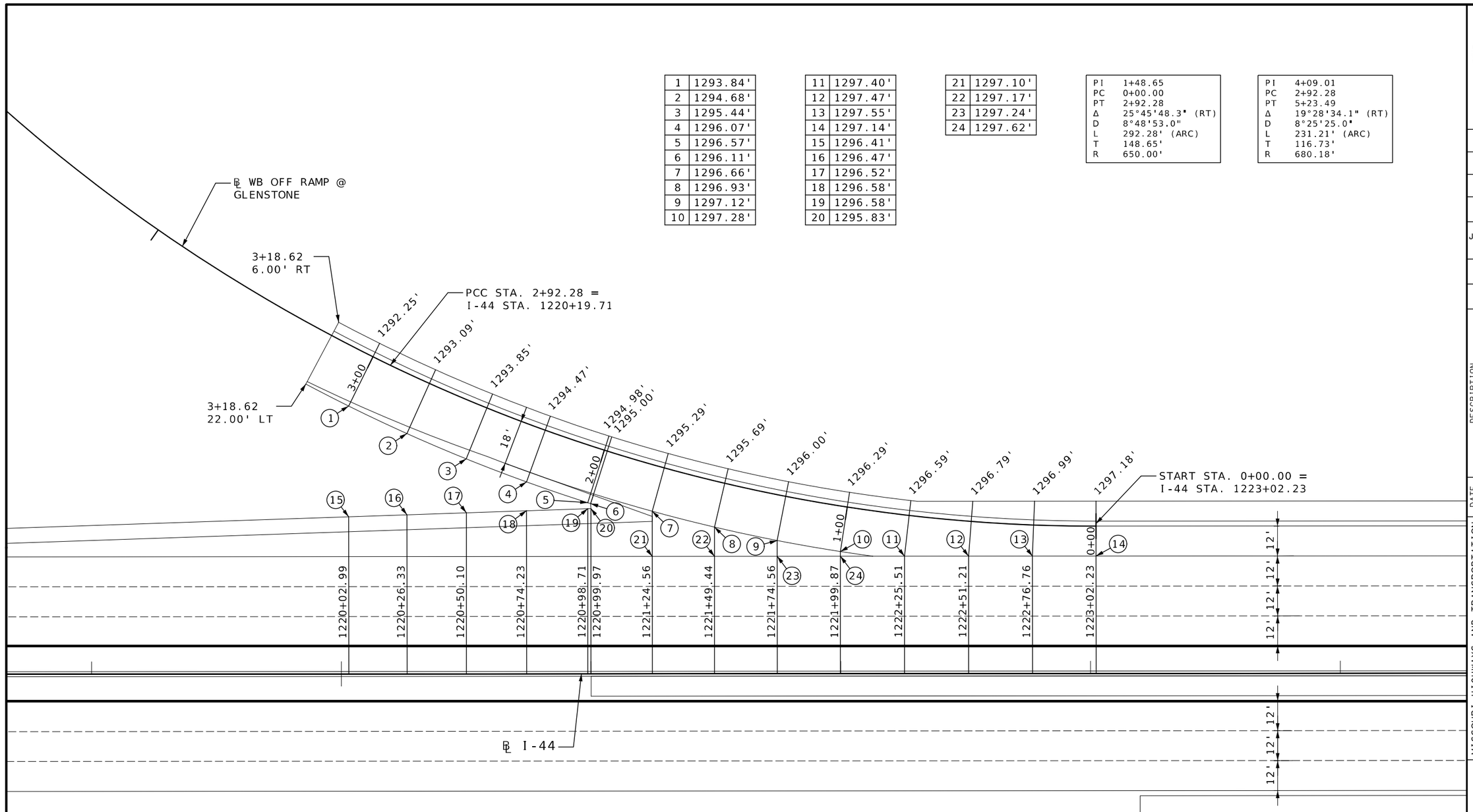
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	DESCRIPTION	REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

GLENSTONE – EB OFF RAMP
I-44 WIDENING
SPECIAL SHEET
3 OF 20



1	1293.84'
2	1294.68'
3	1295.44'
4	1296.07'
5	1296.57'
6	1296.11'
7	1296.66'
8	1296.93'
9	1297.12'
10	1297.28'

11	1297.40'
12	1297.47'
13	1297.55'
14	1297.14'
15	1296.41'
16	1296.47'
17	1296.52'
18	1296.58'
19	1296.58'
20	1295.83'

21	1297.10'
22	1297.17'
23	1297.24'
24	1297.62'

PI	1+48.65
PC	0+00.00
PT	2+92.28
Δ	25°45'48.3" (RT)
D	8°48'53.0"
L	292.28' (ARC)
T	148.65'
R	650.00'

PI	4+09.01
PC	2+92.28
PT	5+23.49
Δ	19°28'34.1" (RT)
D	8°25'25.0"
L	231.21' (ARC)
T	116.73'
R	680.18'

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	33

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT

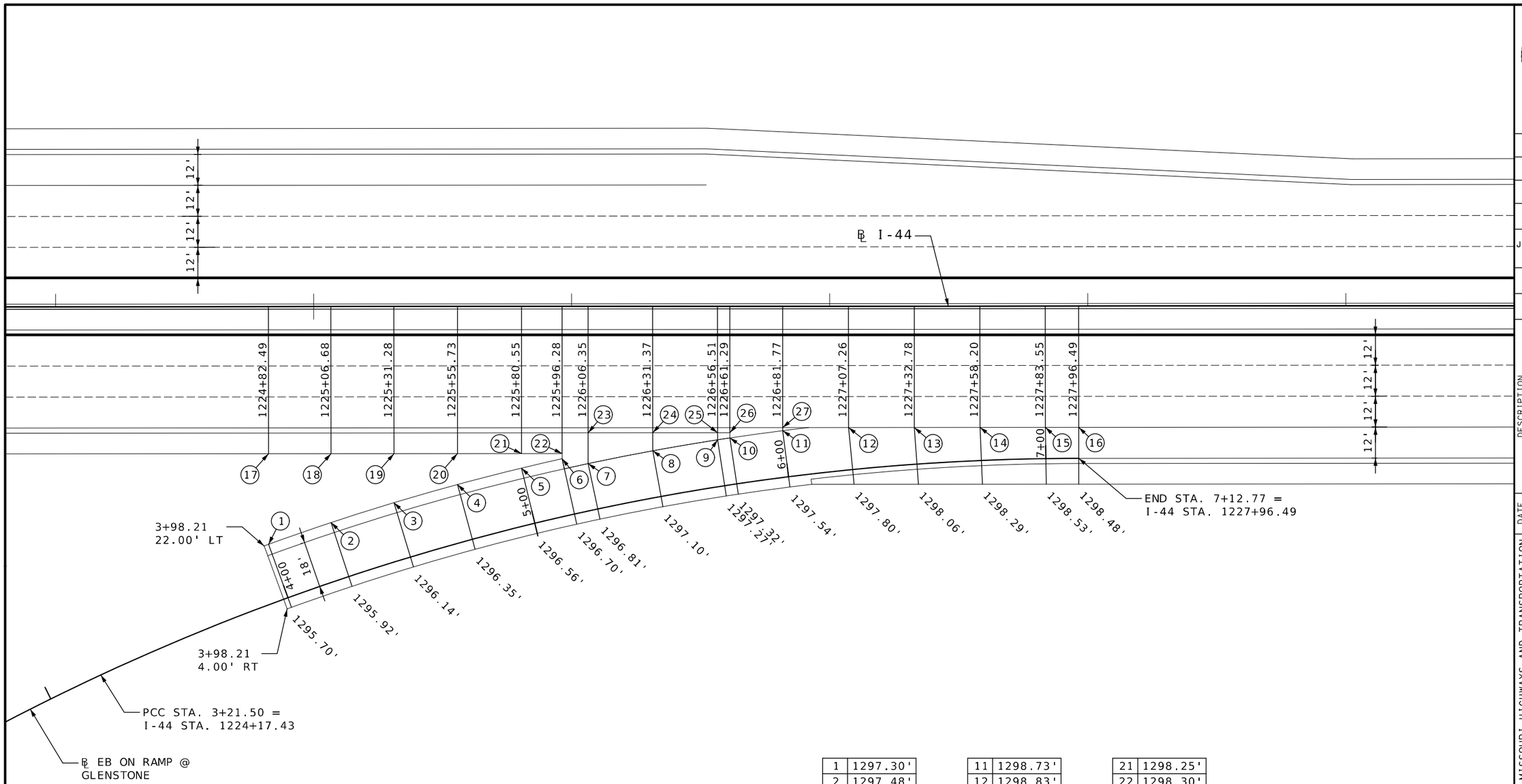
©Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

GLENSTONE – WB OFF RAMP
I-44 WIDENING
SPECIAL SHEET
4 OF 20

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\030-036_SS_Gores_JSU0076_J8I3044C_NEW.dgn 11:43:35 AM 8/20/2024



PI	5+20.27
PC	3+21.50
PT	7+12.77
Δ	24°54'32.9" (RT)
D	6°21'58.3"
L	391.27' (ARC)
T	198.78'
R	900.00'

1	1297.30'
2	1297.48'
3	1297.70'
4	1297.91'
5	1298.12'
6	1298.26'
7	1298.25'
8	1298.43'
9	1298.58'
10	1298.16'

11	1298.73'
12	1298.83'
13	1298.91'
14	1298.98'
15	1299.06'
16	1299.10'
17	1297.96'
18	1298.03'
19	1298.11'
20	1298.18'

21	1298.25'
22	1298.30'
23	1298.49'
24	1298.56'
25	1298.64'
26	1298.43'
27	1298.75'

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	34

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

GLENSTONE - EB ON RAMP
I-44 WIDENING
SPECIAL SHEET
5 OF 20

REV.

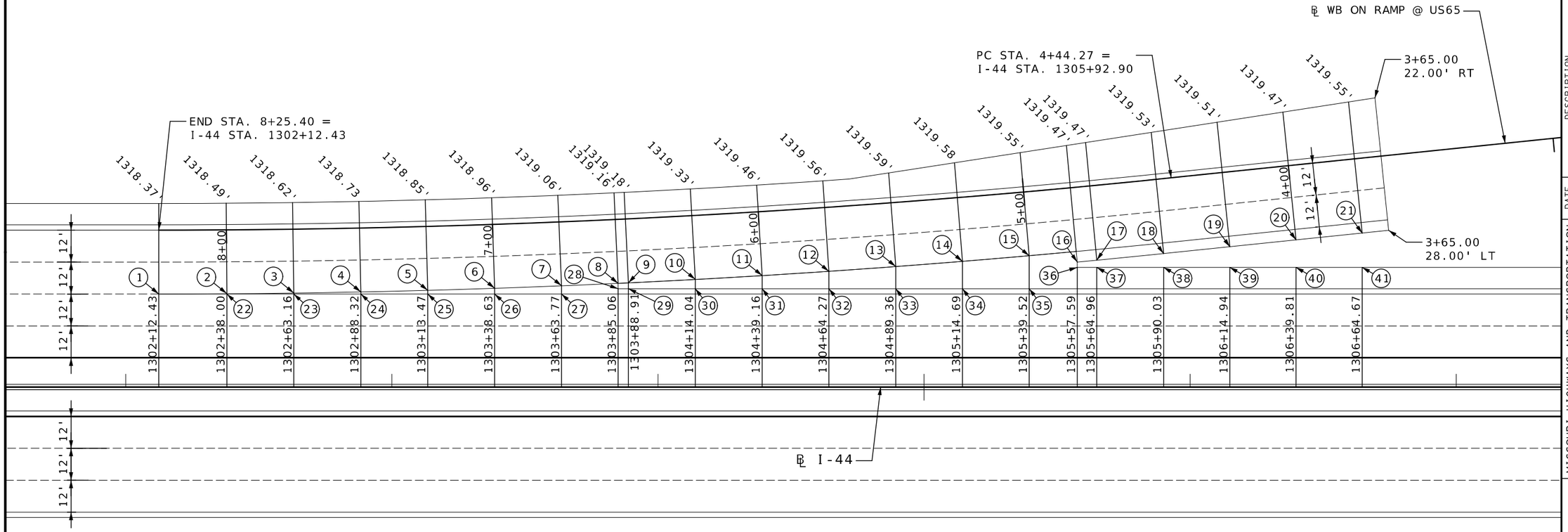
1	1319.04'
2	1319.22'
3	1319.40'
4	1319.57'
5	1319.74'
6	1319.91'
7	1320.07'
8	1320.21'
9	1320.23'
10	1320.38'

11	1320.51'
12	1320.61'
13	1320.68'
14	1320.73'
15	1320.75'
16	1319.87'
17	1320.29'
18	1320.54'
19	1320.45'
20	1320.39'

21	1320.18'
22	1319.23'
23	1319.41'
24	1319.59'
25	1319.77'
26	1319.95'
27	1320.13'
28	1320.25'
29	1320.28'
30	1320.45'

31	1320.61'
32	1320.74'
33	1320.85'
34	1320.94'
35	1320.98'
36	1320.06'
37	1320.50'
38	1320.89'
39	1320.88'
40	1320.86'
41	1320.79'

PI	6+35.00
PC	4+44.27
PT	8+25.40
Δ	5°53'50.1" (RT)
D	1°32'50.2"
L	381.14' (ARC)
T	190.74'
R	3,703.00'



STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	35

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

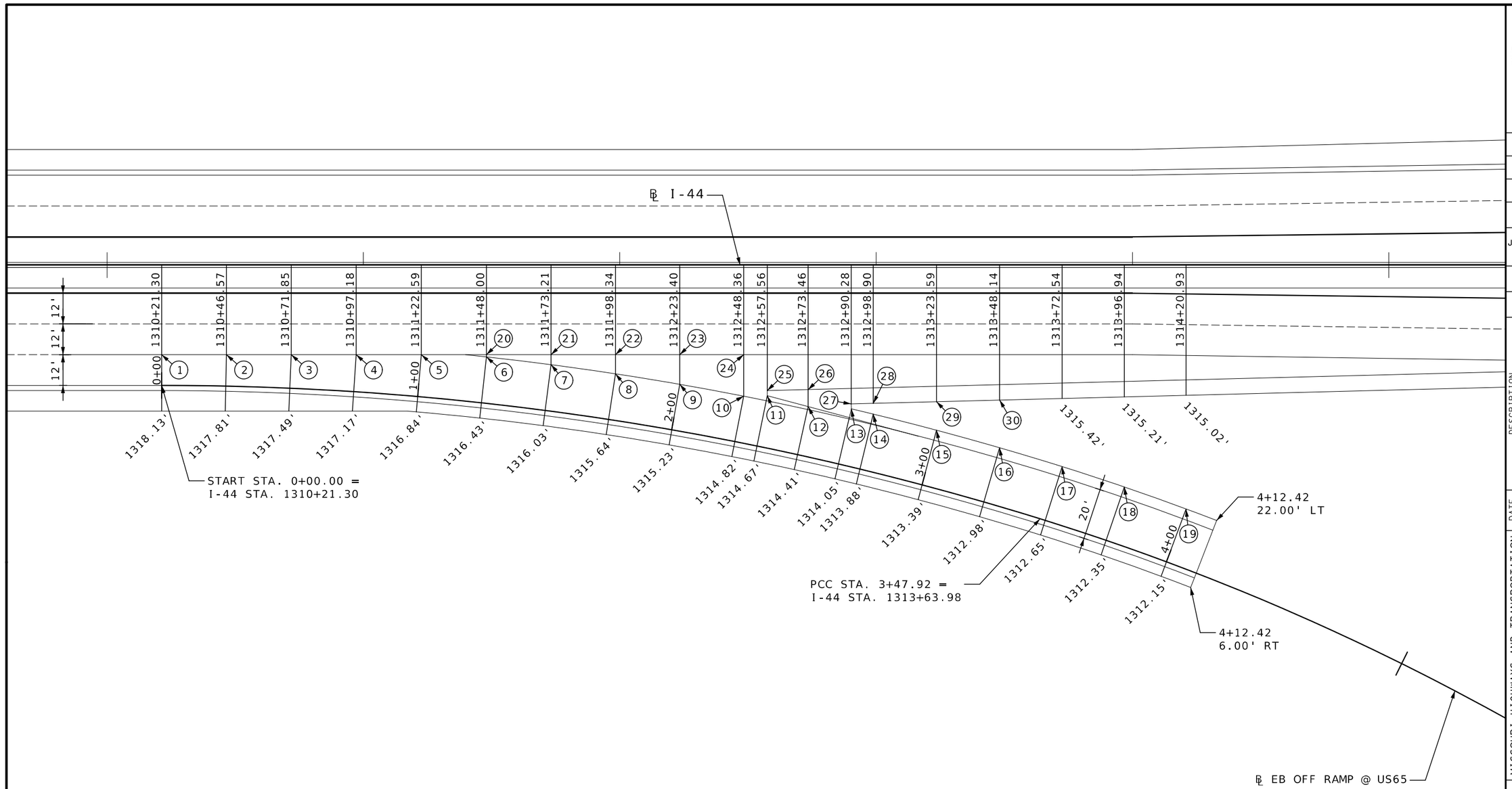
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

US65 - WB ON RAMP
I-44 WIDENING
SPECIAL SHEET
6 OF 20

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\030-036_SS_Gores_JSU0076_J8I3044C_NEW.dgn 11:43:37 AM 8/20/2024



1	1318.57'
2	1318.37'
3	1318.17'
4	1317.98'
5	1317.78'
6	1317.56'
7	1317.31'
8	1317.04'
9	1316.76'
10	1316.48'

11	1316.41'
12	1316.20'
13	1316.02'
14	1315.87'
15	1315.38'
16	1314.97'
17	1314.65'
18	1314.50'
19	1314.37'
20	1317.58'

21	1317.38'
22	1317.19'
23	1316.99'
24	1316.80'
25	1316.45'
26	1316.33'
27	1316.09'
28	1316.03'
29	1315.84'
30	1315.63'

PI	1+75.29
PC	0+00.00
PT	3+47.92
Δ	17°15'40.8" (RT)
D	4°57'40.8"
L	347.92' (ARC)
T	175.29'
R	1,154.84'

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	36

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

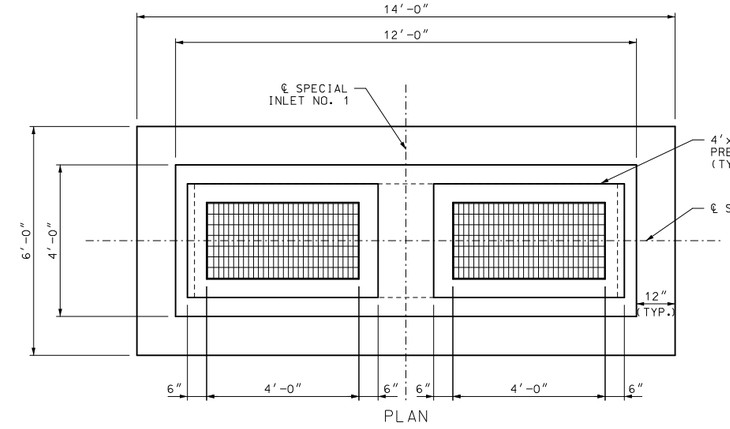
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

US65 - EB OFF RAMP
I-44 WIDENING
SPECIAL SHEET
7 OF 20

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\030-036_SS_Gores_JSU0076_J8I3044C_NEW.dgn 11:43:38 AM 8/20/2024

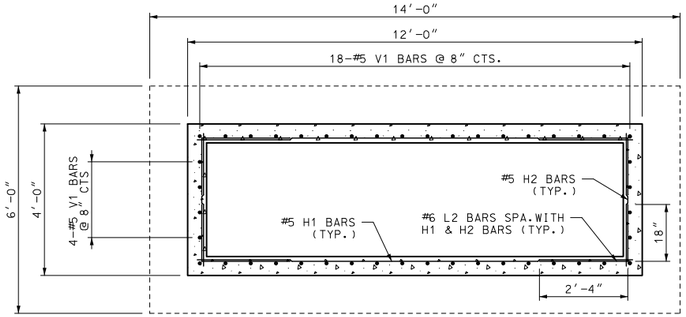


PLAN

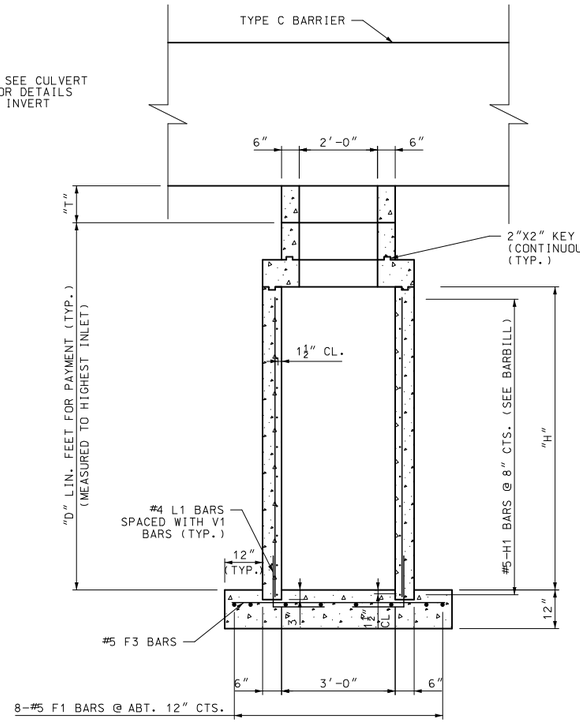
NOTE:

PIPES NOT SHOWN FOR CLARITY. SEE CULVERT SECTIONS AND ROADWAY PLANS FOR DETAILS REGARDING PIPE LOCATIONS AND INVERT ELEVATIONS.

VARYING DIMENSIONS	
	H
STRUCTURE 02	3′-0″
STRUCTURE 21	2′-6″
STRUCTURE 56	3′-0″
STRUCTURE 70	4′-6″

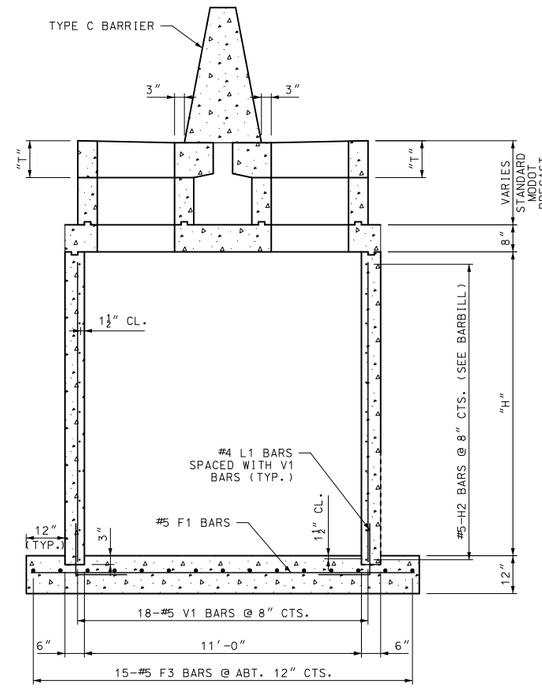


PLAN SHOWING WALL REINFORCEMENT



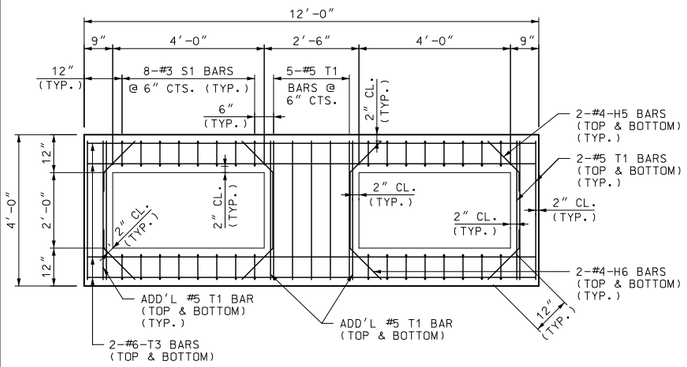
FRONT ELEVATION

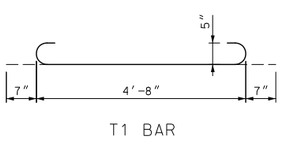
NOTE: REINFORCEMENT IS THE SAME FOR THE BACK WALL.



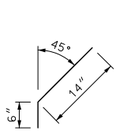
SIDE ELEVATION

NOTE: REINFORCEMENT IS THE SAME FOR THE OTHER SIDE WALL.

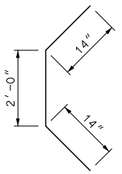




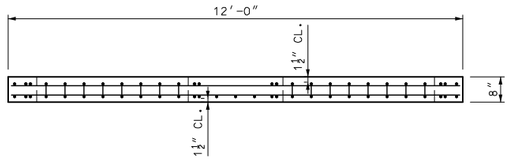
T1 BAR



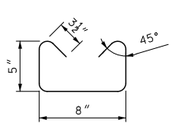
H5 BAR



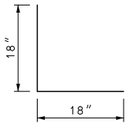
H6 BAR



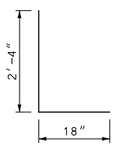
REINFORCED LID DETAILS



S1 BAR



L1 BAR



L2 BAR

PAVEMENT THICKNESS	"T" DIMENSION
LESS THAN OR EQUAL TO 11″	11″
12″	12″
13″	13″
GREATER THAN OR EQUAL TO 14″	14″

NOTES:

ALL WORK INCLUDING STEEL, CONCRETE, REINFORCING BARS AND BACKFILL NECESSARY TO COMPLETE THE CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO THE COST OF SPECIAL INLET.

ALL CAST-IN-PLACE CONCRETE SHALL MEET THE SPECIFICATIONS OF MODOT CLASS B-1 CONCRETE.

SEE CULVERT SECTIONS FOR PIPE INVERT ELEVATIONS.

FIELD VERIFY ALL SIZES AND LOCATIONS PRIOR TO CONSTRUCTION/INSTALLATION OF DRAINAGE STRUCTURES AND PIPES.

ALL REINFORCING TO BE GRADE 60 EPOXY COATED STEEL AND SHALL BE IN ACCORDANCE WITH SEC 706.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1-1/2" UNLESS OTHERWISE SHOWN.

EXPOSED EDGES SHALL BE BEVELED 3/4".

BARBILL FOR STRUCTURE 02

BAR	NO. OF BARS	LENGTH	WEIGHT (LBS.)
#5 T1	23	4′-10″	116
#6 T3	8	11′-8″	141
#3 S1	32	2′-1″	26
#4 H5	8	1′-7″	9
#4 H6	4	4′-4″	12
#5 V1	44	3′-0″	138
#5 H1	10	11′-6″	120
#5 H2	10	3′-6″	37
#5 F1	7	13′-6″	99
#5 F3	15	5′-6″	87
#4 L1	44	2′-11″	86
#6 L2	20	3′-8″	111

QUANTITY TOTALS (PER STRUCTURE 02):
REINFORCING STEEL = 982 LBS.
CLASS B-1 CONCRETE = 5.4 CU. YDS.

BARBILL FOR STRUCTURE 21

BAR	NO. OF BARS	LENGTH	WEIGHT (LBS.)
#5 T1	23	4′-10″	116
#6 T3	8	11′-8″	141
#3 S1	32	2′-1″	26
#4 H5	8	1′-7″	9
#4 H6	4	4′-4″	12
#5 V1	44	2′-6″	115
#5 H1	10	11′-6″	120
#5 H2	10	3′-6″	37
#5 F1	7	13′-6″	99
#5 F3	15	5′-6″	87
#4 L1	44	2′-11″	86
#6 L2	20	3′-8″	111

QUANTITY TOTALS (PER STRUCTURE 21):
REINFORCING STEEL = 959 LBS.
CLASS B-1 CONCRETE = 5.2 CU. YDS.

BARBILL FOR STRUCTURE 56

BAR	NO. OF BARS	LENGTH	WEIGHT (LBS.)
#5 T1	23	4′-10″	116
#6 T3	8	11′-8″	141
#3 S1	32	2′-1″	26
#4 H5	8	1′-7″	9
#4 H6	4	4′-4″	12
#5 V1	44	3′-0″	138
#5 H1	10	11′-6″	120
#5 H2	10	3′-6″	37
#5 F1	7	13′-6″	99
#5 F3	15	5′-6″	87
#4 L1	44	2′-11″	86
#6 L2	20	3′-8″	111

QUANTITY TOTALS (PER STRUCTURE 56):
REINFORCING STEEL = 982 LBS.
CLASS B-1 CONCRETE = 5.4 CU. YDS.

BARBILL FOR STRUCTURE 70

BAR	NO. OF BARS	LENGTH	WEIGHT (LBS.)
#5 T1	23	4′-10″	116
#6 T3	8	11′-8″	141
#3 S1	32	2′-1″	26
#4 H5	8	1′-7″	9
#4 H6	4	4′-4″	12
#5 V1	44	4′-6″	207
#5 H1	16	11′-6″	192
#5 H2	16	3′-6″	59
#5 F1	7	13′-6″	99
#5 F3	15	5′-6″	87
#4 L1	44	2′-11″	86
#6 L2	32	3′-8″	177

QUANTITY TOTALS (PER STRUCTURE 70):
REINFORCING STEEL = 1211 LBS.
CLASS B-1 CONCRETE = 6.3 CU. YDS.

DETAILS OF SPECIAL INLET (4 FT. X 2 FT. DOUBLE DROP INLET ON RECTANGULAR BASE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/20/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	37

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DATE	DESCRIPTION	REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

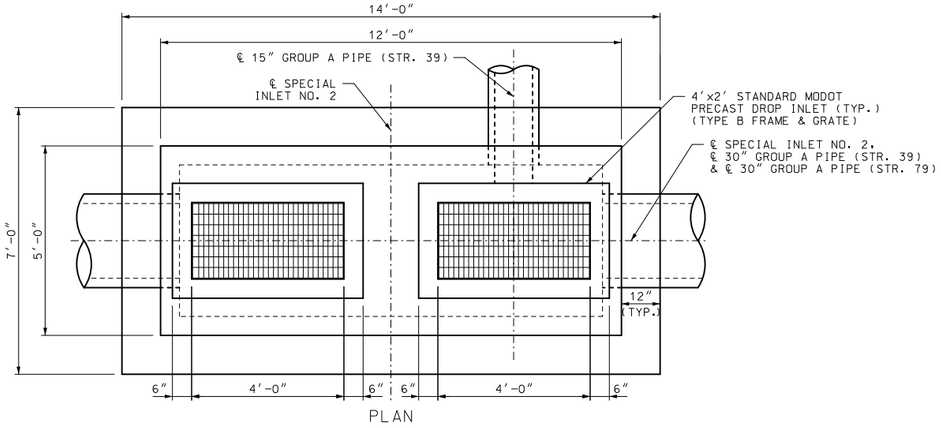
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
©Copyright CMT, Inc.

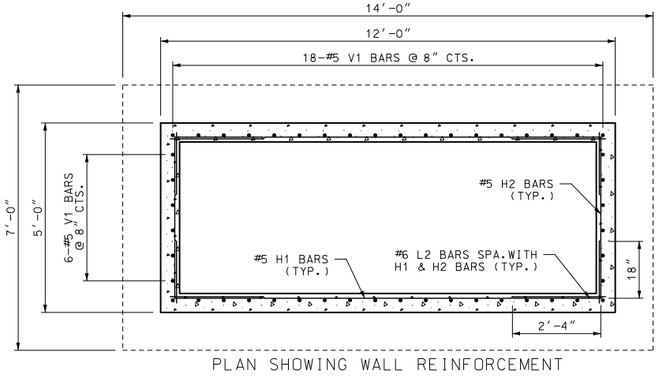
SPECIAL INLET NO.1

SPECIAL SHEET 8 OF 20

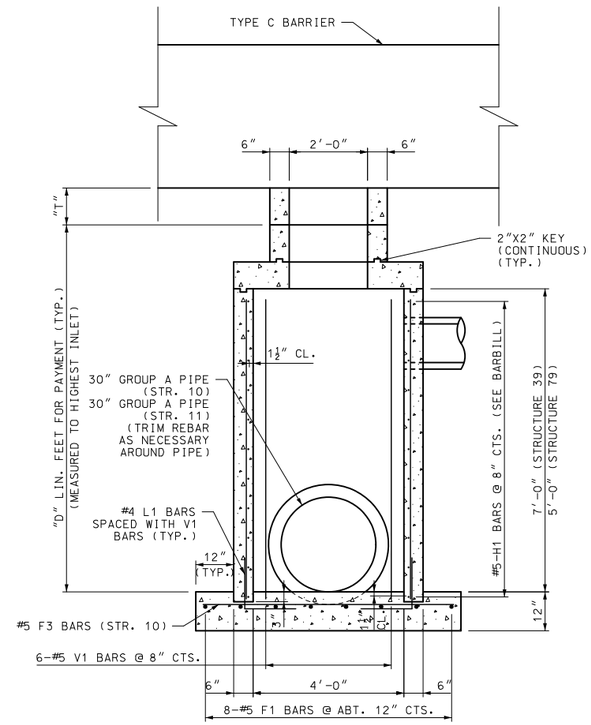
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\037-039_SS_8-10_J8I3044C_JSU0076_i5_Special Inlets 1-3.dgn 11:43:45 AM 8/20/2024



PLAN

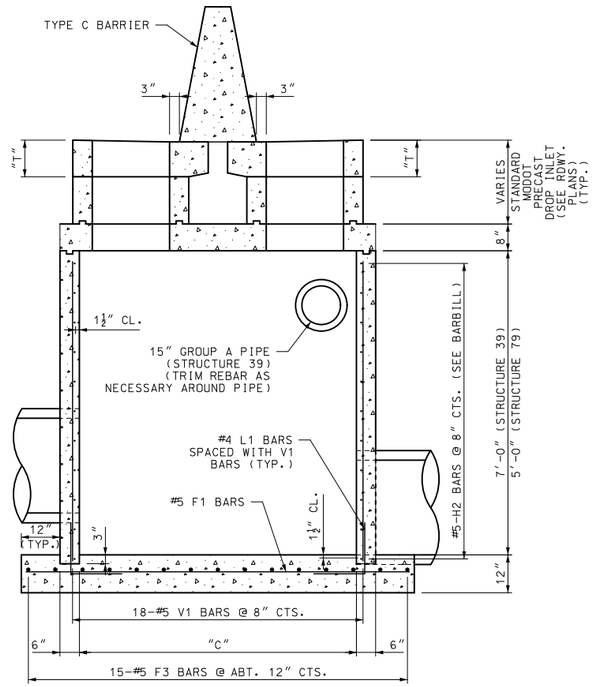


PLAN SHOWING WALL REINFORCEMENT



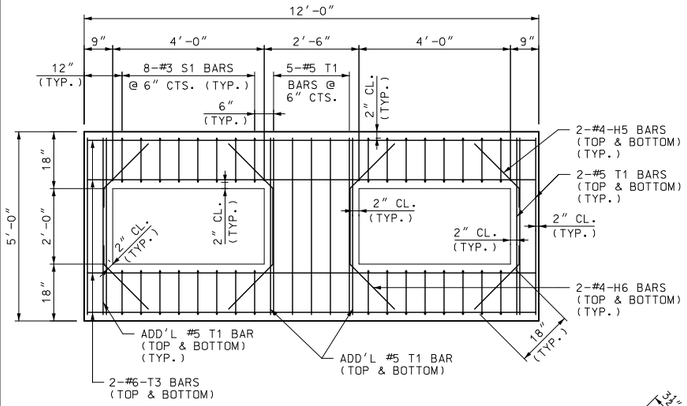
FRONT ELEVATION

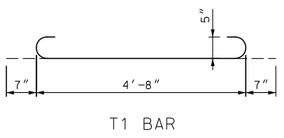
NOTE: REINFORCEMENT IS THE SAME FOR THE BACK WALL.



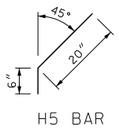
SIDE ELEVATION

NOTE: REINFORCEMENT IS THE SAME FOR THE OTHER SIDE WALL.

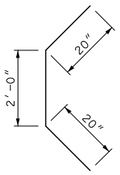




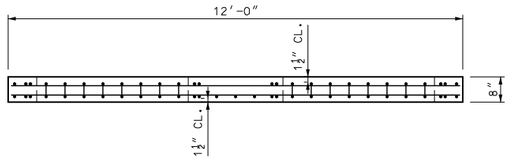
T1 BAR



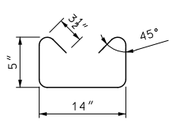
H5 BAR



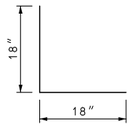
H6 BAR



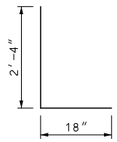
REINFORCED LID DETAILS



S1 BAR



L1 BAR



L2 BAR

BARBILL FOR STRUCTURE 39			
BAR	NO. OF BARS	LENGTH	WEIGHT (LBS.)
#5 T1	23	5′-10″	140
#6 T3	8	11′-8″	141
#3 S1	32	2′-7″	32
#4 H5	8	2′-1″	12
#4 H6	4	5′-4″	15
#5 V1	48	7′-0″	351
#5 H1	22	11′-6″	264
#5 H2	22	4′-6″	104
#5 F1	8	13′-6″	113
#5 F3	15	6′-6″	102
#4 L1	48	2′-11″	94
#6 L2	44	3′-8″	243

QUANTITY TOTALS (PER STRUCTURE 39):

REINFORCING STEEL = 1611 LBS.

CLASS B-1 CONCRETE = 8.6 CU. YDS.

BARBILL FOR STRUCTURE 79			
BAR	NO. OF BARS	LENGTH	WEIGHT (LBS.)
#5 T1	23	5′-10″	140
#6 T3	8	11′-8″	141
#3 S1	32	2′-7″	32
#4 H5	8	2′-1″	12
#4 H6	4	5′-4″	15
#5 V1	48	5′-0″	251
#5 H1	16	11′-6″	192
#5 H2	16	4′-6″	76
#5 F1	8	13′-6″	113
#5 F3	15	6′-6″	102
#4 L1	48	2′-11″	94
#6 L2	32	3′-8″	177

QUANTITY TOTALS (PER STRUCTURE 79):

REINFORCING STEEL = 1345 LBS.

CLASS B-1 CONCRETE = 7.5 CU. YDS.

PAVEMENT THICKNESS	"T" DIMENSION
LESS THAN OR EQUAL TO 11″	11″
12″	12″
13″	13″
GREATER THAN OR EQUAL TO 14″	14″

NOTES:

ALL WORK INCLUDING STEEL, CONCRETE, REINFORCING BARS AND BACKFILL NECESSARY TO COMPLETE THE CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO THE COST OF SPECIAL INLET.

ALL CAST-IN-PLACE CONCRETE SHALL MEET THE SPECIFICATIONS OF MODOT CLASS B-1 CONCRETE.

SEE CULVERT SECTIONS FOR PIPE INVERT ELEVATIONS.

FIELD VERIFY ALL SIZES AND LOCATIONS PRIOR TO CONSTRUCTION/INSTALLATION OF DRAINAGE STRUCTURES AND PIPES.

ALL REINFORCING TO BE GRADE 60 EPOXY COATED STEEL AND SHALL BE IN ACCORDANCE WITH SEC 706.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1-1/2" UNLESS OTHERWISE SHOWN.

EXPOSED EDGES SHALL BE BEVELED 3/4".

DETAILS OF SPECIAL INLET (4 FT. X 2 FT. DOUBLE DROP INLET ON RECTANGULAR BASE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	38

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

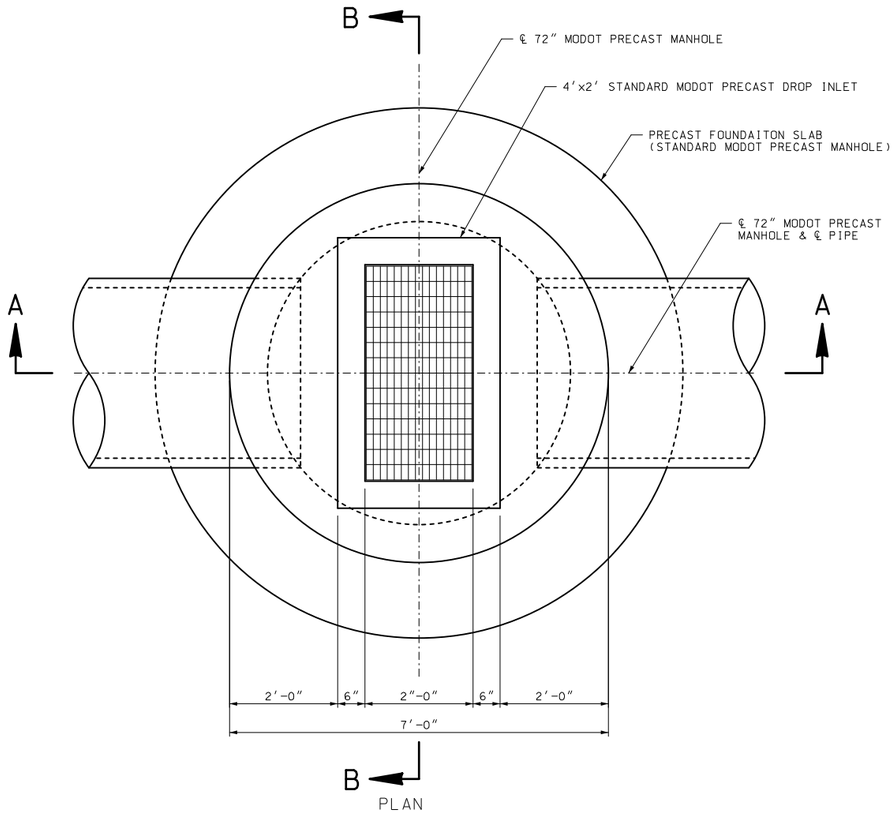
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

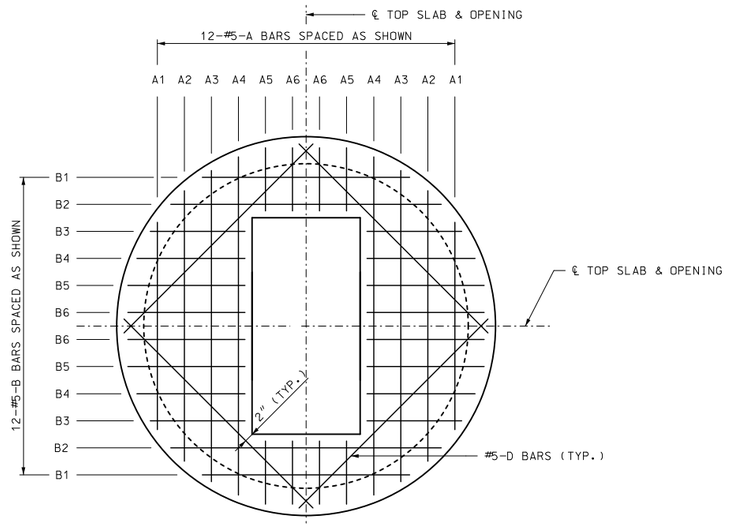
SPECIAL INLET NO.2

SPECIAL SHEET 9 OF 20

REV.



PLAN



TOP SLAB PLAN OF REINFORCEMENT

PAVEMENT THICKNESS	"T" DIMENSION
LESS THAN OR EQUAL TO 11″	11″
12″	12″
13″	13″
GREATER THAN OR EQUAL TO 14″	14″

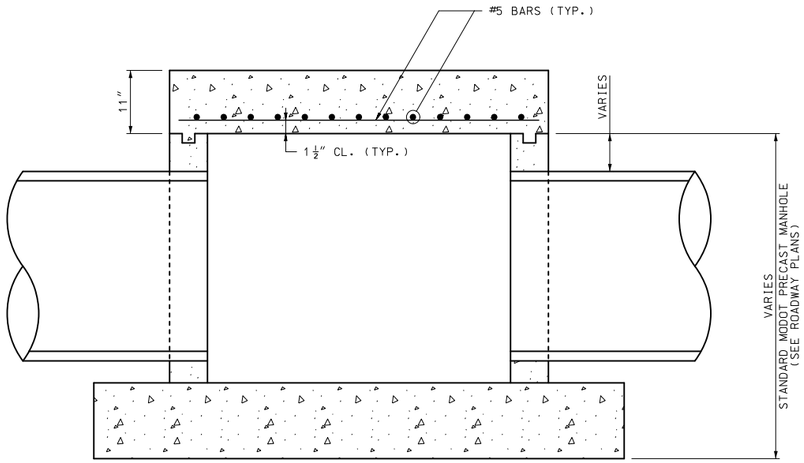
BARBILL FOR TOP SLAB

BAR	NO. OF BARS	LENGTH	WEIGHT (LBS.)
#5 A1	2	3′-10″	8
#5 A2	2	5′-0″	11
#5 A3	2	5′-9″	12
#5 A4	2	6′-3″	14
#5 A5	4	1′-2″	5
#5 A6	4	1′-2″	5
#5 B1	2	3′-10″	8
#5 B2	2	5′-0″	11
#5 B3	4	1′-9″	8
#5 B4	4	2′-0″	9
#5 B5	4	2′-2″	10
#5 B6	4	2′-2″	10
#5 D	4	4′-11″	21

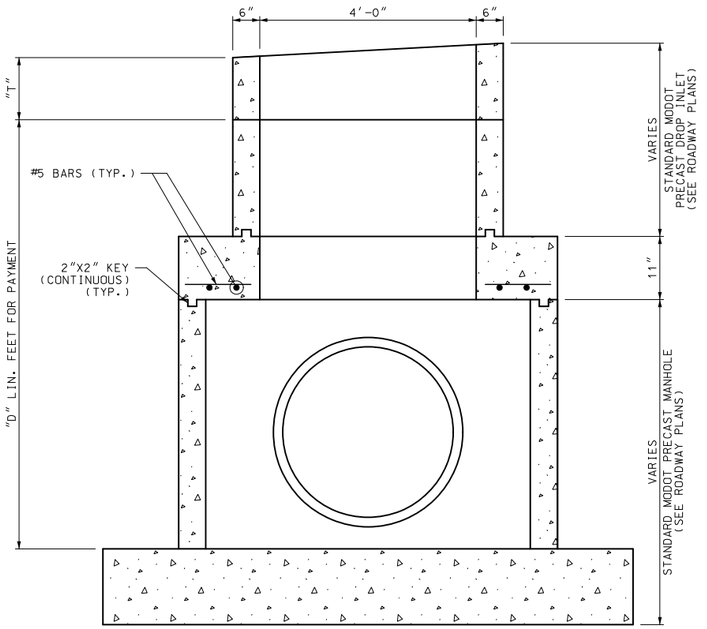
QUANTITY TOTALS (PER TOP SLAB):

REINFORCING STEEL = 132 LBS.

CLASS B-1 CONCRETE = 1.07 CU. YDS.



SECTION A-A



SECTION B-B

NOTES:

ALL WORK INCLUDING STEEL, CONCRETE, REINFORCING BARS AND BACKFILL NECESSARY TO COMPLETE THE CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO THE COST OF SPECIAL INLET.

ALL CAST-IN-PLACE CONCRETE SHALL MEET THE SPECIFICATIONS OF MODOT CLASS B-1 CONCRETE.

SEE CULVERT SECTIONS FOR PIPE INVERT ELEVATIONS.

FIELD VERIFY ALL SIZES AND LOCATIONS PRIOR TO CONSTRUCTION/INSTALLATION OF DRAINAGE STRUCTURES AND PIPES.

ALL REINFORCING TO BE GRADE 60 EPOXY COATED STEEL AND SHALL BE IN ACCORDANCE WITH SEC 706.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1-1/2″ UNLESS OTHERWISE SHOWN.

DETAILS OF SPECIAL INLET (4 FT. X 2 FT. DROP INLET ON 72 IN. MANHOLE BASE)

NOTE: THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS.

SPECIAL INLET NO.3

SPECIAL SHEET 10 OF 20

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	39

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

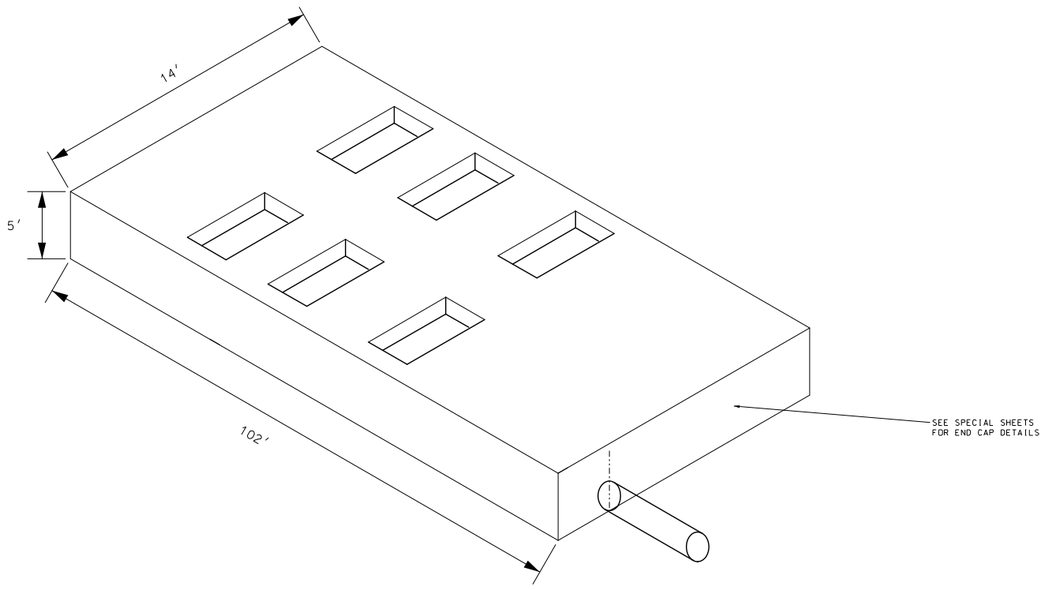
DATE	DESCRIPTION	REV.

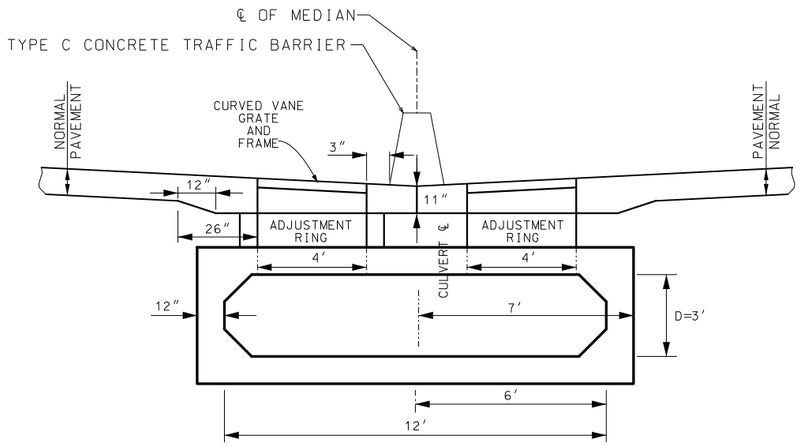
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

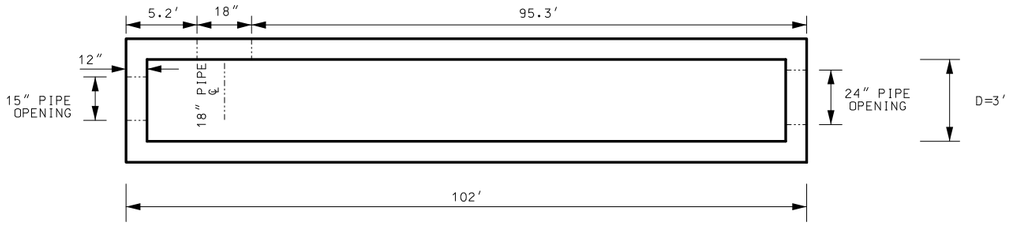
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



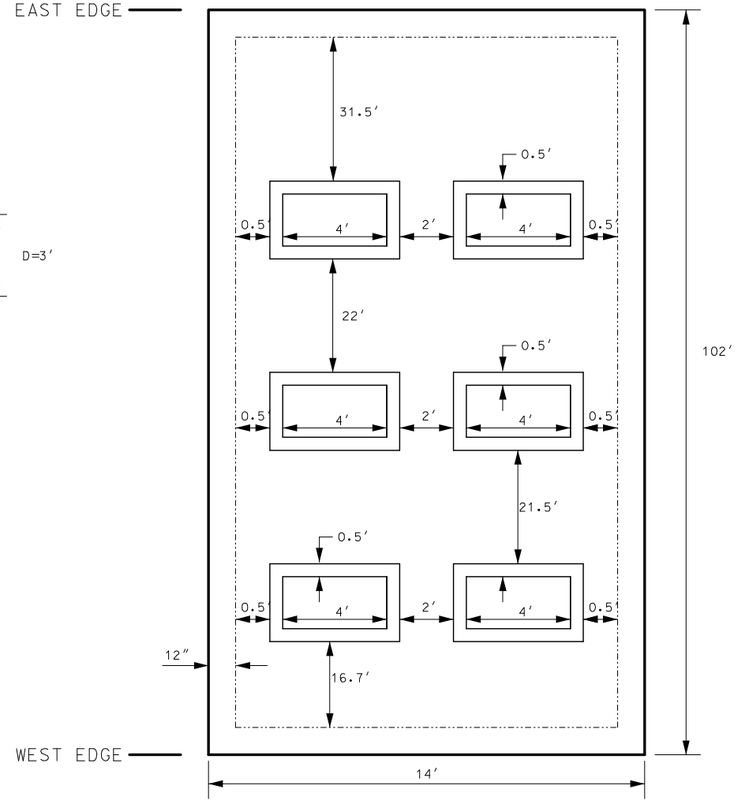


FRONT VIEW

PRECAST 12′ x 3′ STORAGE BOX



SIDE VIEWS



TOP VIEW
(NOT TO SCALE)

NOT TO SCALE

NOTES:

SEE STD DWG 731.10 FOR BAR LOCATIONS.
SEE STD DWG 614.11 FOR CURVED VANE GRATES.
ADJUSTMENT RING REQUIRED FOR INLETS INTO 12′ X 3′ BOX.
ADJUSTMENT RING PAID FOR AS TYPE B INLET
PRECAST STORAGE BOX SHALL BE IN ACCORDANCE WITH SEC. 733 OF THE MISSOURI STANDARD SPECIFICATIONS AND ASTM C1577.

12′x 3′x 100′
MEDIAN DETENTION
BOX DETAIL

SPECIAL SHEET
11 OF 20

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	40

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

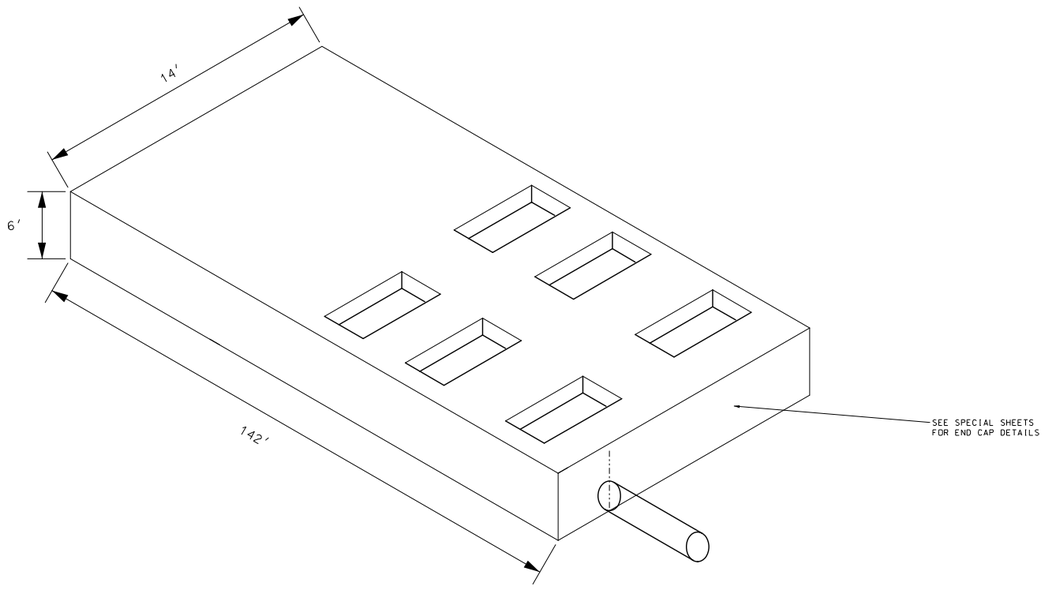
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

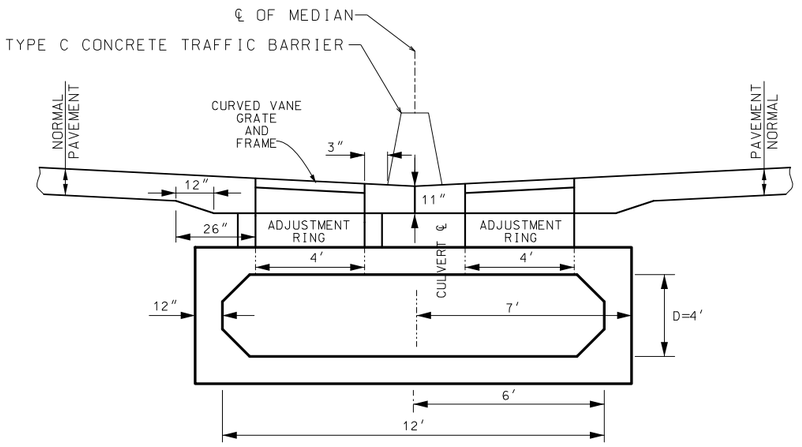
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

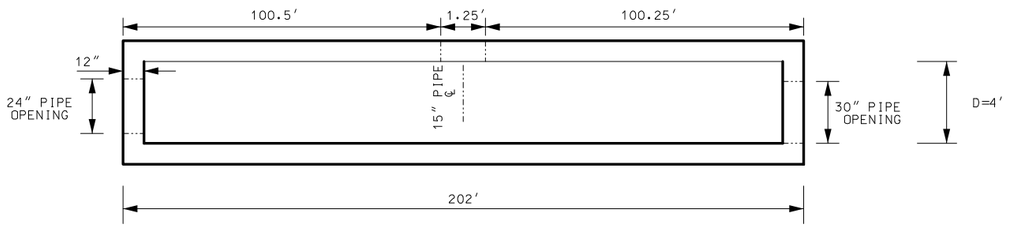
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\040-043_SS_DetentionBox_JSU0076_J8I3044C.dgn 11:43:55 AM 8/20/2024



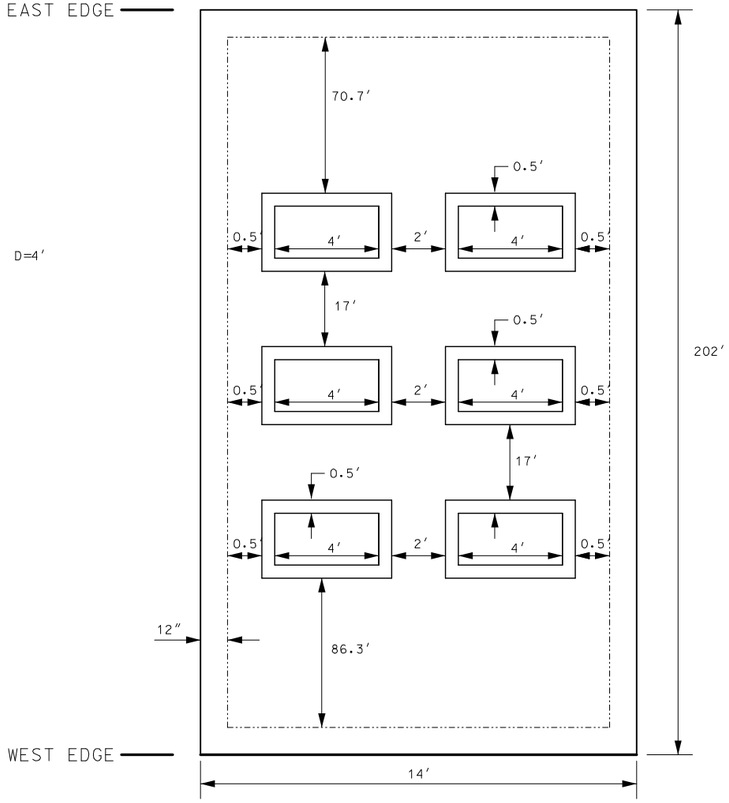
PRECAST 12′ x 4′ STORAGE BOX



FRONT VIEW



SIDE VIEWS



TOP VIEW
(NOT TO SCALE)

NOT TO SCALE

NOTES:

SEE STD DWG 731.10 FOR BAR LOCATIONS.
SEE STD DWG 614.11 FOR CURVED VANE GRATES.
ADJUSTMENT RING REQUIRED FOR INLETS INTO 12′ X 4′ BOX.
ADJUSTMENT RING PAID FOR AS TYPE B INLET
PRECAST STORAGE BOX SHALL BE IN ACCORDANCE WITH SEC. 733 OF THE MISSOURI STANDARD SPECIFICATIONS AND ASTM C1577.

12′ x 4′ x 200′
MEDIAN DETENTION
BOX DETAIL

SPECIAL SHEET
12 OF 20

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	8/20/2024
ROUTE	I-44
STATE	MO
DISTRICT	SW
SHEET NO.	41
COUNTY	GREENE
JOB NO.	JSU0076, J8I3044C, & JST0088B
PROJECT NO.	
BRIDGE NO.	

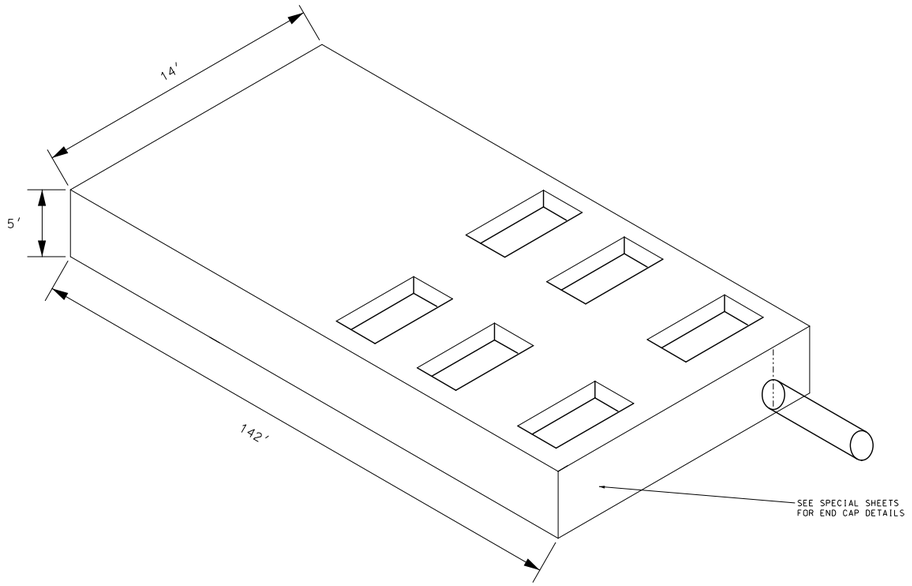
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

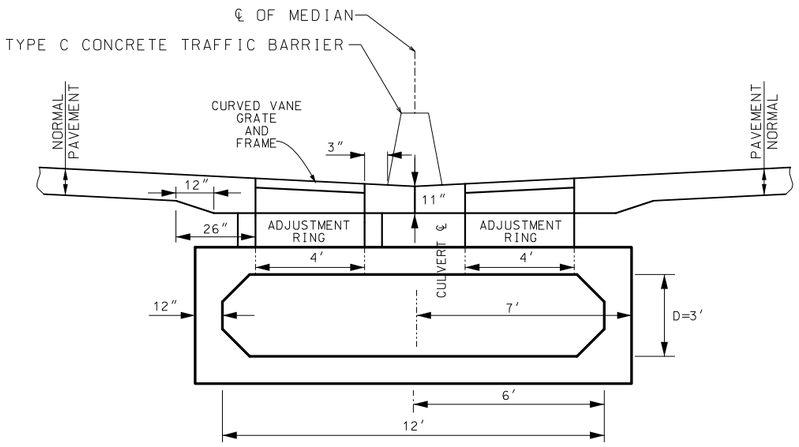
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

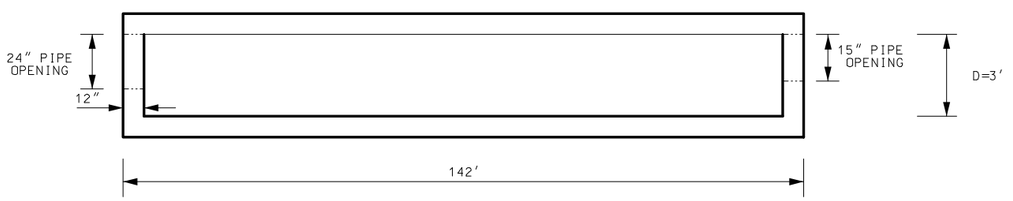
© Copyright CMT, Inc.



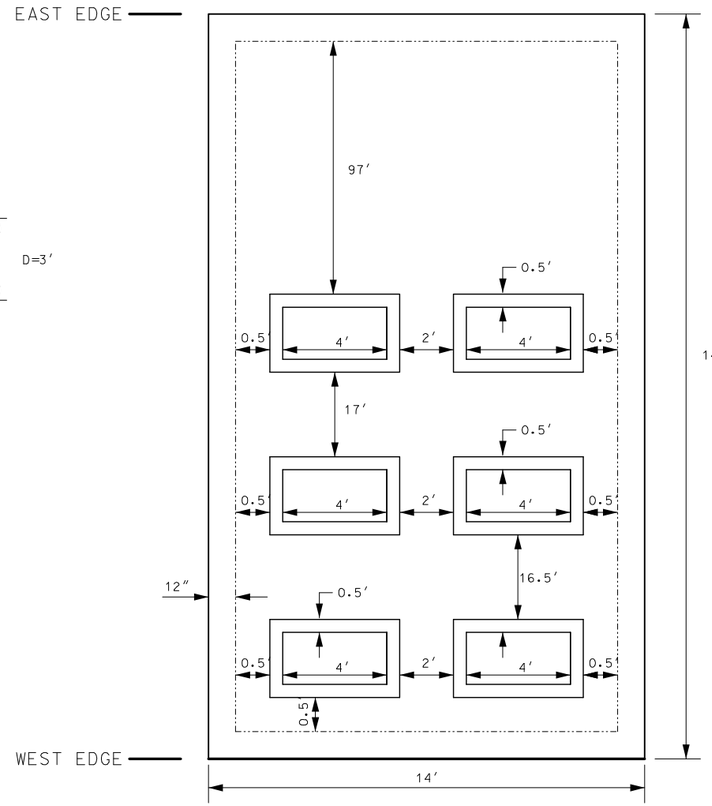
PRECAST 12′ x 3′ STORAGE BOX



FRONT VIEW



SIDE VIEWS



TOP VIEW
(NOT TO SCALE)

NOT TO SCALE

NOTES:

SEE STD DWG 731.10 FOR BAR LOCATIONS.

SEE STD DWG 614.11 FOR CURVED VANE GRATES.

ADJUSTMENT RING REQUIRED FOR INLETS INTO 12′ X 3′ BOX.

ADJUSTMENT RING PAID FOR AS TYPE B INLET

PRECAST STORAGE BOX SHALL BE IN ACCORDANCE WITH SEC. 733 OF THE MISSOURI STANDARD SPECIFICATIONS AND ASTM C1577.

12′ x 3′ x 140′
MEDIAN DETENTION
BOX DETAIL

SPECIAL SHEET
13 OF 20

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	8/20/2024
ROUTE	I-44
STATE	MO
DISTRICT	SW
SHEET NO.	42
COUNTY	GREENE
JOB NO.	JSU0076, J8I3044C, & JST0088B
PROJECT NO.	
BRIDGE NO.	

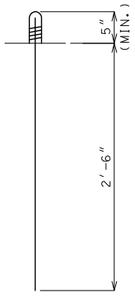
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\040-043_SS_DetentionBox_JSU0076_J8I3044C.dgn 11:43:56 AM 8/20/2024



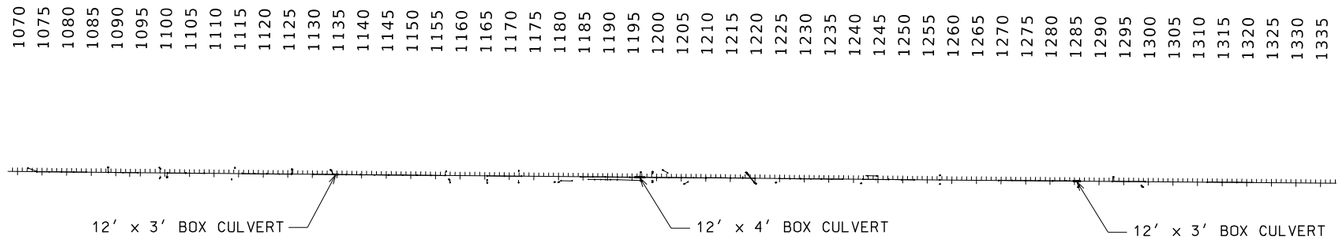
NOTES:
THE CONTRACTOR SHALL USE ONE OF THE QUALIFIED RESIN ANCHOR SYSTEMS IN ACCORDANCE WITH SEC 1039

COST OF FURNISHING AND INSTALLING THE RESIN ANCHOR SYSTEMS, COMPLETE IN PLACE, WILL BE CONSIDERED COMPLETELY COVERED BY THE CONTRACT UNIT PRICE FOR CLASS B-1 CONCRETE

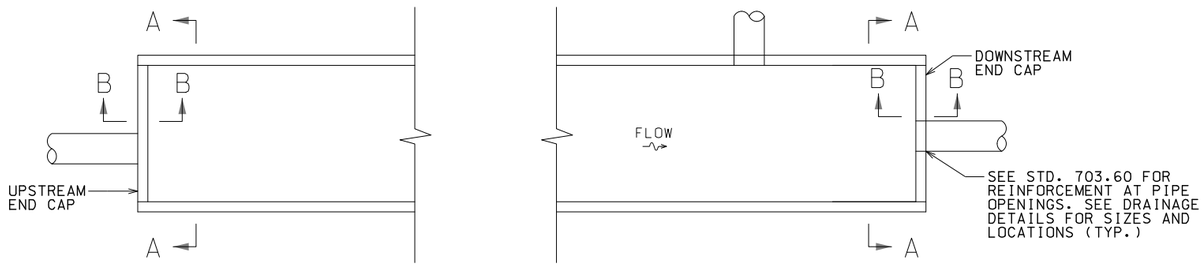
THE MINIMUM EMBEDMENT DEPTH IN CONCRETE WITH F'C = 4,000 PSI FOR THE RESIN ANCHOR SYSTEM SHALL BE THAT REQUIRED TO MEET THE MINIMUM ULTIMATE PULLOUT STRENGTH IN ACCORDANCE WITH SEC 1039 BUT SHALL NOT BE LESS ATHAN 5".

A #6 GRADE 60 REINFORCING BAR SHALL BE SUBSTITUTED FOR THE 3/4" Ø THREADED ROD.

RESIN ANCHOR SYSTEM

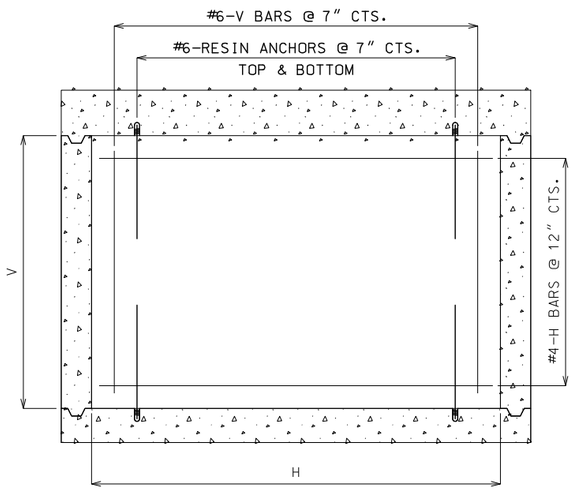


LOCATION SKETCH

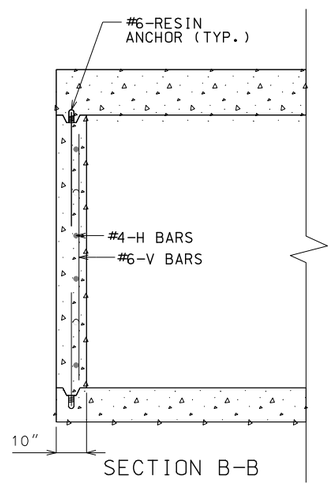


GENERAL PLAN OF DETENTION STRUCTURE

QUANTITIES FOR END CAPS ONLY		
	12'X3'	12'X4'
H DIMENSION	12'-0"	12'-0"
V DIMENSION	3'-0"	4'-0"
CLASS B-1 CONCRETE	2.2 CY	3.0 CY
REINFORCING STEEL	430 LB	590 LB



SECTION A-A
(PIPE OPENINGS NOT SHOWN FOR CLARITY)



SECTION B-B

DESIGN SPECIFICATIONS:
2010 AASHTO LRD BRIDGE DESIGN SPECIFICATIONS AND 2010 INTERIM REVISIONS

DESIGN LOADINGS:
VEHICULAR = HL-93 MINUS LANE LOAD,EARTH = 120 LB/CF
EQUIVALENT FLUID PRESSURE = 30 LB/CF (MIN.), 60 LB/CF (MAX.)

DESIGN UNIT STRESSES:
CLASS B-1 CONCRETE (BOX CULVERT) f'c = 4,000 PSI
REINFORCING STEEL (GRADE 60) fy = 60,000 PSI

MISCELLANEOUS:
MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1 1/2"

STANDARD CULVERT REINFORCING NOT SHOWN FOR CLARITY.

DETENTION END CAPS

SPECIAL SHEET
14 OF 20

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	43

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

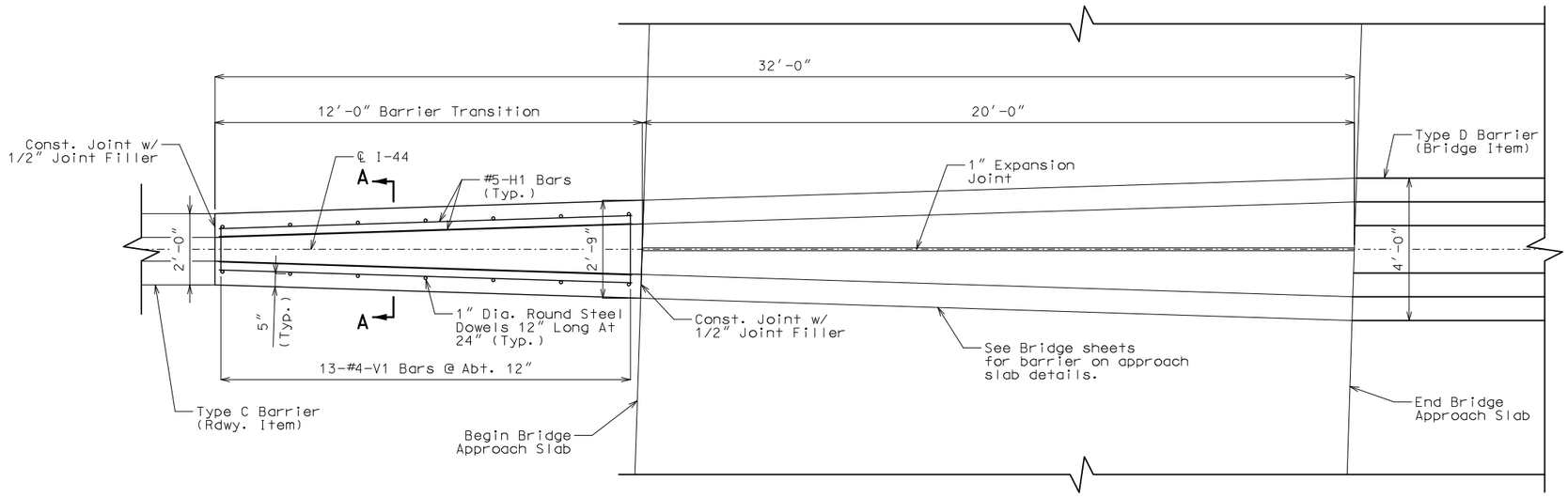
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

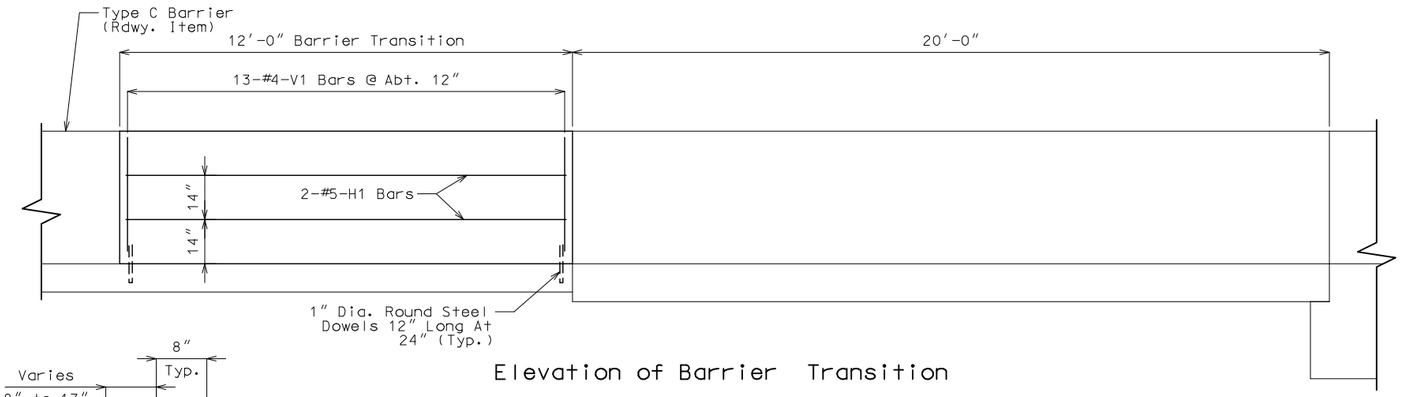
REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\040-043_SS_DetentionBox_JSU0076_J8I3044C.dgn 11:43:56 AM 8/20/2024

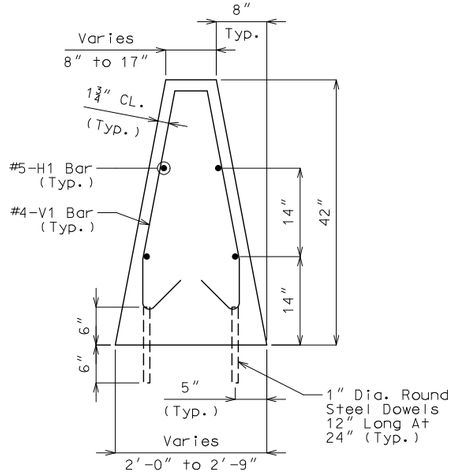
BRIDGE BARRIER TRANSITION DETAILS



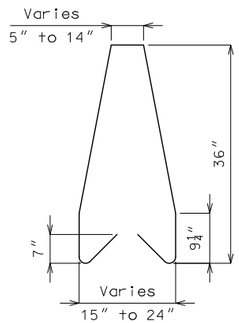
Plan of Barrier Transition



Elevation of Barrier Transition



Section A-A



V1 Bar

Notes:

Longitudinal dimensions are horizontal.

Top of barrier shall be built parallel to grade and barrier joints normal to grade.

All exposed edges of barrier shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Barrier Transition per linear foot.

All concrete in barrier shall be Class B-1.

All reinforcement shall be Grade 60 Epoxy Coated.

Bar splices shall be a minimum of 24 times the nominal diameter of the bar.

Any reinforcing bar installation method devised by the Contractor and approved by the Engineer that will assure the logitudinal reinforcing steel will be positioned ±1/2 inch as dimensioned will be satisfactory.

#8 reinforcing bars with an epoxy anchor system may be substituted for smooth 1″ diameter round steel dowels.

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	44

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING

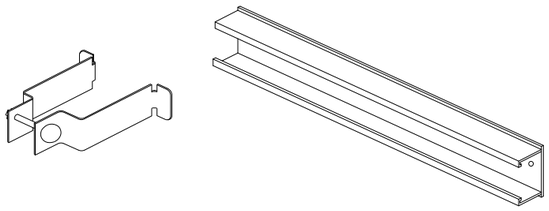
SPECIAL SHEET 15 OF 20

REV.

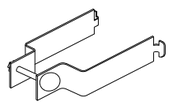
INSTALLATION DETAIL

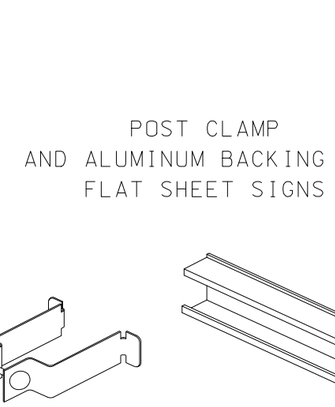
SINGLE POST CONCRETE FOOTING INSTALLATIONS ONLY

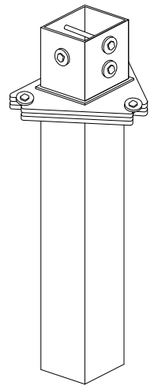
POST CLAMP
AND ALUMINUM BACKING BAR
FLAT SHEET SIGNS



POST CLAMP
EXTRUDED ALUMINUM PANEL SIGNS



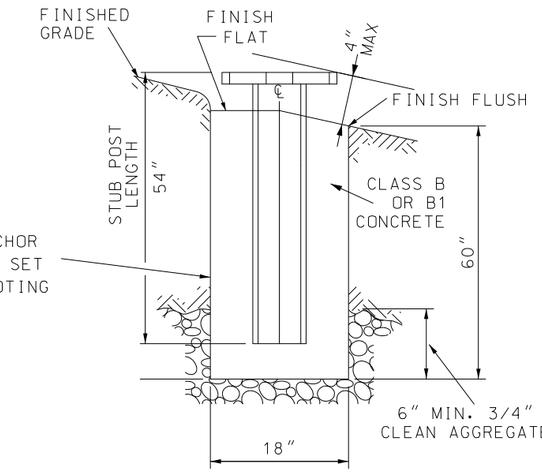




SLIP BASE/ 54" GROUND
ANCHOR COMBINED ASSEMBLY
4" SQUARE POST

THIS POST SYSTEM IS ONLY USED ON THE STATE SYSTEM FOR THE FOLLOWING SINGLE POST APPLICATIONS:

- EXIT GORE SIGNS
- FLAT SHEET SIGN, 48"x60" UP TO 48"x 96"
- COMMUNITY WAYFINDING SIGNS



THIS DRAWING NOT TO SCALE

CONCRETE FOOTING DETAIL

THIS POST SYSTEM SHALL BE ASSEMBLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

4 IN. SQUARE STEEL
POST DETAIL

SPECIAL SHEET
16 OF 20

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	45

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C,
& JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

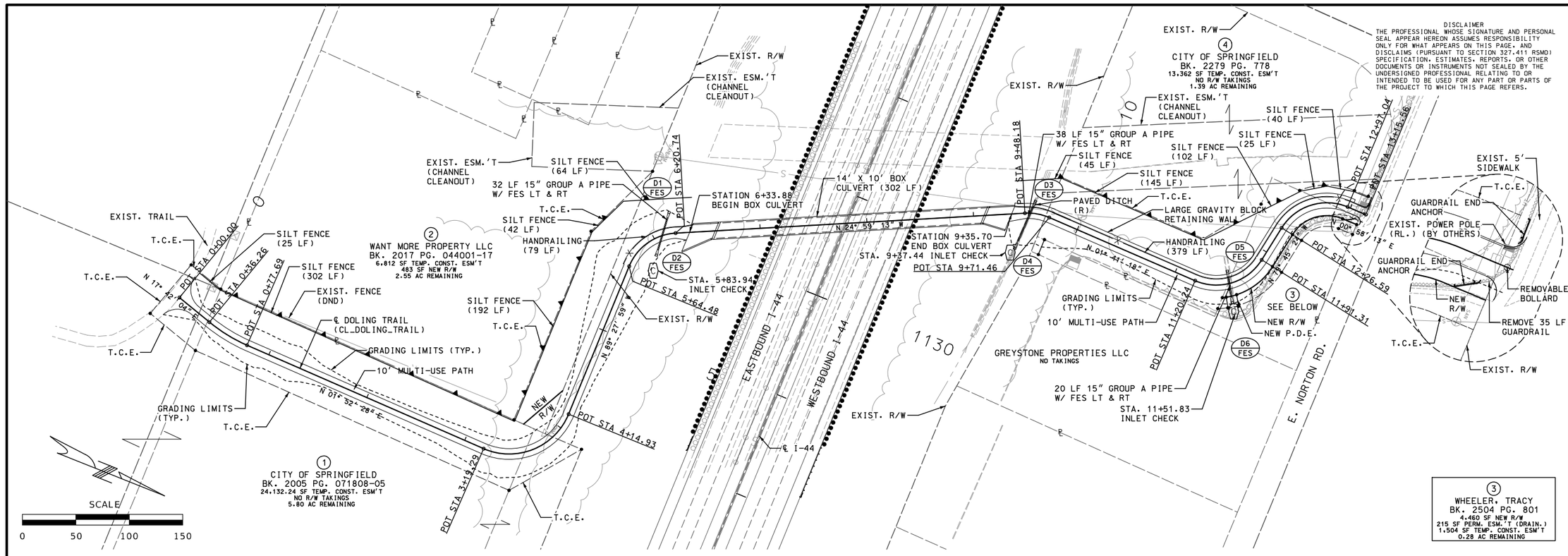
CMT

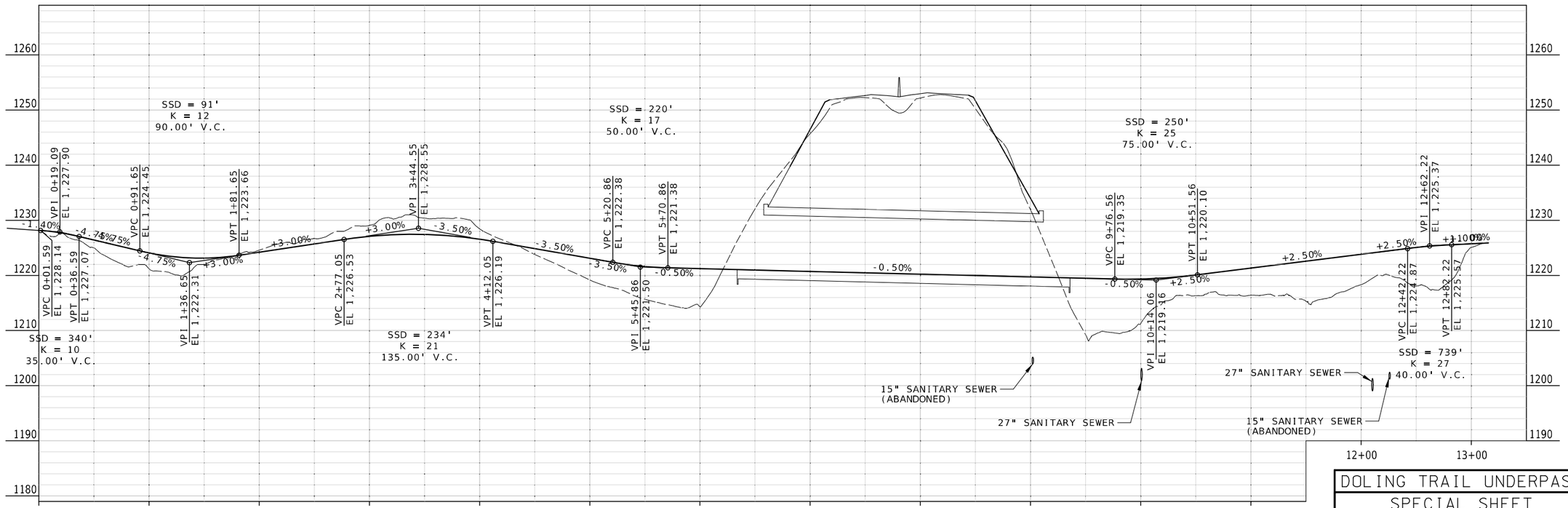
©Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\044_SS_16_Sign Post Detail_JSU0076_J8I3044C.dgn 11:44:15 AM 8/20/2024





DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/20/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	46
COUNTY	
GREENE	
JOB NO.	
JSU0076, J8I3044C & JST0088B	
PROJECT NO.	
BRIDGE NO.	

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

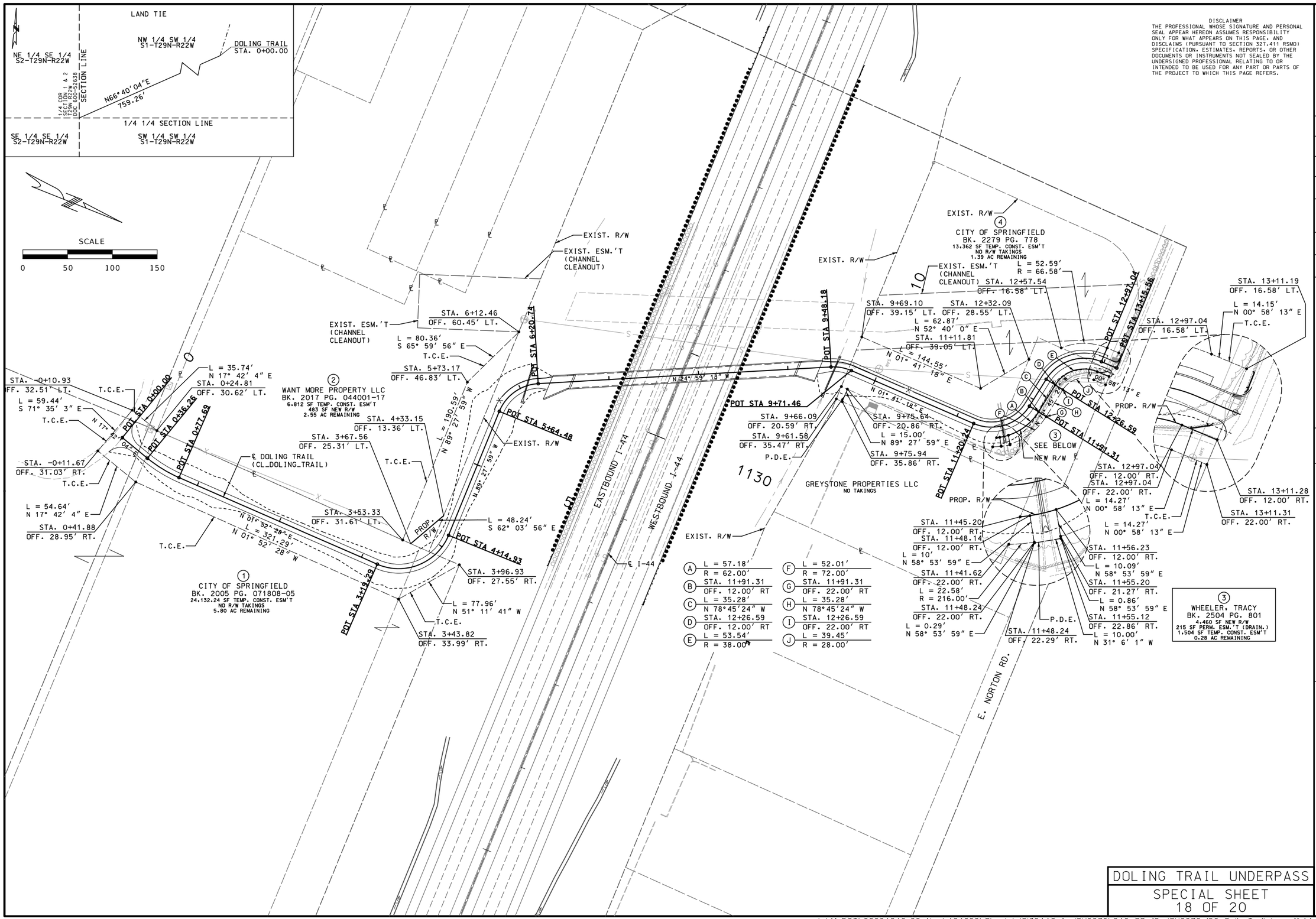
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

DOLING TRAIL UNDERPASS

SPECIAL SHEET
17 OF 20

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\045_SS_17_JSU0076_i50_DolingTrail.dgn 11:44:27 AM 8/20/2024



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	47

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

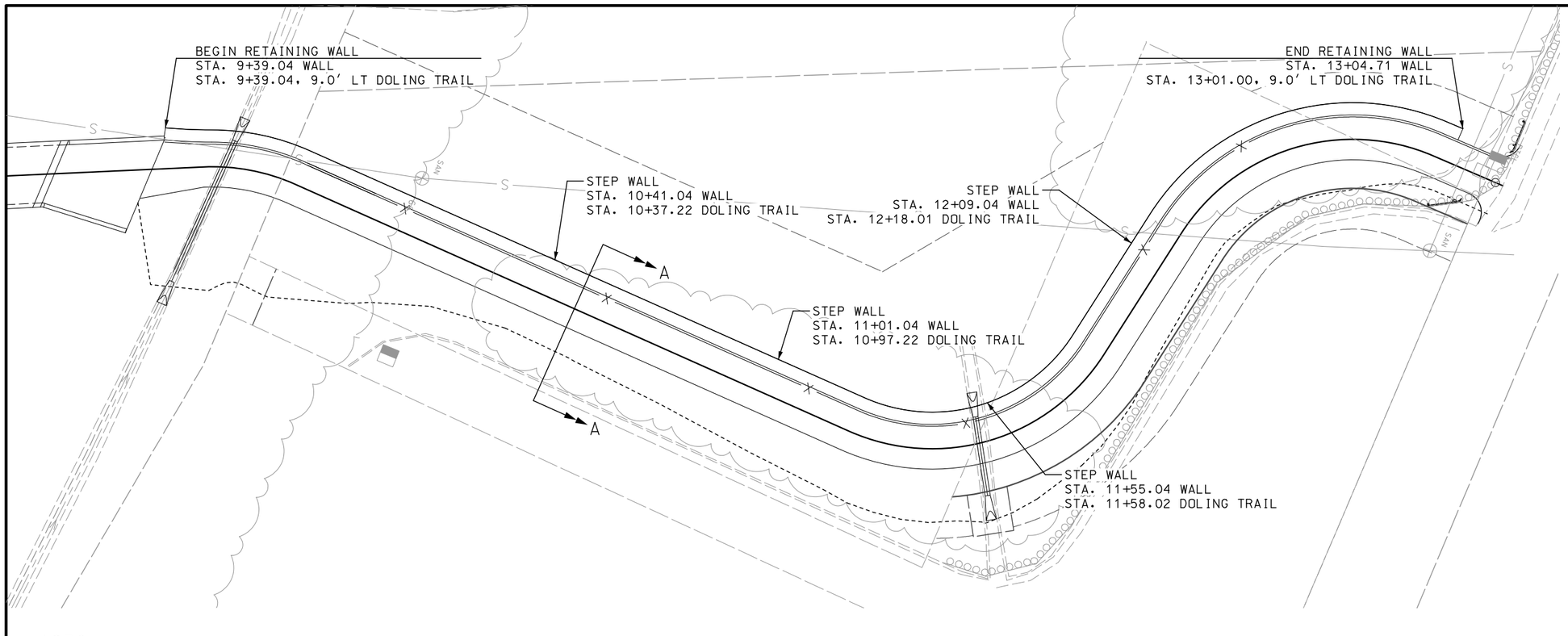
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

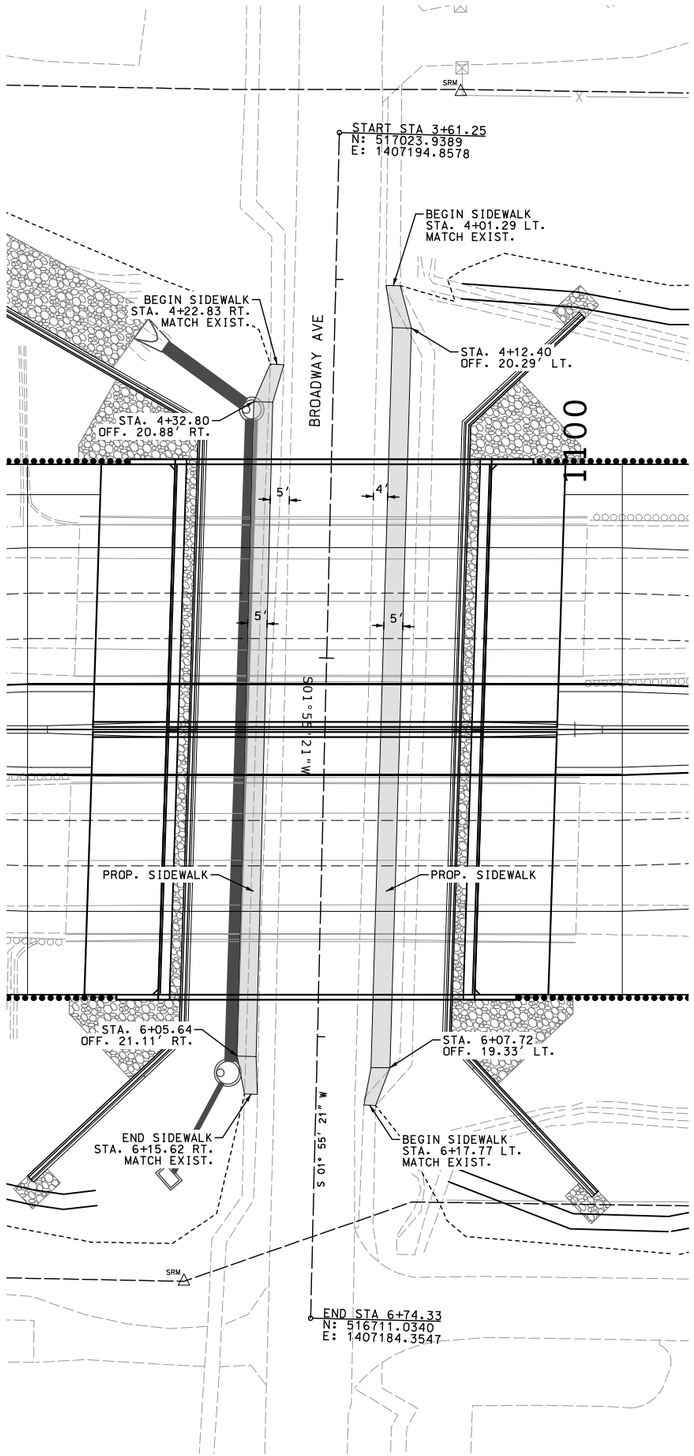
DOLING TRAIL UNDERPASS

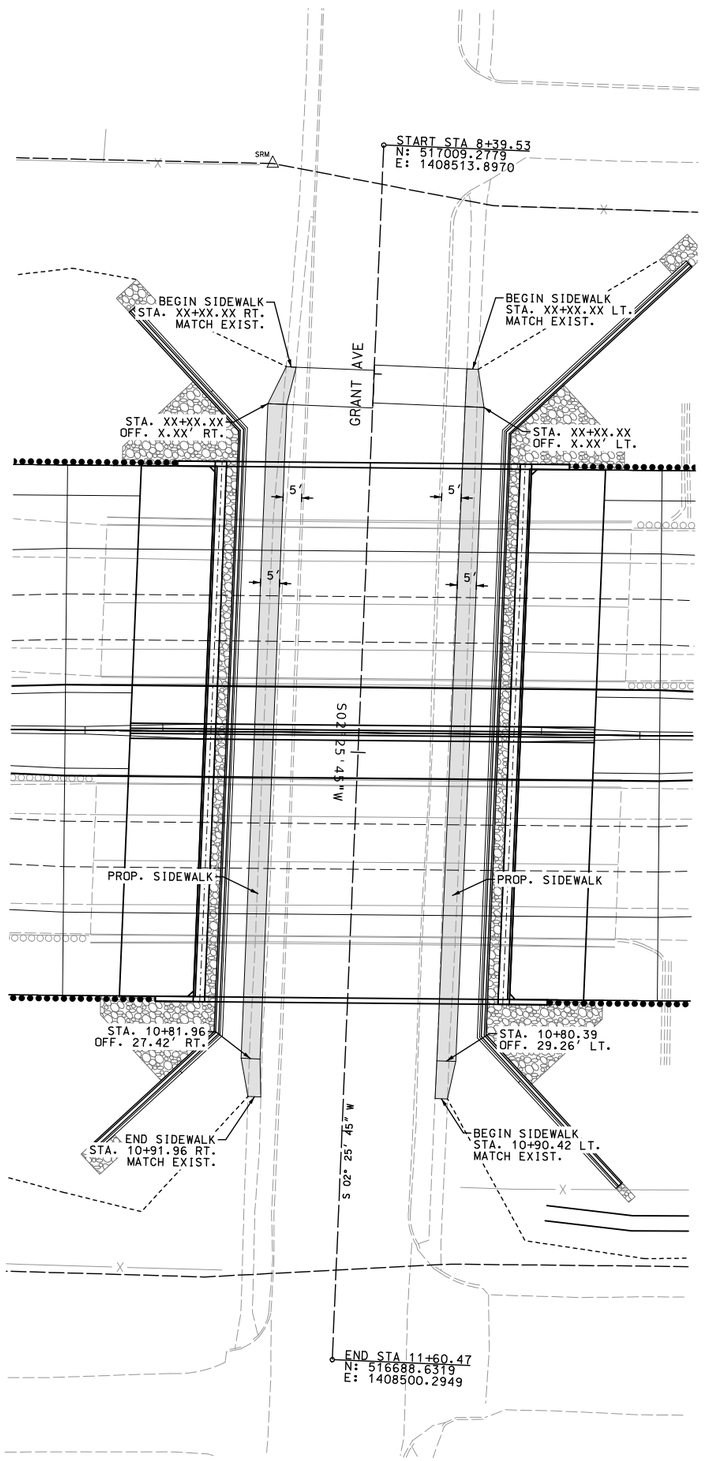
SPECIAL SHEET
18 OF 20

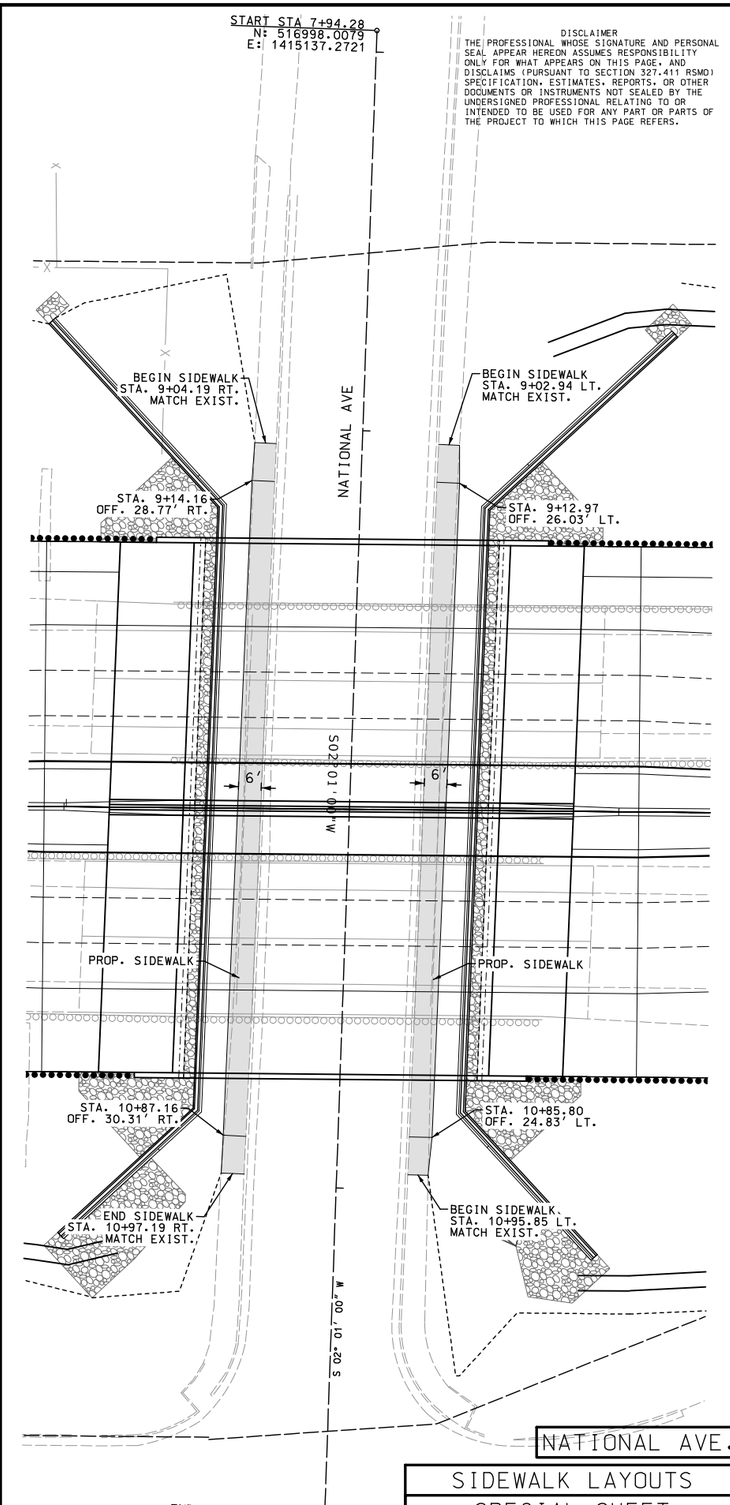
REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\046_SS_18_JSU0076_i50_DolingTrail.dgn 11:44:34 AM 8/20/2024


BEGIN RETAINING WALL
STA. 9+39.04 WALL
STA. 9+39.04, 9.0' LT DOLING TRAIL
STEP WALL
STA. 10+41.04 WALL
STA. 10+37.22 DOLING TRAIL
STEP WALL
STA. 11+01.04 WALL
STA. 10+97.22 DOLING TRAIL
STEP WALL
STA. 11+55.04 WALL
STA. 11+58.02 DOLING TRAIL
STEP WALL
STA. 12+09.04 WALL
STA. 12+18.01 DOLING TRAIL
END RETAINING WALL
STA. 13+04.71 WALL
STA. 13+01.00, 9.0' LT DOLING TRAIL
A
A
S
S
S







DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	49

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SIDEWALK LAYOUTS

SPECIAL SHEET 20 OF 20

REV.

J8I3044C, I-44 WIDENING GLENSTONE TO US 65
STAGED CONSTRUCTION

STAGE 0

UTILIZE OVERNIGHT I-44 EB AND WB INSIDE LANE CLOSURES NEAR ROUTE 13 AND US 65.

CONSTRUCT TEMPORARY CROSSOVERS FOR SINGLE I-44 WB LANE.

STAGE 0B

UTILIZE OVERNIGHT I-44 EB OUSIDE LANE CLOSURE.

CONSTRUCT FULL DEPTH OUTSIDE SHOULDER.

STAGE 1

SPLIT WB I-44 TRAFFIC WITH ONE LANE CROSSING OVER TO EXISTING EB LANES
AND THE SECOND LANE SHIFTED TO THE EXISTING WB OUTSIDE SHOULDER.
MAINTAIN TWO EB LANES AND ONE WB LANE SEPARATED BY TEMP. ANCHORED BARRIER
ON THE EXISTING EB TRAVELWAY.
ACCESS TO EB GLENSTONE ENTRANCE RAMP, WB EXIT RAMP, EB US 65 EXIT RAMP
AND US 65 TO I-44 WB ENTRANCE RAMPS SHALL BE MAINTAINED AT ALL TIMES.

CONSTRUCT MEDIAN GRADING AND DRAINAGE.
CONSTRUCT INSIDE SHOULDER AND TWO PROPOSED LANES OF I-44 WB.

STAGE 2

MAINTAIN TRAFFIC CONFIGURATION ON THE EXISTING EB TRAVELWAY OF TWO EB LANES AND
ONE WB LANE SEPARATED BY TEMP. ANCHORED BARRIER.
SHIFT WB LANE ON WB TRAVELWAY TO INSIDE ONTO NEWLY CONSTRUCTED PAVEMENT.
ACCESS TO EB GLENSTONE ENTRANCE RAMP, WB EXIT RAMP, EB US 65 EXIT RAMP
AND WB ENTRANCE RAMPS SHALL BE MAINTAINED AT ALL TIMES.

CONSTRUCT OUTSIDE SHOULDERS AND PROPOSED LANES OF I-44 WB.

STAGE 2B

I-44 MAINLINE LANES TO REMAIN IN TRAFFIC CONFIGURATION FROM STAGE 2.
CLOSE AND DETOUR US-65 TO I-44 WB ENTRANCE RAMP VIA I-44 EB/MULROY INTERCHANGE/I-44 WB.
CLOSE AND DETOUR I-44 WB TO GLENSTONE EXIT RAMP VIA ROUTE 13/I-44 EB/GLENSTONE.
RAMP CLOSURE PHASES MAY OCCUR INDIVIDUALLY TO MINIMIZE TRAFFIC DISRUPTIONS AT EACH RAMP.

CONSTRUCT WB RAMP GORES AND REMAINING ACCEL/DECEL LANES.

STAGE 3

SPLIT EB I-44 TRAFFIC WITH ONE LANE CROSSING OVER TO EXISTING WB LANES
AND THE SECOND LANE SHIFTED TO THE EXISTING EB OUTSIDE SHOULDER.
MAINTAIN TWO WB LANES AND ONE EB LANE SEPARATED BY TRAFFIC BARRIER.
ACCESS TO EB GLENSTONE ENTRANCE RAMP, WB EXIT RAMP, EB US 65 EXIT RAMP
AND WB ENTRANCE RAMPS SHALL BE MAINTAINED AT ALL TIMES.

CONSTRUCT MEDIAN GRADING AND DRAINAGE.
CONSTRUCT INSIDE SHOULDER AND TWO PROPOSED LANES OF I-44 EB.

STAGE 4

MAINTAIN TRAFFIC CONFIGURATION ON THE EXISTING WB TRAVELWAY OF TWO WB LANES
AND ONE EB LANE SEPARATED BY TEMP. BARRIER.
SHIFT EB LANE ON EB TRAVELWAY TO INSIDE ONTO NEWLY CONSTRUCTED PAVEMENT.
ACCESS TO EB GLENSTONE ENTRANCE RAMP, WB EXIT RAMP, EB US 65 EXIT RAMP
AND WB ENTRANCE RAMPS SHALL BE MAINTAINED AT ALL TIMES.

CONSTRUCT OUTSIDE SHOULDERS AND PROPOSED LANES OF I-44 EB.

STAGE 4B

I-44 MAINLINE LANES TO REMAIN IN TRAFFIC CONFIGURATION FROM STAGE 4.
CLOSE AND DETOUR GLENSTONE TO I-44 EB ENTRANCE RAMP VIA KEARNEY/US-65 NB/I-44 EB.
CLOSE AND DETOUR I-44 EB TO US-65 SB EXIT RAMP VIA MULROY INTERCHANGE/I-44 WB/US-65 SB.
RAMP CLOSURE PHASES MAY OCCUR INDIVIDUALLY TO MINIMIZE TRAFFIC DISRUPTIONS AT EACH RAMP.

CONSTRUCT EB RAMP GORES AND REMAINING ACCEL/DECEL LANES.

STAGE 5

UTILIZE SHORT-TERM/OVERNIGHT LANE CLOSURES OF I-44 NEAR US 65.

REMOVE TEMPORARY CROSSOVERS.
CONSTRUCT PROPOSED PAVEMENT AND SHOULDER TRANSITIONS AT THE EAST END OF THE PROJECT.

TRAFFIC CONTROL PLAN
STAGING WRITE-UP
J8I3044C

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	50

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C,
& JST0088B

PROJECT NO.

BRIDGE NO.

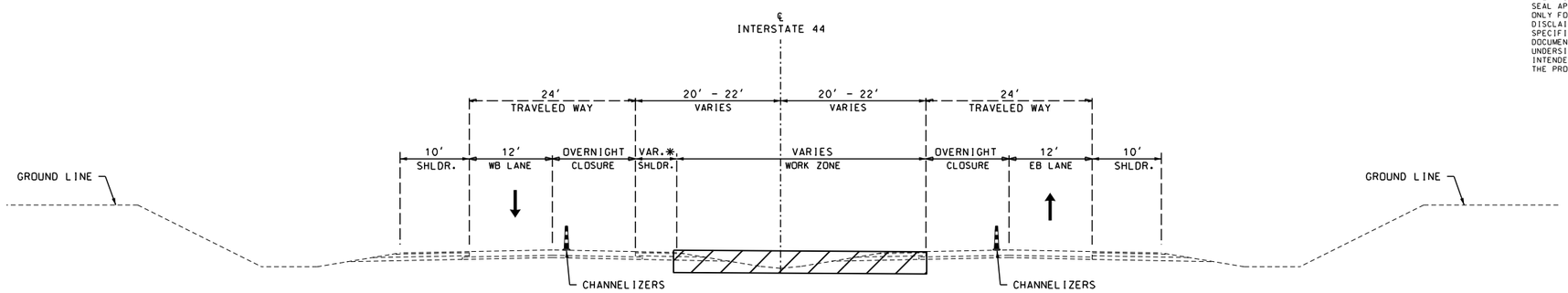
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

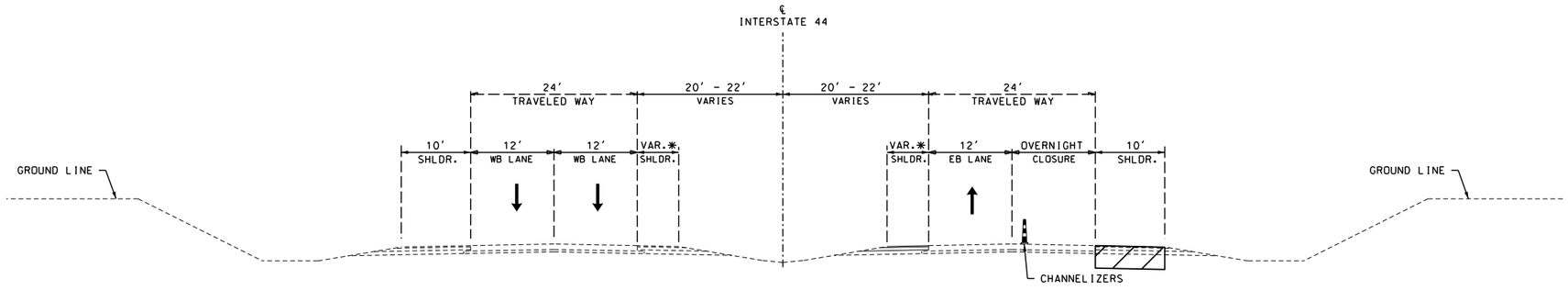
Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



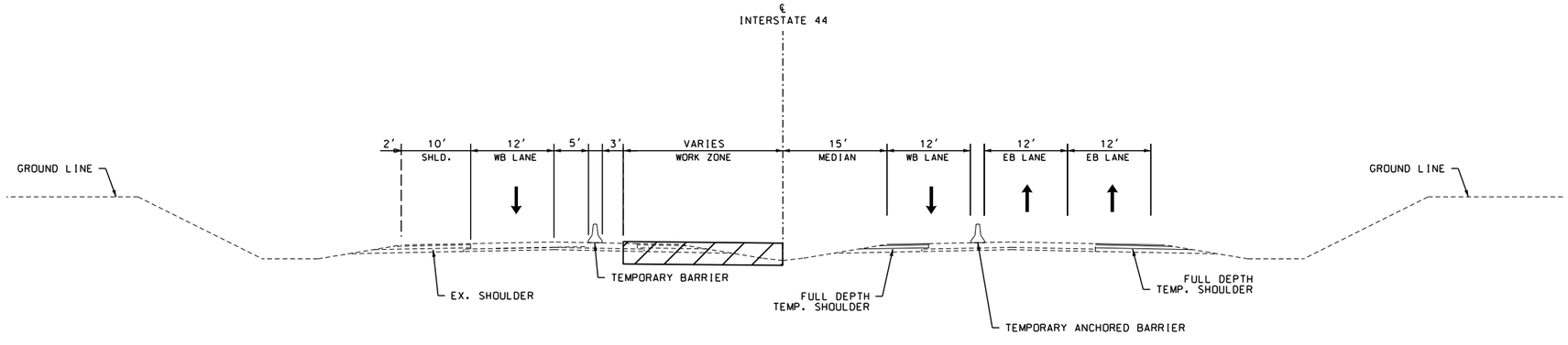
PHASE 0 TYPICAL SECTION - INTERSTATE 44

ROADWAY TANGENT
* SHLDR. VARIES FROM 4' TO 6'



PHASE 0B TYPICAL SECTION - INTERSTATE 44

ROADWAY TANGENT
* SHLDR. VARIES FROM 4' TO 6'



PHASE 1 TYPICAL SECTION - INTERSTATE 44

ROADWAY TANGENT

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS
J813044C
SHEET 1 OF 2

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	51

COUNTY
GREENE

JOB NO.
JSU0076, J813044C, & JST0088

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

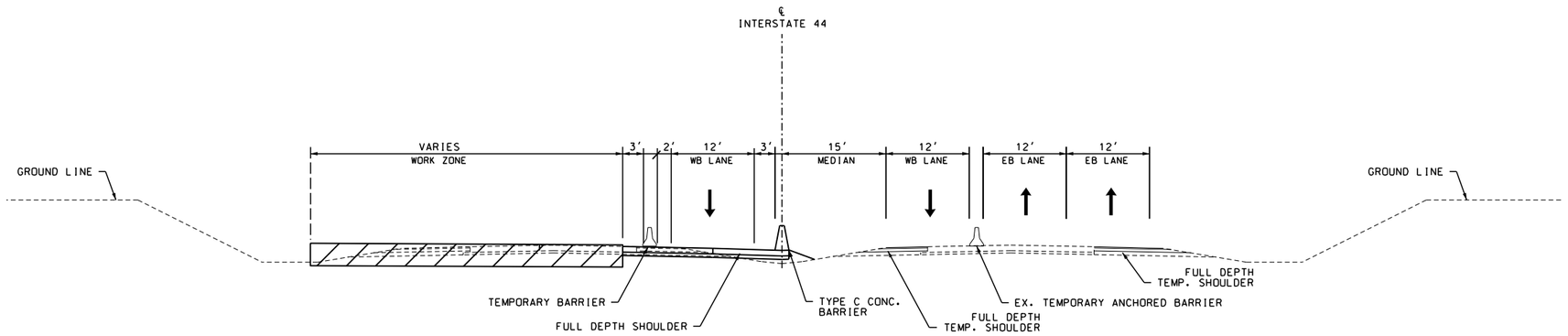
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

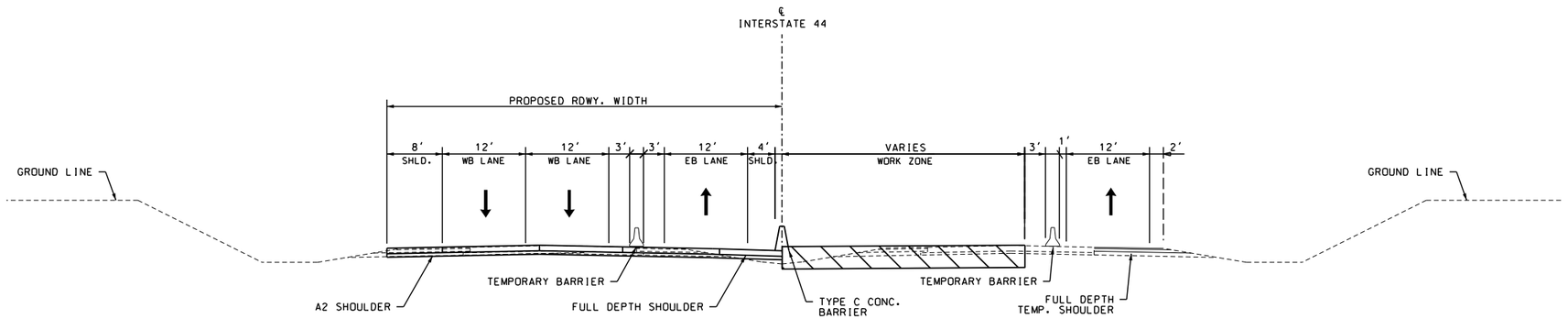
Hg CONSULT, INC.
9111 NE 79th Street Kansas City, MO 64158: (816)912-4720
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J813044\051-052_TC_02-03_J813044C_I10_TypicalSections.dgn 7:18:55 PM 8/16/2024



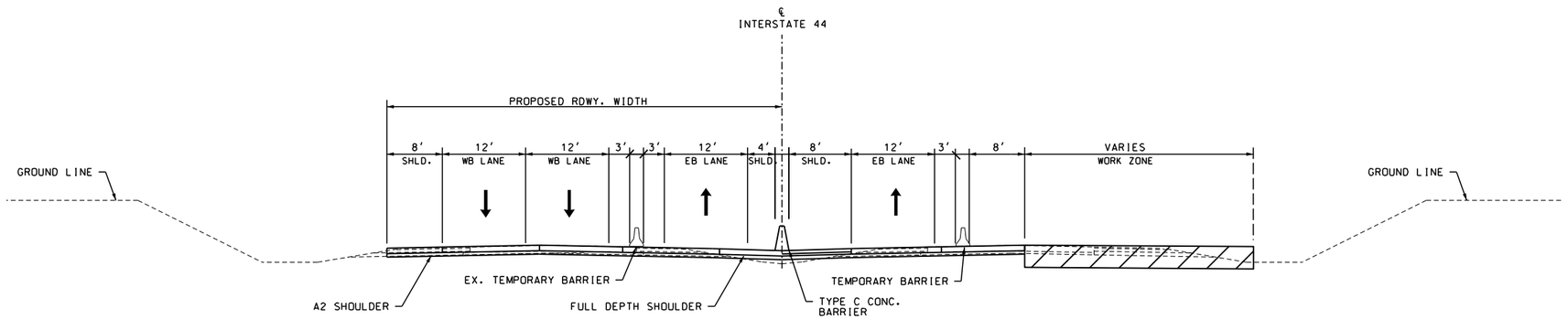
PHASE 2 TYPICAL SECTION - INTERSTATE 44

ROADWAY TANGENT



PHASE 3 TYPICAL SECTION - INTERSTATE 44

ROADWAY TANGENT



PHASE 4 TYPICAL SECTION - INTERSTATE 44

ROADWAY TANGENT

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS
J813044C
SHEET 2 OF 2

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	52

COUNTY
GREENE

JOB NO.
JSU0076, J813044C, & JST0088B

PROJECT NO.

BRIDGE NO.

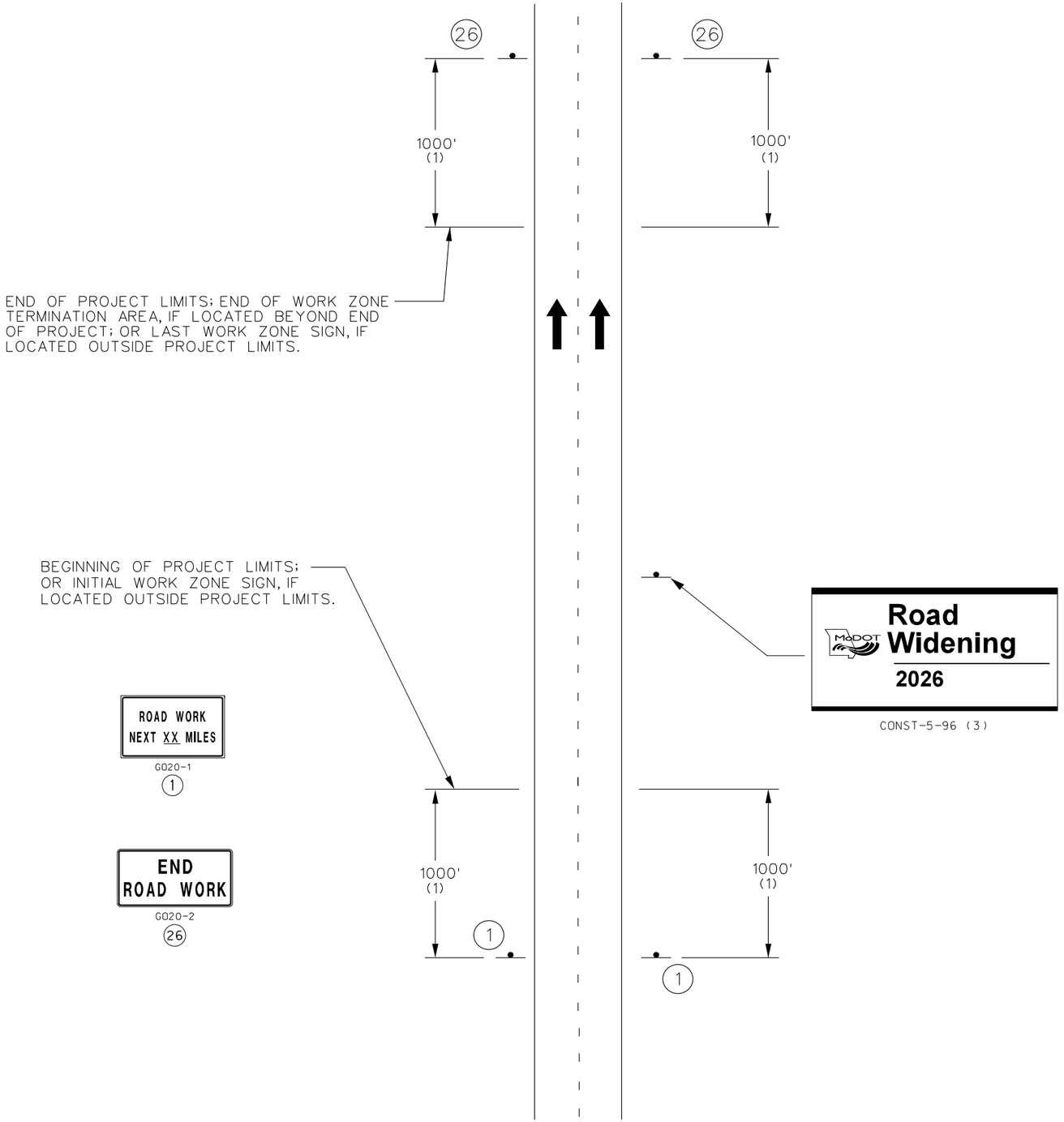
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J813044\051-052_TC_02-03_J813044C_110_TypicalSections.dgn 6:56:26 PM 8/16/2024



MULTI-LANE DIVIDED
BEGIN/END OF PROJECT SIGNING
(FOR USE ON ALL PROJECTS)

NOTES:

SIGN (1) IS REQUIRED PER EPG 616.2.3.

SIGN (26) IS USED ON ALL PROJECTS WHERE SIGN (1) IS USED.

OTHER SIGNS SUCH AS DETOUR OR ALTERNATE ROUTE SIGNING MAY BE USED OUTSIDE THE PROJECT LIMITS.

ANY EXISTING SIGNING THAT CONFLICTS WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.

(1) DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS. WHERE TRAFFIC BACKUPS ARE EXPECTED BEYOND THE ADVANCE WARNING AREA, ADDITIONAL SIGNING MAY BE NEEDED.

(2) SIGN CONST-7-72 OR CONST-7-48 IS PLACED 500 FEET BEFORE THE BEGINNING OF PROJECT LIMITS OR THE ROAD WORK AHEAD SIGN OR ROAD WORK NEXT XX MILES SIGN, IF USED, WHEN THESE SIGNS ARE LOCATED OUTSIDE THE PROJECT LIMITS.

(3) SIGN CONST-5-96 IS PLACED IN A VISIBLE AREA WITHIN THE PROJECT LIMITS PROVIDED ITS PLACEMENT DOES NOT DISRUPT A SEQUENCE OF SIGNS. IF A VISIBLE LOCATION WITHIN THE PROJECT IS NOT AVAILABLE, THE SIGN MAY BE PLACED 500 FEET BEFORE SIGN CONST-7-72 OR CONST-7-48.

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	53

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

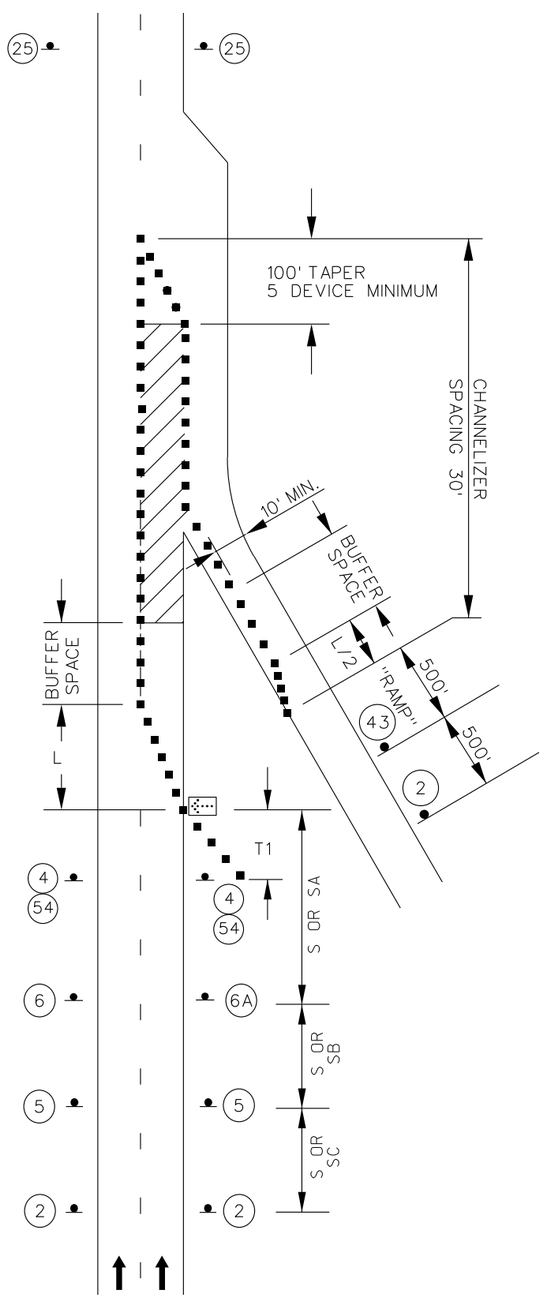
DATE	DESCRIPTION

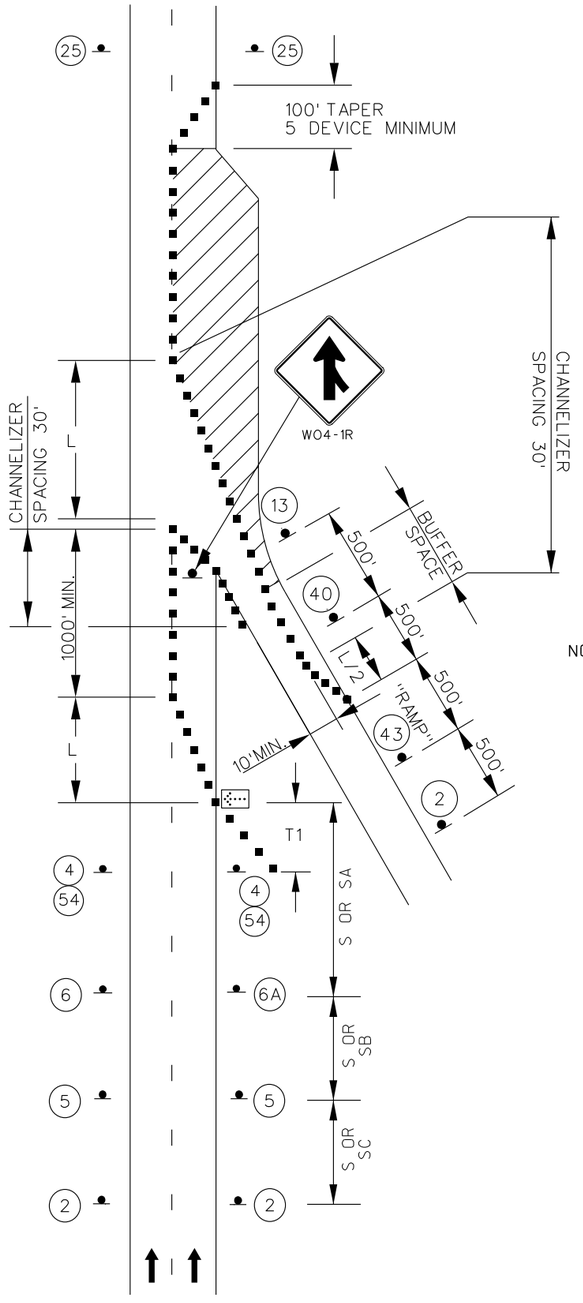
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

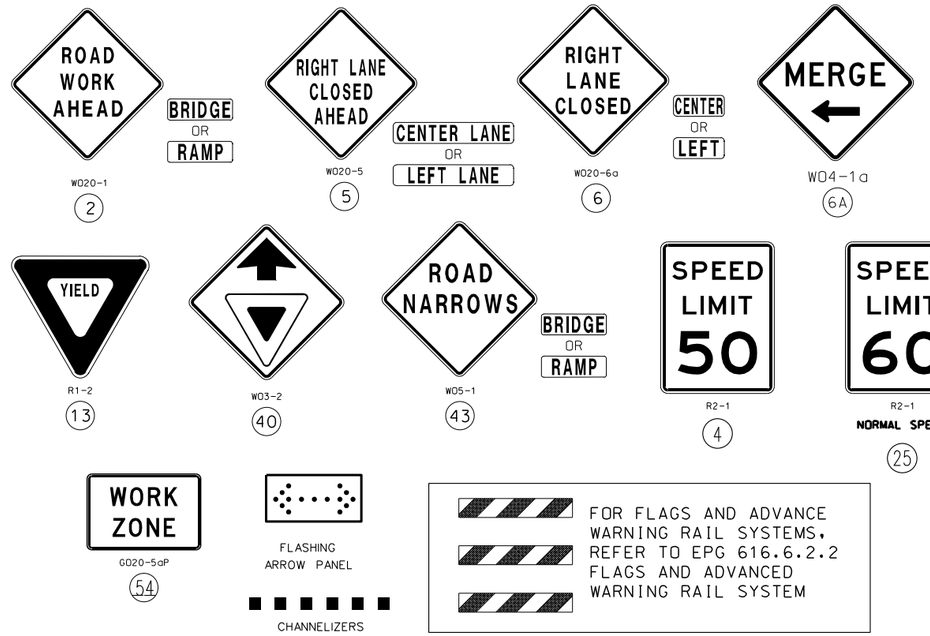
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

TRAFFIC CONTROL PLAN
TYPICAL APPLICATIONS
BEGIN/END
J8I3044C & JSU0076
SHEET 1 OF 5







NOTES:

LANE CLOSURE
ENTRANCE RAMP AREAS

TRAFFIC CONTROL PLAN
TYPICAL APPLICATIONS
WORK IN VICINITY OF
ENTRANCE RAMP
J8I3044C & JSU0076
SHEET 2 OF 5

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

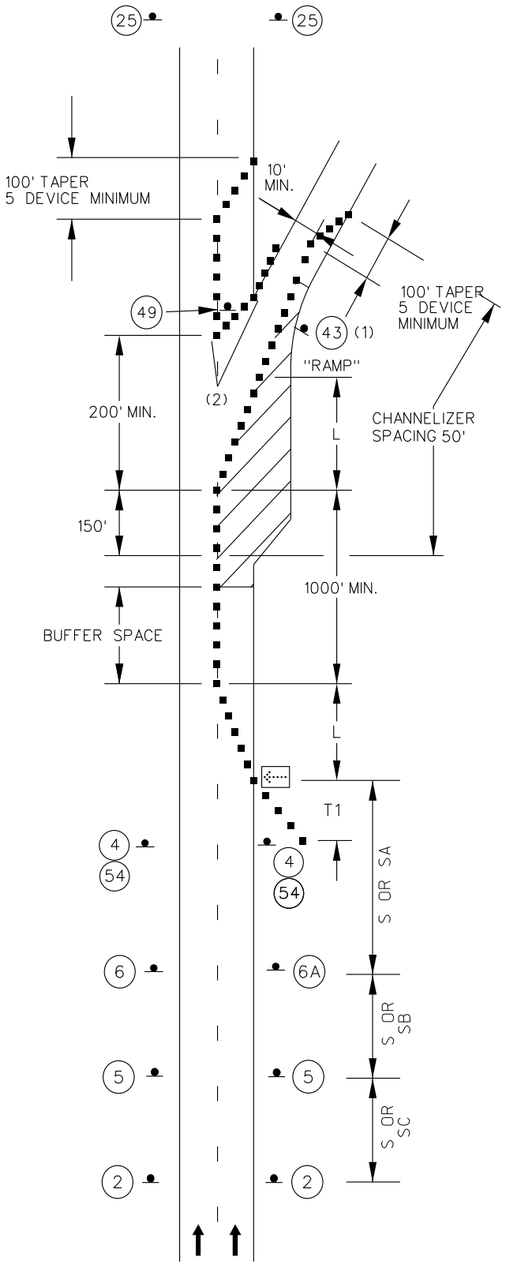
DATE PREPARED	8/16/2024
ROUTE	I-44
STATE	MO
DISTRICT	SW
SHEET NO.	54
COUNTY	GREENE
JOB NO.	JSU0076, J8I3044C, & JST0088
PROJECT NO.	
BRIDGE NO.	

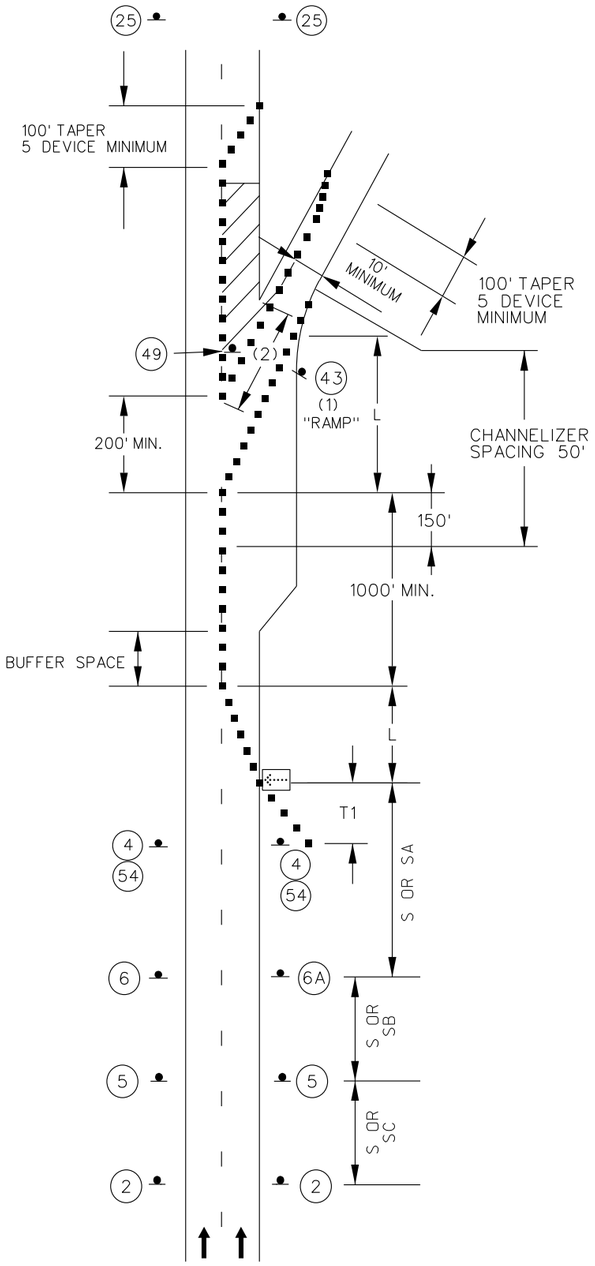
DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

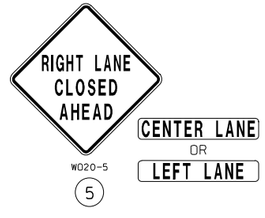
Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

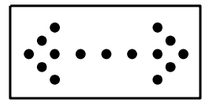
G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\054_TC_05_J8I3044C_I1_TA-44_Work_in_Vicinity_Entrance_Ramp.dgn 6:56:33 PM 8/16/2024

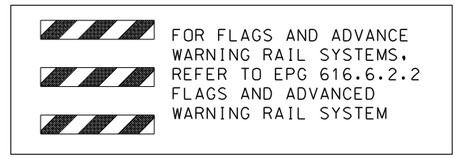




WORK IN THE VICINITY
OF A EXIT RAMP AREAS







NOTES:

SEE TRAFFIC CONTROL SHEET 1 FOR WORK ZONE SPEED LIMIT GUIDELINES.

SEE TRAFFIC CONTROL SHEET 1 FOR SIGN SPACING, DEVICE SPACING AND CHANNELIZING TAPER LENGTHS.

REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKING AS NEEDED.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES.

IF RUMBLE STRIPS ARE USED, REVIEW EPG 616.6.87 RUMBLE STRIPS.

FOR NIGHT TIME OPERATIONS, REVIEW EPG 616.6.83 WARNING LIGHTS FOR USE OF SEQUENTIAL LIGHTS.

REVIEW EPG 616.6.63 CHANNELIZING DEVICES FOR DIFFERENT TYPES AND AND GUIDELINES FOR THE DEVICE.

(1). SIGN (43) REQUIRED WHEN RAMP WIDTH IS REDUCED.

(2). FIVE CHANNELIZER DEVICE MINIMUM.

TRAFFIC CONTROL PLAN
TYPICAL APPLICATIONS
WORK IN VICINITY OF
EXIT RAMP
J8I3044C & JSU0076
SHEET 3 OF 5

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	55

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088

PROJECT NO.:

BRIDGE NO.:

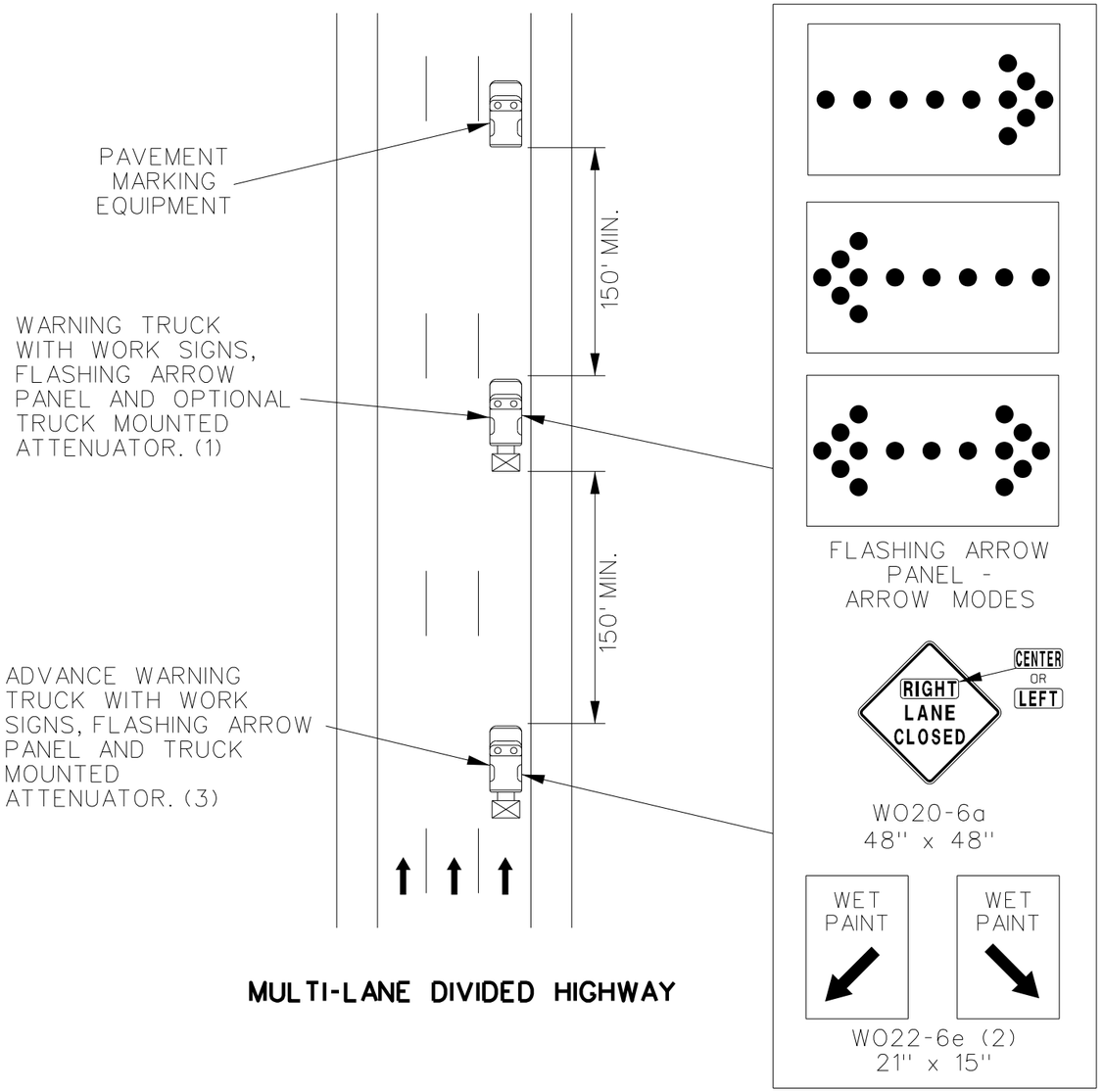
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc. engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\055_TC_06_J8I3044C_I1_TA-42_Work_in_Vicinity_Exit_Ramp.dgn 6:56:36 PM 8/16/2024



MULTI-LANE DIVIDED HIGHWAY

MOVING OPERATION ON HIGHWAY OPEN TO TRAFFIC

NOTES:

ALL SIGNS HAVE TYPE 3 FLUORESCENT ORANGE RETROFLECTIVE SHEETING.

UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCKS EQUIPPED WITH PROPER WARNING DEVICES.

PROTECTIVE TRUCK AND WORK VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING OR STROBE LIGHTS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH -INTENSITY ROTATING FLASHING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

(1). TRUCK IS OPTIONAL ON TWO-LANE UNDIVIDED HIGHWAYS IF SIGNING AND ARROW BOARD IS MOUNTED ON THE PAVEMENT MARKING EQUIPMENT.

(2). WET PAINT SIGNS ARE INSTALLED TO INDICATE THE SIDE IN WHICH THE PAVEMENT MARKING MATERIAL IS BEING APPLIED. AT THE CONTRACTOR'S OPTION. A FRONT FACING WET PAINT SIGN MAY BE INSTALLED ON THE LEFT SIDE OF THE PAVEMENT MARKING EQUIPMENT.

(3). ADVANCE WARNING TRUCK IS POSITIONED AT THE NO TRACK POINT OF THE PAVEMENT MARKING MATERIAL OR SPACING SHOWN, WHICHEVER IS GREATER.

TRAFFIC CONTROL PLAN
TYPICAL APPLICATIONS
MOVING OPERATION
OPEN TO TRAFFIC
J8I3044C & JSU0076
SHEET 4 OF 5

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	56

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

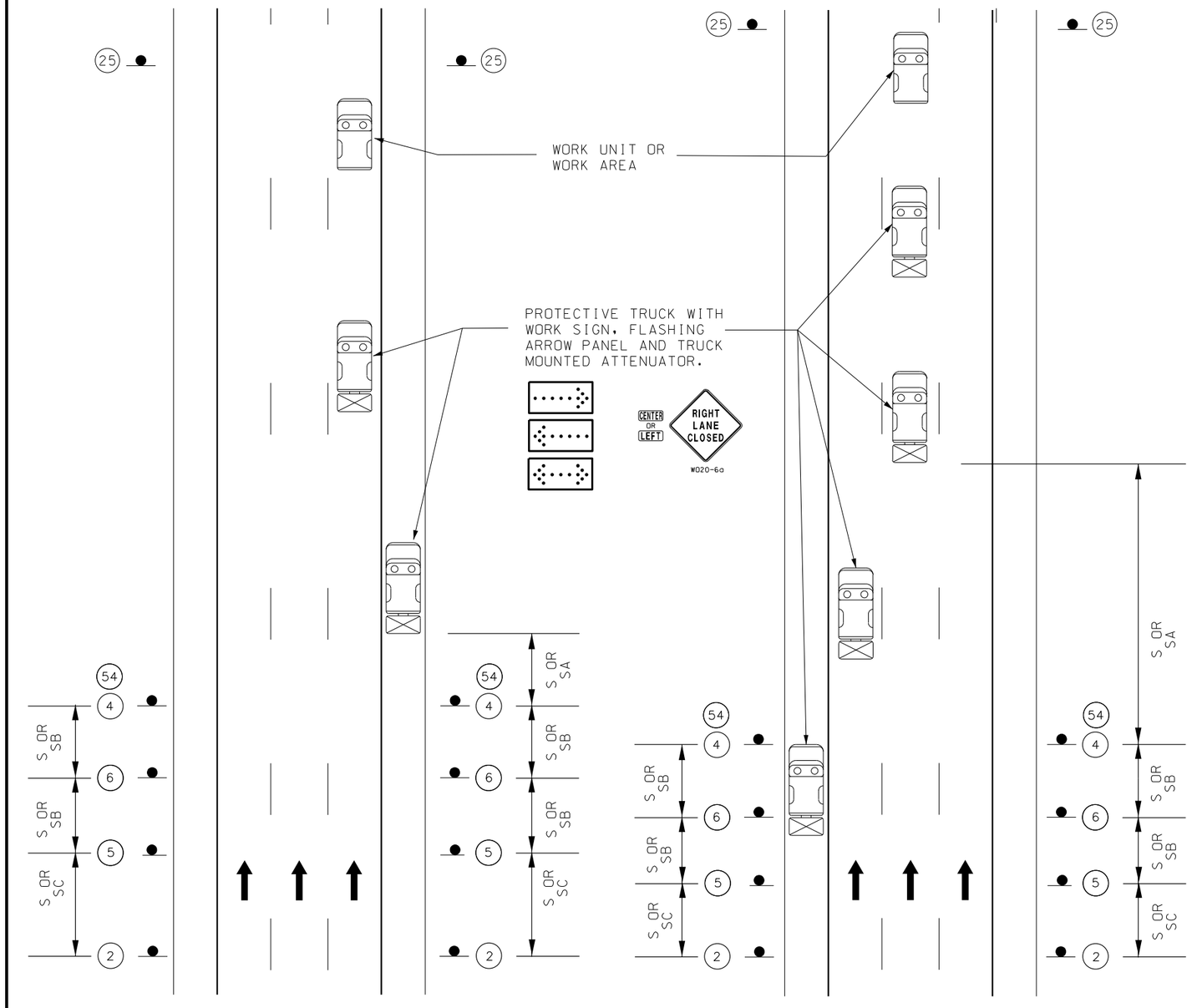
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

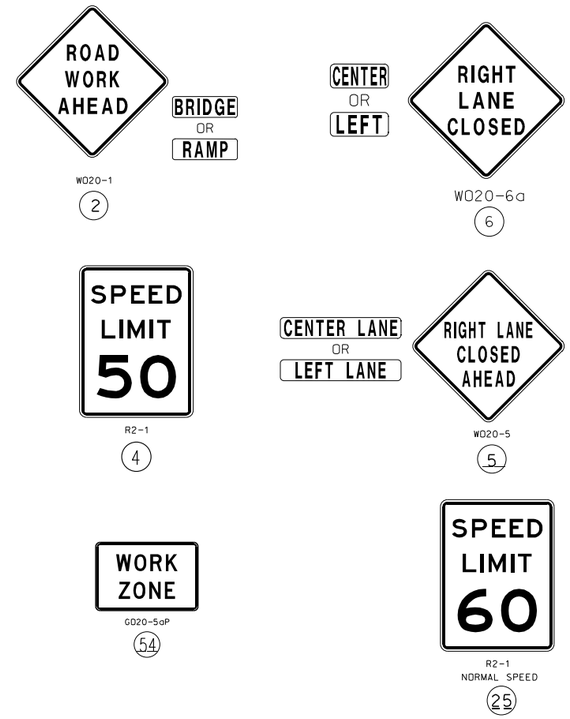
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\056_TC_07_J8I3044C_I1_TA-17a_Moving_Operation_Two_Lane_Striping.dgn 6:56:39 PM 8/16/2024



MOVING OPERATION ON MULTI-LANE DIVIDED HIGHWAY OPEN TO TRAFFIC



NOTES:

SEE TRAFFIC CONTROL SHEET 1 FOR WORK ZONE SPEED LIMIT GUIDELINES.

SEE TRAFFIC CONTROL SHEET 1 FOR SIGN SPACING, DEVICE SPACING CHANNELIZING TAPER LENGTHS.

UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCKS EQUIPPED WITH PROPER WARNING DEVICES.

PROTECTIVE TRUCK AND WORK VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING OR STROBE LIGHTS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH -INTENSITY ROTATING FLASHING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

FLASHING ARROW PANELS SHALL, AS A MINIMUM, BE TYPE B, WITH A SIZE OF 60 X 30 INCHES.

VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.

A FLASHING ARROW BOARD SHALL BE USED WHEN A FREEWAY LANE IS CLOSED, WHEN MORE THAN ONE LANE IS CLOSED A SEPARATE FLASHING ARROW BOARD SHALL BE USED FOR EACH CLOSED LANE.

TRAFFIC CONTROL PLAN
TYPICAL APPLICATIONS
MOBILE OPERATION
ON DIVIDED OR
MULTI-LANE HIGHWAYS
J8I3044C & JSU0076
SHEET 5 OF 5

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	57

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

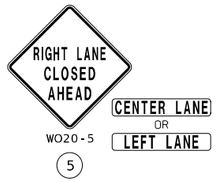
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\057_TC_08_J8I3044C_I1_TA-35_Moving_Operation_Multi_Lane.dgn 6:56:42 PM 8/16/2024

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (DIB) W/ LIGHTS
- CHANNELIZER
- TYPE 3 BARRICADE
- CHANGEABLE MESSAGE BOARD (CMS)
- TEMP. LONG TERM RUMBLE STRIPS (T.L.T.R.S.)
- FLASHING ARROW PANEL (FAP)
- TRUCK MOUNTED ATTENUATOR (TMA)
- ADVANCE WARNING RAIL SYSTEM (AWRS)

W20-1
(2)



WO20-5
(5)

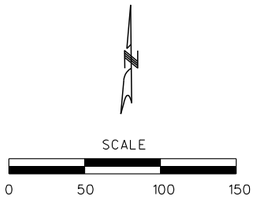
WO20-6a
(6)

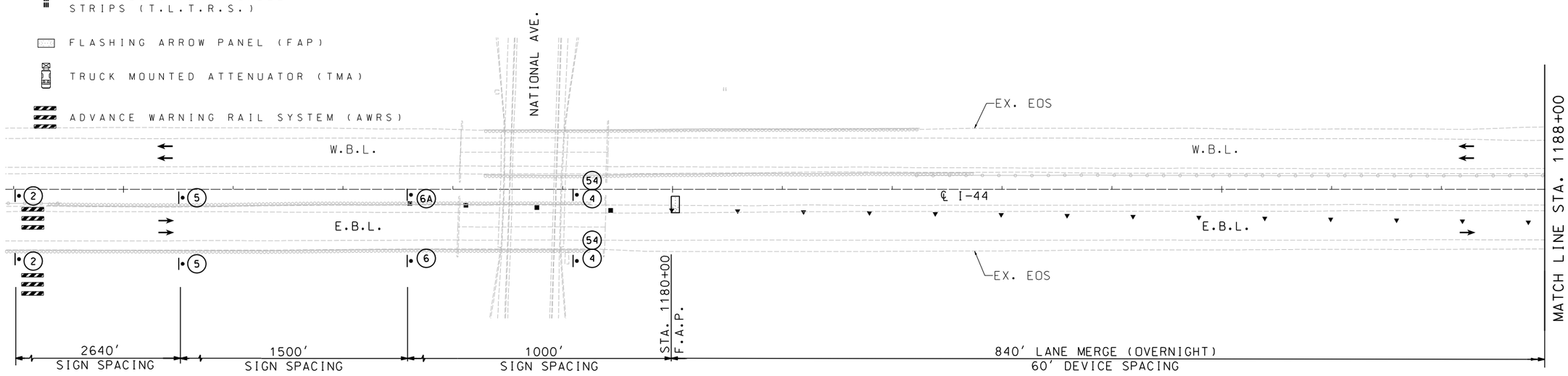
WO4-1aL
(6A)

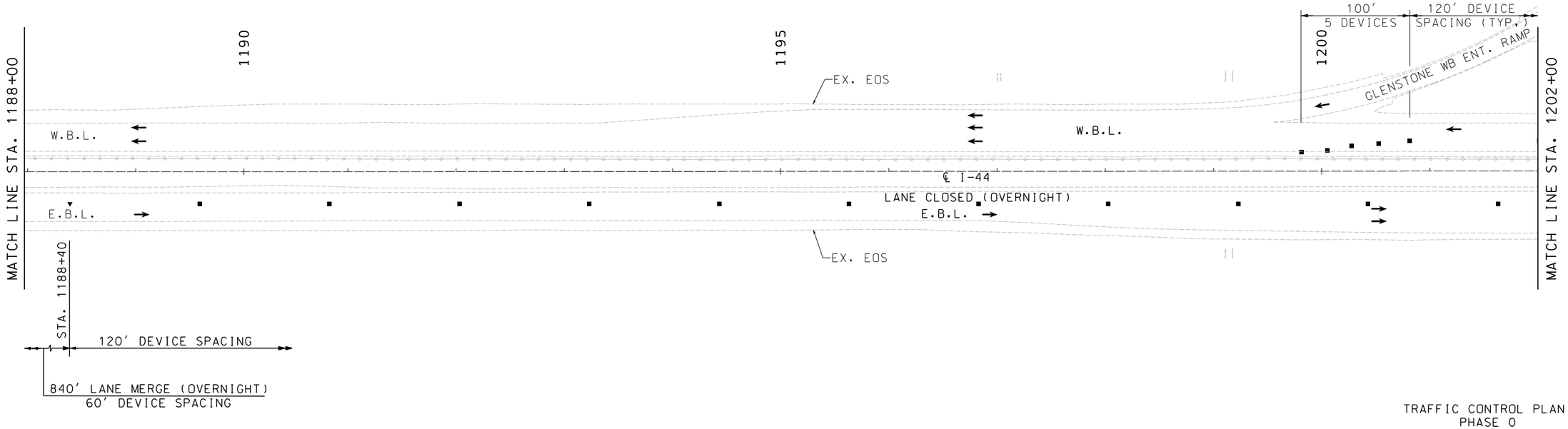
GO20-5aP
(54)

R2-1
(4)

R2-1
(25)







TRAFFIC CONTROL PLAN
PHASE 0
J8I3044C
SHEET 1 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS been SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	58

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088

PROJECT NO.:

BRIDGE NO.:

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

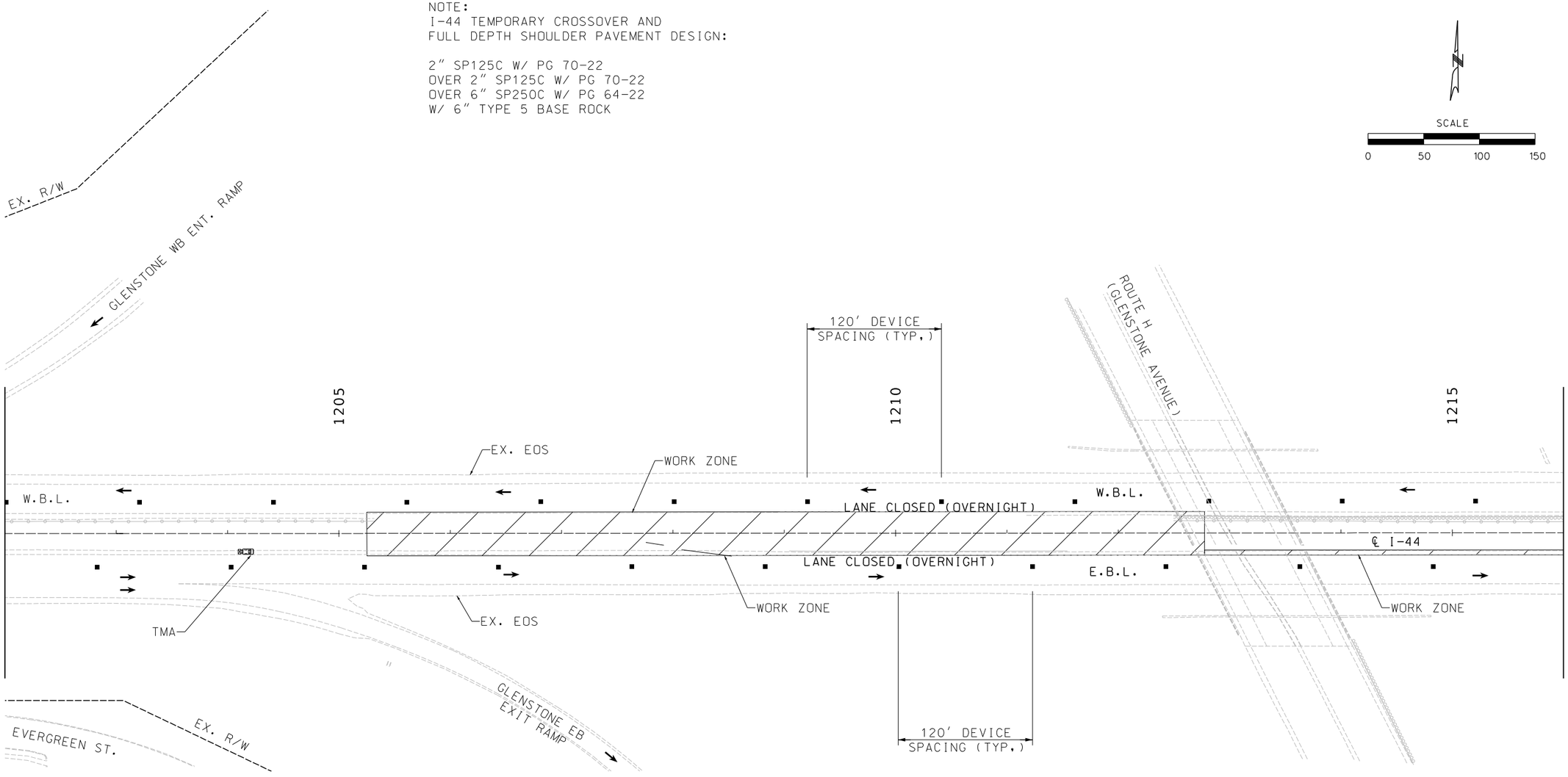
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\058_TC_09_J8I3044C_I50_Phase_0-01.dgn 6:56:47 PM 8/16/2024

NOTE:
I-44 TEMPORARY CROSSOVER AND
FULL DEPTH SHOULDER PAVEMENT DESIGN:

2" SP125C W/ PG 70-22
OVER 2" SP125C W/ PG 70-22
OVER 6" SP250C W/ PG 64-22
W/ 6" TYPE 5 BASE ROCK



TRAFFIC CONTROL PLAN
PHASE 0
J8I3044C
SHEET 2 OF 8

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	59

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

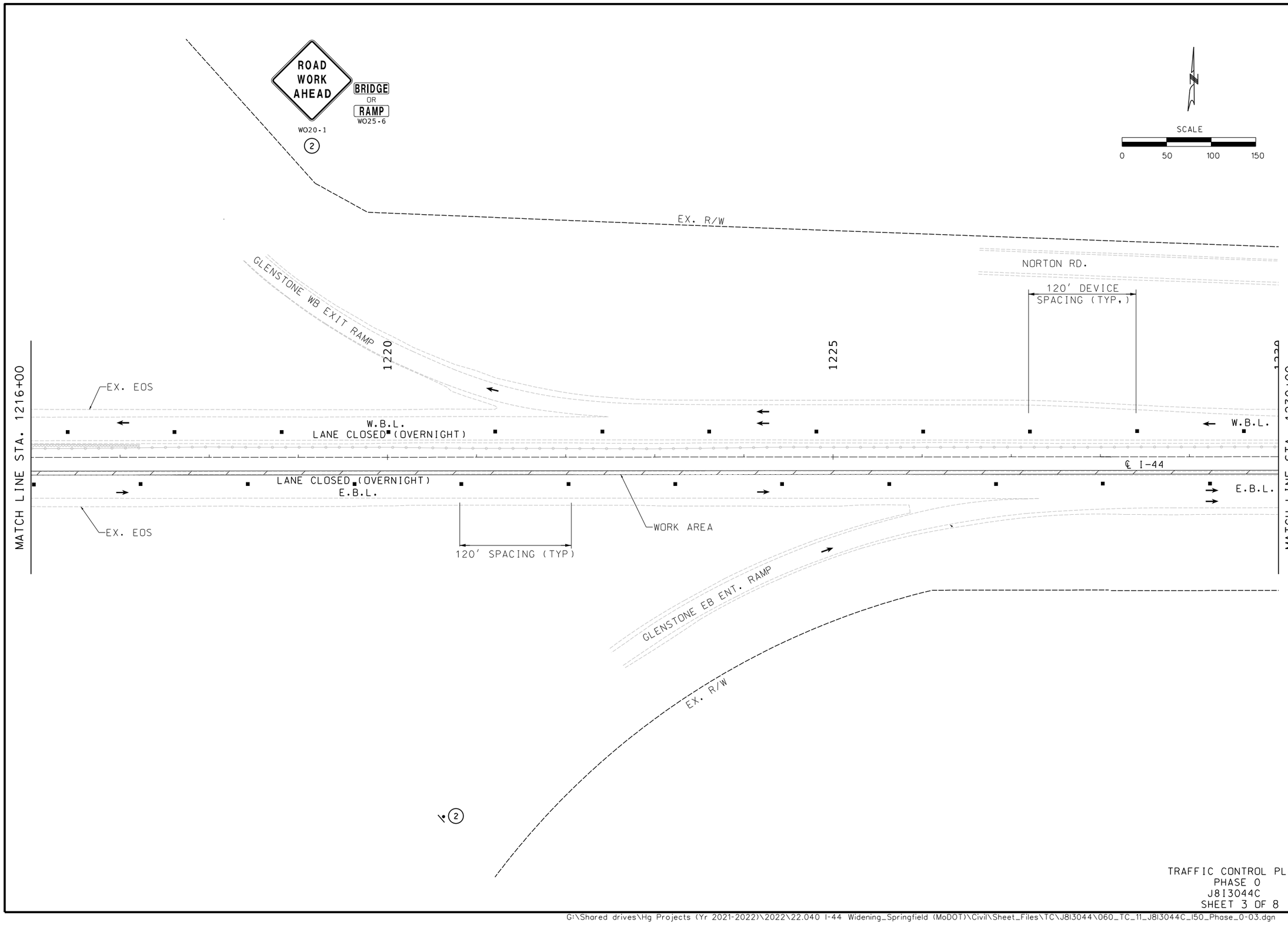
BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720



TRAFFIC CONTROL PLAN
PHASE 0
J8I3044C
SHEET 3 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	60

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

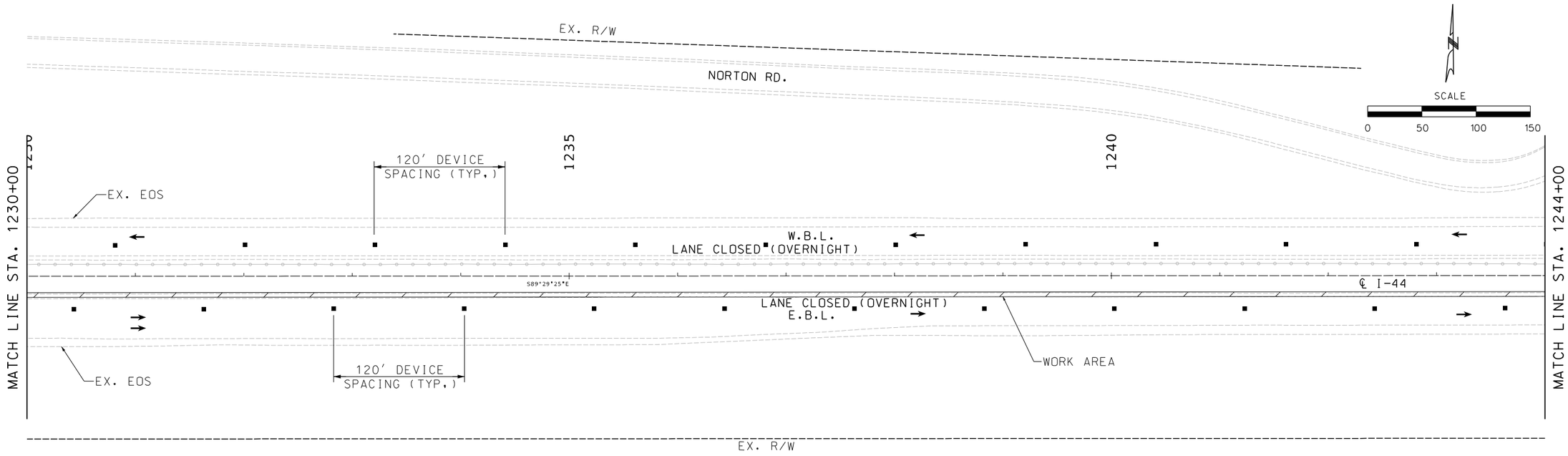
DESCRIPTION	DATE

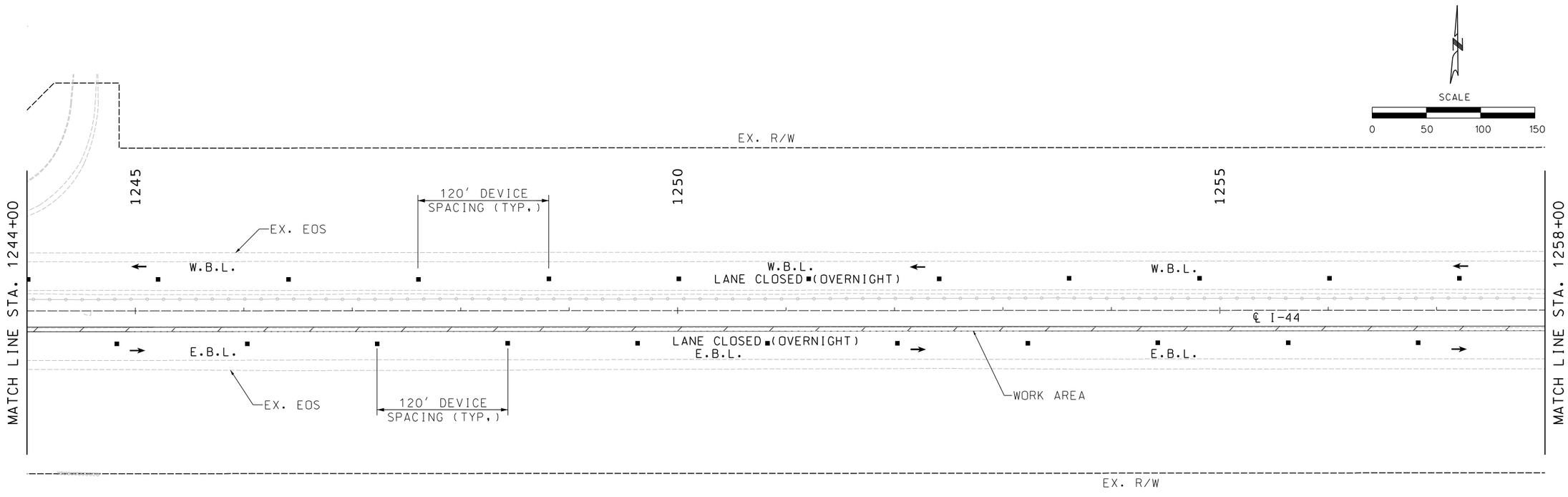
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816.912-4720)
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\060_TC_11_J8I3044C_150_Phase_0-03.dgn 6:56:56 PM 8/16/2024





TRAFFIC CONTROL PLAN
PHASE 0
J8I3044C
SHEET 4 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	61

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

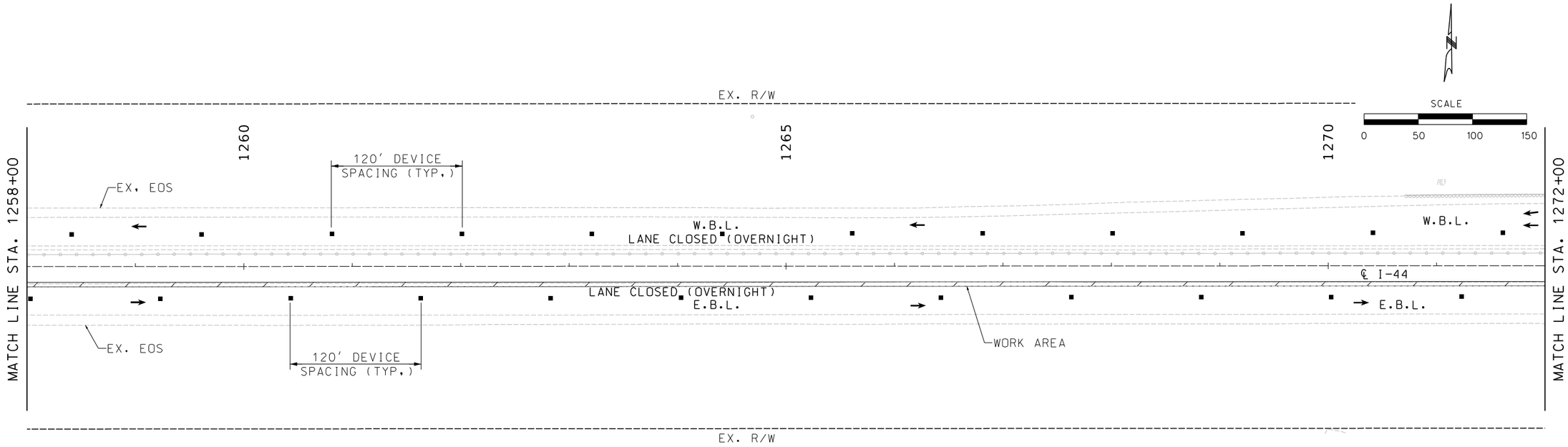
DESCRIPTION	DATE

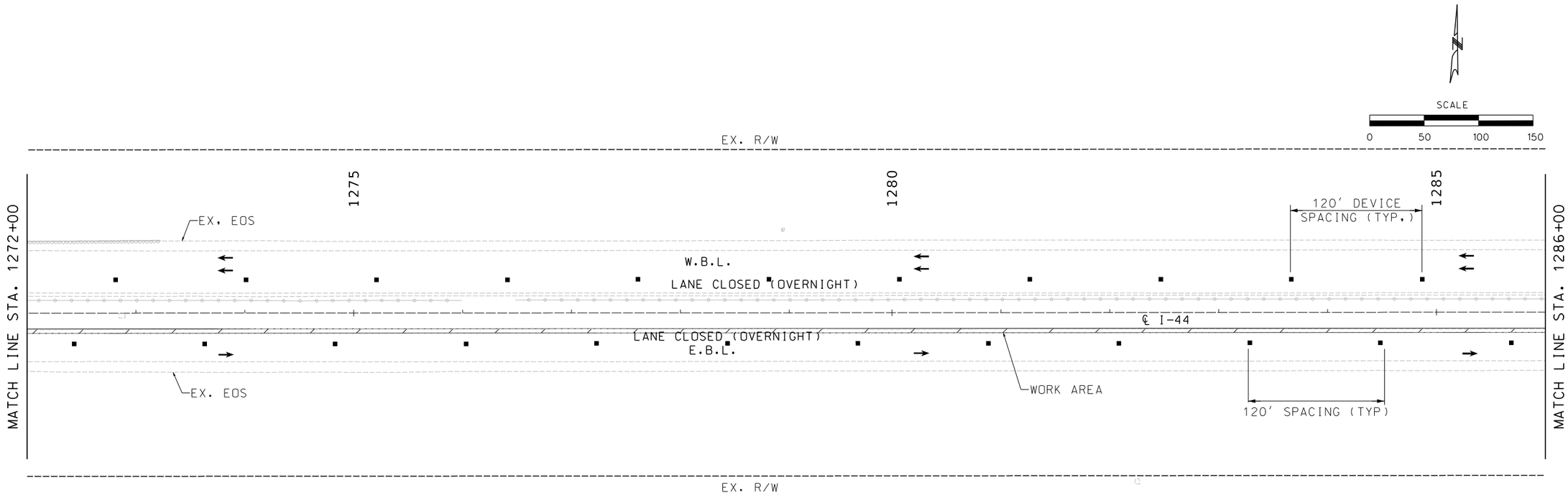
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\061_TC_12_J8I3044C_I50_Phase_0-04.dgn 6:57:00 PM 8/16/2024





TRAFFIC CONTROL PLAN
PHASE 0
J8I3044C
SHEET 5 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	62

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

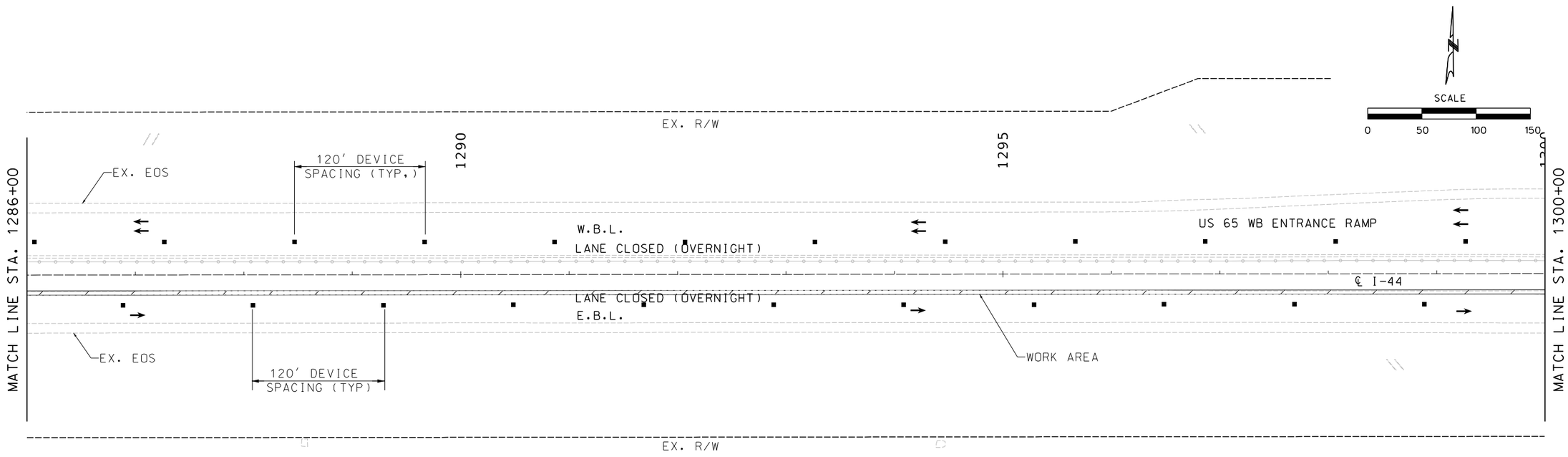
DESCRIPTION	DATE

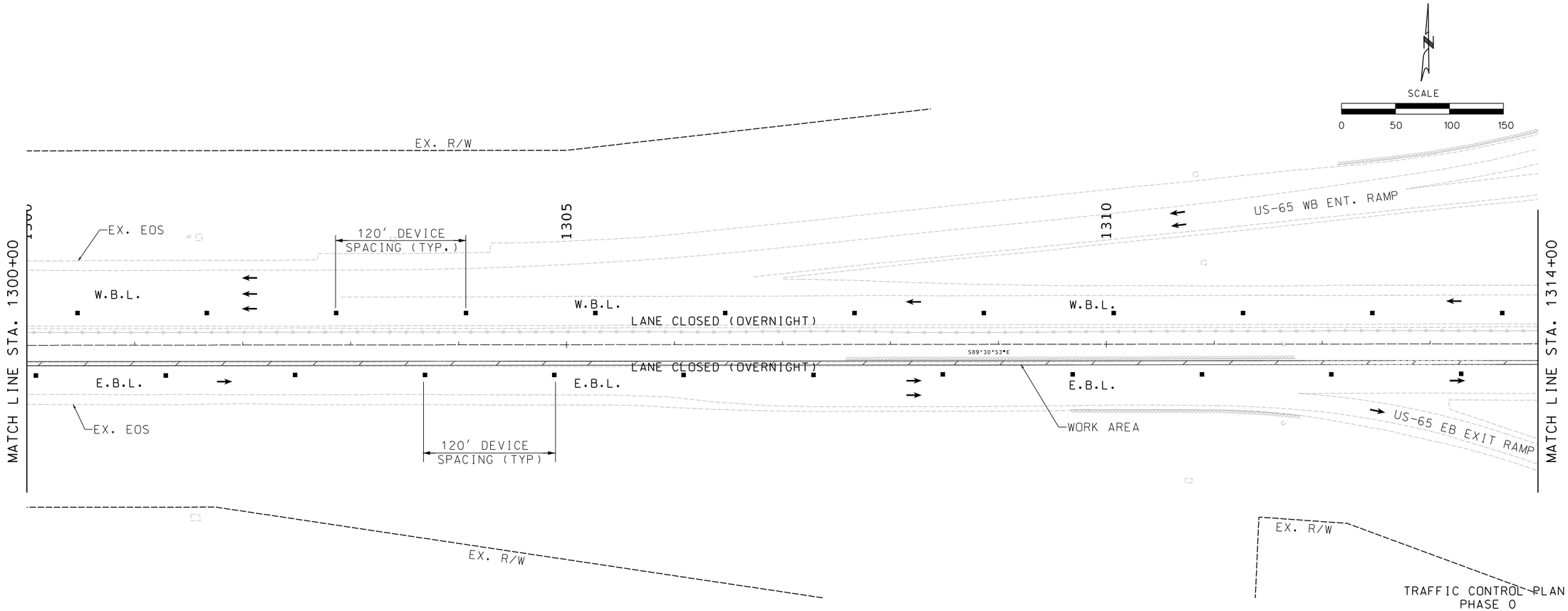
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\062_TC_13_J8I3044C_150_Phase_0-05.dgn 4:09:18 PM 8/18/2024





TRAFFIC CONTROL PLAN
PHASE 0
J8I3044C
SHEET 6 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	63

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

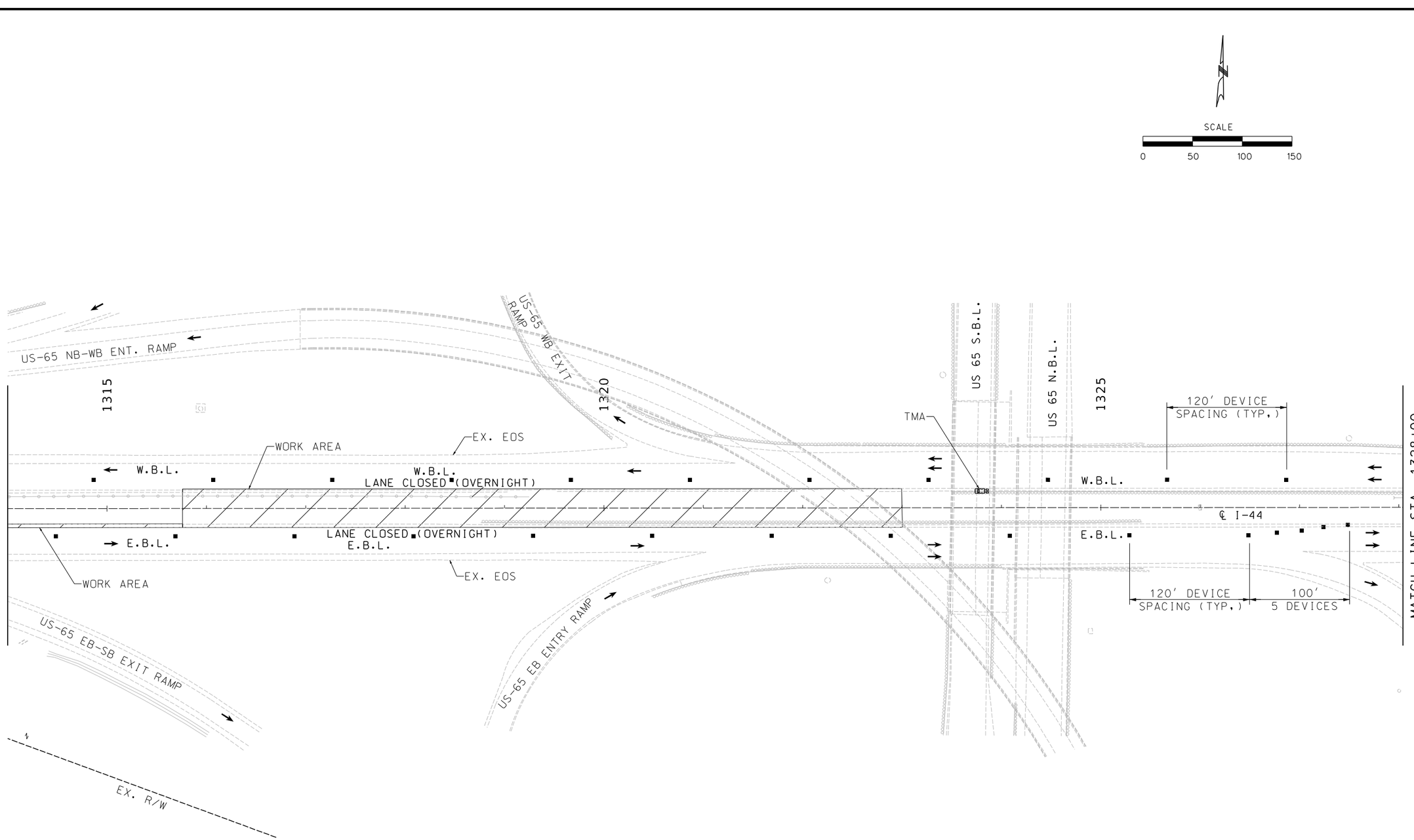
DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\063_TC_14_J8I3044C_I50_Phase_0-06.dgn 6:57:08 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 0
J8I3044C
SHEET 7 OF 8

STATE OF MISSOURI
ERIC J REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	64

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

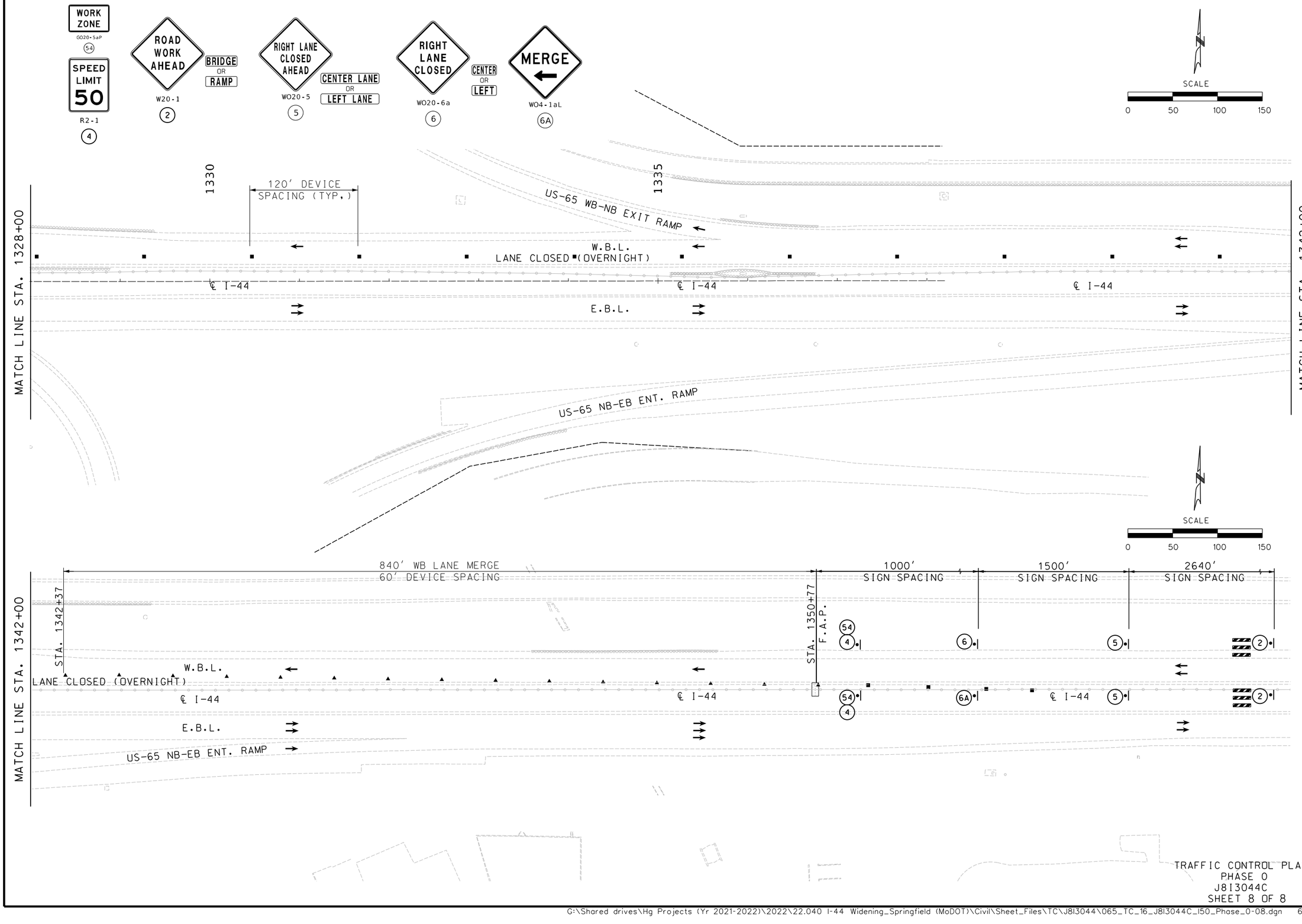
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\064_TC_15_J8I3044C_I50_Phase_0-07.dgn 4:12:10 PM 8/18/2024



TRAFFIC CONTROL PLAN
PHASE 0
J8I3044C
SHEET 8 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 65
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

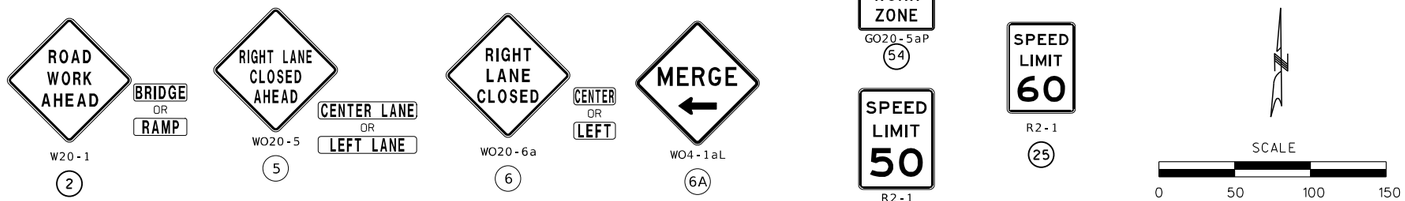
Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

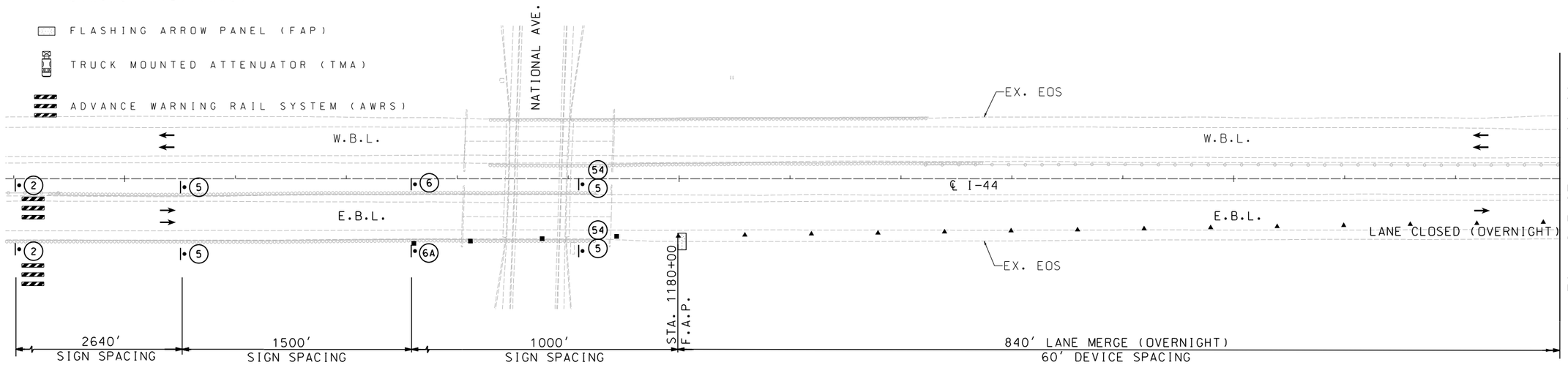
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

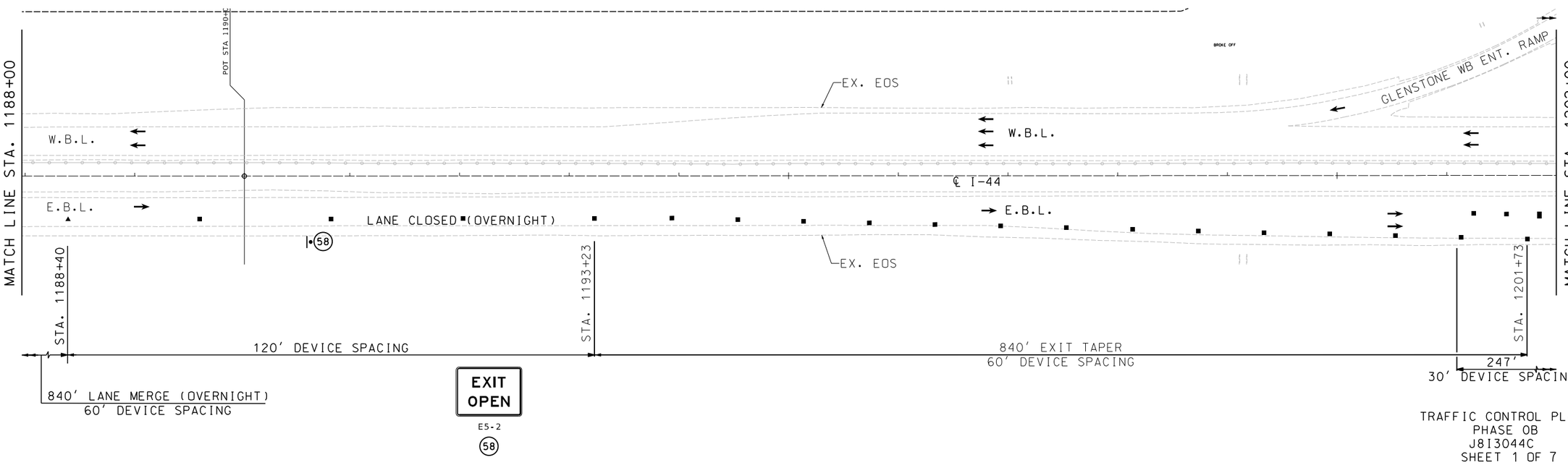
G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\065_TC_16_J8I3044C_I50_Phase_0-08.dgn 6:57:17 PM 8/16/2024

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (DIB) W/ LIGHTS
- CHANNELIZER
- TYPE 3 BARRICADE
- CHANGEABLE MESSAGE BOARD (CMS)
- TEMP. LONG TERM RUMBLE STRIPS (T.L.T.R.S.)
- FLASHING ARROW PANEL (FAP)
- TRUCK MOUNTED ATTENUATOR (TMA)
- ADVANCE WARNING RAIL SYSTEM (AWRS)







TRAFFIC CONTROL PLAN
PHASE 0B
J8I3044C
SHEET 1 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	66

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088

PROJECT NO.:

BRIDGE NO.:

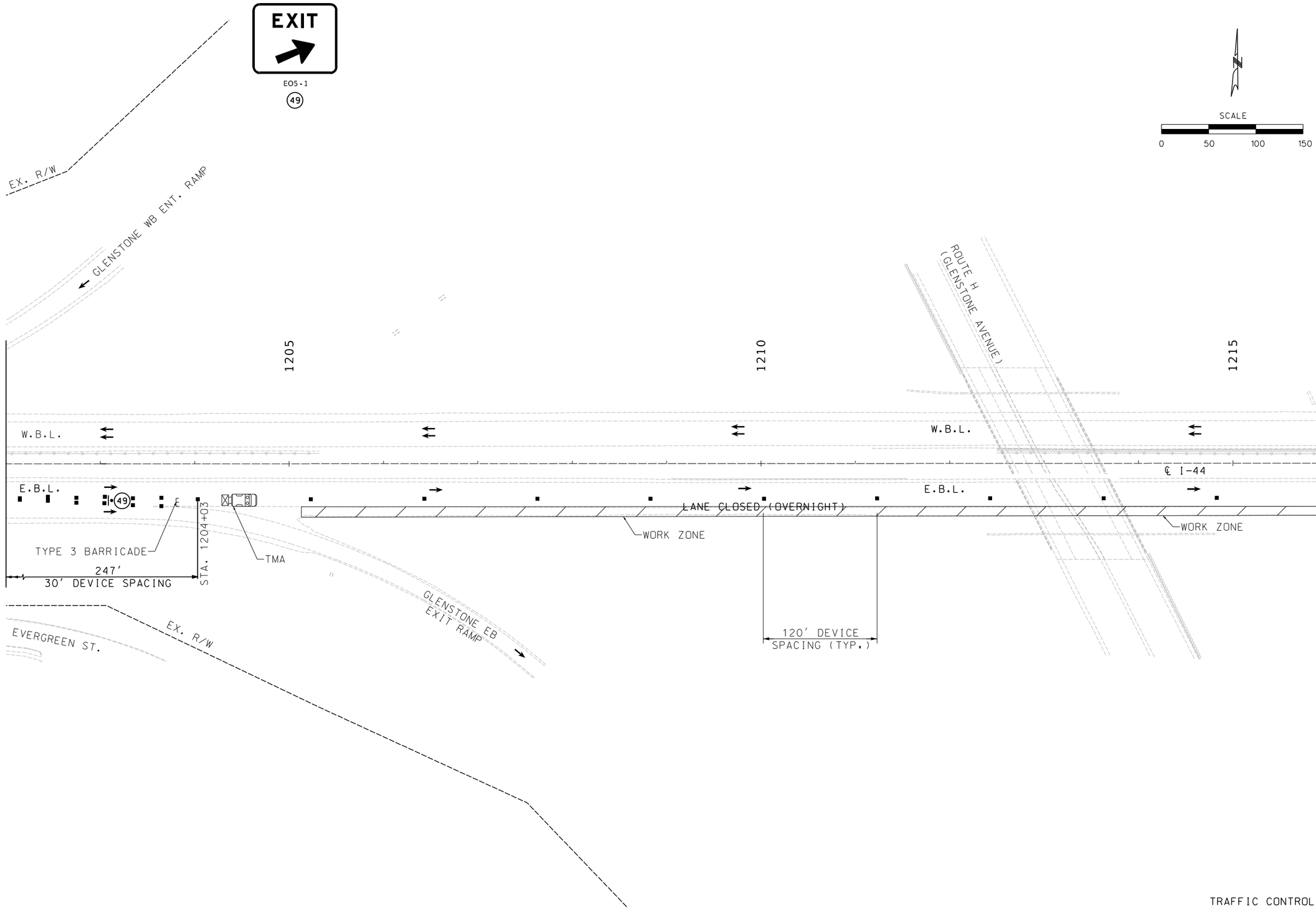
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\066_TC_17_J8I3044C_150_Phase_0B-01.dgn 4:19:04 PM 8/18/2024



TRAFFIC CONTROL PLAN
PHASE 0B
J8I3044C
SHEET 2 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	67

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

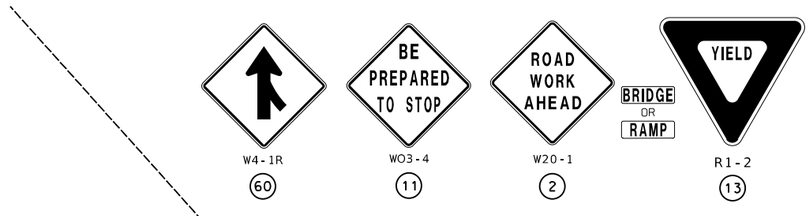
DESCRIPTION	DATE

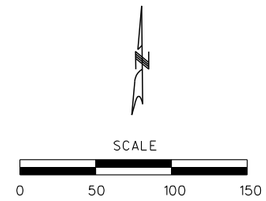
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

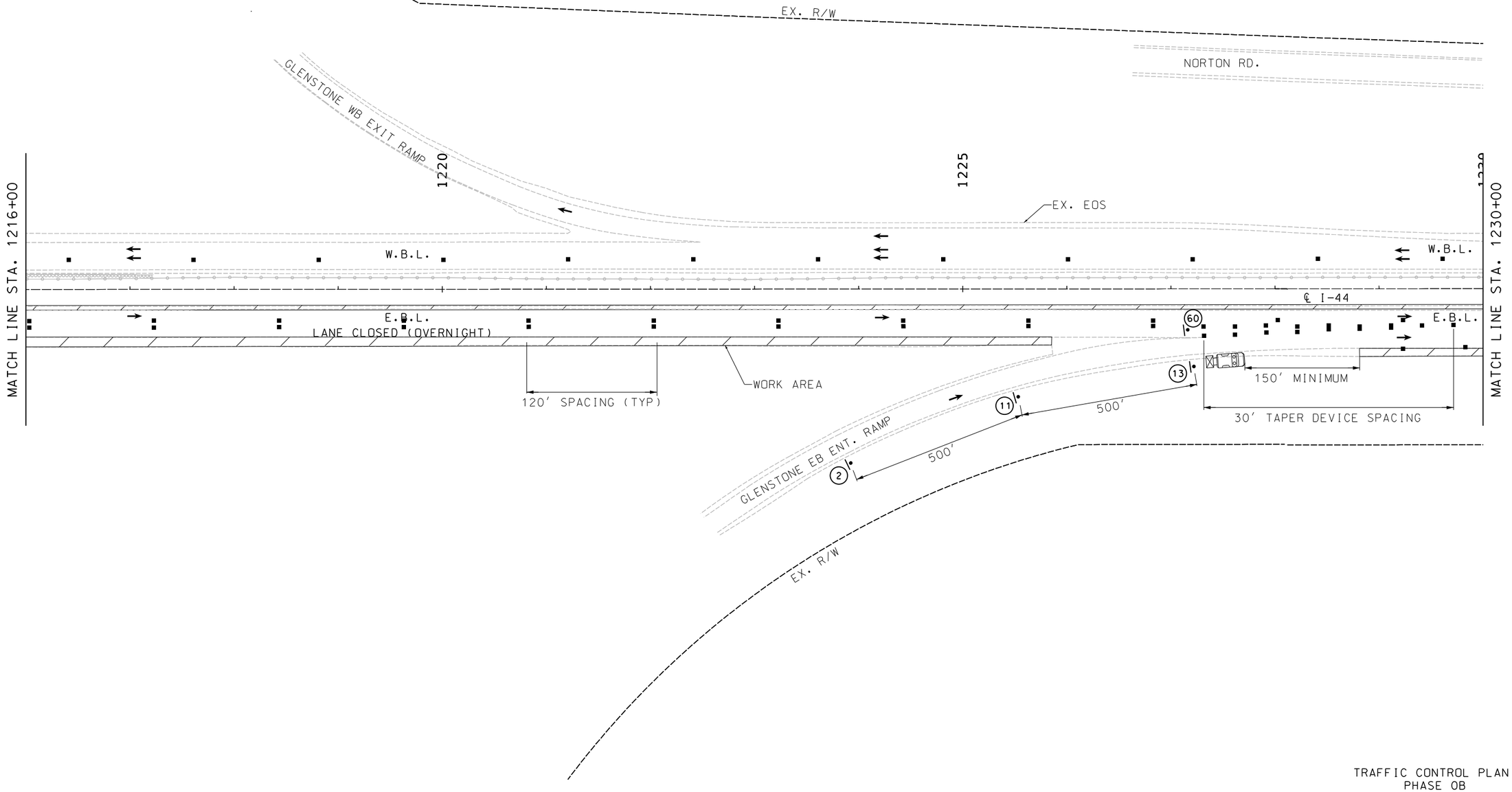
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\067_TC_18_J8I3044C_I50_Phase_0B-02.dgn 6:57:36 PM 8/16/2024







TRAFFIC CONTROL PLAN
PHASE 0B
J8I3044C
SHEET 3 OF 7

STATE OF MISSOURI
ERIC J REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	68

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

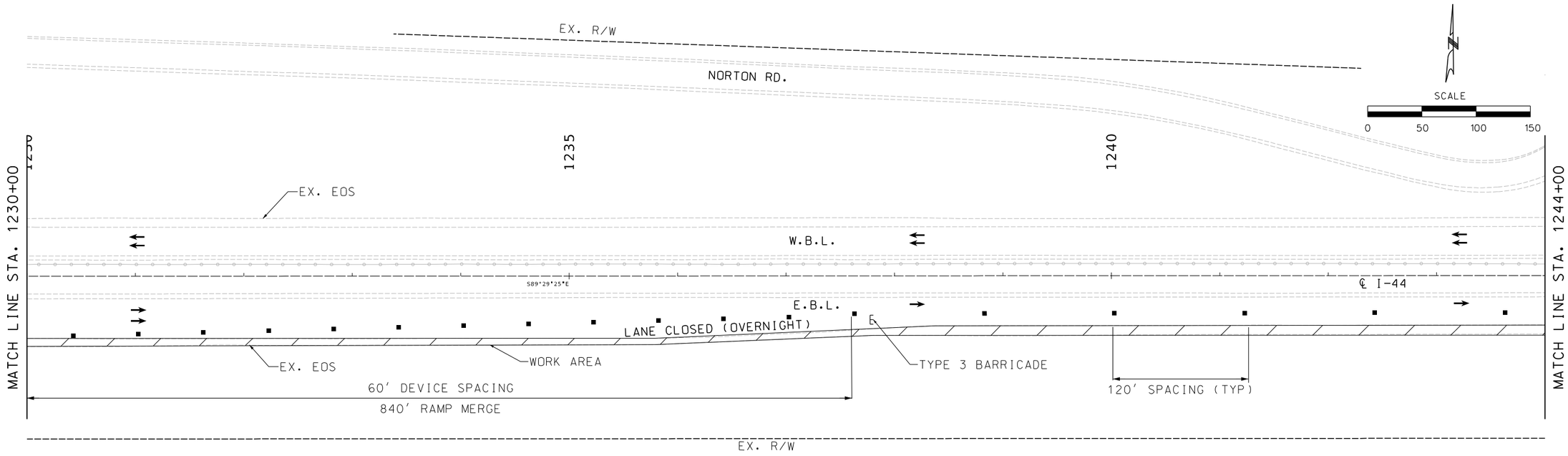
DESCRIPTION	DATE

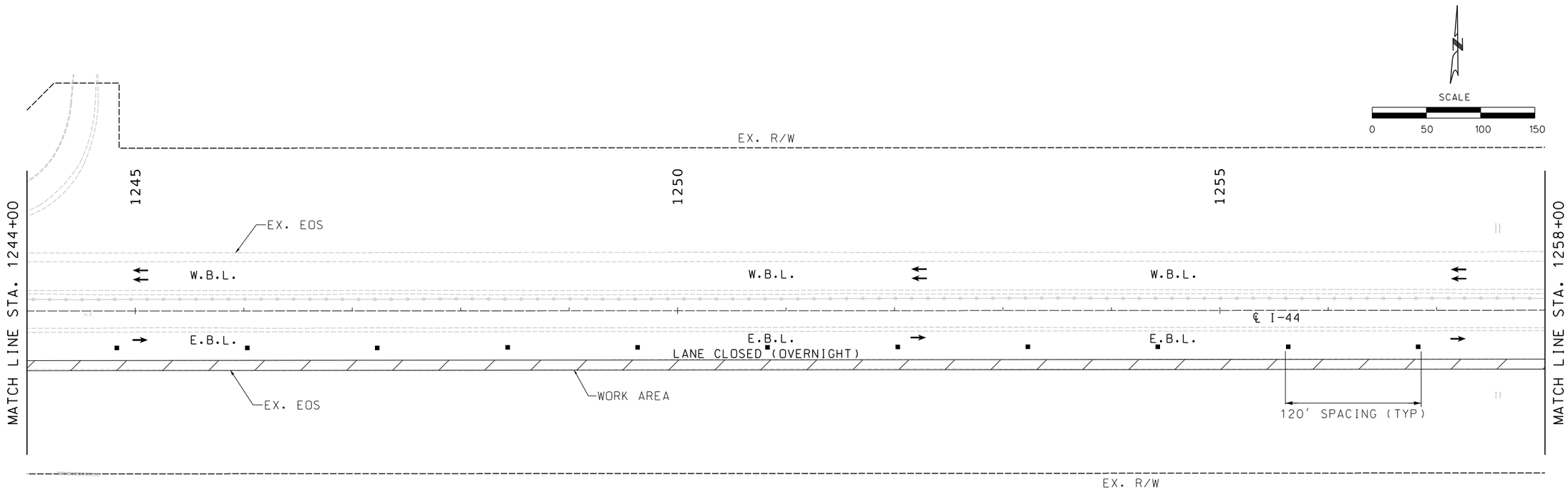
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\068_TC_19_J8I3044C_150_Phase_0B-03.dgn 4:22:15 PM 8/18/2024





TRAFFIC CONTROL PLAN
PHASE 0B
J8I3044C
SHEET 4 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	69

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

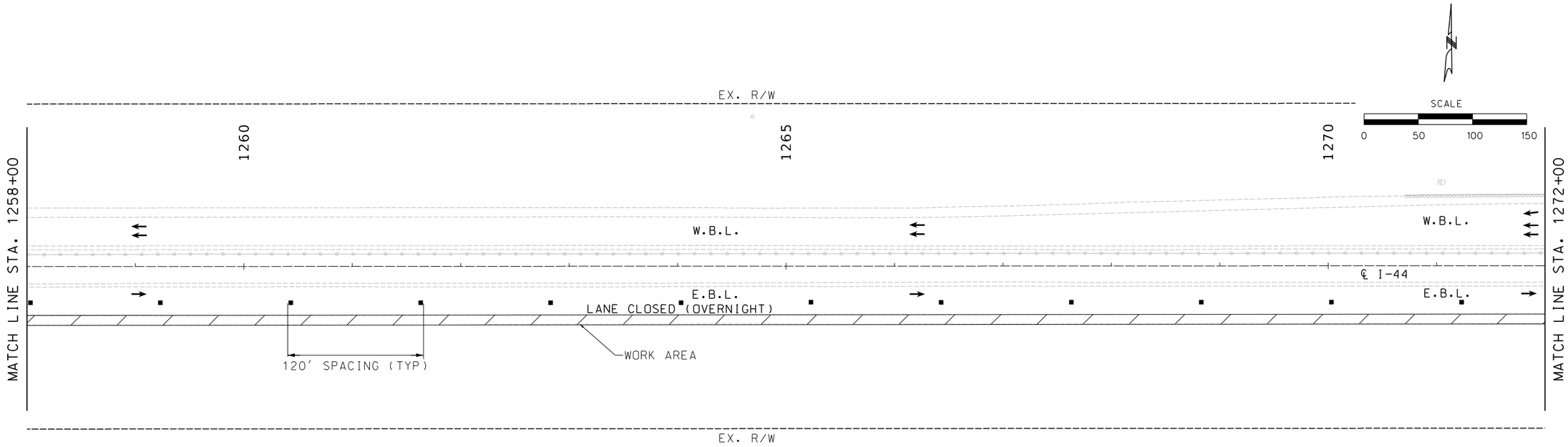
BRIDGE NO.:

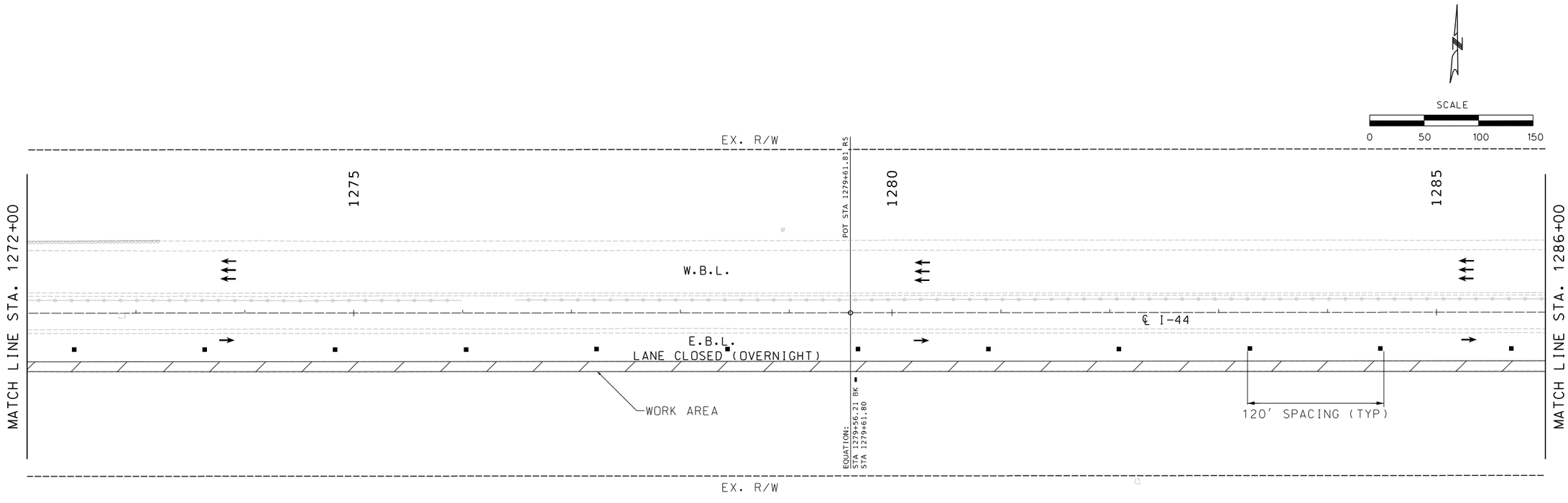
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873





TRAFFIC CONTROL PLAN
PHASE 0B
J8I3044C
SHEET 5 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	8/16/2024
ROUTE	I-44
STATE	MO
DISTRICT	SW
SHEET NO.	70
COUNTY	GREENE
JOB NO.	JSU0076, J8I3044C, & JST0088B
PROJECT NO.	
BRIDGE NO.	

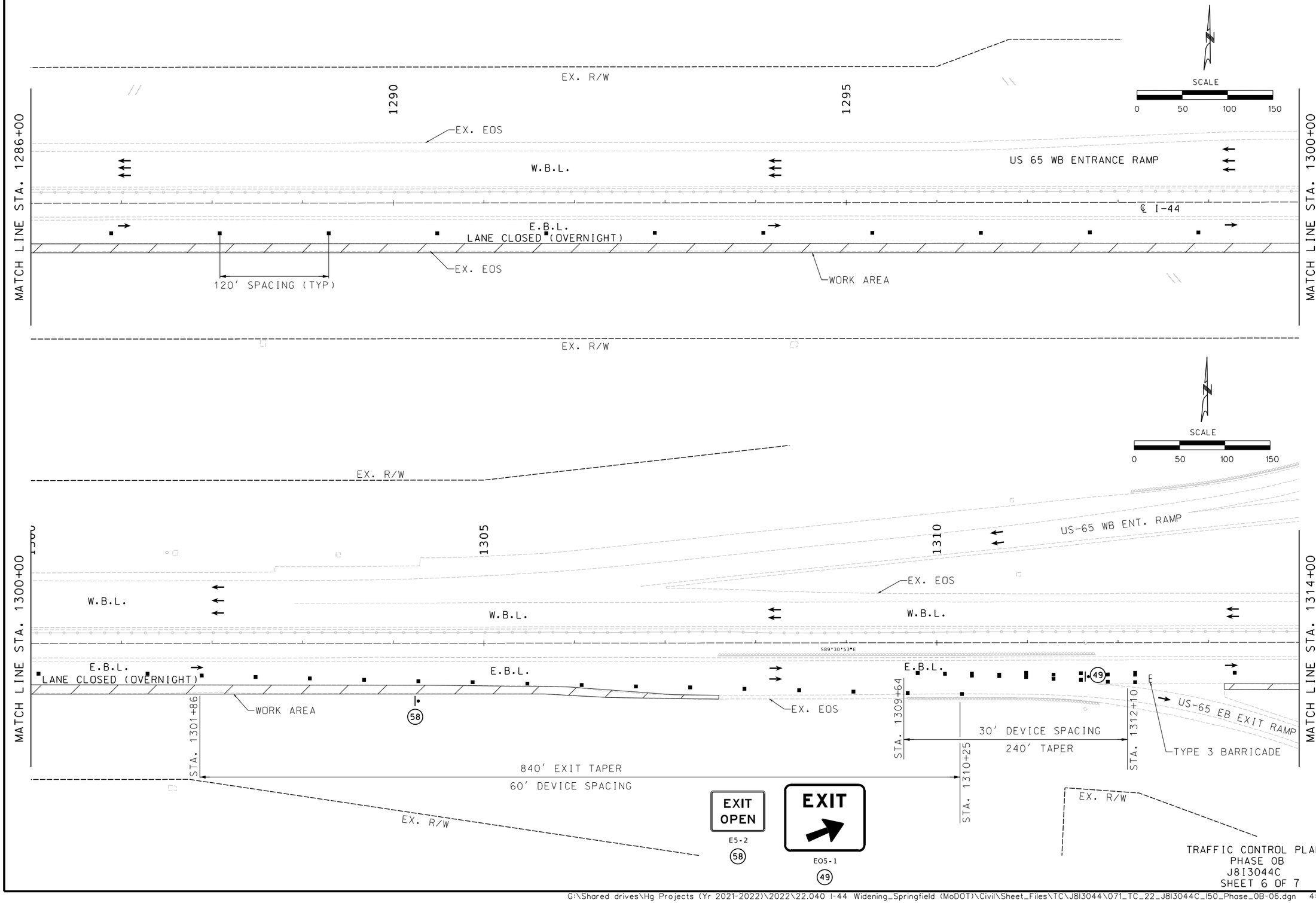
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\070_TC_21_J8I3044C_150_Phase_0B-05.dgn 6:57:49 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 0B
J8I3044C
SHEET 6 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	71

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

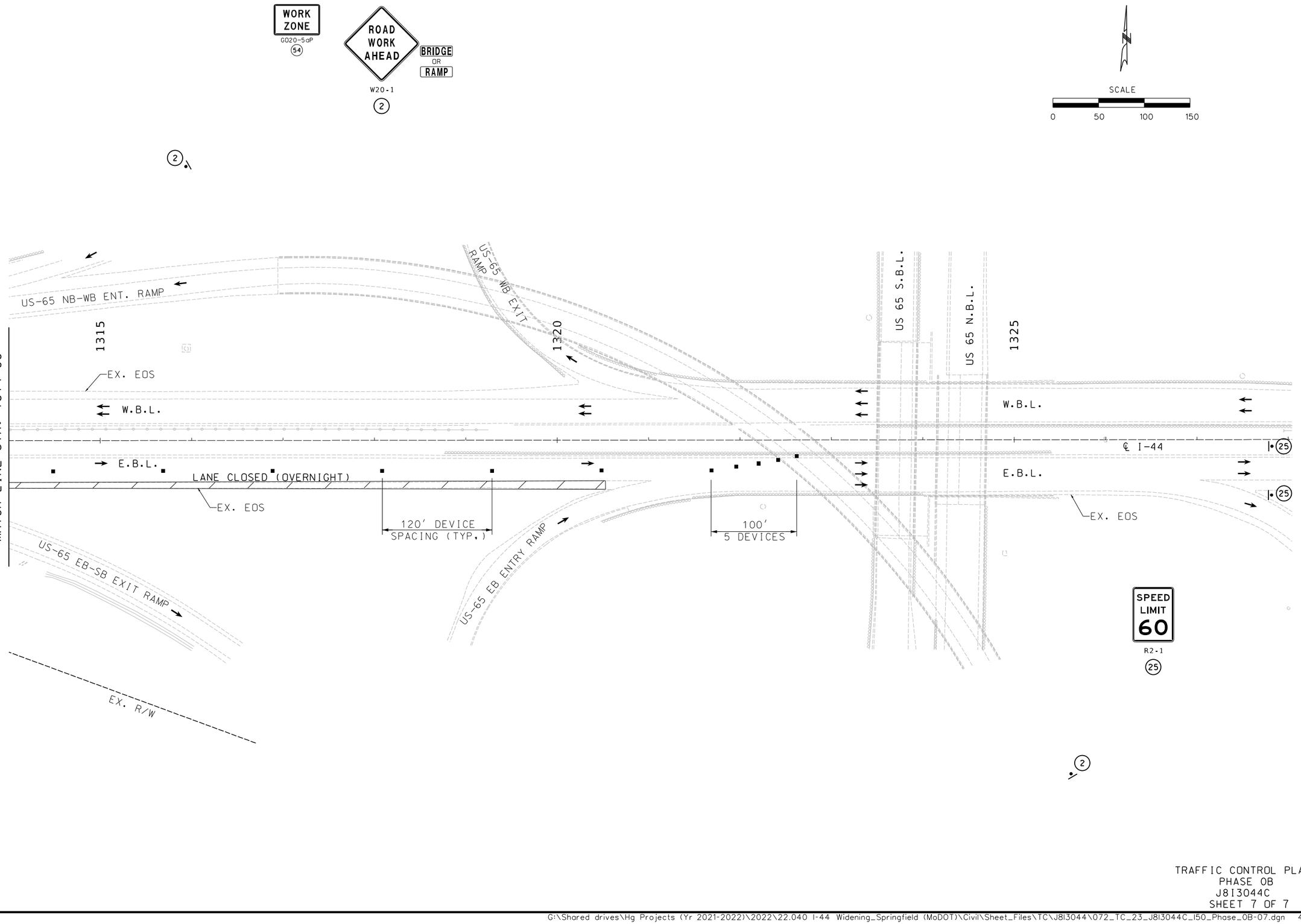
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\071_TC_22_J8I3044C_I50_Phase_0B-06.dgn 4:26:32 PM 8/18/2024



TRAFFIC CONTROL PLAN
PHASE 0B
J8I3044C
SHEET 7 OF 7

STATE OF MISSOURI
ERIC J REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	72

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

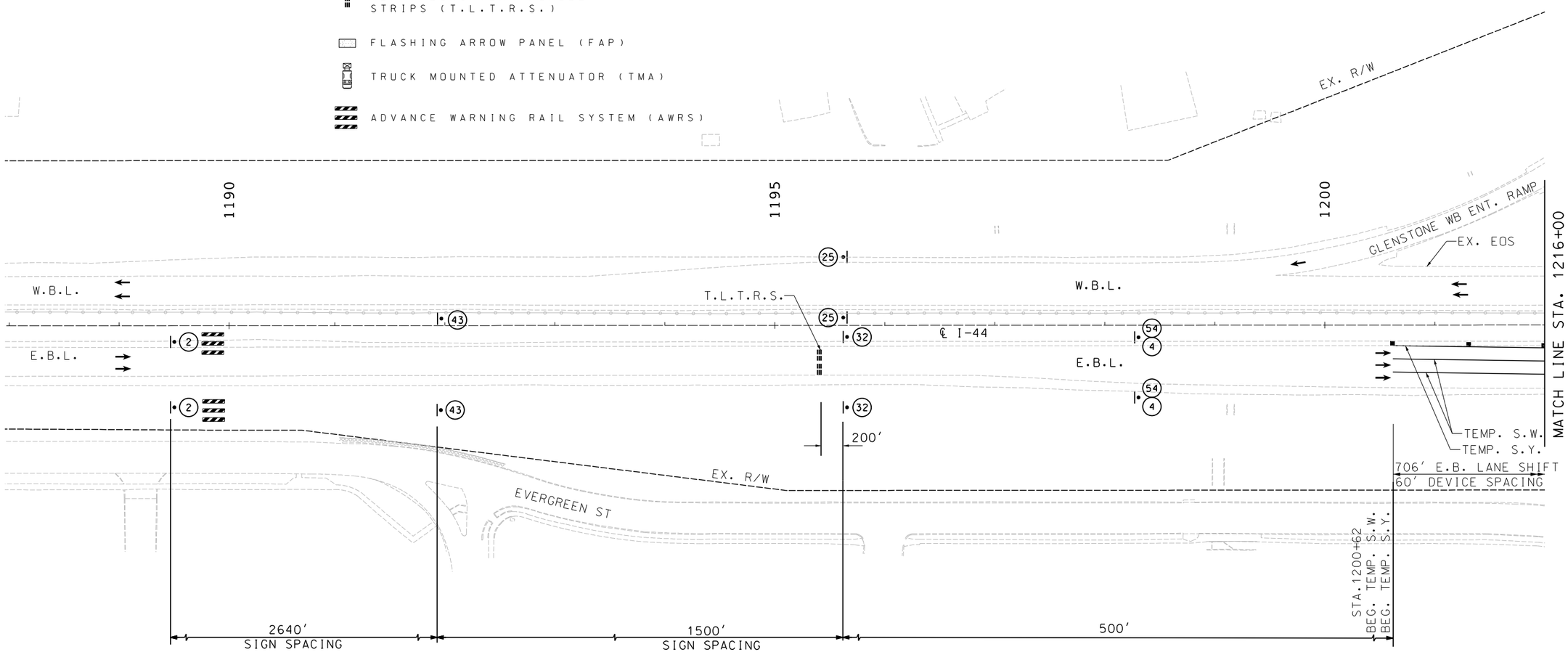
G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\072_TC_23_J8I3044C_I50_Phase_0B-07.dgn 4:28:43 PM 8/18/2024

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (DIB) W/ LIGHTS
- CHANNELIZER
- TYPE 3 BARRICADE
- CHANGEABLE MESSAGE BOARD (CMS)
- TEMP. LONG TERM RUMBLE STRIPS (T.L.T.R.S.)
- FLASHING ARROW PANEL (FAP)
- TRUCK MOUNTED ATTENUATOR (TMA)
- ADVANCE WARNING RAIL SYSTEM (AWRS)

SPEED LIMIT 60
R2-1
(25)

SCALE
0 50 100 150



ROAD WORK AHEAD
BRIDGE OR RAMP
W20-1
(2)

ROAD NARROWS
BRIDGE OR RAMP
W05-1
(43)

W1-4bR
(32)

WORK ZONE
G020-5aP
(54)

SPEED LIMIT 50
R2-1
(4)

TRAFFIC CONTROL PLAN
PHASE 1
J8I3044C
SHEET 1 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/18/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 73
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

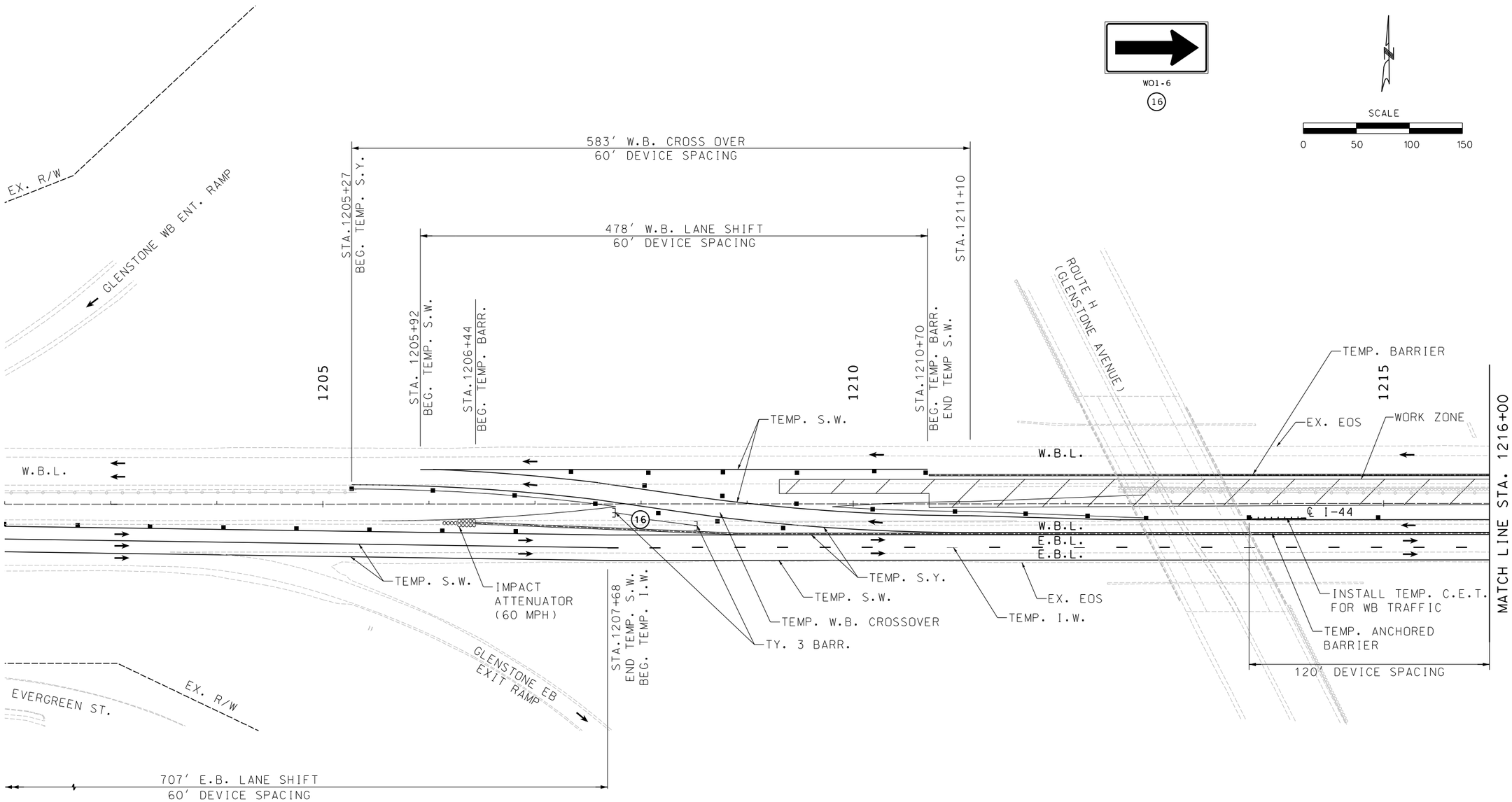
DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\073_TC_24_J8I3044C_150_Phase_1-01.dgn 4:31:16 PM 8/18/2024



TRAFFIC CONTROL PLAN
PHASE 1
J8I3044C
SHEET 2 OF 7

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	74

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

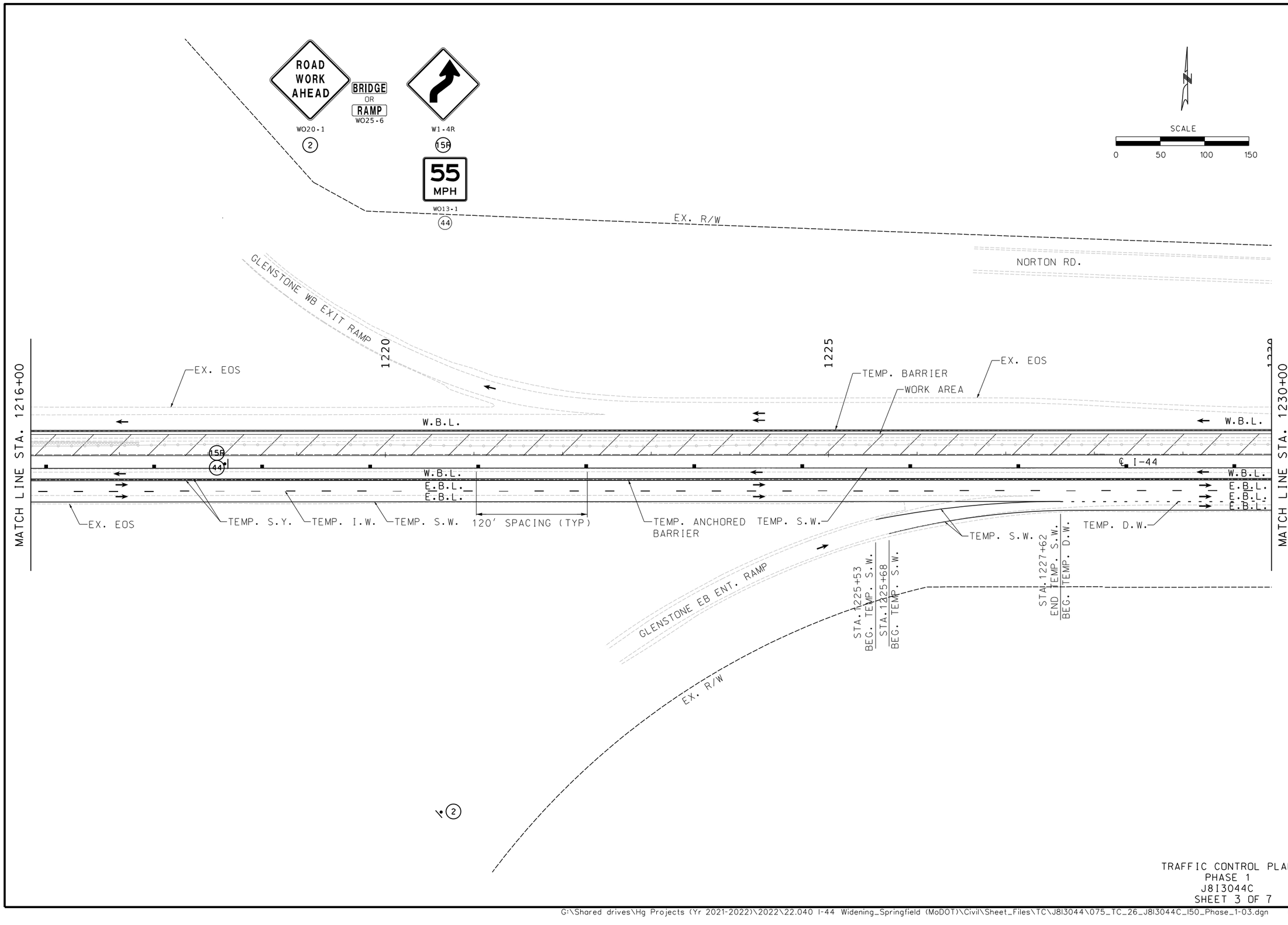
BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873



TRAFFIC CONTROL PLAN
PHASE 1
J8I3044C
SHEET 3 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	75

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

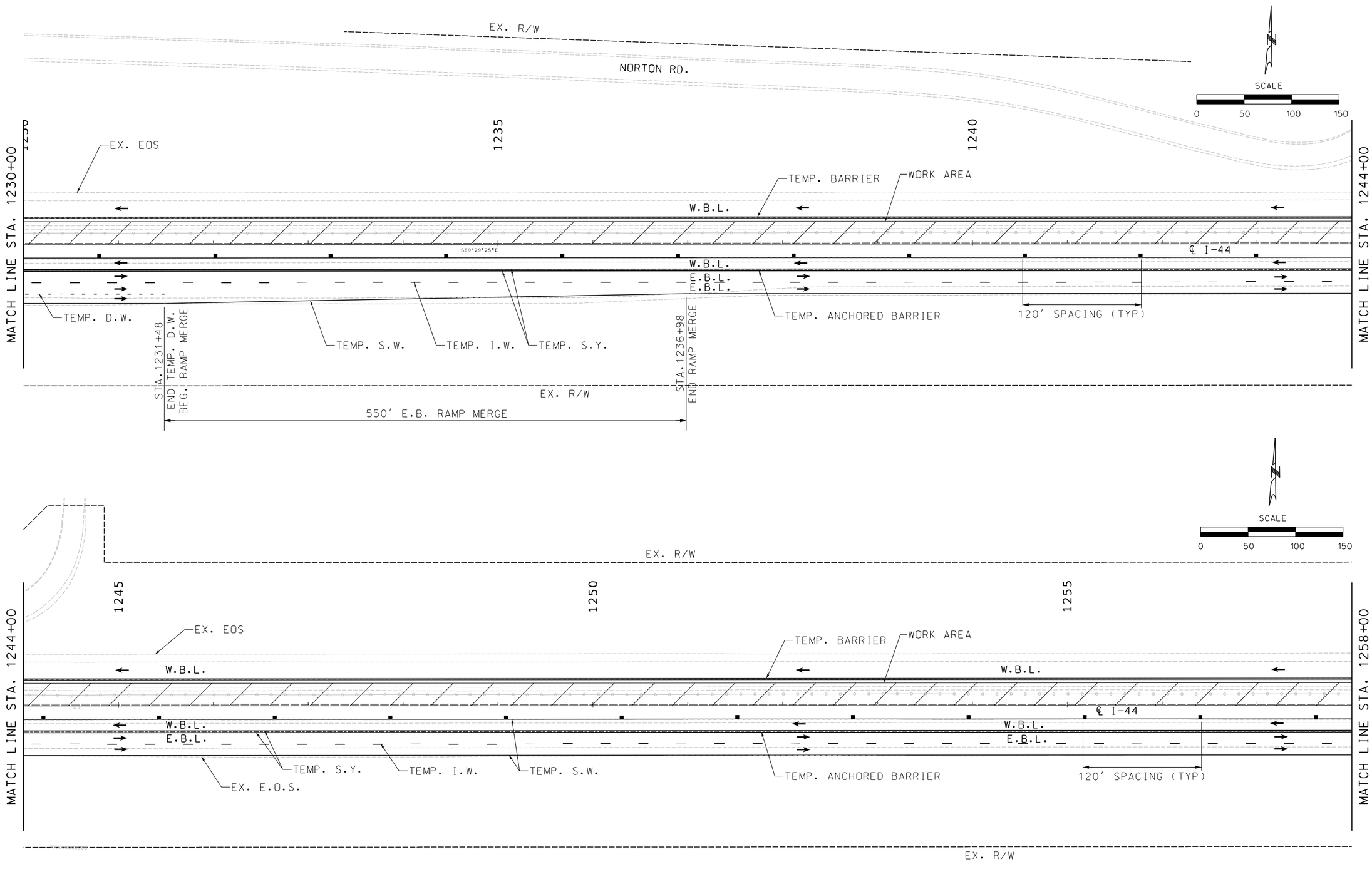
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\075_TC_26_J8I3044C_I50_Phase_1-03.dgn 6:58:11 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 1
J8I3044C
SHEET 4 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/16/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	76
COUNTY	
GREENE	
JOB NO.	
JSU0076, J8I3044C, & JST0088B	
PROJECT NO.	
BRIDGE NO.	

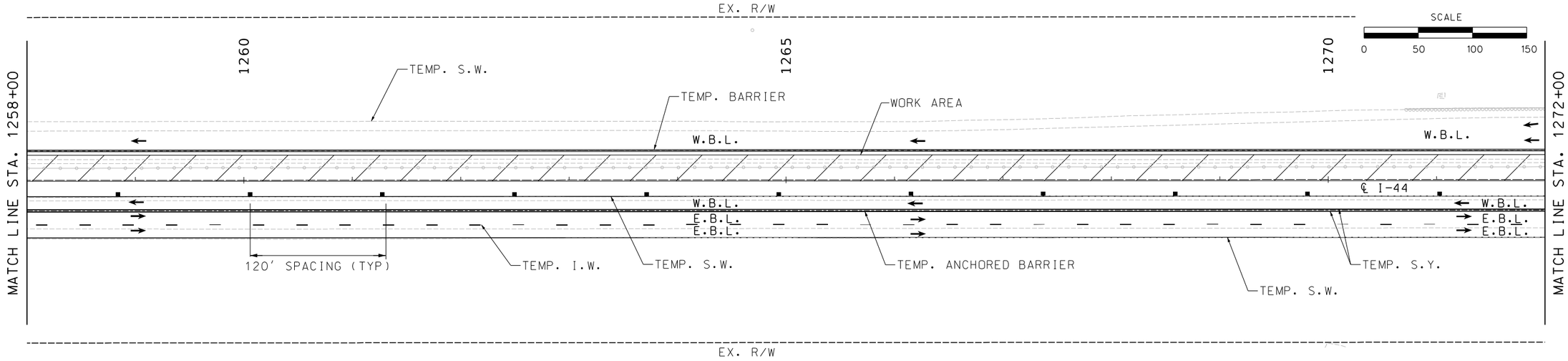
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

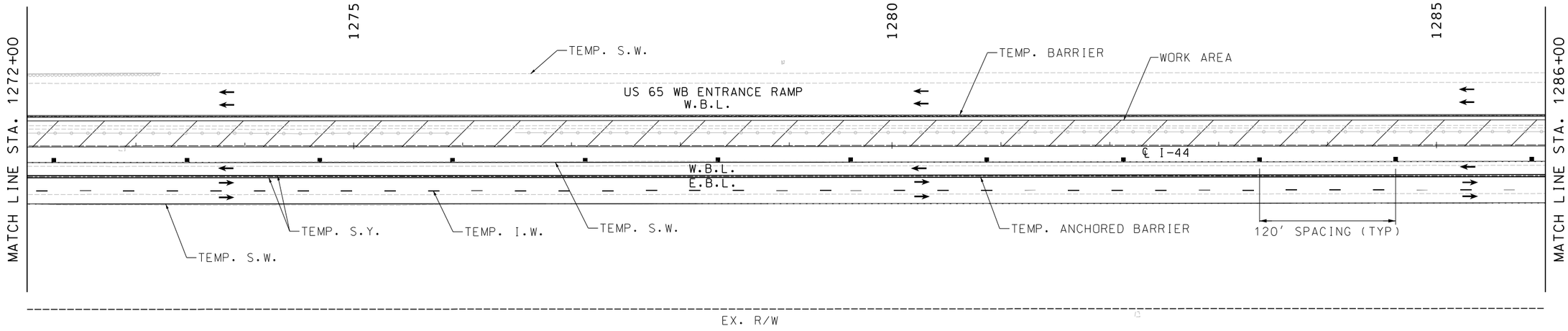
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\076_TC_27_J8I3044C_150_Phase_1-04.dgn 6:58:15 PM 8/16/2024



SCALE
0 50 100 150



SCALE
0 50 100 150

TRAFFIC CONTROL PLAN
PHASE 1
J8I3044C
SHEET 5 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	77

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

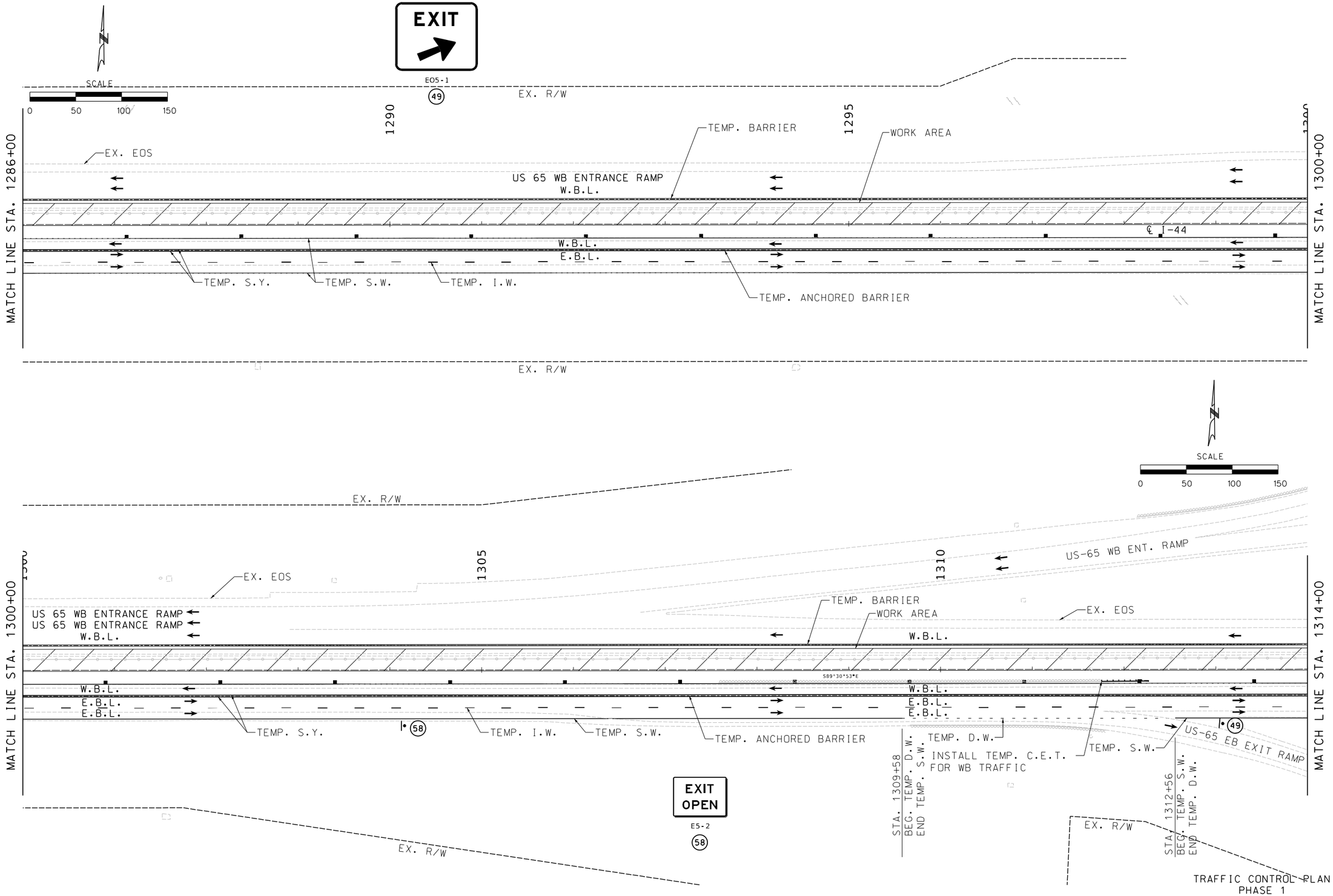
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\077_TC_28_J8I3044C_150_Phase_1-05.dgn 6:58:19 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 1
J8I3044C
SHEET 6 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/16/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	78
COUNTY	
GREENE	
JOB NO.	
JSU0076, J8I3044C, & JST0088B	
PROJECT NO.	
BRIDGE NO.	

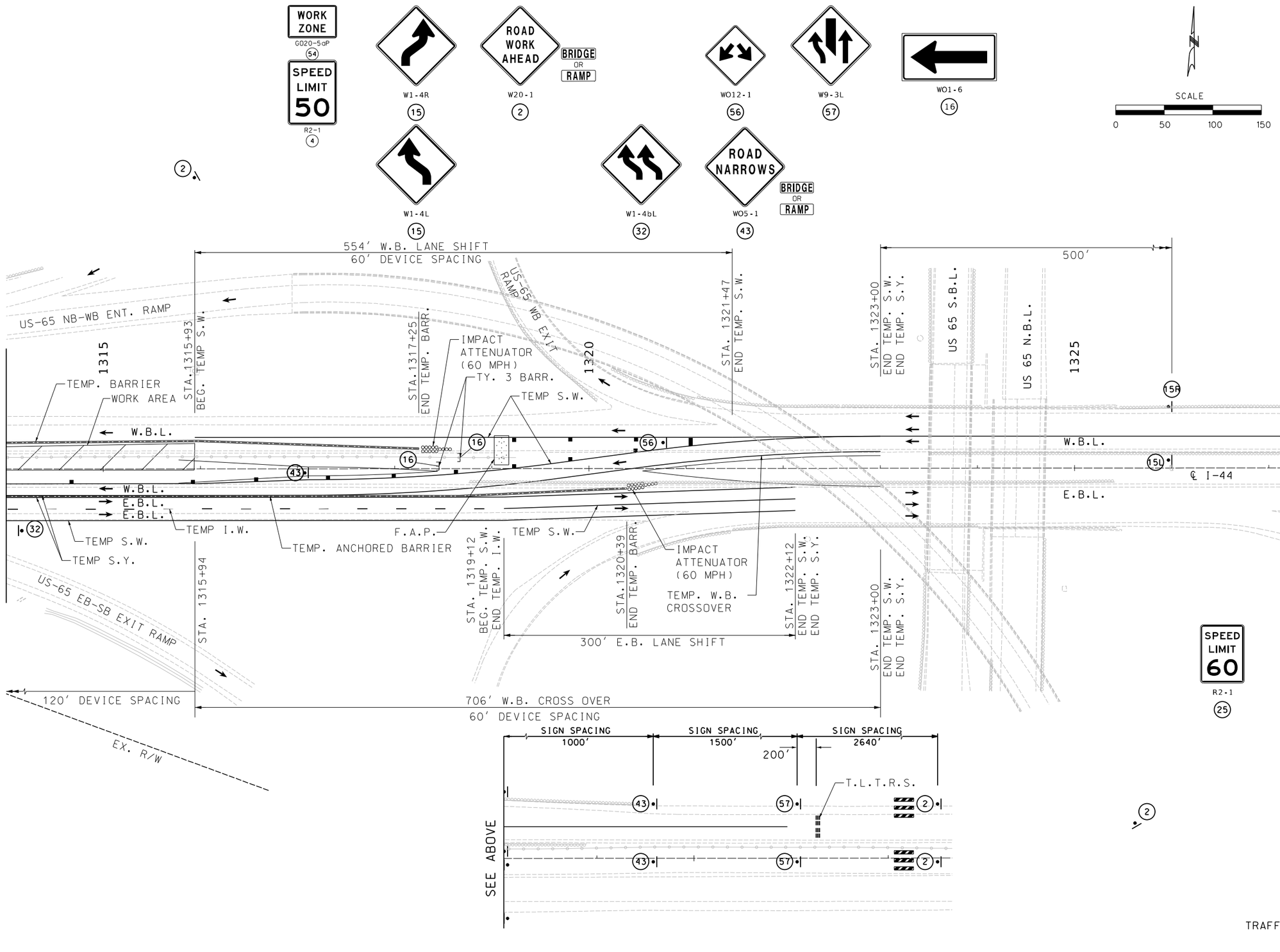
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\078_TC_29_J8I3044C_I50_Phase_1-06.dgn 6:58:23 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 1
J8I3044C
SHEET 7 OF 7

ERIC J. REINKEMEYER
NUMBER PE-2006002846
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	79

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

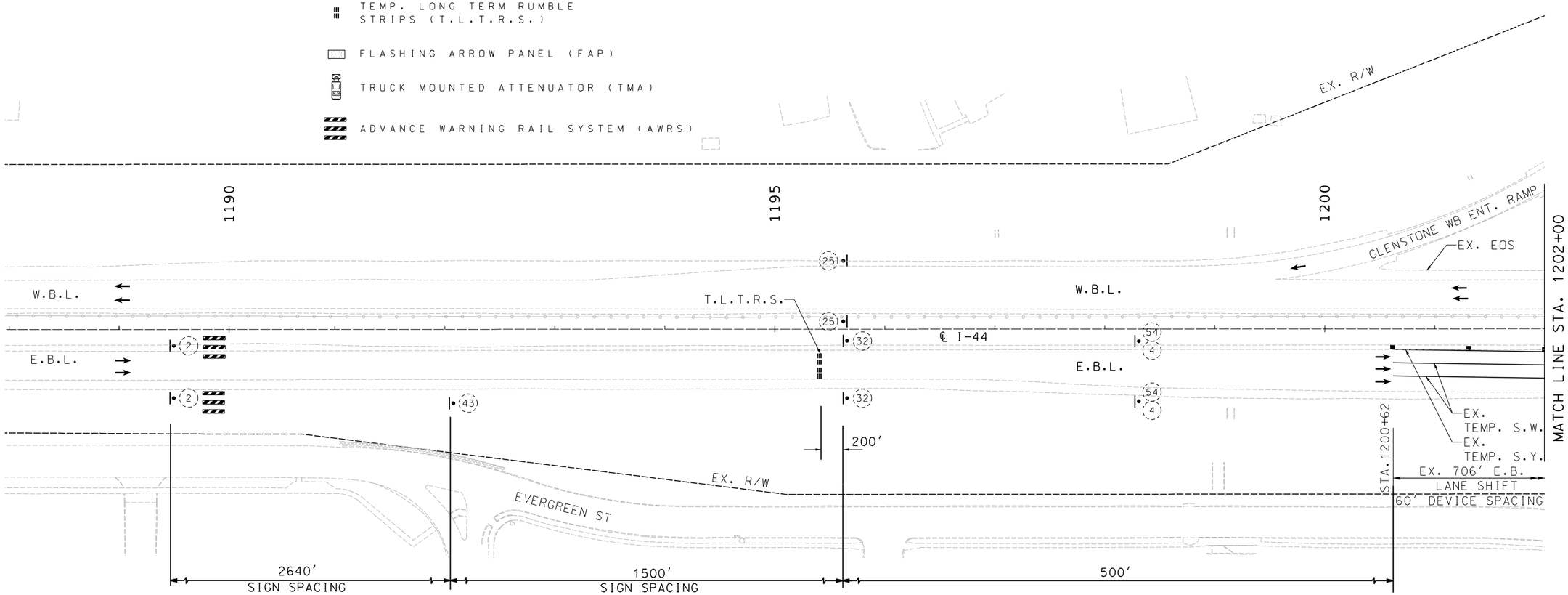
G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\079_TC_30_J8I3044C_I50_Phase_1-07.dgn 8:53:43 PM 8/18/2024

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (DIB) W/ LIGHTS
- CHANNELIZER
- TYPE 3 BARRICADE
- CHANGEABLE MESSAGE BOARD (CMS)
- TEMP. LONG TERM RUMBLE STRIPS (T.L.T.R.S.)
- FLASHING ARROW PANEL (FAP)
- TRUCK MOUNTED ATTENUATOR (TMA)
- ADVANCE WARNING RAIL SYSTEM (AWRS)

SPEED LIMIT 60
R2-1
(25)

SCALE
0 50 100 150



ROAD NARROWS BRIDGE OR RAMP
W05-1
(43)

ROAD WORK AHEAD BRIDGE OR RAMP
W20-1
(2)

W1-4bR
(32)

WORK ZONE
G020-5aP
(54)

SPEED LIMIT 50
R2-1
(4)

TRAFFIC CONTROL PLAN
PHASE 2
J8I3044C
SHEET 1 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/16/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	80

COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

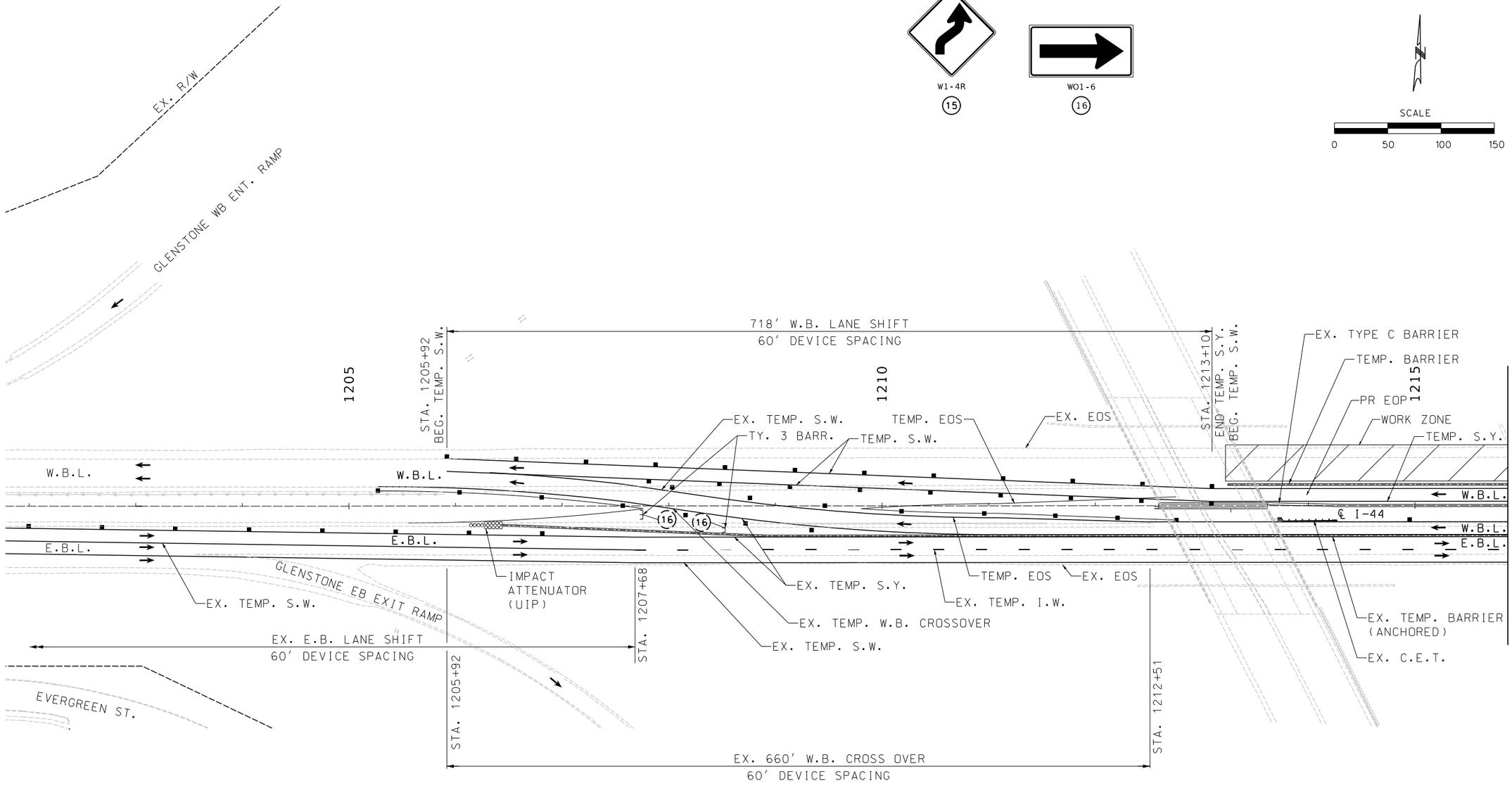
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\080_TC_31_J8I3044C_I50_Phase_2-01.dgn 6:58:33 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 2
J8I3044C
SHEET 2 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	81

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

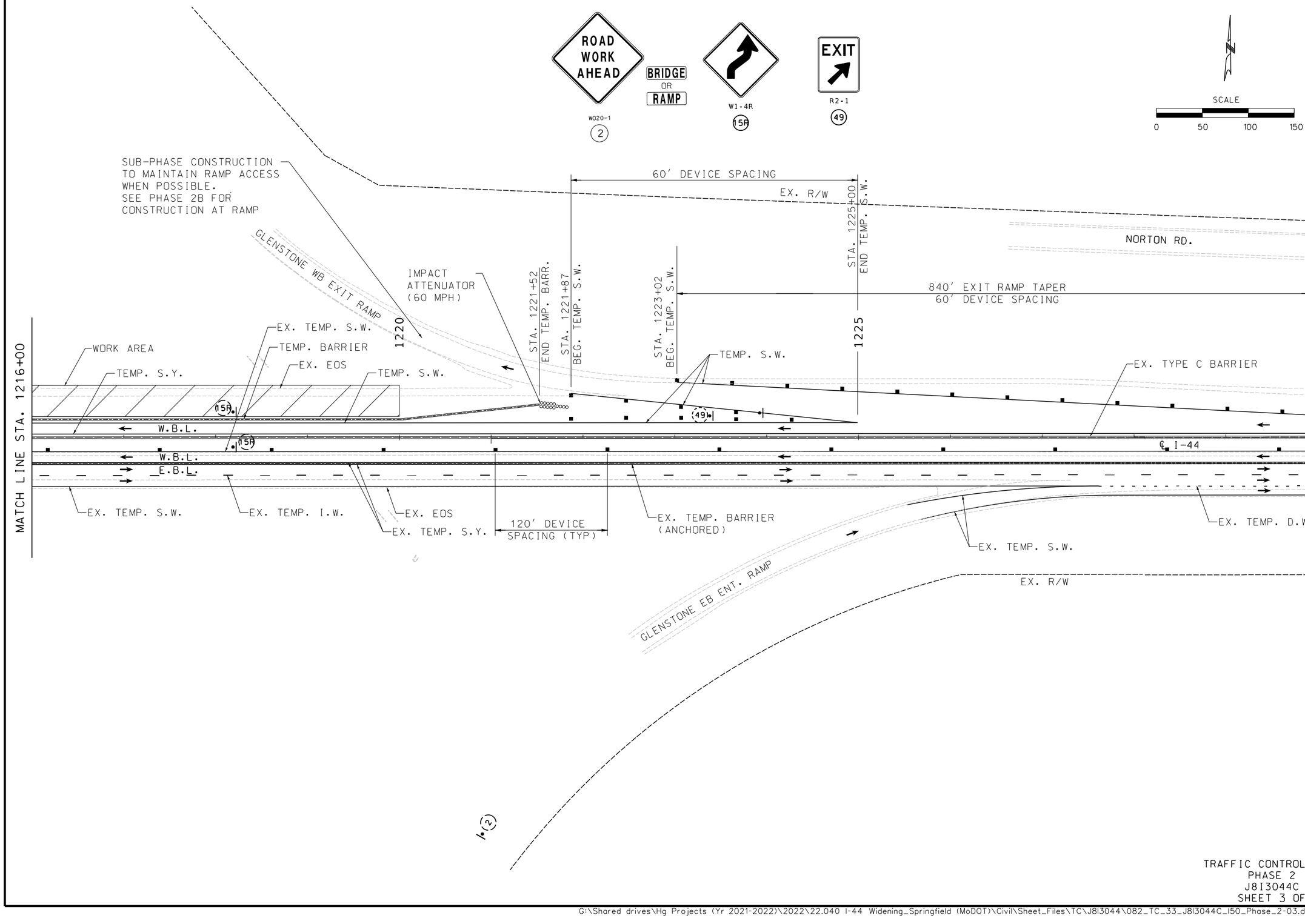
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\081_TC_32_J8I3044C_I50_Phase_2-02.dgn 4:55:44 PM 8/18/2024



TRAFFIC CONTROL PLAN
PHASE 2
J8I3044C
SHEET 3 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/18/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	82
COUNTY	
GREENE	
JOB NO.	
JSU0076, J8I3044C, & JST0088	
PROJECT NO.	
BRIDGE NO.	

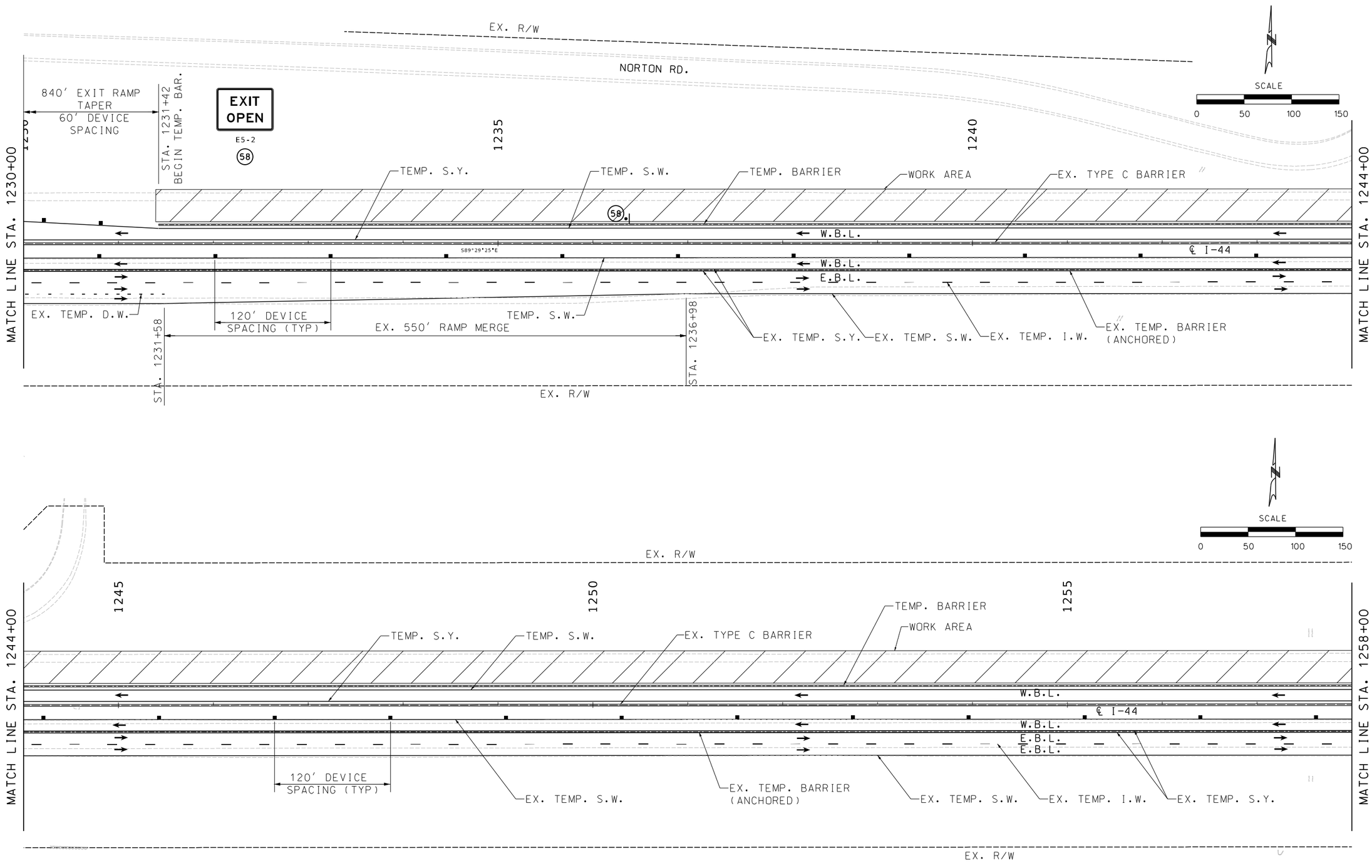
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\082_TC_33_J8I3044C_I50_Phase_2-03.dgn 4:58:30 PM 8/18/2024



TRAFFIC CONTROL PLAN
PHASE 2
J8I3044C
SHEET 4 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	83

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088

PROJECT NO.:

BRIDGE NO.:

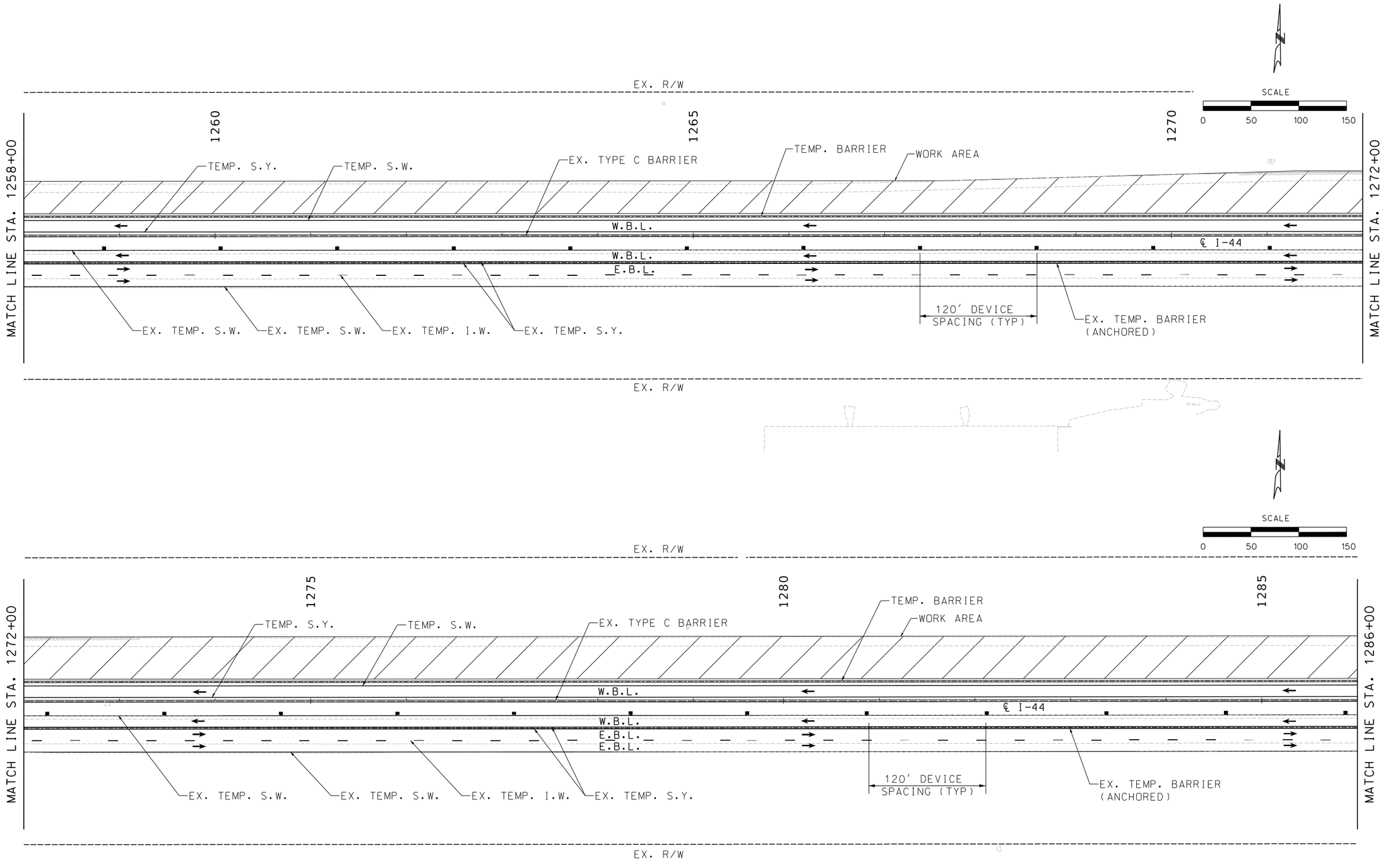
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\083_TC_34_J8I3044C_I50_Phase_2-04.dgn 6:58:46 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 2
J8I3044C
SHEET 5 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	8/18/2024
ROUTE	I-44
STATE	MO
DISTRICT	SW
SHEET NO.	84
COUNTY	GREENE
JOB NO.	JSU0076, J8I3044C, & JST0088
PROJECT NO.	
BRIDGE NO.	

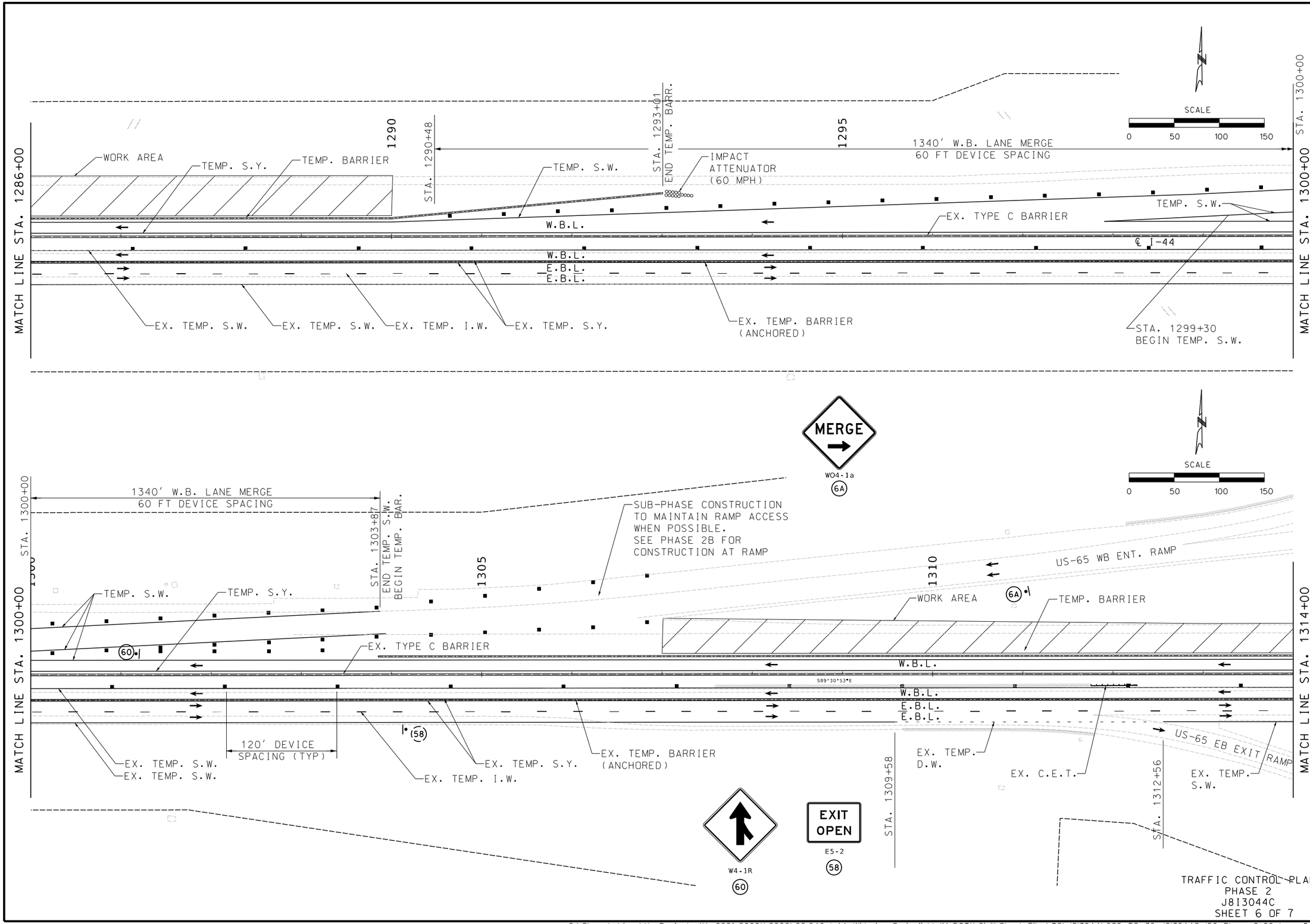
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\084_TC_35_J8I3044C_I50_Phase_2-05.dgn 5:07:11 PM 8/18/2024



TRAFFIC CONTROL PLAN
PHASE 2
J8I3044C
SHEET 6 OF 7

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER
STATE OF MISSOURI

DATE PREPARED: 8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	85

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

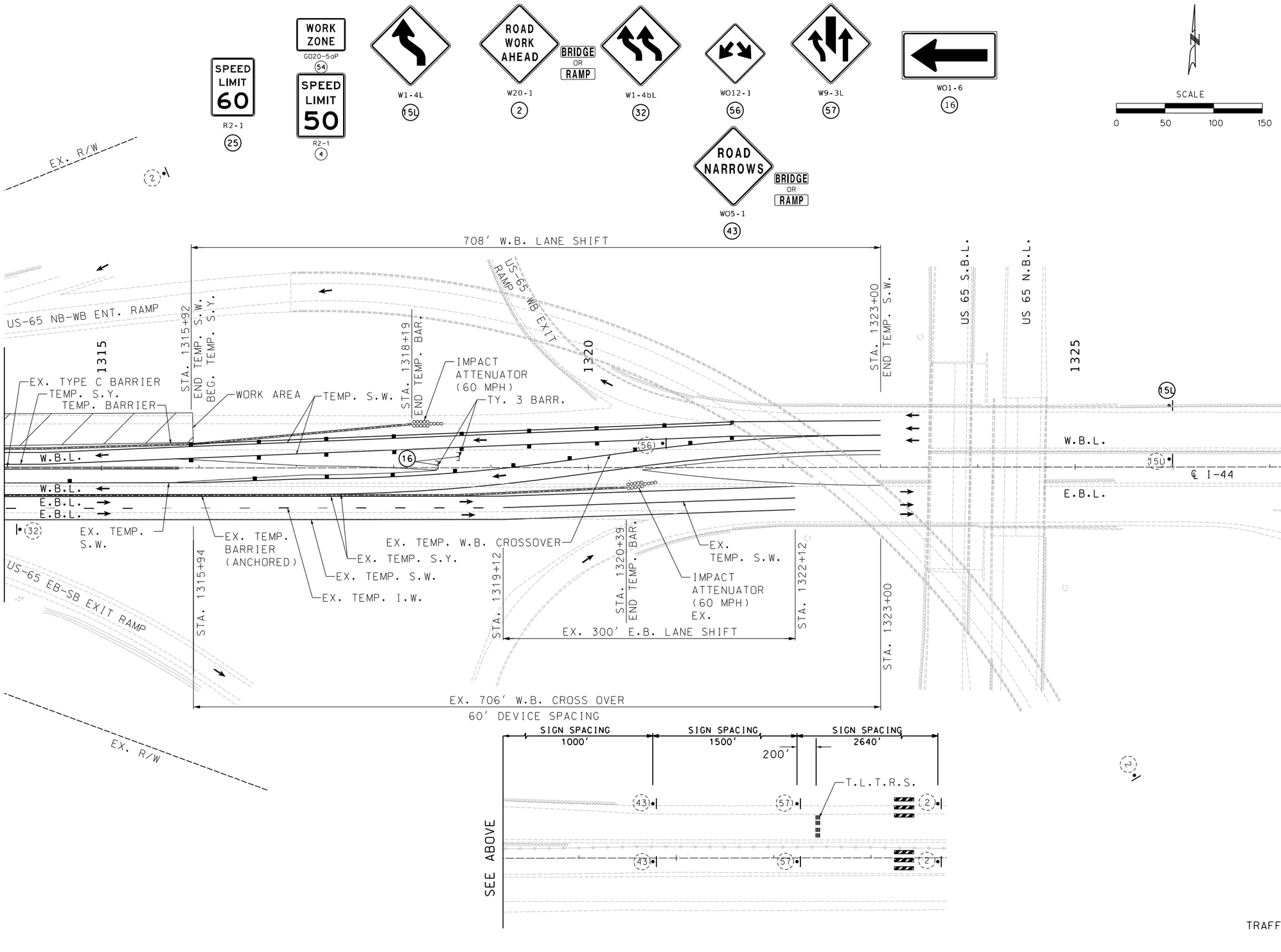
BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158! (816)912-4720



TRAFFIC CONTROL PLAN
PHASE 2
J8I3044C
SHEET 7 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	86

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088

PROJECT NO.:

BRIDGE NO.:

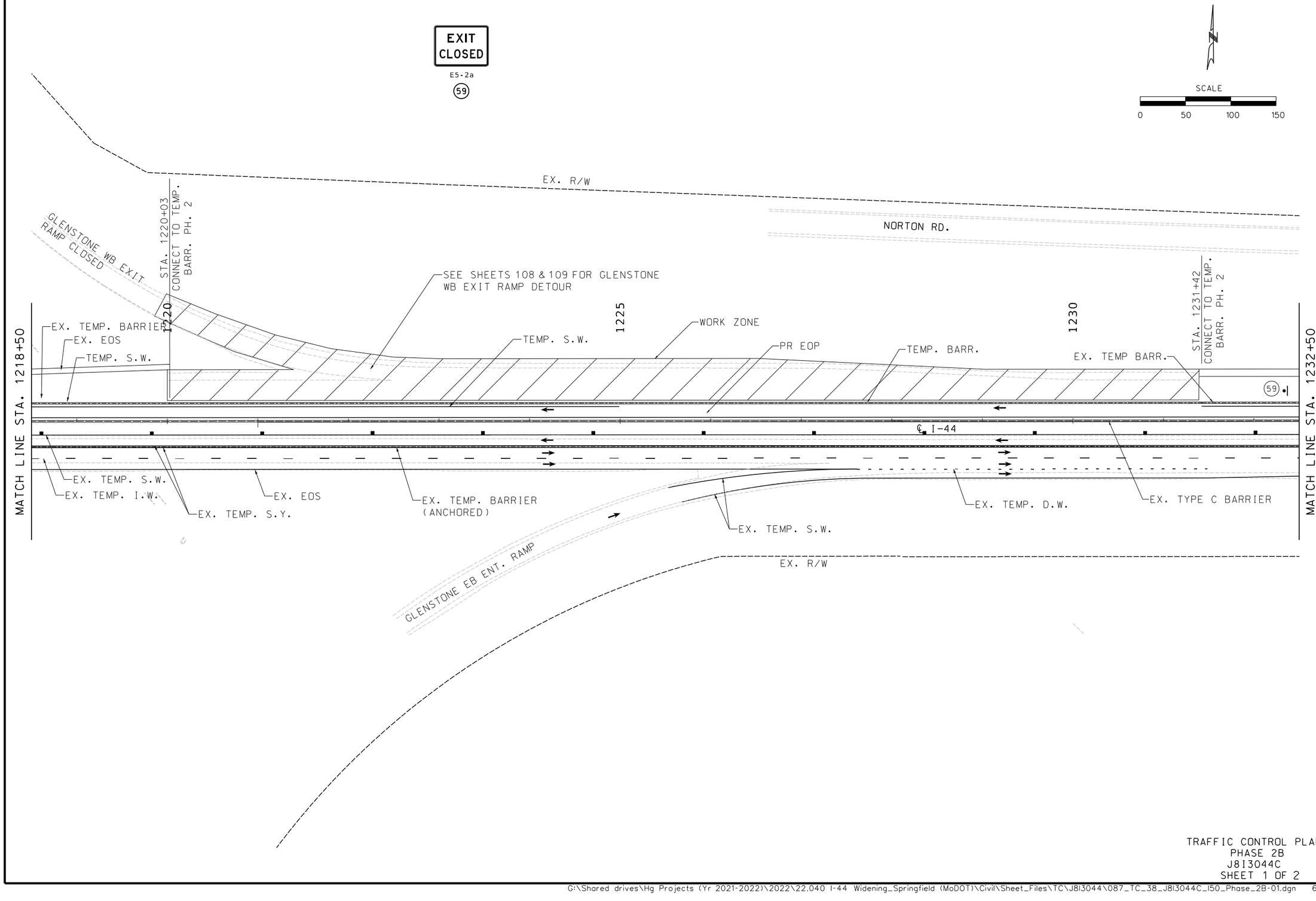
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\086_TC_37_J8I3044C_I50_Phase_2-07.dgn 6:59:05 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 2B
J8I3044C
SHEET 1 OF 2

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

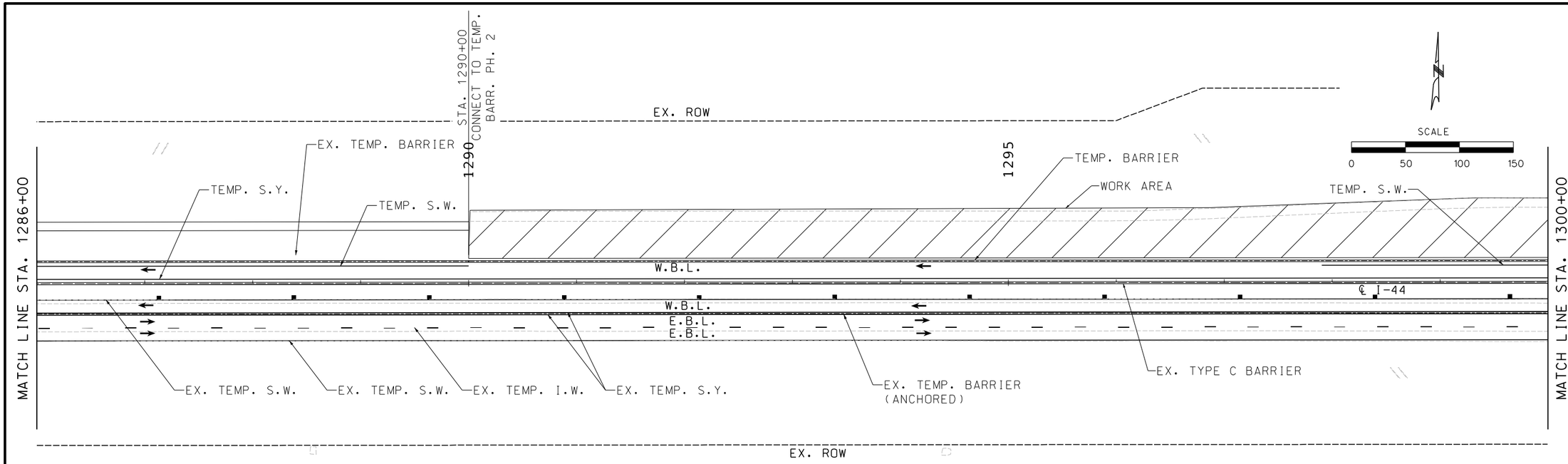
DATE PREPARED	
8/16/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	87
COUNTY	
GREENE	
JOB NO.	
JSU0076, J8I3044C, & JST0088	
PROJECT NO.	
BRIDGE NO.	

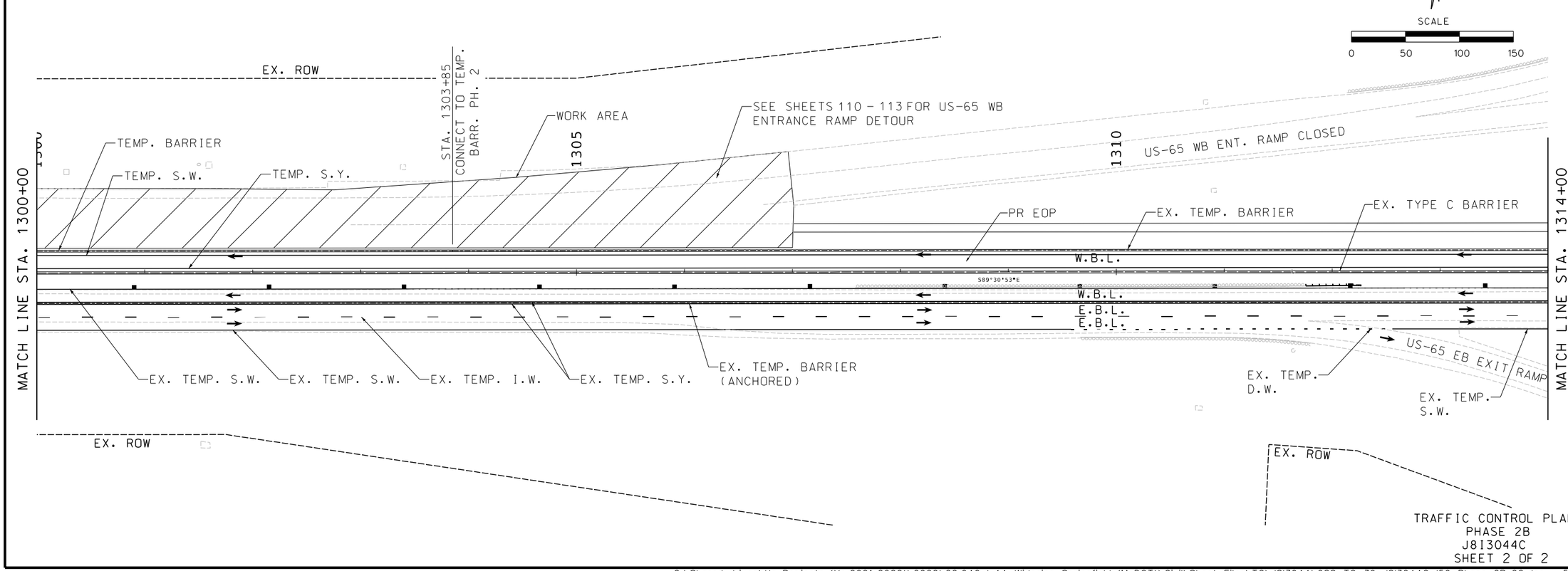
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc. engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\087_TC_38_J8I3044C_150_Phase_2B-01.dgn 6:59:10 PM 8/16/2024





TRAFFIC CONTROL PLAN
PHASE 2B
J8I3044C
SHEET 2 OF 2

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	88

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
PRO. ENGINEER 2010005873

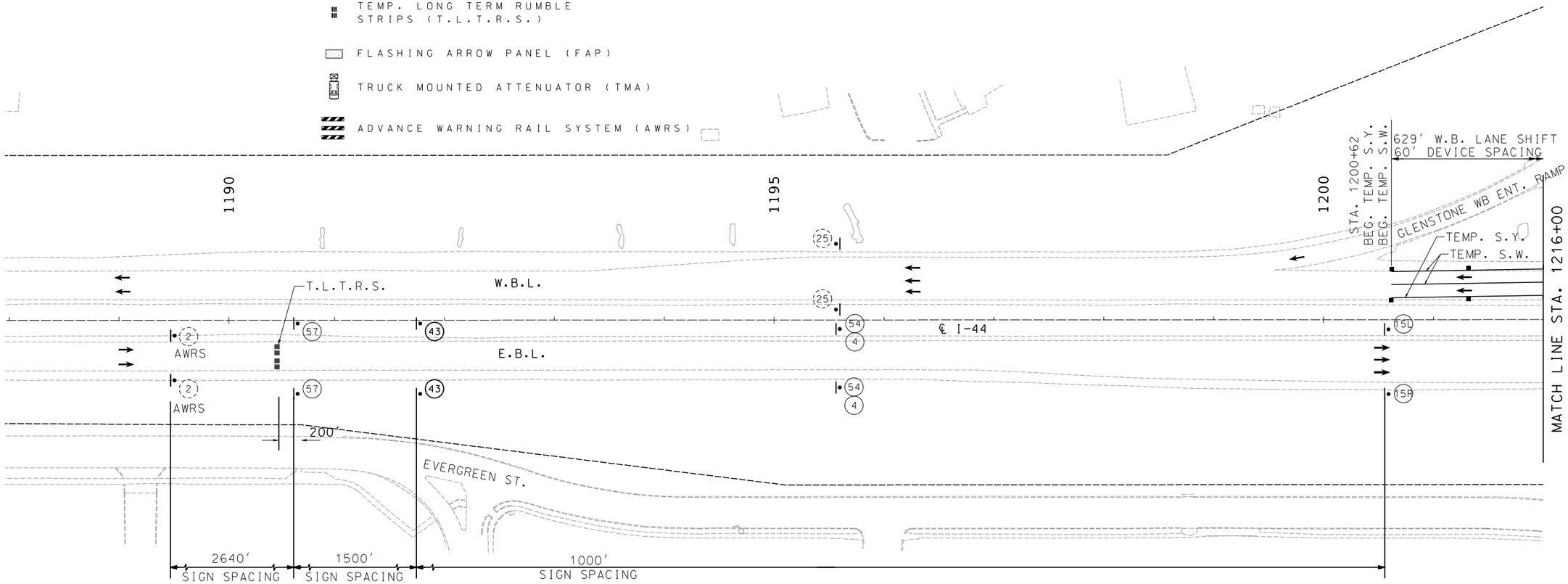
G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\088_TC_39_J8I3044C_I50_Phase_2B-02.dgn 5:12:02 PM 8/18/2024

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (DIB) W/ LIGHTS
- CHANNELIZER
- TYPE 3 BARRICADE
- CHANGEABLE MESSAGE BOARD (CMS)
- TEMP. LONG TERM RUMBLE STRIPS (T.L.T.R.S.)
- FLASHING ARROW PANEL (FAP)
- TRUCK MOUNTED ATTENUATOR (TMA)
- ADVANCE WARNING RAIL SYSTEM (AWRS)

SPEED LIMIT 60
R2-1
(25)

SCALE
0 50 100 150



ROAD NARROWS
W05-1
(43)

ROAD WORK AHEAD
BRIDGE OR RAMP
W20-1
(2)

WORK ZONE
G020-5aP
(54)

SPEED LIMIT 50
R2-1
(4)

W9-3L
(57)

W1-4R
(15)

W1-4L
(15)

TRAFFIC CONTROL PLAN
PHASE 3
J8I3044C
SHEET 1 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	89

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

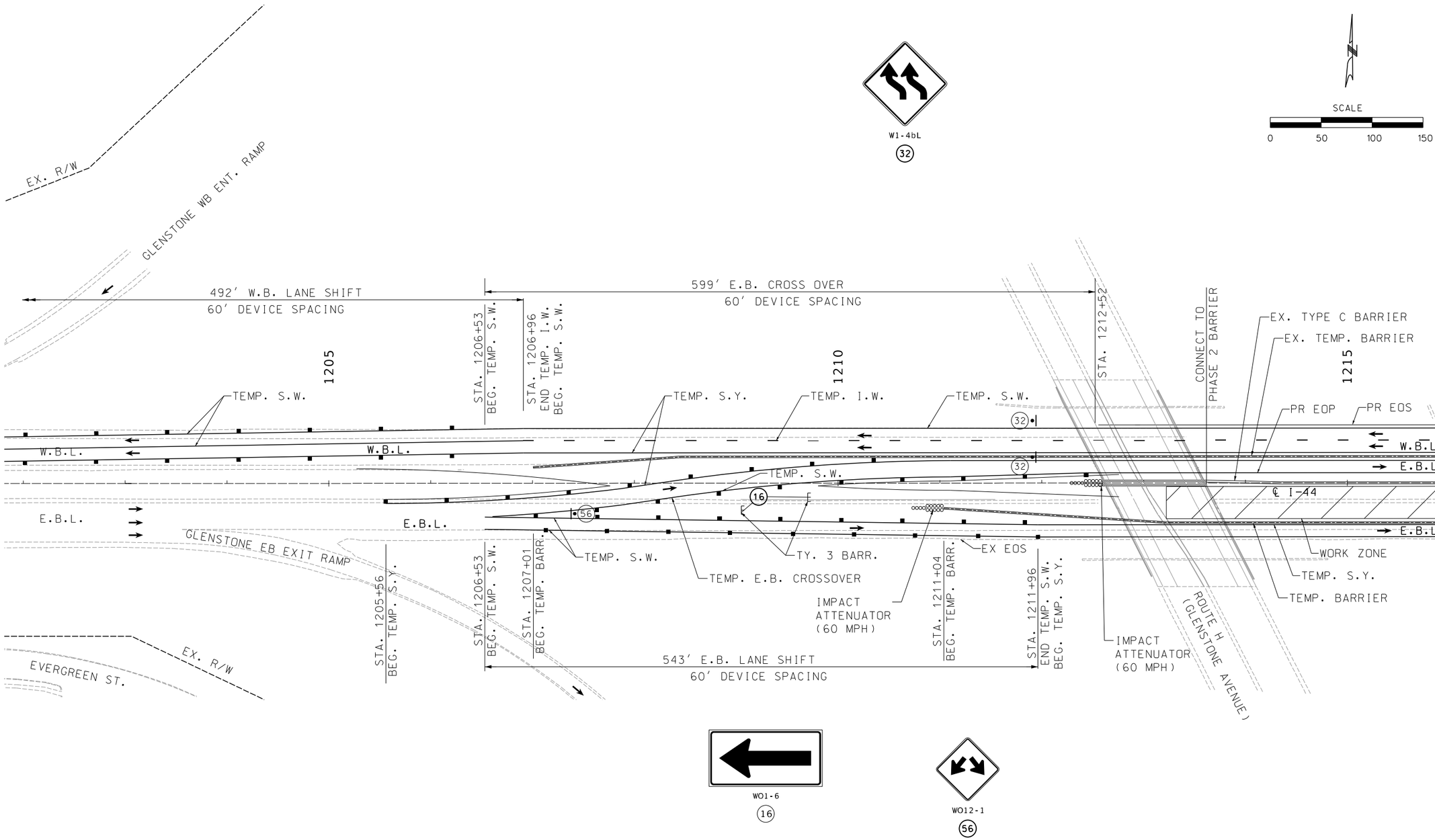
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\089_TC_40_J8I3044C_150_Phase_3-01.dgn 6:59:19 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 3
J8I3044C
SHEET 2 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/16/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	90

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088

PROJECT NO.:

BRIDGE NO.:

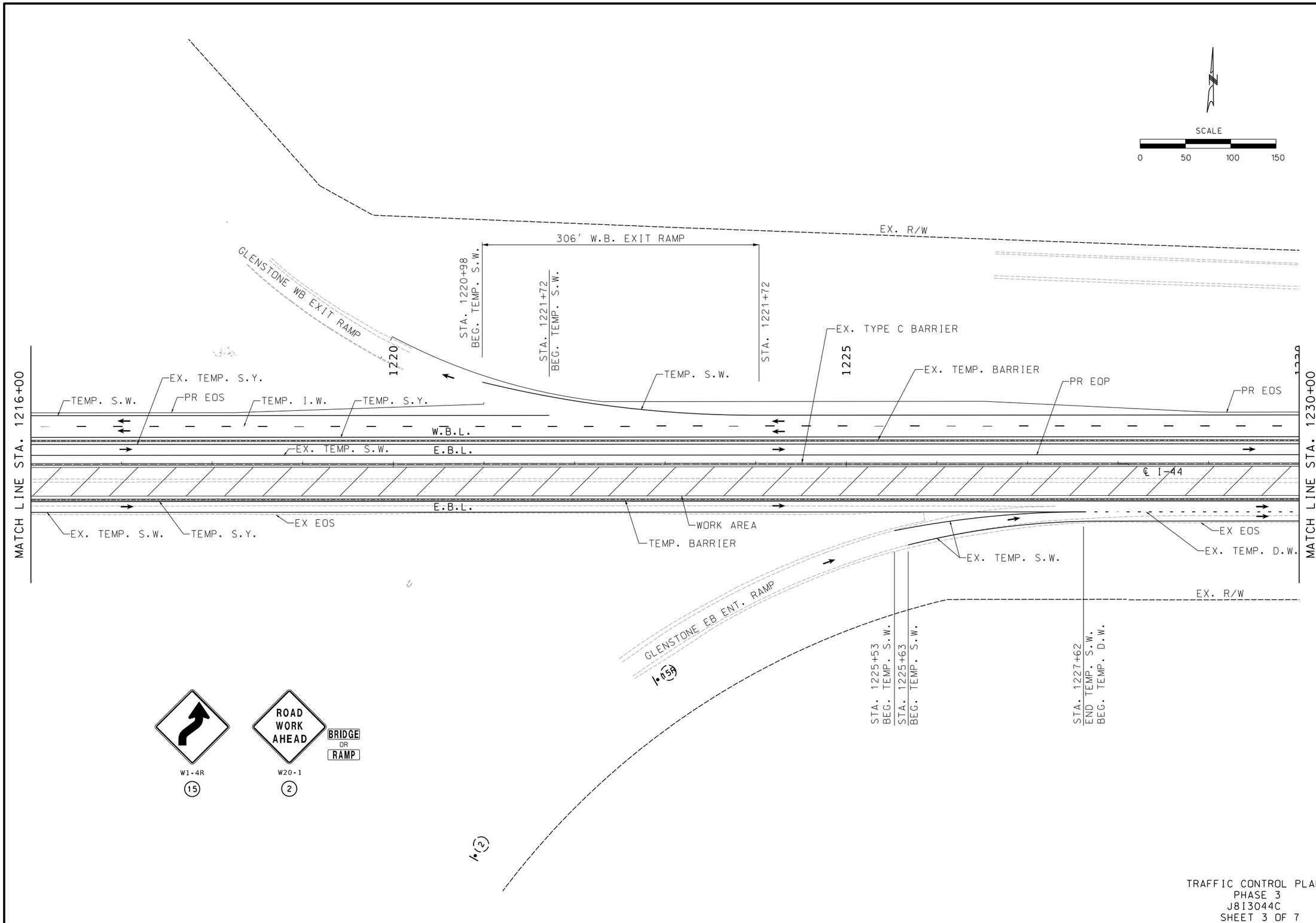
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc. engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\090_TC_41_J8I3044C_I50_Phase_3-02.dgn 6:59:24 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 3
J8I3044C
SHEET 3 OF 7

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\091_TC_42_J8I3044C_I50_Phase_3-03.dgn 5:16:12 PM 8/18/2024

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	91

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

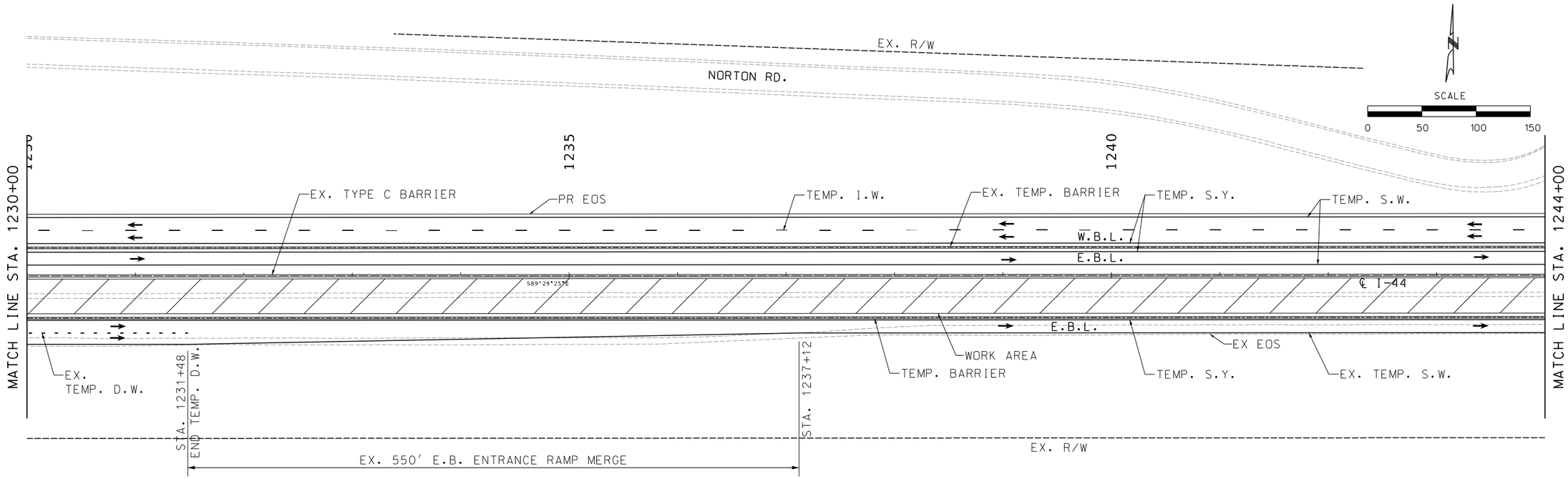
BRIDGE NO.

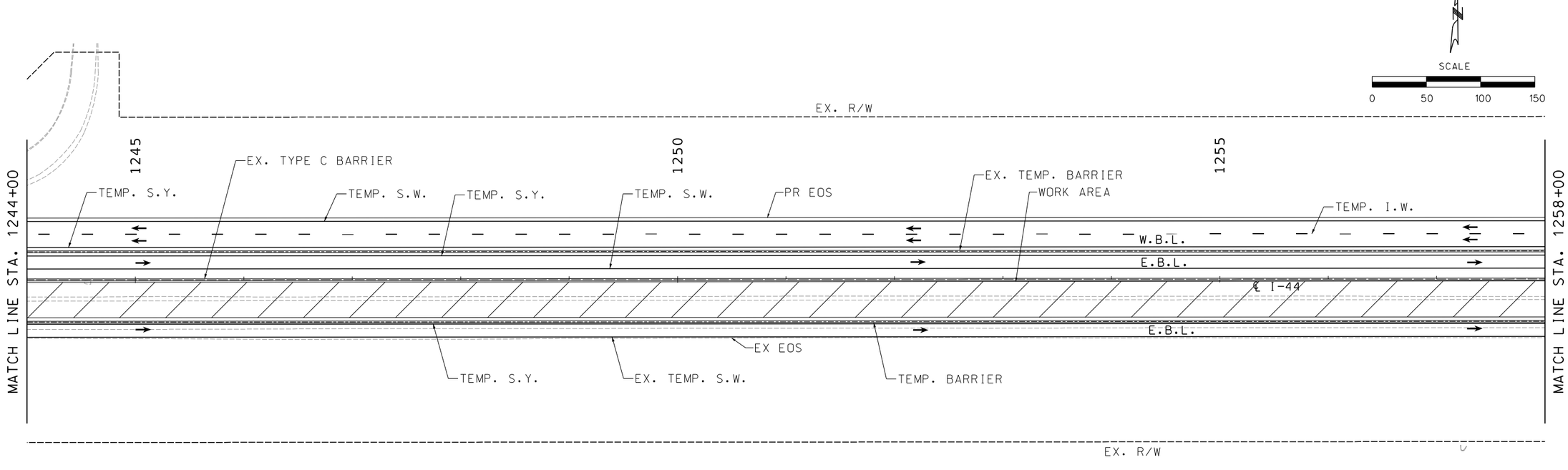
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873





TRAFFIC CONTROL PLAN
PHASE 3
J8I3044C
SHEET 4 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	92

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088

PROJECT NO.:

BRIDGE NO.:

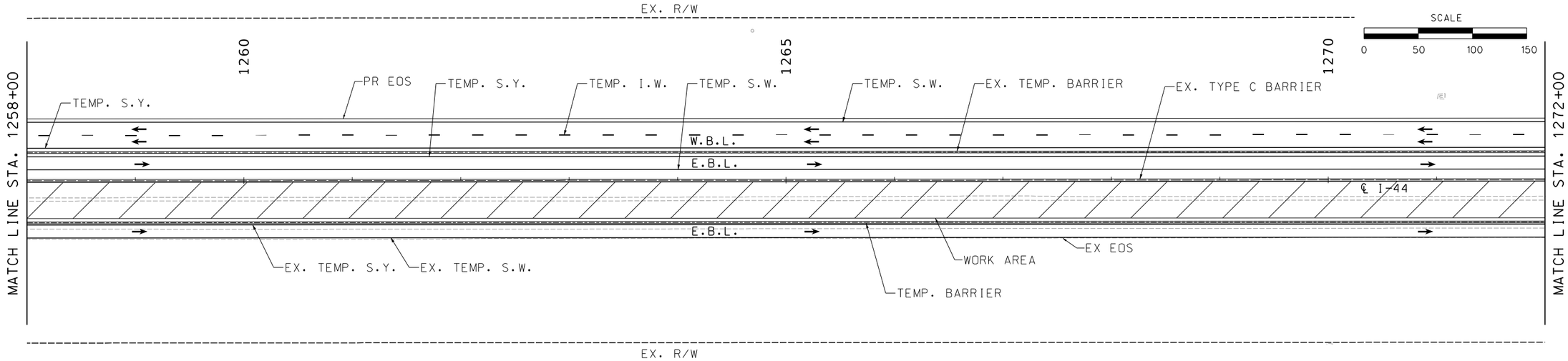
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

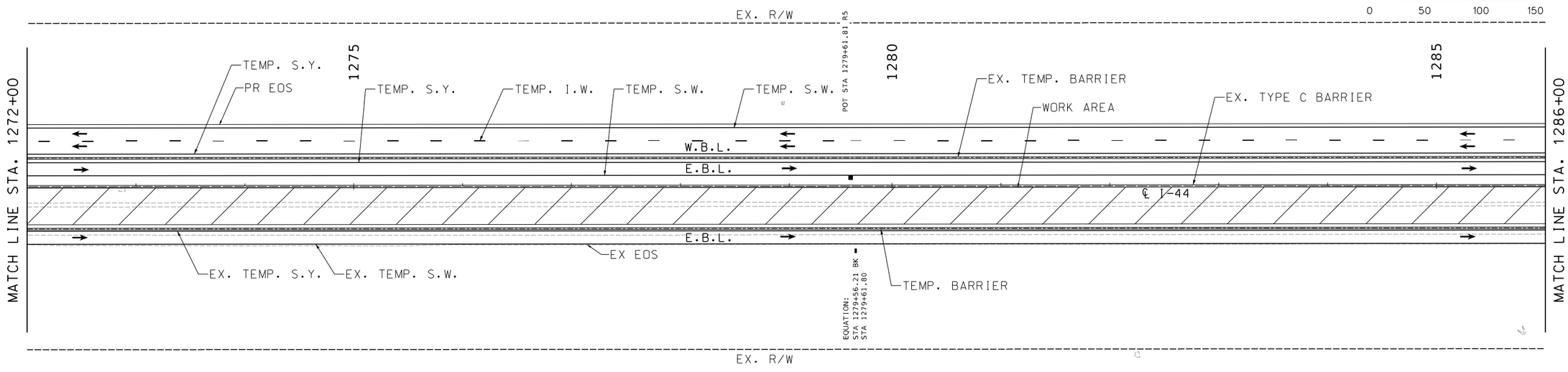
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\092_TC_43_J8I3044C_I50_Phase_3-04.dgn 6:59:33 PM 8/16/2024



SCALE
0 50 100 150



SCALE
0 50 100 150

TRAFFIC CONTROL PLAN
PHASE 3
J8I3044C
SHEET 5 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	93

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

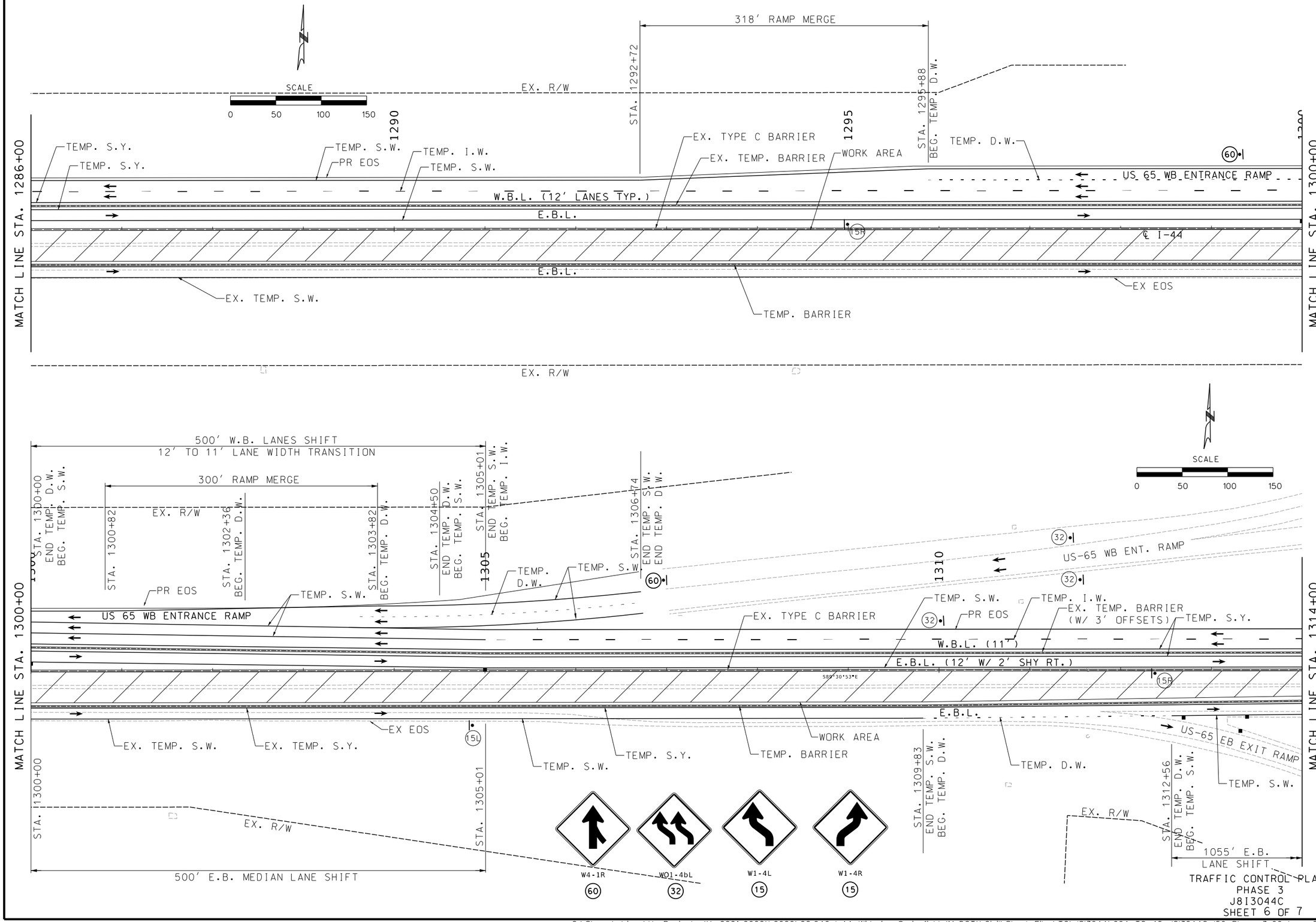
DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\093_TC_44_J8I3044C_I50_Phase_3-05.dgn 6:59:38 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 3
J8I3044C
SHEET 6 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	94

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

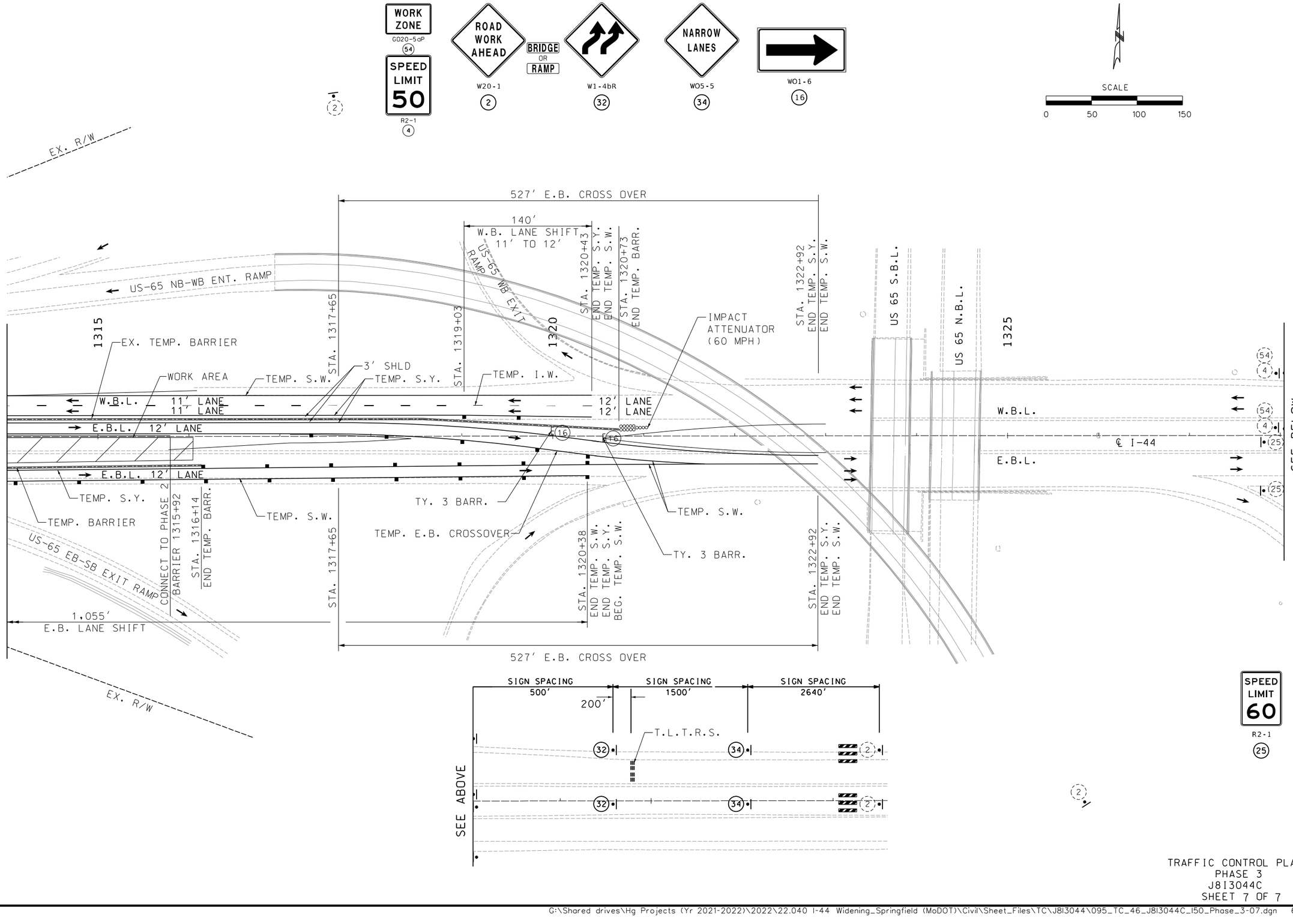
DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\094_TC_45_J8I3044C_I50_Phase_3-06.dgn 6:59:42 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 3
J8I3044C
SHEET 7 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/16/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	95

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

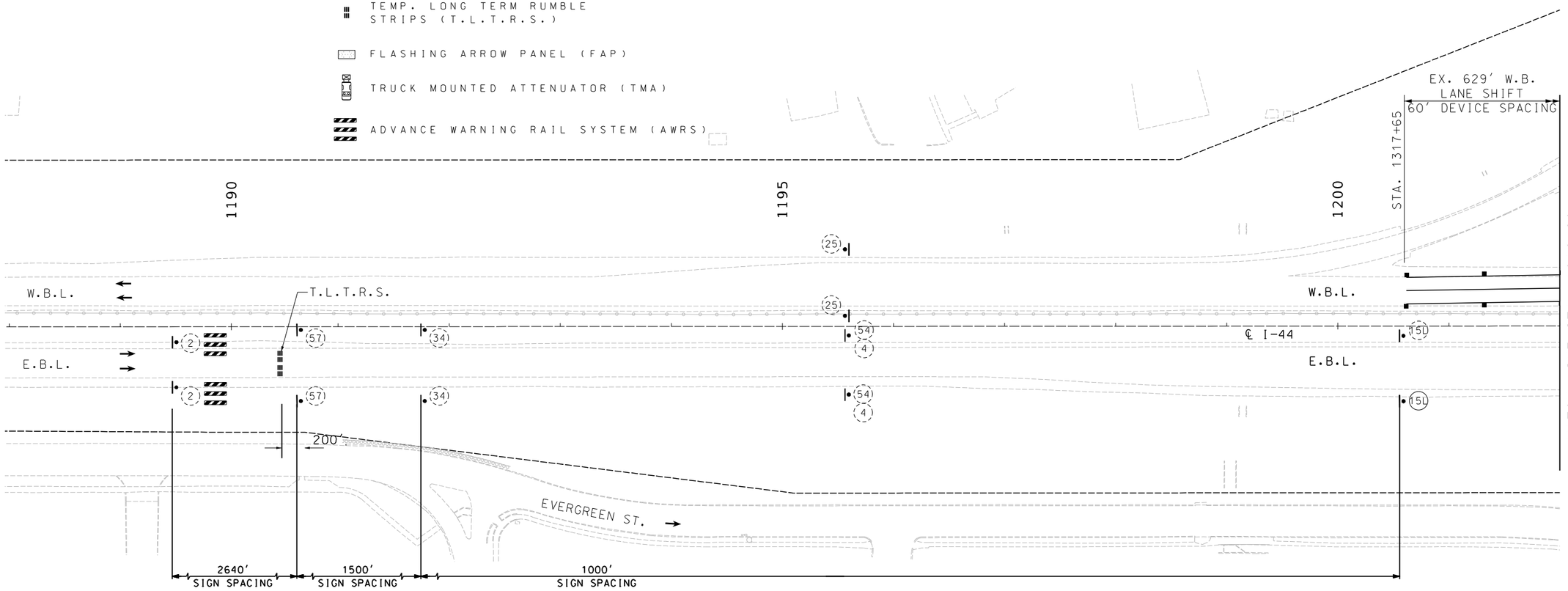
G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\095_TC_46_J8I3044C_I50_Phase_3-07.dgn 6:59:46 PM 8/16/2024

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (DIB) W/ LIGHTS
- CHANNELIZER
- TYPE 3 BARRICADE
- CHANGEABLE MESSAGE BOARD (CMS)
- TEMP. LONG TERM RUMBLE STRIPS (T.L.T.R.S.)
- FLASHING ARROW PANEL (FAP)
- TRUCK MOUNTED ATTENUATOR (TMA)
- ADVANCE WARNING RAIL SYSTEM (AWRS)

SPEED LIMIT 60
R2-1
(25)

SCALE
0 50 100 150



NARROW LANES
WO5-5
(34)

ROAD WORK AHEAD
BRIDGE OR RAMP
W20-1
(2)

WORK ZONE
G020-5aP
(54)

SPEED LIMIT 50
R2-1
(4)

W9-3L
(57)

W1-4L
(15)

TRAFFIC CONTROL PLAN
PHASE 4
J8I3044C
SHEET 1 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	96

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

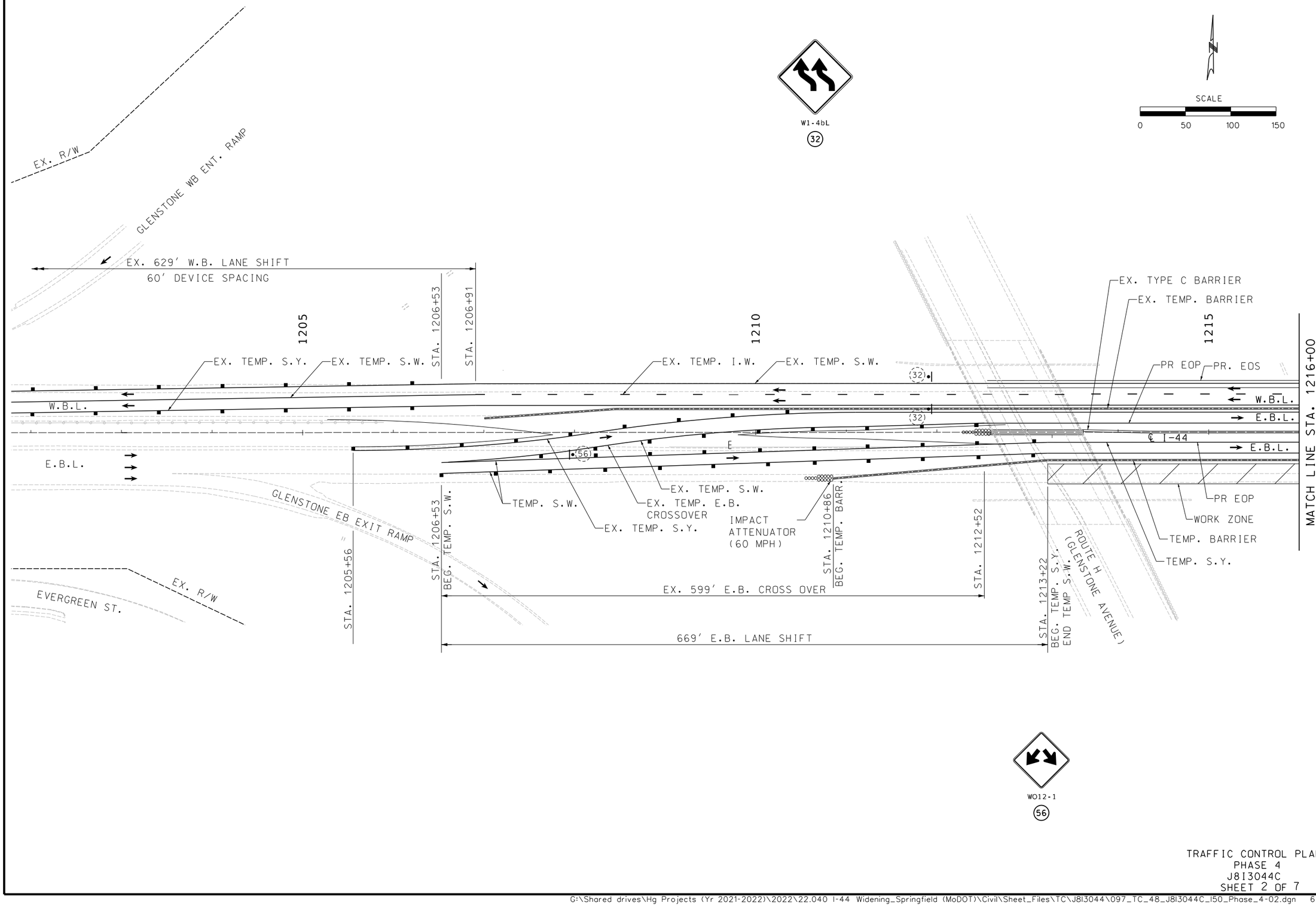
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\096_TC_47_J8I3044C_I50_Phase_4-01.dgn 6:59:51 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 4
J8I3044C
SHEET 2 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	97

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\097_TC_48_J8I3044C_I50_Phase_4-02.dgn 6:59:56 PM 8/16/2024

GLENSTONE WB EXIT RAMP

EX. 306' W.B. EXIT RAMP

STA. 1220+98 BEG. TEMP. S.W.

STA. 1221+72 END TEMP. S.W.

STA. 1221+72

EX. TYPE C BARRIER

EX. TEMP. S.W.

EX. TEMP. BARRIER

EX. TEMP. I.W.

EX. TEMP. S.Y.

PR EOS

PR EOP

EX. TEMP. S.W.

1220

1225

1230

MATCH LINE STA. 1216+00

MATCH LINE STA. 1230+00

W.B.L.

E.B.L.

E.B.L.

℄ I-44

PR EOP

TEMP. S.W.

TEMP. S.Y.

TEMP. BARRIER

WORK AREA

60

13

500'

11

STA. 1225+56 END TEMP. BARR.

STA. 1227+44 BEG. TEMP. S.W.

TEMP. S.W.

60' DEVICE SPACING

1345' E.B. RAMP MERGE

60' DEVICE SPACING

SUB-PHASE CONSTRUCTION
TO MAINTAIN RAMP ACCESS
WHEN POSSIBLE.
SEE PHASE 4B FOR
CONSTRUCTION AT RAMP

GLENSTONE EB ENT. RAMP

W4-1R

60

BE PREPARED TO STOP

W03-4

11

YIELD

R1-2

13

SCALE

0 50 100 150

TRAFFIC CONTROL PLAN
PHASE 4
J8I3044C
SHEET 3 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	98

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

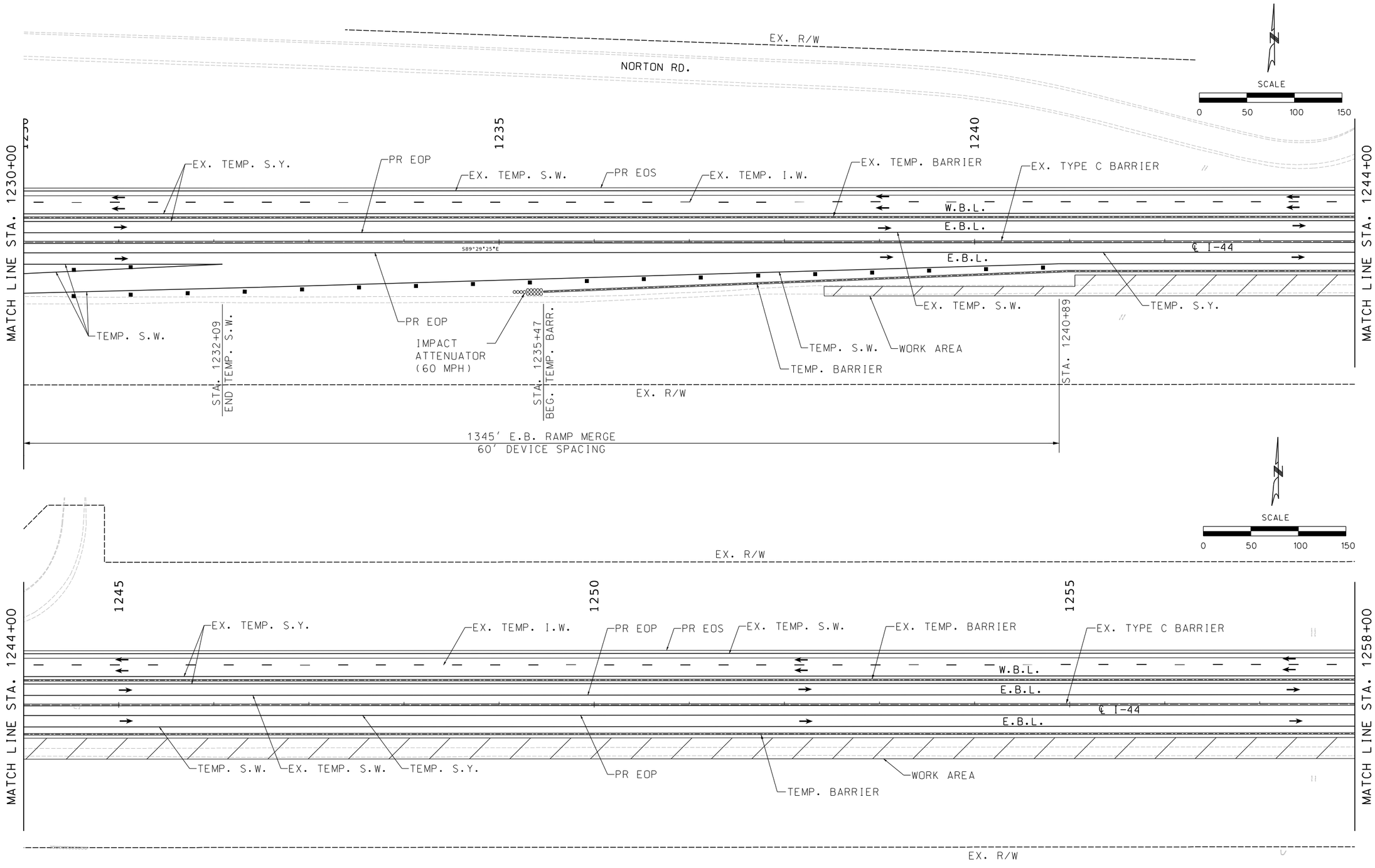
BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
PRO. ENGINEER 2010005873



TRAFFIC CONTROL PLAN
PHASE 4
J8I3044C
SHEET 4 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/16/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	99
COUNTY	
GREENE	
JOB NO.	
JSU0076, J8I3044C, & JST0088B	
PROJECT NO.	
BRIDGE NO.	

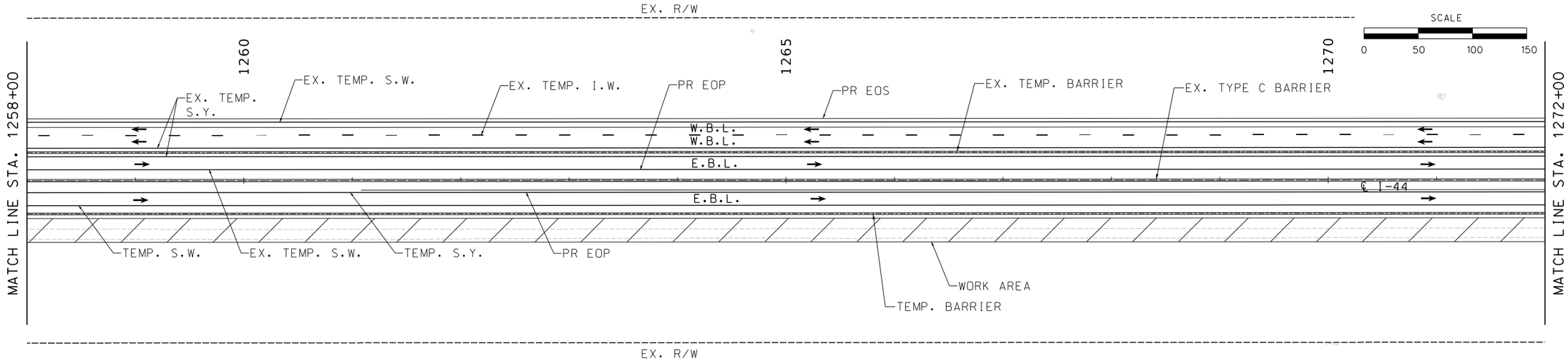
DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

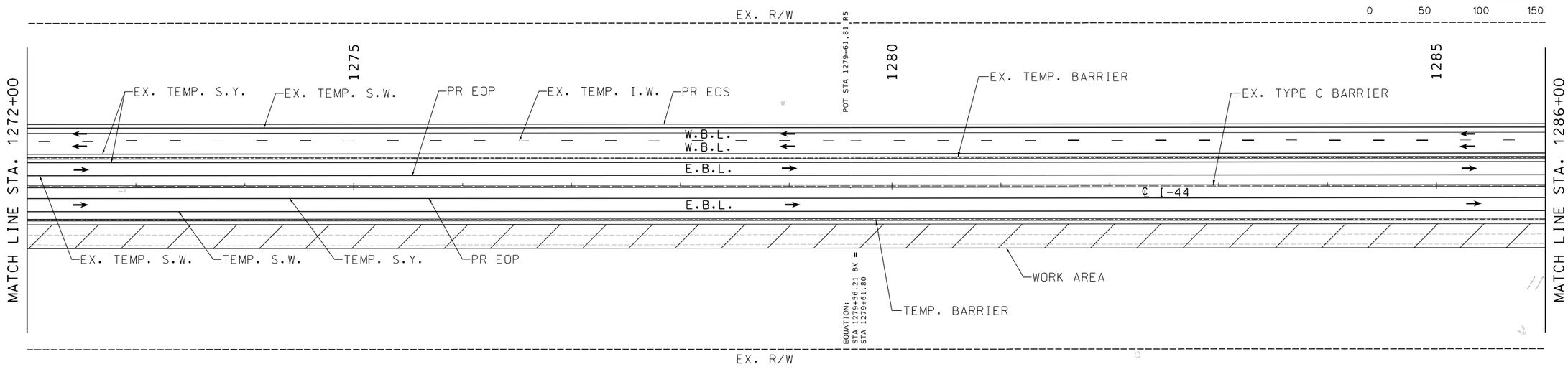
Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\099_TC_50_J8I3044C_I50_Phase_4-04.dgn 7:00:04 PM 8/16/2024



SCALE

0 50 100 150



SCALE

0 50 100 150

TRAFFIC CONTROL PLAN
PHASE 4
J8I3044C
SHEET 5 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	100

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

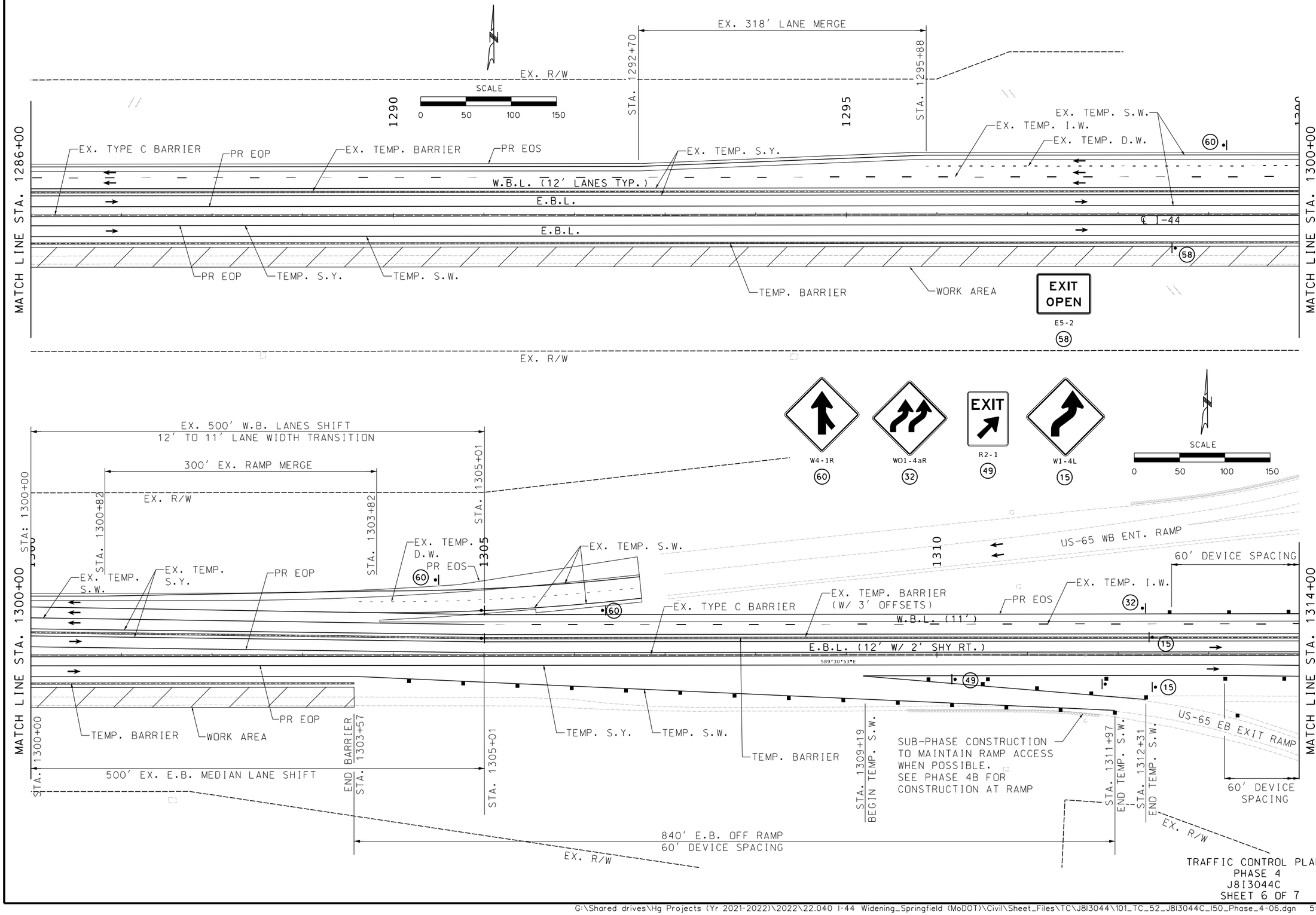
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\100_TC_51_J8I3044C_150_Phase_4-05.dgn 7:00:08 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 4
J8I3044C
SHEET 6 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	101

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088

PROJECT NO.:

BRIDGE NO.:

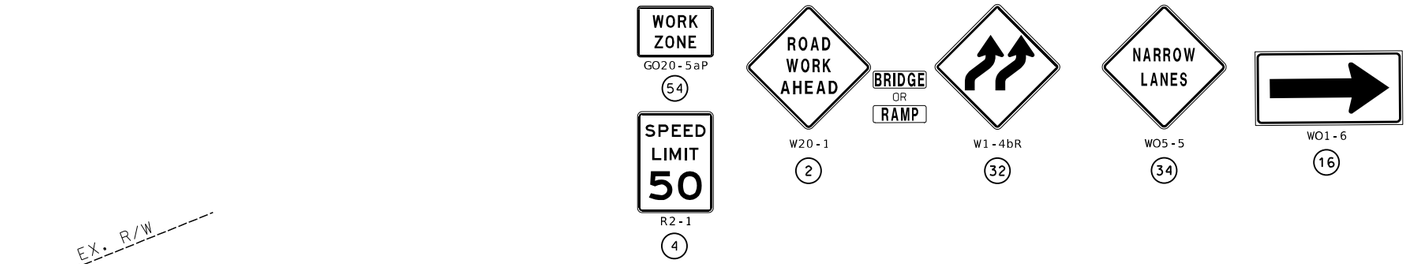
DATE	DESCRIPTION

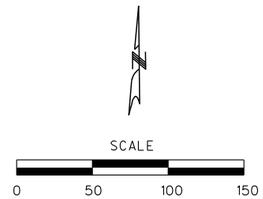
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

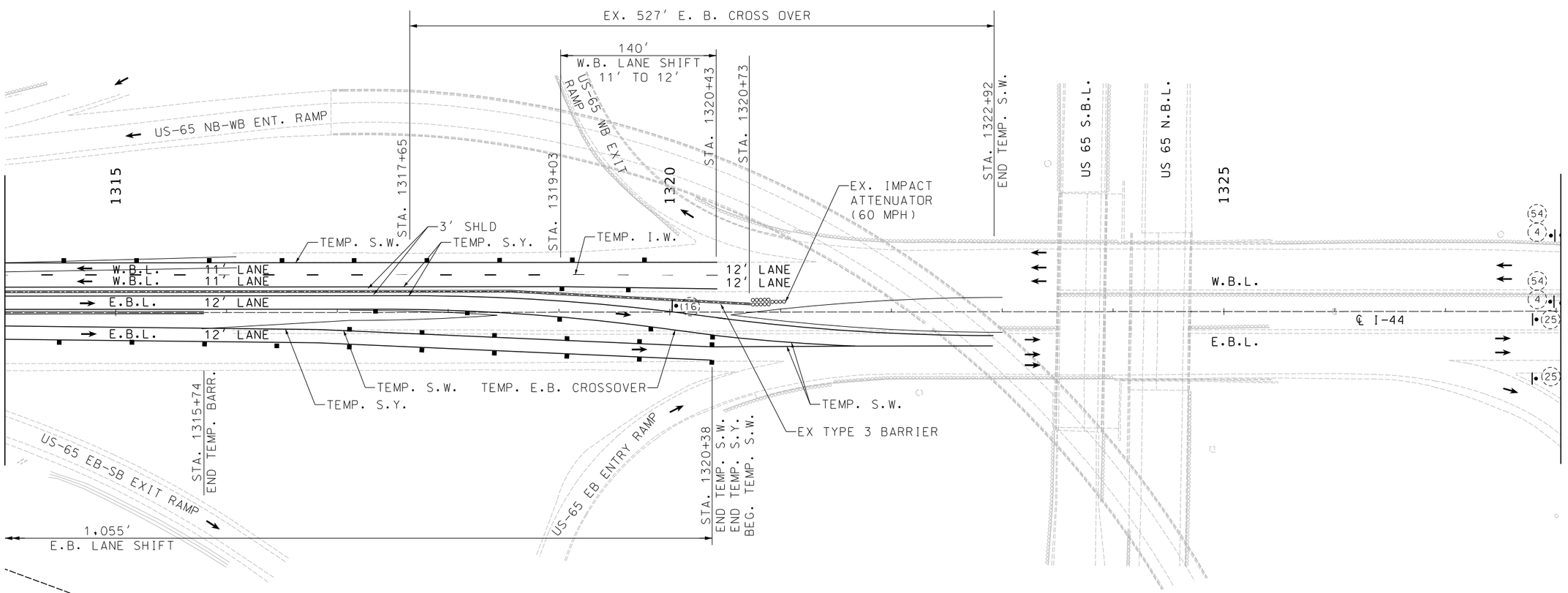
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

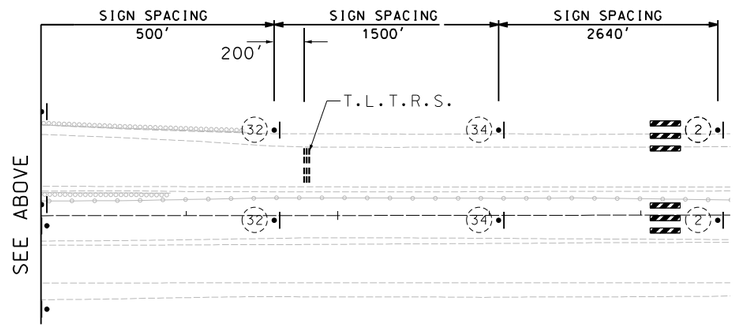
Hg Consult, Inc. engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\101_TC_52_J8I3044C_I50_Phase_4-06.dgn 5:26:20 PM 8/18/2024









TRAFFIC CONTROL PLAN
PHASE 4
J8I3044C
SHEET 7 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	102

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

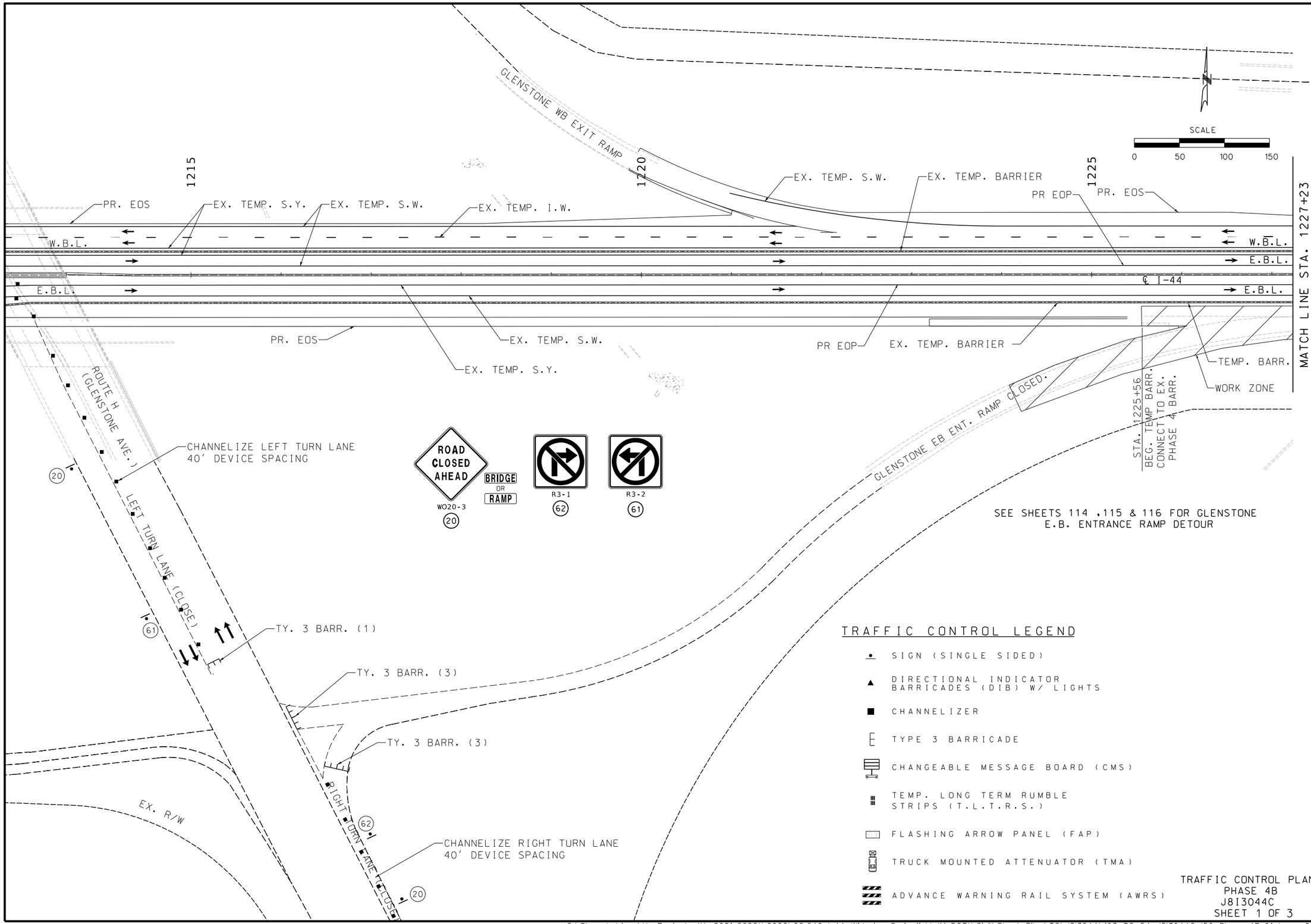
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\102_TC_53_J8I3044C_I50_Phase_4-07.dgn 7:00:18 PM 8/16/2024



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (DIB) W/ LIGHTS
- CHANNELIZER
- TYPE 3 BARRICADE
- CHANGEABLE MESSAGE BOARD (CMS)
- TEMP. LONG TERM RUMBLE STRIPS (T.L.T.R.S.)
- FLASHING ARROW PANEL (FAP)
- TRUCK MOUNTED ATTENUATOR (TMA)
- ADVANCE WARNING RAIL SYSTEM (AWRS)

TRAFFIC CONTROL PLAN
PHASE 4B
J8I3044C
SHEET 1 OF 3

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	103

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

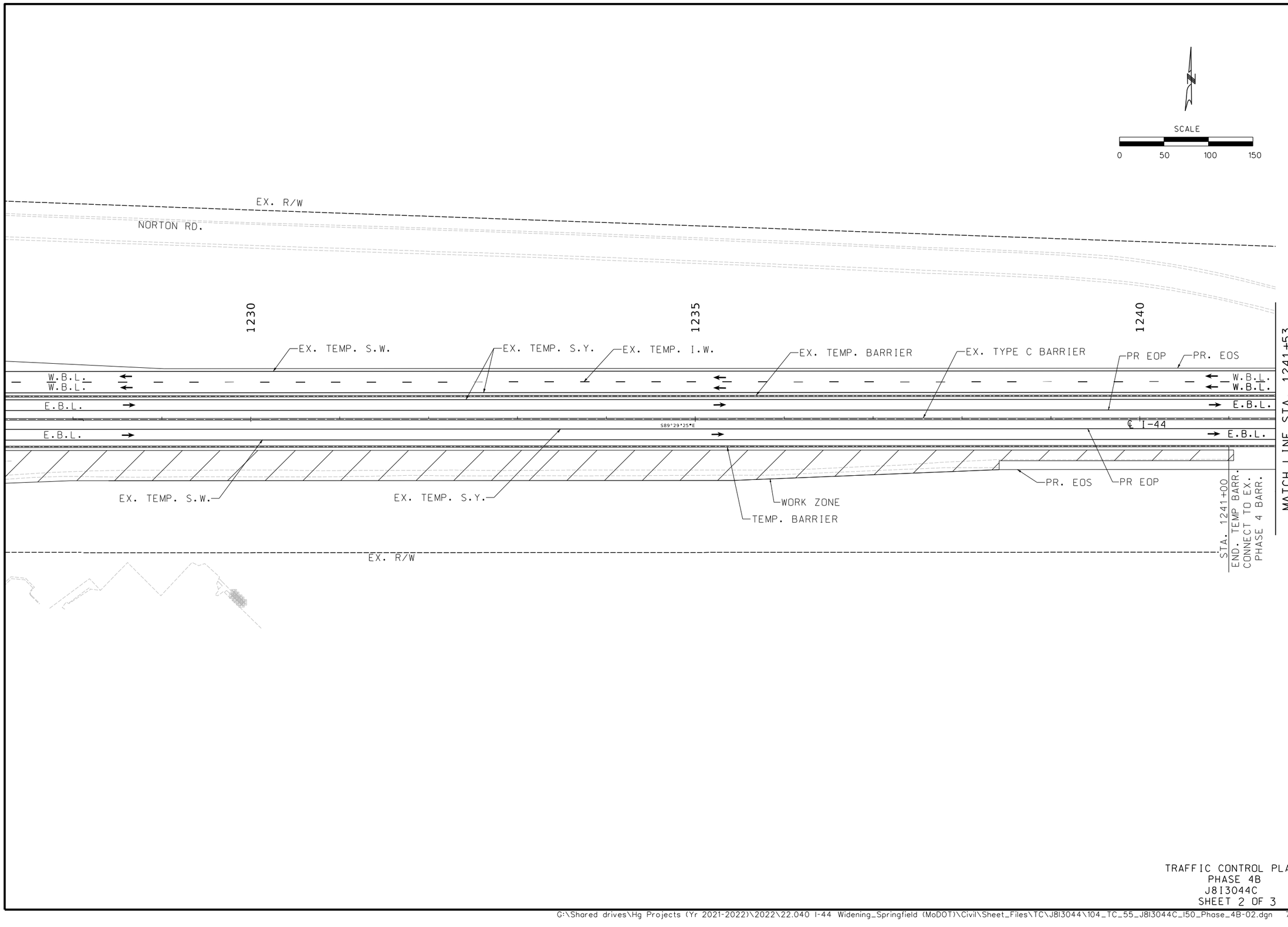
DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc. engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\103_TC_54_J8I3044C_150_Phase_4B-01.dgn 5:29:18 PM 8/18/2024



TRAFFIC CONTROL PLAN
PHASE 4B
J8I3044C
SHEET 2 OF 3

ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER
STATE OF MISSOURI

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	104

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

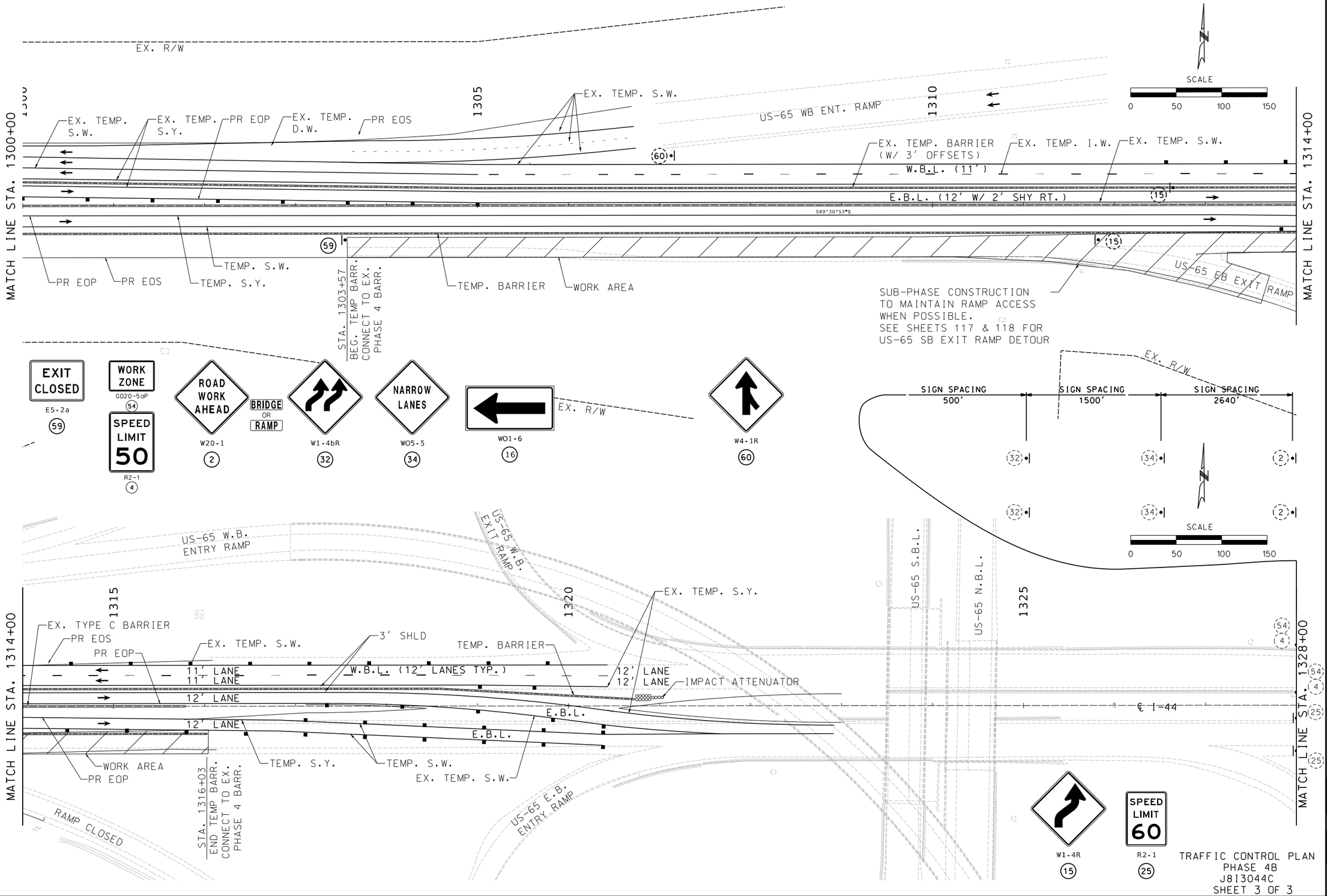
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\104_TC_55_J8I3044C_150_Phase_4B-02.dgn 7:00:27 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 4B
J8I3044C
SHEET 3 OF 3

ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER
STATE OF MISSOURI

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/18/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 105
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088
PROJECT NO.:
BRIDGE NO.:

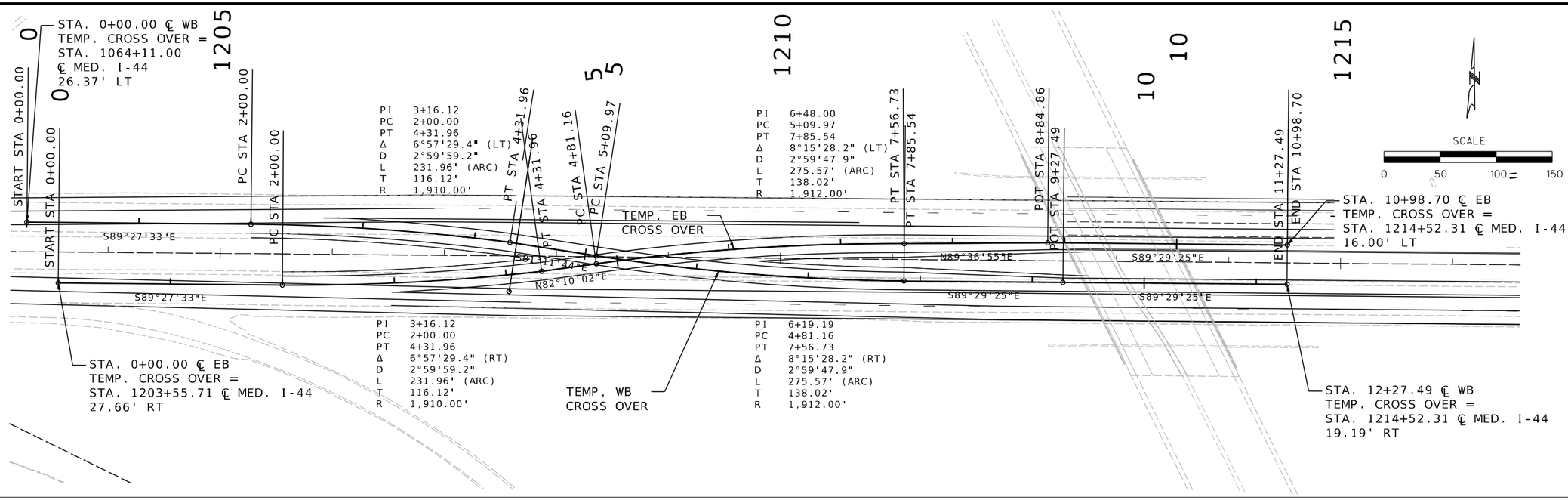
DESCRIPTION | DATE

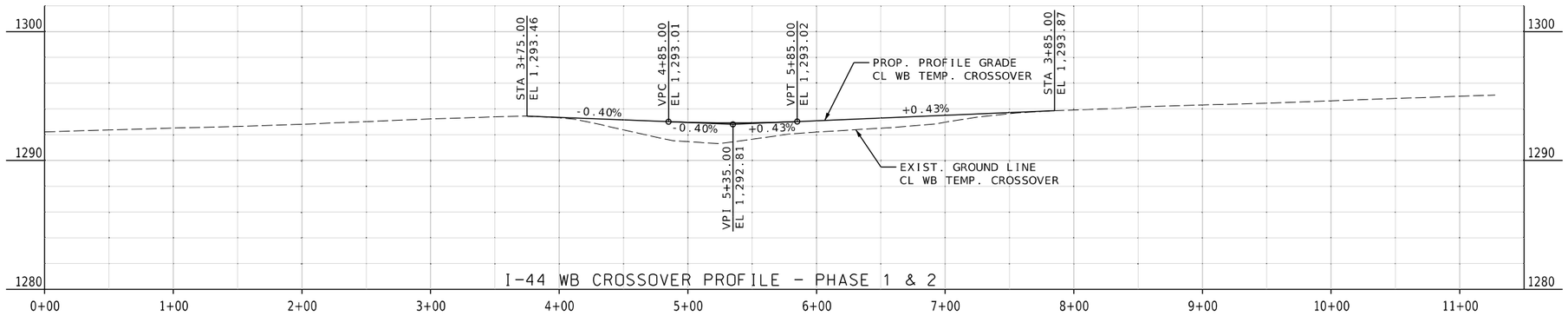
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

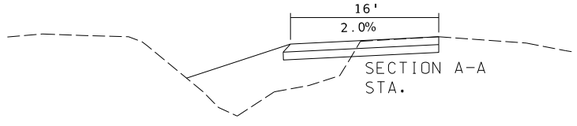
Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\105_TC_56_J8I3044C_I50_Phase_4B-03.dgn 5:31:27 PM 8/18/2024

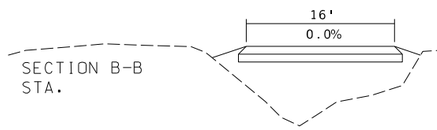




I-44 WB CROSSOVER PROFILE - PHASE 1 & 2



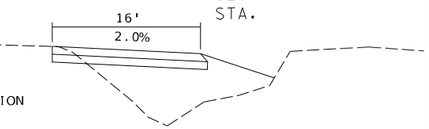
SECTION A-A
STA.



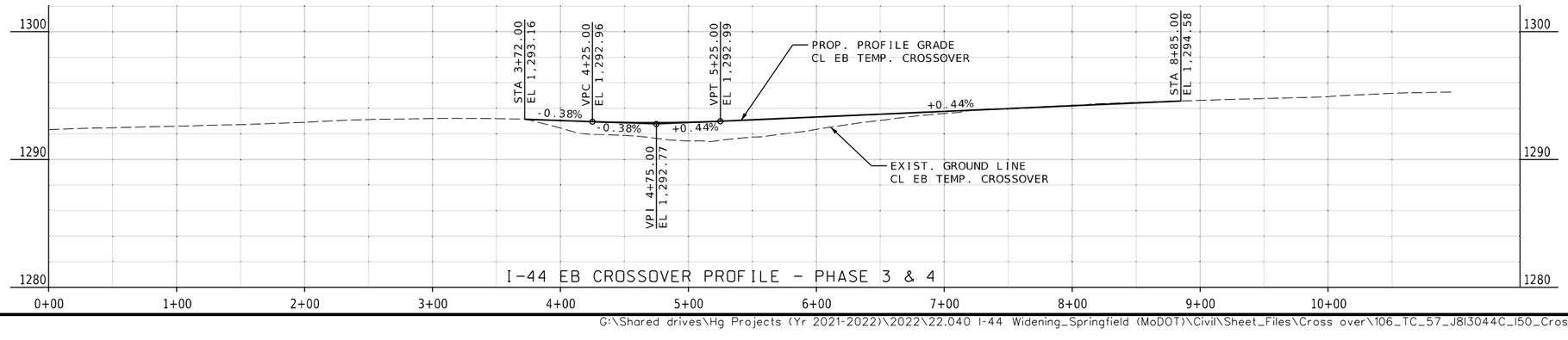
SECTION B-B
STA.

LINEAR GRADING CLASS 2 = 7 STA.
CONSTRUCT WEST TEMP. CROSSOVERS

LINEAR GRADING CLASS 2 = 7 STA.
REMOVE WEST TEMP. CROSSOVERS AND REGRADE MEDIAN UPON COMPLETION



SECTION C-C
STA.



I-44 EB CROSSOVER PROFILE - PHASE 3 & 4

TRAFFIC CONTROL PLAN
WEST END TEMP. CROSSOVERS
J8I3044C
SHEET 1 OF 2

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 106
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

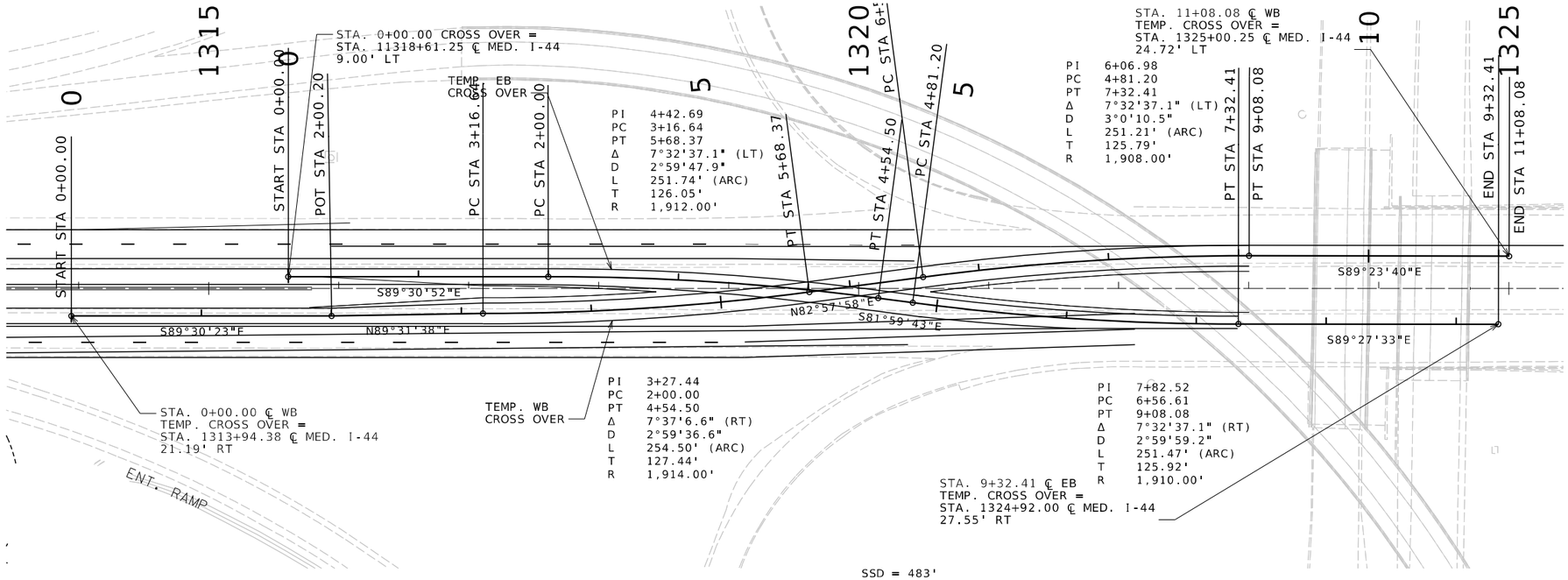
DESCRIPTION | DATE

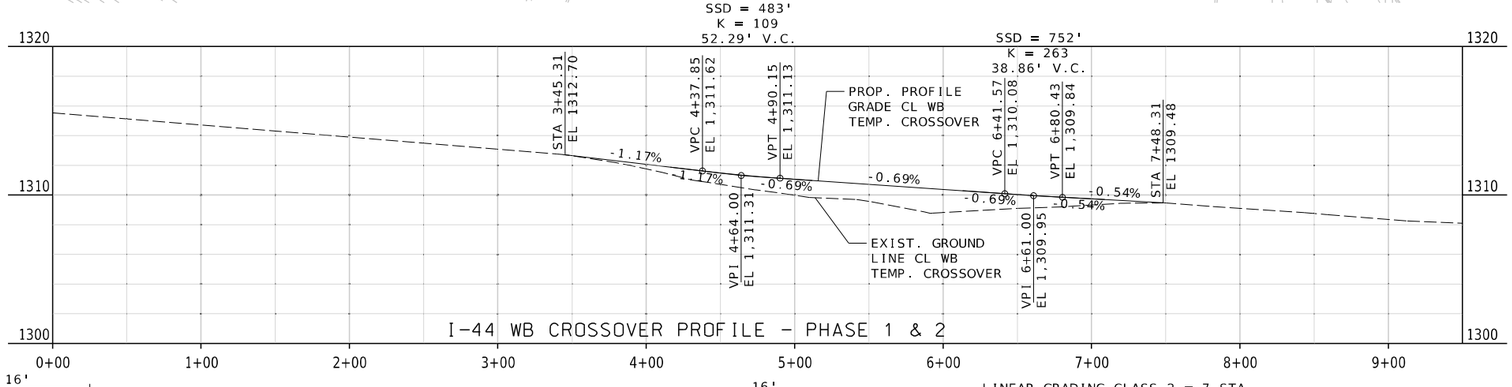
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

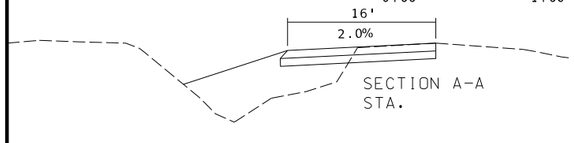
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

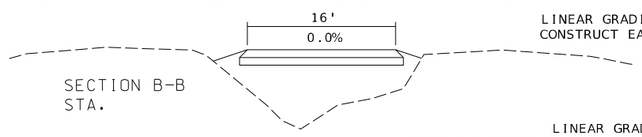
Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\Cross over\106_TC_57_J8I3044C_150_Crossover_Plan&Profile_West_End.dgn 7:00:40 PM 8/16/2024

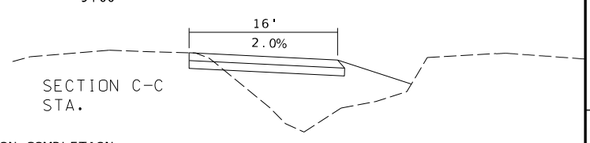




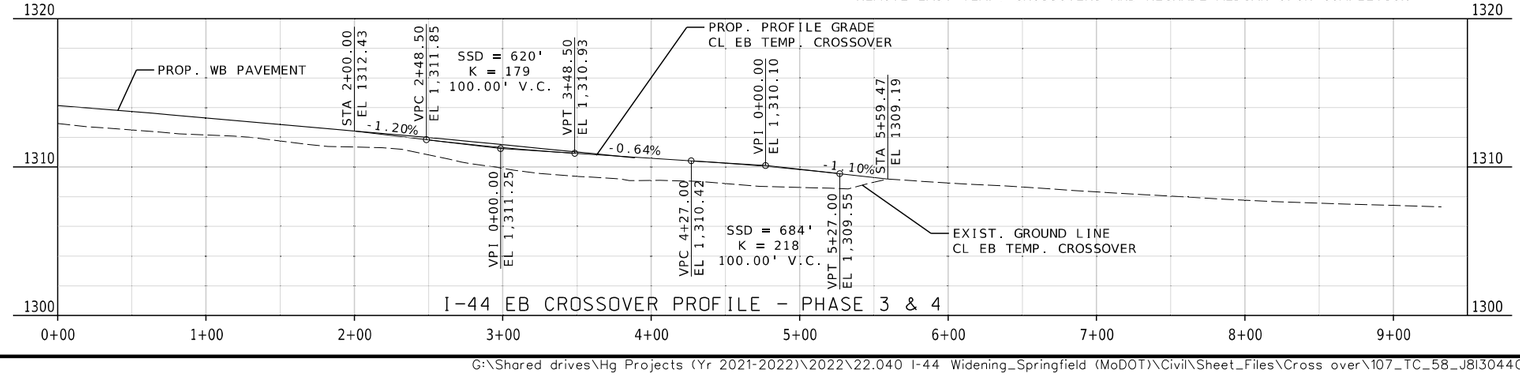




LINEAR GRADING CLASS 2 = 7 STA.
CONSTRUCT EAST TEMP. CROSSOVERS



LINEAR GRADING CLASS 2 = 7 STA.
REMOVE EAST TEMP. CROSSOVERS AND REGRADE MEDIAN UPON COMPLETION



TRAFFIC CONTROL PLAN
EAST END TEMP. CROSSOVERS
J8I3044C
SHEET 2 OF 2

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	107

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

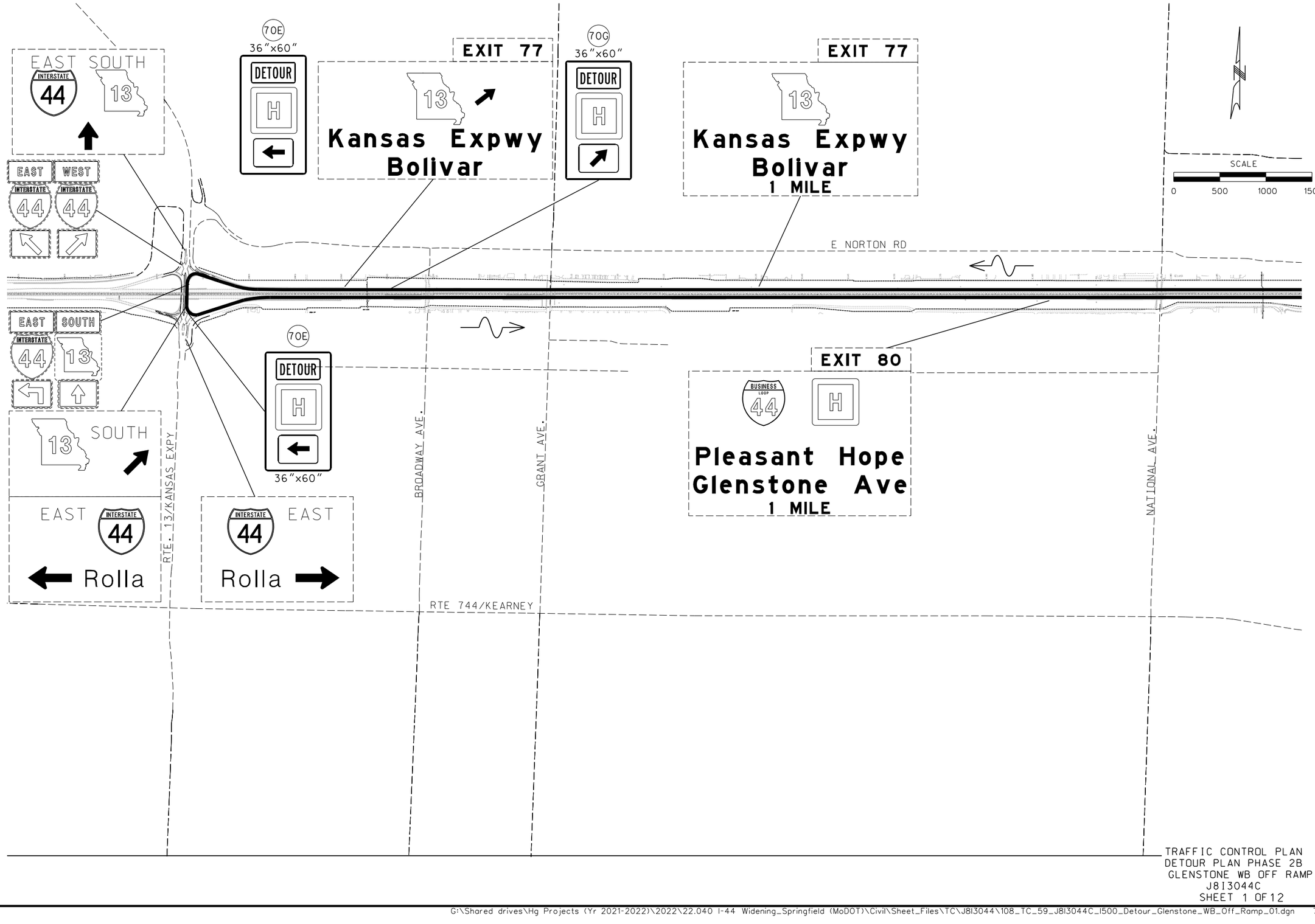
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\Cross over\107_TC_58_J8I3044C_150_Crossover_Plan&Profile_East_End.dgn 7:00:46 PM 8/16/2024



TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 2B
GLENSTONE WB OFF RAMP
J8I3044C
SHEET 1 OF 12

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	108

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

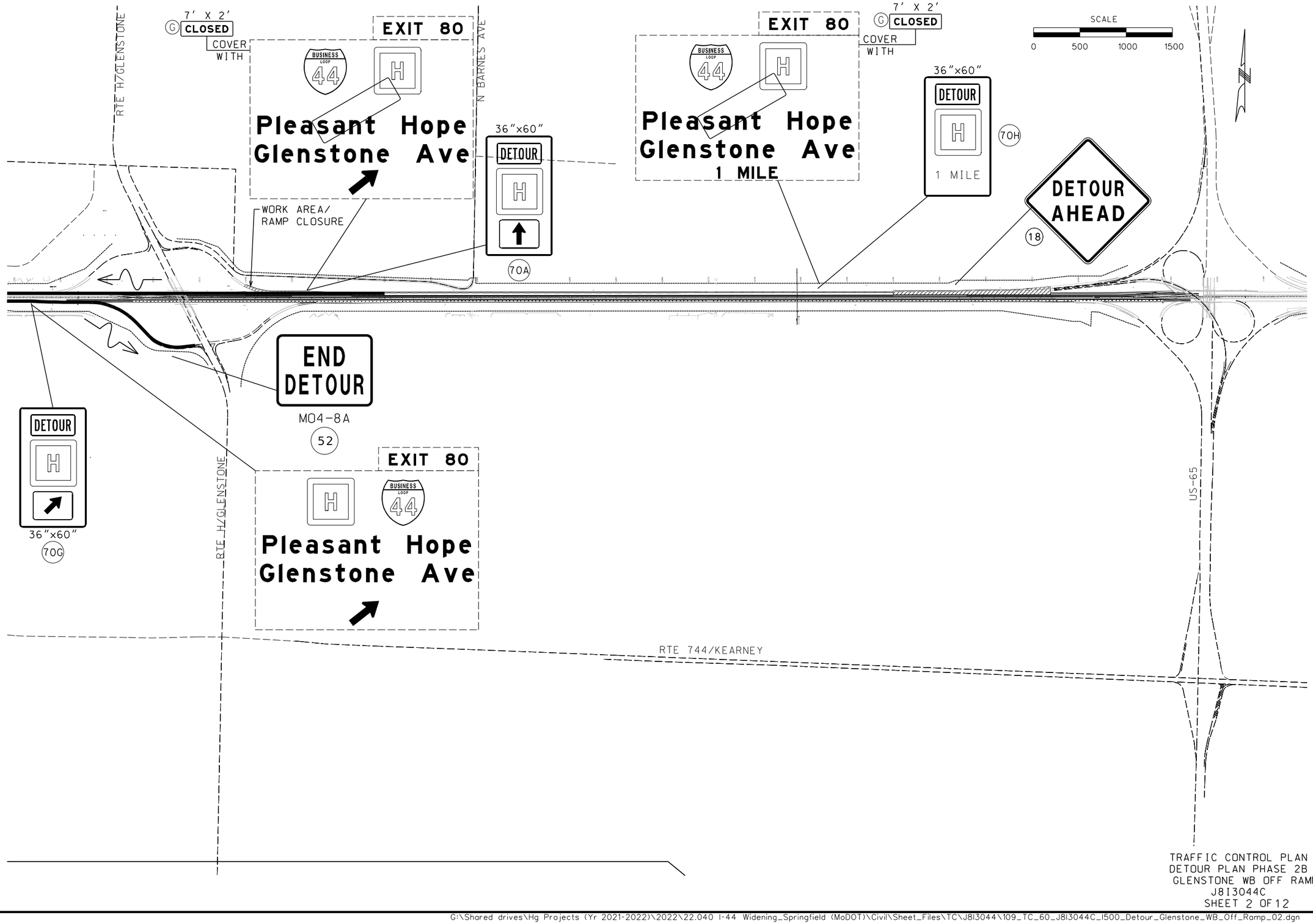
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\108_TC_59_J8I3044C_I500_Detour_Glenstone_WB_Off_Ramp_01.dgn 7:00:51 PM 8/16/2024



TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 2B
GLENSTONE WB OFF RAMP
J8I3044C
SHEET 2 OF 12

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	109

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\109_TC_60_J8I3044C_I500_Detour_Glenstone_WB_Off_Ramp_02.dgn 7:00:56 PM 8/16/2024

RTE 744/KEARNEY

I-44 EAST

I-44 WEST

E VALLEY WATER MILL RD

INTERSTATE 44
Joplin
St Louis
EXIT ONLY

F.A.P.

WEST
INTERSTATE 44
Joplin
EXIT ONLY

COVER WITH G CLOSED

F.A.P.

I-44 WEST RAMP CLOSED

USE ALTERNATE ROUTE

C.M.S.

69E
36"x78"
DETOUR
WEST
INTERSTATE 44

WORK AREA

RAMP CLOSED

MERGE
6A
W04-1aR

350' INSIDE RAMP LANE MERGE 60' DEVICE SPACING

DETOUR
WEST
INTERSTATE 44
69C
36"x78"

ROAD CLOSED
R11-2
29

MERGE
6A
W04-1aL

69A
36"x78"
DETOUR
WEST
INTERSTATE 44

5
W020-5
RIGHT LANE CLOSED AHEAD

DETOUR AHEAD
18
W020-2

US-65

DETOUR AHEAD
18
W020-2

RAMP CLOSED 1000 FT
20
W020-3

4 TYPE III MOVABLE BARRICADES

350' OUTSIDE RAMP LANE MERGE 60' DEVICE SPACING

SEE SHEET 113 FOR DETAILS

3 TYPE III MOVABLE BARRICADES

SEE SHEET 112 FOR DETAILS

ROAD CLOSED
29
R11-2

LEFT LANE CLOSED AHEAD
5
W020-5

DETOUR
WEST
INTERSTATE 44
69C
36"x78"

COVER WITH G CLOSED 7' X 2'

INTERSTATE 44
Joplin
St Louis
1 MILE

C.M.S.

I-44 WEST RAMP CLOSED

USE ALTERNATE ROUTE

WEST
INTERSTATE 44
Joplin
EXIT ONLY

EAST
INTERSTATE 44
St Louis
EXIT ONLY

COVER WITH G CLOSED 7' X 2'

WEST
INTERSTATE 44
Joplin
EXIT ONLY

EAST
INTERSTATE 44
St Louis
EXIT ONLY

TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 2B
US-65 WB ON RAMP
J8I3044C
SHEET 3 OF 12

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	110

COUNTY GREENE

JOB NO. JSU0076, J8I3044C, & JST0088

PROJECT NO.

BRIDGE NO.

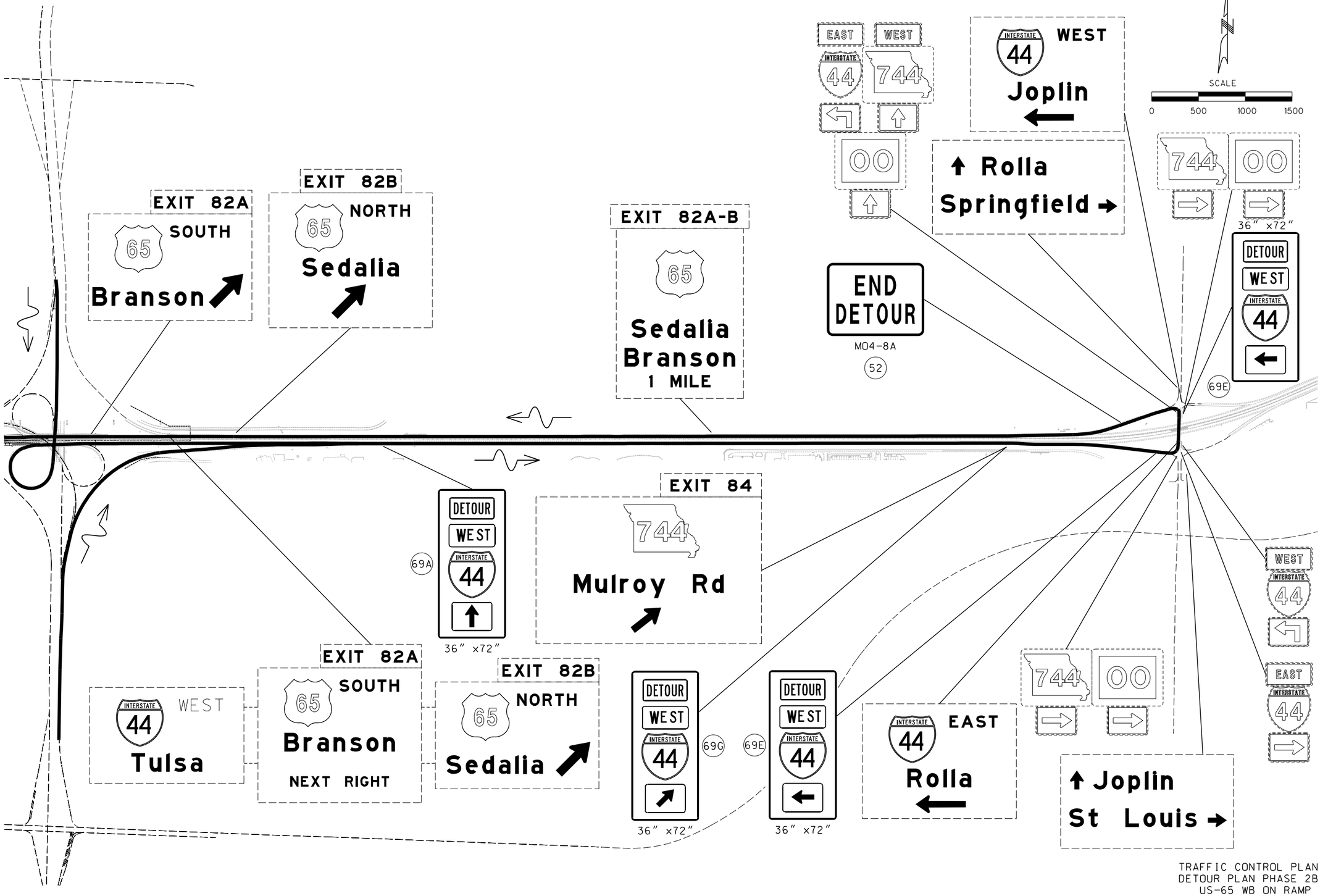
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Consult engineers inc planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\110_TC_61_J8I3044C_I500_Detour_US-65_WB_On_Ramp_01.dgn 5:38:34 PM 8/18/2024



TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 2B
US-65 WB ON RAMP
J8I3044C
SHEET 4 OF 12

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	8/16/2024
ROUTE	I-44
STATE	MO
DISTRICT	SW
SHEET NO.	111
COUNTY	GREENE
JOB NO.	JSU0076, J8I3044C, & JST0088B
PROJECT NO.	
BRIDGE NO.	

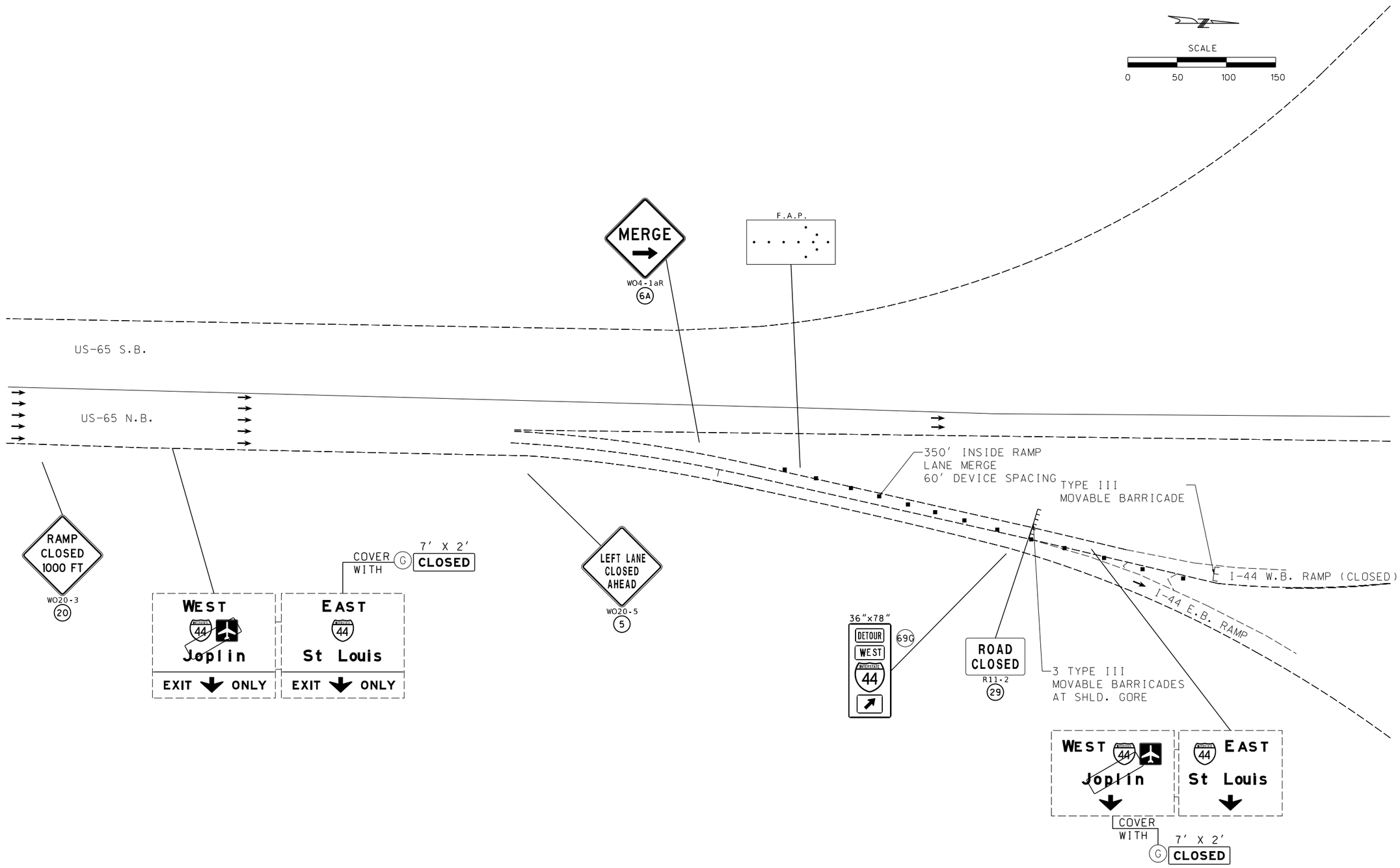
DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\111_TC_62_J8I3044C_I500_Detour_US-65_WB_On_Ramp_02.dgn 7:01:13 PM 8/16/2024



TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 2B
US-65 WB ON RAMP
J8I3044C
SHEET 5 OF 12

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	112

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

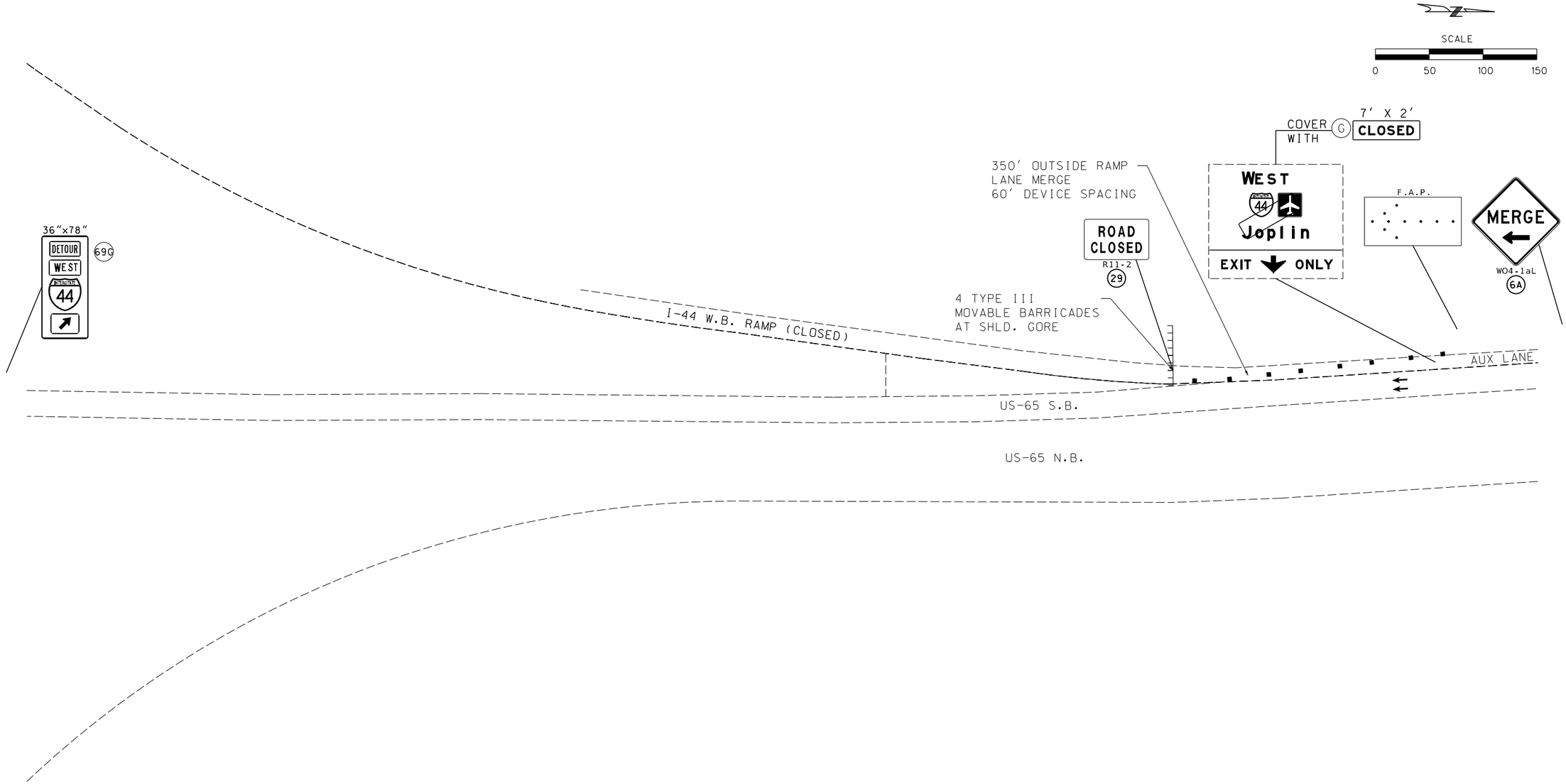
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\112_TC_63_J8I3044C_150_Detour_US-65_WB_On_Ramp_Blow-up_01.dgn 7:01:21 PM 8/16/2024



TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 2B
US-65 WB ON RAMP
J8I3044C
SHEET 6 OF 12

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	113

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

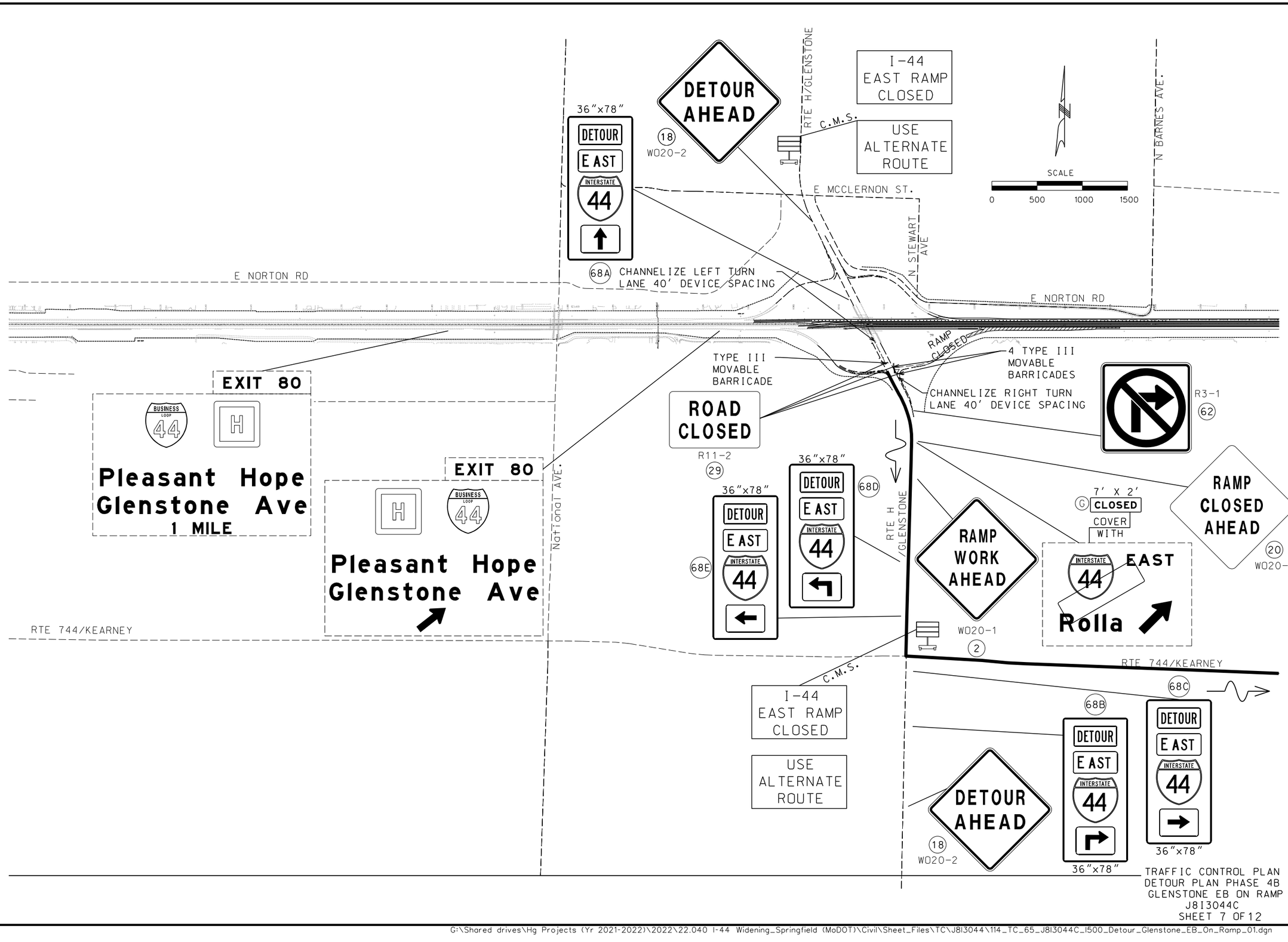
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\113_TC_64_J8I3044C_150_Detour_US-65_WB_On_Ramp_Blow-up_02.dgn 5:50:23 PM 8/18/2024



TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 4B
GLENSTONE EB ON RAMP
J8I3044C
SHEET 7 OF 12

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	114

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\114_TC_65_J8I3044C_I500_Detour_Glenstone_EB_On_Ramp_01.dgn 7:01:30 PM 8/16/2024

SCALE
0 50 100 150

36"x78"
DETOUR
E AST
INTERSTATE 44
68D

I-44 EB OFF RAMP

R3-2
61

61
20

36"x78"
DETOUR
E AST
INTERSTATE 44
68A

1210

LEFT TURN LANE (CLOSED)

ROUTE H
(GLENSTONE AVE.)

TY. 3 BARR. (1)

CHANNELIZE LEFT
TURN LANE
40' DEVICE
SPACING

RIGHT TURN LANE (CLOSED)

20
62

TY. 3 BARR. (3)

RAMP
CLOSED
AHEAD
20
WO20-3

CHANNELIZE RIGHT
TURN LANE 40'
DEVICE SPACING

ROAD
CLOSED
R11-2
29

TY. 3 BARR. (3)

R3-1
62

I-44 EB ON RAMP (CLOSED)

ROAD
CLOSED
AHEAD
BRIDGE
OR
RAMP
WO20-3
20

1215

I-44 E.B.

I-44 W.B.

TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 4B
GLENSTONE EB ON RAMP
J8I3044C
SHEET 8 OF12

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	115

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C,
& JST0088B

PROJECT NO.

BRIDGE NO.

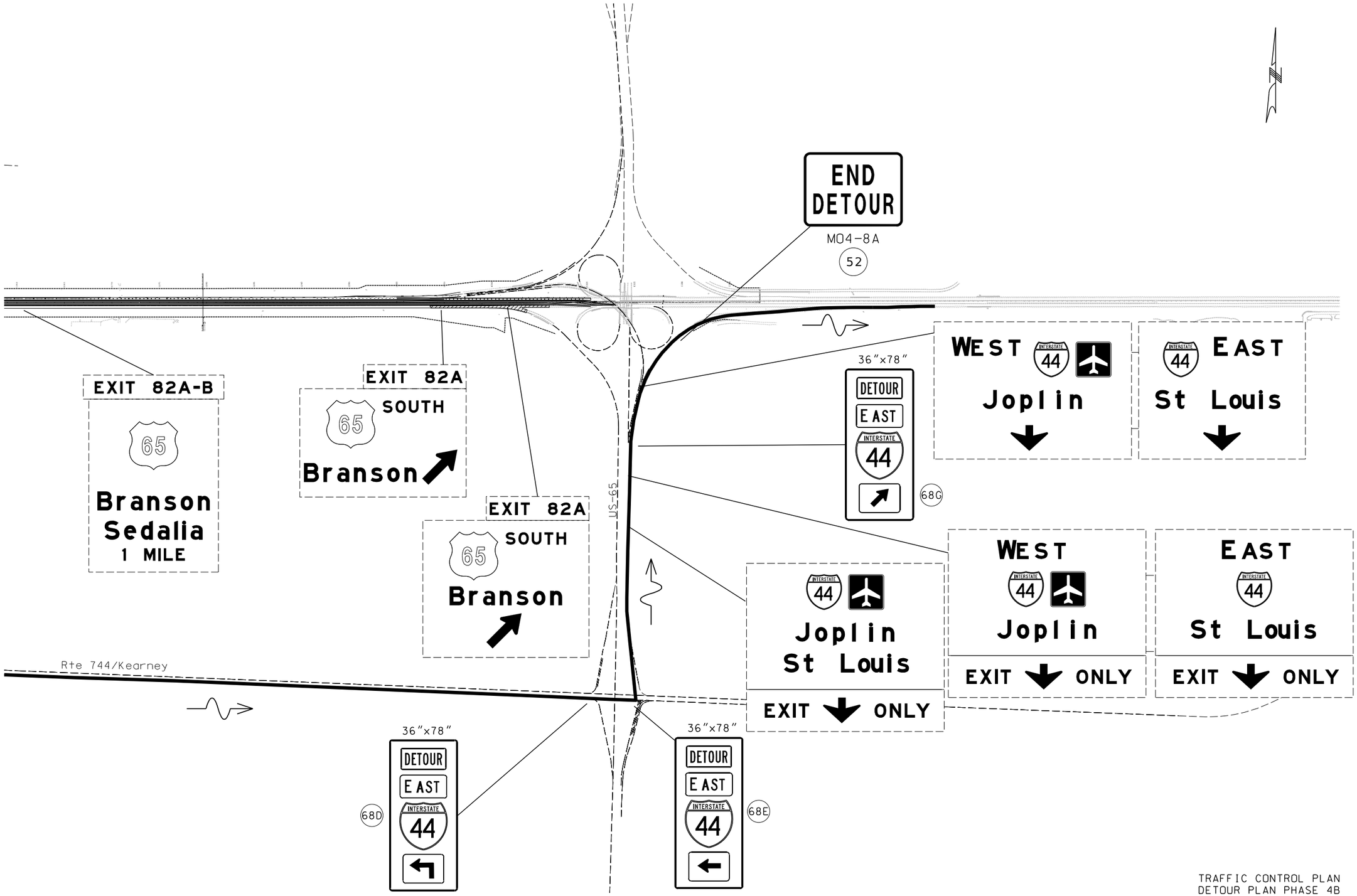
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street• Kansas City, MO 64158• (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\115_TC_66_J8I3044C_I50_Detour_Glenstone_EB_On_Ramp_Blow-up_01.dgn 5:57:02 PM 8/18/2024



TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 4B
GLENSTONE EB ON RAMP
J8I3044C
SHEET 9 OF 12

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	116

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc. engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\116_TC_67_J8I3044C_1500_Detour_Glenstone_EB_On_Ramp_02.dgn 7:11:42 PM 8/16/2024

EXIT 80

BUSINESS LOOP 44

H

Pleasant Hope
Glenstone Ave
1 MILE

72G
36" x78"

DETOUR
SOUTH
65

EXIT 82A
65 SOUTH
Branson

EXIT 82B
65 NORTH
Sedalia

END DETOUR
MO4-8A
52

Buffalo
NEXT RIGHT

E NORTON RD

EXIT 82A-B
65
Branson
Sedalia
1 MILE
COVER WITH G CLOSED 7' X 2'

EXIT 82A
65 SOUTH
Branson
COVER WITH G CLOSED 7' X 2'

WORK AREA/
RAMP CLOSURE

DETOUR
SOUTH
65
36" x78"
72A

EXIT 82A
65 SOUTH
Branson
COVER WITH G CLOSED 7' X 2'

US-65

INTERSTATE 44 WEST
Tulsa

EXIT 82A
65 SOUTH
Branson
NEXT RIGHT

EXIT 82B
65 NORTH
Sedalia

KEARNEY ST

TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 4B
US-65 SB OFF RAMP
J8I3044C
SHEET 10 OF 12

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	117

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION

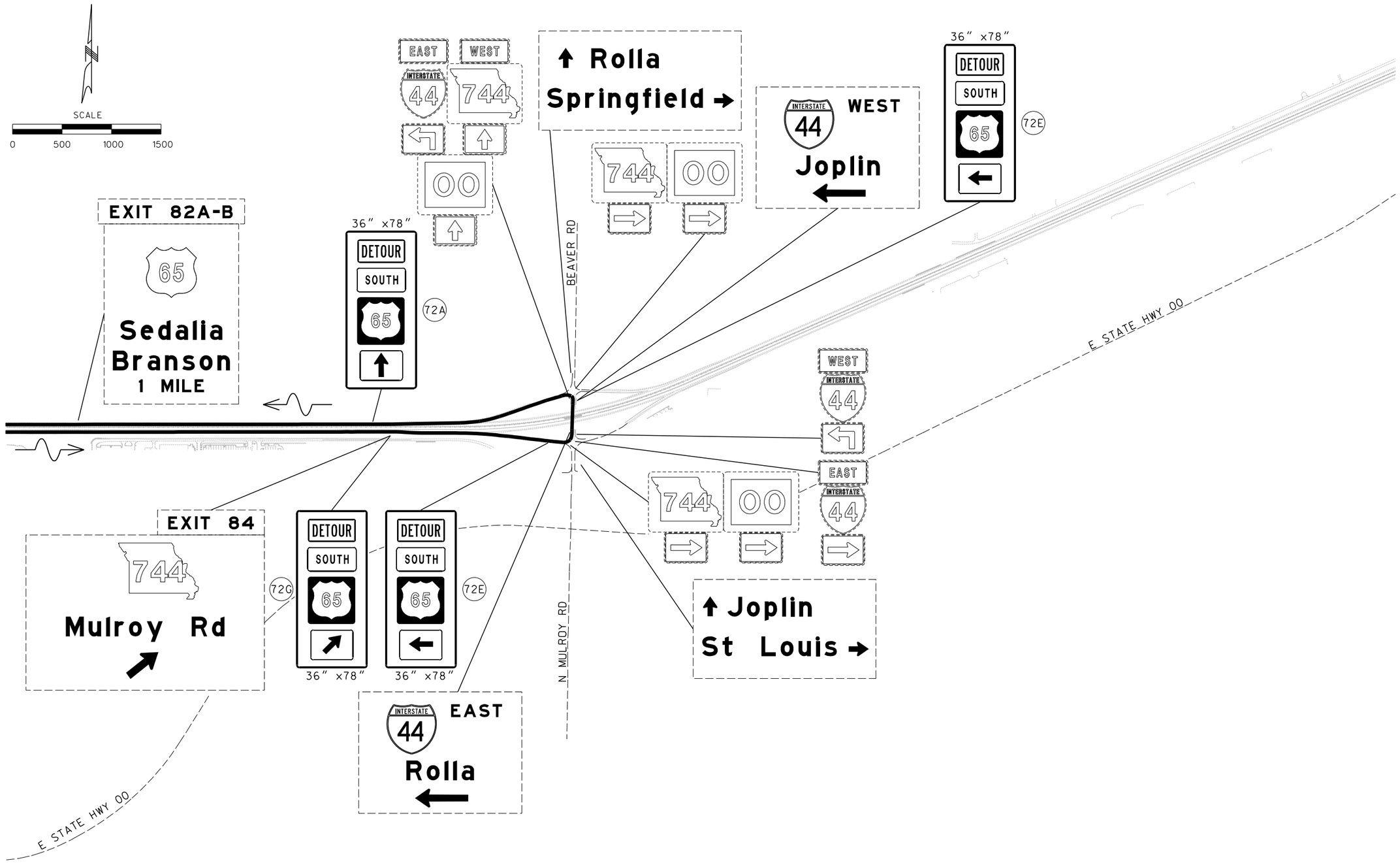
DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\117_TC_68_J8I3044C_1500_Detour_US-65_SB_Off_Ramp_01.dgn 7:11:51 PM 8/16/2024



TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 4B
US-65 SB OFF RAMP
J8I3044C
SHEET 11 OF 12

ERIC J. REINKEMEYER
NUMBER PE-2006002846
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	118

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\118_TC_69_J8I3044C_I500_Detour_US-65_SB_Off_Ramp_02.dgn 5:59:21 PM 8/18/2024

I-44 WORK ZONE ITS SYSTEM LAYOUT

NOTE:

* INDICATES C.M.S. IS PART OF THE WORK ZONE ITS SYSTEM. SYSTEM INCLUDES 4 NON-INTRUSIVE DETECTORS FOR BOTH THE EB AND WB APPROACHES. SYSTEM CAPABLE OF MESSAGING WARNINGS FOR SPEED, CONGESTION, AND BACK OF QUEUE. SEE DIAGRAM TO THE LEFT.

FOR DMS BOARD MESSAGING, COORDINATE WITH TMC OF THE OZARKS
417-864-1160
OzarksTrafficOps@modot.mo.gov

MESSAGES

NO CONGESTION:

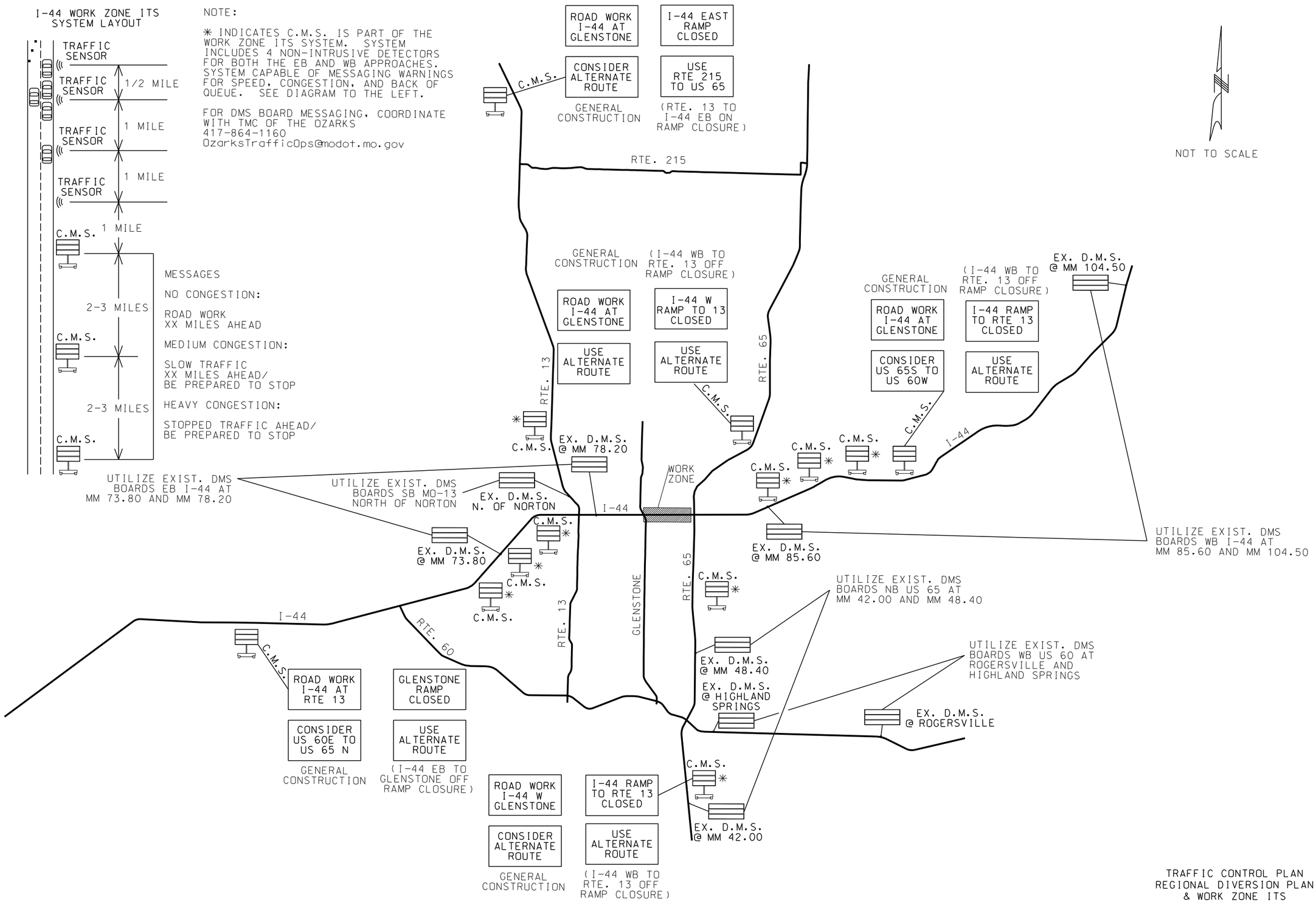
ROAD WORK
XX MILES AHEAD

MEDIUM CONGESTION:

SLOW TRAFFIC
XX MILES AHEAD/
BE PREPARED TO STOP

HEAVY CONGESTION:

STOPPED TRAFFIC AHEAD/
BE PREPARED TO STOP



NOT TO SCALE

TRAFFIC CONTROL PLAN
REGIONAL DIVERSION PLAN
& WORK ZONE ITS
J8I3044C
SHEET 12 OF 12

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	119

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\J8I3044\119_TC_70_J8I3044C_I10000_Regional_Diversion_Plan.dgn 12:38:50 PM 8/19/2024

JSU0076, I-44 WIDENING ROUTE 13 TO GLENSTONE
STAGED CONSTRUCTION

STAGE 0

UTILIZE OVERNIGHT I-44 EB AND WB INSIDE LANE CLOSURES NEAR ROUTE 13 AND GLENSTONE.

CONSTRUCT TEMPORARY CROSSOVERS FOR SINGLE I-44 EB LANE.

STAGE 0B

UTILIZE OVERNIGHT I-44 WB OUTSIDE LANE CLOSURE.

CONSTRUCT FULL DEPTH OUTSIDE SHOULDER.

STAGE 1

SPLIT EB I-44 TRAFFIC WITH ONE LANE CROSSING OVER TO EXISTING WB LANES
AND THE SECOND LANE SHIFTED TO THE EXISTING EB INSIDE SHOULDER.
MAINTAIN TWO WB LANES AND ONE EB LANE SEPARATED BY TEMP. ANCHORED BARRIER
ON THE EXISTING WB TRAVELWAY.
CLOSE GLENSTONE WB ENTRANCE RAMP AND DETOUR KEARNEY/KANSAS EXPY/I-44 WB.
ACCESS TO ROUTE 13 WB EXIT RAMP, ROUTE 13 TO I-44 EB ENTRANCE RAMP AND
GLENSTONE EB EXIT RAMP SHALL BE PROVIDED AT ALL TIMES.

REMOVE AND CONSTRUCT OUTSIDE PORTION OF WB I-44 BRIDGES.
CONSTRUCT OUTSIDE SHOULDERS AND PROPOSED LANE OF I-44 WB.

STAGE 1B

MAINLINE I-44 TO STAY IN TRAFFIC CONFIGURATION FROM STAGE 1.
GLENSTONE WB ENTRANCE RAMP TO REMAIN CLOSED AND DETOURED.
CLOSE ROUTE 13 TO I-44 EB ENTRANCE RAMP AND DETOUR VIA KEARNEY/GLENSTONE/I-44 EB.
CLOSE I-44 EB TO GLENSTONE EXIT RAMP AND DETOUR VIA ROUTE 13/KEARNEY/GLENSTONE.

CONSTRUCT EB RAMP GORES AND REMAINING ACCEL/DECEL LANES.

STAGE 2

MAINTAIN TRAFFIC CONFIGURATION ON THE EXISTING WB TRAVELWAY OF TWO WB LANES AND
ONE EB LANE SEPARATED BY TEMP. ANCHORED BARRIER.
SHIFT EB LANE ON EB TRAVELWAY TO OUTSIDE ONTO NEWLY CONSTRUCTED PAVEMENT AND SHOULDERS.

ROUTE 13 EB ENTRANCE RAMP TO REMAIN CLOSED AND DETOURED WEST ON I-44 VIA THE US 160 INTERCHANGE.
ACCESS TO ROUTE 13 WB EXIT RAMP, GLENSTONE WB ENTRANCE RAMP, AND GLENSTONE EB
EXIT RAMP SHALL BE MAINTAINED AT ALL TIMES.
GLENSTONE WB ENTRANCE RAMP TO REMAIN CLOSED AND DETOURED.
ACCESS TO ALL OTHER RAMPS TO BE MAINTAINED AT ALL TIMES.

REMOVE AND CONSTRUCT INSIDE PORTION OF EB I-44 BRIDGES.
CONSTRUCT GRADING, DRAINAGE AND INSIDE SHOULDERS AND PROPOSED LANES OF I-44 EB.

STAGE 3

PROVIDE TWO-LANE CROSSOVER TO SHIFT WB I-44 TRAFFIC TO THE EB TRAVELWAY.
MAINTAIN TWO LANES IN EACH DIRECTION SEPARATED BY ANCHORED TRAFFIC BARRIER.
ROUTE 13 EB ENTRANCE RAMP AND I-44 EB EXIT RAMP TO GLENSTONE SHALL BE MAINTAINED AT ALL TIMES.
GLENSTONE TO WB I-44 ENTRANCE RAMP TO REMAIN CLOSED AND DETOURED.
CLOSE AND DETOUR I-44 WB EXIT RAMP TO ROUTE 13 VIA THE US 160 INTERCHANGE.

REMOVE AND CONSTRUCT WB I-44 BRIDGES.
CONSTRUCT GRADING, DRAINAGE, SHOULDERS, PROPOSED LANES AND RAMPS OF I-44 WB.

STAGE 4

PROVIDE TWO-LANE CROSSOVER TO SHIFT EB I-44 TRAFFIC TO THE WB TRAVELWAY.
MAINTAIN TWO LANES IN EACH DIRECTION SEPARATED BY ANCHORED TRAFFIC BARRIER.
ACCESS SHALL BE MAINTAINED TO ALL RAMPS AT ALL TIMES.

CONSTRUCT DOLING TRAIL RCB UNDER I-44 EB ROADBED.

STAGE 5

UTILIZE SHORT-TERM/OVERNIGHT LANE CLOSURES OF I-44 NEAR ROUTE 13.

REMOVE TEMPORARY CROSSOVERS.
CONSTRUCT PROPOSED PAVEMENT AND SHOULDER TRANSITIONS AT THE WEST END OF THE PROJECT.

TRAFFIC CONTROL PLAN
STAGING WRITE-UP
JSU0076

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	120

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DATE	DESCRIPTION

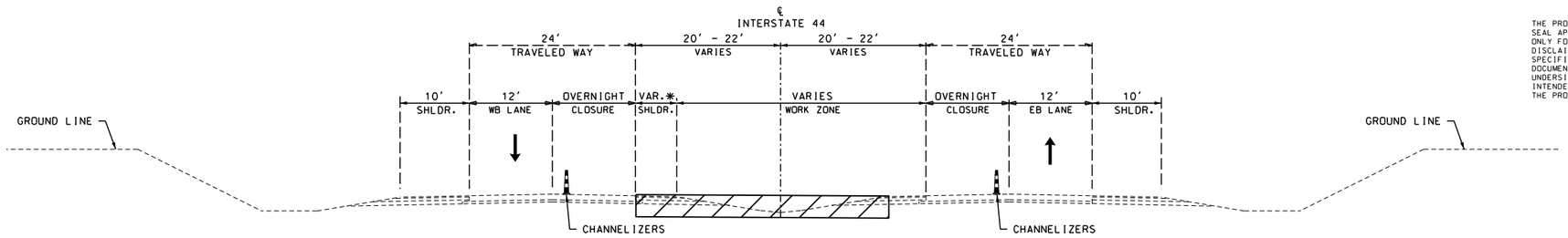
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

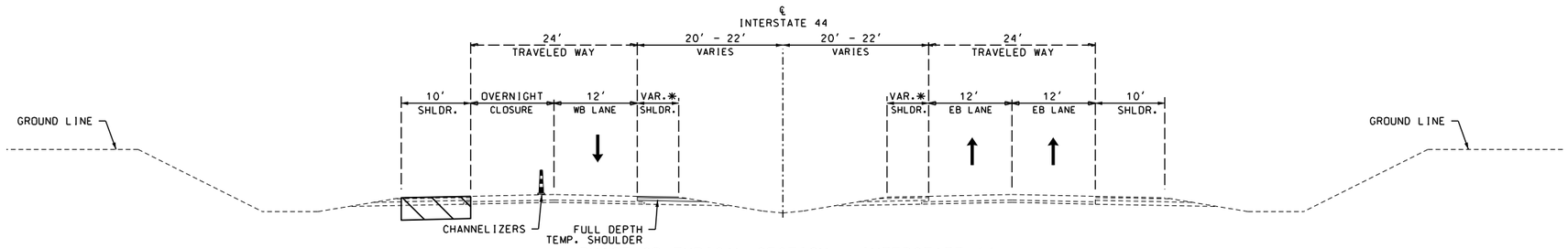
G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\120_TC_71_JSU0076_11_Staging_Writeup.dgn 8:34:46 PM 8/18/2024



PHASE 0 TYPICAL SECTION - INTERSTATE 44

ROADWAY TANGENT

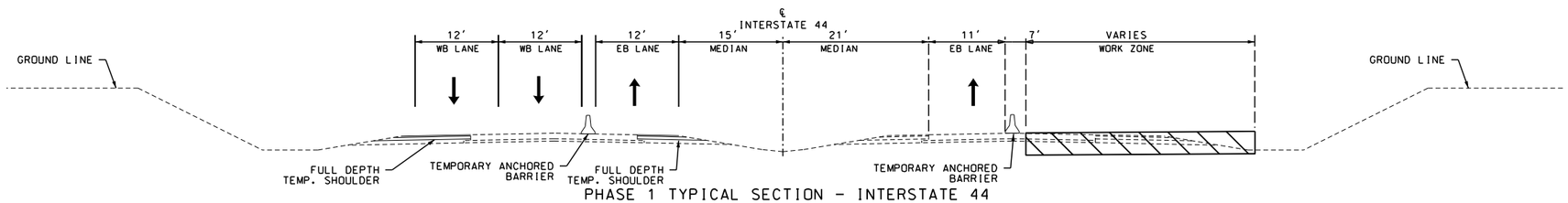
* SHLDR. VARIES FROM 4' TO 6'



PHASE 0B TYPICAL SECTION - INTERSTATE 44

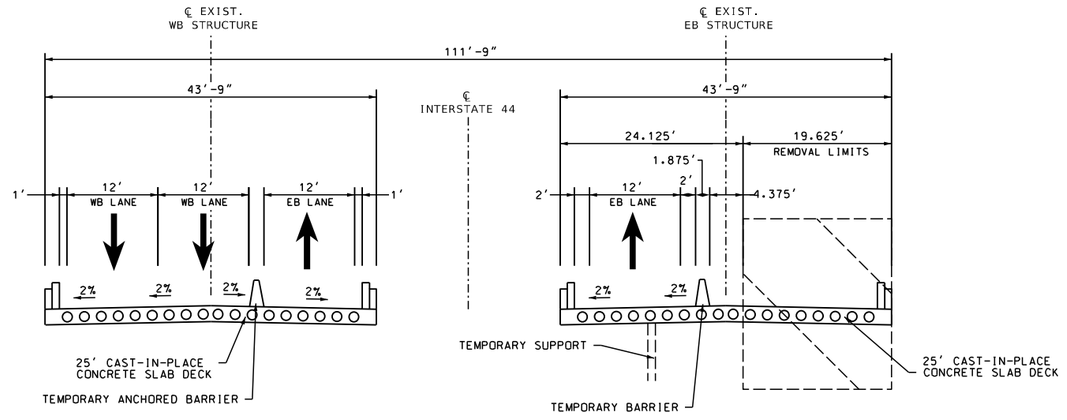
ROADWAY TANGENT

* SHLDR. VARIES FROM 4' TO 6'



PHASE 1 TYPICAL SECTION - INTERSTATE 44

ROADWAY TANGENT



BRIDGE STAGING - PHASE 1

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	121

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

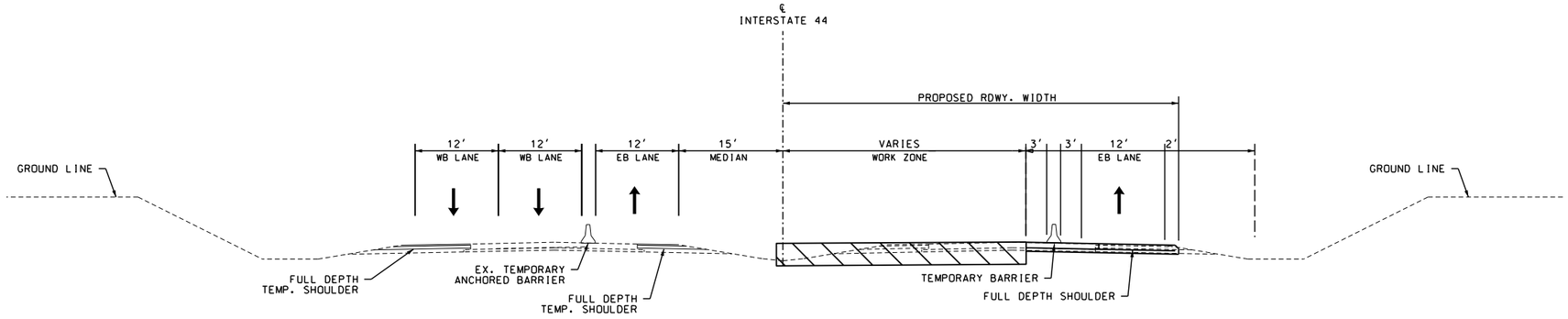
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS
JSU0076
SHEET 1 OF 3

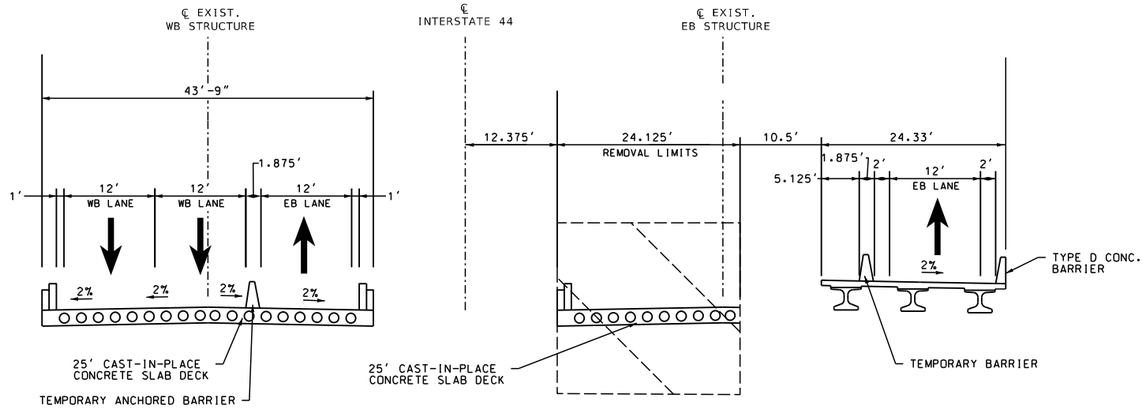
G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\121-123_TC_72-74_JSU0076_I10_TypicalSections.dgn 8:35:23 PM 8/18/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



PHASE 2 TYPICAL SECTION - INTERSTATE 44

ROADWAY TANGENT



BRIDGE STAGING - PHASE 2

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS
JSU0076
SHEET 2 OF 3

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	122

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

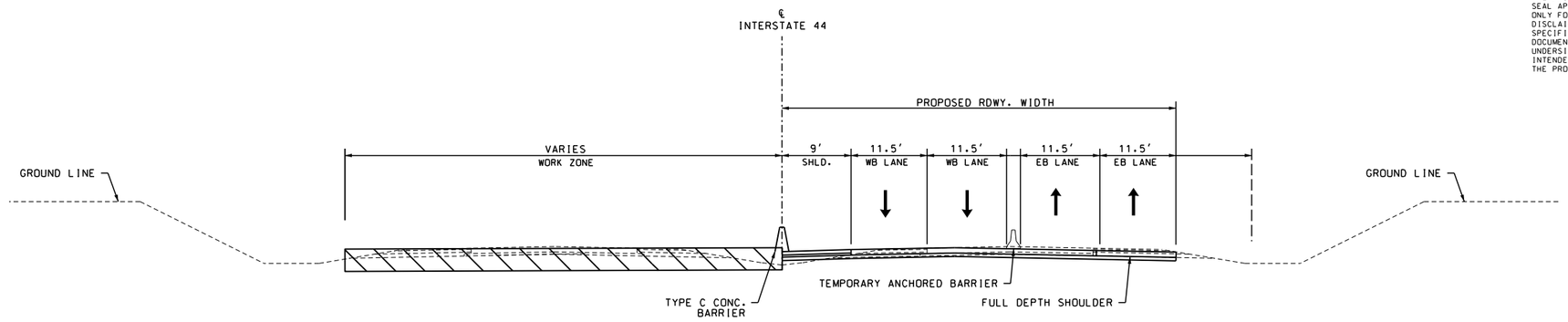
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

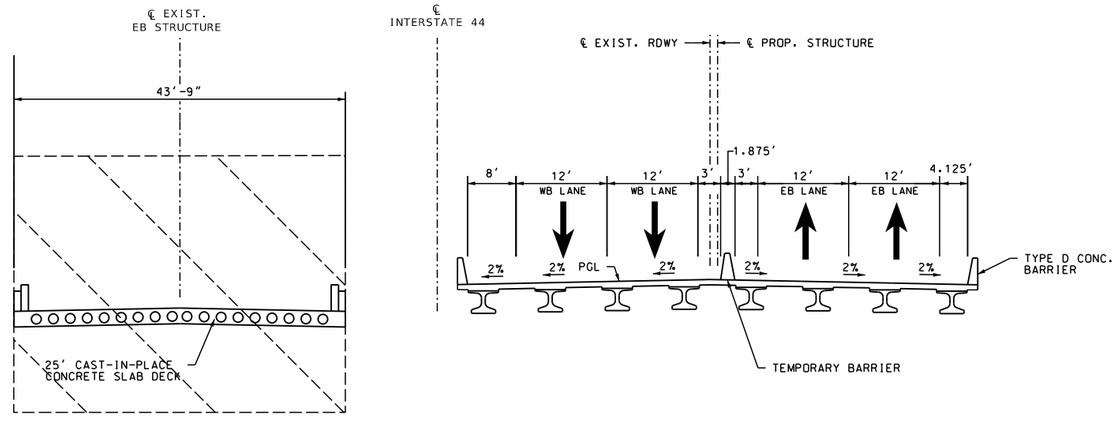
G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\121-123_TC_72-74_JSU0076_I10_TypicalSections.dgn 8:36:00 PM 8/18/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

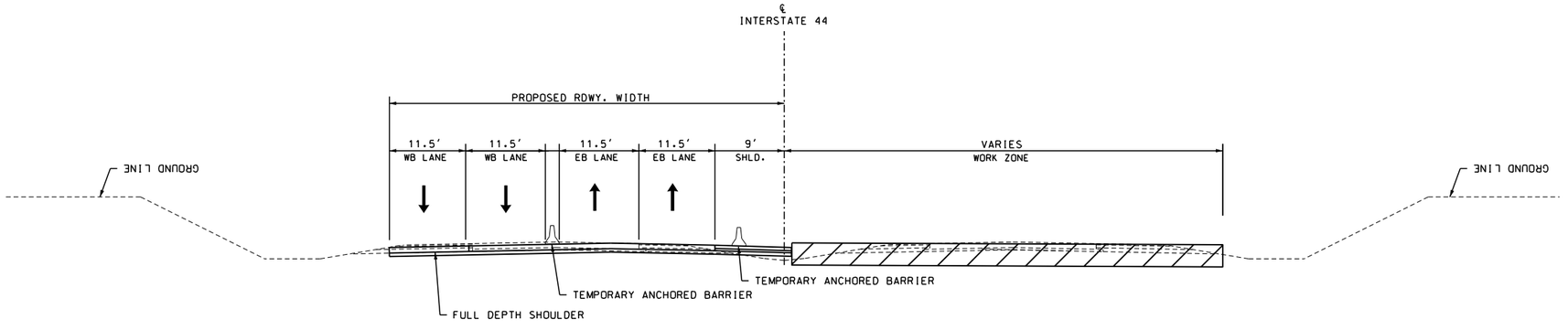


PHASE 3 TYPICAL SECTION - INTERSTATE 44

ROADWAY TANGENT



BRIDGE STAGING - PHASE 3



PHASE 5 TYPICAL SECTION - INTERSTATE 44

ROADWAY TANGENT

TRAFFIC CONTROL PLAN
TYPICAL SECTIONS
JSU0076
SHEET 3 OF 3

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	123

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

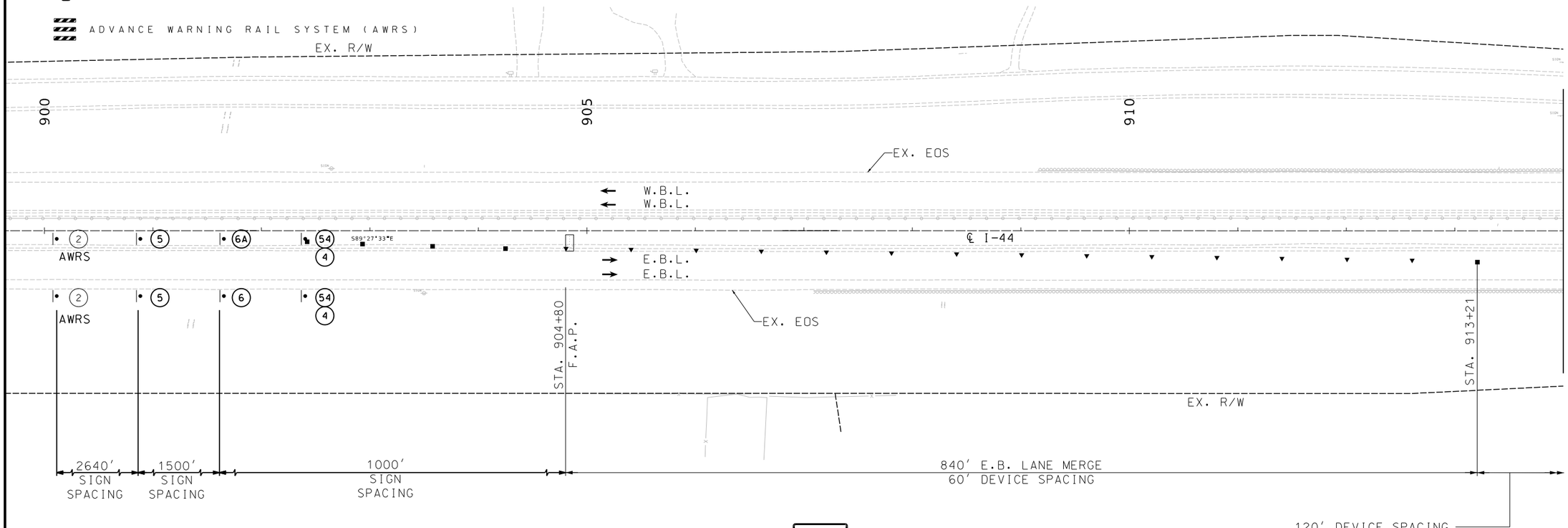
Hg Consult, Inc. engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

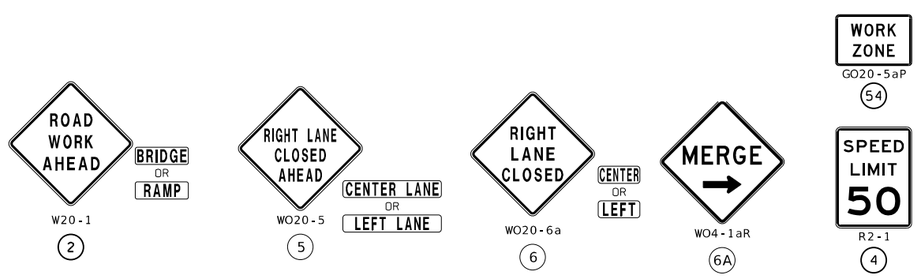
G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\121-123_TC_72-74_JSU0076_110_TypicalSections.dgn 8:37:39 PM 8/18/2024

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (DIB) W/ LIGHTS
- CHANNELIZER
- TYPE 3 BARRICADE
- CHANGEABLE MESSAGE BOARD (CMS)
- TEMP. LONG TERM RUMBLE STRIPS (T.L.T.R.S.)
- FLASHING ARROW PANEL (FAP)
- TRUCK MOUNTED ATTENUATOR (TMA)
- ADVANCE WARNING RAIL SYSTEM (AWRS)

SCALE
0 50 100 150





TRAFFIC CONTROL PLAN
PHASE 0
JSU0076
SHEET 1 OF 11

ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER
STATE OF MISSOURI
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 124
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

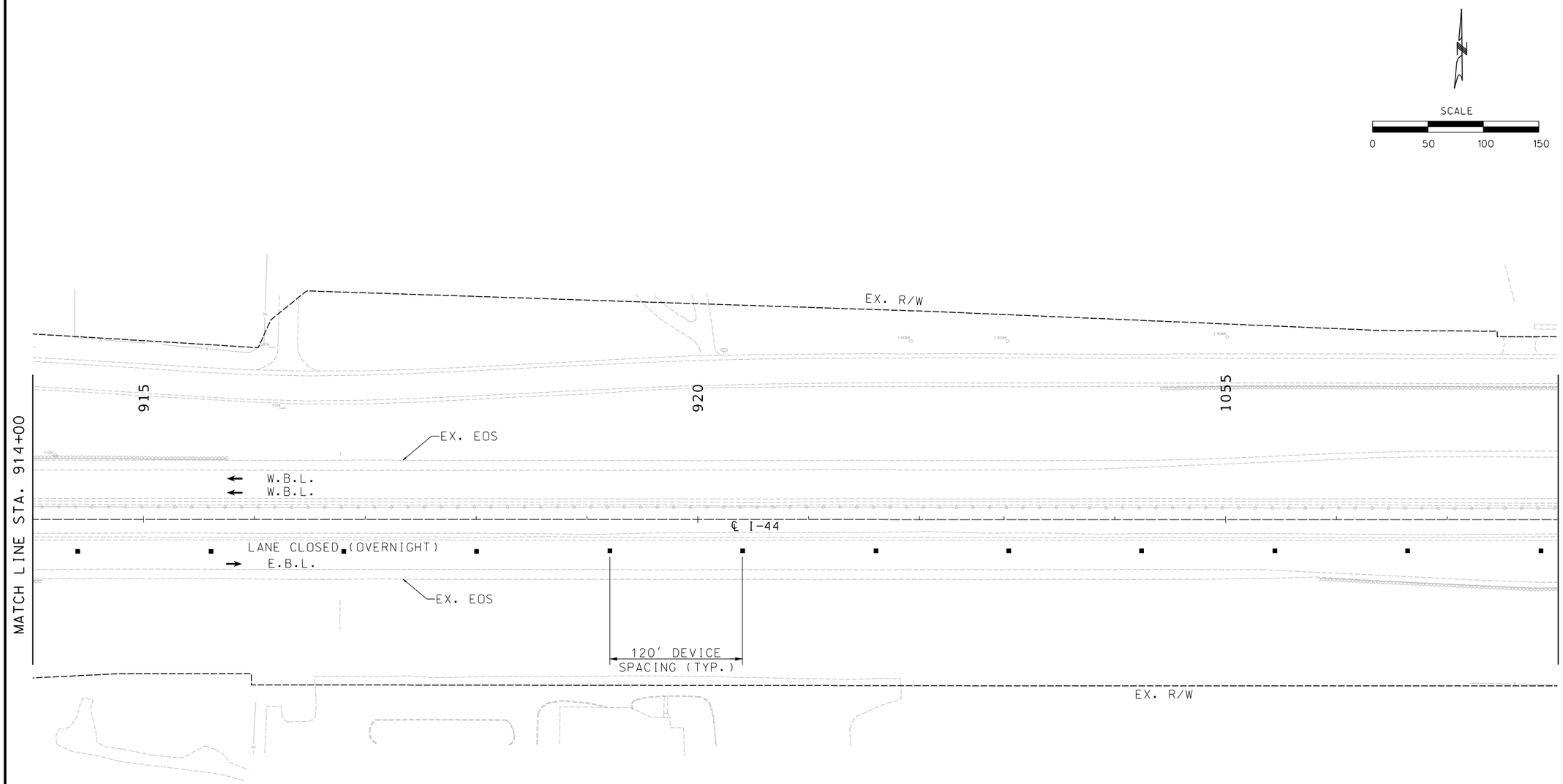
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\124_TC_75_JSU0076_150_Phase_0-01.dgn 5:53:13 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 0
JSU0076
SHEET 2 OF 11

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	125

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

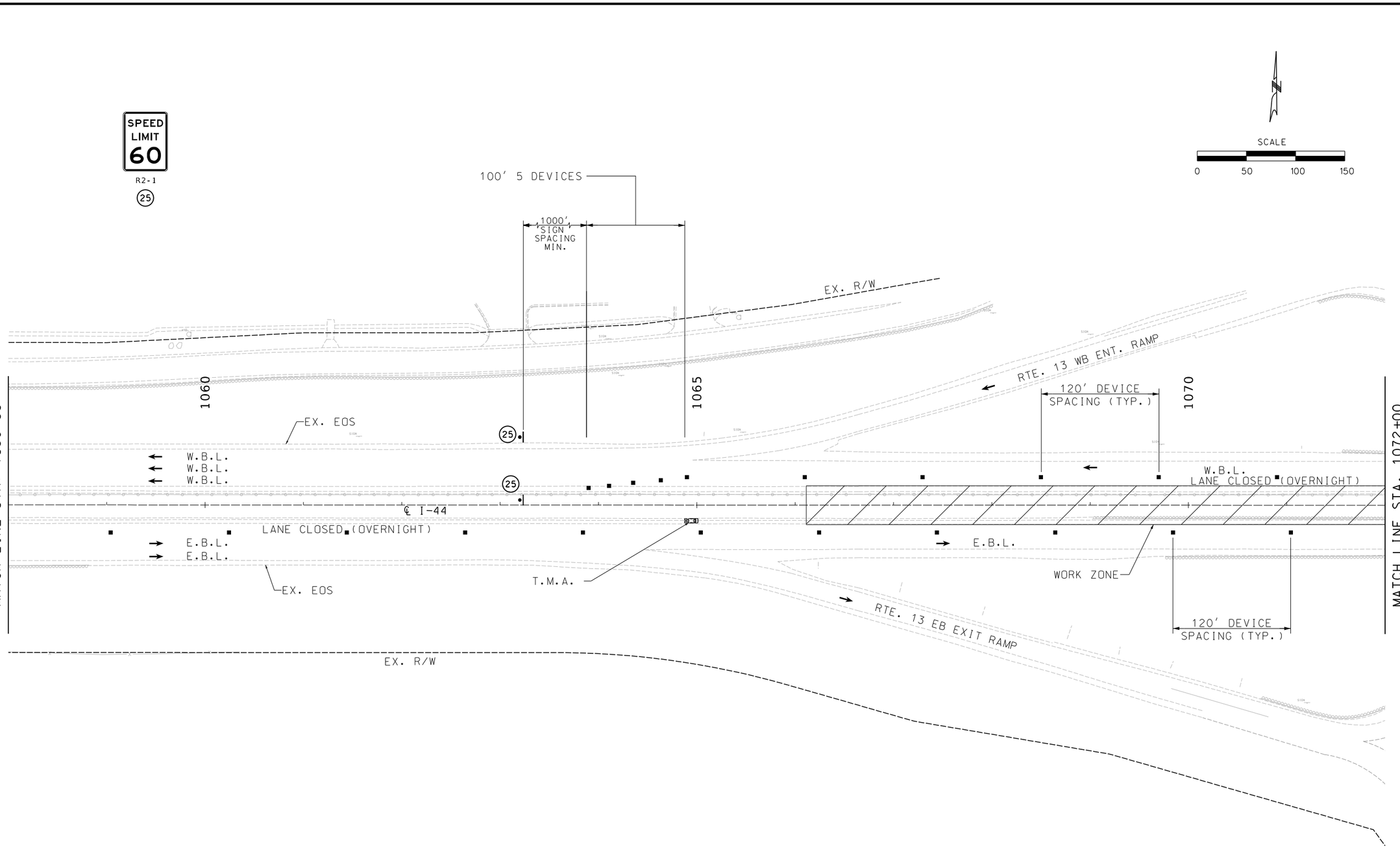
BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720



TRAFFIC CONTROL PLAN
PHASE 0
JSU0076
SHEET 3 OF 11

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	126

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

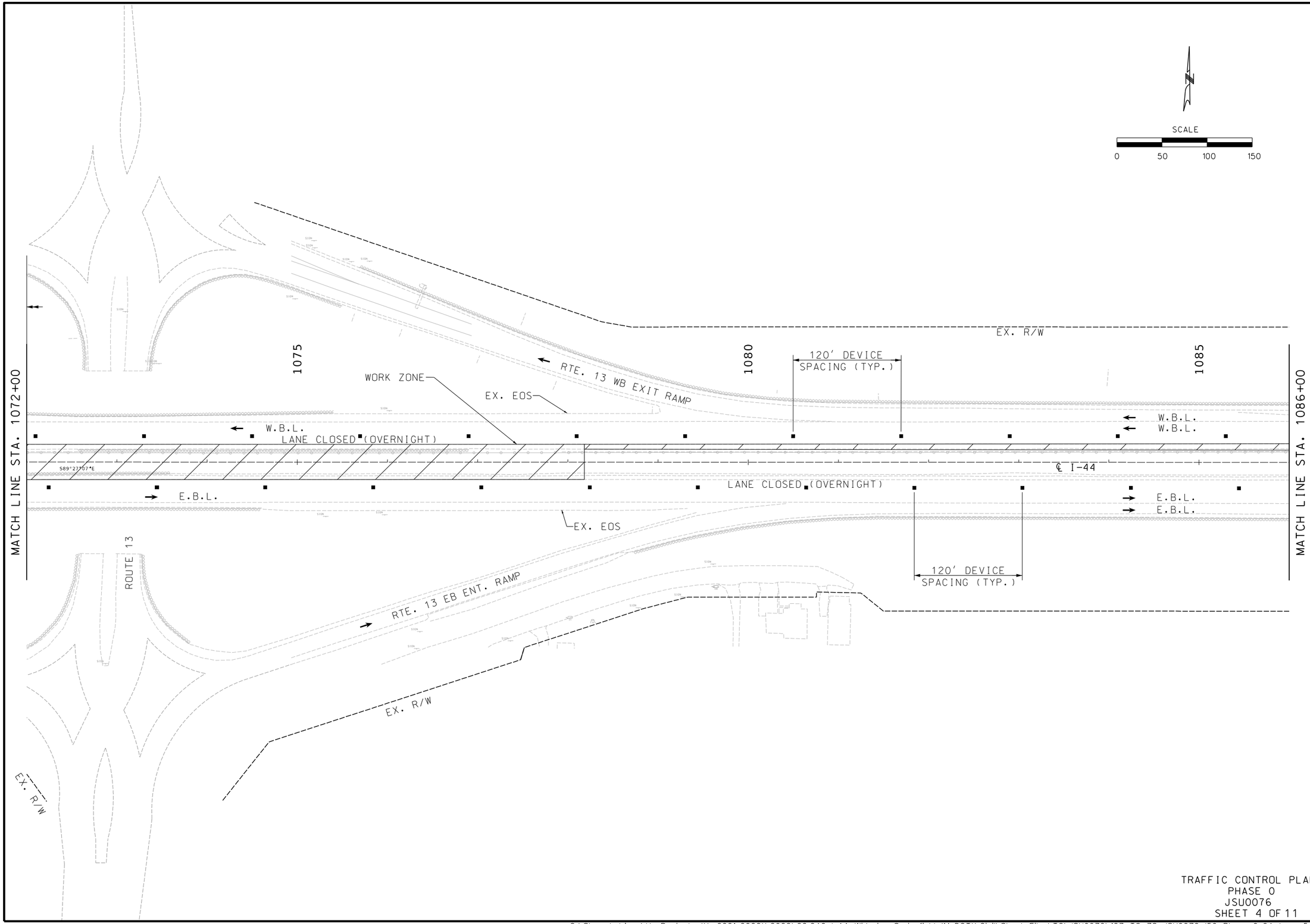
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\126_TC_77_JSU0076_150_Phase_0-03 .dgn 5:53:23 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 0
JSU0076
SHEET 4 OF 11

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER
STATE OF MISSOURI

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	127

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

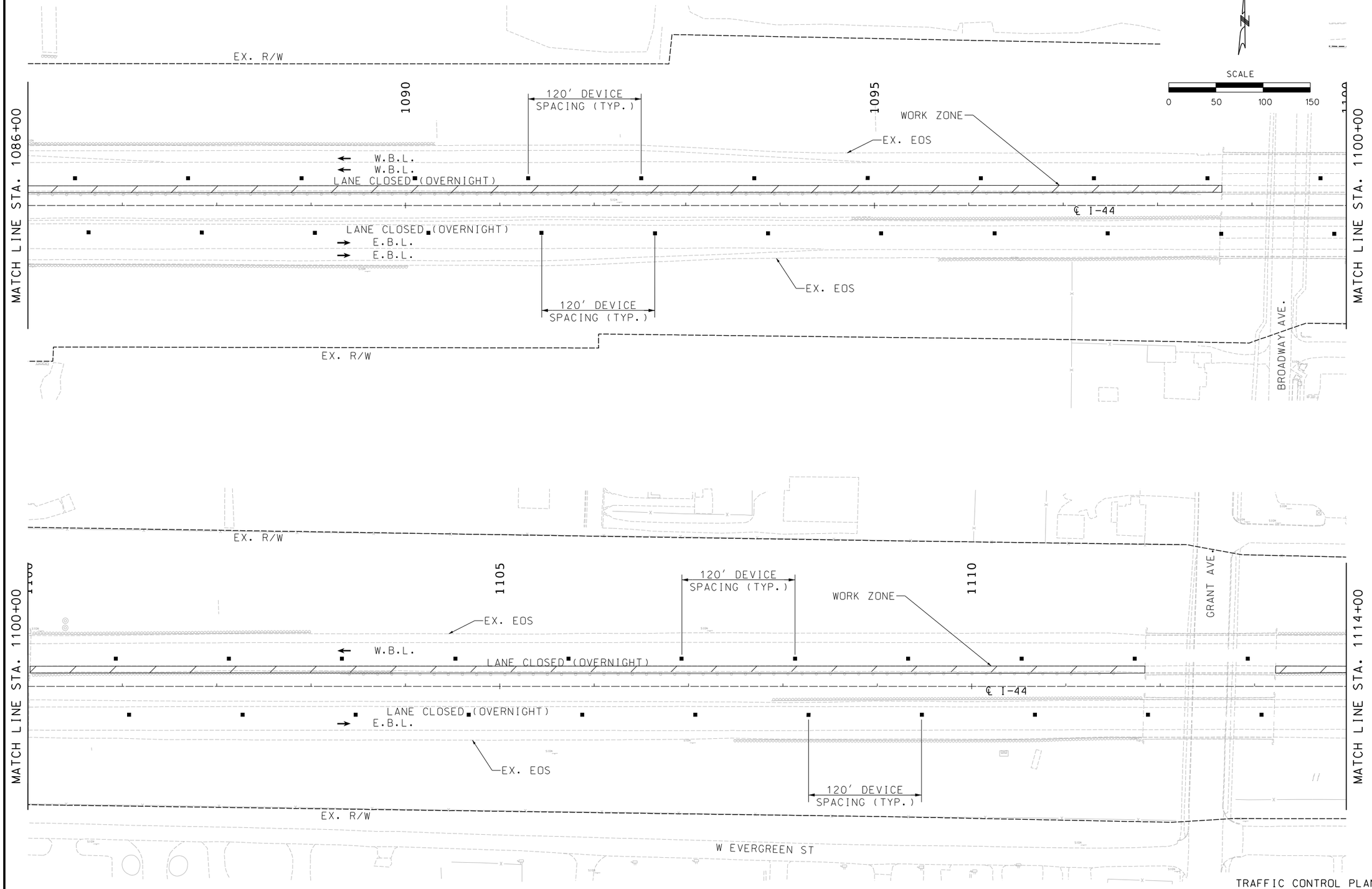
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\127_TC_78_JSU0076_I50_Phase_0-04.dgn 5:53:27 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 0
JSU0076
SHEET 5 OF 11

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	128

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

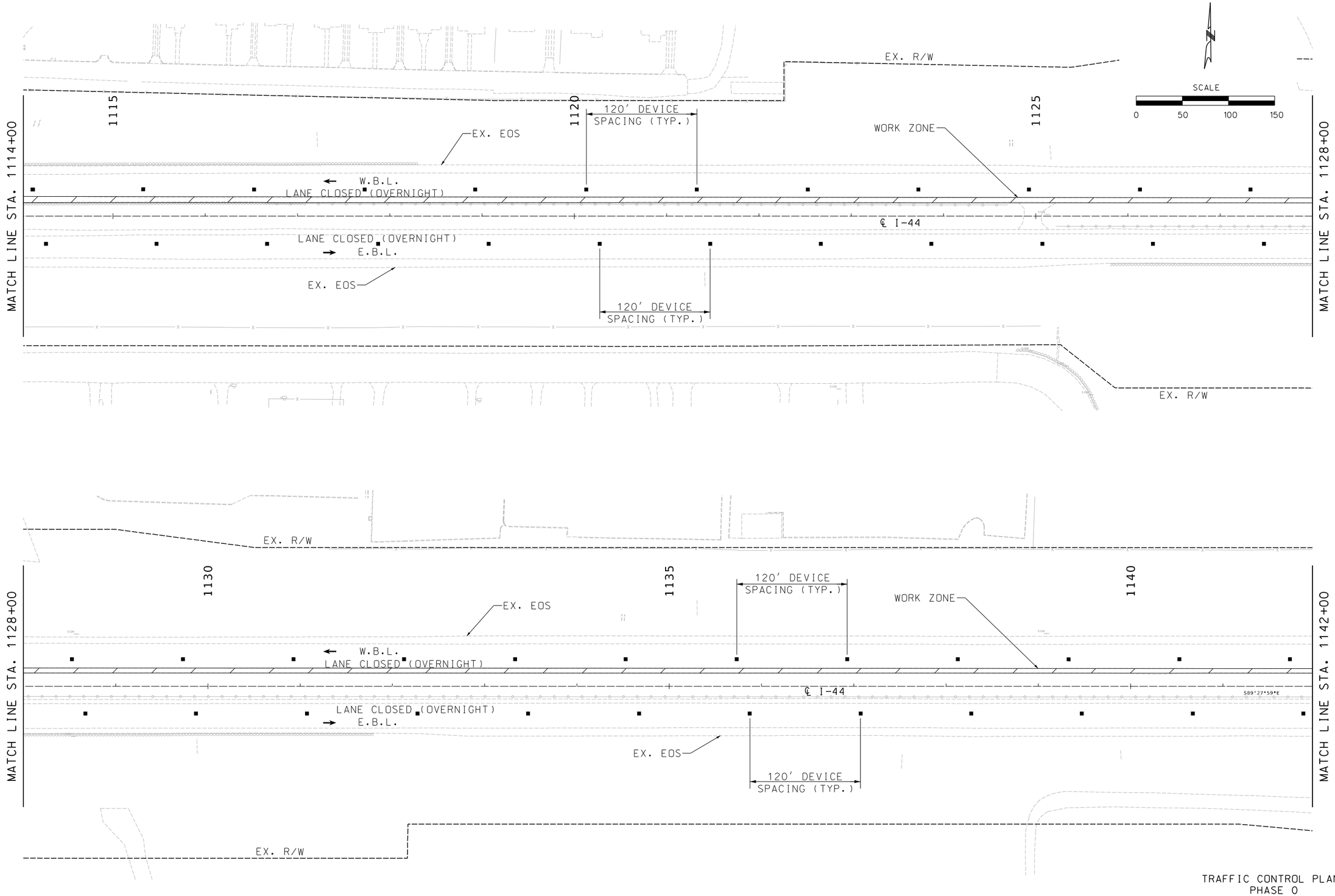
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\128_TC_79_JSU0076_I50_Phase_0-05.dgn 5:53:31 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 0
JSU0076
SHEET 6 OF 11

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	129

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

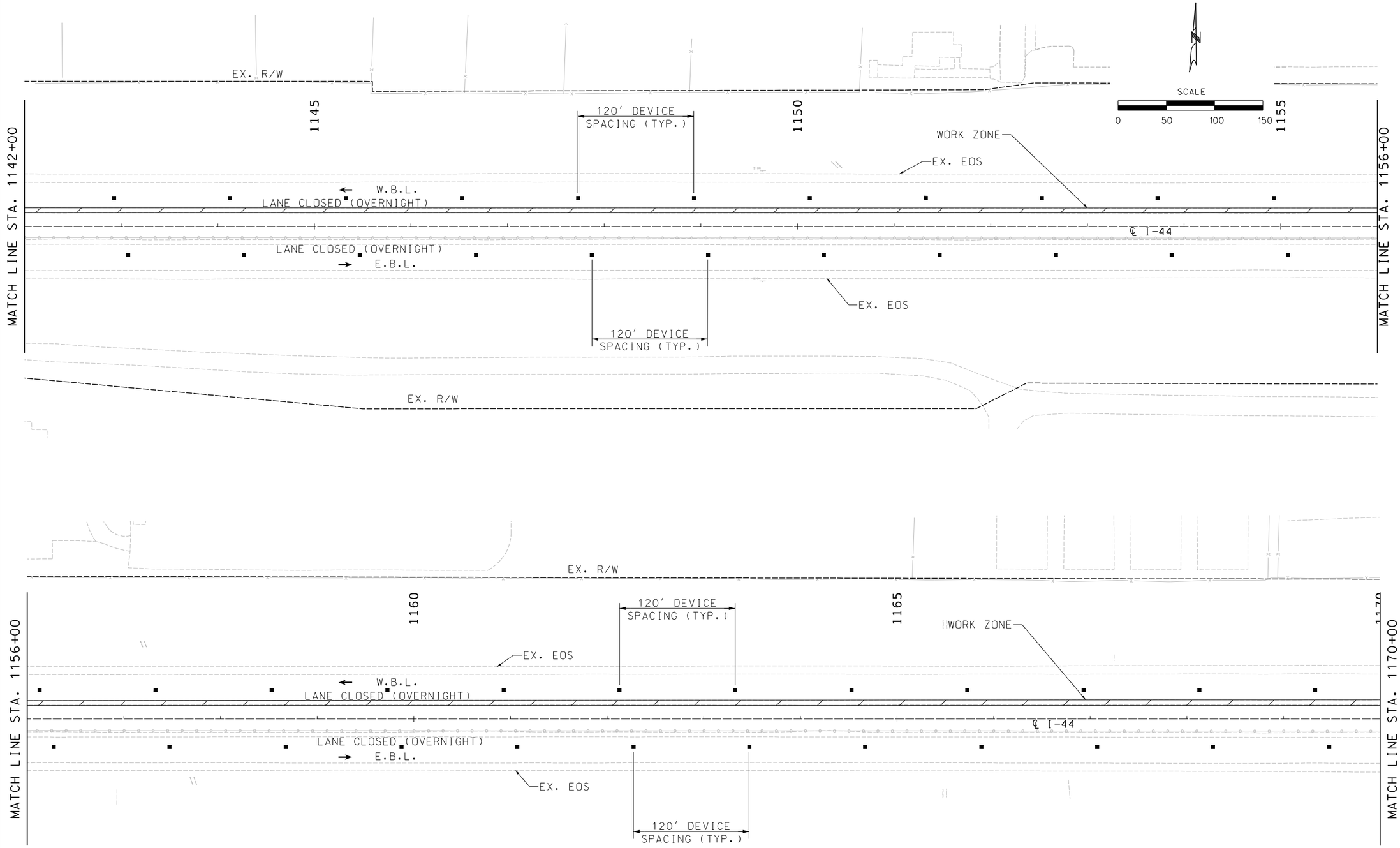
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\129_TC_80_JSU0076_I50_Phase_0-06.dgn 5:53:35 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 0
JSU0076
SHEET 7 OF 11

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	130

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

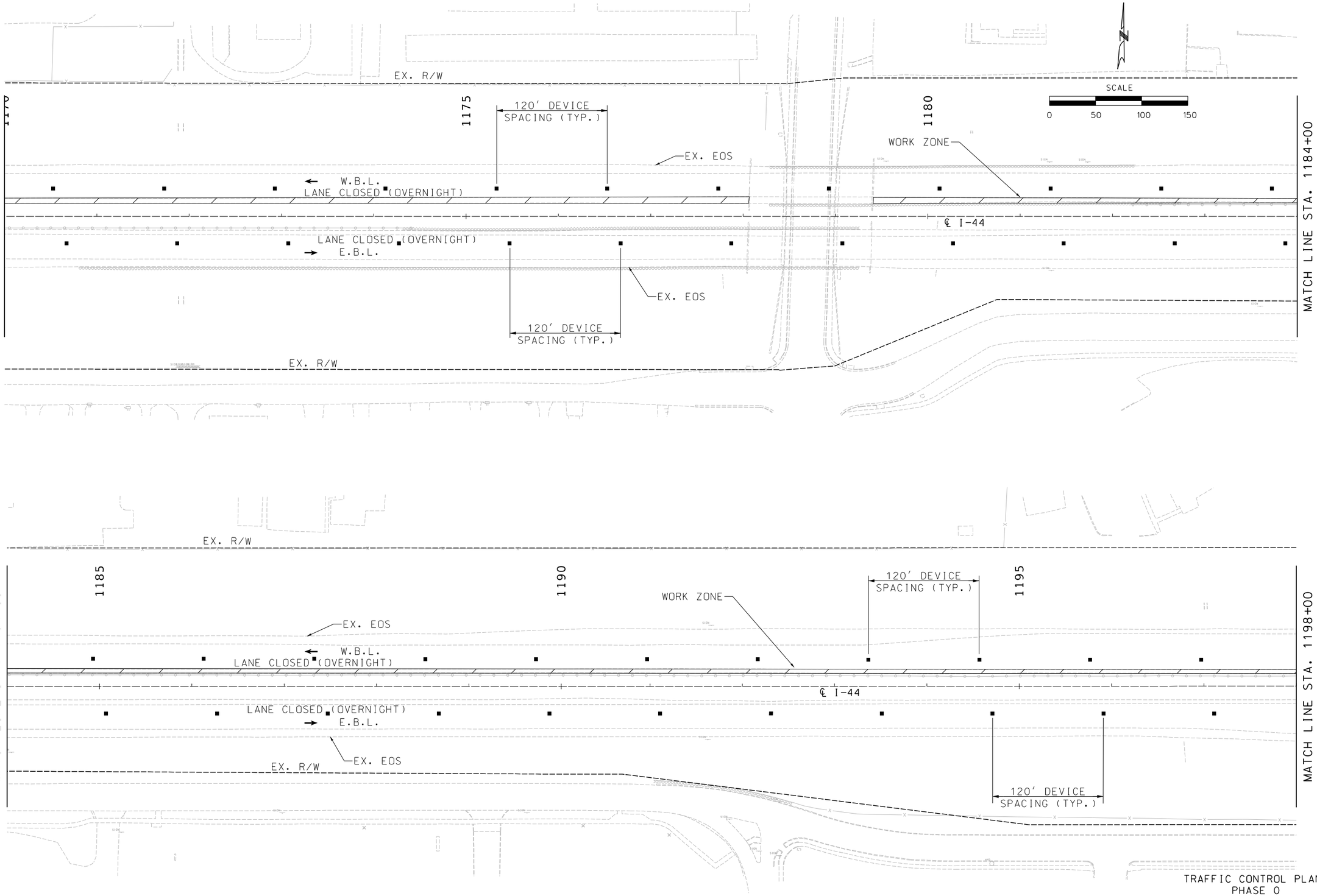
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\130_TC_81_JSU0076_I50_Phase_0-07.dgn 5:53:40 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 0
JSU0076
SHEET 8 OF 11

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	131

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

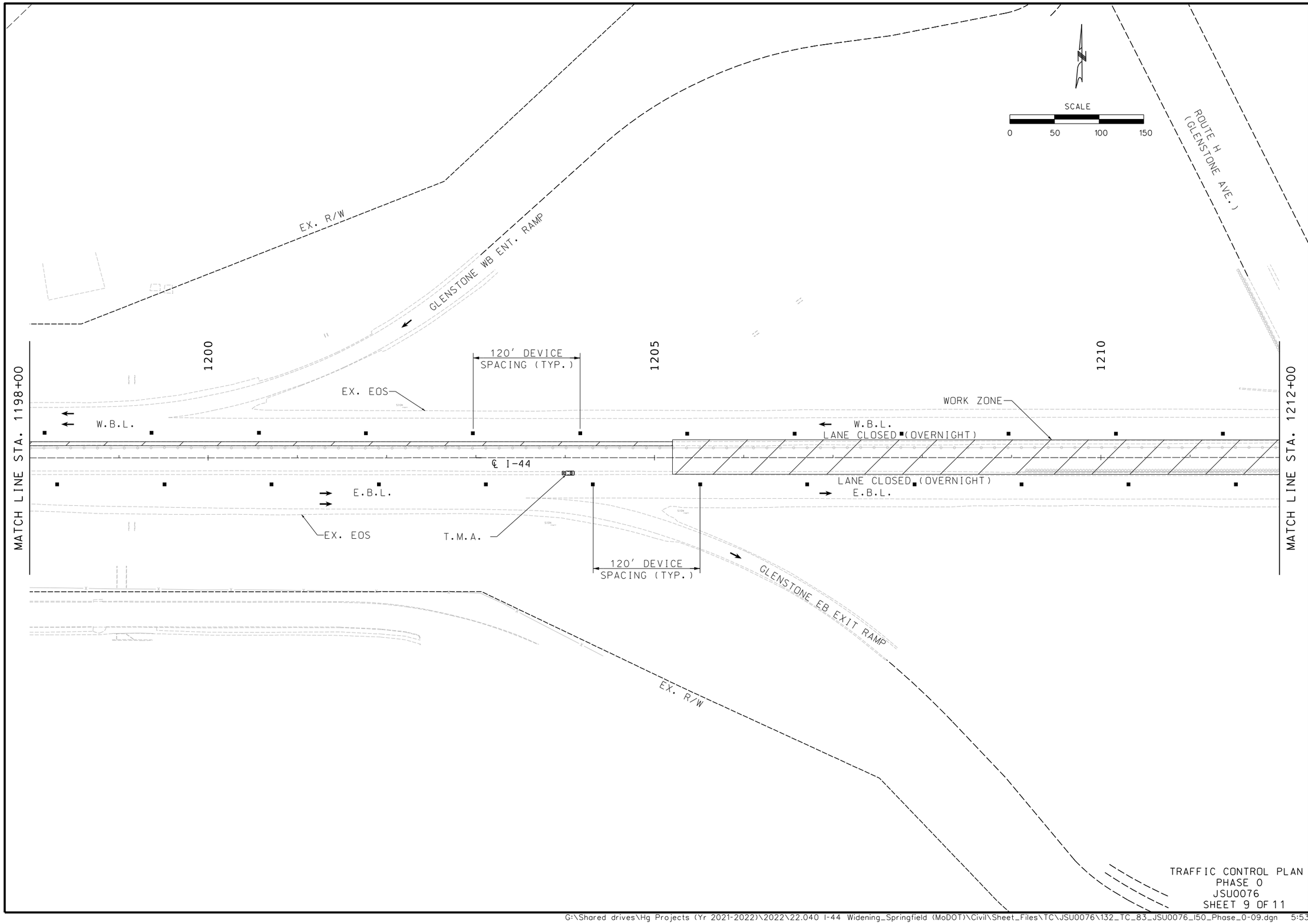
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\131_TC_82_JSU0076_I50_Phase_0-08.dgn 5:53:44 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 0
JSU0076
SHEET 9 OF 11

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/16/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	132
COUNTY	
GREENE	
JOB NO.	
JSU0076, J8I3044C, & JST0088	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\132_TC_83_JSU0076_I50_Phase_0-09.dgn 5:53:49 PM 8/16/2024

SCALE
0 50 100 150

GLENSTONE WB EXIT RAMP

EX. R/W

ROUTE H
(GLENSTONE AVE.)

1215

1220

1225

120' DEVICE
SPACING (TYP.)

MATCH LINE STA. 1212+00

EX. EOS

W.B.L.

W.B.L.
LANE CLOSED (OVERNIGHT)

T.M.A.

W.B.L.

℄ I-44

25

E.B.L.
E.B.L.

LANE CLOSED (OVERNIGHT)
E.B.L.

WORK ZONE

EX. EOS

120' DEVICE
SPACING (TYP.)

STA. 1221+13

STA. 1222+13

1000'
SIGN
SPACING
MIN.

100' 5 DEVICES

MATCH LINE STA. 1226+00

GLENSTONE EB ENT. RAMP

EX. R/W

SPEED
LIMIT
60
R2-1
25

TRAFFIC CONTROL PLAN
PHASE 0
JSU0076
SHEET 10 OF 11

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	133

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

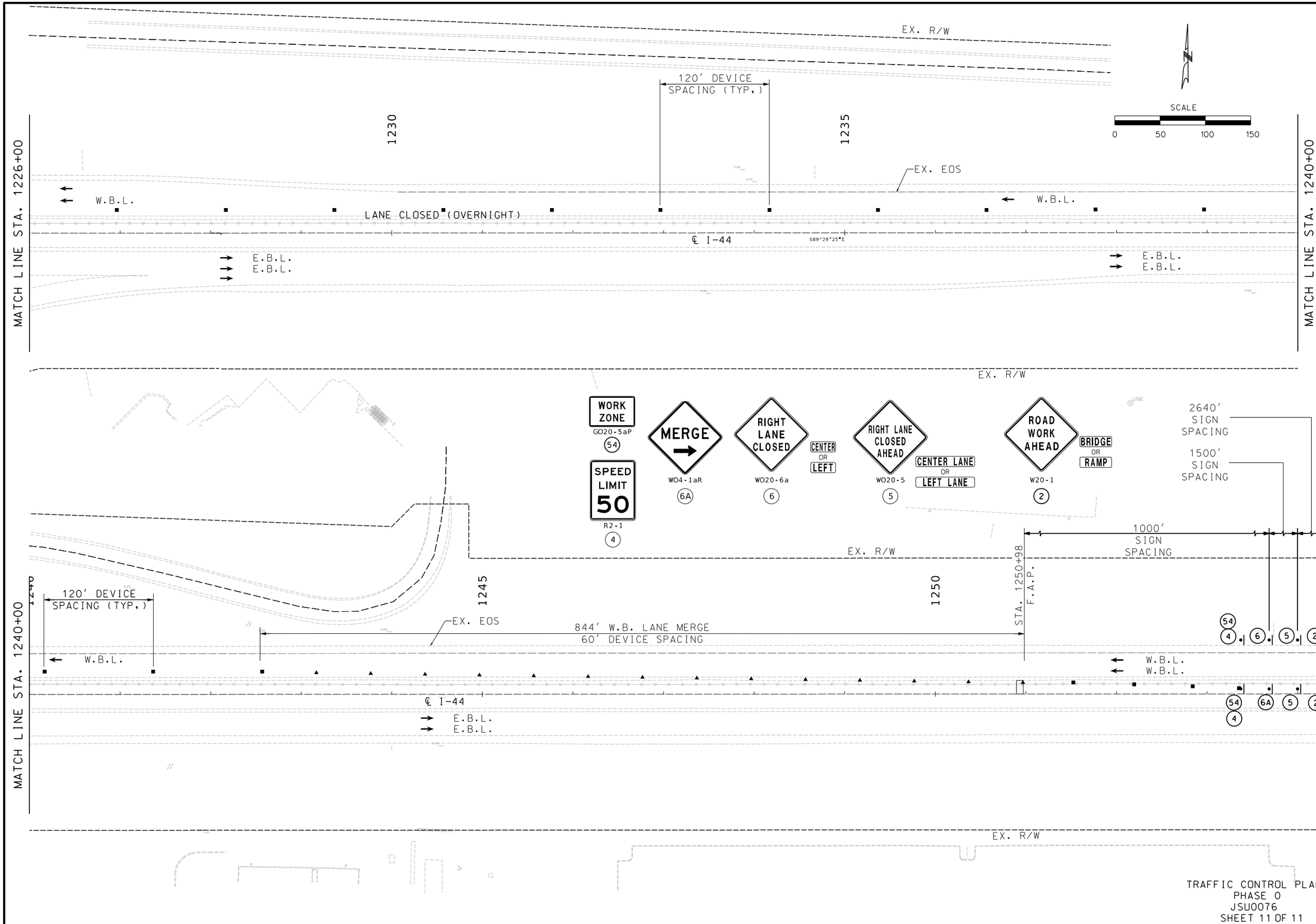
BRIDGE NO.

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Consult engineers inc planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873



TRAFFIC CONTROL PLAN
PHASE 0
JSU0076
SHEET 11 OF 11

ERIC J. REINKEMEYER
NUMBER PE-2006002846
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	8/18/2024
ROUTE	I-44
STATE	MO
DISTRICT	SW
SHEET NO.	134
COUNTY	GREENE
JOB NO.	JSU0076, J8I3044C, & JST0088B
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

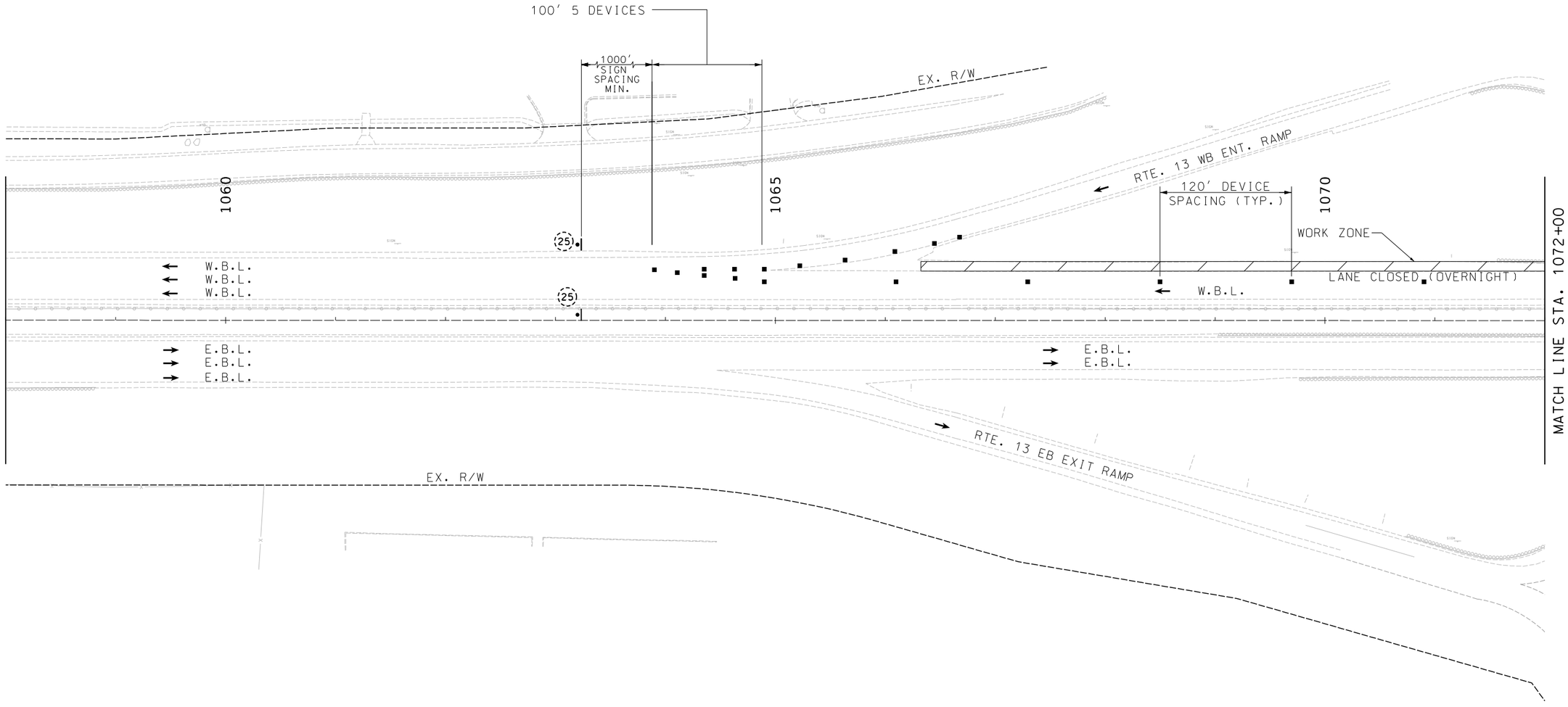
G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\134_TC_85_JSU0076_150_Phase_0-11.dgn 8:12:52 PM 8/18/2024

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (DIB) W/ LIGHTS
- CHANNELIZER
- TYPE 3 BARRICADE
- CHANGEABLE MESSAGE BOARD (CMS)
- TEMP. LONG TERM RUMBLE STRIPS (T.L.T.R.S.)
- FLASHING ARROW PANEL (FAP)
- TRUCK MOUNTED ATTENUATOR (TMA)
- ADVANCE WARNING RAIL SYSTEM (AWRS)

SPEED LIMIT 60
R2-1
(25)

SCALE
0 50 100 150



TRAFFIC CONTROL PLAN
PHASE 0B
JSU0076
SHEET 1 OF 9

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	135

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

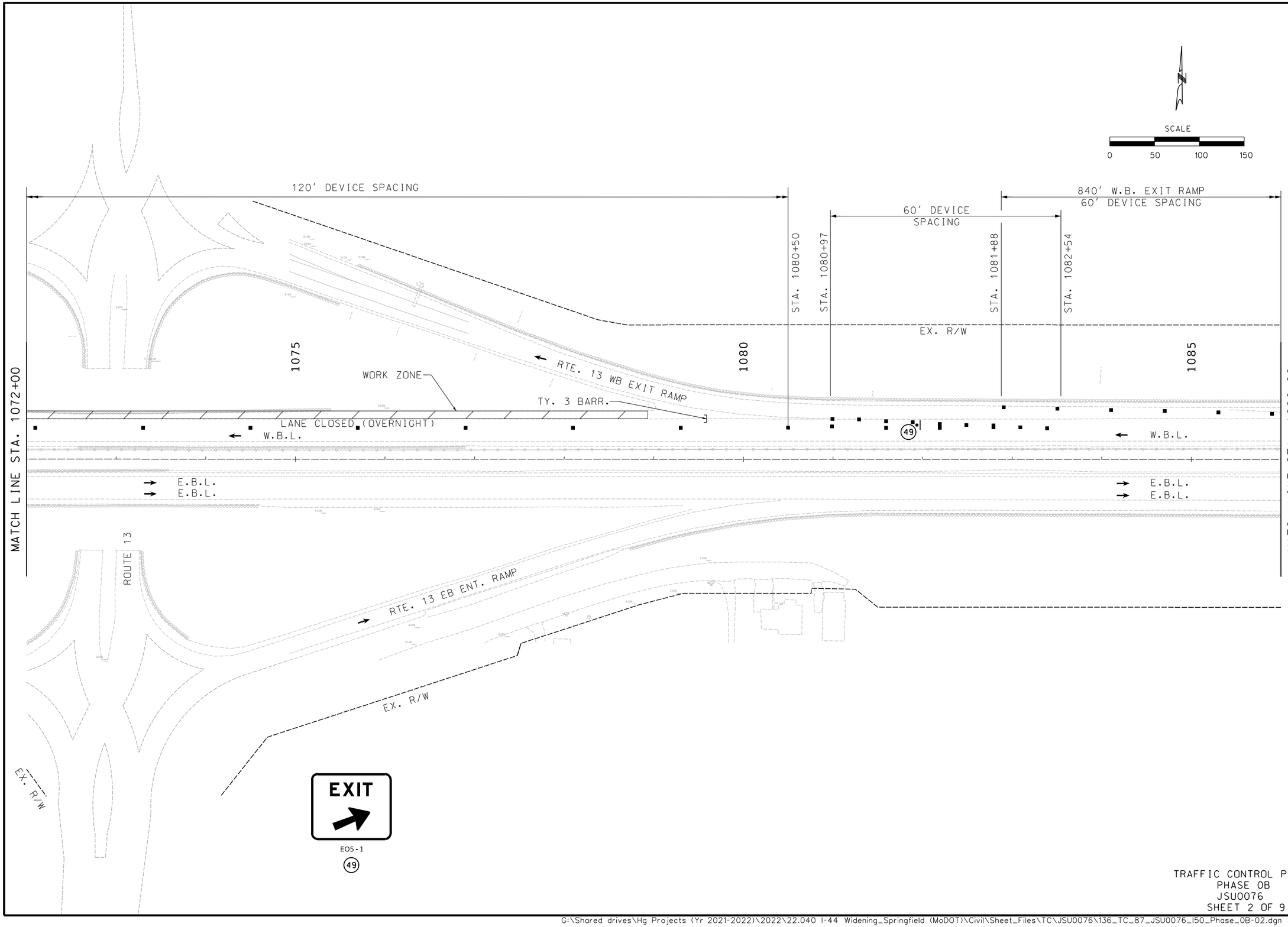
DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\135_TC_86_JSU0076_150_Phase_0B-01.dgn 6:05:47 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 0B
JSU0076
SHEET 2 OF 9

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	136

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

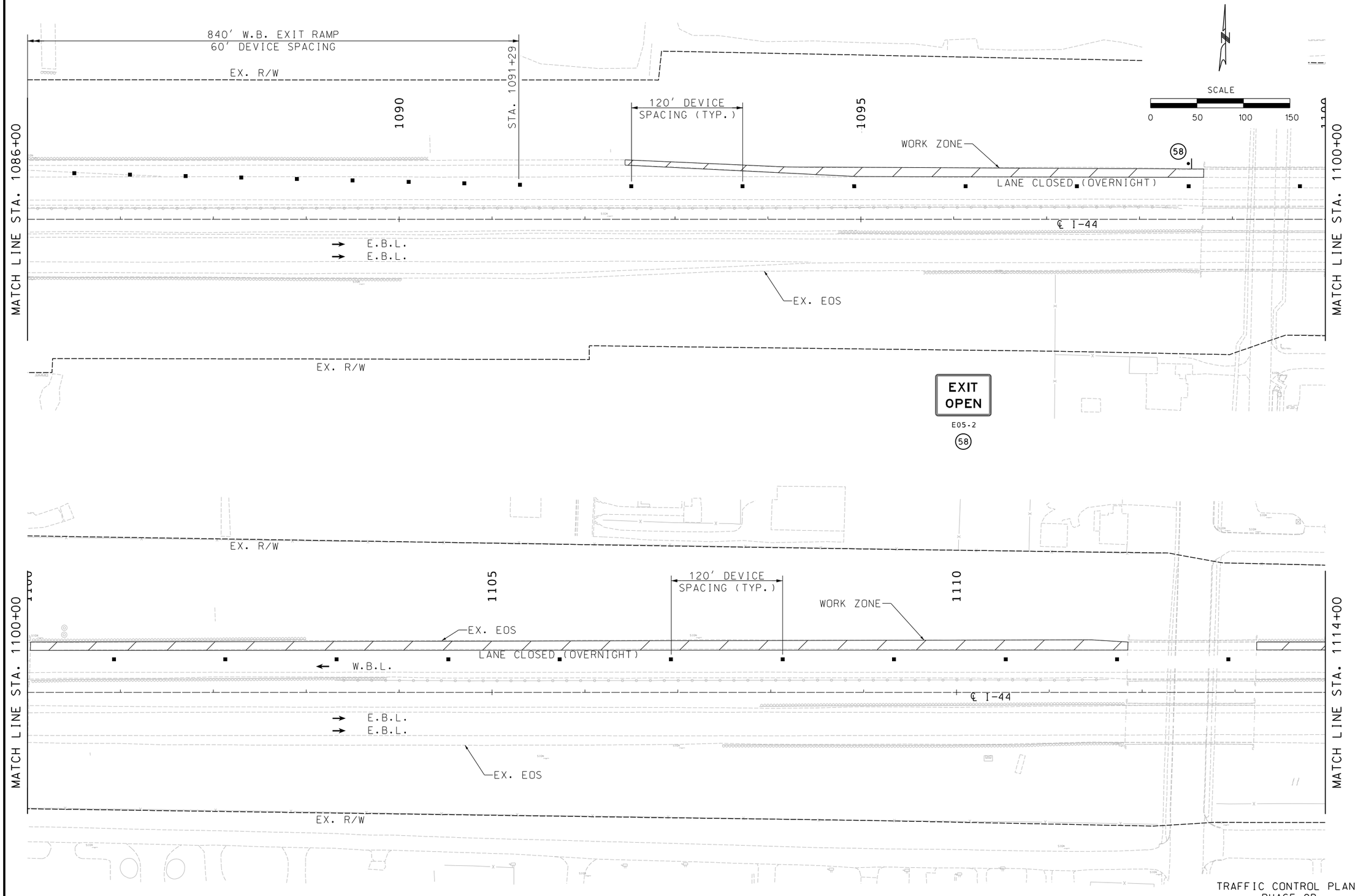
BRIDGE NO.

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816.912-4720)



TRAFFIC CONTROL PLAN
PHASE 0B
JSU0076
SHEET 3 OF 9

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	137

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

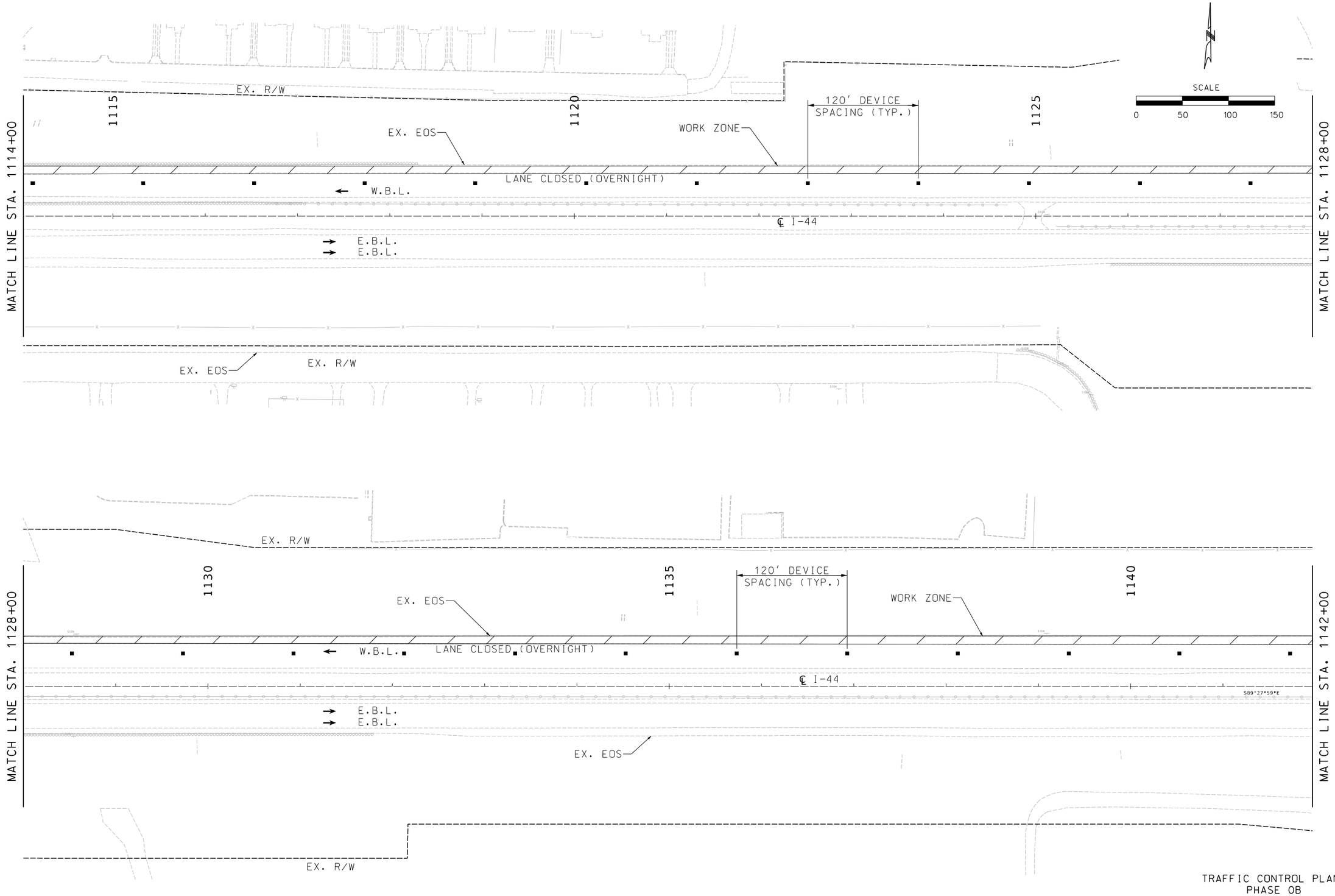
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\137_TC_88_JSU0076_150_Phase_0B-03.dgn 6:05:55 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 0B
JSU0076
SHEET 4 OF 9

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	138

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

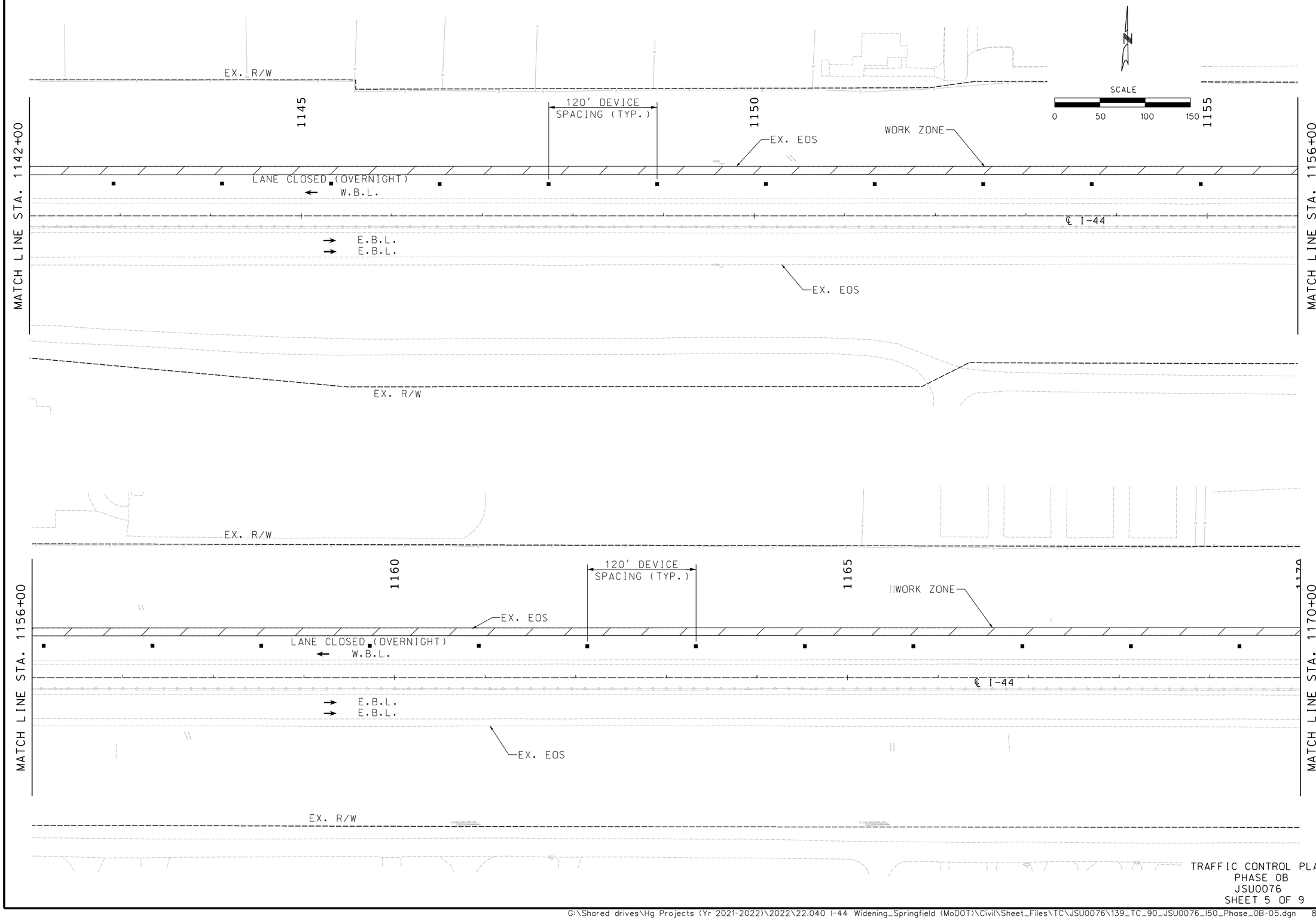
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\138_TC_89_JSU0076_150_Phase_0B-04.dgn 6:06:00 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 0B
JSU0076
SHEET 5 OF 9

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	139

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

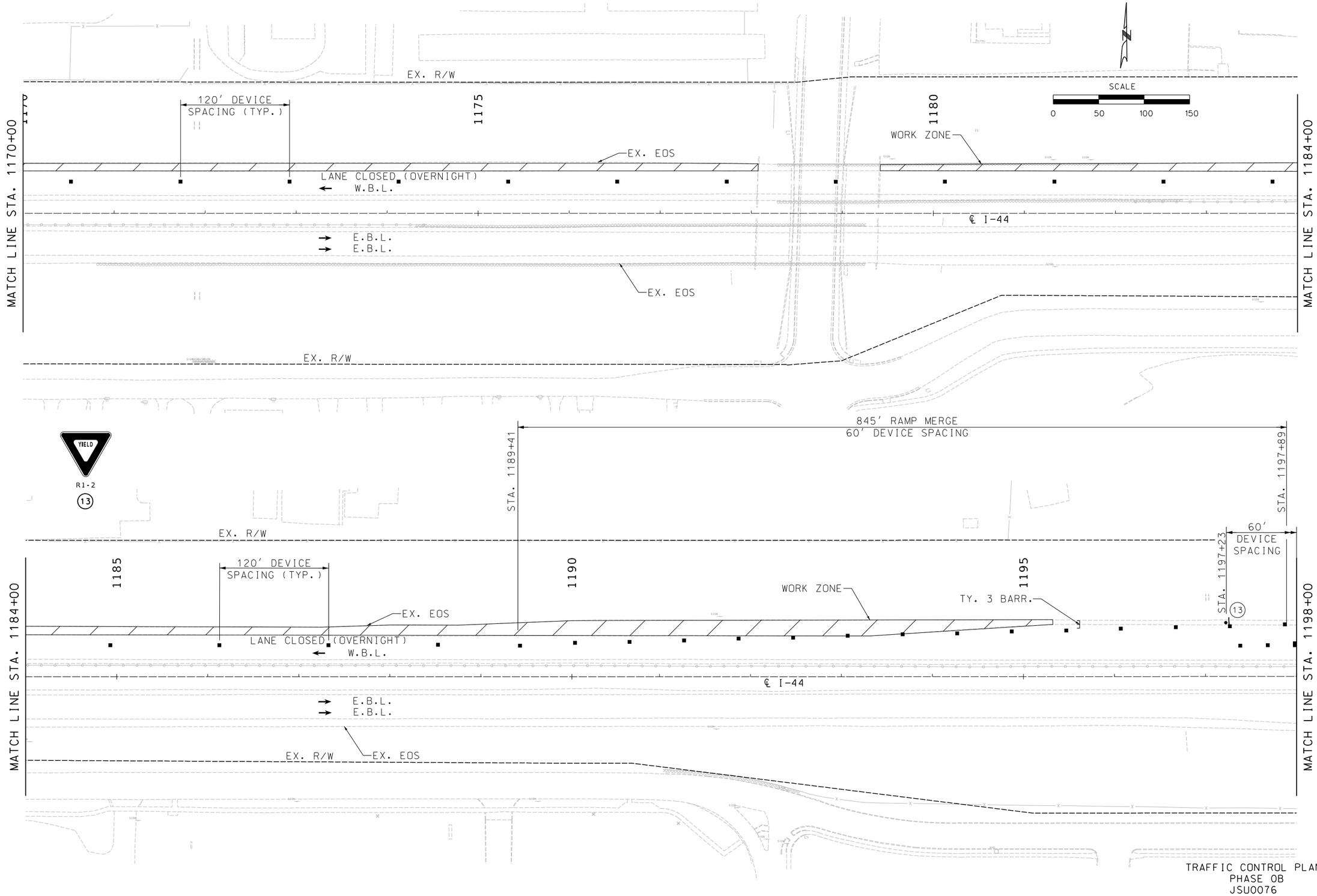
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\139_TC_90_JSU0076_150_Phase_0B-05.dgn 8:15:35 PM 8/18/2024



TRAFFIC CONTROL PLAN
PHASE 0B
JSU0076
SHEET 6 OF 9

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	8/16/2024
ROUTE	I-44
STATE	MO
DISTRICT	SW
SHEET NO.	140
COUNTY	GREENE
JOB NO.	JSU0076, J8I3044C, & JST0088B
PROJECT NO.	
BRIDGE NO.	

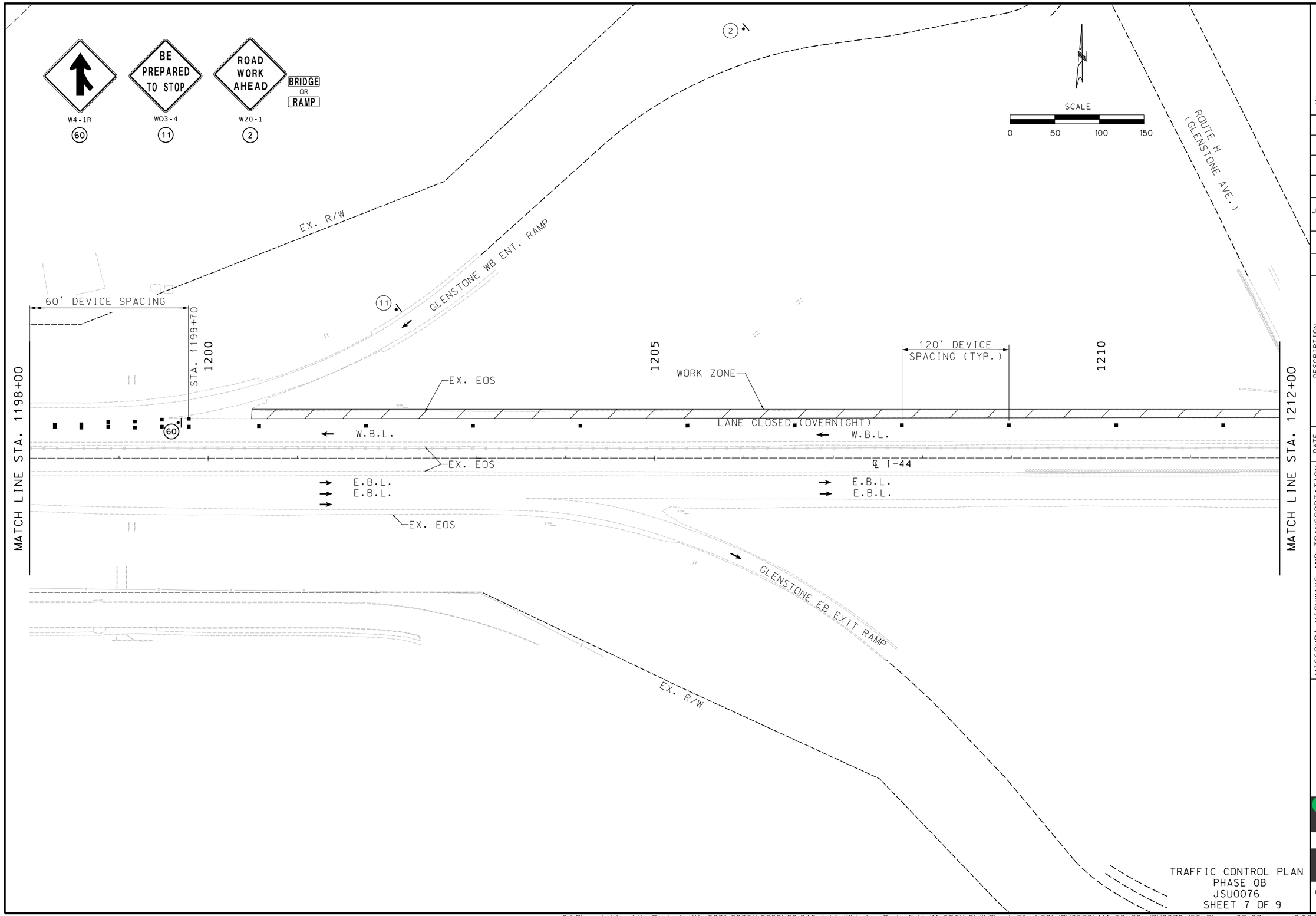
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\140_TC_91_JSU0076_I50_Phase_0B-06.dgn 6:06:08 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 0B
JSU0076
SHEET 7 OF 9

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED	
8/16/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	141
COUNTY	
GREENE	
JOB NO.	
JSU0076, J8I3044C, & JST0088	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

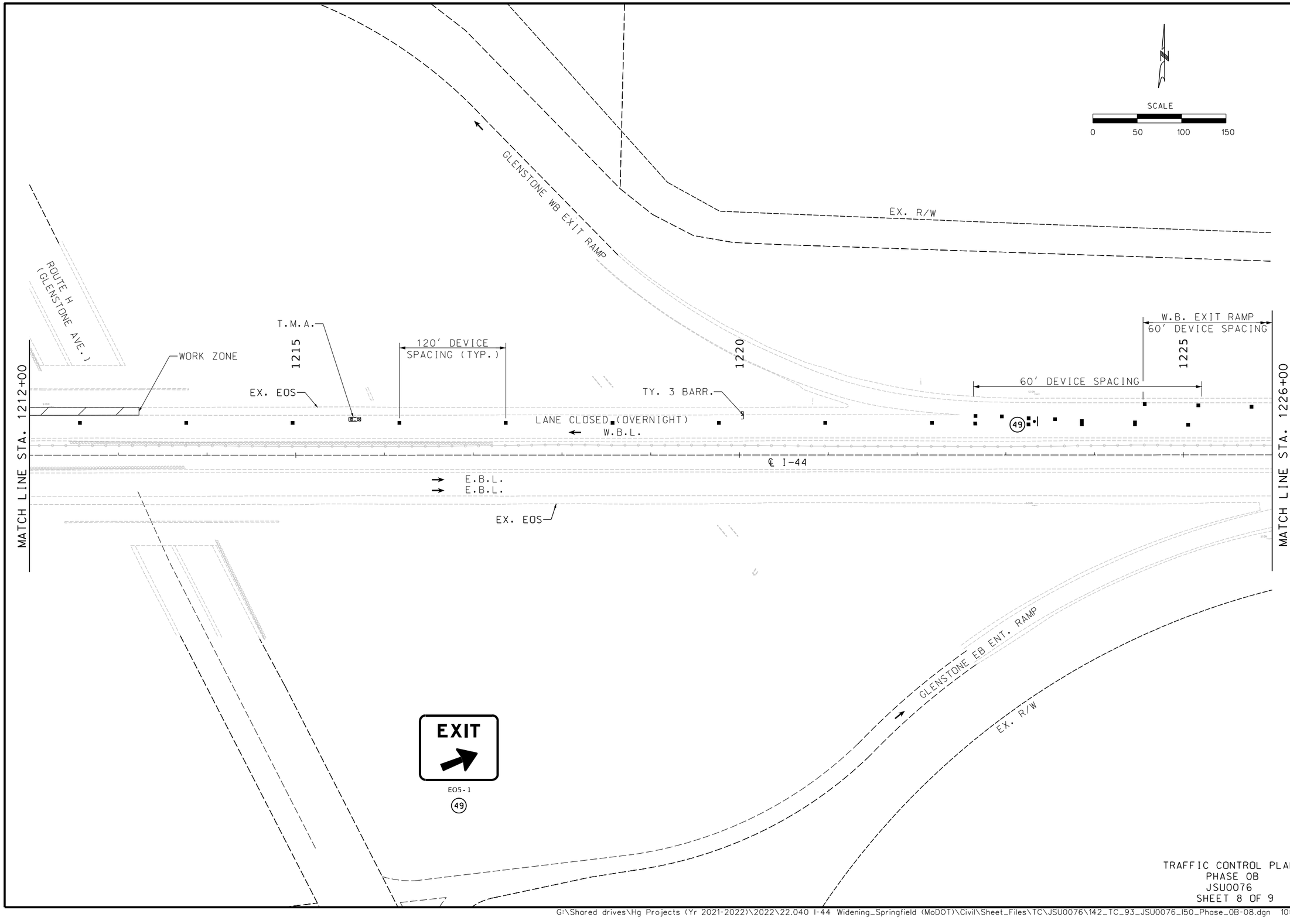
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\141_TC_92_JSU0076_150_Phase_0B-07.dgn 6:06:13 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 0B
JSU0076
SHEET 8 OF 9

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	8/17/2024
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	142
COUNTY	GREENE
JOB NO.	JSU0076, J8I3044C, & JST0088B
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\142_TC_93_JSU0076_150_Phase_0B-08.dgn 10:50:25 AM 8/17/2024

EX. R/W

MATCH LINE STA. 1226+00

1230

840' EXIT TAPER
60' DEVICE SPACING

1235

120' DEVICE
SPACING (TYP.)

EX. EOS

W.B.L.

℄ I-44

S89°29'25"E

LANE CLOSED (OVERNIGHT)

MATCH LINE STA. 1240+00

SCALE
0 50 100 150

EXIT
OPEN
E05-2
(58)

EX. R/W

WORK ZONE
GO20-5aP
(54)

SPEED LIMIT 50
R2-1
(4)

MERGE
WO4-1aL
(6A)

RIGHT LANE CLOSED
CENTER OR LEFT
WO20-6a
(6)

RIGHT LANE CLOSED AHEAD
CENTER LANE OR LEFT LANE
WO20-5
(5)

ROAD WORK AHEAD
BRIDGE OR RAMP
W20-1
(2)

2640' SIGN SPACING

1500' SIGN SPACING

1000' SIGN SPACING

STA. 1250+98
F.A.P.

EX. R/W

1240

120' DEVICE
SPACING (TYP.)

1245

1250

844' W.B. LANE MERGE
60' DEVICE SPACING

EX. EOS

LANE CLOSED (OVERNIGHT)
W.B.L.

W.B.L.
W.B.L.

℄ I-44

(54) (4) (6A) (5) (2) AWRS

(54) (4) (6) (5) (2) AWRS

MATCH LINE STA. 1240+00

EX. R/W

TRAFFIC CONTROL PLAN
PHASE 0B
JSU0076
SHEET 9 OF 9

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	143

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

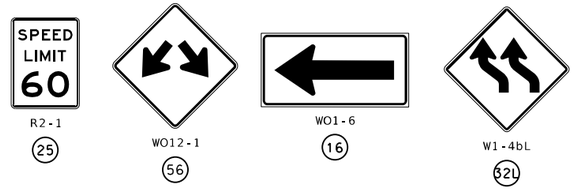
Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

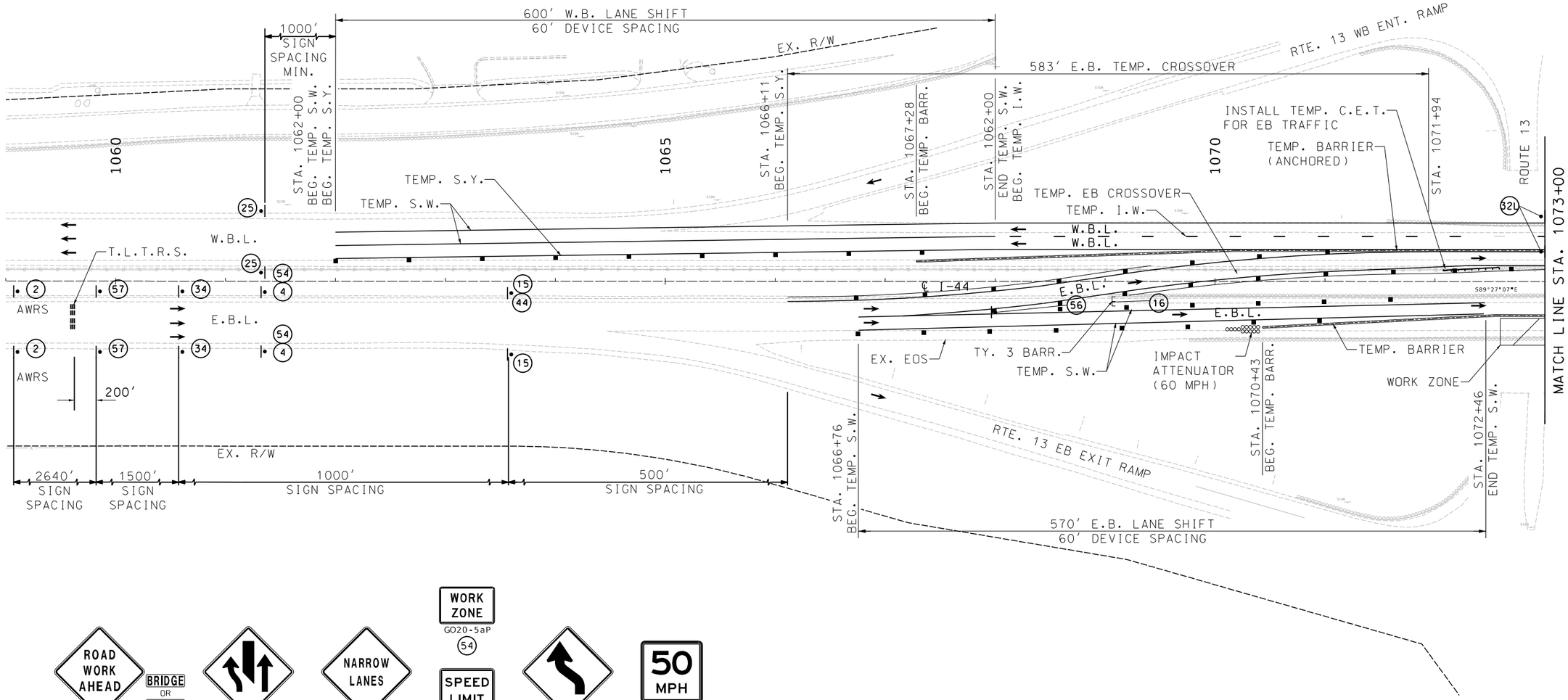
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

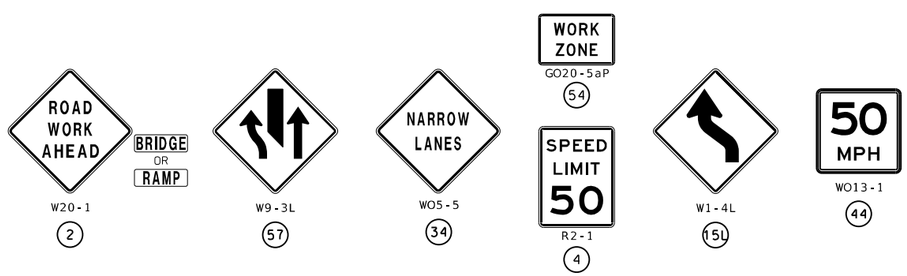
G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\143_TC_94_JSU0076_I50_Phase_0B-09.dgn 6:06:21 PM 8/16/2024

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (DIB) W/ LIGHTS
- CHANNELIZER
- TYPE 3 BARRICADE
- CHANGEABLE MESSAGE BOARD (CMS)
- TEMP. LONG TERM RUMBLE STRIPS (T.L.T.R.S.)
- FLASHING ARROW PANEL (FAP)
- TRUCK MOUNTED ATTENUATOR (TMA)
- ADVANCE WARNING RAIL SYSTEM (AWRS)







TRAFFIC CONTROL PLAN
PHASE 1
JSU0076
SHEET 1 OF 8

ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER
STATE OF MISSOURI

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/16/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	144

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

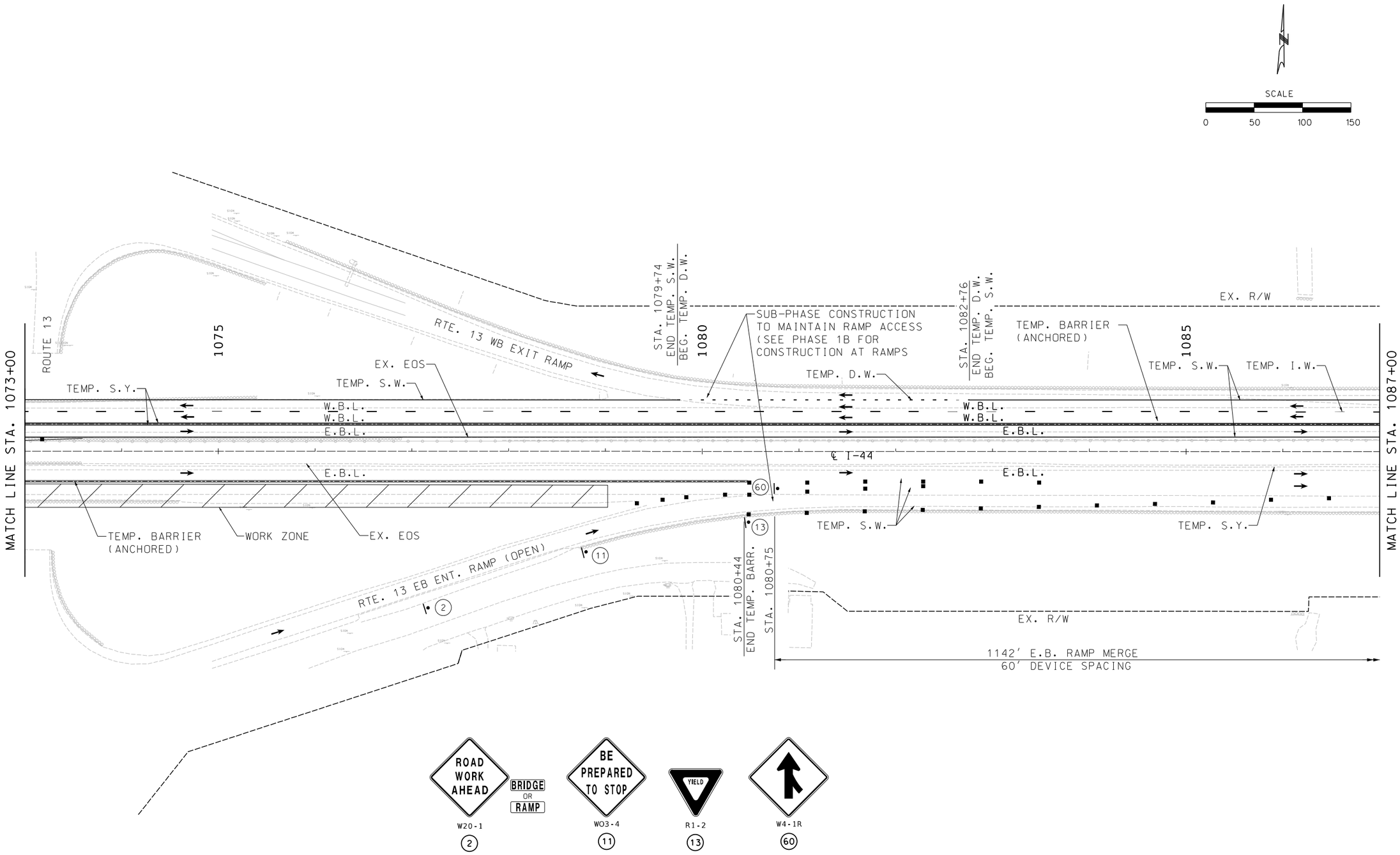
BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720



SCALE

0 50 100 150

TRAFFIC CONTROL PLAN
PHASE 1
JSU0076
SHEET 2 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	145

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

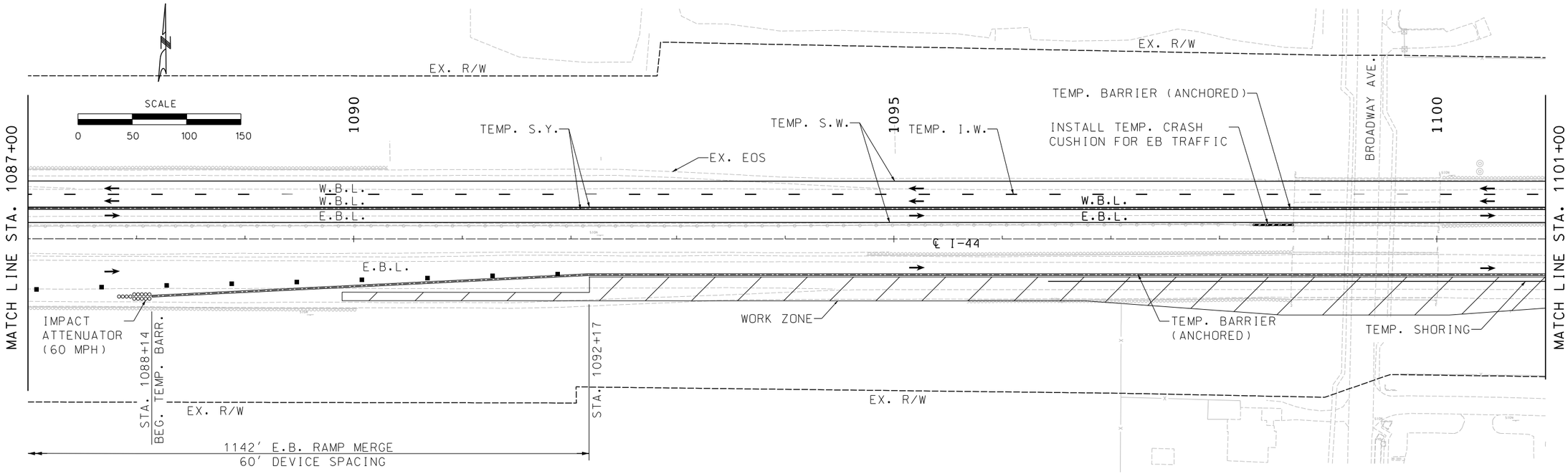
DESCRIPTION	DATE

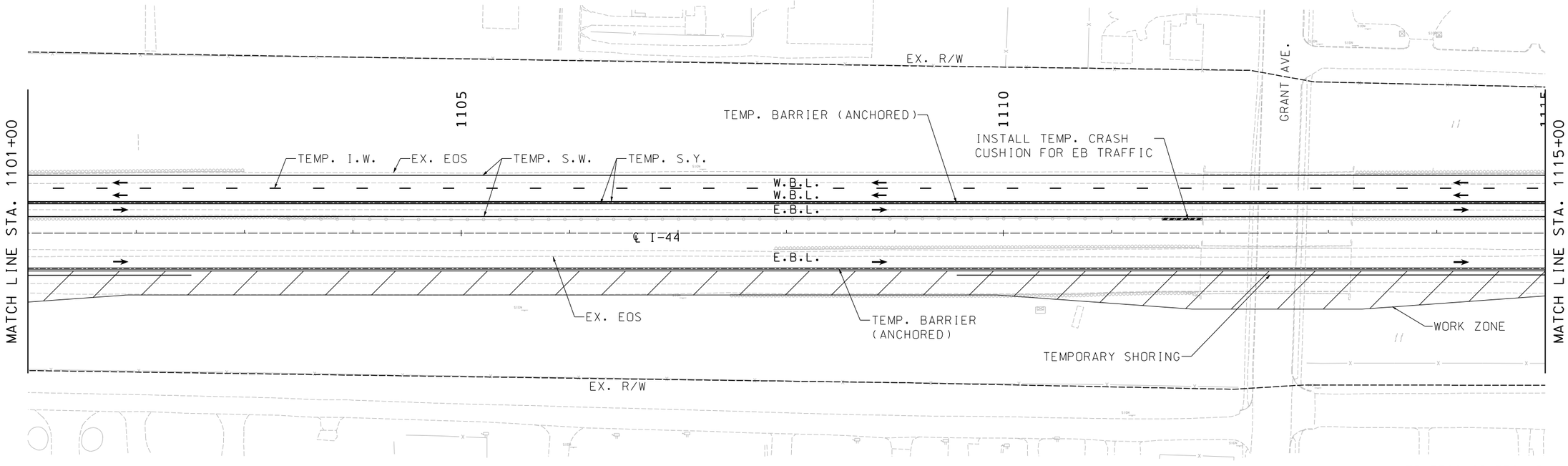
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\145_TC_96_JSU0076_150_Phase_1-02.dgn 6:06:31 PM 8/16/2024





TRAFFIC CONTROL PLAN
PHASE 1
JSU0076
SHEET 3 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	146

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

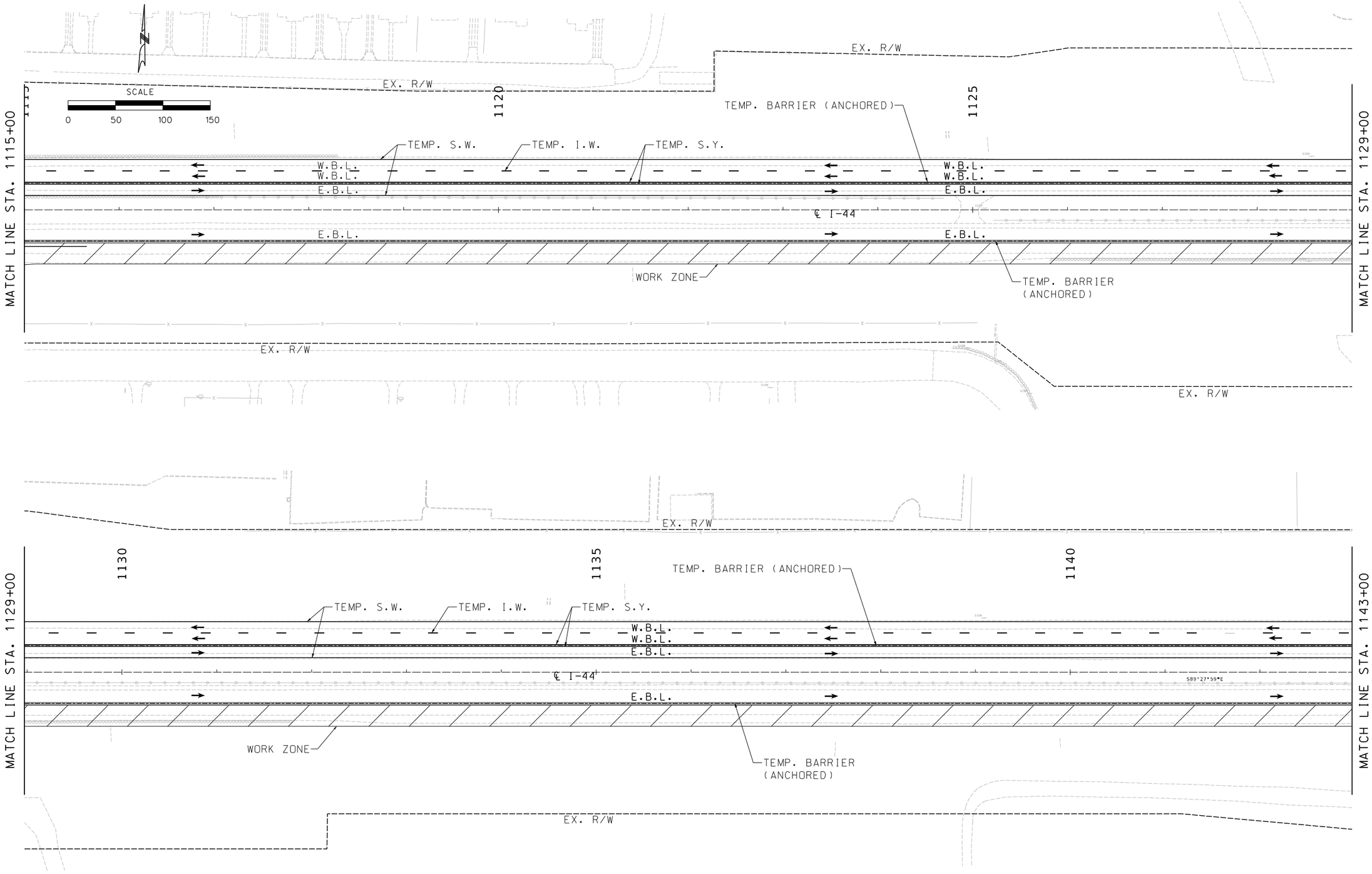
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\146_TC_97_JSU0076_150_Phase_1-03.dgn 6:06:36 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 1
JSU0076
SHEET 4 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/16/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	147
COUNTY	
GREENE	
JOB NO.	
JSU0076, J8I3044C, & JST0088B	
PROJECT NO.	
BRIDGE NO.	

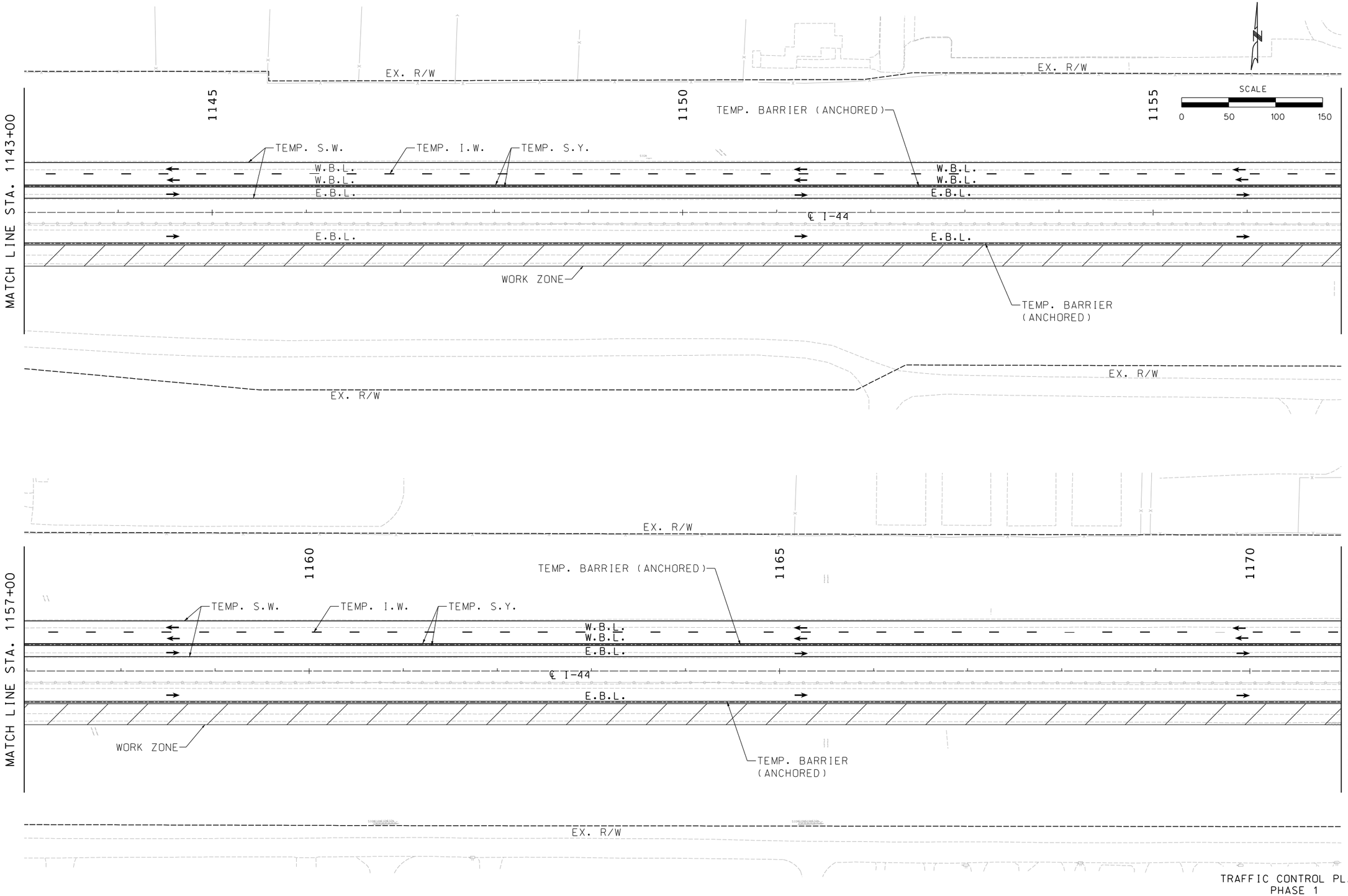
DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\147_TC_98_JSU0076_150_Phase_1-04.dgn 6:06:40 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 1
JSU0076
SHEET 5 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	148

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

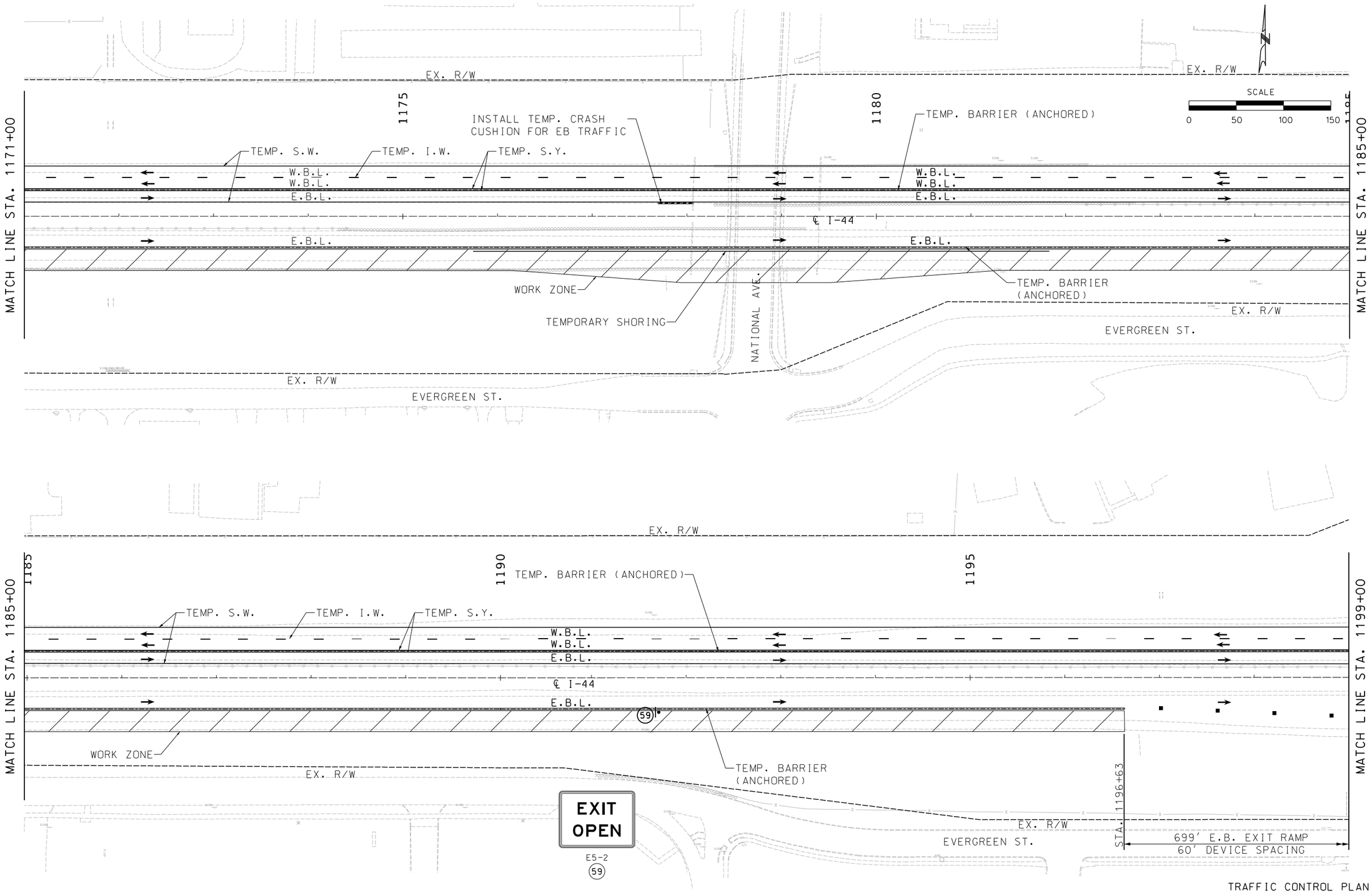
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\148_TC_99_JSU0076_150_Phase_1-05.dgn 6:06:44 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 1
JSU0076
SHEET 6 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	8/16/2024
ROUTE	I-44
STATE	MO
DISTRICT	SW
SHEET NO.	149
COUNTY	GREENE
JOB NO.	JSU0076, J8I3044C, & JST0088B
PROJECT NO.	
BRIDGE NO.	

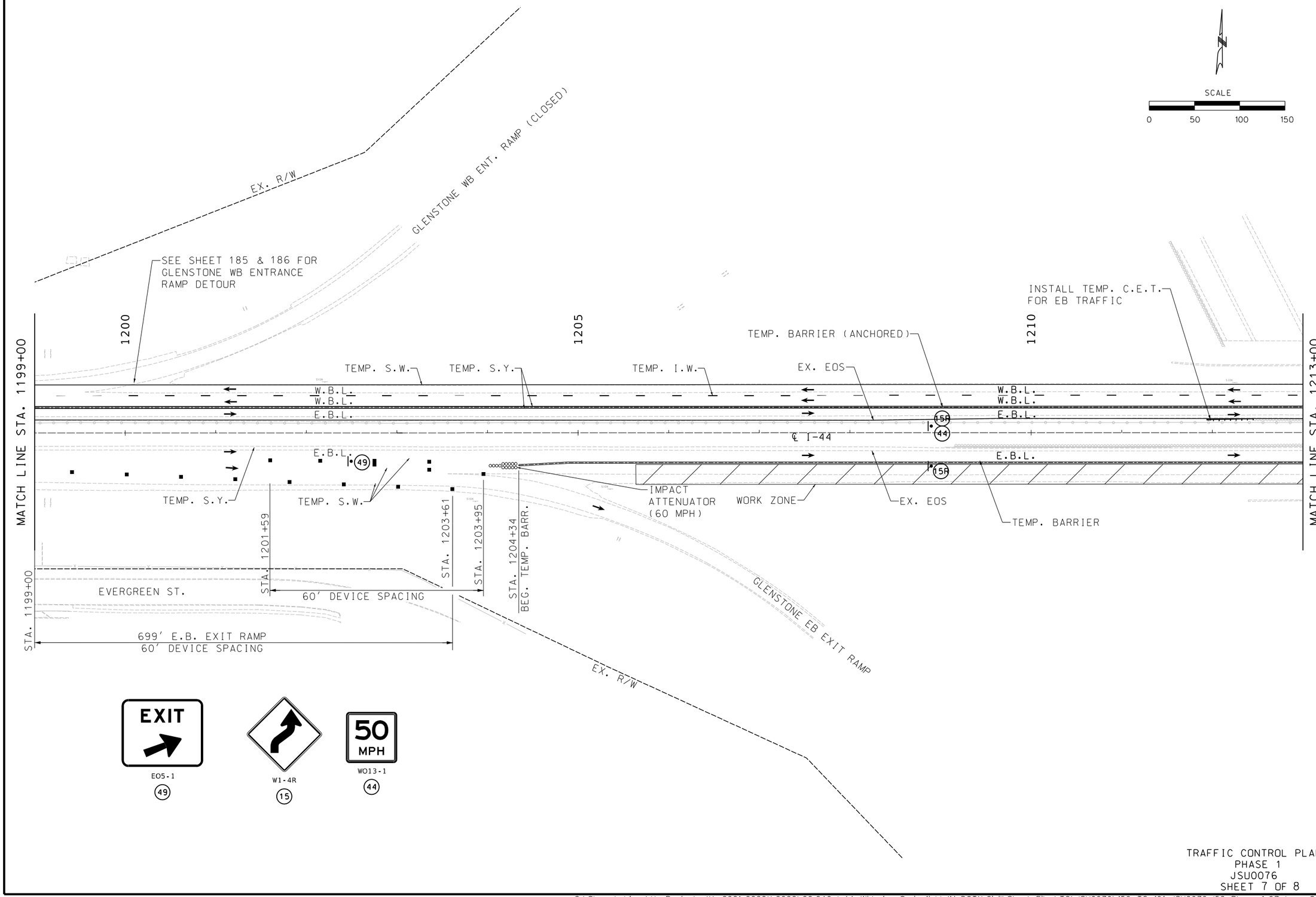
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\149_TC_100_JSU0076_150_Phase_1-06.dgn 6:06:49 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 1
JSU0076
SHEET 7 OF 8

ERIC J. REINKEMEYER
NUMBER PE-2006002846
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/18/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	150

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\150_TC_101_JSU0076_150_Phase_1-07.dgn 8:25:26 PM 8/18/2024

NOTE:
KEEP WB MEDIAN LANE (THIRD THRU LANE)
FROM J8I3044C CLOSED UNTIL JSU0076
CONSTRUCTION IS COMPLETE.

WO13-1
(44)

W1-4bR
(32R)

R2-1
(25)

G020-5aP
(54)

R2-1
(4)

WO5-1
(43)

BRIDGE OR RAMP

W20-1
(2)

BRIDGE OR RAMP

SCALE
0 50 100 150

456' W.B. LANE SHIFT
60' DEVICE SPACING

STA. 1219+00
END TEMP. I.W.
END TEMP. S.W.

STA. 1223+56
END TEMP. S.W.
END TEMP. S.Y.

EX. R/W

GLENSTONE WB EXIT RAMP

236' W.B. EXIT RAMP

STA. 1220+66

STA. 1223+02

SIGN SPACING 500'

SIGN SPACING 1500'

SIGN SPACING 2640'

J8I3044C (COMPLETE)

200'

MATCH LINE STA. 1213+00

STA. 0+00.00 ℄ TEMP. CROSSOVER =
STA. 1213+09 ℄ MED. I-44
27.17' LF

START STA 0+00.00

PC STA 1+99.93

PT STA 4+52.72

PC STA 6+40.95

PT STA 7+91.37

END STA 9+91.37

PI 3+26.51
PC 1+99.93
PT 4+52.72
Δ 7°32'37.1" (RT)
D 2°59'3.0"
L 252.79' (ARC)
T 126.58'
R 1,920.00'

PI 6+66.34
PC 5+40.95
PT 7+91.37
Δ 7°32'37.1" (LT)
D 3°0'44.6"
L 250.42' (ARC)
T 125.39'
R 1,902.00'

TEMP. BARRIER (ANCHORED)

TEMP. I.W.

TEMP. S.W.

TEMP. S.Y.

PR EOS

PR EOP

W.B.L.

12' W.B.L.

T.L.T.R.S.

AWRS

(LANE CLOSED)

℄ I-44

S89°31'07"E

S81°59'39"E

S89°27'59"E

16' E.B. CROSSOVER

12' E.B.L.

E.B.L.

WORK ZONE

TEMP. BARRIER

TEMP. S.W.

TEMP. EB CROSSOVER
FULL DEPTH MEDIAN
SHOULDERS (J8I3044C)

ROUTE H
GLENSTONE AVE.

STA. 1213+26
END TEMP. BARRIER
BEG. TEMP. S.W.

STA. 1213+96

STA. 1213+93
BEG. TEMP. S.W.

STA. 1219+46
END TEMP. S.W.

STA. 1220+98
END TEMP. S.W.
END TEMP. S.Y.
END TEMP. BARRIER

706' E.B. CROSS OVER
60' DEVICE SPACING

708' E.B. LANE SHIFT
60' DEVICE SPACING

STA. 9+91.37
℄ TEMP. CROSSOVER =
STA. 1222+98.44 ℄ MED.
I-44 16.97' RT

CONNECT TEMP. BARRIER TO
PERM. MEDIAN BARRIER
(J8I3044C)

GLENSTONE EB ENT. RAMP

EX. R/W

TRAFFIC CONTROL PLAN
PHASE 1
JSU0076
SHEET 8 OF 8

ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER
STATE OF MISSOURI
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	151

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (DIB) W/ LIGHTS
- CHANNELIZER
- TYPE 3 BARRICADE
- CHANGEABLE MESSAGE BOARD (CMS)
- TEMP. LONG TERM RUMBLE STRIPS (T.L.T.R.S.)
- FLASHING ARROW PANEL (FAP)
- TRUCK MOUNTED ATTENUATOR (TMA)
- ADVANCE WARNING RAIL SYSTEM (AWRS)

SCALE
0 50 100 150

MATCH LINE STA. 1068+70

1070

ROUTE 13

1075

1080

MATCH LINE STA. 1082+75

EX. R/W

EX. TEMP. I.W.

EX. TEMP. S.W.

EX. TEMP. S.Y.

EX. EOS

EX. TEMP. D.W.

W.B.L.
W.B.L.
E.B.L.
E.B.L.

S89°27'07"E

℄ I-44

EX. TEMP. BARRIER
(ANCHORED)

25' SPACING CHANNELIZERS

3 - TYP III BARRICADE

29

RTE. 13 EB ENT. RAMP (CLOSED)

WORK ZONE

TEMP. BARRIER
(ANCHORED)

STA. 1078+93
CONNECT TO TEMP.
BARR. PH. 1

SEE SHEETS 179 & 180 FOR ROUTE 13
E.B. ENTRANCE RAMP DETOUR

ROAD
CLOSED
R11-2
29

2 - TYP III BARRICADE

29

RIGHT LANE CLOSED

25' SPACING CHANNELIZERS

TRAFFIC CONTROL PLAN
PHASE 1B
JSU0076
SHEET 1 OF 3

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	152

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

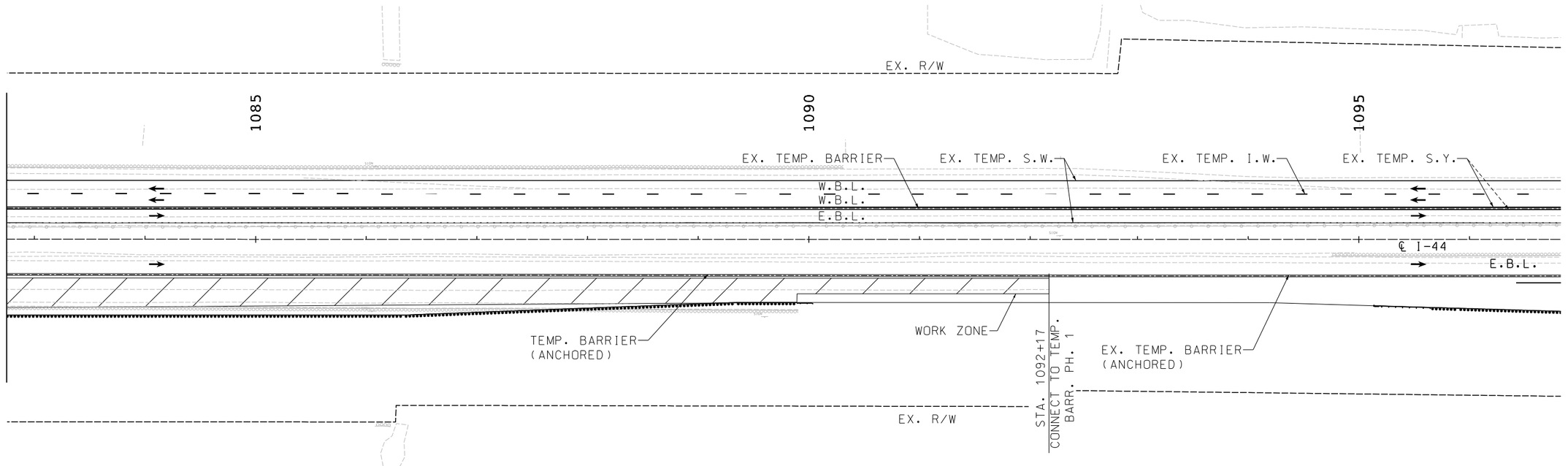
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\152_TC_103_JSU0076_I50_Phase_1B-01.dgn 6:07:03 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 1B
JSU0076
SHEET 2 OF 3

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	153

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

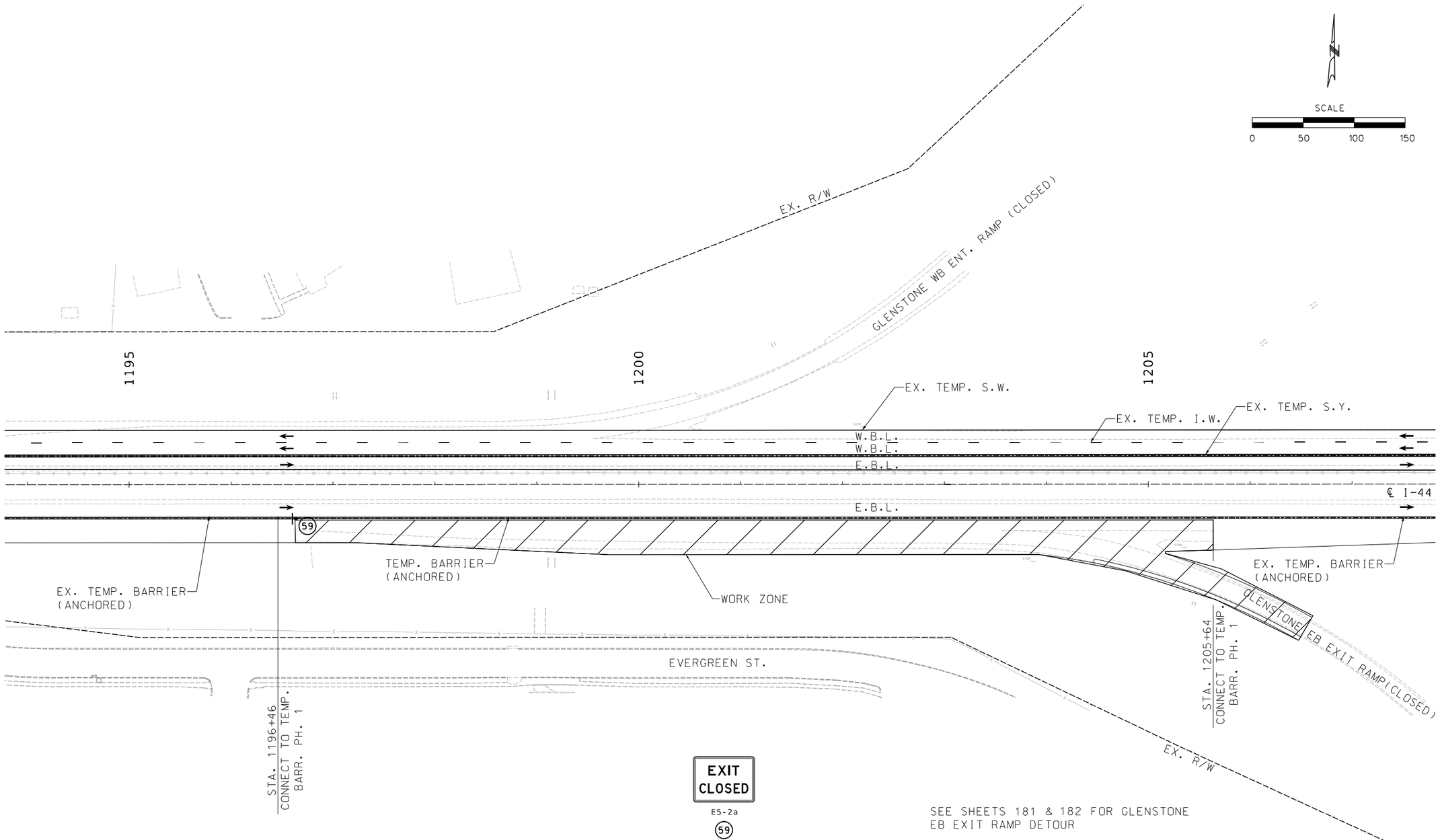
BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873



TRAFFIC CONTROL PLAN
PHASE 1B
JSU0076
SHEET 3 OF 3

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	154

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

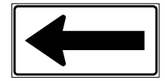
Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

TRAFFIC CONTROL LEGEND

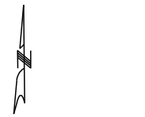
- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (DIB) W/ LIGHTS
- CHANNELIZER
- TYPE 3 BARRICADE
- CHANGEABLE MESSAGE BOARD (CMS)
- TEMP. LONG TERM RUMBLE STRIPS (T.L.T.R.S.)
- FLASHING ARROW PANEL (FAP)
- TRUCK MOUNTED ATTENUATOR (TMA)
- ADVANCE WARNING RAIL SYSTEM (AWRS)

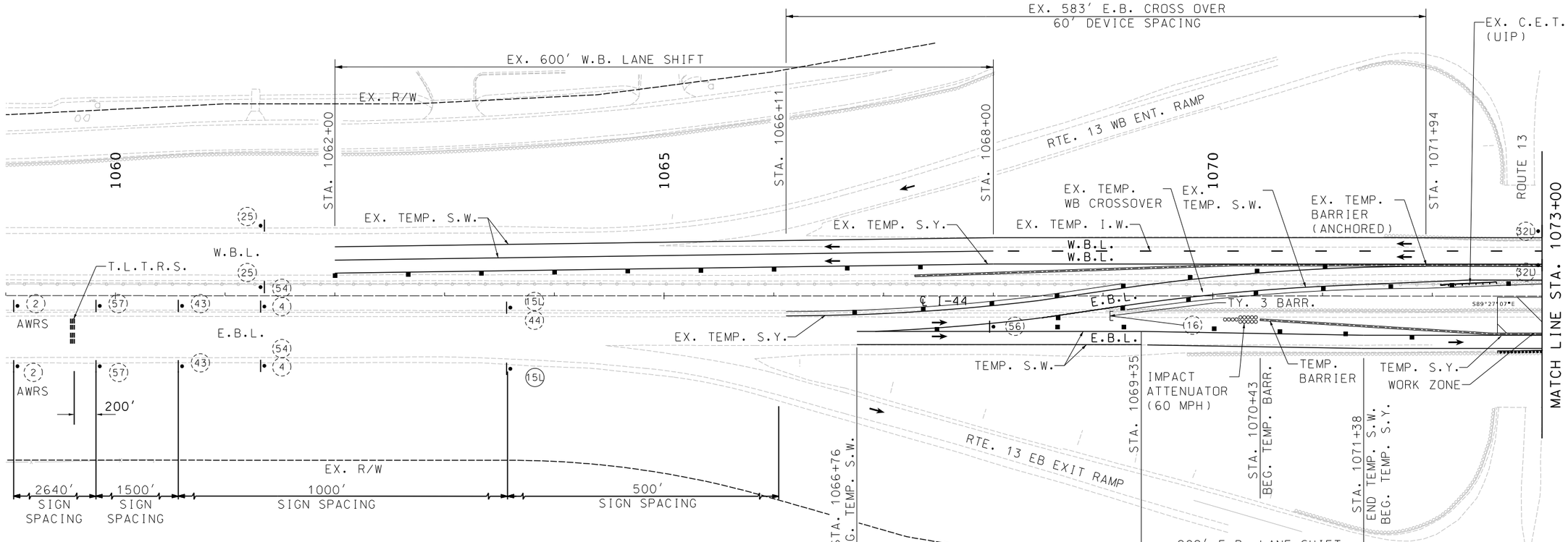
R2-1 (25)

WO12-1 (56)


WO1-6 (16)

W1-4bL (32L)





W20-1 (2)

W9-3L (57)

WO5-1 (43)

GO20-5aP (54)

R2-1 (4)

W1-4L (15L)

WO13-1 (44)

TRAFFIC CONTROL PLAN
PHASE 2
JSU0076
SHEET 1 OF 8

ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER
STATE OF MISSOURI

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	155

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

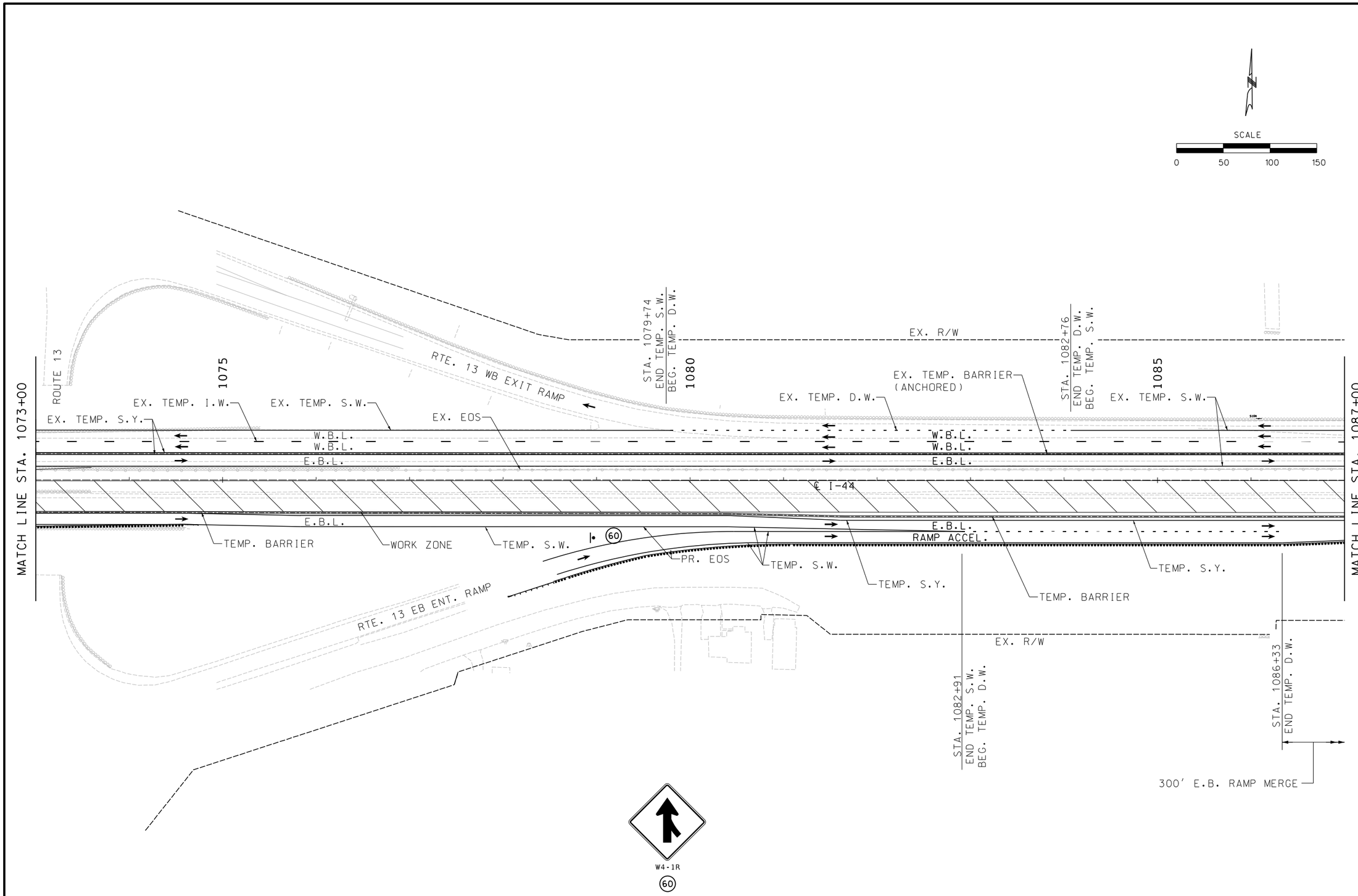
BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720



TRAFFIC CONTROL PLAN
PHASE 2
JSU0076
SHEET 2 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	156

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

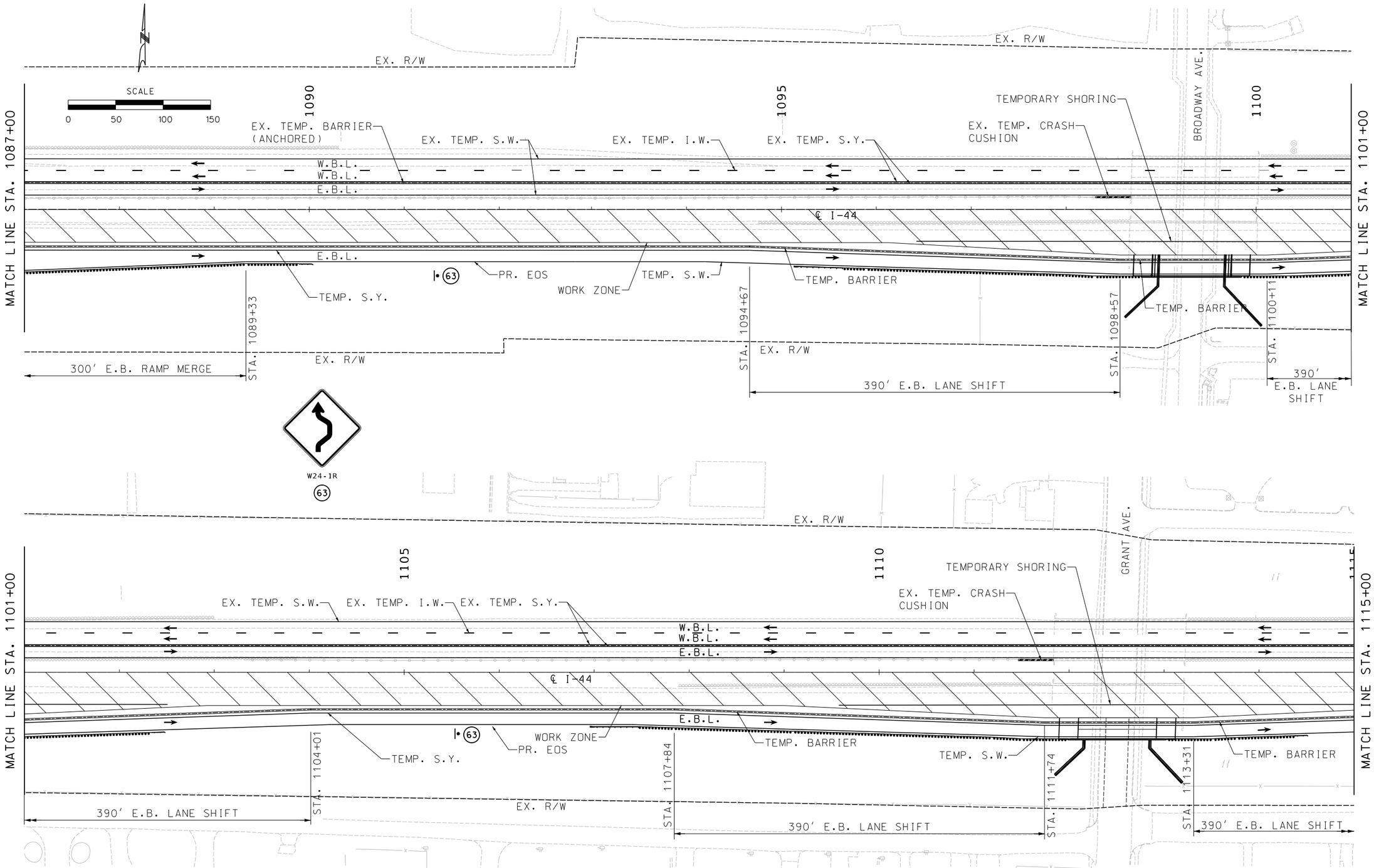
BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873



STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	157

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

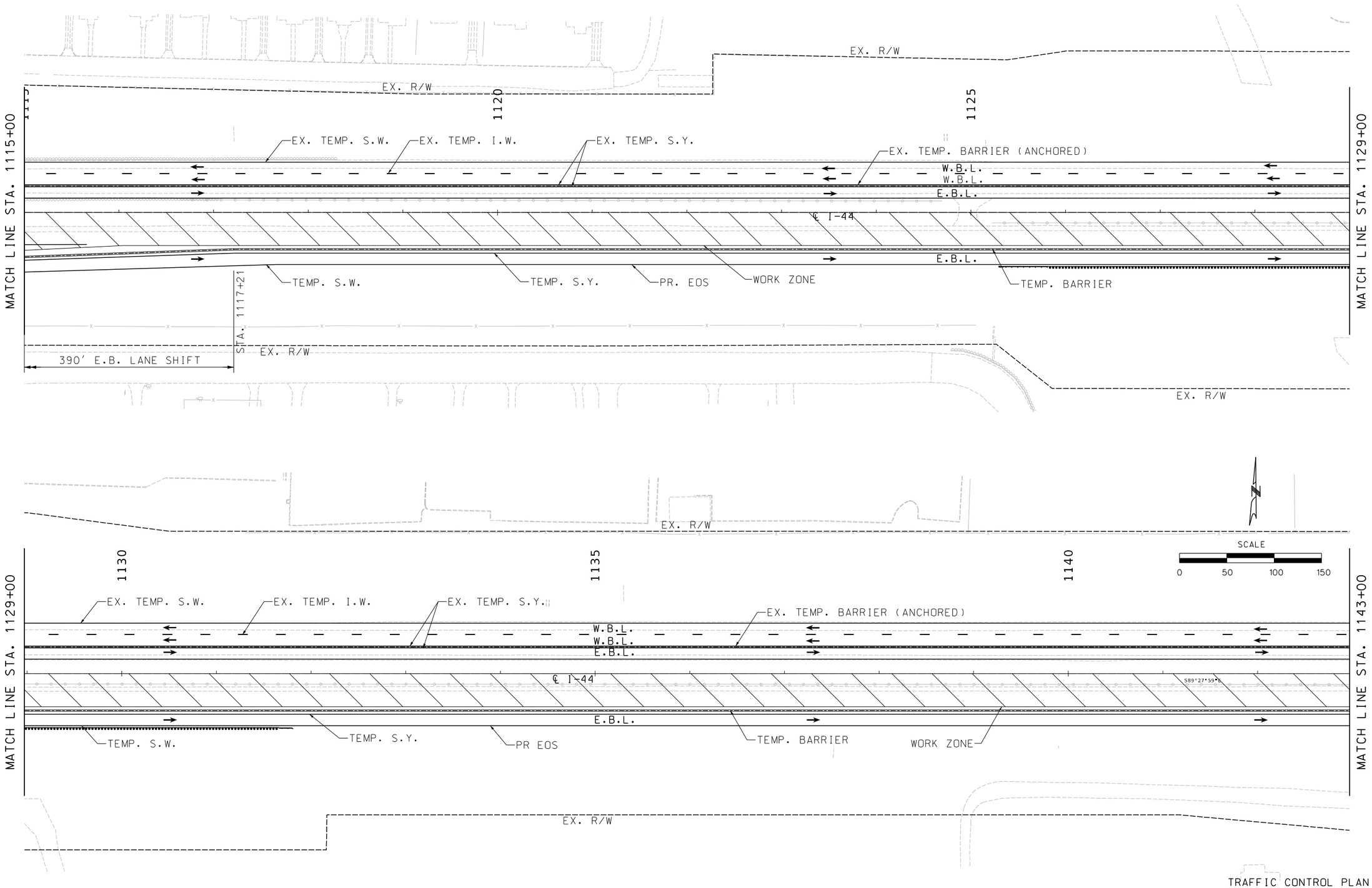
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc. engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

TRAFFIC CONTROL PLAN
PHASE 2
JSU0076
SHEET 3 OF 8

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\157_TC_108_JSU0076_I50_Phase_2-03.dgn 6:07:28 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 2
JSU0076
SHEET 4 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/16/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	158
COUNTY	
GREENE	
JOB NO.	
JSU0076, J8I3044C, & JST0088B	
PROJECT NO.	
BRIDGE NO.	

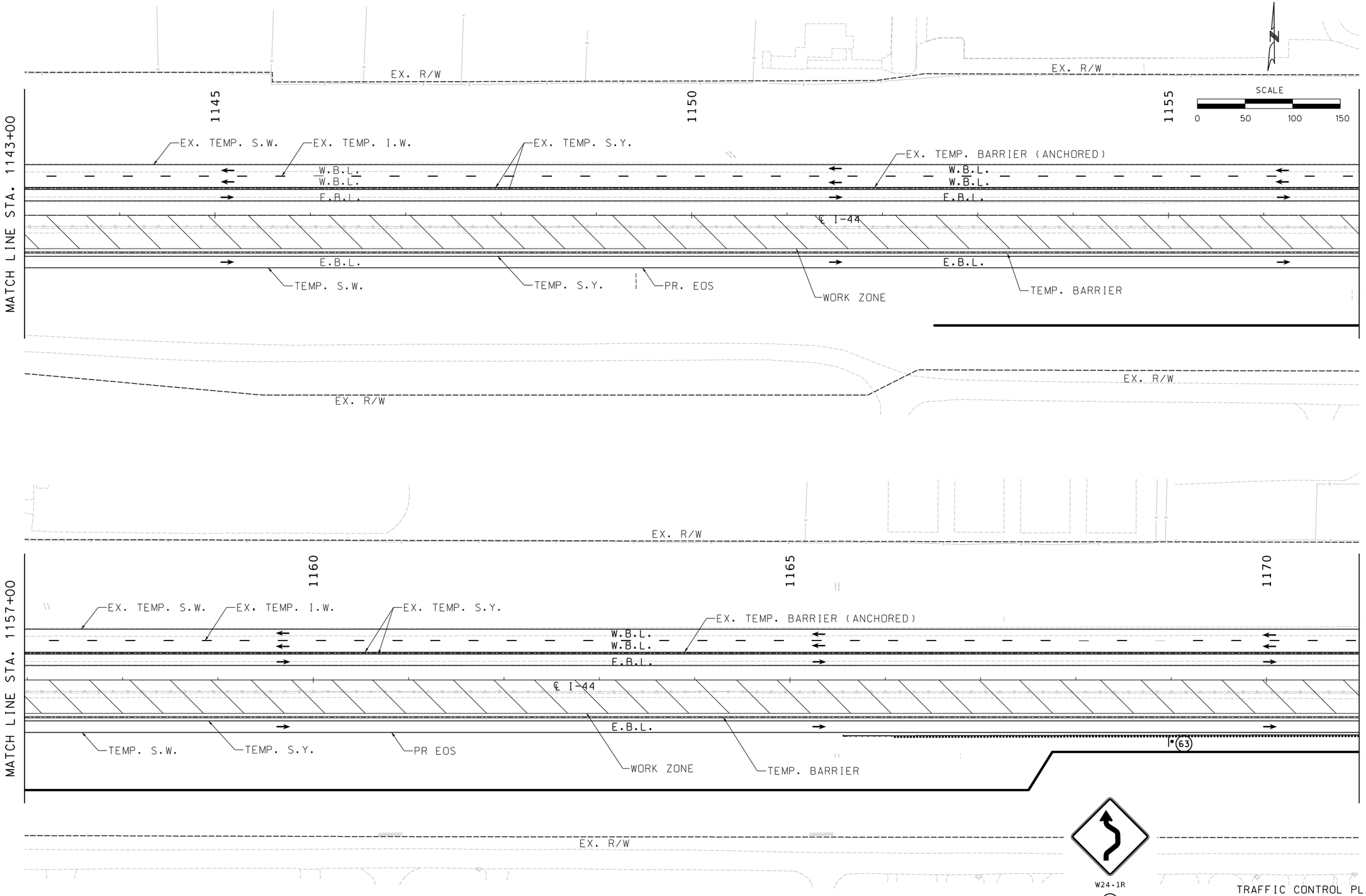
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\158_TC_109_JSU0076_I50_Phase_2-04.dgn 6:07:32 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 2
JSU0076
SHEET 5 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	8/18/2024
ROUTE	I-44
STATE	MO
DISTRICT	SW
SHEET NO.	159
COUNTY	GREENE
JOB NO.	JSU0076, J8I3044C, & JST0088B
PROJECT NO.	
BRIDGE NO.	

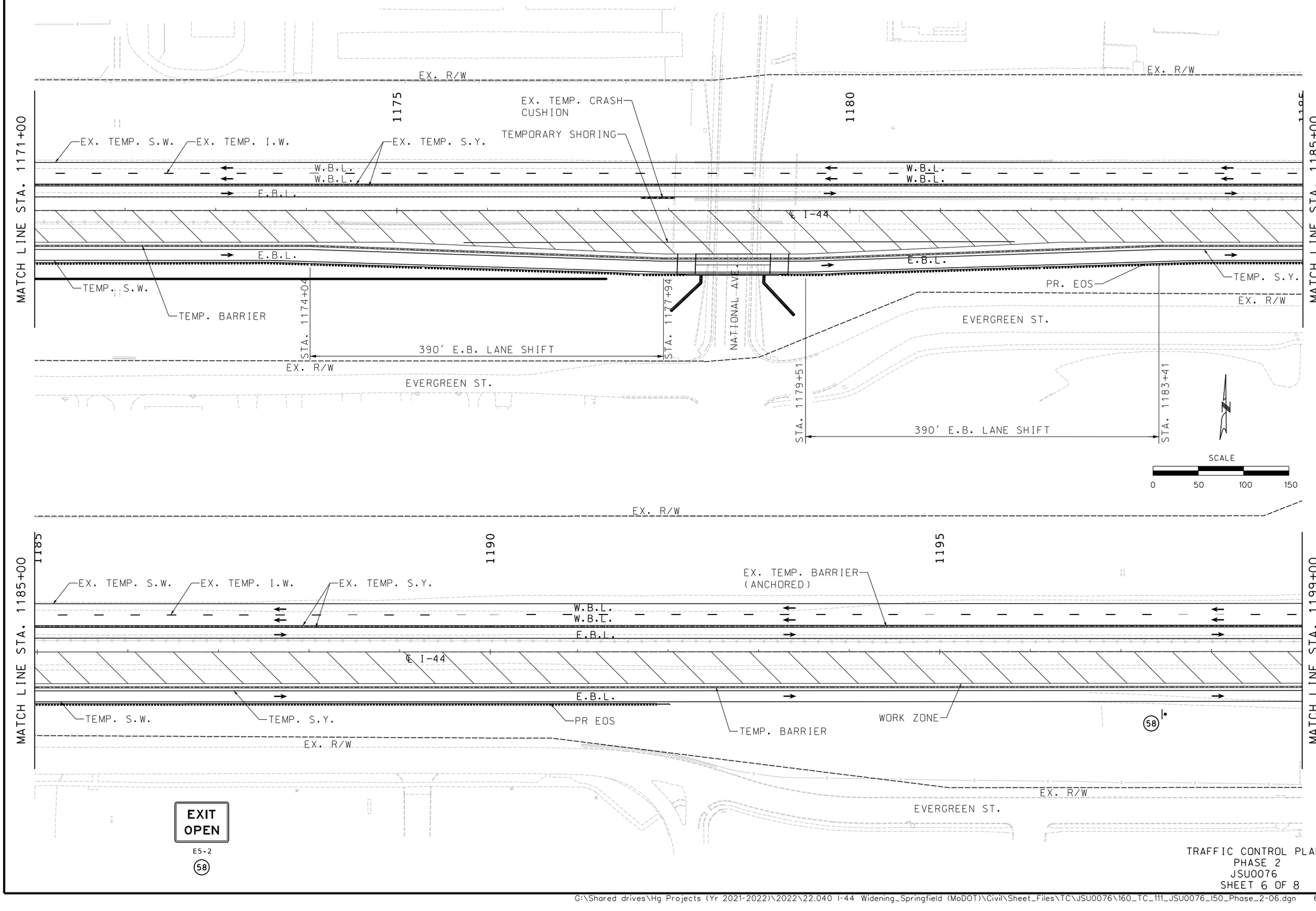
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\159_TC_110_JSU0076_150_Phase_2-05.dgn 8:29:53 PM 8/18/2024



TRAFFIC CONTROL PLAN
PHASE 2
JSU0076
SHEET 6 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	160

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

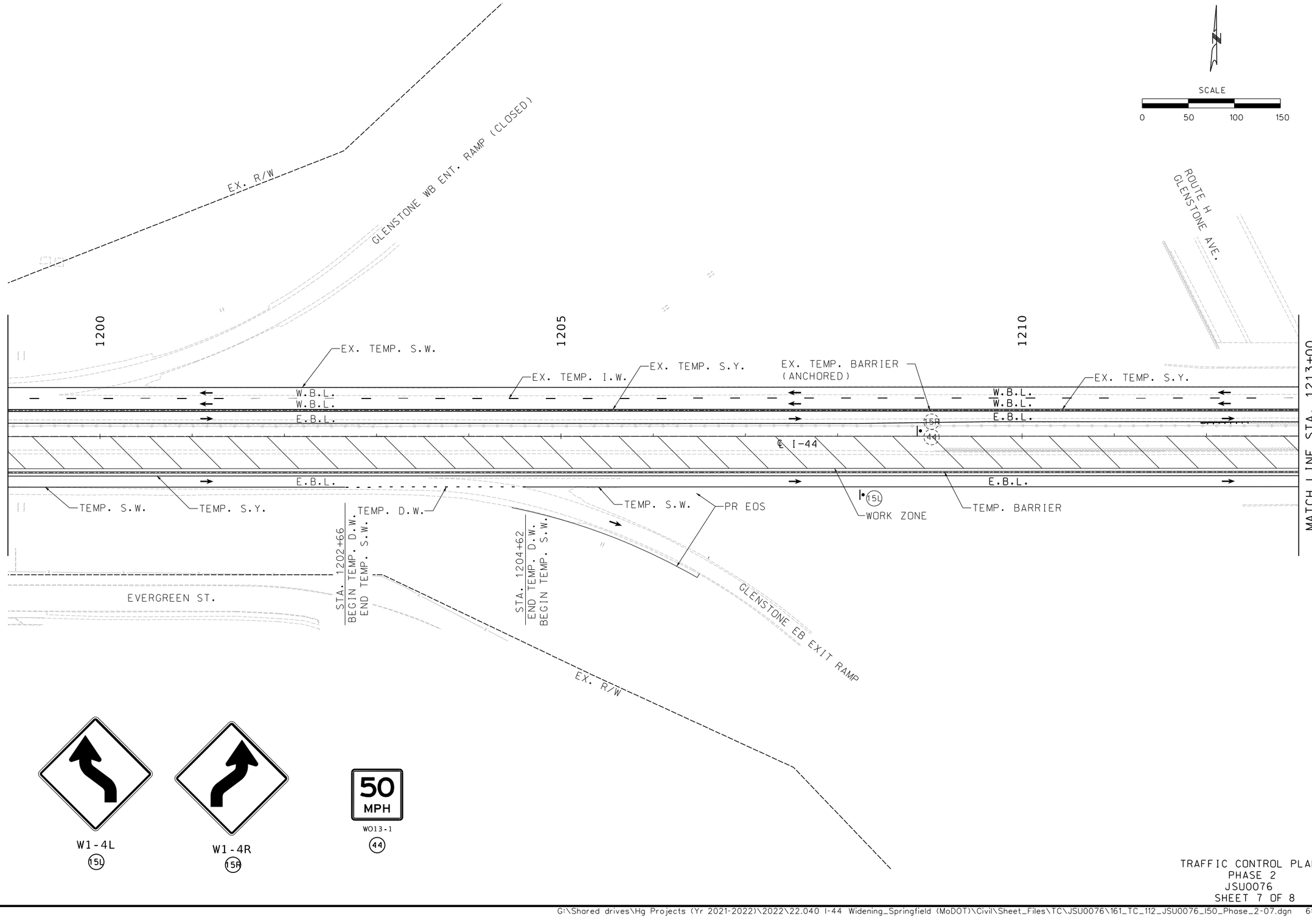
DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\160_TC_111_JSU0076_150_Phase_2-06.dgn 6:07:41 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 2
JSU0076
SHEET 7 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/16/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	161

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

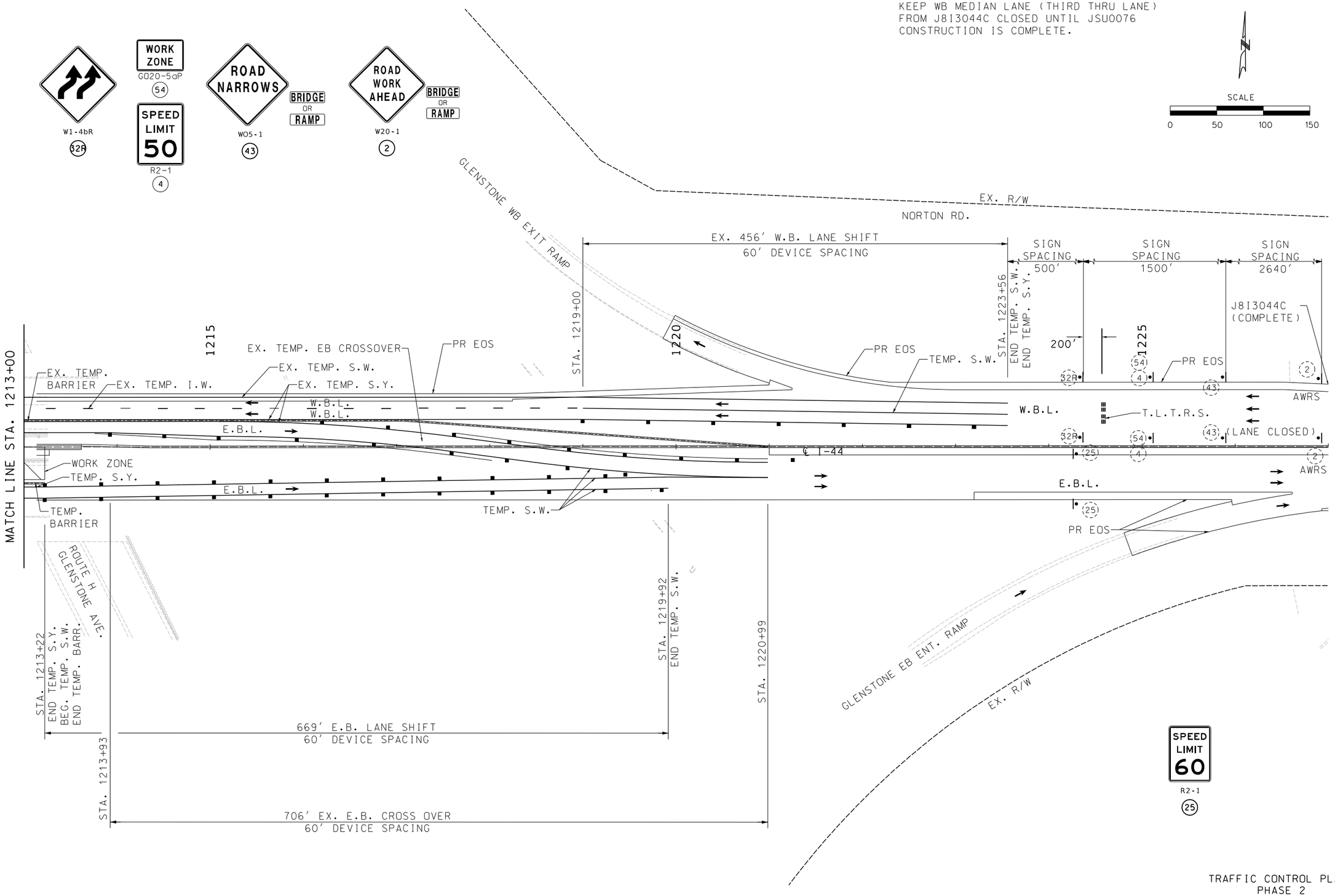
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc. engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\161_TC_112_JSU0076_I50_Phase_2-07.dgn 6:07:46 PM 8/16/2024

NOTE:
KEEP WB MEDIAN LANE (THIRD THRU LANE)
FROM J8I3044C CLOSED UNTIL JSU0076
CONSTRUCTION IS COMPLETE.



STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/16/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	162

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

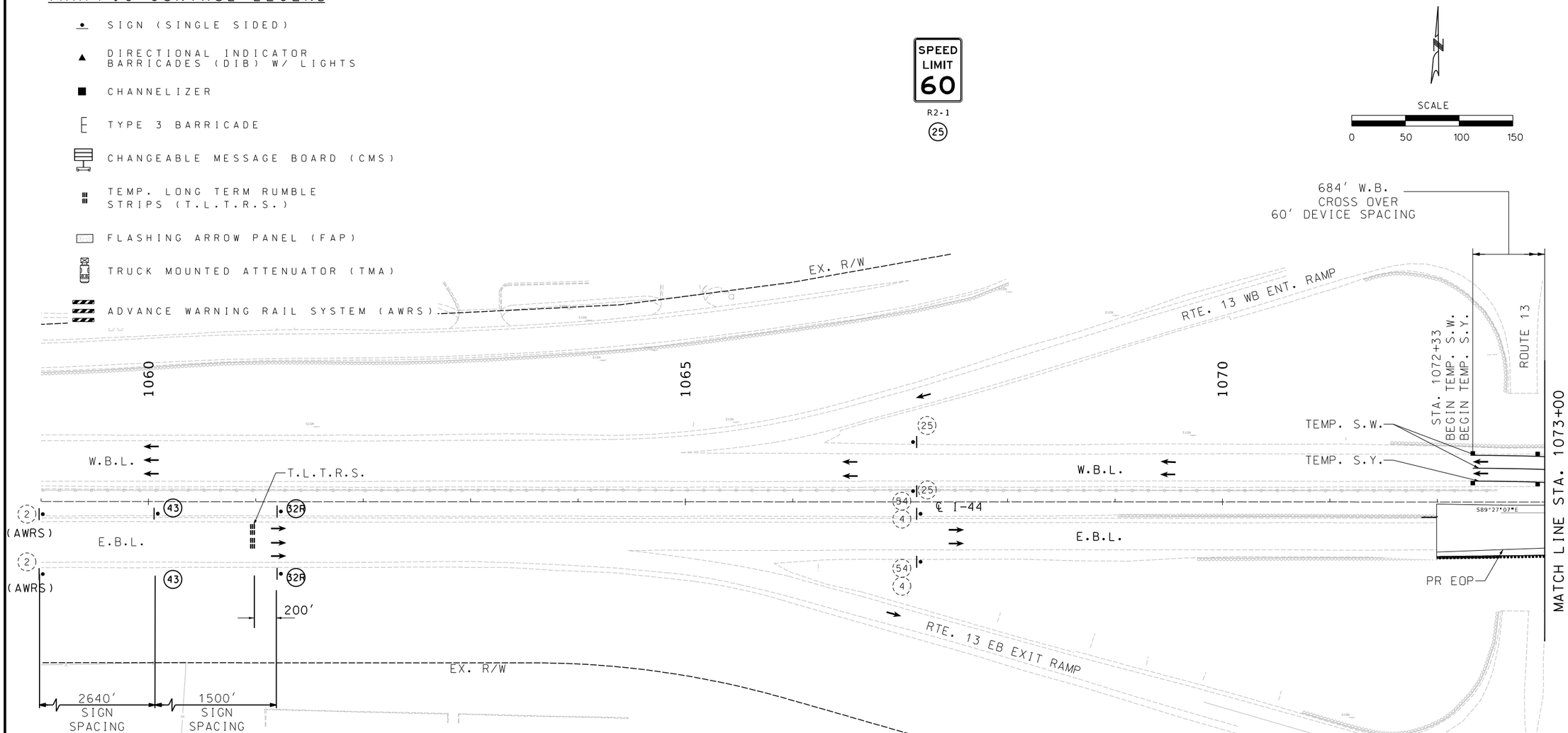
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

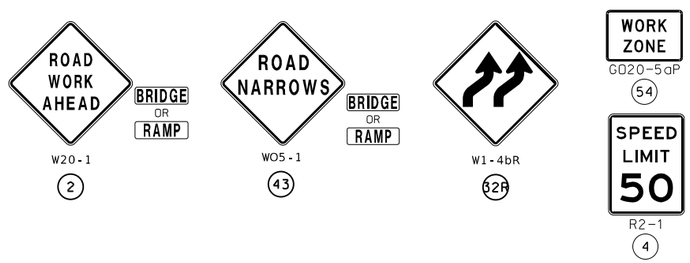
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- DIRECTIONAL INDICATOR BARRICADES (DIB) W/ LIGHTS
- CHANNELIZER
- TYPE 3 BARRICADE
- CHANGEABLE MESSAGE BOARD (CMS)
- TEMP. LONG TERM RUMBLE STRIPS (T.L.T.R.S.)
- FLASHING ARROW PANEL (FAP)
- TRUCK MOUNTED ATTENUATOR (TMA)
- ADVANCE WARNING RAIL SYSTEM (AWRS)





TRAFFIC CONTROL PLAN
PHASE 3
JSU0076
SHEET 1 OF 8

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

ERIC J. REINKEMEYER
NUMBER PE-2006002846
STATE OF MISSOURI
PROFESSIONAL ENGINEER

DATE PREPARED: 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	163

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

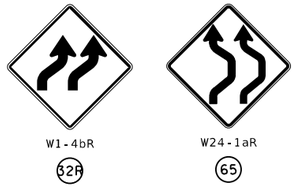
DESCRIPTION	DATE

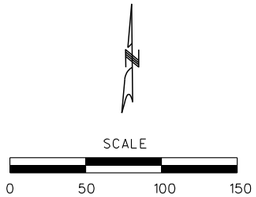
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

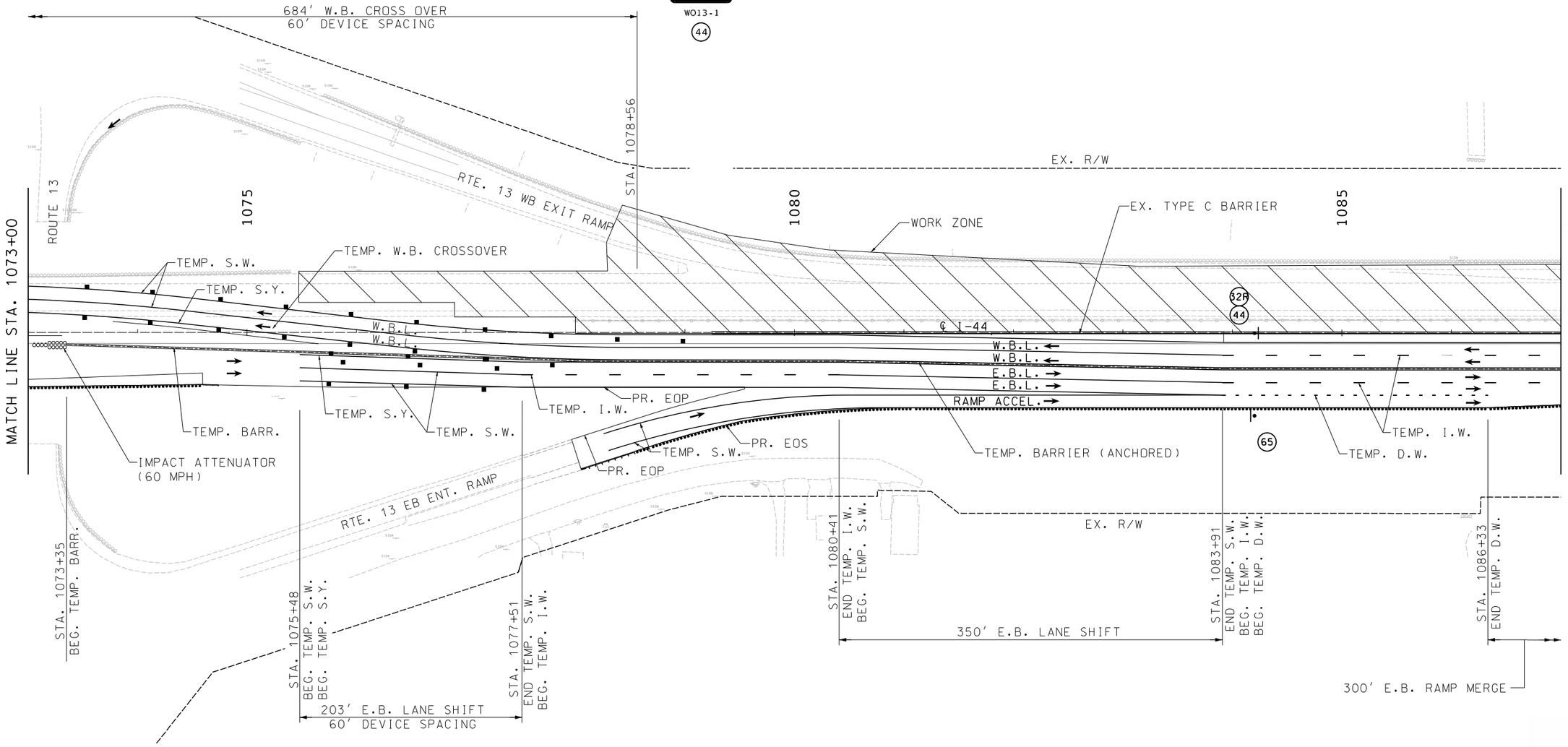
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\163_TC_114_JSU0076_150_Phase_3-01.dgn 6:07:55 PM 8/16/2024







TRAFFIC CONTROL PLAN
PHASE 3
JSU0076
SHEET 2 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	164

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088

PROJECT NO.

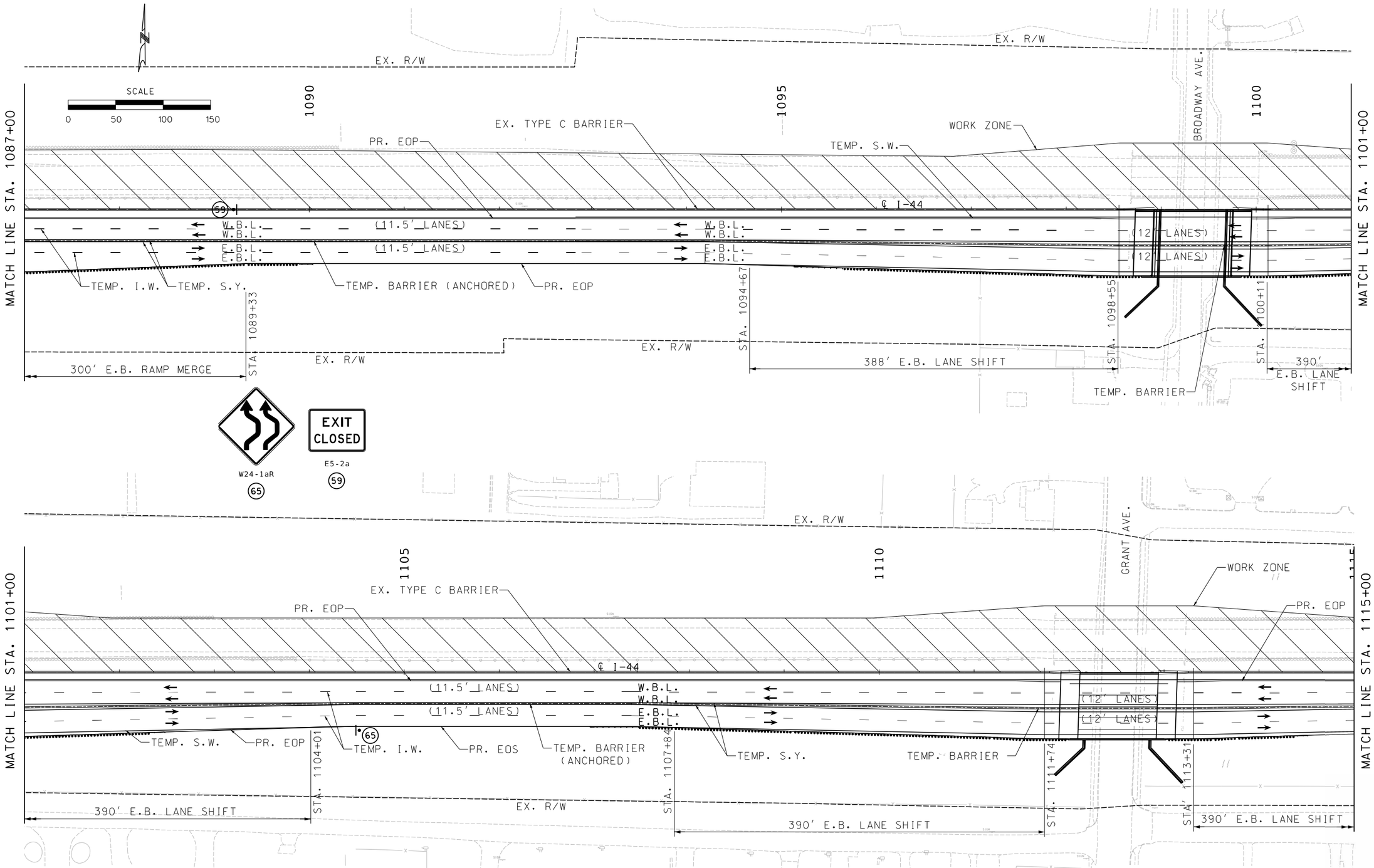
BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873



TRAFFIC CONTROL PLAN
PHASE 3
JSU0076
SHEET 3 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	165

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

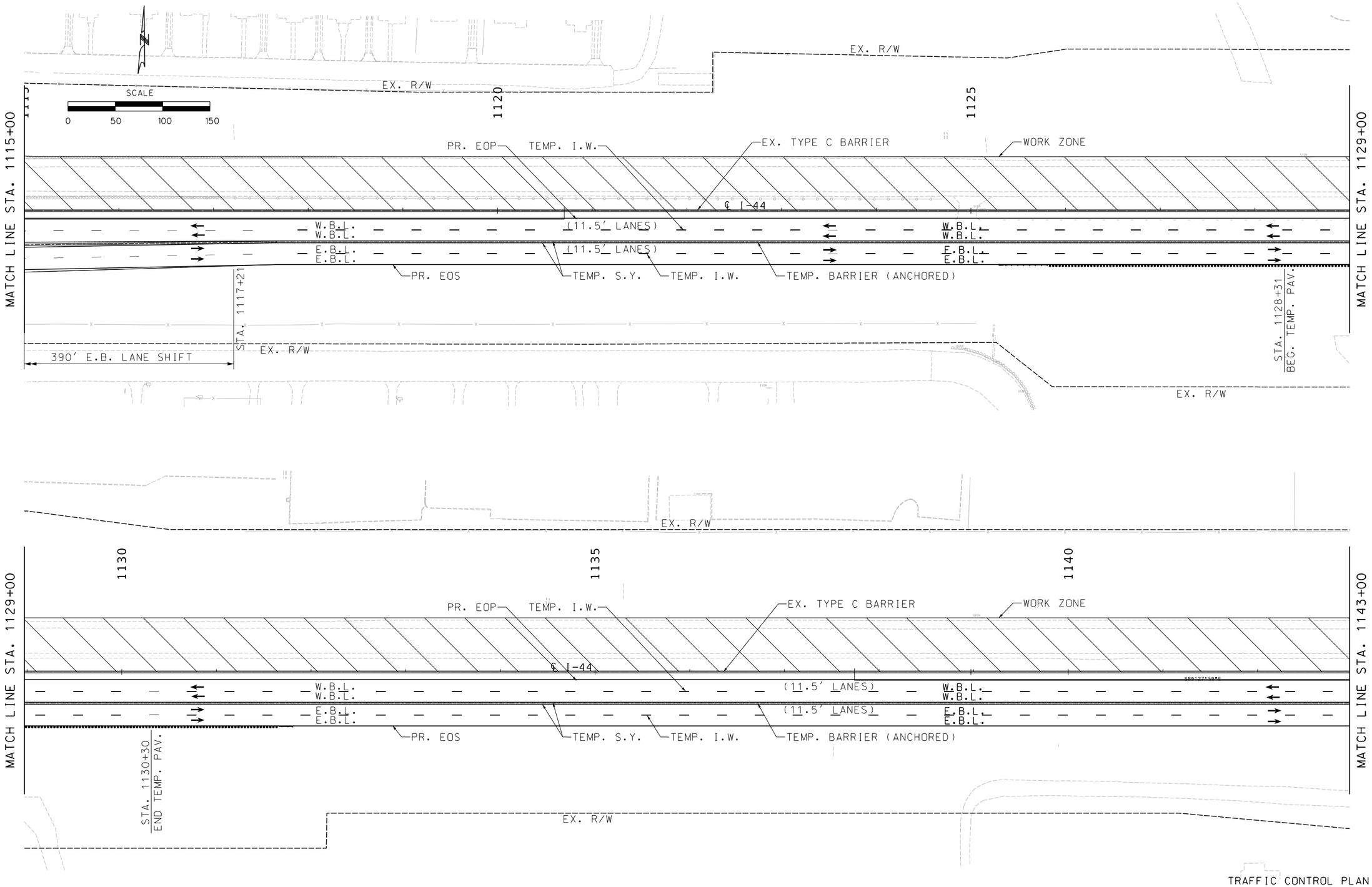
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\165_TC_116_JSU0076_150_Phase_3-03.dgn 6:08:04 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 3
JSU0076
SHEET 4 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	166

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

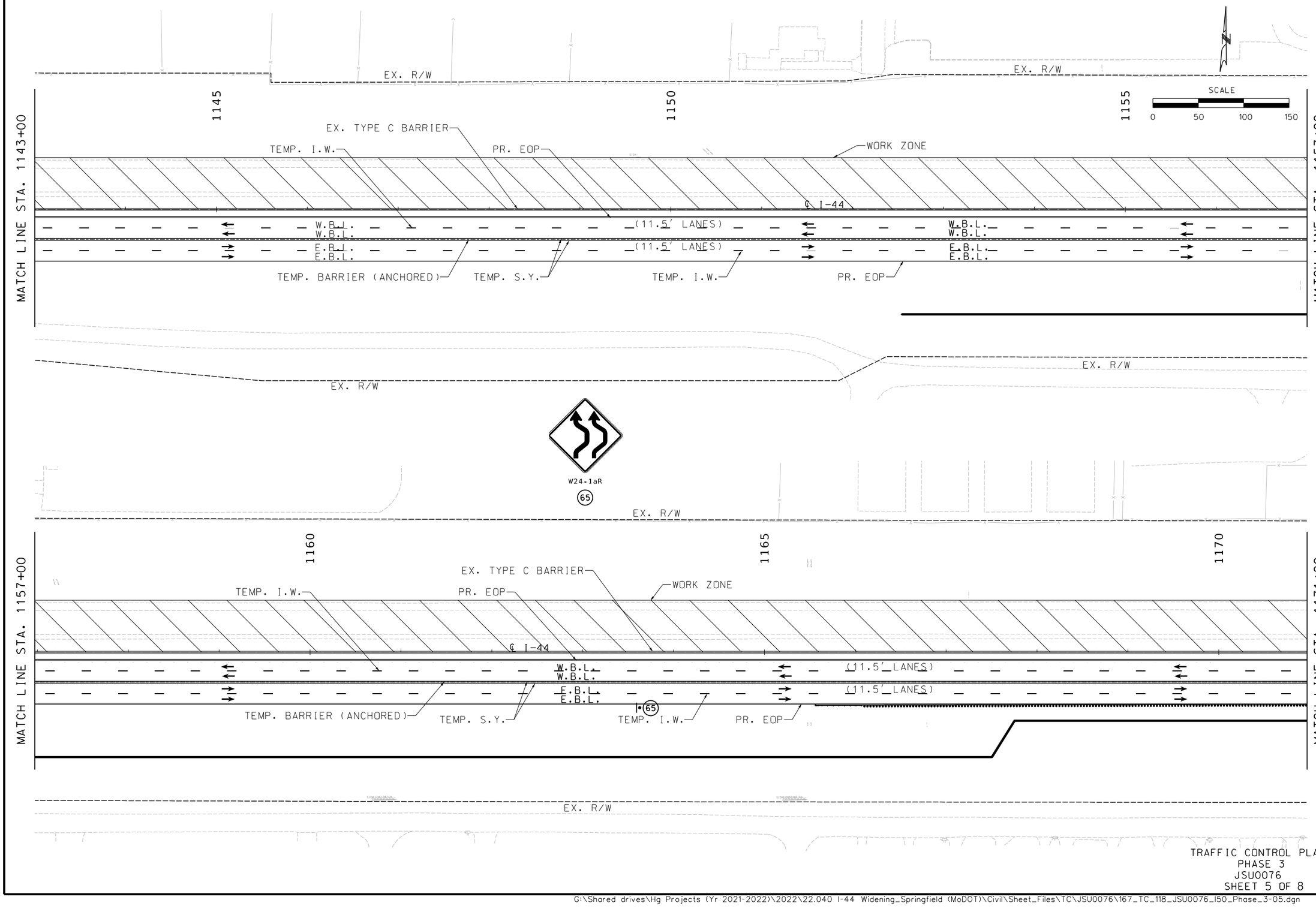
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\166_TC_117_JSU0076_150_Phase_3-04.dgn 6:08:08 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 3
JSU0076
SHEET 5 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/16/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	167
COUNTY	
GREENE	
JOB NO.	
JSU0076, J8I3044C, & JST0088B	
PROJECT NO.	
BRIDGE NO.	

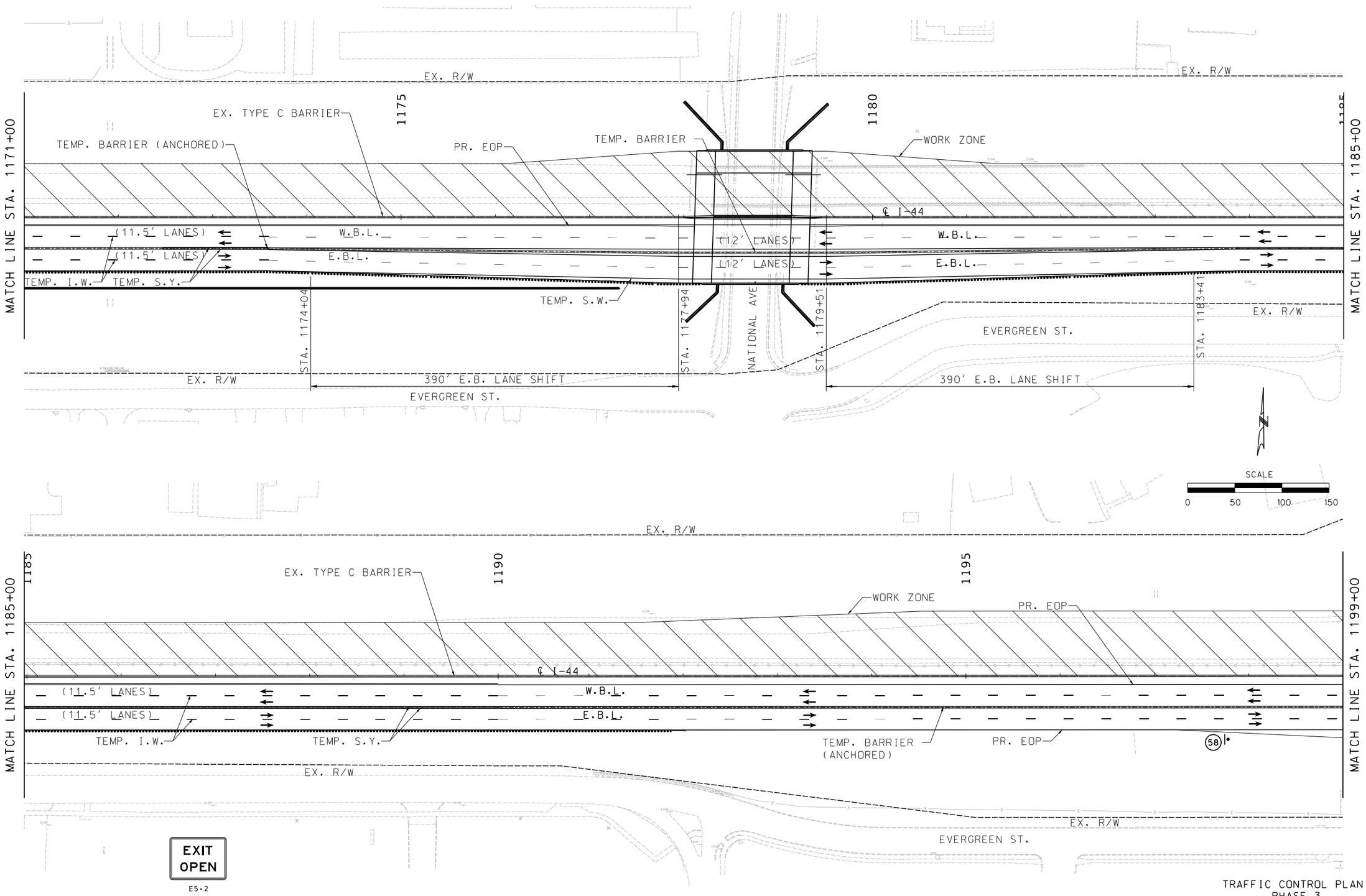
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873



TRAFFIC CONTROL PLAN
PHASE 3
JSU0076
SHEET 6 OF 8

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	168

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

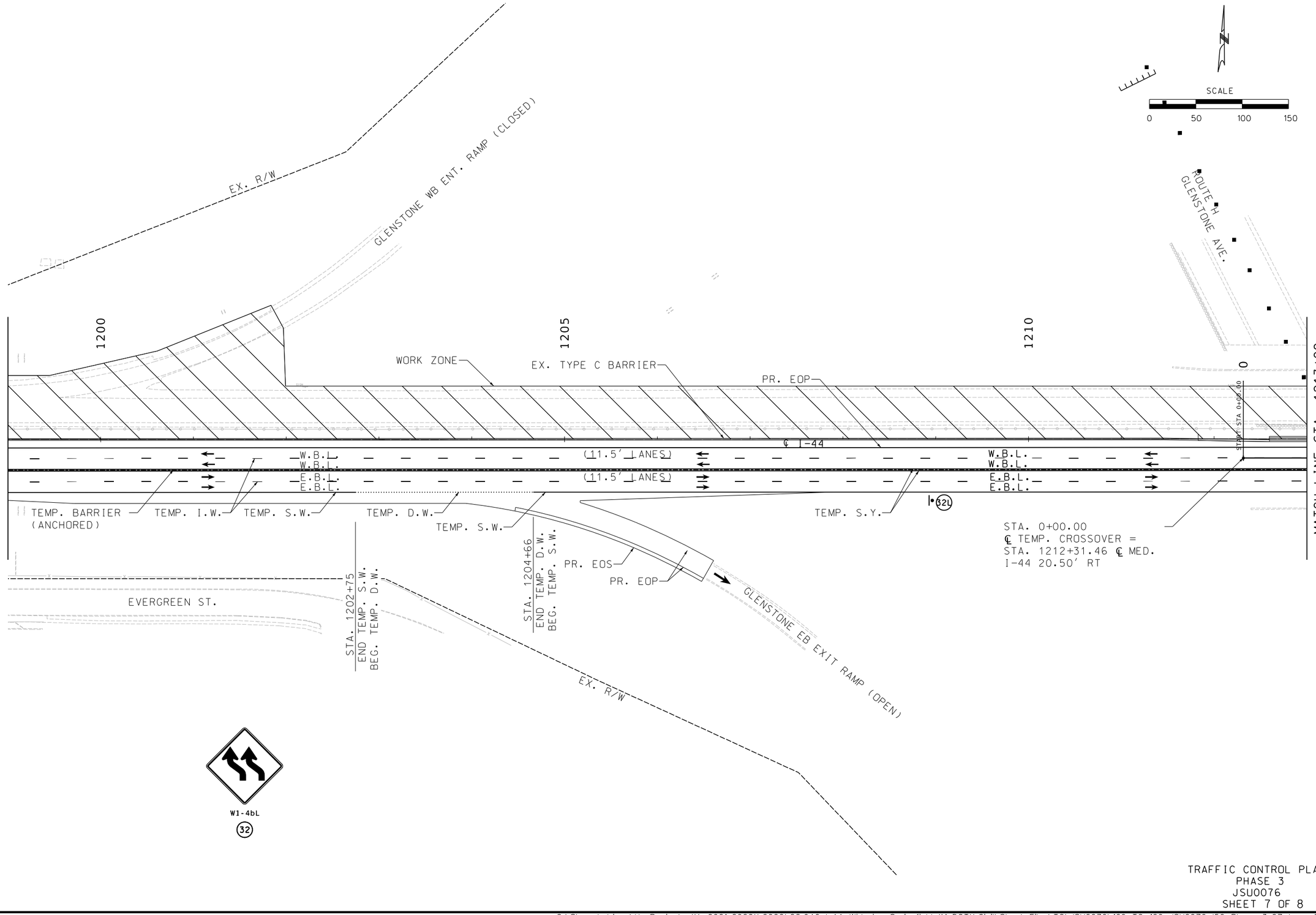
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\168_TC_119_JSU0076_150_Phase_3-06.dgn 6:08:17 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 3
JSU0076
SHEET 7 OF 8

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	169

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

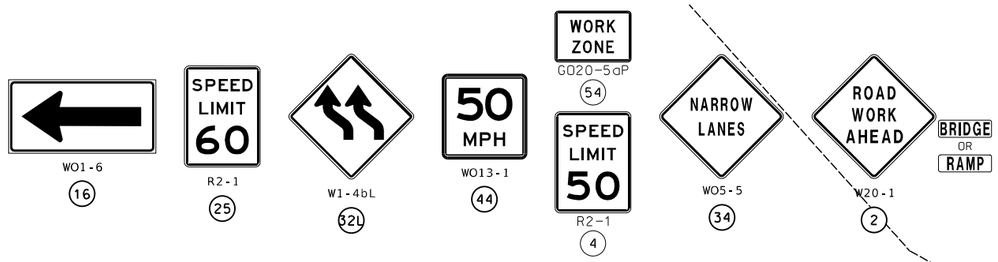
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

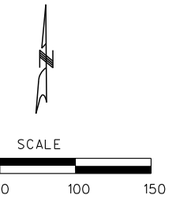
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

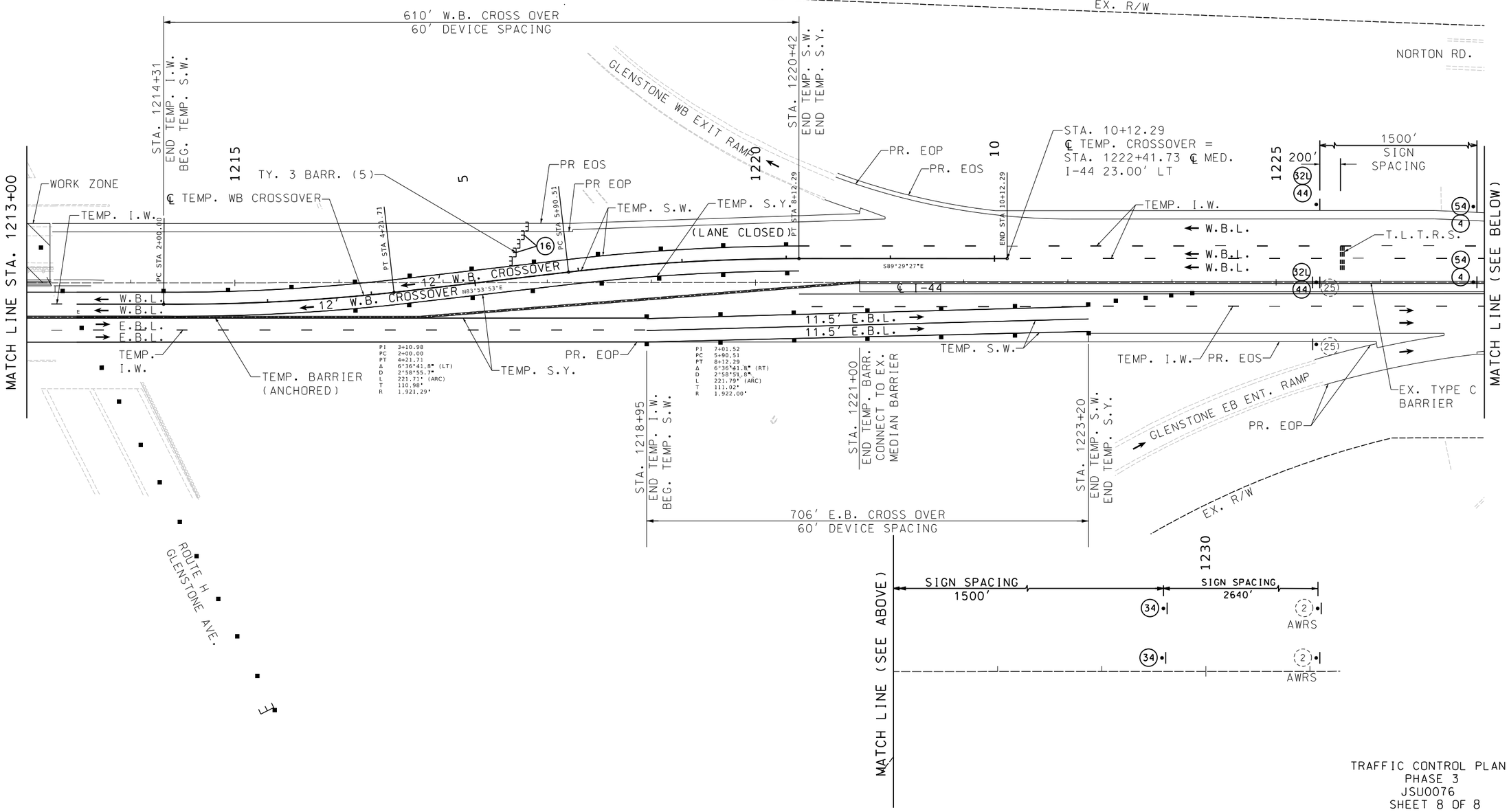
Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\169_TC_120_JSU0076_I50_Phase_3-07.dgn 6:08:22 PM 8/16/2024



NOTE:
KEEP THIRD WB THRU LANE
FROM J8I3044C CLOSED UNTIL JSU0076
CONSTRUCTION IS COMPLETE





TRAFFIC CONTROL PLAN
PHASE 3
JSU0076
SHEET 8 OF 8

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	170

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

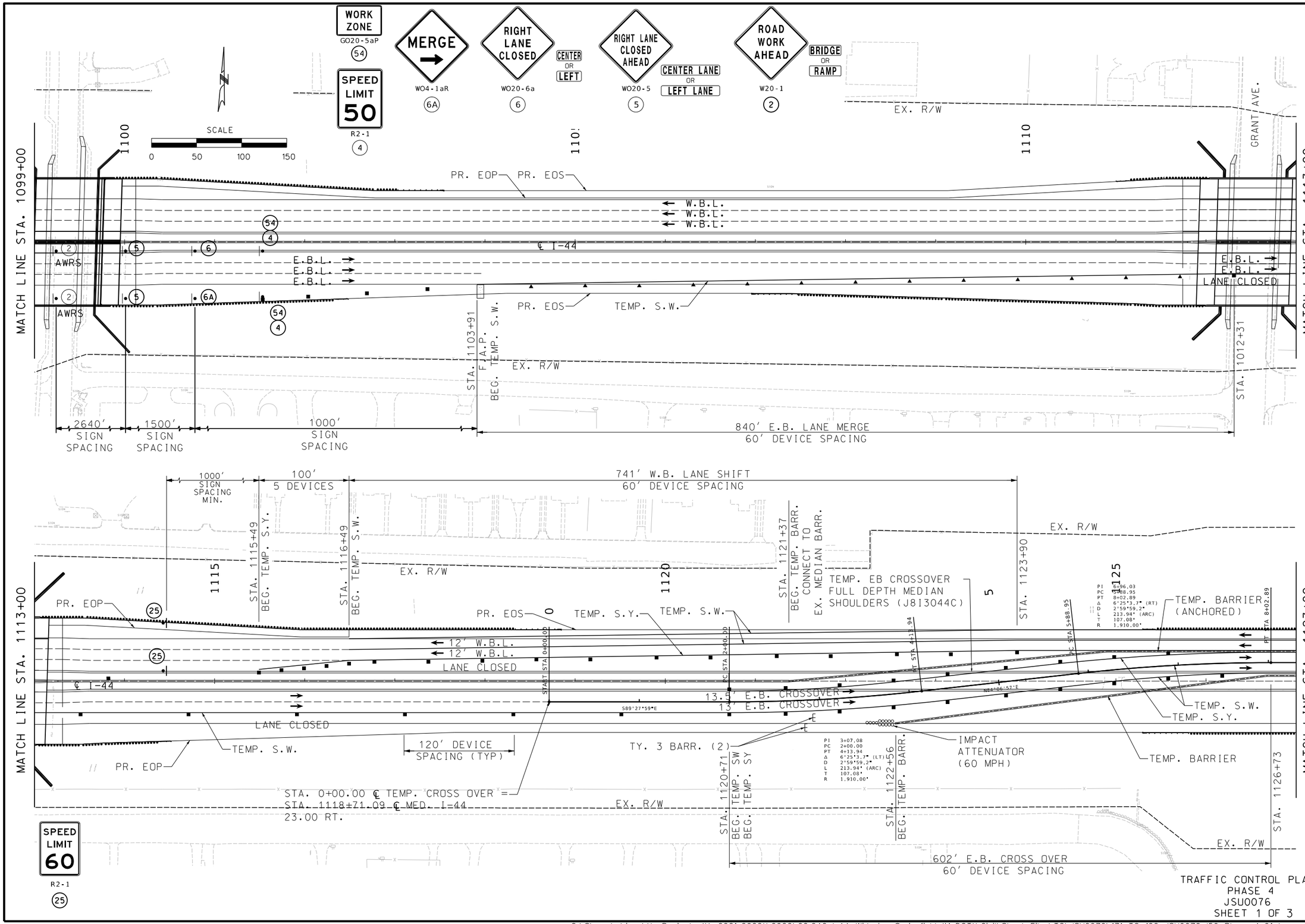
DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\170_TC_121_JSU0076_I50_Phase_3-08.dgn 6:08:26 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 4
JSU0076
SHEET 1 OF 3

ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER
STATE OF MISSOURI

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	8/16/2024
ROUTE	I-44
STATE	MO
DISTRICT	SW
SHEET NO.	171
COUNTY	GREENE
JOB NO.	JSU0076, J8I3044C, & JST0088
PROJECT NO.	
BRIDGE NO.	

DATE | DESCRIPTION

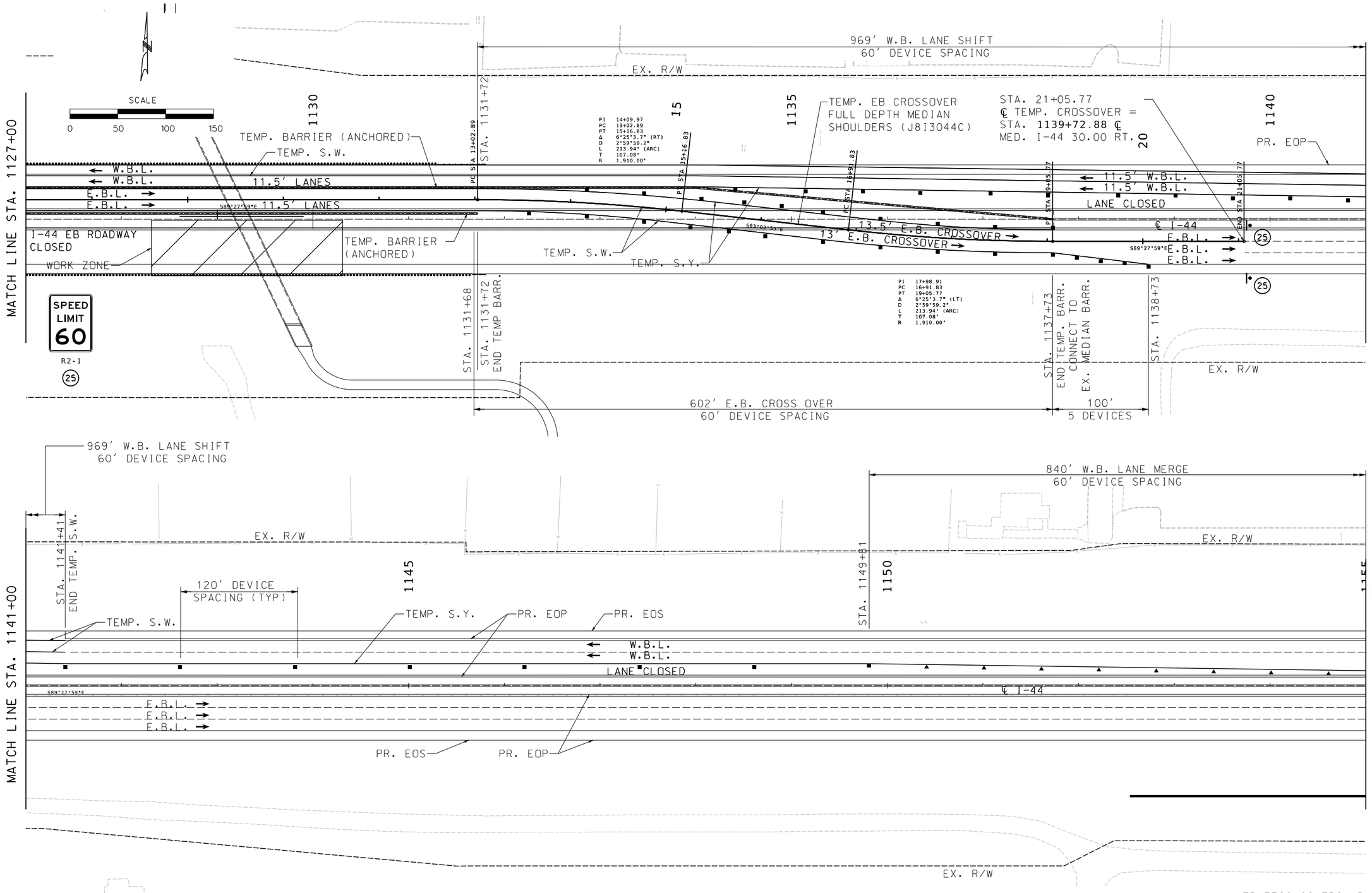
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\171_TC_122_JSU0076_150_Phase_4-01.dgn 6:08:31 PM 8/16/2024



TRAFFIC CONTROL PLAN
PHASE 4
JSU0076
SHEET 2 OF 3

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/16/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	172
COUNTY	
GREENE	
JOB NO.	
JSU0076, J8I3044C, & JST0088	
PROJECT NO.	
BRIDGE NO.	

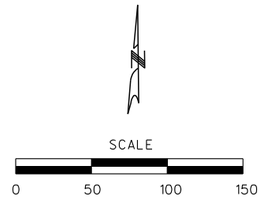
DATE	DESCRIPTION

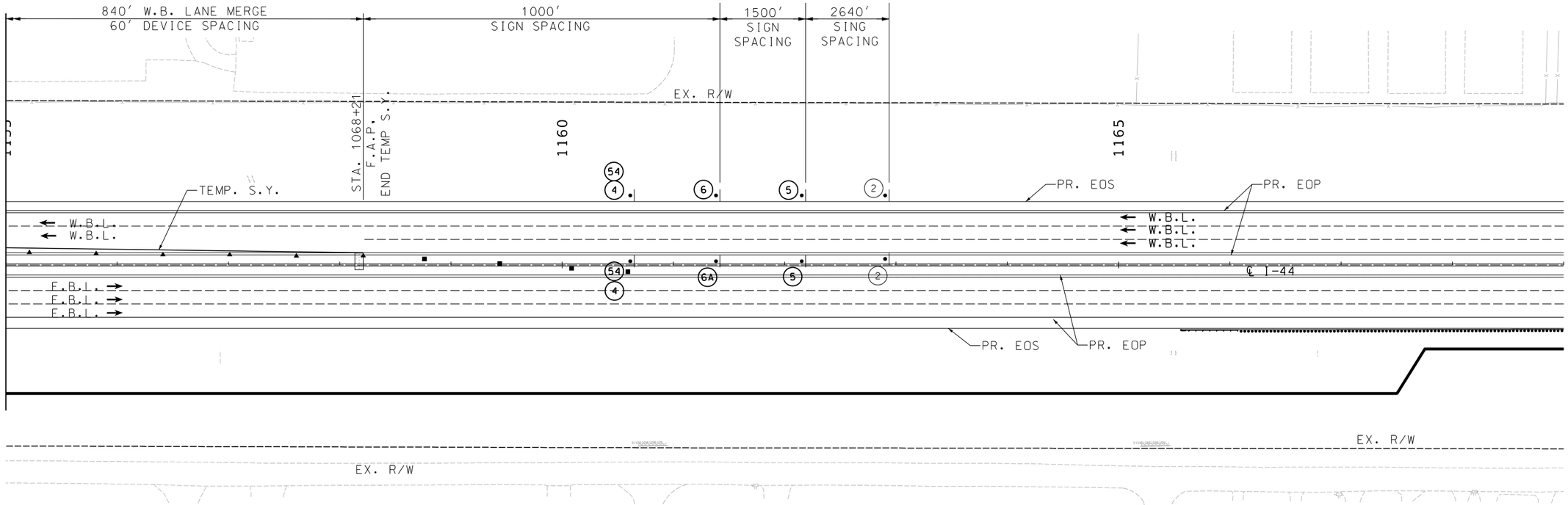
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

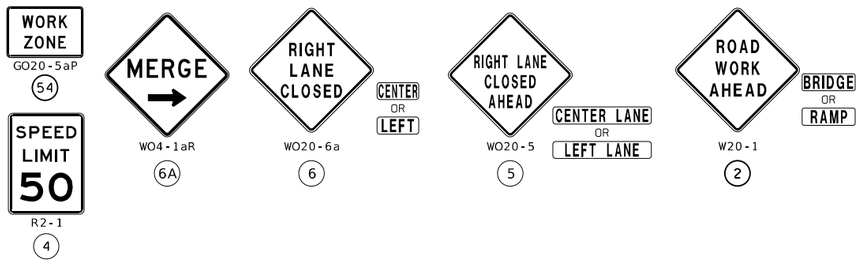
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158! (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\172_TC_123_JSU0076_I50_Phase_4-02.dgn 6:08:36 PM 8/16/2024







TRAFFIC CONTROL PLAN
PHASE 4
JSU0076
SHEET 3 OF 3

ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER
STATE OF MISSOURI

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	173

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

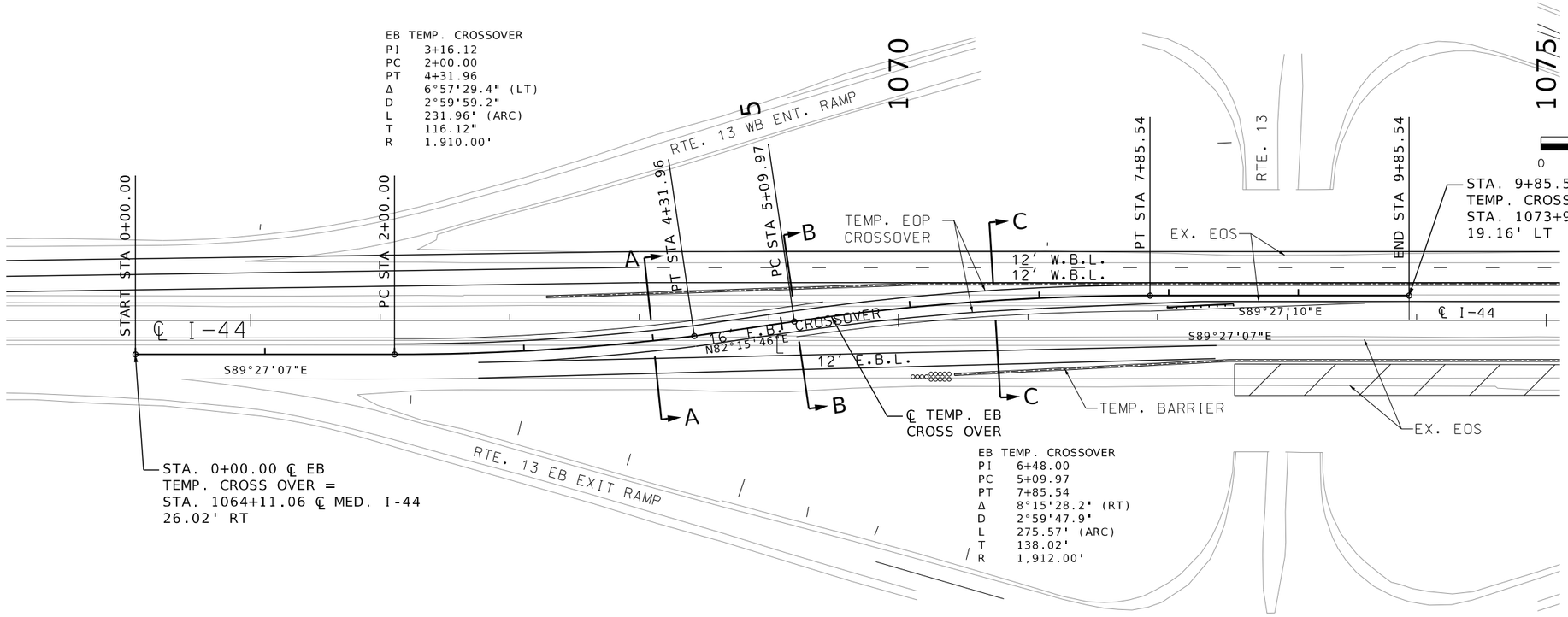
BRIDGE NO.

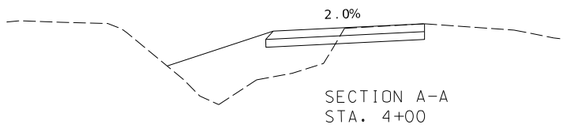
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

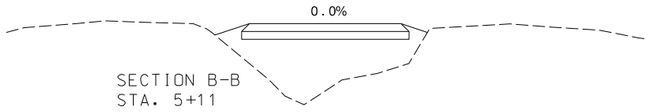
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street• Kansas City, MO 64158• (816)912-4720

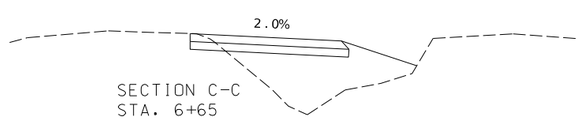




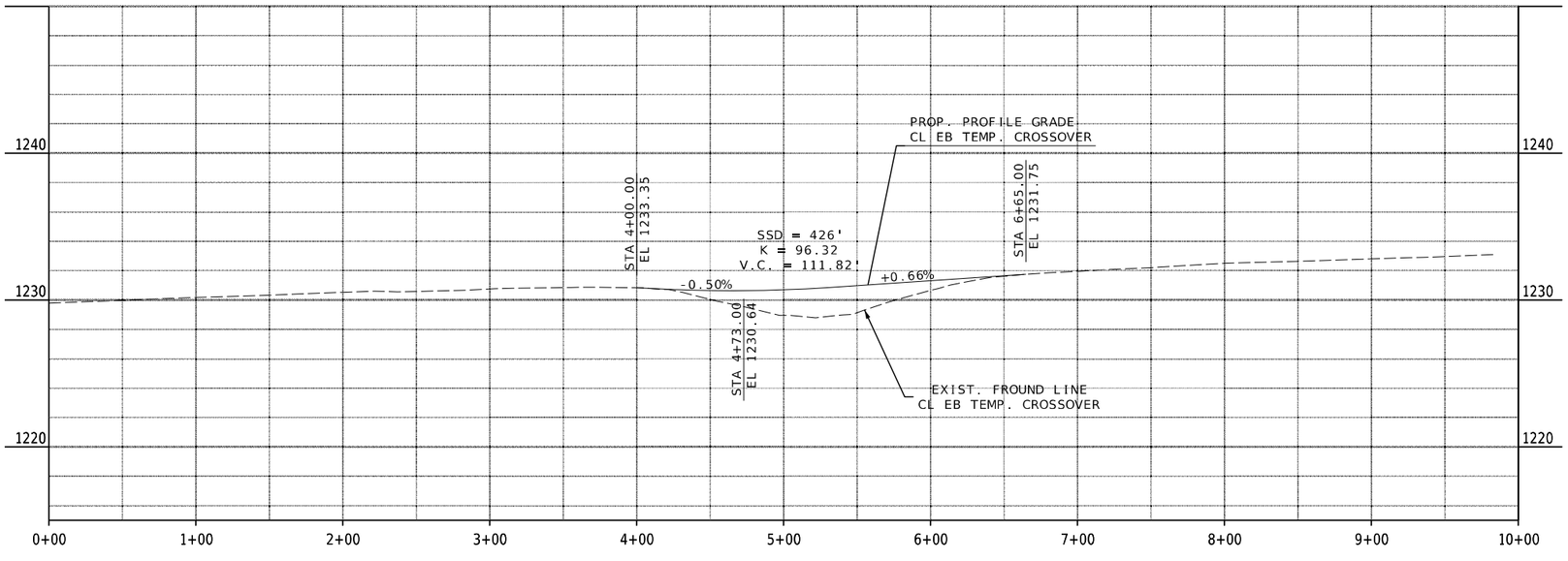
SECTION A-A
STA. 4+00



SECTION B-B
STA. 5+11



SECTION C-C
STA. 6+65



TRAFFIC CONTROL PLAN
EB. TEMP. CROSSOVER
JSU0076
SHEET 1 OF 2

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

ERIC J. REINKEMEYER
NUMBER PE-2006002846
STATE OF MISSOURI
PROFESSIONAL ENGINEER

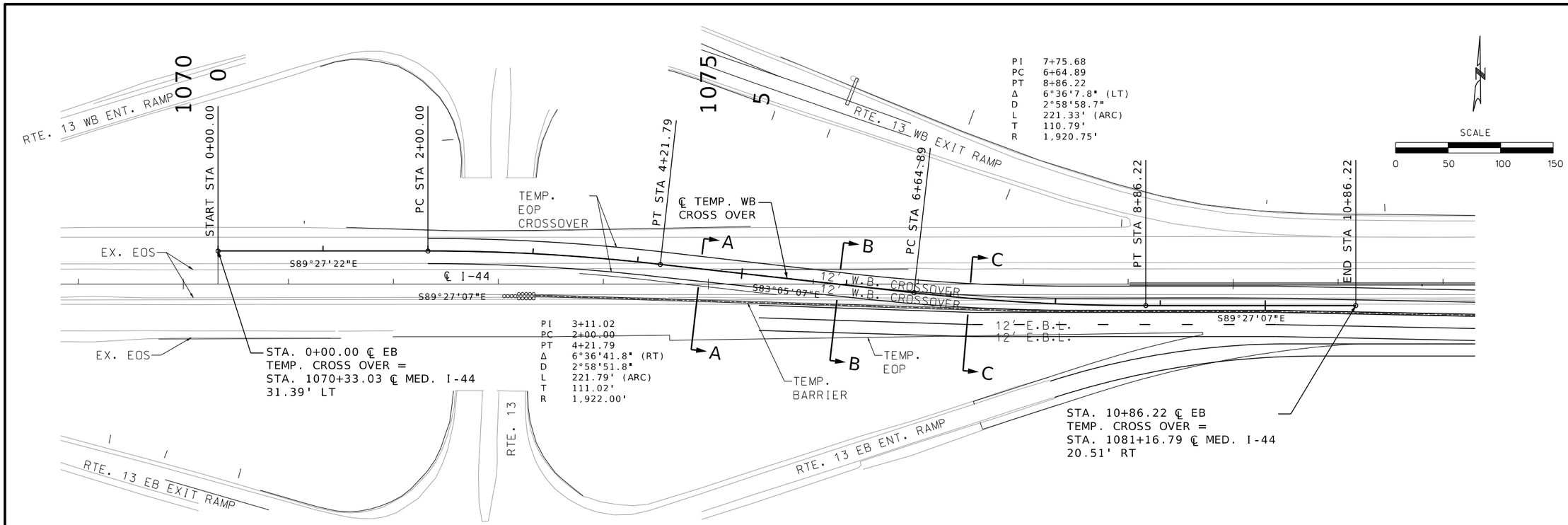
DATE PREPARED: 8/16/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 174
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

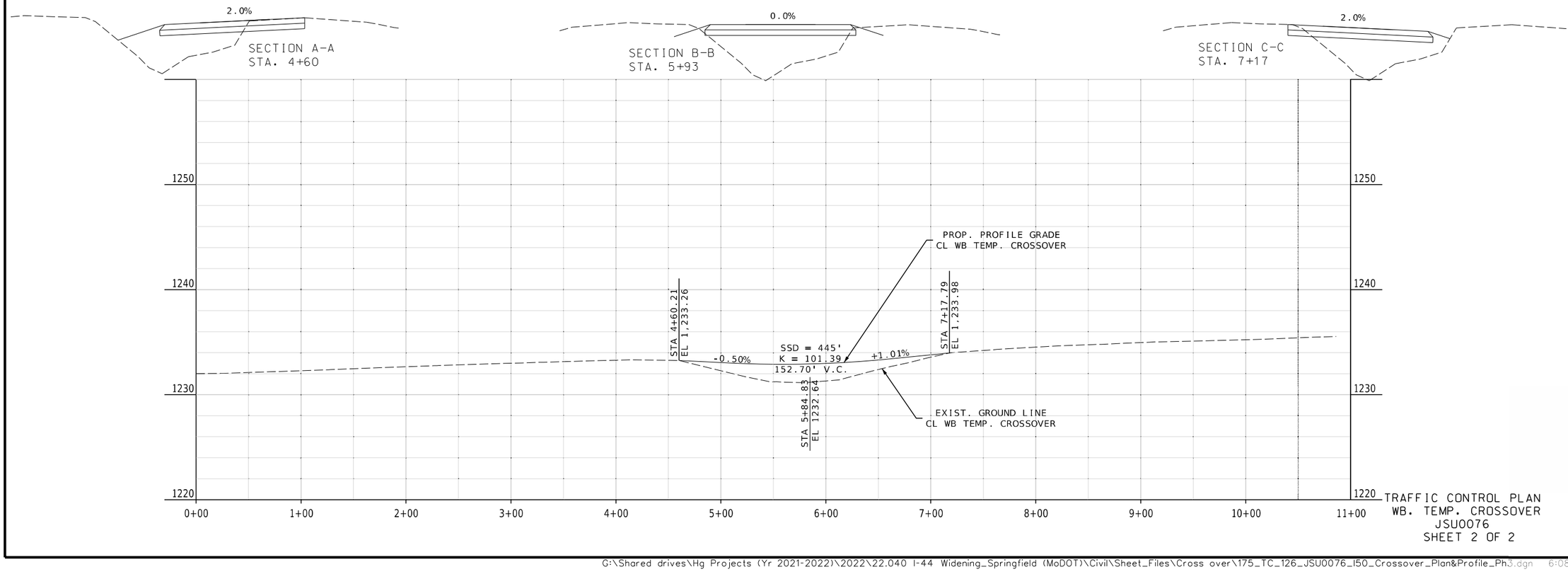
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
MoDOT
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720





TRAFFIC CONTROL PLAN
WB. TEMP. CROSSOVER
JSU0076
SHEET 2 OF 2

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	175

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

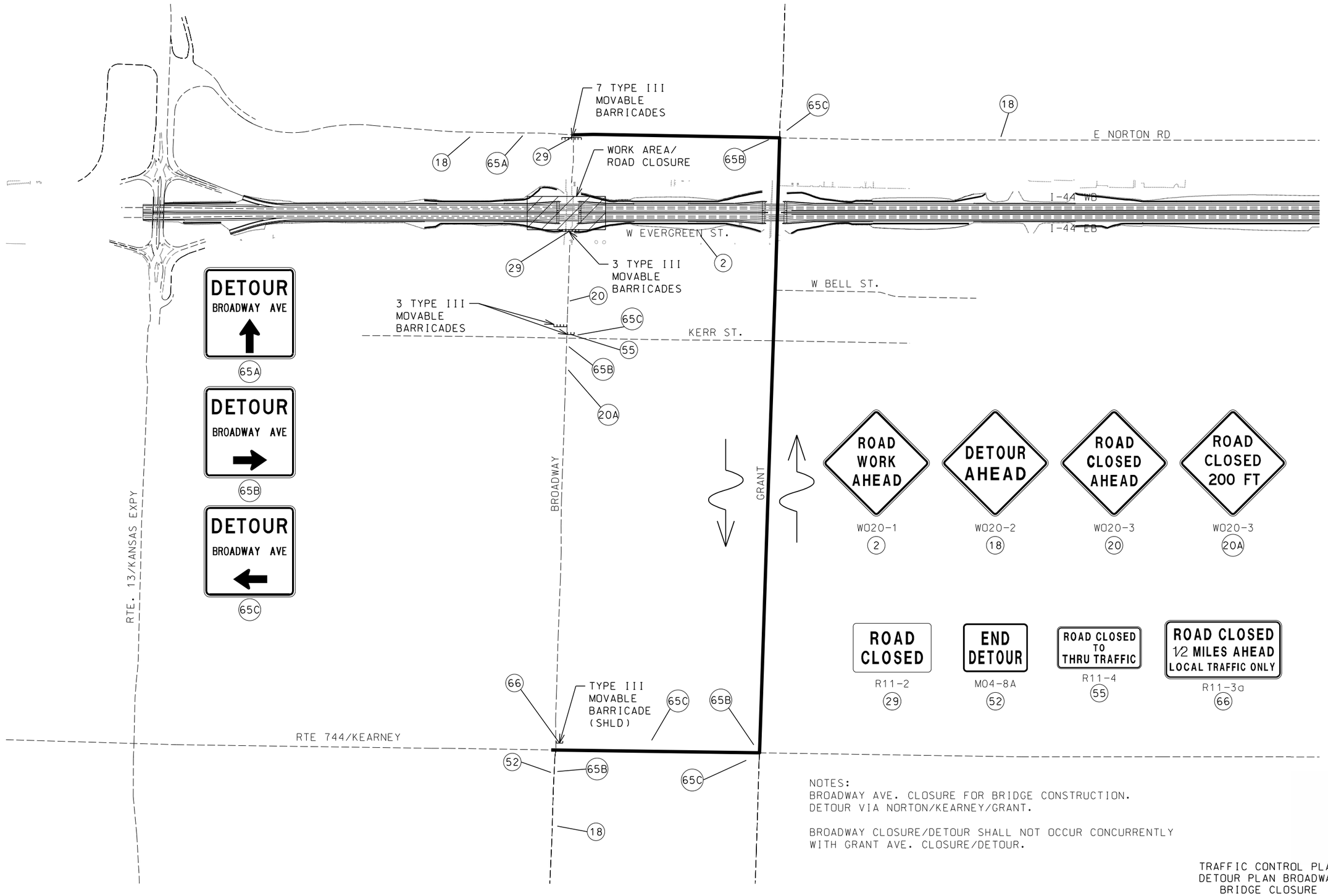
DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\Cross over\175_TC_126_JSU0076_I50_Crossover_Plan&Profile_Ph3.dgn 6:08:54 PM 8/16/2024



NOTES:
BROADWAY AVE. CLOSURE FOR BRIDGE CONSTRUCTION.
DETOUR VIA NORTON/KEARNEY/GRANT.

BROADWAY CLOSURE/DETOUR SHALL NOT OCCUR CONCURRENTLY WITH GRANT AVE. CLOSURE/DETOUR.

TRAFFIC CONTROL PLAN
DETOUR PLAN BROADWAY
BRIDGE CLOSURE
JSU0076
SHEET 1 OF 13

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	176

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

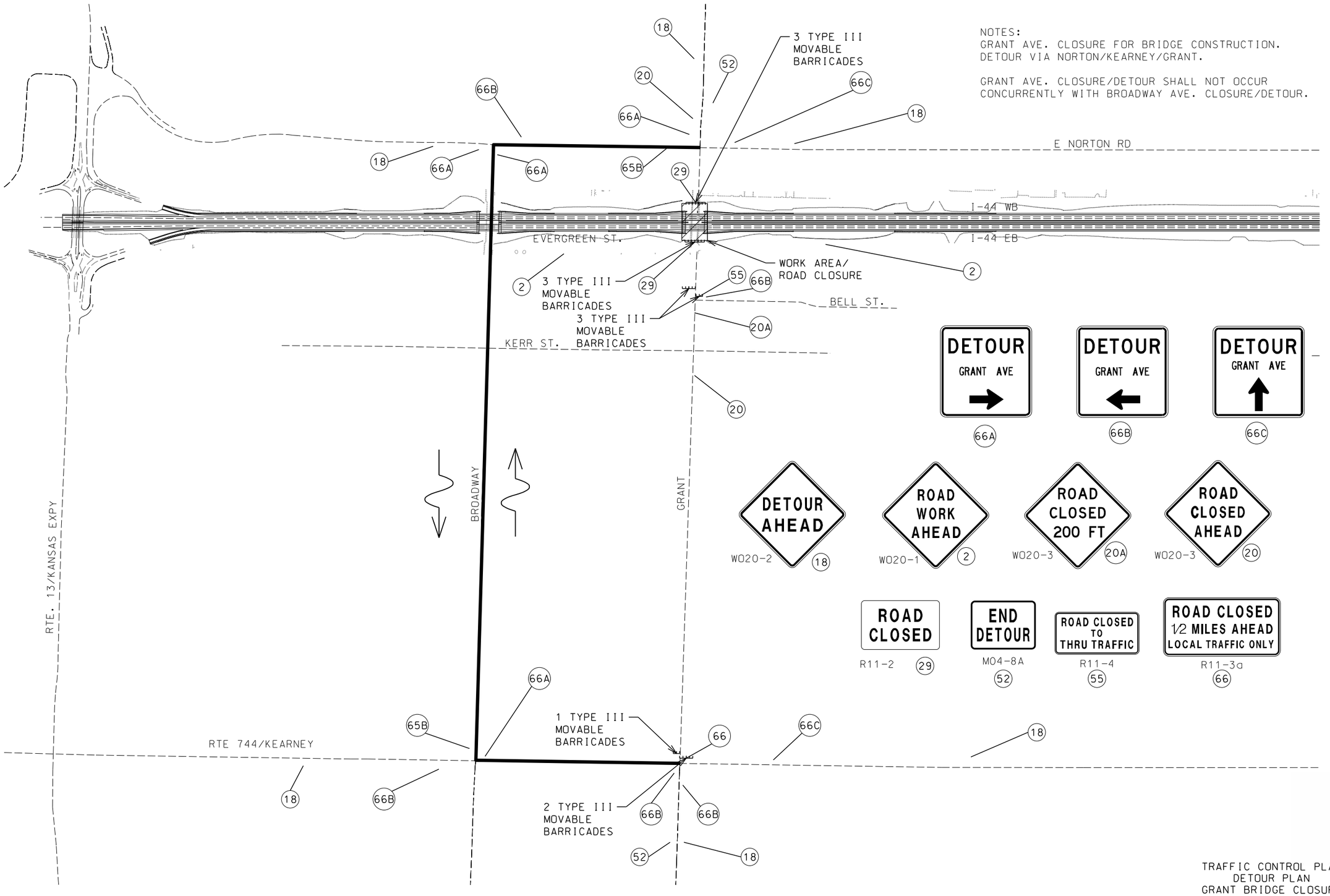
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\176_TC_127_JSU0076_I300_Detour_Broadway_Bridge_Closure.dgn 6:08:59 PM 8/16/2024

NOTES:
GRANT AVE. CLOSURE FOR BRIDGE CONSTRUCTION.
DETOUR VIA NORTON/KEARNEY/GRANT.

GRANT AVE. CLOSURE/DETOUR SHALL NOT OCCUR CONCURRENTLY WITH BROADWAY AVE. CLOSURE/DETOUR.



TRAFFIC CONTROL PLAN
DETOUR PLAN
GRANT BRIDGE CLOSURE
JSU0076
SHEET 2 OF13

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	177

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

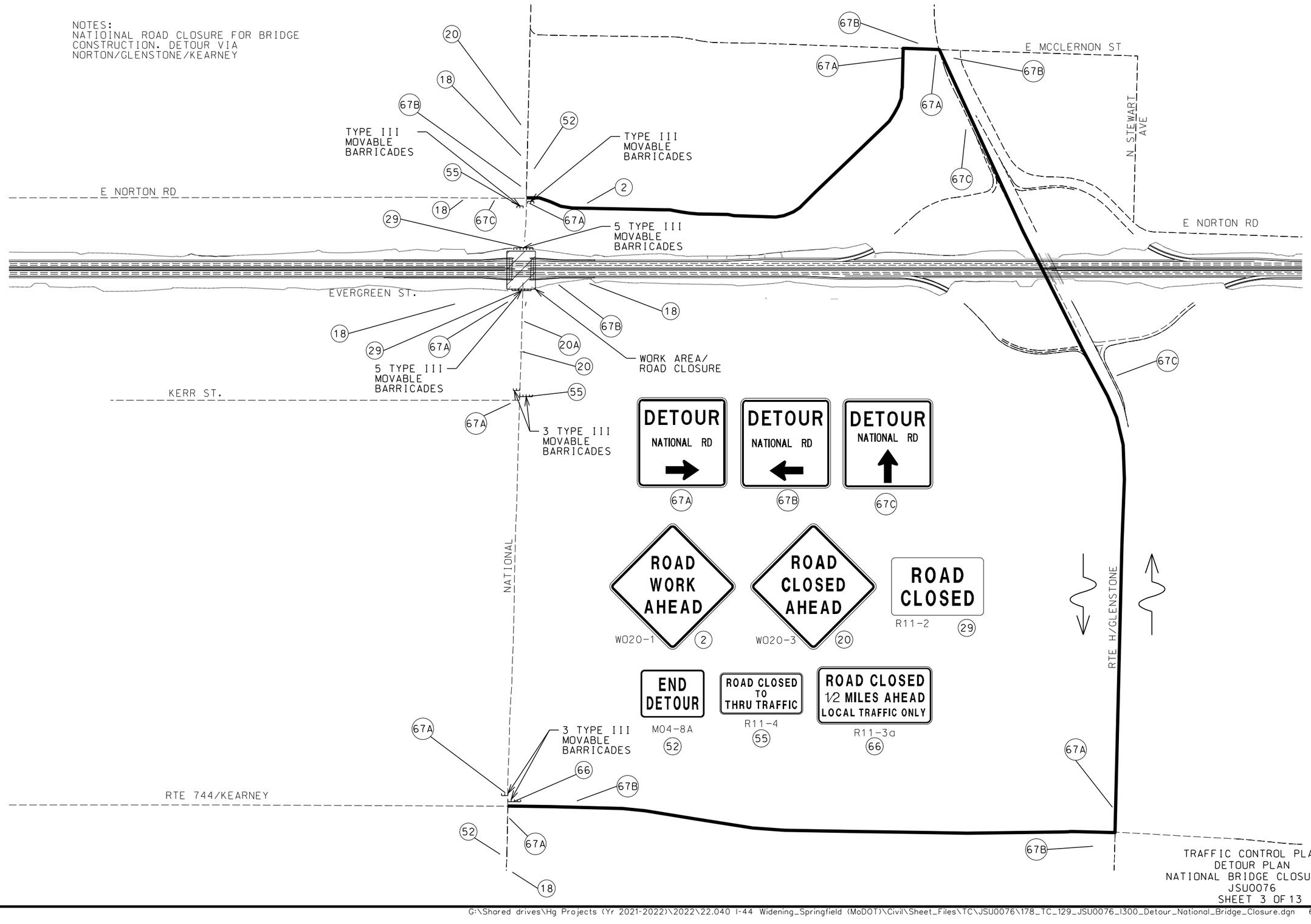
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

NOTES:
NATIOINAL ROAD CLOSURE FOR BRIDGE CONSTRUCTION. DETOUR VIA NORTON/GLENSTONE/KEARNEY



TRAFFIC CONTROL PLAN
DETOUR PLAN
NATIONAL BRIDGE CLOSURE
JSU0076
SHEET 3 OF 13

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	178

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

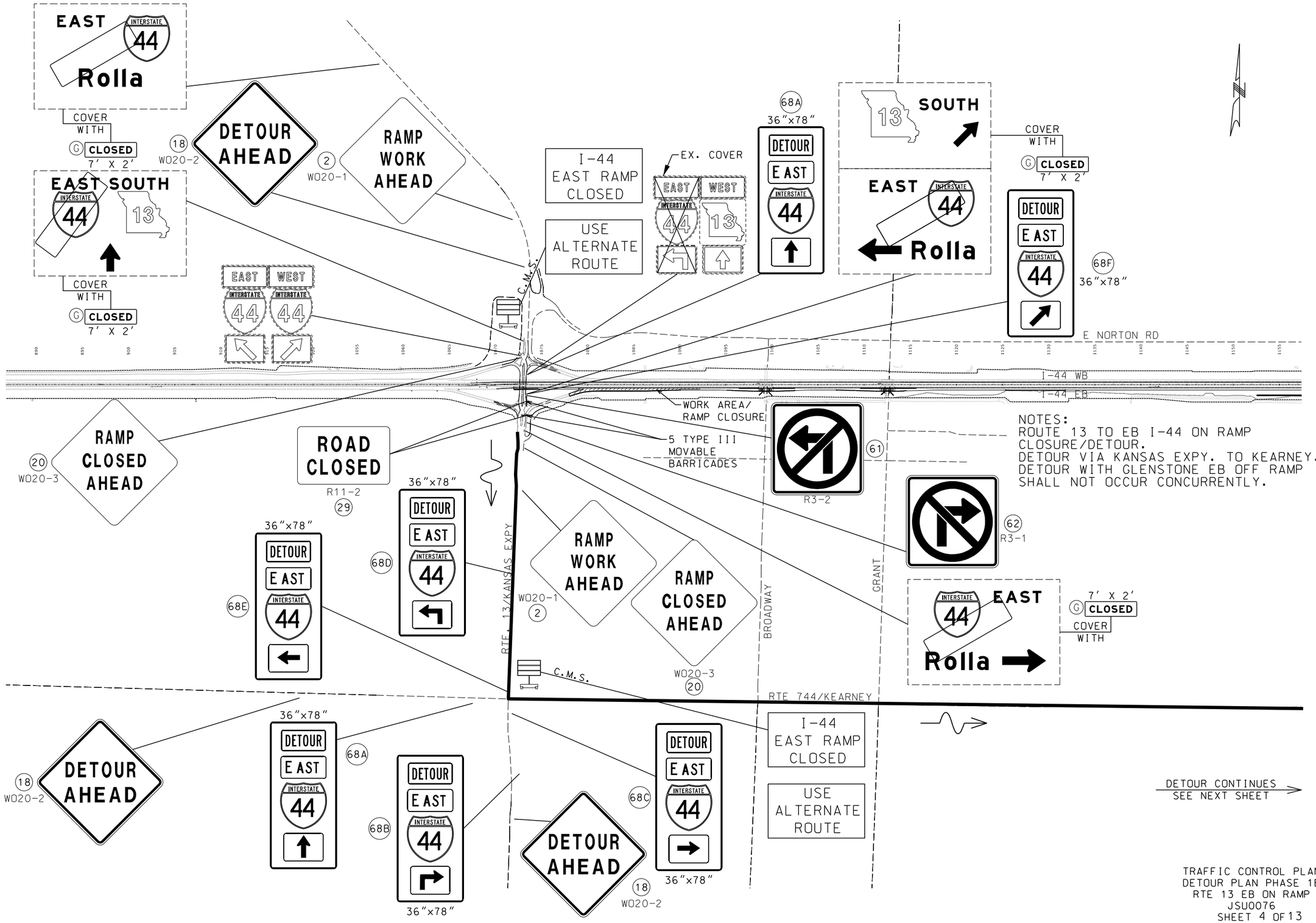
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

FINAL PLANS

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\178_TC_129_JSU0076_I300_Detour_National_Bridge_Closure.dgn 6:09:08 PM 8/16/2024



TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 1B
RTE 13 EB ON RAMP
JSU0076
SHEET 4 OF 13

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/16/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	179

COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

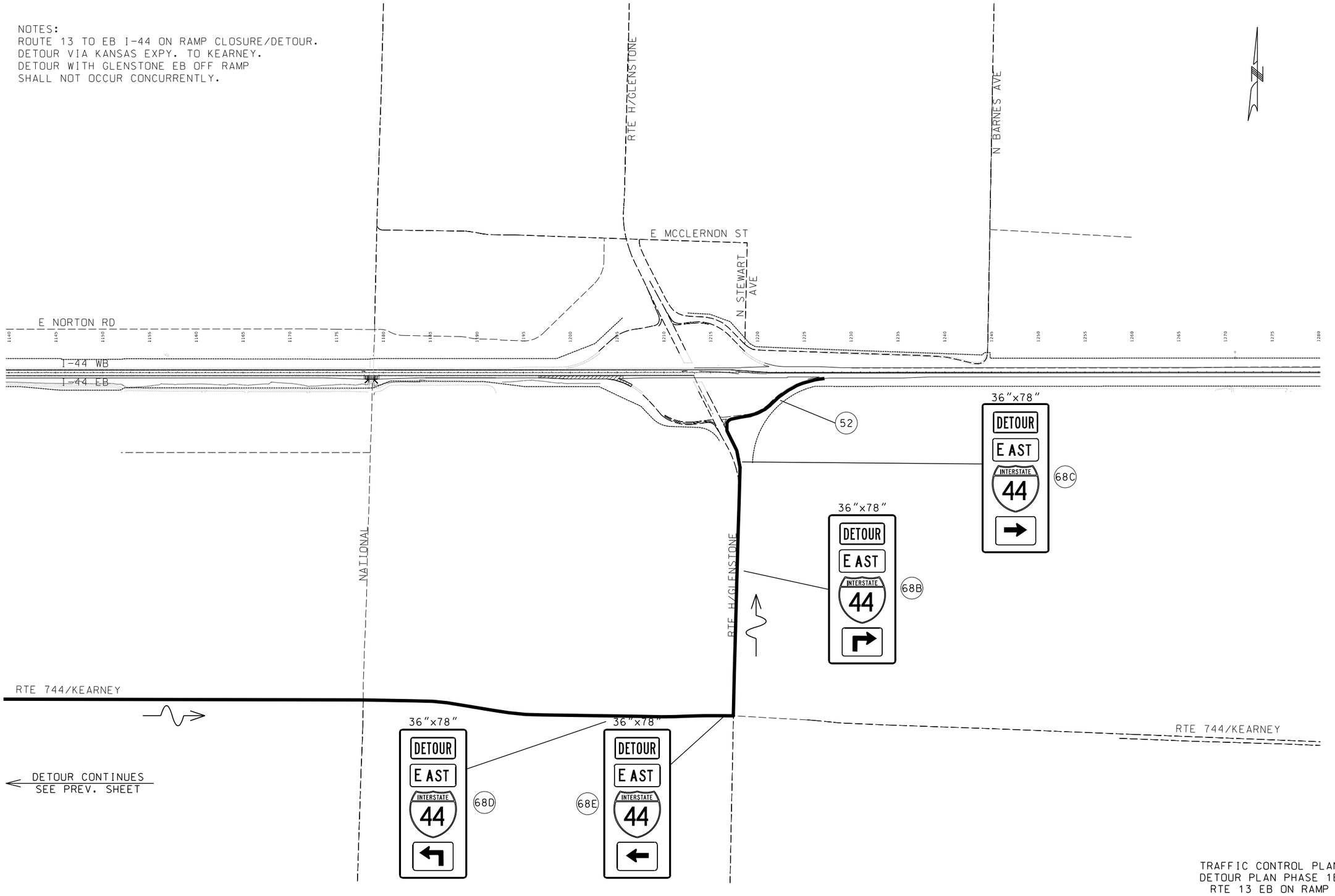
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

FINAL PLANS

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\179_TC_130_JSU0076_I500_Detour_Rte-13_EB_On_Ramp_01.dgn 6:09:15 PM 8/16/2024

NOTES:
ROUTE 13 TO EB I-44 ON RAMP CLOSURE/DETOUR.
DETOUR VIA KANSAS EXPY. TO KEARNEY.
DETOUR WITH GLENSTONE EB OFF RAMP
SHALL NOT OCCUR CONCURRENTLY.



TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 1B
RTE 13 EB ON RAMP
JSU0076
SHEET 5 OF 13

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	180

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

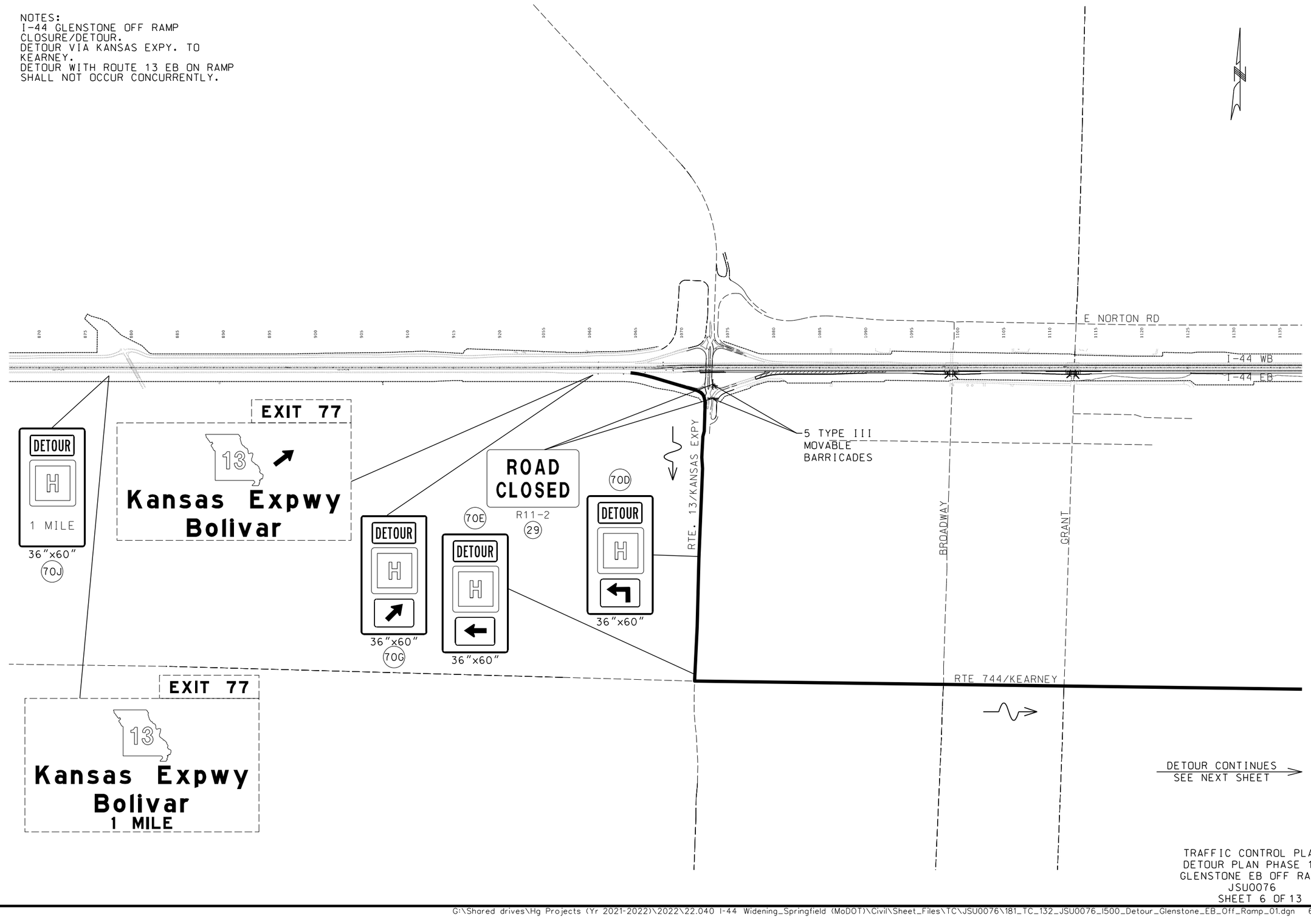
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

FINAL PLANS

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\180_TC_131_JSU0076_1500_Detour_Rte-13_EB_On_Ramp_02.dgn 6:09:19 PM 8/16/2024

NOTES:
I-44 GLENSTONE OFF RAMP
CLOSURE/DETOUR.
DETOUR VIA KANSAS EXPY. TO
KEARNEY.
DETOUR WITH ROUTE 13 EB ON RAMP
SHALL NOT OCCUR CONCURRENTLY.



TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 1B
GLENSTONE EB OFF RAMP
JSU0076
SHEET 6 OF 13

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	181

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

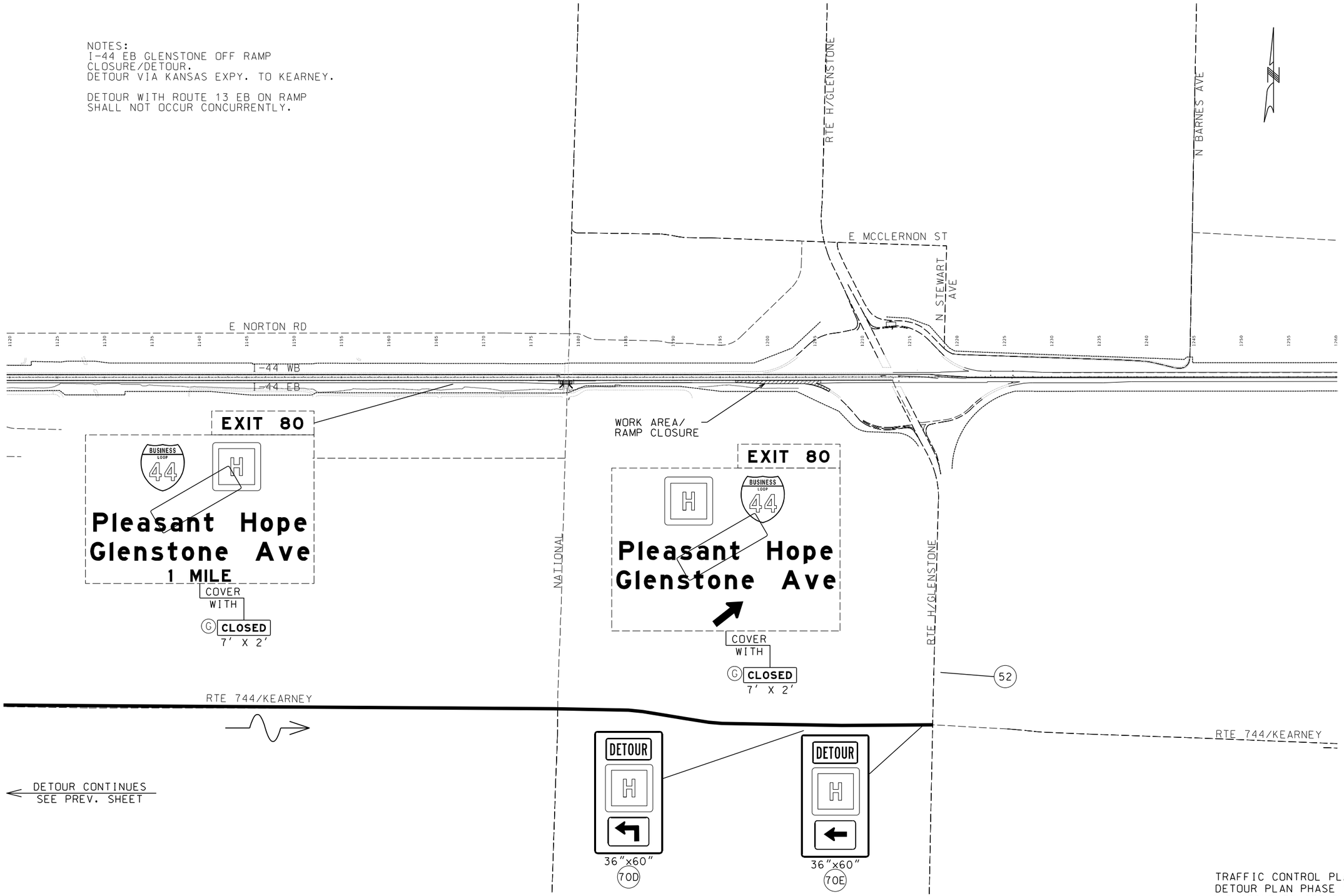
Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

FINAL PLANS

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\181_TC_132_JSU0076_1500_Detour_Glenstone_EB_Off_Ramp_01.dgn 6:09:24 PM 8/16/2024

NOTES:
I-44 EB GLENSTONE OFF RAMP
CLOSURE/DETOUR.
DETOUR VIA KANSAS EXPY. TO KEARNEY.

DETOUR WITH ROUTE 13 EB ON RAMP
SHALL NOT OCCUR CONCURRENTLY.



TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 1B
GLENSTONE EB OFF RAMP
JSU0076
SHEET 7 OF 13

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	182

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

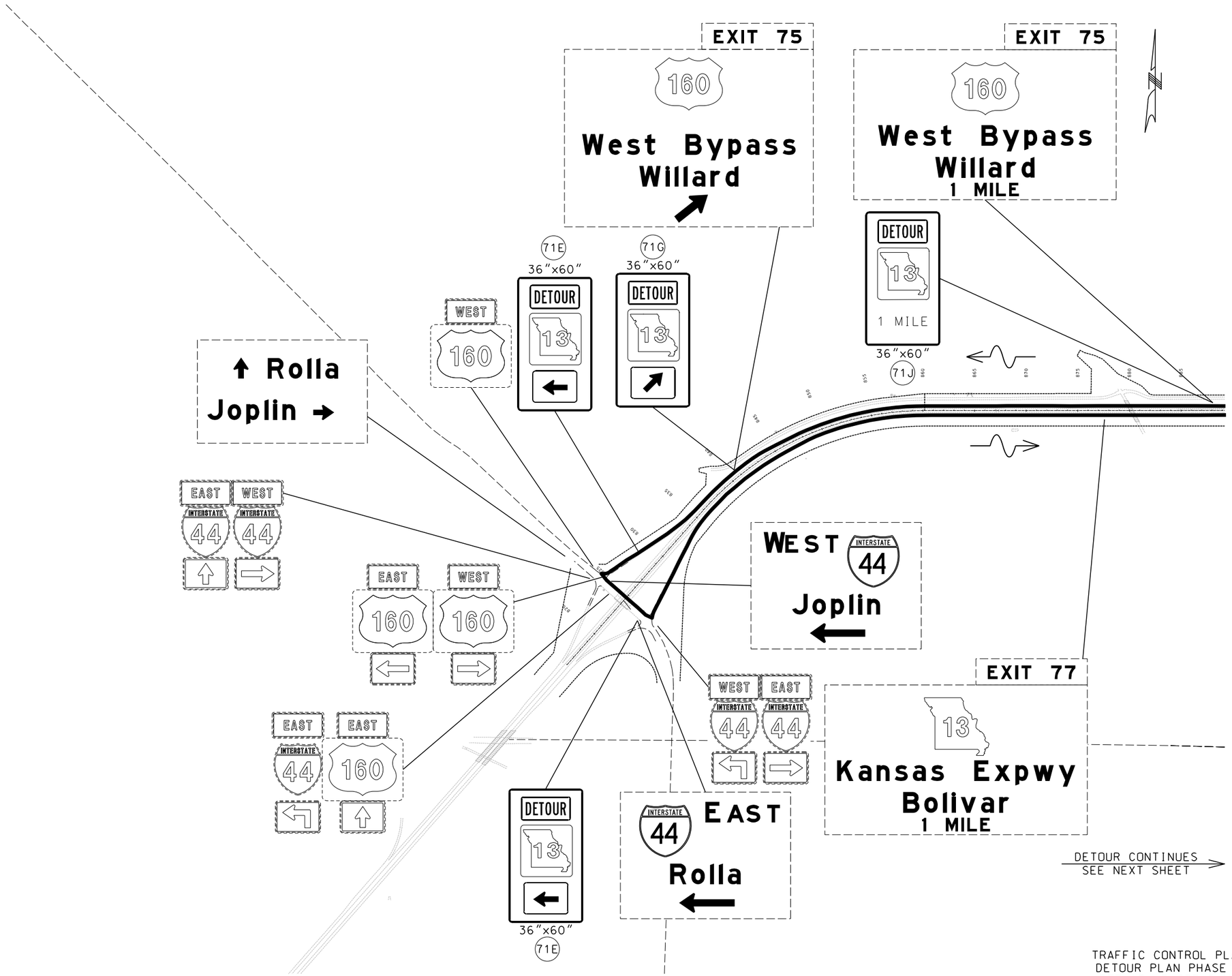
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

FINAL PLANS

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\182_TC_133_JSU0076_I500_Detour_Glenstone_EB_Off_Ramp_02.dgn 6:09:28 PM 8/16/2024



TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 3
RTE 13 WB OFF RAMP
JSU0076
SHEET 8 OF 13

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	183

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

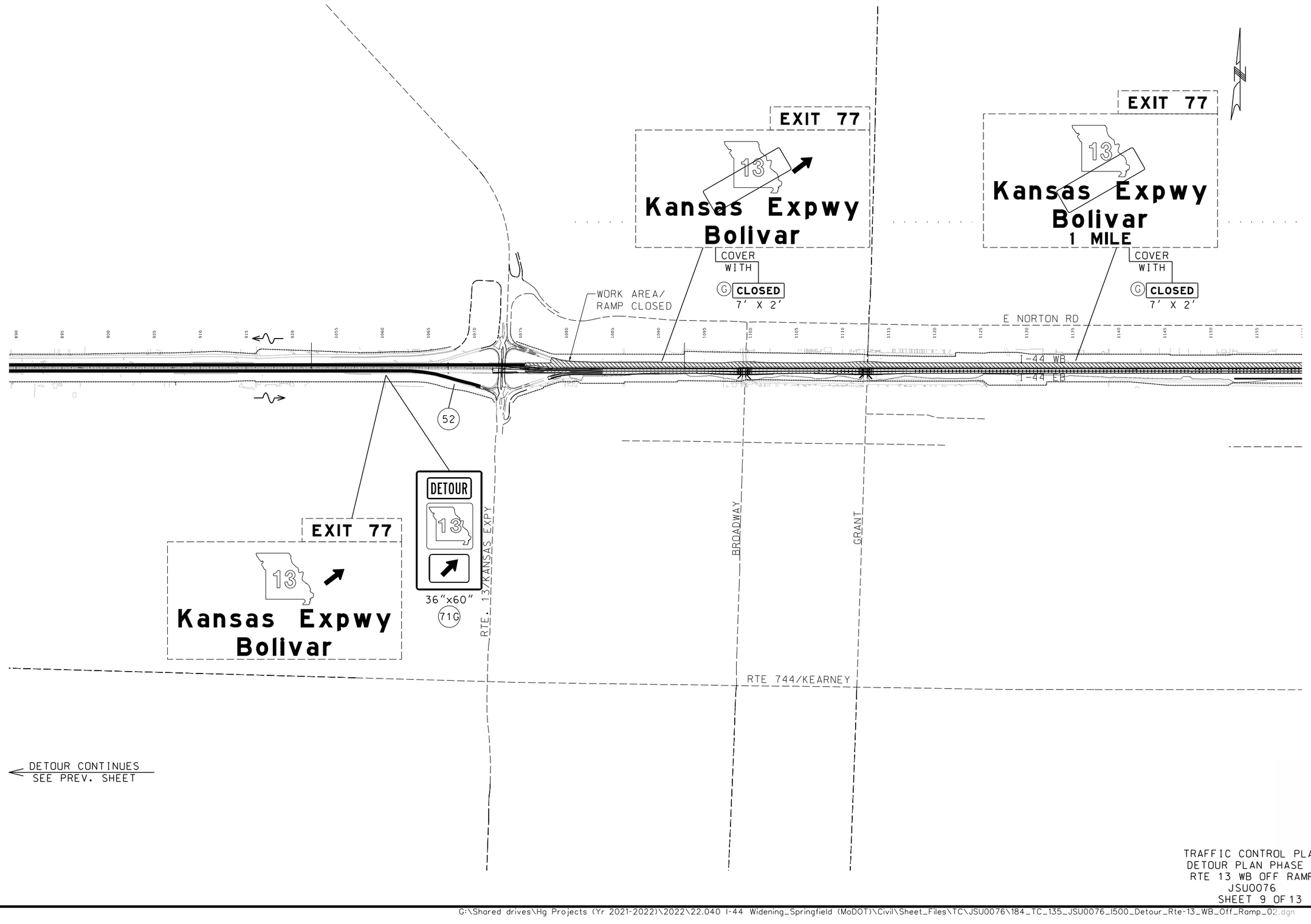
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
PRO. ENGINEER 2010005873

FINAL PLANS

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\183_TC_134_JUS0076_I500_Detour_Rte-13_WB_Off_Ramp_01.dgn 6:25:22 PM 8/16/2024



TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 3
RTE 13 WB OFF RAMP
JSU0076
SHEET 9 OF 13

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	184

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

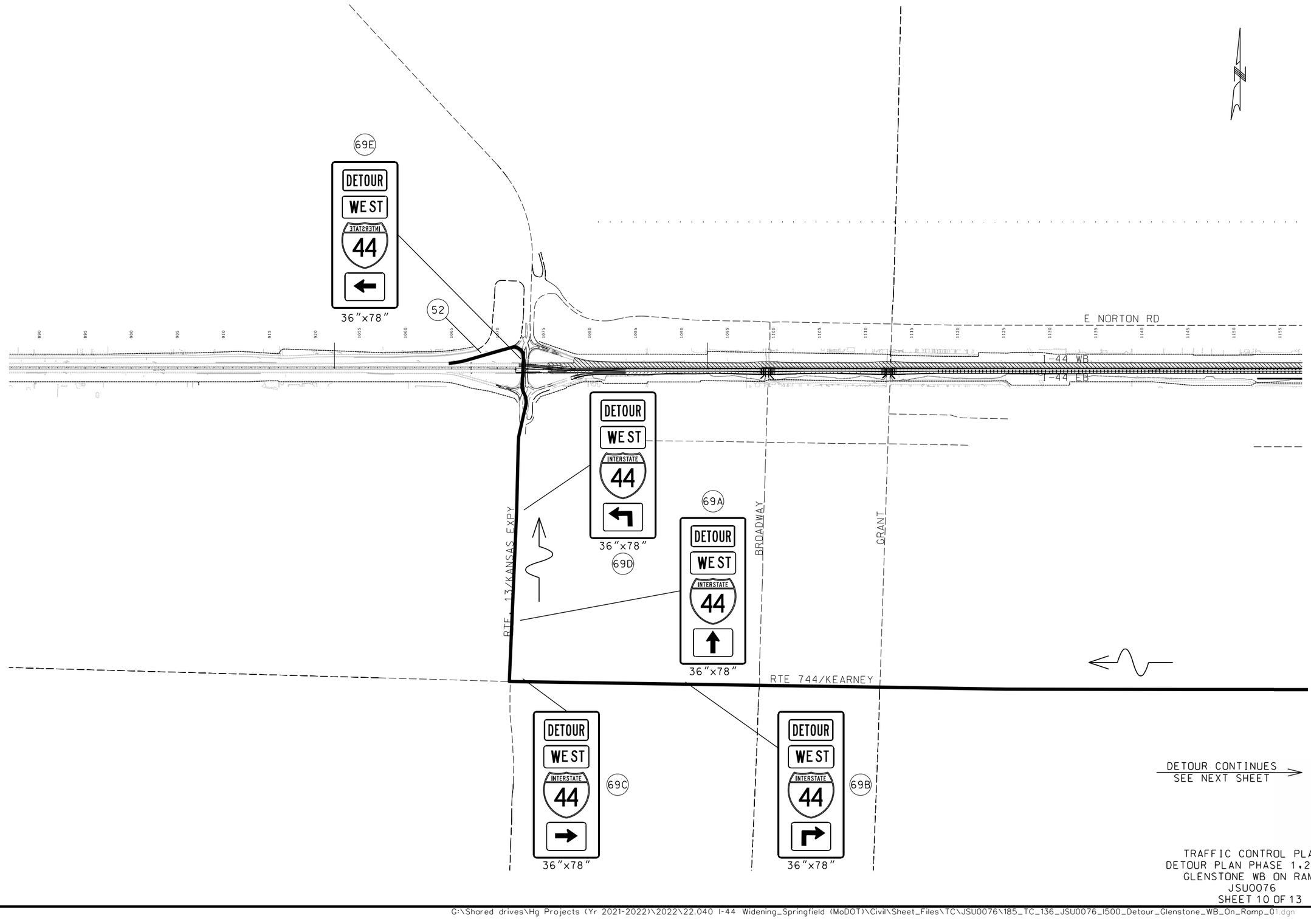
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

FINAL PLANS

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\184_TC_135_JSU0076_1500_Detour_Rte-13_WB_Off_Ramp_02.dgn 6:19:43 PM 8/16/2024



TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 1,2,3
GLENSTONE WB ON RAMP
JSU0076
SHEET 10 OF 13

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	185

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

FINAL PLANS

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\185_TC_136_JSU0076_I500_Detour_Glenstone_WB_On_Ramp_01.dgn 6:19:48 PM 8/16/2024

7' X 2'
G CLOSED
COVER WITH
INTERSTATE 44 WEST
Joplin

COVER
EAST INTERSTATE 44
WEST INTERSTATE 44

69A
36"x78"
DETOUR
WEST
INTERSTATE 44

I-44 WEST RAMP CLOSED
USE ALTERNATE ROUTE
C.M.S.

RTE H/GLENSTONE

7' X 2'
G CLOSED
COVER WITH
INTERSTATE 44 WEST
Joplin

61
R3-2

WO20-3
20
ROAD CLOSED AHEAD

N BARNES AVE

6 TYPE III MOVABLE BARRICADES

CHANNELIZE RIGHT TURN LANE 40' DEVICE SPACING

COVER
WEST INTERSTATE 44
EAST INTERSTATE 44
H

20
WO20-3
RAMP CLOSED AHEAD

62
R3-1

ROAD CLOSED

R11-2
29

3 TYPE III MOVABLE BARRICADES

E NORTON RD

1140 1145 1150 1155 1160 1165 1170 1175 1180 1190 1195 1200 1210 1215 1220 1225 1230 1235 1240 1245 1250 1255 1260 1265 1270 1275 1280

I-44 WB
I-44 EB

RAMP CLOSED

COVER
WEST INTERSTATE 44
36"x78"
DETOUR
WEST
INTERSTATE 44
69C

DETOUR
WEST
INTERSTATE 44
36"x78"
69B

TYPE III MOVABLE BARRICADES

CHANNELIZE LEFT TURN LANE 40' DEVICE SPACING

COVER
WEST INTERSTATE 44
EAST INTERSTATE 44

7' X 2'
G CLOSED
COVER WITH
INTERSTATE 44 WEST
Joplin

69A
DETOUR
WEST
INTERSTATE 44
36"x78"

NATIONAL

RTE H/GLENSTONE

I-44 WEST RAMP CLOSED
USE ALTERNATE ROUTE
C.M.S.

36"x78"
DETOUR
WEST
INTERSTATE 44
69E

RTE 744/KEARNEY

RTE 744/KEARNEY

DETOUR CONTINUES
SEE PREV. SHEET

18
WO20-2
DETOUR AHEAD

DETOUR
WEST
INTERSTATE 44
69D
36"x78"

TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 1,2,3
GLENSTONE WB ON RAMP
JSU0076
SHEET 11 OF 13

ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER
STATE OF MISSOURI
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	186

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088

PROJECT NO.:

BRIDGE NO.:

DATE	DESCRIPTION

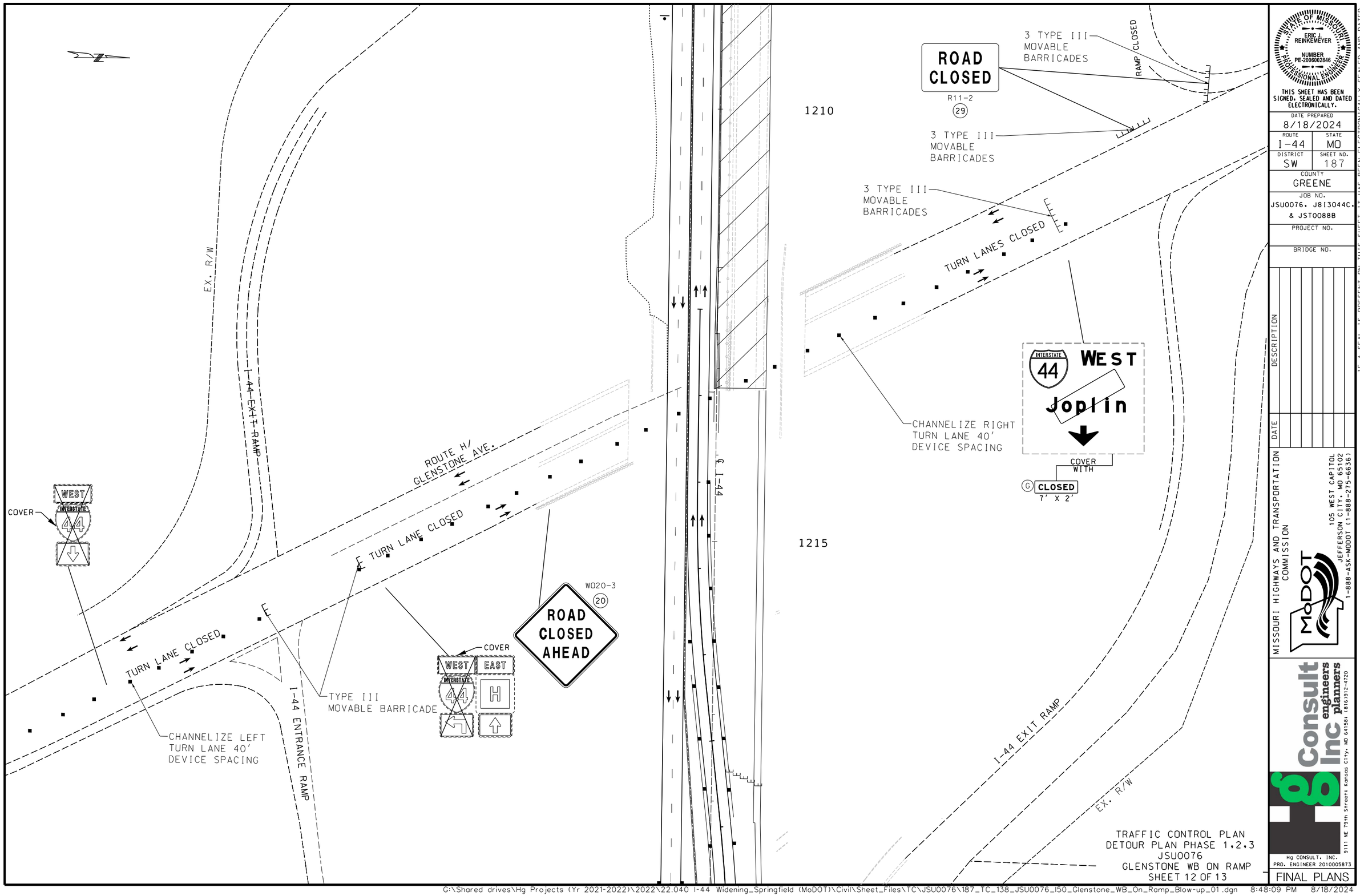
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

FINAL PLANS

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\186_TC_137_JSU0076_I500_Detour_Glenstone_WB_On_Ramp_02 .dgn 6:19:53 PM 8/16/2024



TRAFFIC CONTROL PLAN
DETOUR PLAN PHASE 1,2,3
JSU0076
GLENSTONE WB ON RAMP
SHEET 12 OF 13

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS been SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/18/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	187

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

FINAL PLANS

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\187_TC_138_JSU0076_150_Glenstone_WB_On_Ramp_Blow-up_01.dgn 8:48:09 PM 8/18/2024

I-44 WORK ZONE ITS SYSTEM LAYOUT

MESSAGES

NO CONGESTION:

ROAD WORK
XX MILES AHEAD

MEDIUM CONGESTION:

SLOW TRAFFIC
XX MILES AHEAD/
BE PREPARED TO STOP

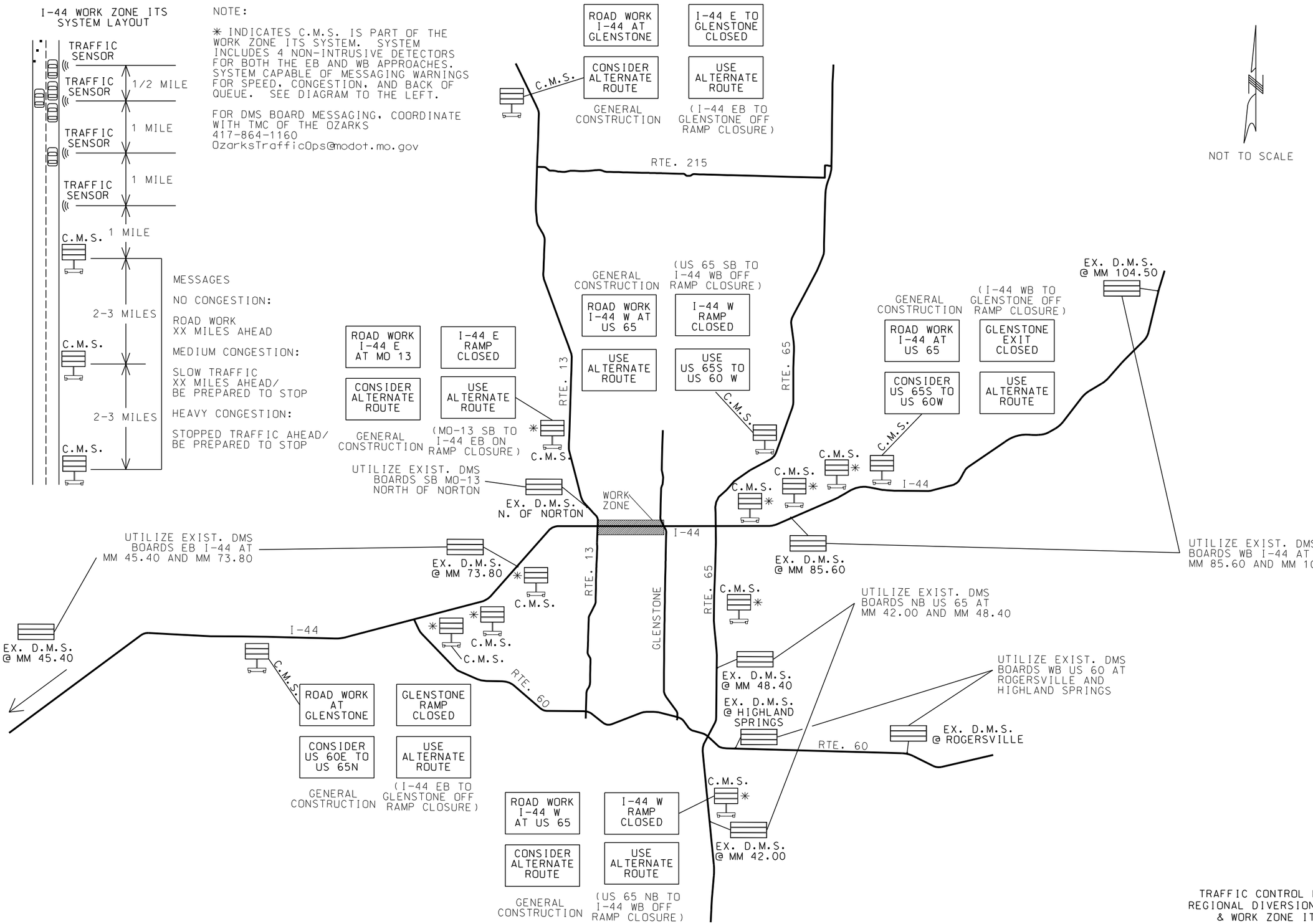
HEAVY CONGESTION:

STOPPED TRAFFIC AHEAD/
BE PREPARED TO STOP

NOTE:

* INDICATES C.M.S. IS PART OF THE WORK ZONE ITS SYSTEM. SYSTEM INCLUDES 4 NON-INTRUSIVE DETECTORS FOR BOTH THE EB AND WB APPROACHES. SYSTEM CAPABLE OF MESSAGING WARNINGS FOR SPEED, CONGESTION, AND BACK OF QUEUE. SEE DIAGRAM TO THE LEFT.

FOR DMS BOARD MESSAGING, COORDINATE WITH TMC OF THE OZARKS
417-864-1160
OzarksTrafficOps@modot.mo.gov



NOT TO SCALE

TRAFFIC CONTROL PLAN
REGIONAL DIVERSION PLAN
& WORK ZONE ITS
JSU0076
SHEET 13 OF 13

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	188

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.040 I-44 Widening_Springfield (MoDOT)\Civil\Sheet_Files\TC\JSU0076\188_TC_139_JSU0076_110000_Regional_Diversion_Plan.dgn 6:20:01 PM 8/16/2024

SCALE
0 50 100 150

1075 1080 1085

R/W (EXIST.)

STA 1078+40.66
OFF 121.60' LT.

STA 1080+08.68
OFF 82.01' LT.

STA 1081+40.98
OFF 72.26' LT.

663 LF

STA 1077+47.92
OFF 64.26' LT.

STA 1077+27.36
OFF 58.52' LT.

553 LF

STA 1071+96.53
OFF 55.90' LT.

W.B.L. I-44

℄ I-44

E.B.L. I-44

STA 1078+41.76
OFF 64.83' RT.

STA 1071+96.91
OFF 55.64' RT.

707 LF

STA 1077+48.37
OFF 54.24' RT.

STA 1077+72.35
OFF 65.39' RT.

STA 1077+89.22
OFF 92.51' RT.

STA 1079+80.96
OFF 99.43' RT.

741 LF

STA 1081+91.09
OFF 88.09' RT.

STA 1081+68.10
OFF 139.32' RT.

STA 1078+00.74
OFF 136.31' RT.

R/W (EXIST.)

R/W (EXIST.)

MATCHLINE STA. 1085+00.00

MATCHLINE STA. 1085+00.00

1085 1090 1095

R/W (EXIST.)

R/W (EXIST.)

STA 1097+96.16
OFF 149.62' LT.

STA 1095+50.32
OFF 83.69' LT.

STA 1097+55.69
OFF 97.86' LT.

377 LF

STA 1093+23.51
OFF 69.38' LT.

821 LF

℄ I-44

W.B.L. I-44

E.B.L. I-44

819 LF

STA 1092+96.82
OFF 65.15' RT.

STA 1093+17.72
OFF 77.38' RT.

STA 1087+27.69
OFF 72.01' RT.

STA 1086+61.06
OFF 81.97' RT.

R/W (EXIST.)

R/W (EXIST.)

MATCHLINE STA. 1099+00.00

MATCHLINE STA. 1099+00.00

SCALE
0 50 100 150

TEMPORARY EROSION CONTROL LEGEND

C CURB INLET CHECK

I INLET CHECK *

SILT FENCE

* INCLUDED IN ROCK DITCH CHECK AND ALTERNATE DITCH CHECK MEASUREMENT FOR PAYMENT

I-44 WIDENING
JSU0076 & JST0088B

EROSION CONTROL
PRE-CONST. PHASE
SHEET 1 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED
8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	189

COUNTY
GREENE

JOB NO.
JSU0076, JRB3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

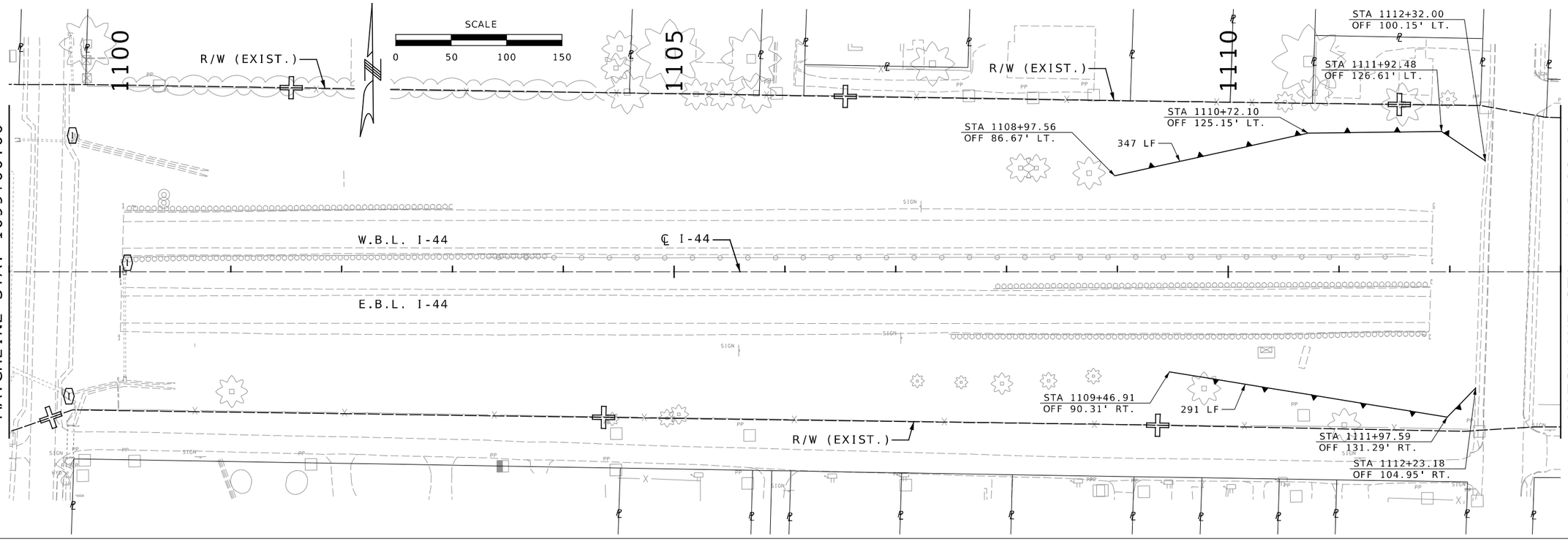
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

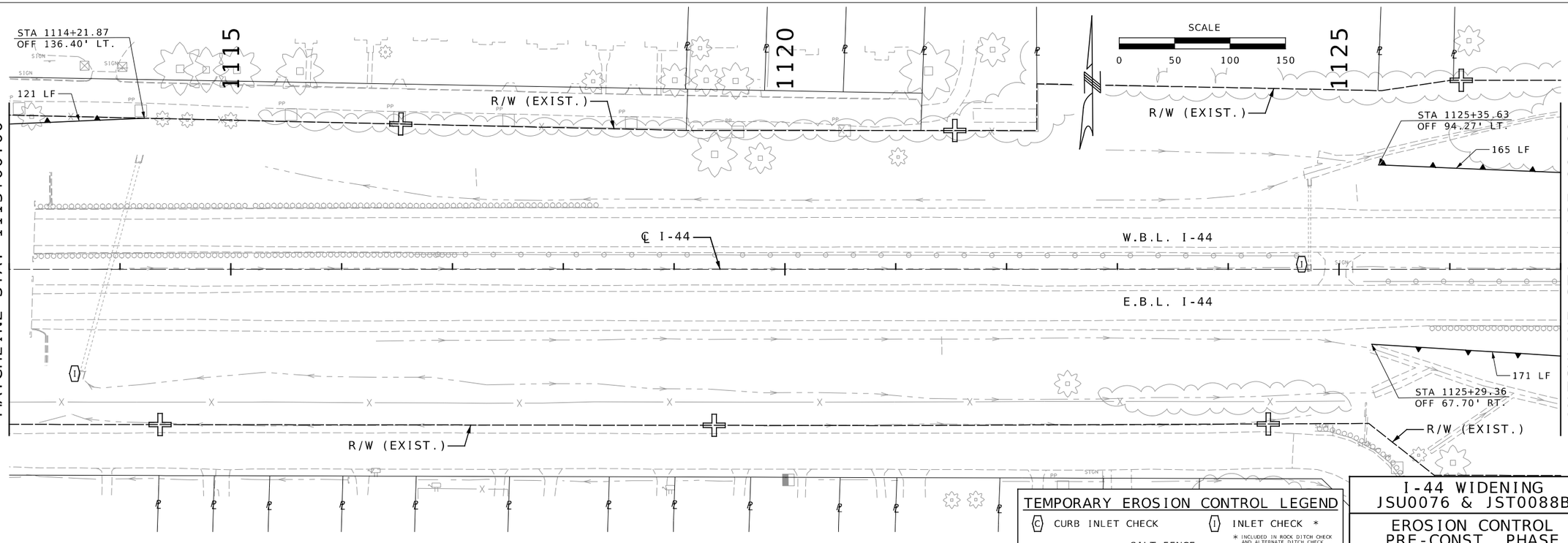
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165

BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\189_EC_JSU0076_I50.dgn 10:02:54 AM 8/19/2024





TEMPORARY EROSION CONTROL LEGEND

C CURB INLET CHECK

I INLET CHECK *

SILT FENCE

* INCLUDED IN ROCK DITCH CHECK AND ALTERNATE DITCH CHECK MEASUREMENT FOR PAYMENT

I-44 WIDENING
JSU0076 & JST0088B

EROSION CONTROL PRE-CONST. PHASE
SHEET 2 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED 8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	190

COUNTY: GREENE

JOB NO. JSU0076, JRI3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

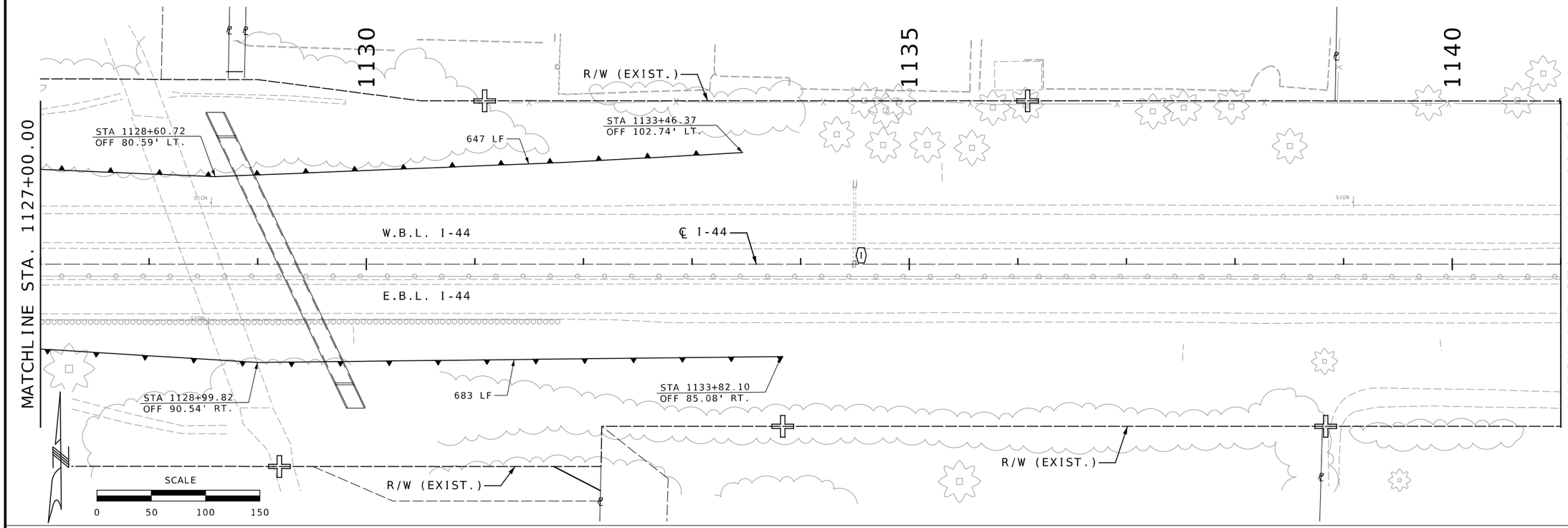
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

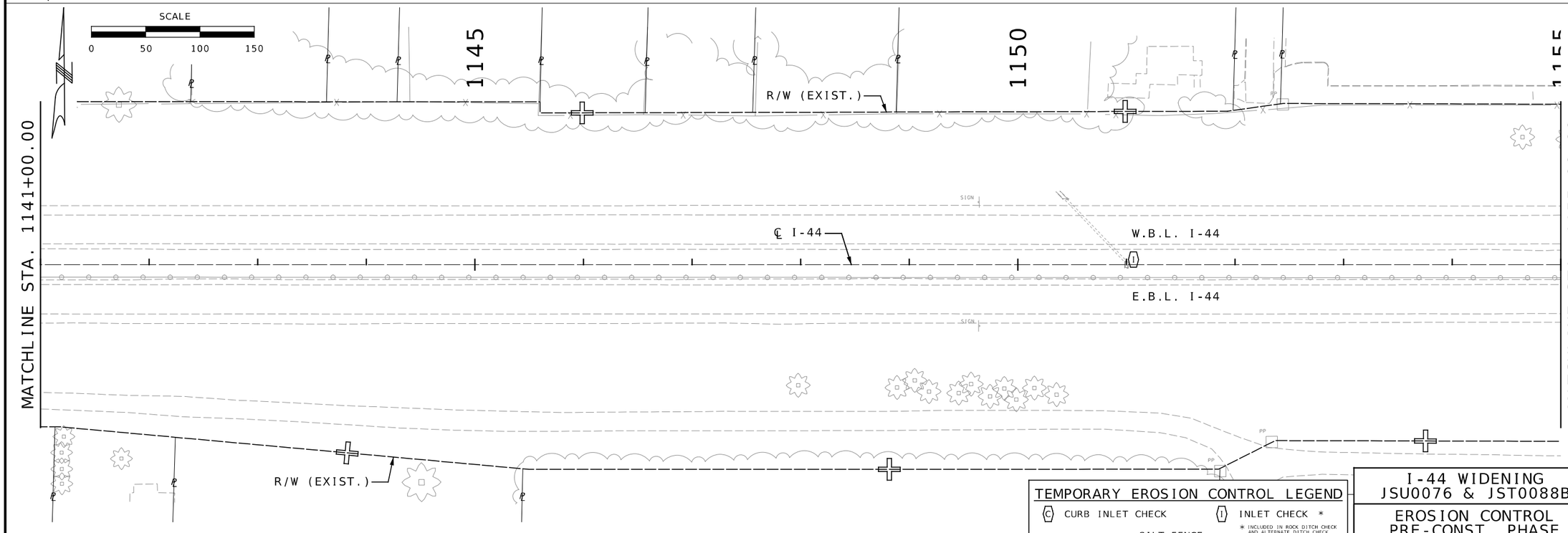
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\190_EC_JSU0076_150.dgn 10:03:10 AM 8/19/2024





TEMPORARY EROSION CONTROL LEGEND

C CURB INLET CHECK

I INLET CHECK *

SILT FENCE

* INCLUDED IN ROCK DITCH CHECK AND ALTERNATE DITCH CHECK MEASUREMENT FOR PAYMENT

I-44 WIDENING
JSU0076 & JST0088B

EROSION CONTROL PRE-CONST. PHASE
SHEET 3 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	191

COUNTY: GREENE

JOB NO.: JSU0076, JBI3044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

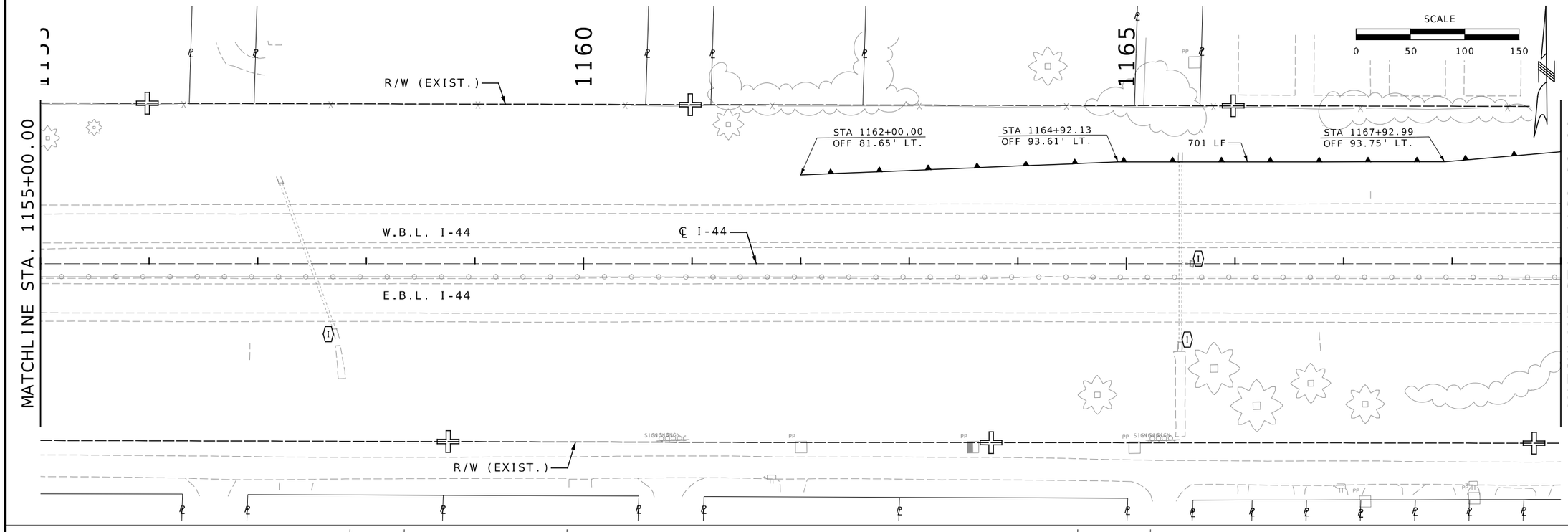
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

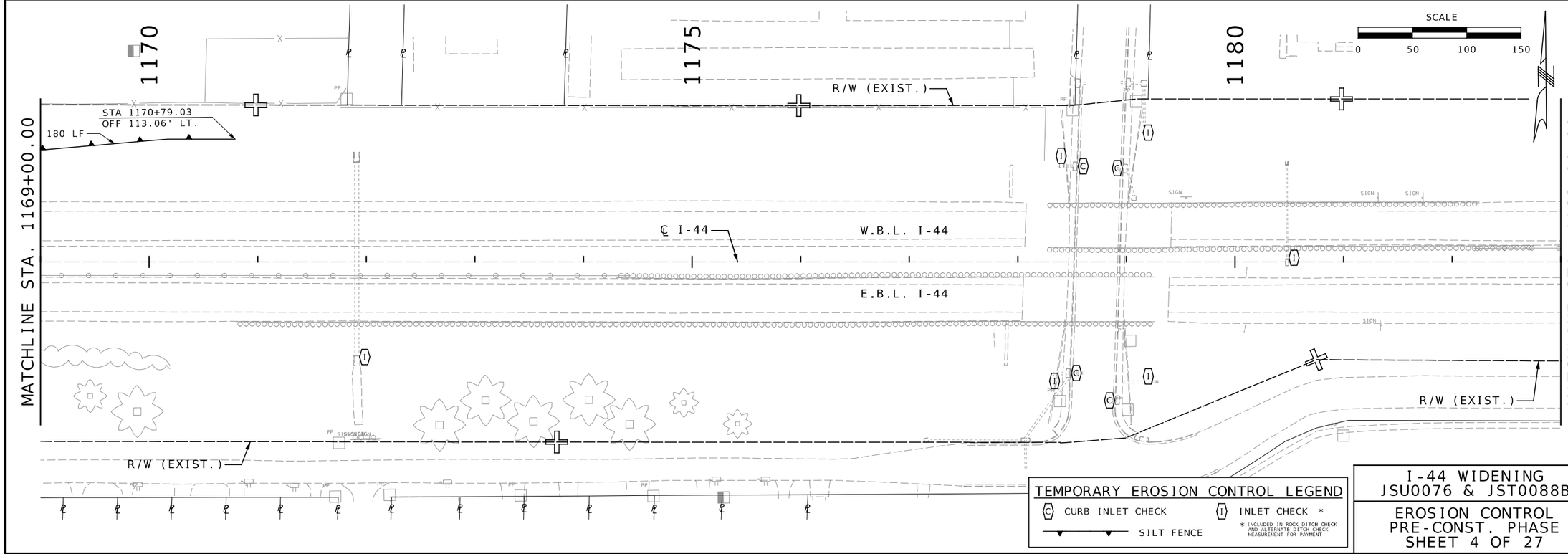
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\191_EC_JSU0076_I50.dgn 10:03:23 AM 8/19/2024





TEMPORARY EROSION CONTROL LEGEND

- (C) CURB INLET CHECK
- (I) INLET CHECK *
- SILT FENCE

* INCLUDED IN ROCK DITCH CHECK AND ALTERNATE DITCH CHECK MEASUREMENT FOR PAYMENT

I-44 WIDENING
JSU0076 & JST0088B

EROSION CONTROL
PRE-CONST. PHASE
SHEET 4 OF 27

JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER
STATE OF MISSOURI

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED	
8/19/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	192

COUNTY: GREENE

JOB NO.: JSU0076, JRI3044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

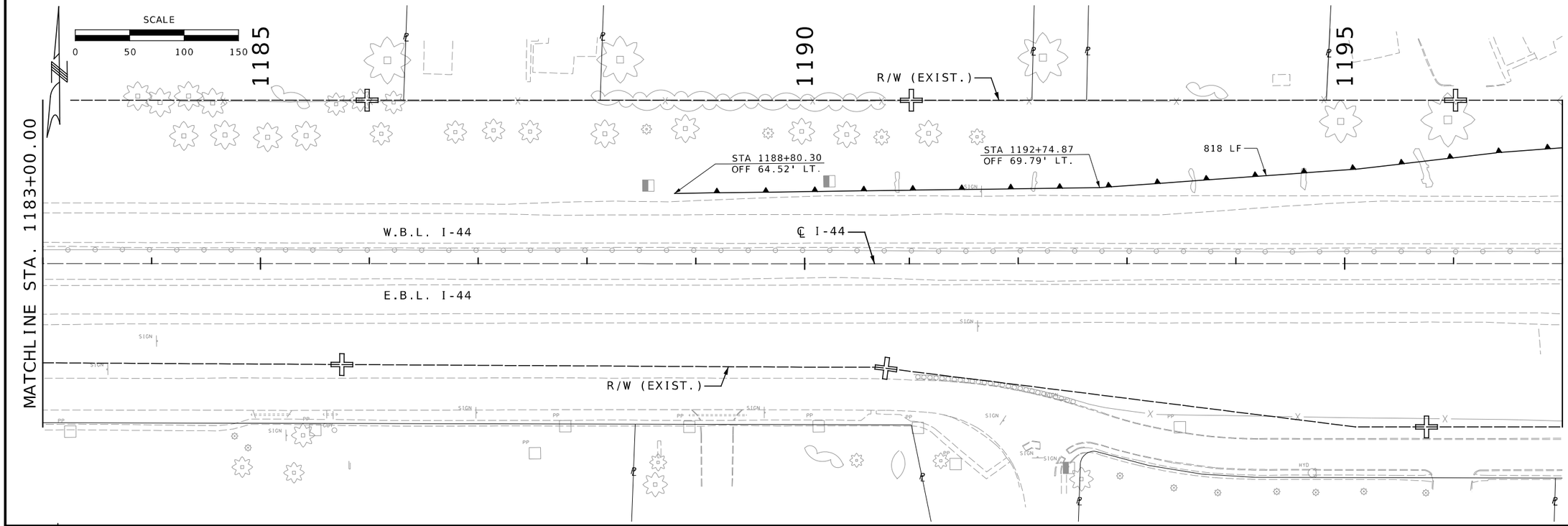
BRIDGE NO.:

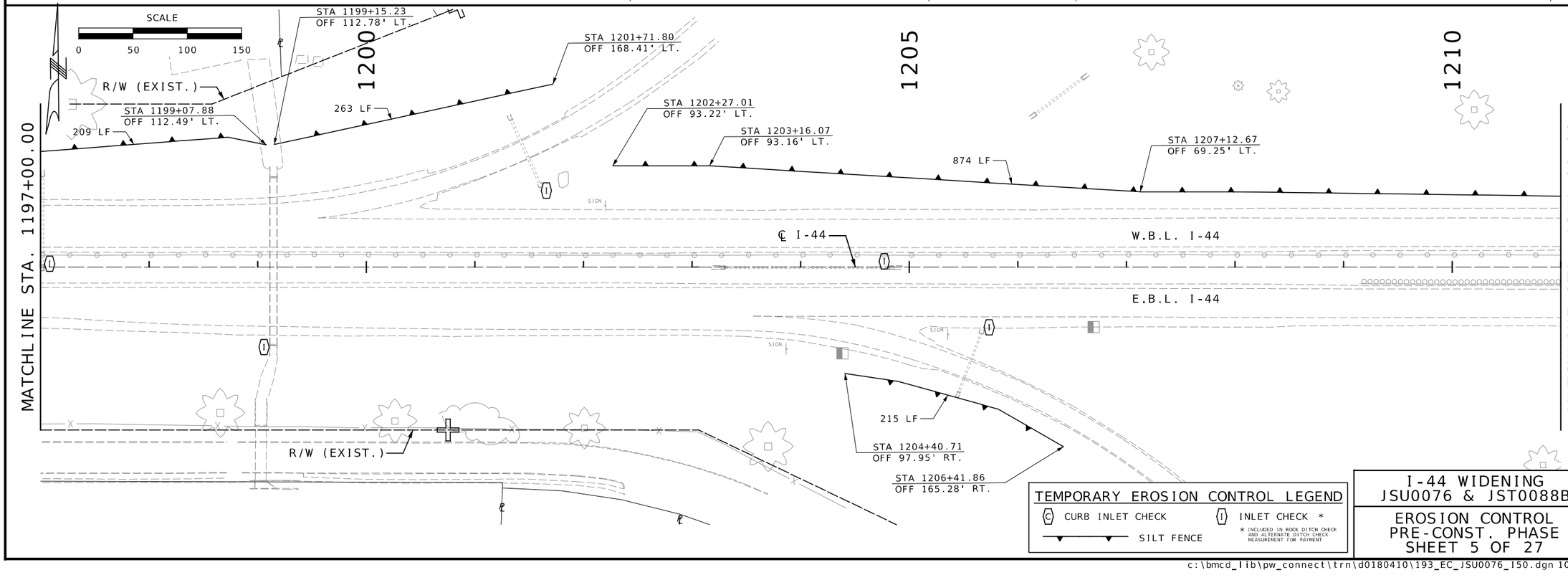
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\192_EC_JSU0076_I50.dgn 10:03:34 AM 8/19/2024





TEMPORARY EROSION CONTROL LEGEND

- (C) CURB INLET CHECK
- (I) INLET CHECK *
- SILT FENCE

* INCLUDED IN ROCK DITCH CHECK AND ALTERNATE DITCH CHECK MEASUREMENT FOR PAYMENT

I-44 WIDENING
JSU0076 & JST0088B

EROSION CONTROL
PRE-CONST. PHASE
SHEET 5 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	193

COUNTY: GREENE

JOB NO.: JSU0076, JBI3044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

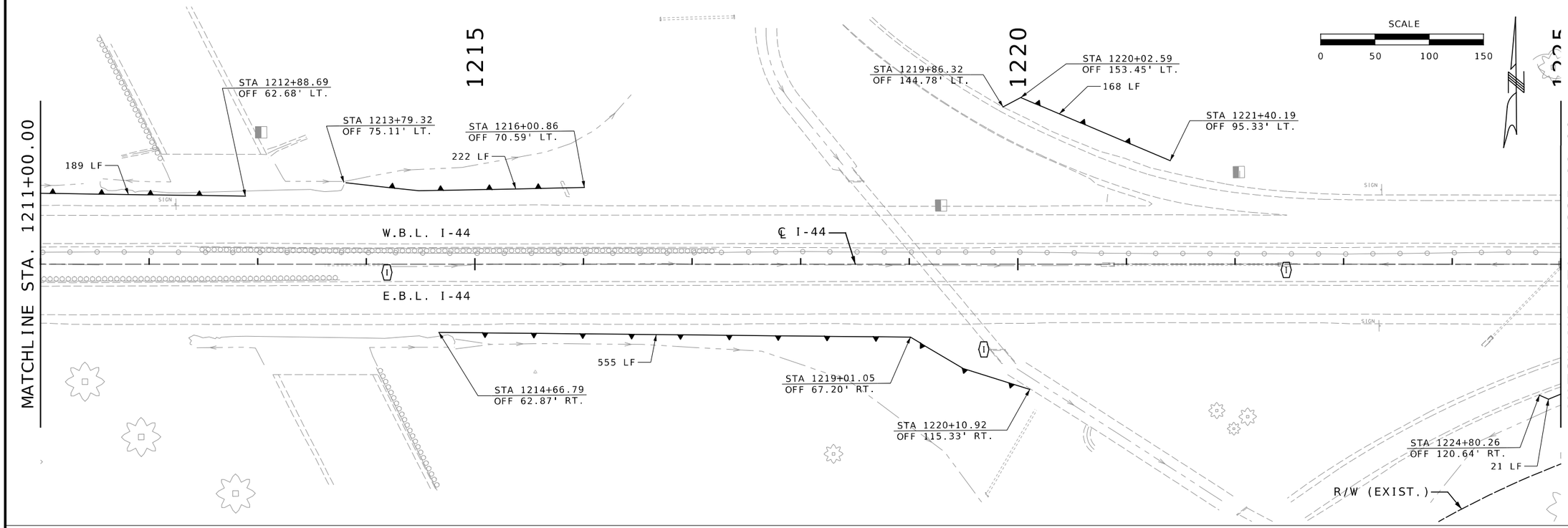
BRIDGE NO.:

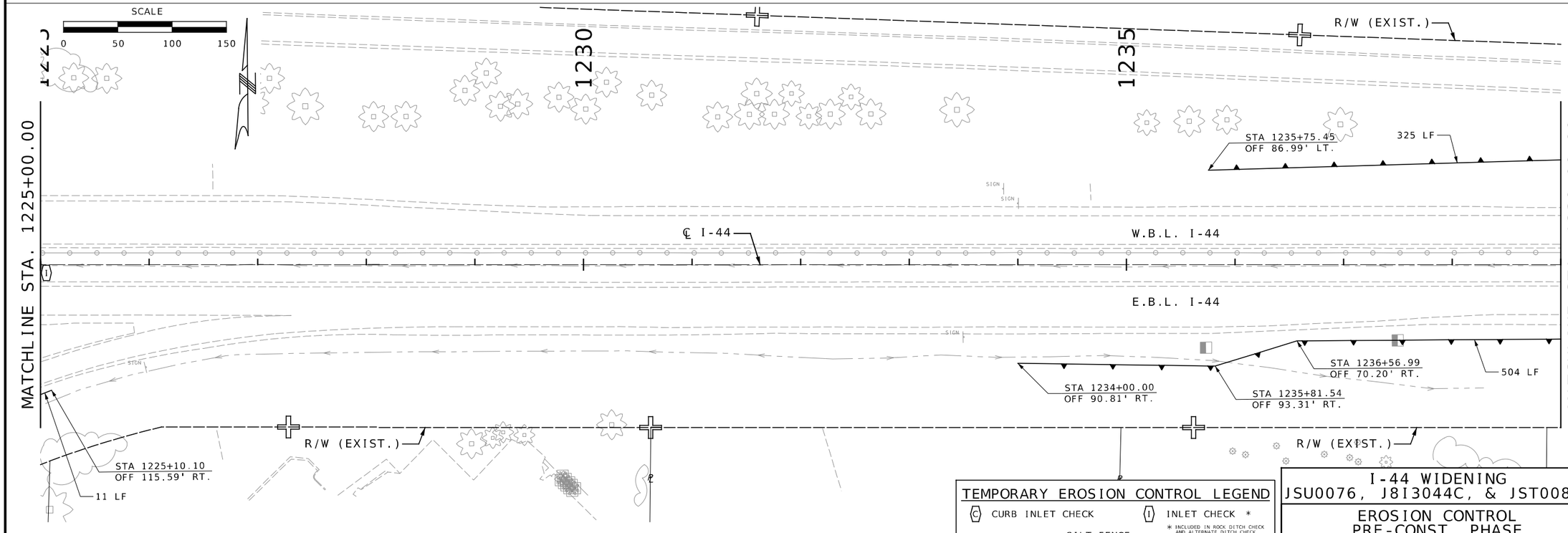
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\193_EC_JSU0076_I50.dgn 10:03:47 AM 8/19/2024





TEMPORARY EROSION CONTROL LEGEND

- (C) CURB INLET CHECK
- (I) INLET CHECK *
- SILT FENCE

* INCLUDED IN ROCK DITCH CHECK AND ALTERNATE DITCH CHECK MEASUREMENT FOR PAYMENT

I-44 WIDENING
JSU0076, J8I3044C, & JST0088B

EROSION CONTROL
PRE-CONST. PHASE
SHEET 6 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	194

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

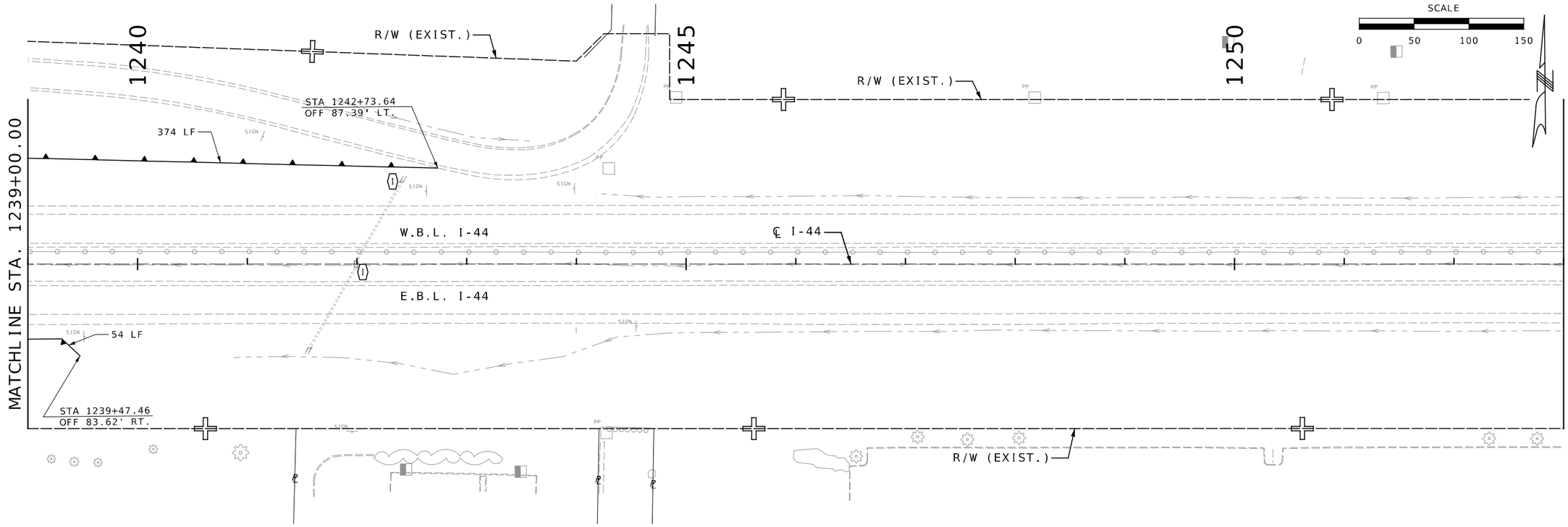
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

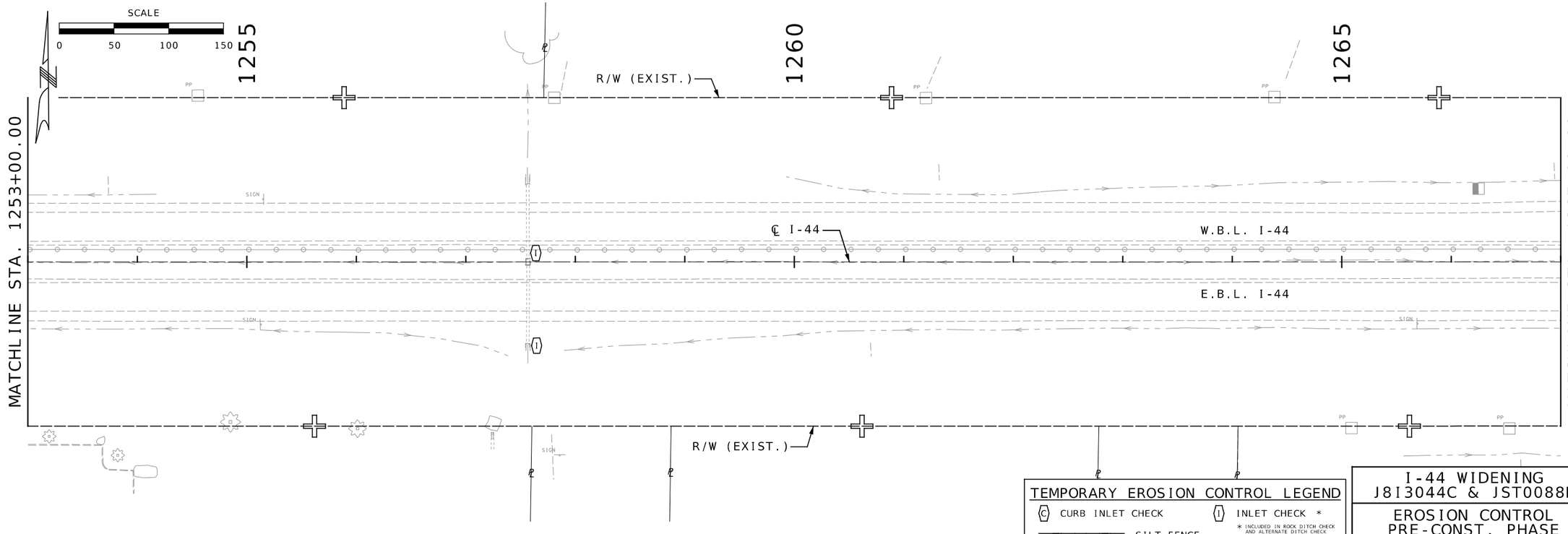
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\194_EC_JSU0076-J8I3044C_I50.dgn 10:04:02 AM 8/19/2024





TEMPORARY EROSION CONTROL LEGEND

C CURB INLET CHECK

I INLET CHECK *

SILT FENCE

* INCLUDED IN ROCK DITCH CHECK AND ALTERNATE DITCH CHECK MEASUREMENT FOR PAYMENT

I-44 WIDENING
J8I3044C & JST0088B

EROSION CONTROL PRE-CONST. PHASE
SHEET 7 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	195

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

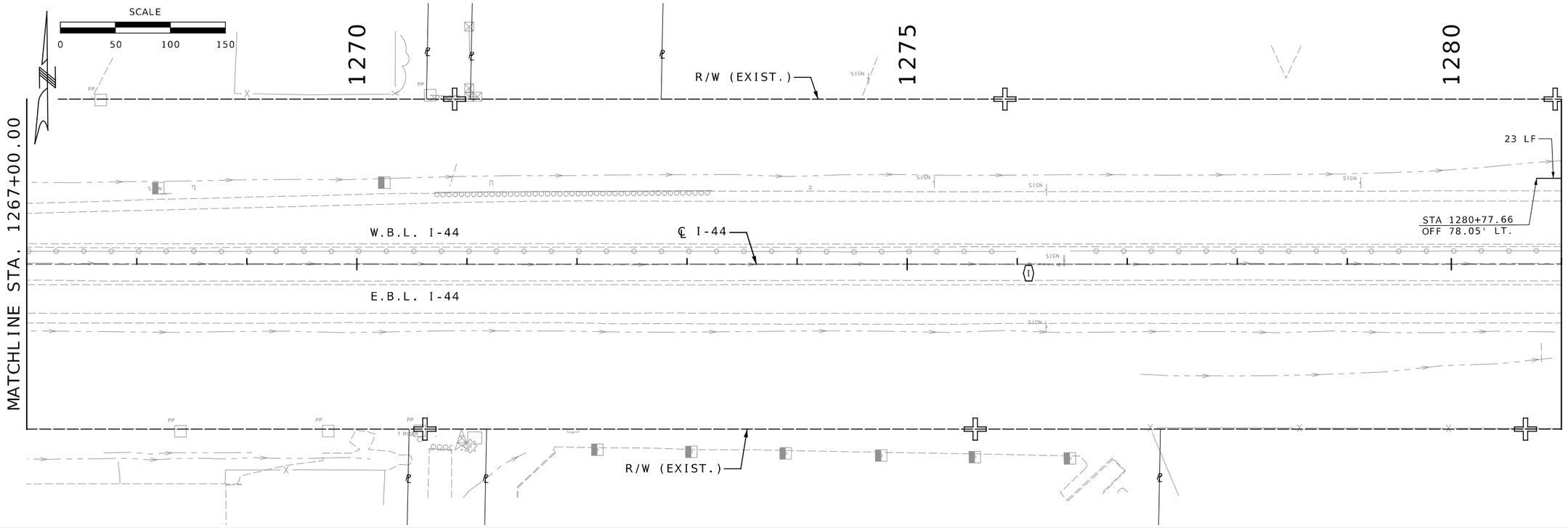
DESCRIPTION	DATE

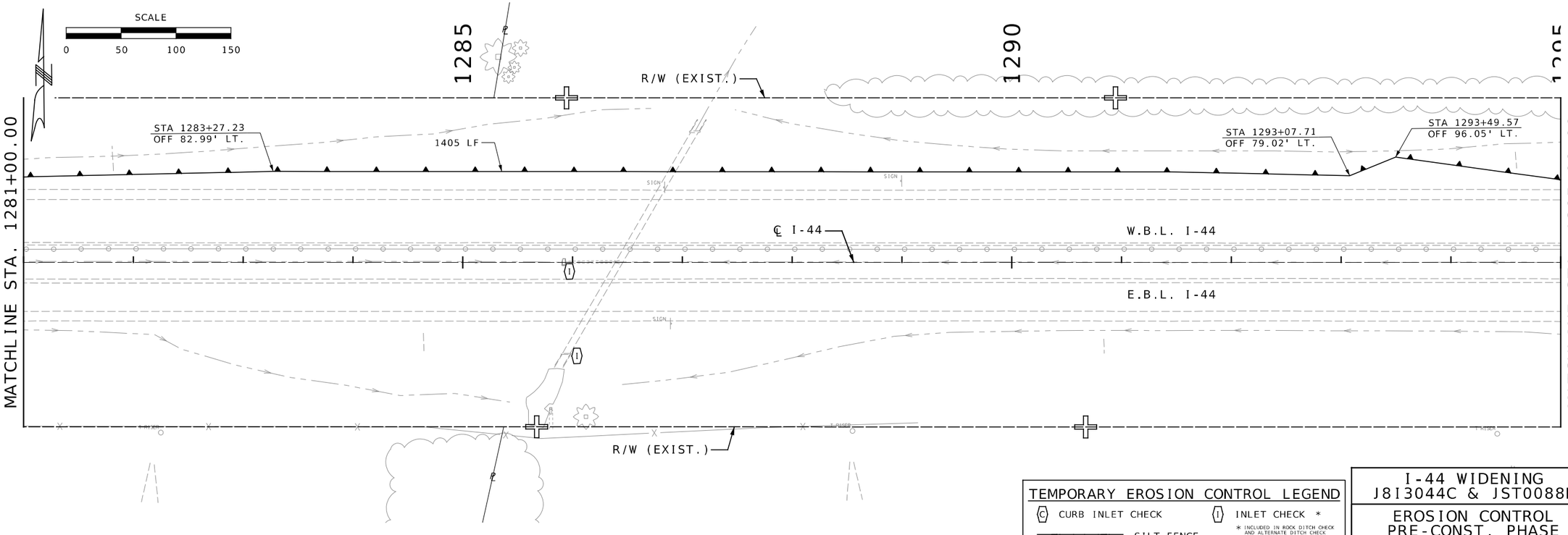
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\195_EC_J8I3044C_I50.dgn 10:04:15 AM 8/19/2024





TEMPORARY EROSION CONTROL LEGEND

- CURB INLET CHECK
- INLET CHECK *
- SILT FENCE

* INCLUDED IN ROCK DITCH CHECK AND ALTERNATE DITCH CHECK MEASUREMENT FOR PAYMENT

I-44 WIDENING
J8I3044C & JST0088B

EROSION CONTROL PRE-CONST. PHASE
SHEET 8 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	196

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

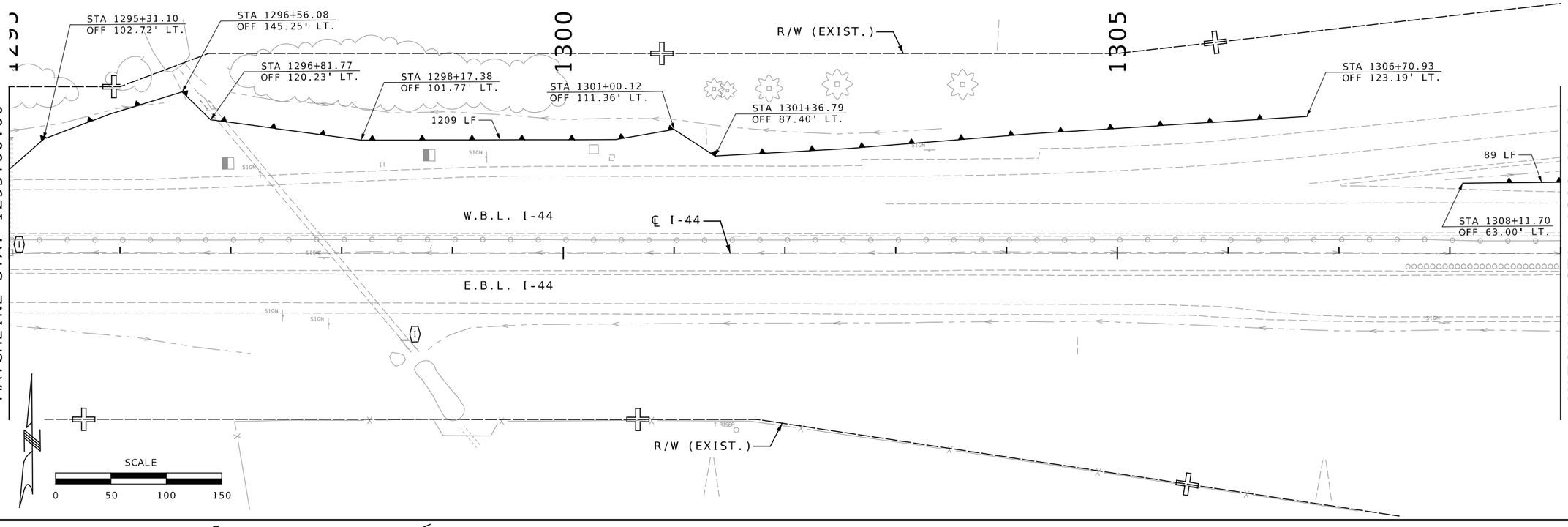
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\196_EC_J8I3044C_150.dgn 10:04:28 AM 8/19/2024



TEMPORARY EROSION CONTROL LEGEND

C CURB INLET CHECK

I INLET CHECK *

SILT FENCE

* INCLUDED IN ROCK DITCH CHECK AND ALTERNATE DITCH CHECK MEASUREMENT FOR PAYMENT

I-44 WIDENING
J8I3044C & JST0088B

EROSION CONTROL
PRE-CONST. PHASE
SHEET 9 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	197

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\197_EC_J8I3044C_150.dgn 10:04:41 AM 8/19/2024

SCALE
0 50 100 150

1075 1080 1085

R/W (EXIST.)

STA 1078+40.66
OFF 121.60' LT.

STA 1080+08.68
OFF 82.01' LT.

STA 1081+40.98
OFF 72.26' LT.

STA 1077+47.92
OFF 64.26' LT.

STA 1077+27.36
OFF 58.52' LT.

S.L.

553 LF

663 LF

STA 1071+96.53
OFF 55.90' LT.

W.B.L. I-44

℄ I-44

E.B.L. I-44

STA 1078+41.76
OFF 64.83' RT.

INSTALL 777 SQ YD
EROSION CONTROL
BLANKET (TYPE 3B)

STA 1071+96.91
OFF 55.64' RT.

707 LF

S.L.

STA 1077+48.37
OFF 54.24' RT.

STA 1077+72.35
OFF 65.39' RT.

STA 1077+89.22
OFF 92.51' RT.

STA 1079+80.96
OFF 99.43' RT.

S.L.

741 LF

STA 1081+91.09
OFF 88.09' RT.

STA 1081+68.10
OFF 139.32' RT.

STA 1078+00.74
OFF 136.31' RT.

R/W (EXIST.)

R/W (EXIST.)

MATCHLINE STA. 1085+00.00

MATCHLINE STA. 1085+00.00

1090 1095 1100

R/W (EXIST.)

R/W (EXIST.)

STA 1097+96.16
OFF 149.62' LT.

STA 1095+50.32
OFF 83.69' LT.

DITCH CHECK
SPACING BASED ON
9" EFF. HEIGHT

STA 1097+55.69
OFF 97.86' LT.

S.L.

377 LF

STA 1093+23.51
OFF 69.38' LT.

821 LF

℄ I-44

W.B.L. I-44

INSTALL 527 SQ YD
EROSION CONTROL
BLANKET (TYPE 3B)

E.B.L. I-44

INSTALL 764 SQ YD
EROSION CONTROL
BLANKET (TYPE 3B)

STA 1087+27.69
OFF 72.01' RT.

819 LF

STA 1092+96.82
OFF 65.15' RT.

STA 1093+17.72
OFF 77.38' RT.

S.L.

DITCH CHECK
SPACING BASED ON 9" EFF. HEIGHT

STA 1086+61.06
OFF 81.97' RT.

R/W (EXIST.)

R/W (EXIST.)

DITCH CHECK
SPACING BASED ON
18" EFF. HEIGHT

SCALE
0 50 100 150

EROSION CONTROL LEGEND

- (C) CURB INLET CHECK
- (S) SEDIMENT TRAP
- (R) ROCK DITCH CHECK
- (I) INLET CHECK *
- (A) ALTERNATE DITCH CHECK
- * INCLUDED IN ROCK DITCH CHECK AND ALTERNATE DITCH CHECK MEASUREMENT FOR PAYMENT
- EROSION CONTROL BLANKET
- ROCK DITCH LINER
- SILT FENCE

I-44 WIDENING
JSU0076 & JST0088B

EROSION CONTROL CONSTRUCTION PHASE
SHEET 10 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	198

COUNTY: GREENE

JOB NO.: JSU0076, JBI3044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

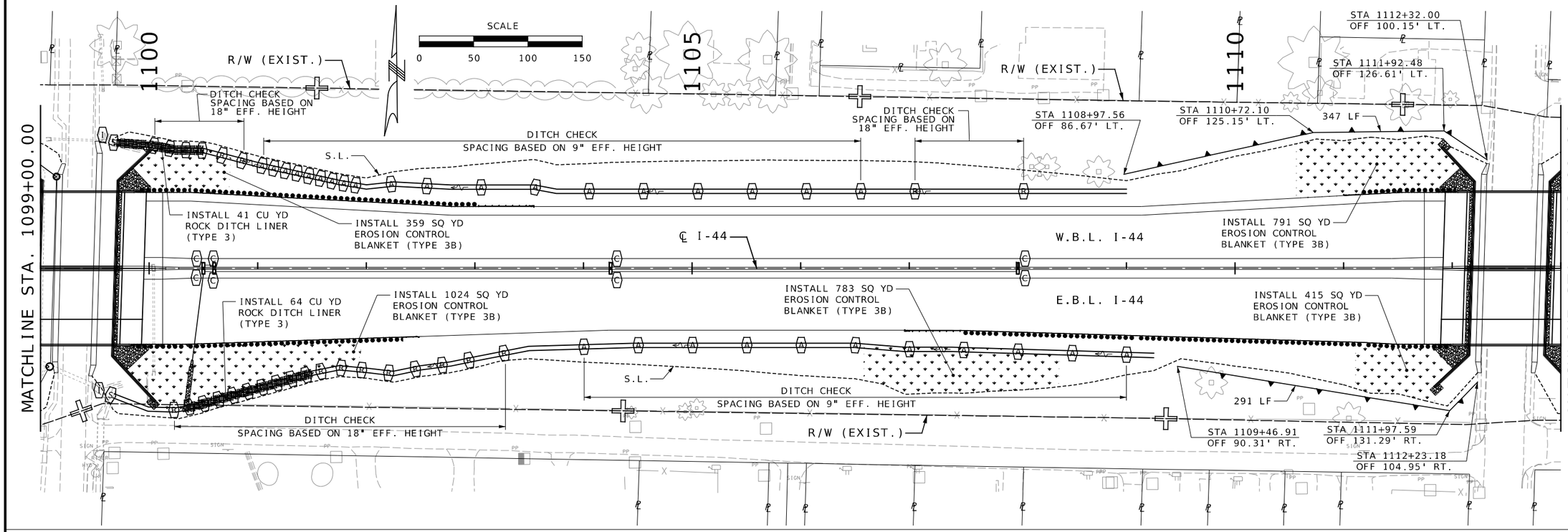
BRIDGE NO.:

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\198_EC_JSU0076_150.dgn 10:04:55 AM 8/19/2024



STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED
8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	199

COUNTY
GREENE

JOB NO.
JSU0076, JB13044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

I-44 WIDENING
JSU0076 & JST0088B

EROSION CONTROL CONSTRUCTION PHASE
SHEET 11 OF 27

c:\bmcd_lib\pw_connect\trn\d0180410\199_EC_JSU0076_I50.dgn 10:05:09 AM 8/19/2024

MATCHLINE STA. 1127+00.00

1130

1135

1140

MATCHLINE STA. 1141+00.00

NOTE:
REFER TO SHEETS 46 & 47 OF THE SUMMARY OF QUANTITIES FOR THE DOLING TRAIL EROSION CONTROL

STA 1128+60.72
OFF 80.59' LT.

647 LF

STA 1133+46.37
OFF 102.74' LT.

R/W (EXIST.)

DITCH CHECK
SPACING BASED ON 9" EFF. HEIGHT

S.L.

INSTALL 324 SQ YD
EROSION CONTROL
BLANKET (TYPE 3B)

W.B.L. I-44

℄ I-44

E.B.L. I-44

INSTALL 1429 SQ YD
EROSION CONTROL
BLANKET (TYPE 3B)

INSTALL 306 SQ YD
EROSION CONTROL
BLANKET (TYPE 3B)

INSTALL 807 SQ YD
EROSION CONTROL
BLANKET (TYPE 3B)

STA 1128+99.82
OFF 90.54' RT.

683 LF

STA 1133+82.10
OFF 85.08' RT.

S.L.

DITCH CHECK
SPACING BASED ON 9" EFF. HEIGHT

℄ DOLING TRAIL

R/W (EXIST.)

R/W (EXIST.)

SCALE
0 50 100 150

SCALE
0 50 100 150

MATCHLINE STA. 1141+00.00

1145

1150

1155

MATCHLINE STA. 1155+00.00

R/W (EXIST.)

DITCH CHECK
SPACING BASED ON
9" EFF. HEIGHT

S.L.

INSTALL 7985 SQ YD
EROSION CONTROL
BLANKET (TYPE 3B)

℄ I-44

W.B.L. I-44

E.B.L. I-44

INSTALL 6788 SQ YD
EROSION CONTROL
BLANKET (TYPE 3B)

S.L.

NOISE WALL (JSU0114)

R/W (EXIST.)

DITCH CHECK
SPACING BASED ON
9" EFF. HEIGHT

DITCH CHECK
SPACING BASED ON
9" EFF. HEIGHT

EROSION CONTROL LEGEND

- (C) CURB INLET CHECK
- (R) ROCK DITCH CHECK
- (A) ALTERNATE DITCH CHECK
- EROSION CONTROL BLANKET
- (S) SEDIMENT TRAP
- (I) INLET CHECK *
  * INCLUDED IN ROCK DITCH CHECK AND ALTERNATE DITCH CHECK MEASUREMENT FOR PAYMENT
- ROCK DITCH LINER
- SILT FENCE

I-44 WIDENING
JSU0076 & JST0088B

EROSION CONTROL CONSTRUCTION PHASE
SHEET 12 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000856
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED
8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	200

COUNTY
GREENE

JOB NO.
JSU0076, JBI3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

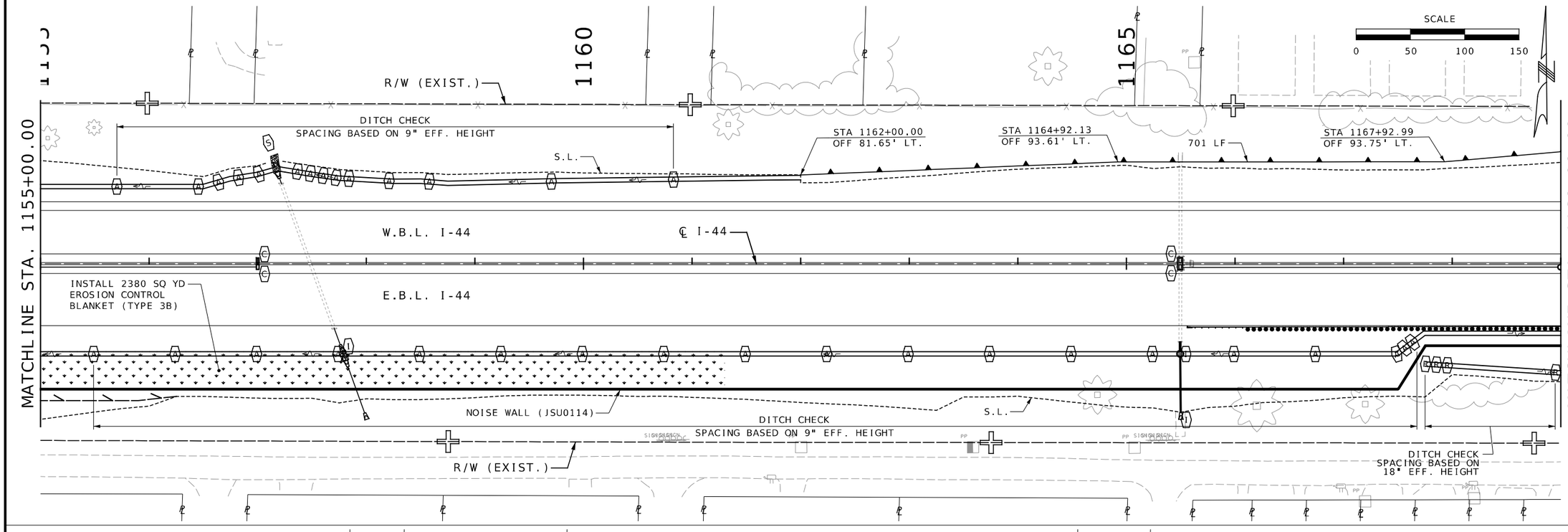
DESCRIPTION	DATE

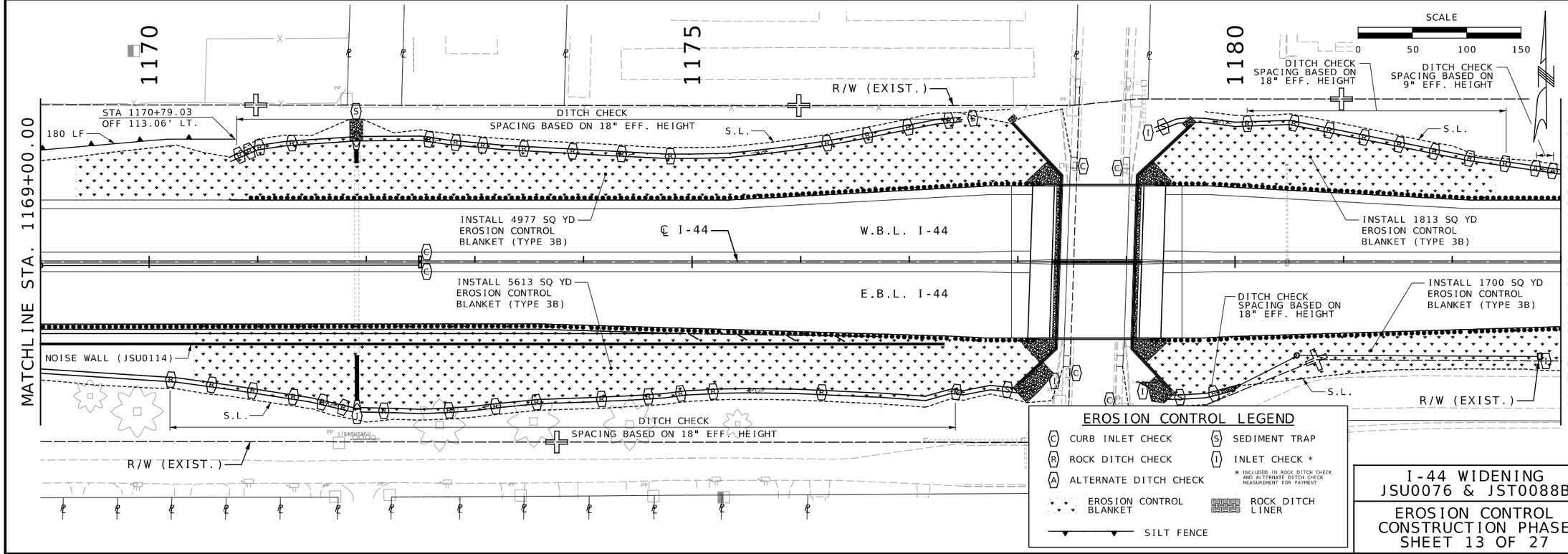
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\200_EC_JSU0076_I50.dgn 10:05:23 AM 8/19/2024





EROSION CONTROL LEGEND

- (C) CURB INLET CHECK
- (S) SEDIMENT TRAP
- (R) ROCK DITCH CHECK
- (I) INLET CHECK *
- (A) ALTERNATE DITCH CHECK
- * INCLUDED IN ROCK DITCH CHECK AND ALTERNATE DITCH CHECK MEASUREMENT FOR PAYMENT
- EROSION CONTROL BLANKET
- ROCK DITCH LINER
- SILT FENCE

I-44 WIDENING
JSU0076 & JST0088B

EROSION CONTROL CONSTRUCTION PHASE
SHEET 13 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	201

COUNTY: GREENE

JOB NO.: JSU0076, JBI3044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\201_EC_JSU0076_I50.dgn 10:05:35 AM 8/19/2024

SCALE
0 50 100 150

1185 1190 1195

MATCHLINE STA. 1183+00.00

MATCHLINE STA. 1197+00.00

R/W (EXIST.)

DITCH CHECK
SPACING BASED ON 9" EFF. HEIGHT

S.L.

STA 1188+80.30
OFF 64.52' LT.

STA 1192+74.87
OFF 69.79' LT.

818 LF

W.B.L. I-44

℄ I-44

E.B.L. I-44

INSTALL 258 SQ YD
EROSION CONTROL
BLANKET (TYPE 3B)

INSTALL 1149 SQ YD
EROSION CONTROL
BLANKET (TYPE 3B)

S.L.

R/W (EXIST.)

DITCH CHECK
SPACING BASED ON 9" EFF. HEIGHT

SCALE
0 50 100 150

1200 1205 1210

MATCHLINE STA. 1197+00.00

MATCHLINE STA. 1211+00.00

STA 1199+15.23
OFF 112.78' LT.

STA 1201+71.80
OFF 168.41' LT.

R/W (EXIST.)

STA 1199+07.88
OFF 112.49' LT.

209 LF

263 LF

S.L.

STA 1202+27.01
OFF 93.22' LT.

STA 1203+16.07
OFF 93.16' LT.

874 LF

STA 1207+12.67
OFF 69.25' LT.

S.L.

INSTALL 991 SQ YD
EROSION CONTROL
BLANKET (TYPE 3B)

℄ I-44

W.B.L. I-44

INSTALL 2407 SQ YD
EROSION CONTROL
BLANKET (TYPE 3B)

E.B.L. I-44

S.L.

DITCH CHECK
SPACING BASED ON 18" EFF. HEIGHT

R/W (EXIST.)

215 LF

STA 1204+40.71
OFF 97.95' RT.

STA 1206+41.86
OFF 165.28' RT.

S.L.

DITCH CHECK
SPACING BASED ON 9" EFF. HEIGHT

EROSION CONTROL LEGEND

- (C) CURB INLET CHECK
- (R) ROCK DITCH CHECK
- (A) ALTERNATE DITCH CHECK
- EROSION CONTROL BLANKET
- (S) SEDIMENT TRAP
- (I) INLET CHECK *
  * INCLUDED IN ROCK DITCH CHECK AND ALTERNATE DITCH CHECK MEASUREMENT FOR PAYMENT
- ROCK DITCH LINER
- SILT FENCE

I-44 WIDENING
JSU0076 & JST0088B

EROSION CONTROL
CONSTRUCTION PHASE
SHEET 14 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED
8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	202

COUNTY
GREENE

JOB NO.
JSU0076, JBI3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

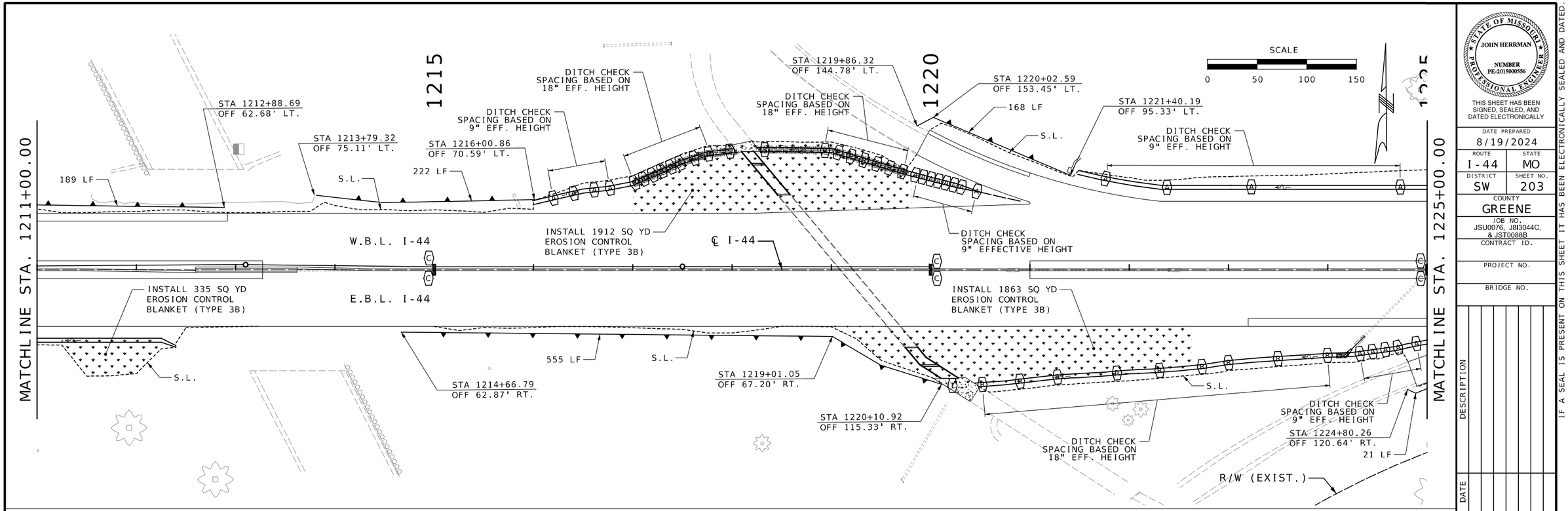
BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



I-44 WIDENING
JSU0076, J8I3044C, & JST0088B

EROSION CONTROL
CONSTRUCTION PHASE
SHEET 15 OF 27

JOHN HERRMAN
NUMBER PE-2015000556
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

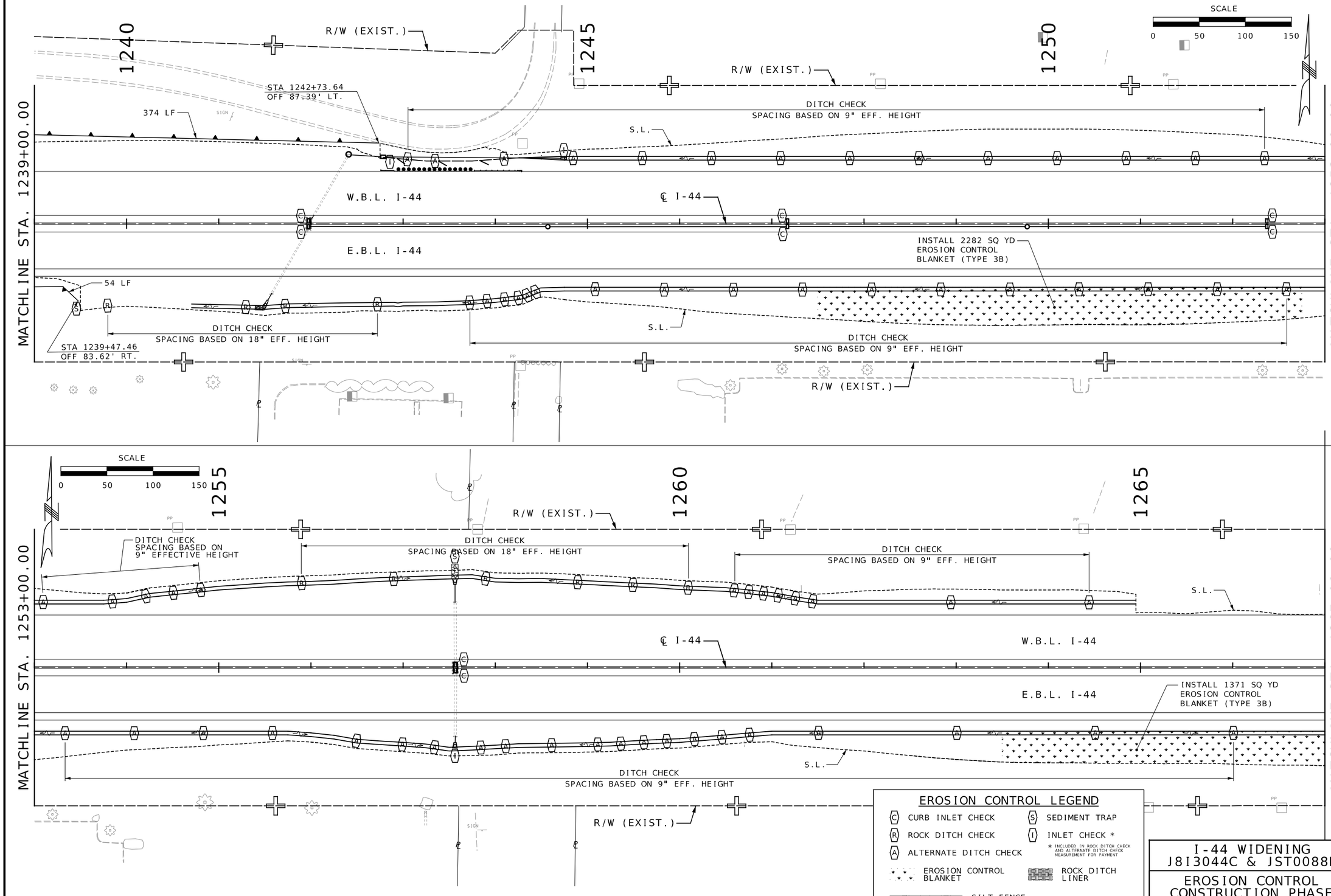
DATE PREPARED: 8/19/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 203
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\203_EC_JSU0076-J8I3044C_I50.dgn 10:06:03 AM 8/19/2024



EROSION CONTROL LEGEND

- (C) CURB INLET CHECK
- (R) ROCK DITCH CHECK
- (A) ALTERNATE DITCH CHECK
- (S) SEDIMENT TRAP
- (I) INLET CHECK *
  * INCLUDED IN ROCK DITCH CHECK AND ALTERNATE DITCH CHECK MEASUREMENT FOR PAYMENT
- EROSION CONTROL BLANKET
- ROCK DITCH LINER
- SILT FENCE

I-44 WIDENING
J8I3044C & JST0088B

EROSION CONTROL CONSTRUCTION PHASE
SHEET 16 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000586
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	204

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

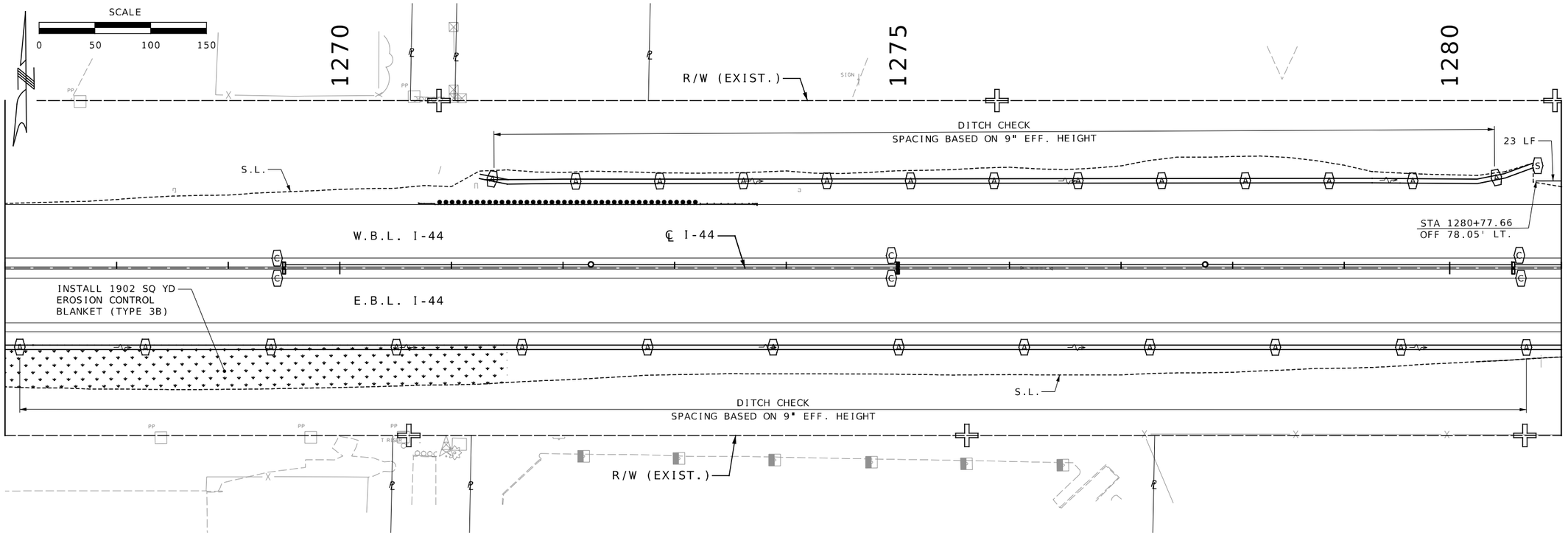
BRIDGE NO.:

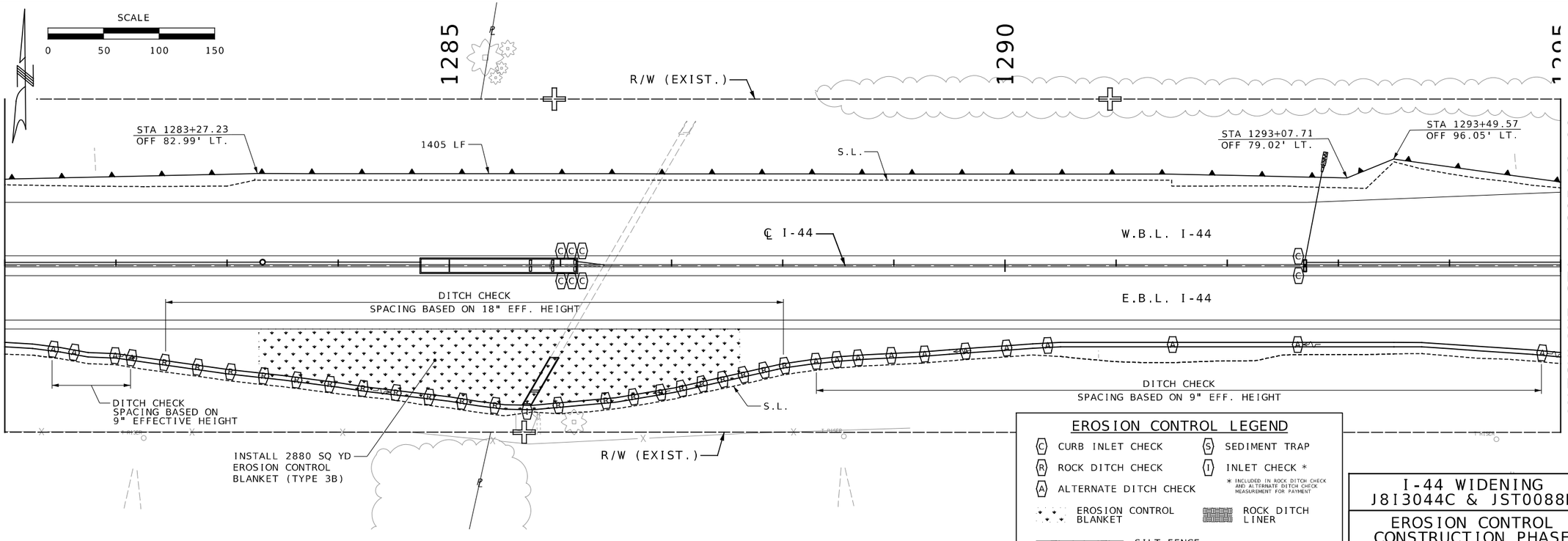
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617





EROSION CONTROL LEGEND

- (C) CURB INLET CHECK
- (R) ROCK DITCH CHECK
- (A) ALTERNATE DITCH CHECK
- EROSION CONTROL BLANKET
- (S) SEDIMENT TRAP
- (I) INLET CHECK *
  * INCLUDED IN ROCK DITCH CHECK AND ALTERNATE DITCH CHECK MEASUREMENT FOR PAYMENT
- ROCK DITCH LINER
- SILT FENCE

I-44 WIDENING
J8I3044C & JST0088B

EROSION CONTROL CONSTRUCTION PHASE
SHEET 17 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	205

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

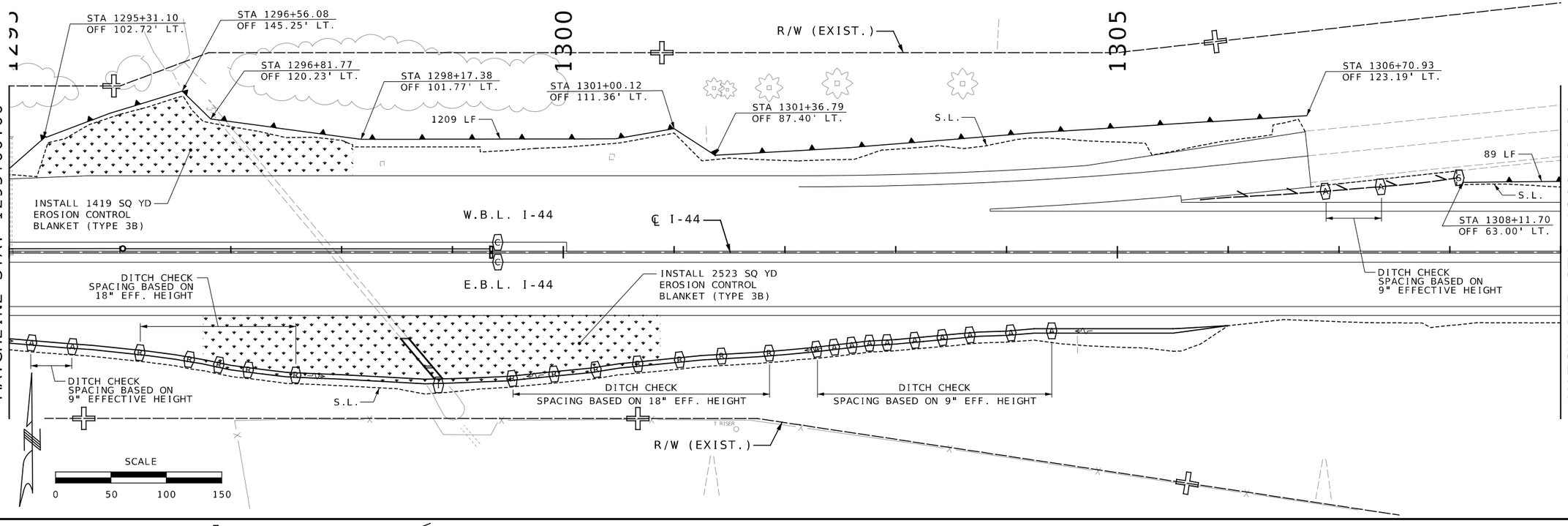
BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No. : 000165
BMcD Project No. 146617



JOHN HERRMAN
NUMBER PE-2015000556
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED
8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	206

COUNTY
GREENE

JOB NO.
JSU0076, JBI3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION

DATE

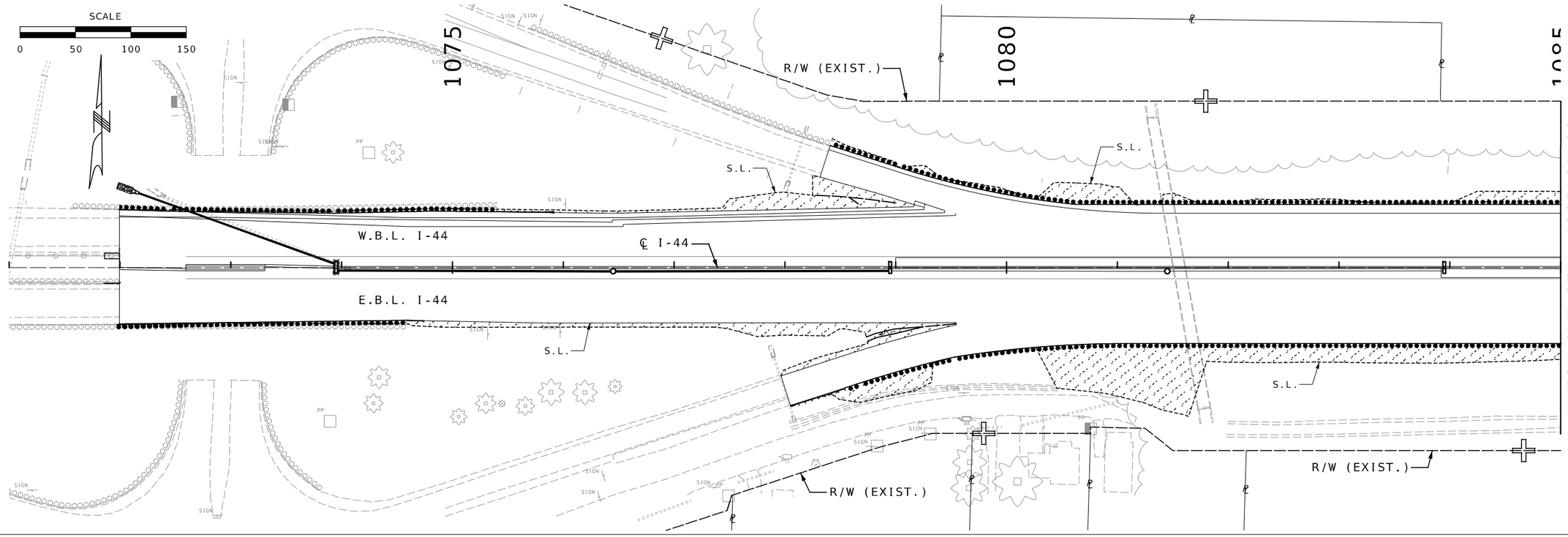
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

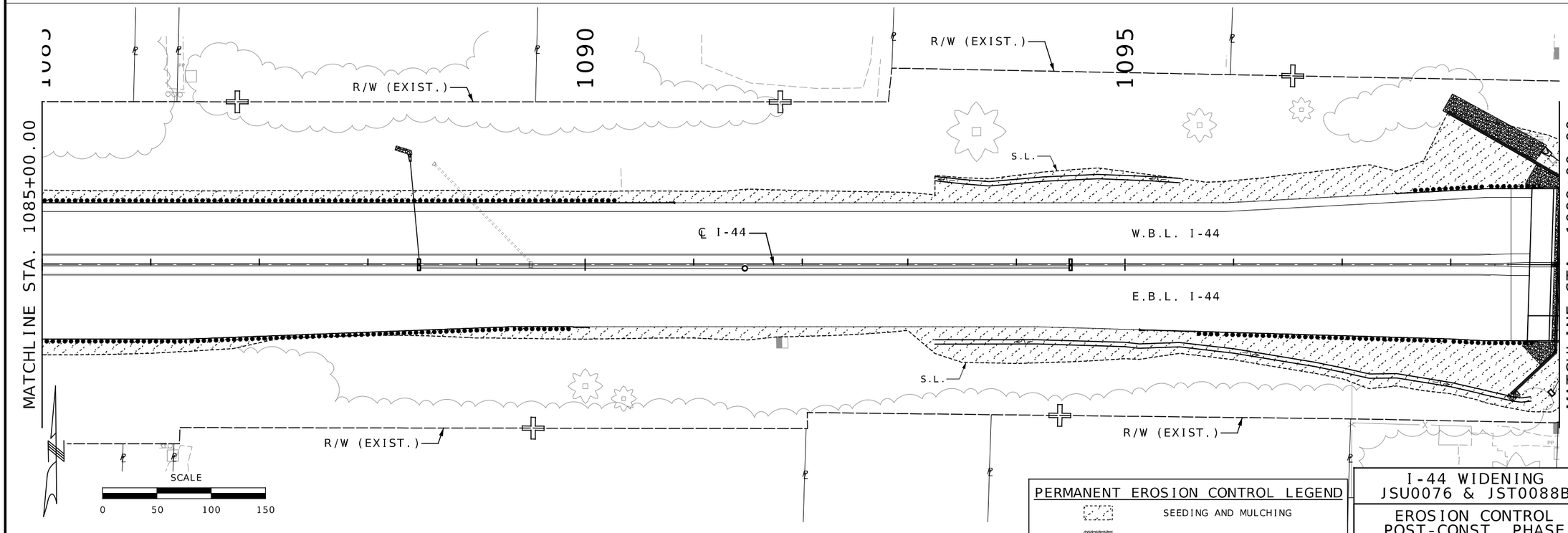
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

I-44 WIDENING
J8I3044C & JST0088B

EROSION CONTROL
CONSTRUCTION PHASE
SHEET 18 OF 27

c:\bmcd_lib\pw_connect\trn\d0180410\206_EC_J8I3044C_I50.dgn 10:06:43 AM 8/19/2024





PERMANENT EROSION CONTROL LEGEND

- SEEDING AND MULCHING
- ROCK DITCH LINER

I-44 WIDENING
JSU0076 & JST0088B

EROSION CONTROL POST-CONST. PHASE
SHEET 19 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	207

COUNTY: GREENE

JOB NO.: JSU0076, JBI3044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

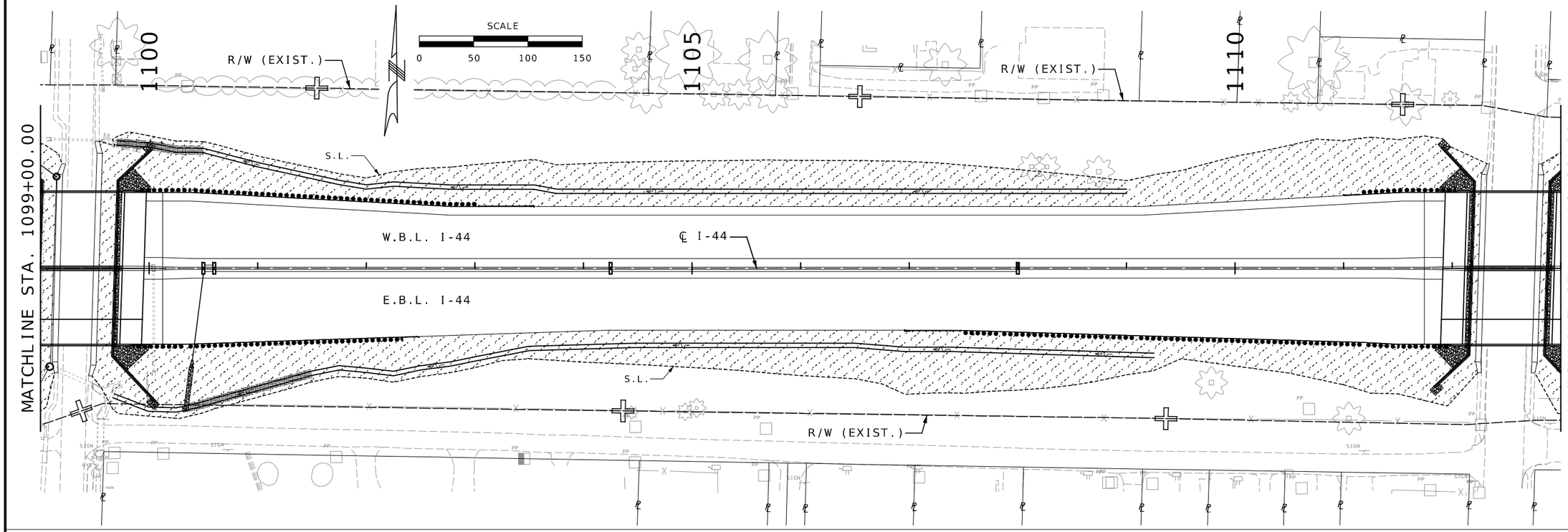
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

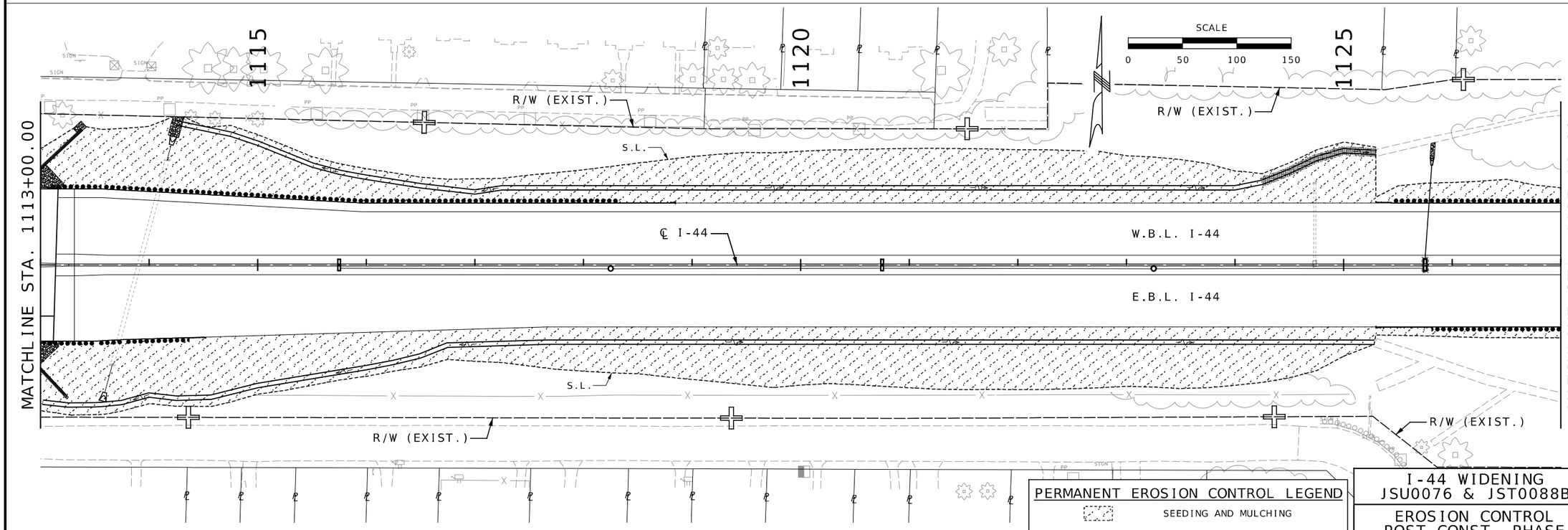
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\207_EC_JSU0076_I50.dgn 10:06:55 AM 8/19/2024





PERMANENT EROSION CONTROL LEGEND

SEEDING AND MULCHING

ROCK DITCH LINER

I-44 WIDENING
JSU0076 & JST0088B

EROSION CONTROL POST-CONST. PHASE
SHEET 20 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	208

COUNTY: GREENE

JOB NO. JSU0076, JB13044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

NO.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\208_EC_JSU0076_I50.dgn 10:07:09 AM 8/19/2024

MATCHLINE STA. 1127+00.00

1130

1135

1140

MATCHLINE STA. 1141+00.00

NOTE:
REFER TO SHEETS 46 & 47 OF THE SUMMARY OF QUANTITIES FOR THE DOLING TRAIL EROSION CONTROL

R/W (EXIST.)

S.L.

W.B.L. I-44

℄ I-44

E.B.L. I-44

S.L.

℄ DOLING TRAIL

R/W (EXIST.)

SCALE
0 50 100 150

SCALE
0 50 100 150

1145

1150

1155

MATCHLINE STA. 1141+00.00

R/W (EXIST.)

S.L.

℄ I-44

W.B.L. I-44

E.B.L. I-44

S.L.

NOISE WALL (JSU0114)

R/W (EXIST.)

PERMANENT EROSION CONTROL LEGEND

SEEDING AND MULCHING

ROCK DITCH LINER

MATCHLINE STA. 1155+00.00

I-44 WIDENING
JSU0076 & JST0088B

EROSION CONTROL
POST-CONST. PHASE
SHEET 21 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED
8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	209

COUNTY
GREENE

JOB NO.
JSU0076, JBI3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION

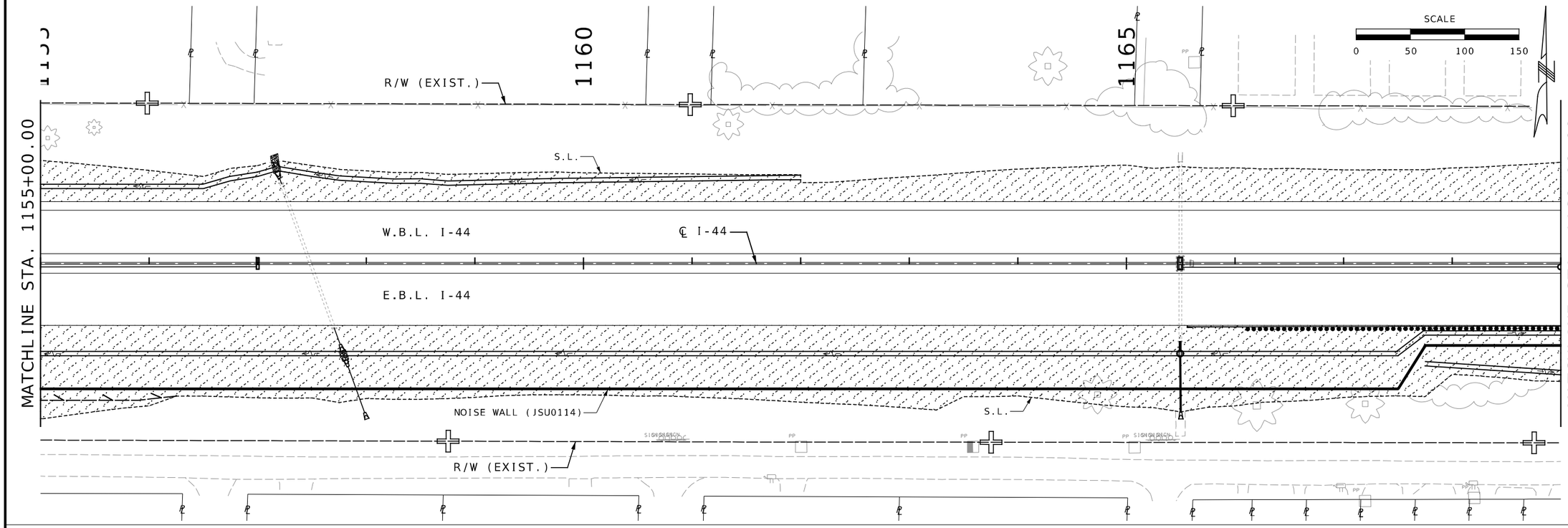
DATE

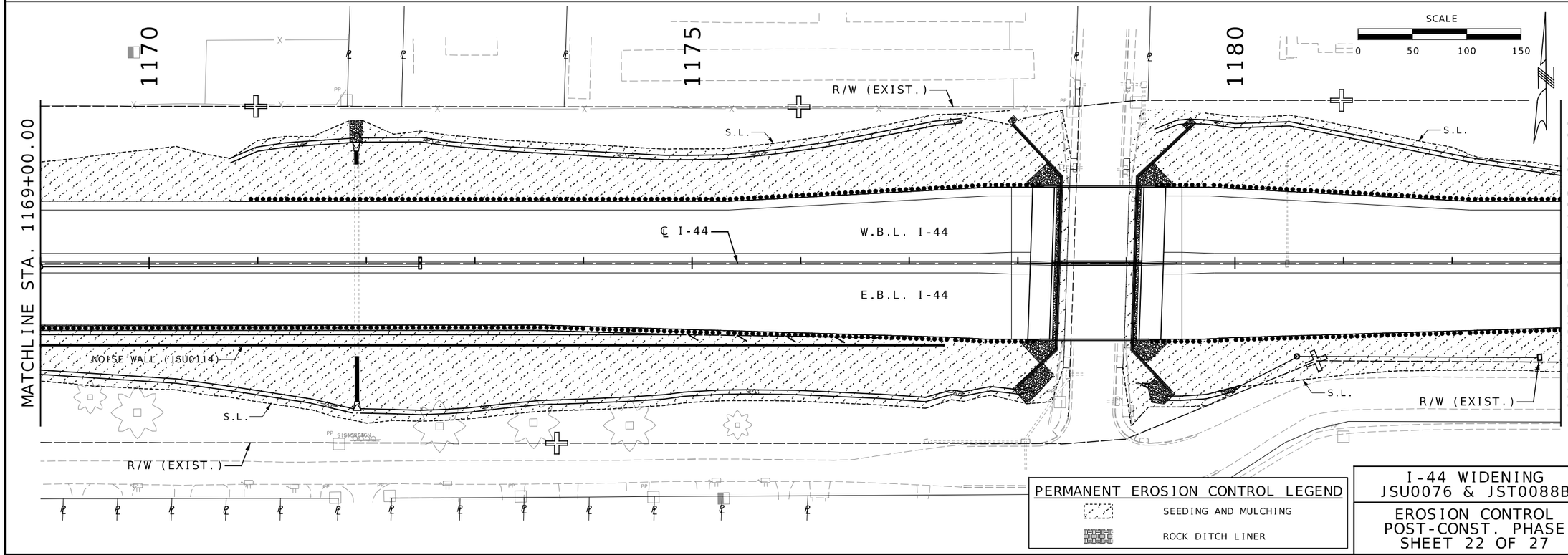
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\209_EC_JSU0076_I50.dgn 10:07:23 AM 8/19/2024





PERMANENT EROSION CONTROL LEGEND

SEEDING AND MULCHING

ROCK DITCH LINER

I-44 WIDENING JSU0076 & JST0088B

EROSION CONTROL POST-CONST. PHASE SHEET 22 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000586
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	210

COUNTY: GREENE

JOB NO.: JSU0076, JBI3044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

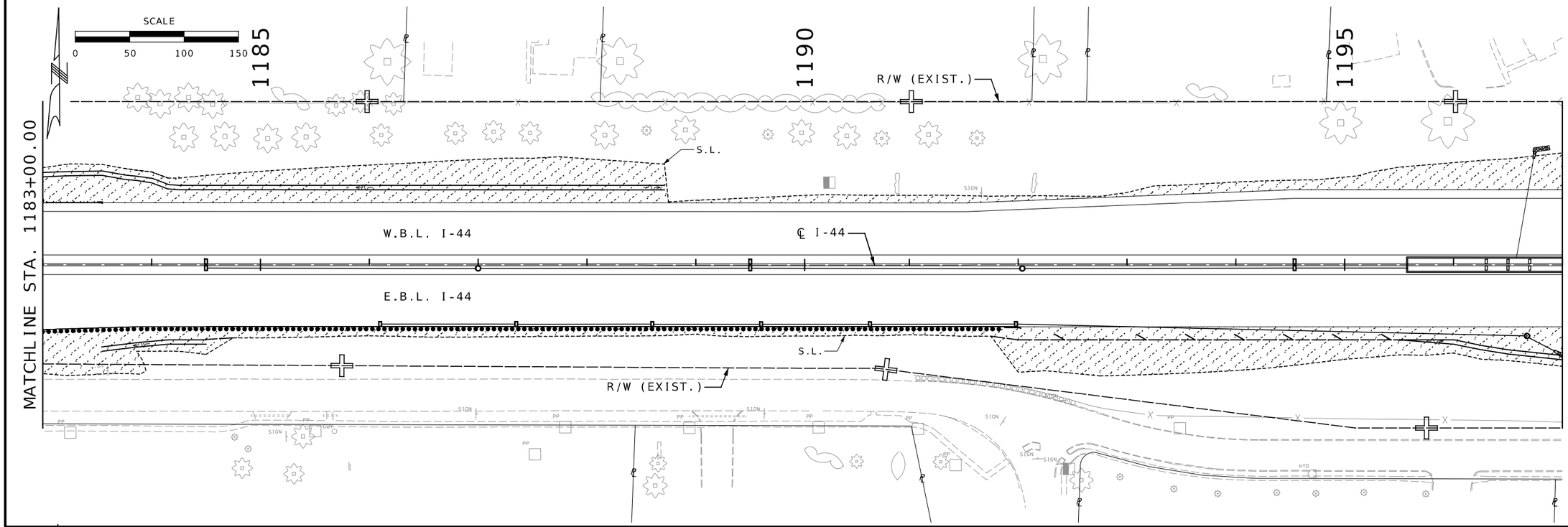
BRIDGE NO.:

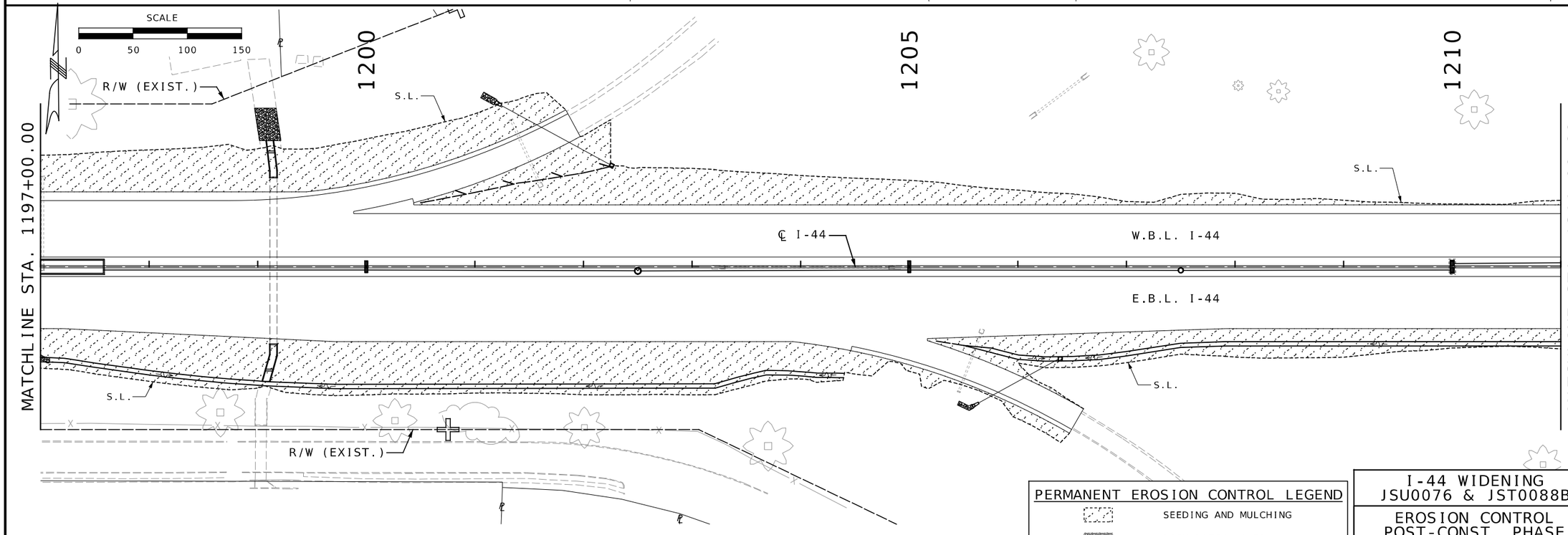
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617





PERMANENT EROSION CONTROL LEGEND

SEEDING AND MULCHING

ROCK DITCH LINER

I-44 WIDENING
JSU0076 & JST0088B

EROSION CONTROL
POST-CONST. PHASE
SHEET 23 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED
8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	211

COUNTY
GREENE

JOB NO.
JSU0076, JBI3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

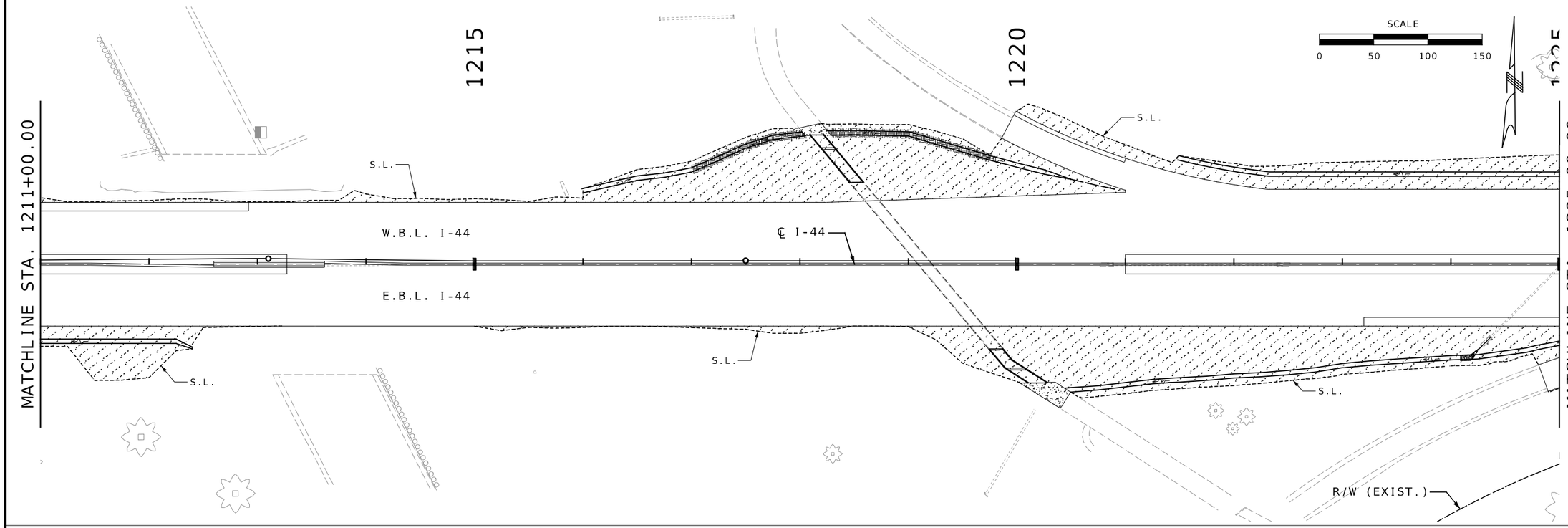
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

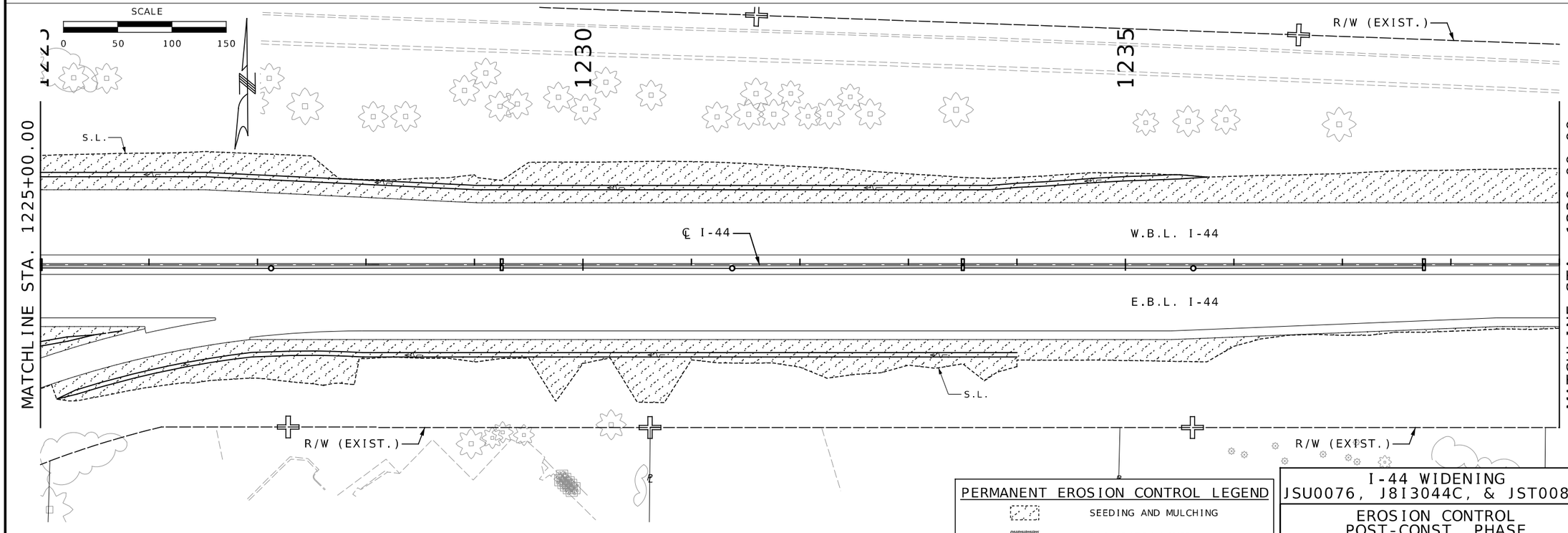
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\211_EC_JSU0076_I50.dgn 10:07:49 AM 8/19/2024





PERMANENT EROSION CONTROL LEGEND

SEEDING AND MULCHING

ROCK DITCH LINER

I-44 WIDENING
JSU0076, J8I3044C, & JST0088B

EROSION CONTROL
POST-CONST. PHASE
SHEET 24 OF 27

JOHN HERRMAN
NUMBER PE-2015005556
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	212

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

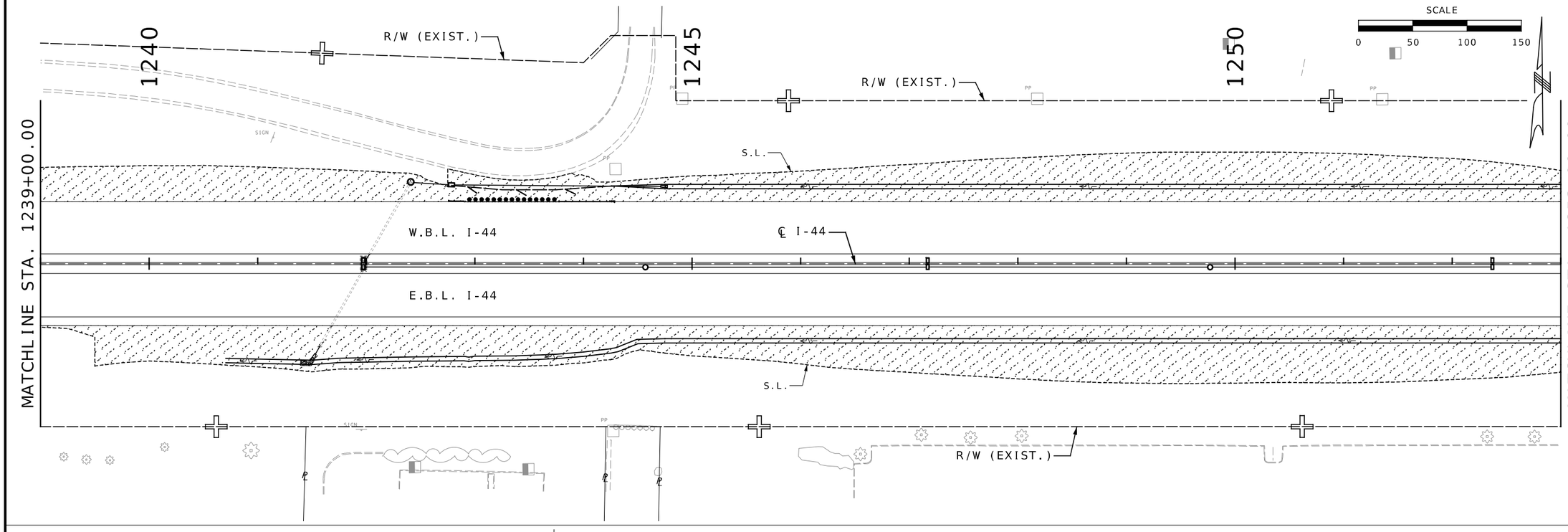
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

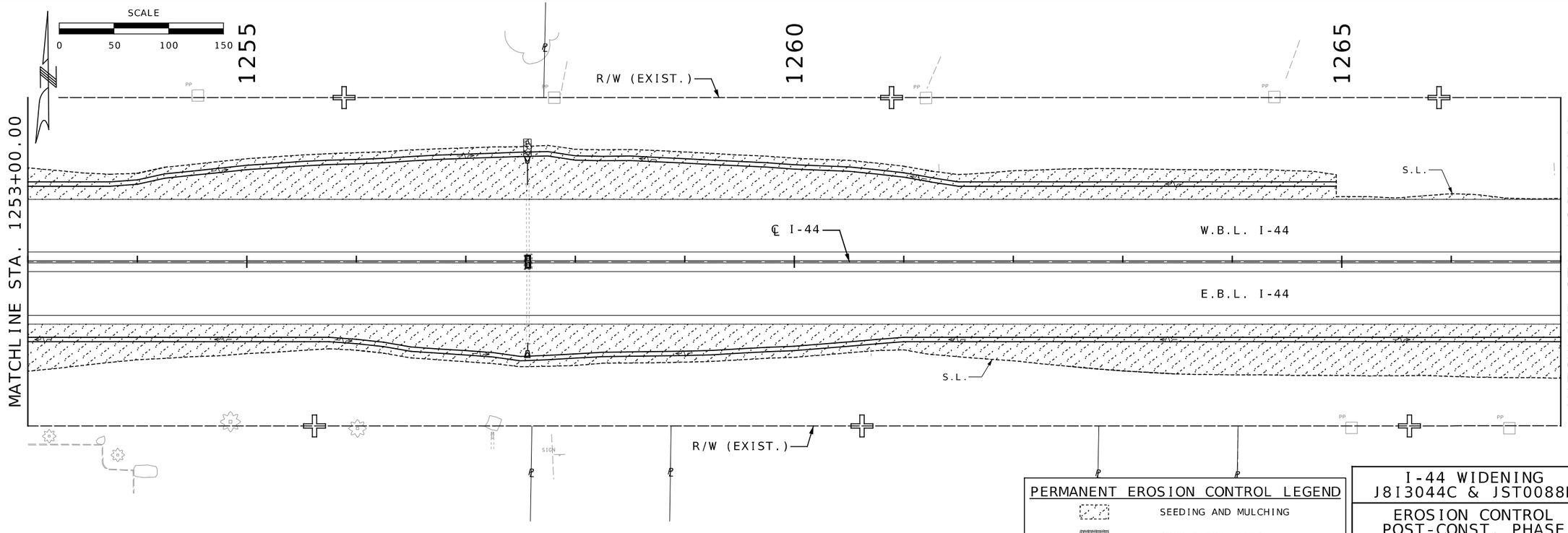
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\212_EC_JSU0076-J8I3044C_I50.dgn 10:08:02 AM 8/19/2024





PERMANENT EROSION CONTROL LEGEND

SEEDING AND MULCHING

ROCK DITCH LINER

I-44 WIDENING
J8I3044C & JST0088B

EROSION CONTROL
POST-CONST. PHASE
SHEET 25 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015005856
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	213

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

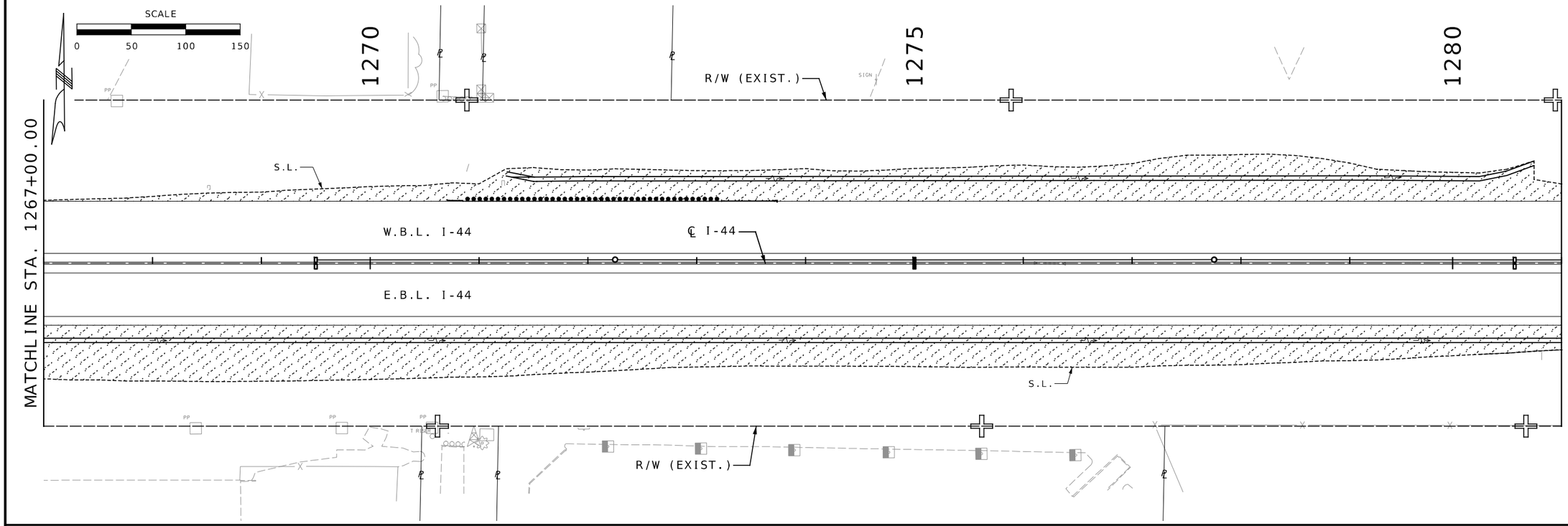
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

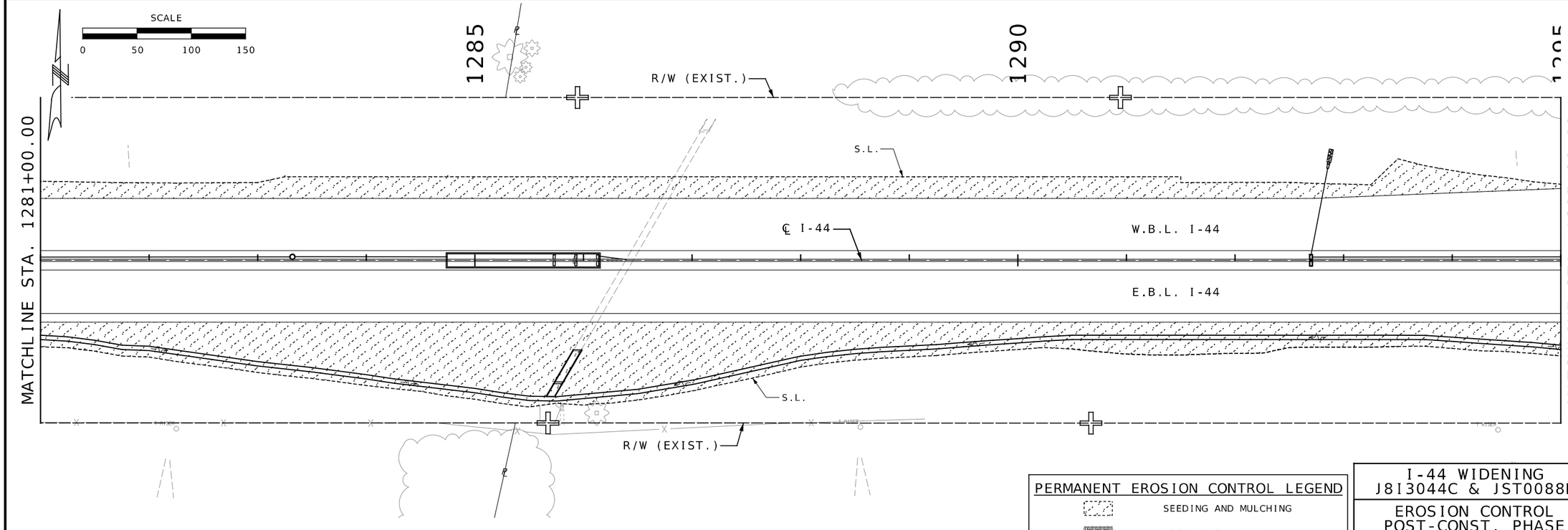
DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\213_EC_J8I3044C_I50.dgn 10:08:15 AM 8/19/2024





PERMANENT EROSION CONTROL LEGEND

SEEDING AND MULCHING

ROCK DITCH LINER

I-44 WIDENING
J8I3044C & JST0088B

EROSION CONTROL POST-CONST. PHASE SHEET 26 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	214

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

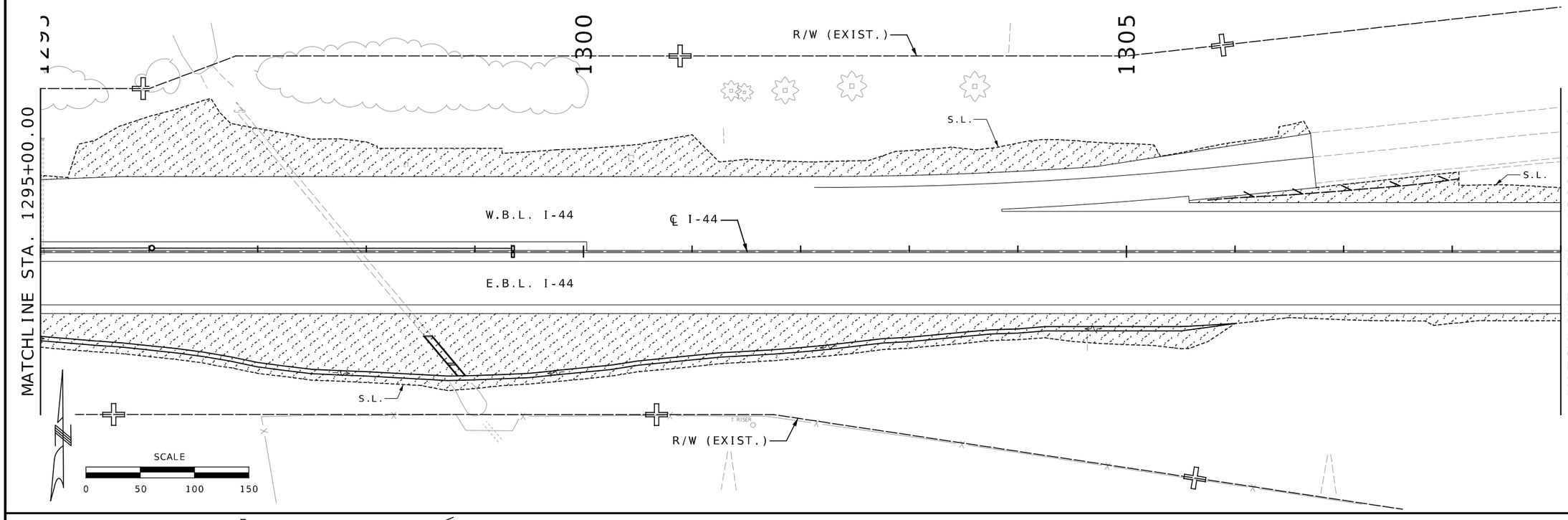
DESCRIPTION	DATE

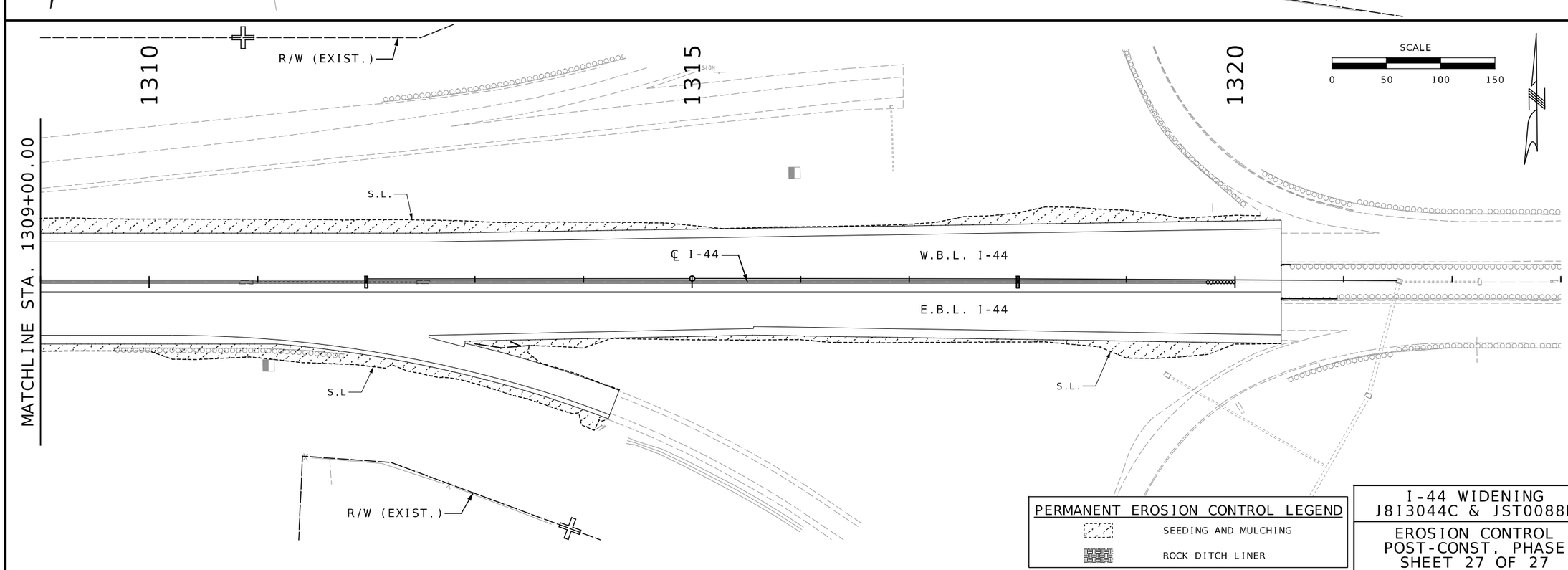
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\214_EC_J8I3044C_I50.dgn 10:08:30 AM 8/19/2024





PERMANENT EROSION CONTROL LEGEND

SEEDING AND MULCHING

ROCK DITCH LINER

I-44 WIDENING
J8I3044C & JST0088B

EROSION CONTROL POST-CONST. PHASE
SHEET 27 OF 27

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED
8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	215

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

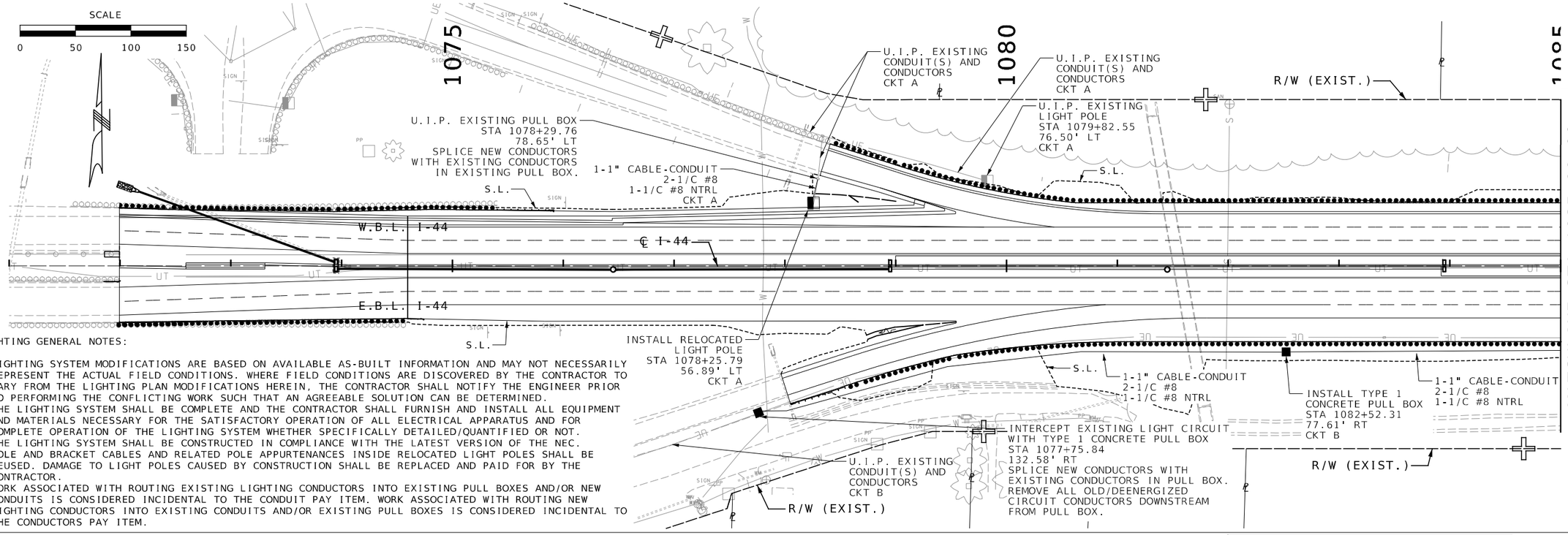
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

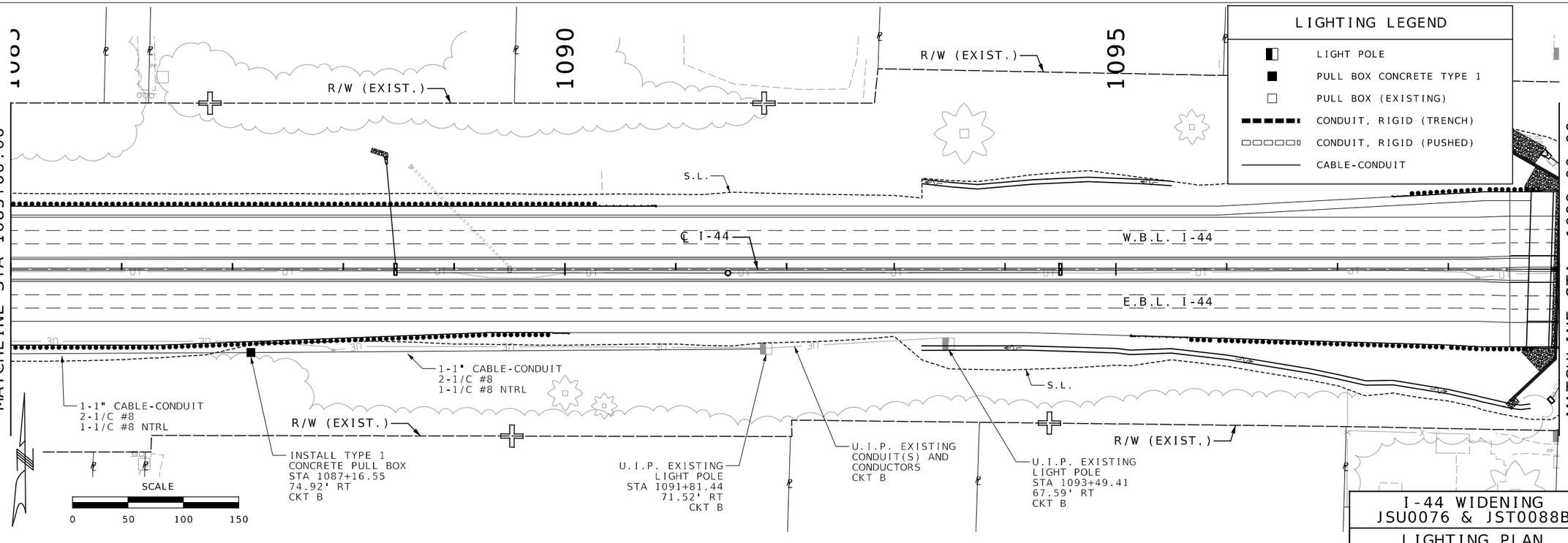
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0180410\215_EC_J8I3044C_I50.dgn 10:08:46 AM 8/19/2024



LIGHTING GENERAL NOTES:

1. LIGHTING SYSTEM MODIFICATIONS ARE BASED ON AVAILABLE AS-BUILT INFORMATION AND MAY NOT NECESSARILY REPRESENT THE ACTUAL FIELD CONDITIONS. WHERE FIELD CONDITIONS ARE DISCOVERED BY THE CONTRACTOR TO VARY FROM THE LIGHTING PLAN MODIFICATIONS HEREIN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PERFORMING THE CONFLICTING WORK SUCH THAT AN AGREEABLE SOLUTION CAN BE DETERMINED.
2. THE LIGHTING SYSTEM SHALL BE COMPLETE AND THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT AND MATERIALS NECESSARY FOR THE SATISFACTORY OPERATION OF ALL ELECTRICAL APPARATUS AND FOR COMPLETE OPERATION OF THE LIGHTING SYSTEM WHETHER SPECIFICALLY DETAILED/QUANTIFIED OR NOT.
3. THE LIGHTING SYSTEM SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE LATEST VERSION OF THE NEC.
4. POLE AND BRACKET CABLES AND RELATED POLE APPURTENANCES INSIDE RELOCATED LIGHT POLES SHALL BE REUSED. DAMAGE TO LIGHT POLES CAUSED BY CONSTRUCTION SHALL BE REPLACED AND PAID FOR BY THE CONTRACTOR.
5. WORK ASSOCIATED WITH ROUTING EXISTING LIGHTING CONDUCTORS INTO EXISTING PULL BOXES AND/OR NEW CONDUITS IS CONSIDERED INCIDENTAL TO THE CONDUIT PAY ITEM. WORK ASSOCIATED WITH ROUTING NEW LIGHTING CONDUCTORS INTO EXISTING CONDUITS AND/OR EXISTING PULL BOXES IS CONSIDERED INCIDENTAL TO THE CONDUCTORS PAY ITEM.



LIGHTING LEGEND

- LIGHT POLE
- PULL BOX CONCRETE TYPE 1
- PULL BOX (EXISTING)
- CONDUIT, RIGID (TRENCH)
- CONDUIT, RIGID (PUSHED)
- CABLE-CONDUIT

I-44 WIDENING
JSU0076 & JST0088B

LIGHTING PLAN
SHEET 1 OF 17

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED 8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	216

COUNTY: GREENE

JOB NO.: JSU0076, JB13044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

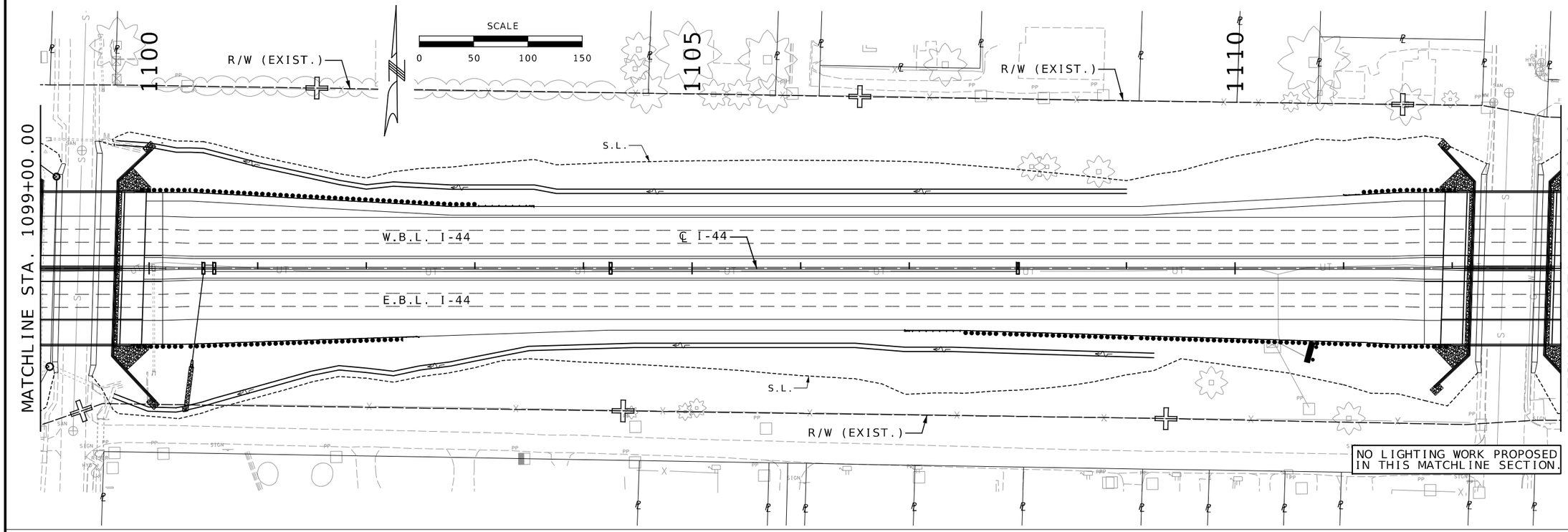
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

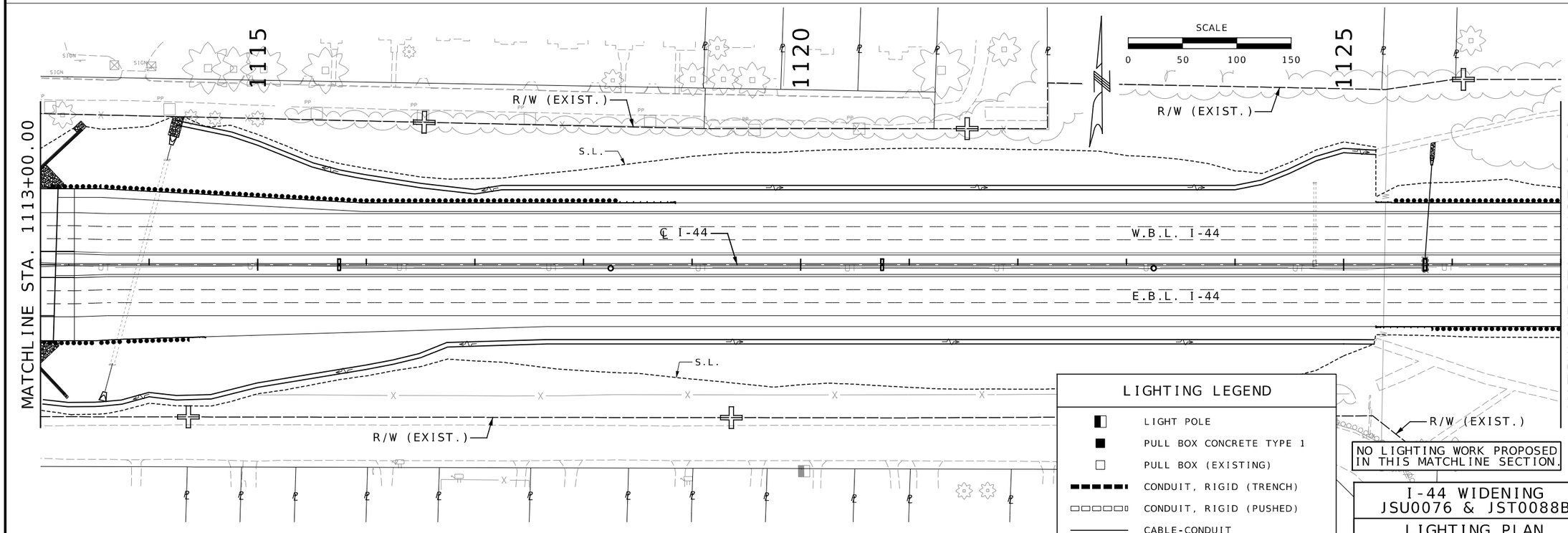
DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0181667\216_LT_JSU0076_150.dgn 10:09:00 AM 8/19/2024





LIGHTING LEGEND

- LIGHT POLE
- PULL BOX CONCRETE TYPE 1
- PULL BOX (EXISTING)
- CONDUIT, RIGID (TRENCH)
- CONDUIT, RIGID (PUSHED)
- CABLE-CONDUIT

I-44 WIDENING
JSU0076 & JST0088B

LIGHTING PLAN
SHEET 2 OF 17

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	217

COUNTY: GREENE

JOB NO.: JSU0076, JB13044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0181667\217_LT_JSU0076_150.dgn 10:09:13 AM 8/19/2024

MATCHLINE STA. 1127+00.00

MATCHLINE STA. 1141+00.00

1130

1135

1140

1145

1150

1155

R/W (EXIST.)

DOLING TRAIL PEDESTRIAN UNDERPASS
SEE SHEET 230 FOR TUNNEL LIGHTING
PLANS.

S.L.

W.B.L. I-44

℄ I-44

E.B.L. I-44

℄ DOLING TRAIL

SCALE
0 50 100 150

MATCHLINE STA. 1141+00.00

MATCHLINE STA. 1155+00.00

NOISE WALL (JSU0114)

NO LIGHTING WORK PROPOSED
IN THIS MATCHLINE SECTION.

LIGHTING LEGEND

- LIGHT POLE
- PULL BOX CONCRETE TYPE 1
- PULL BOX (EXISTING)
- CONDUIT, RIGID (TRENCH)
- CONDUIT, RIGID (PUSHED)
- CABLE-CONDUIT

I-44 WIDENING
JSU0076 & JST0088B

LIGHTING PLAN
SHEET 3 OF 17

JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER
STATE OF MISSOURI

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	218

COUNTY: GREENE

JOB NO.: JSU0076, JB13044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

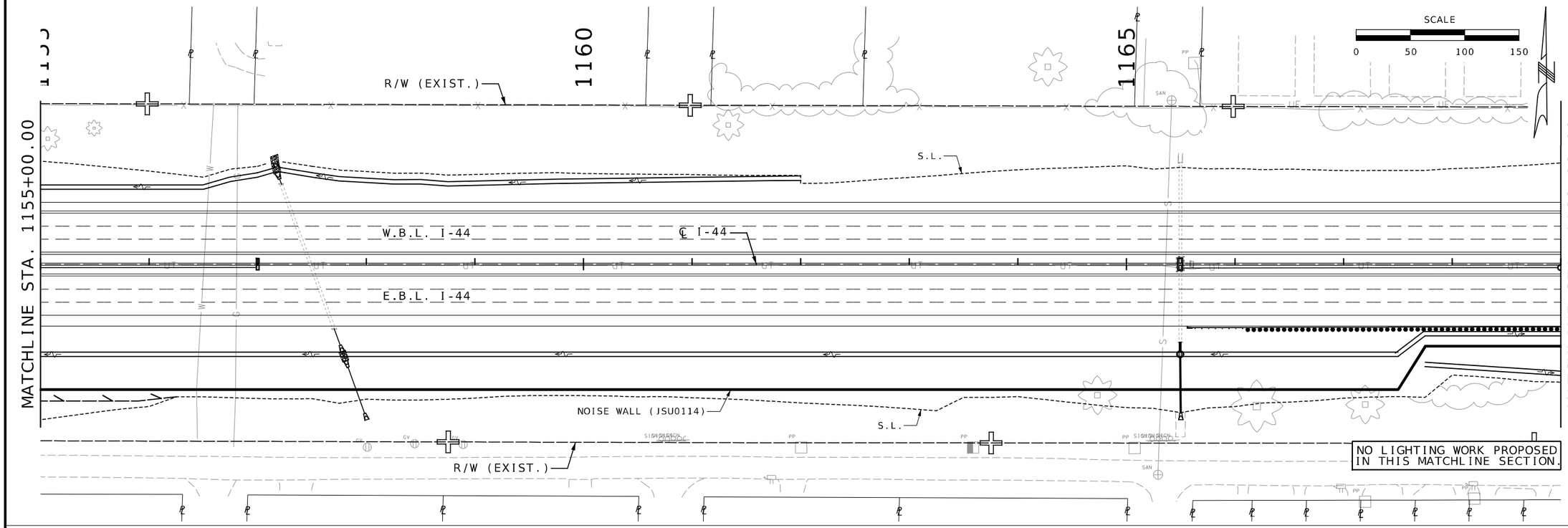
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

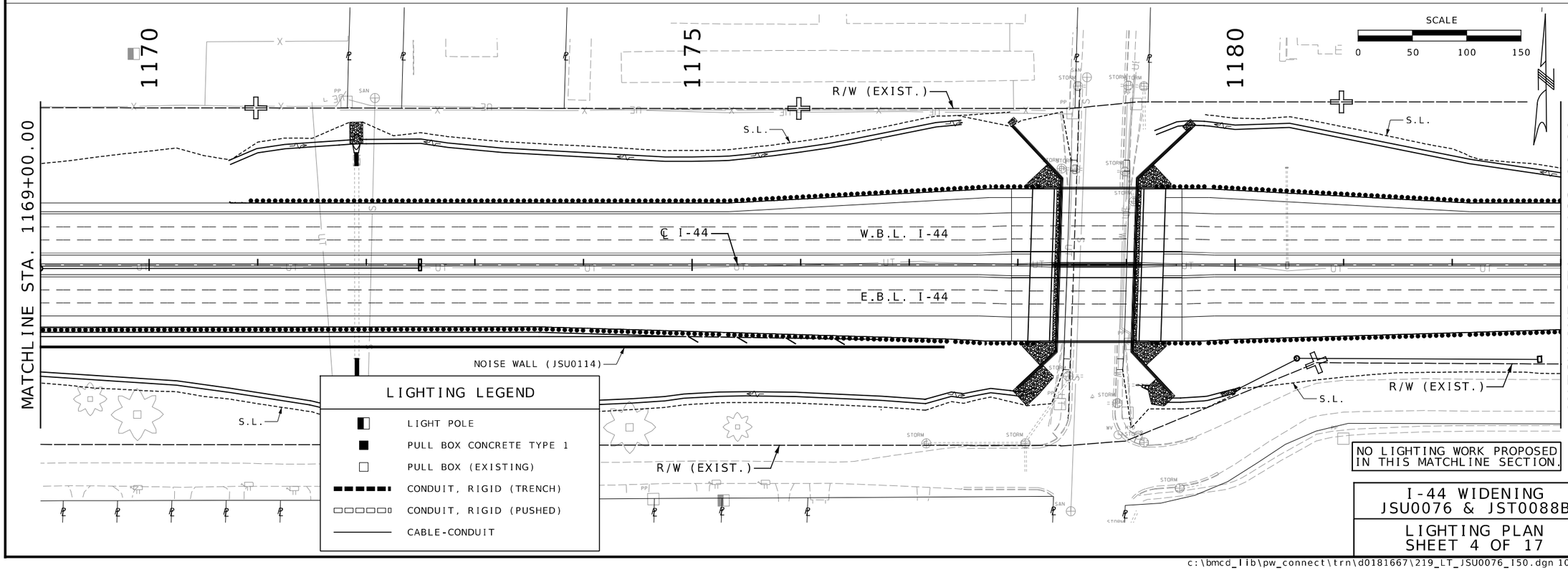
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165

BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0181667\218_LT_JSU0076_I50.dgn 10:09:25 AM 8/19/2024





STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED
8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	219

COUNTY
GREENE

JOB NO.
JSU0076, JBI3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

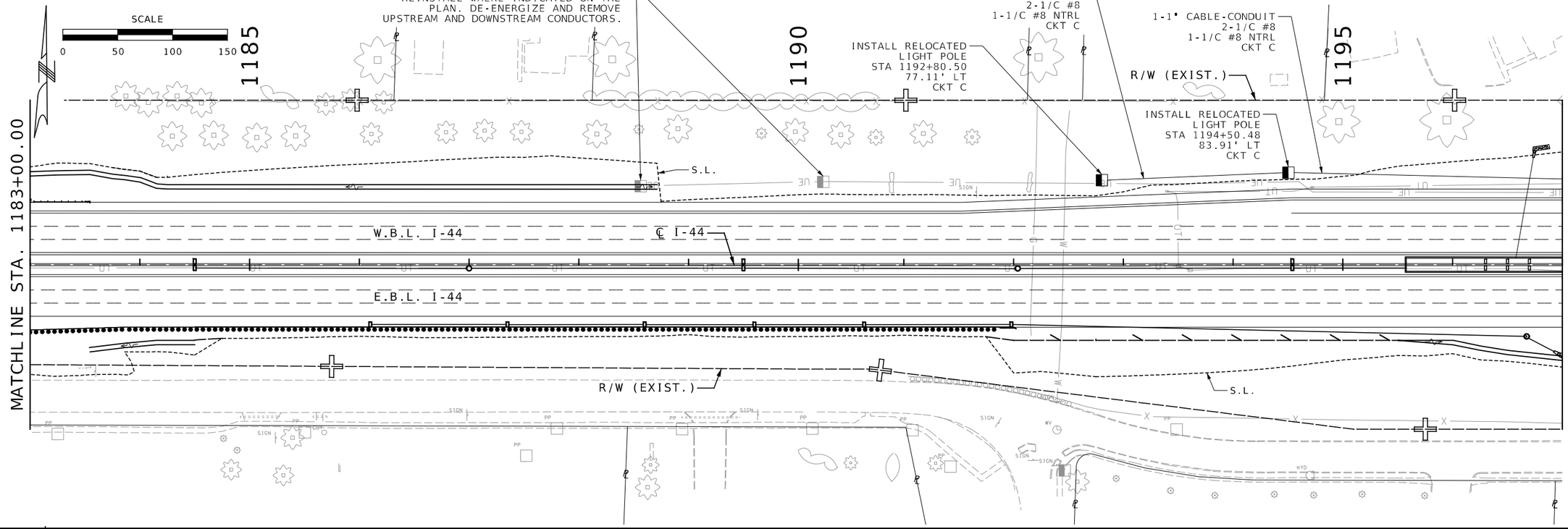
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

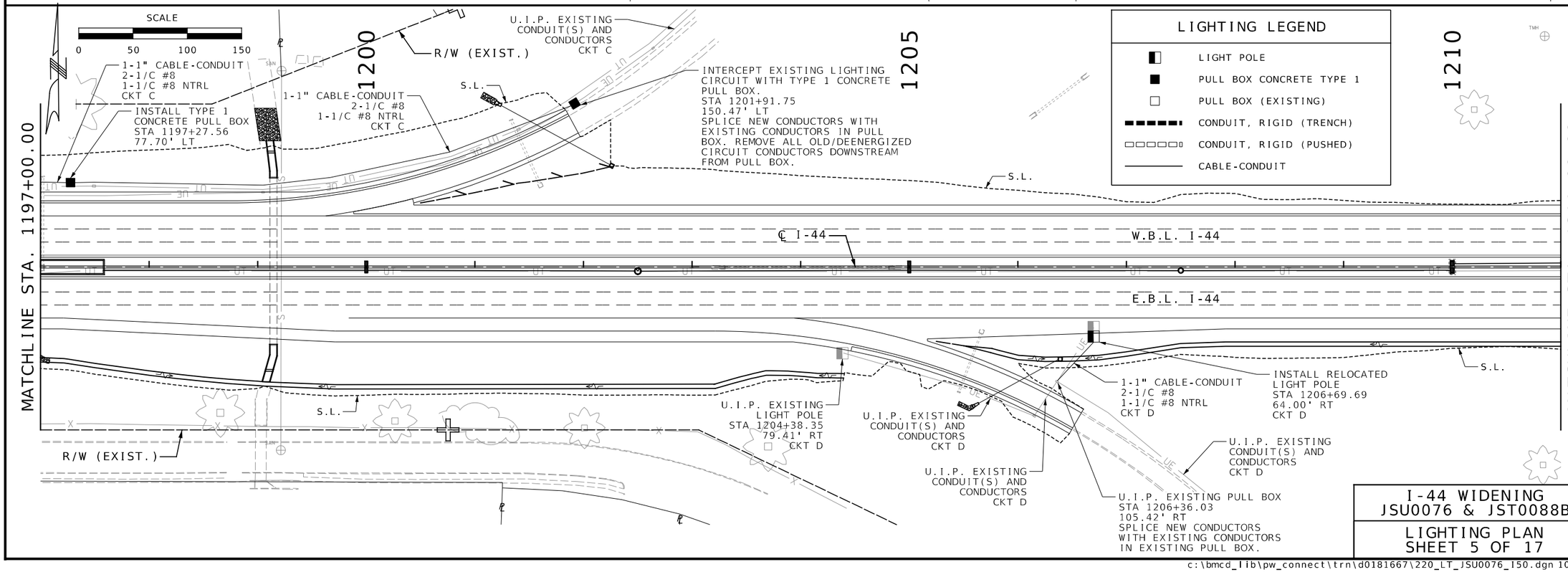
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

I-44 WIDENING
JSU0076 & JST0088B

LIGHTING PLAN
SHEET 4 OF 17

c:\bmcd_lib\pw_connect\trn\d0181667\219_LT_JSU0076_150.dgn 10:09:38 AM 8/19/2024





LIGHTING LEGEND

- LIGHT POLE
- PULL BOX CONCRETE TYPE 1
- PULL BOX (EXISTING)
- CONDUIT, RIGID (TRENCH)
- CONDUIT, RIGID (PUSHED)
- CABLE-CONDUIT

JOHN HERRMANN
NUMBER PE-2015005556
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED 8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	220

COUNTY: GREENE

JOB NO. JSU0076, JBI3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

I-44 WIDENING
JSU0076 & JST0088B

LIGHTING PLAN
SHEET 5 OF 17

c:\bmcd_lib\pw_connect\trn\d0181667\220_LT_JSU0076_150.dgn 10:09:53 AM 8/19/2024

MATCHLINE STA. 1211+00.00

1215

U.I.P. EXISTING CONDUIT(S) AND CONDUCTORS CKT E

INTERCEPT EXISTING LIGHT CIRCUIT WITH TYPE 1 CONCRETE PULL BOX STA 1220+54.22 65.56' LT
SPLICE NEW CONDUCTORS WITH EXISTING CONDUCTORS IN PULL BOX. REMOVE ALL OLD/DEENERGIZED CIRCUIT CONDUCTORS DOWNSTREAM FROM PULL BOX.

INSTALL RELOCATED LIGHT POLE STA 1219+29.24 62.00' LT CKT E

1220

3" CONDUIT
1-1" CABLE-CONDUIT
2-1/C#8
1-1/C#8 NTRL
CKT E

U.I.P. EXISTING PULL BOX STA 1220+94.43 102.81' LT
SPLICE NEW CONDUCTORS WITH EXISTING CONDUCTORS IN EXISTING PULL BOX. REMOVE ALL OLD/DE-ENERGIZED CIRCUIT CONDUCTORS DOWNSTREAM FROM PULL BOX.

1-1" CABLE-CONDUIT
2-1/C #8
1-1/C #8 NTRL
CKT E

INSTALL RELOCATED LIGHT POLE STA 1222+03.14 82.79' LT CKT E

SCALE
0 50 100 150

1225

MATCHLINE STA. 1225+00.00

S.L.

W.B.L. I-44

℄ I-44

E.B.L. I-44

1-1" CABLE-CONDUIT
2-1/C #8
1-1/C #8 NTRL
CKT E

U.I.P. EXISTING CONDUIT(S) AND CONDUCTORS CKT F

R/W (EXIST.)

LIGHTING LEGEND

- LIGHT POLE
- PULL BOX CONCRETE TYPE 1
- PULL BOX (EXISTING)
- CONDUIT, RIGID (TRENCH)
- CONDUIT, RIGID (PUSHED)
- CABLE-CONDUIT

SCALE
0 50 100 150

1227

1230

1235

R/W (EXIST.)

MATCHLINE STA. 1225+00.00

MATCHLINE STA. 1239+00.00

S.L.

℄ I-44

W.B.L. I-44

E.B.L. I-44

1-1" CABLE-CONDUIT
2-1/C #8
1-1/C #8 NTRL
CKT F

INSTALL RELOCATED LIGHT POLE STA 1235+73.23 76.75' RT CKT F

1-1" CABLE-CONDUIT
2-1/C #8
1-1/C #8 NTRL
CKT F

R/W (EXIST.)

U.I.P. EXISTING CONDUIT(S) AND CONDUCTORS CKT F

INTERCEPT EXISTING LIGHTING CIRCUIT WITH TYPE 1 CONCRETE PULL BOX.
STA 1226+88.56
73.68' RT
SPLICE NEW CONDUCTORS WITH EXISTING CONDUCTORS IN PULL BOX. REMOVE ALL OLD/DEENERGIZED CIRCUIT CONDUCTORS DOWNSTREAM FROM PULL BOX.

INSTALL TYPE 1 CONCRETE PULL BOX STA 1231+30.27 75.22' RT CKT F

1-1" CABLE-CONDUIT
2-1/C #8
1-1/C #8 NTRL
CKT F

U.I.P. EXISTING LIGHT POLE STA 1237+49.79 69.69' RT CKT F
SPLICE NEW 1" CONDUIT WITH EXISTING CONDUIT AT POLE FOOTING. SPLICE NEW CABLE AT FUSED AND NON-FUSED CONNECTORS INSIDE EXISTING POLE.

R/W (EXIST.)

I-44 WIDENING
JSU0076, J8I3044C, & JST0088B

LIGHTING PLAN
SHEET 6 OF 17

JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER
STATE OF MISSOURI

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED	
8/19/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	221

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

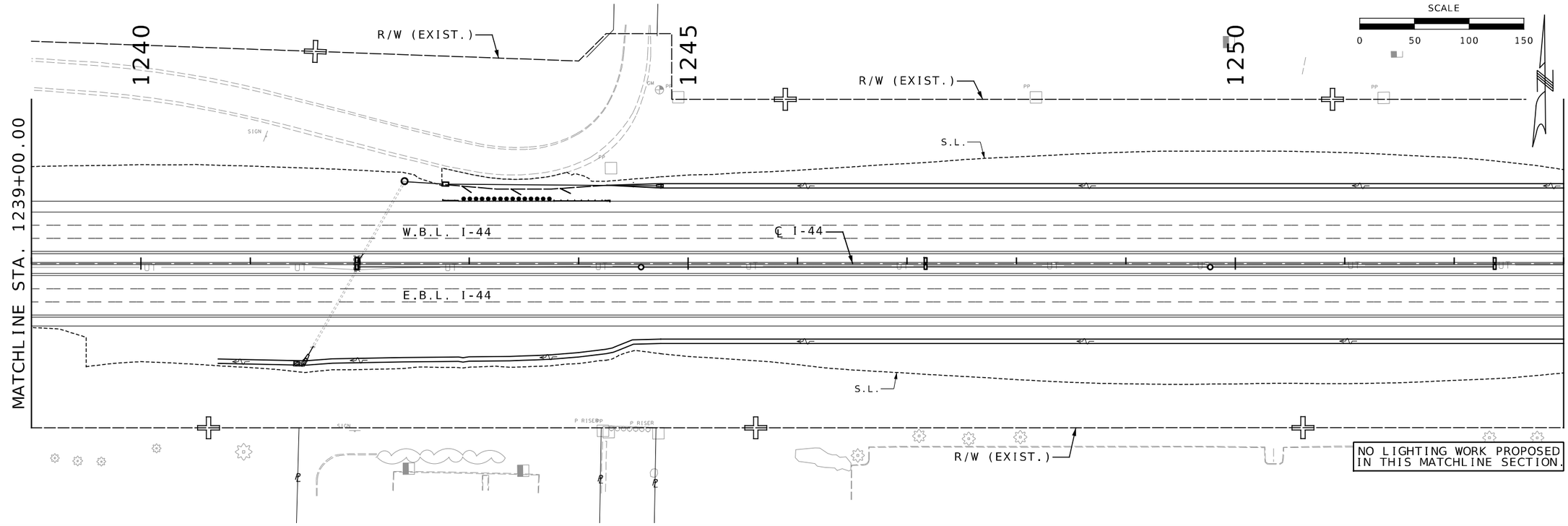
DATE	DESCRIPTION

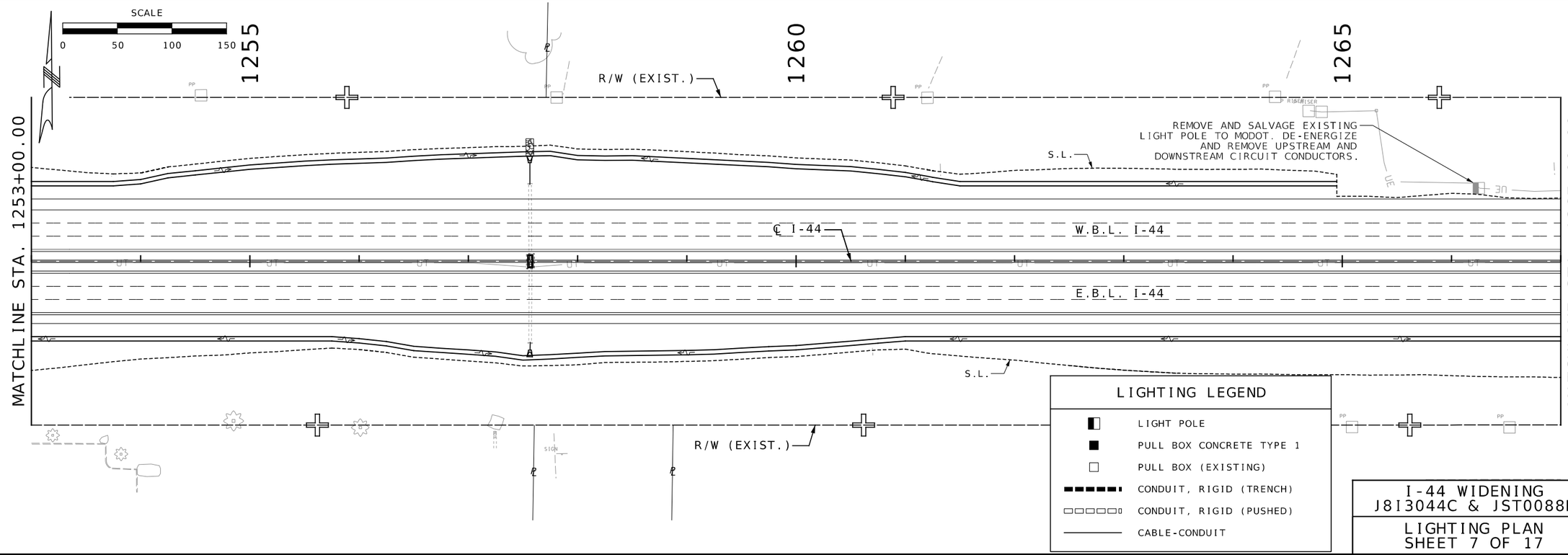
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0181667\221_LT_JSU0076-J8I3044C_I50.dgn 10:10:06 AM 8/19/2024





STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED
8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	222

COUNTY
GREENE

JOB NO.
JSU0076, JBI3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

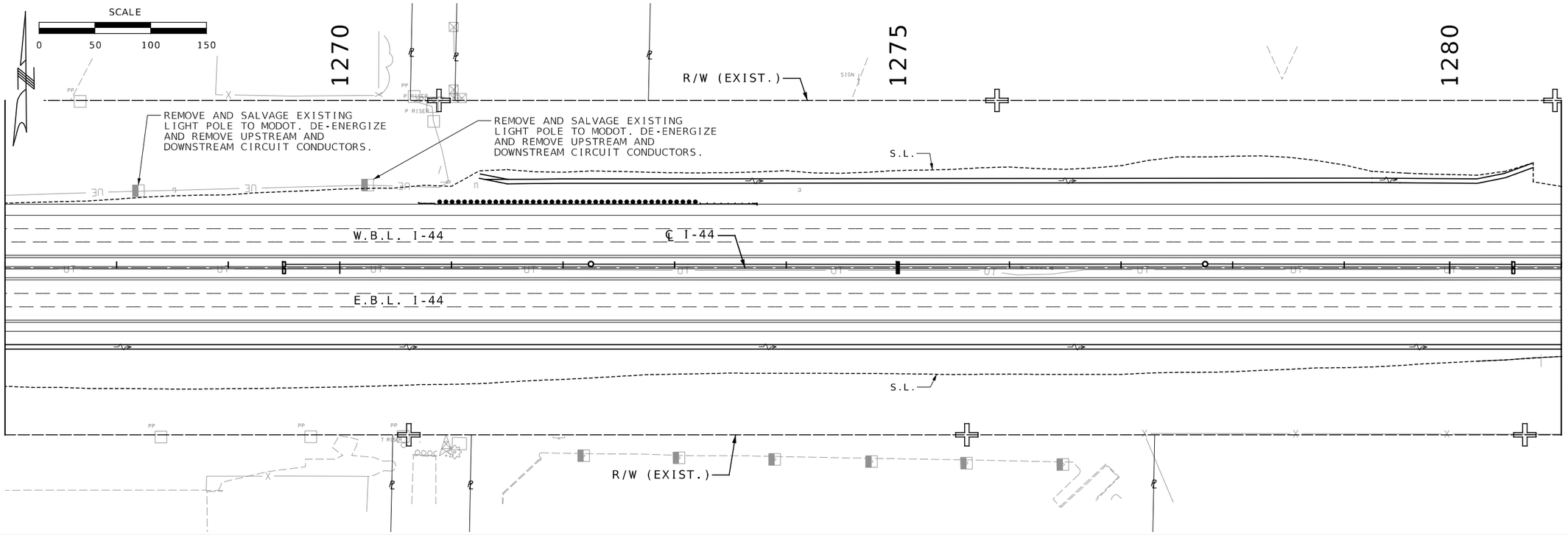
DESCRIPTION	DATE

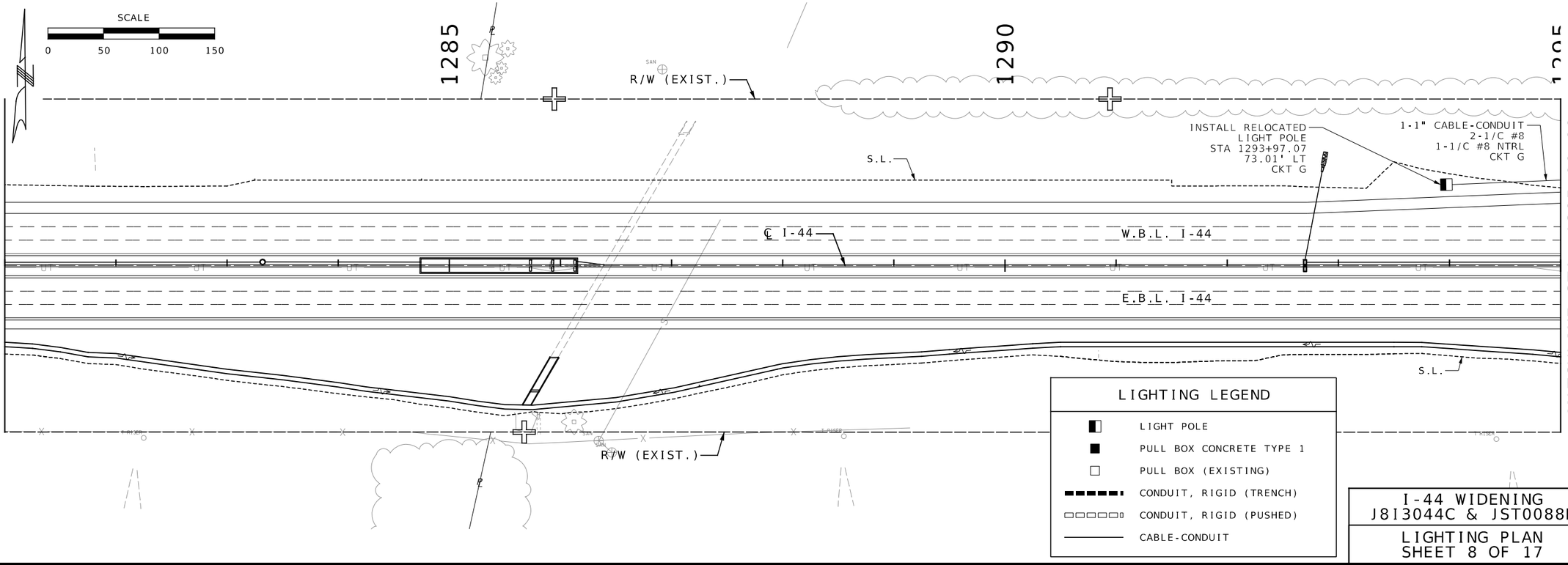
I-44 WIDENING
J8I3044C & JST0088B

LIGHTING PLAN
SHEET 7 OF 17

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617





JOHN HERRMAN
NUMBER PE-2015000556
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 8/19/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	223

COUNTY: GREENE

JOB NO. JSU0076, J8I3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

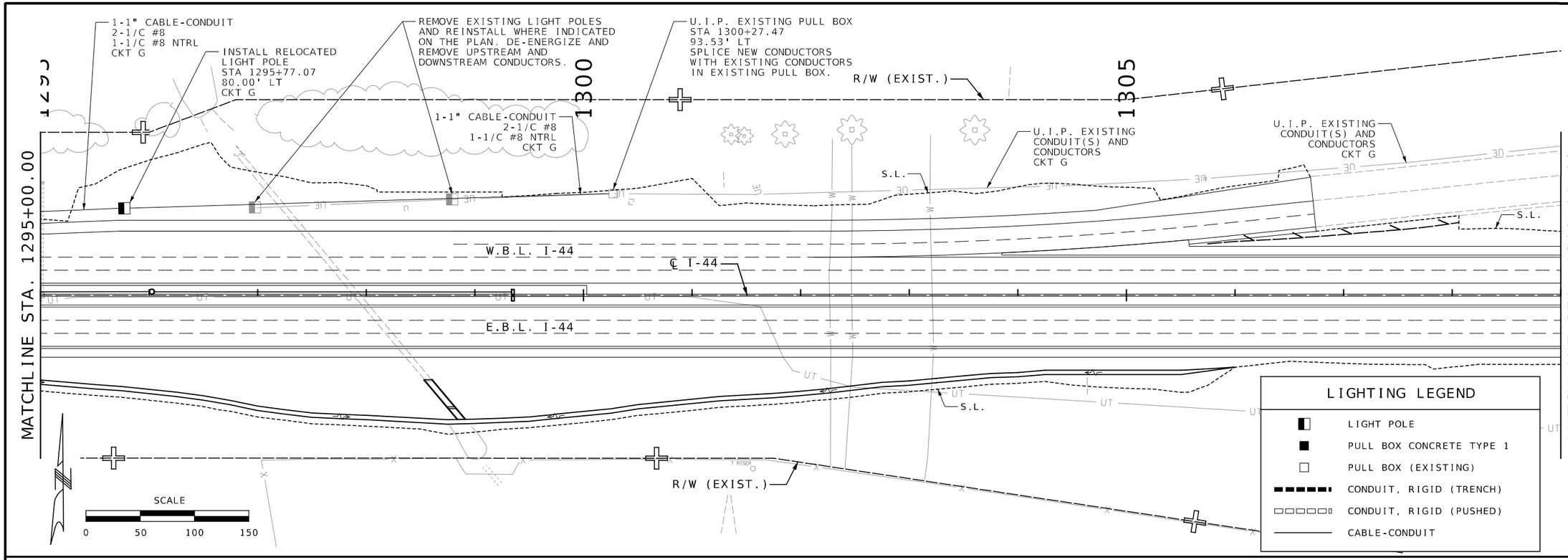
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

I-44 WIDENING
J8I3044C & JST0088B

LIGHTING PLAN
SHEET 8 OF 17

c:\bmcd_lib\pw_connect\trn\d0181667\223_LT_J8I3044C_150.dgn 10:10:32 AM 8/19/2024



JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER
STATE OF MISSOURI

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED	
8/19/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	224
COUNTY	
GREENE	
JOB NO.	
JSU0076, JBI3044C, & JST0088B	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

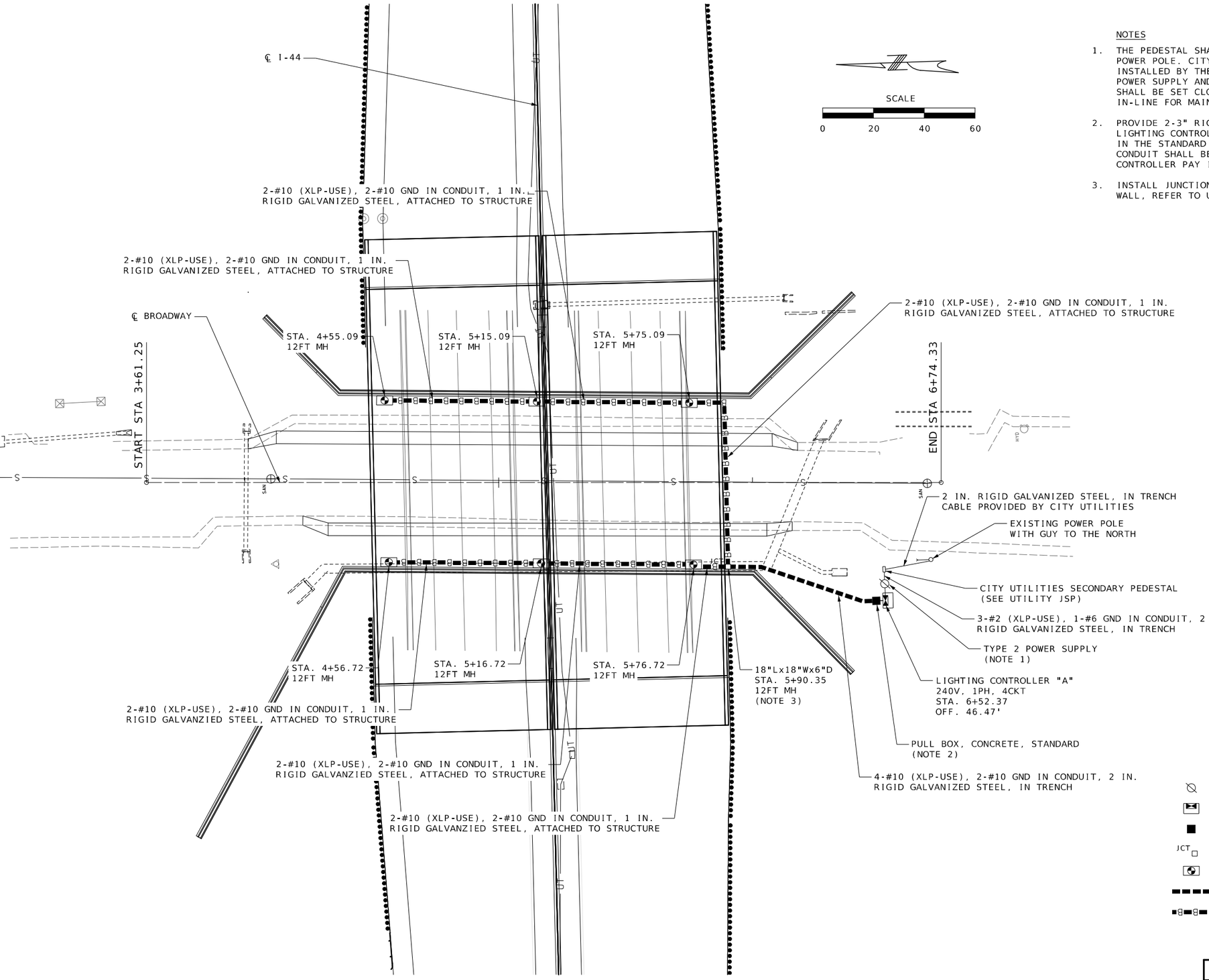
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

I-44 WIDENING
J8I3044C & JST0088B

LIGHTING PLAN
SHEET 9 OF 17

c:\bmcd_lib\pw_connect\trn\d0181667\224_LT_J8I3044C_150.dgn 10:10:45 AM 8/19/2024



BROADWAY UNDERPASS LIGHTING

NOTES

1. THE PEDESTAL SHALL BE 5FT MIN. FROM THE POWER POLE. CITY UTILITIES TO PROVIDE AND INSTALLED BY THE CONTRACTOR. THE TYPE 2 POWER SUPPLY AND LIGHTING CONTROLLER SHALL BE SET CLOSE TO EACH OTHER AND IN-LINE FOR MAINTENANCE PURPOSES.
2. PROVIDE 2-3" RIGID CONDUIT BETWEEN LIGHTING CONTROLLER AND PULL BOX AS SHOWN IN THE STANDARD MODOT DETAIL 901.30F. CONDUIT SHALL BE INCLUDED IN LIGHTING CONTROLLER PAY ITEM.
3. INSTALL JUNCTION BOX ON FRONT OF MSE WALL, REFER TO UNDERPASS LIGHTING DETAIL.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/20/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 225
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

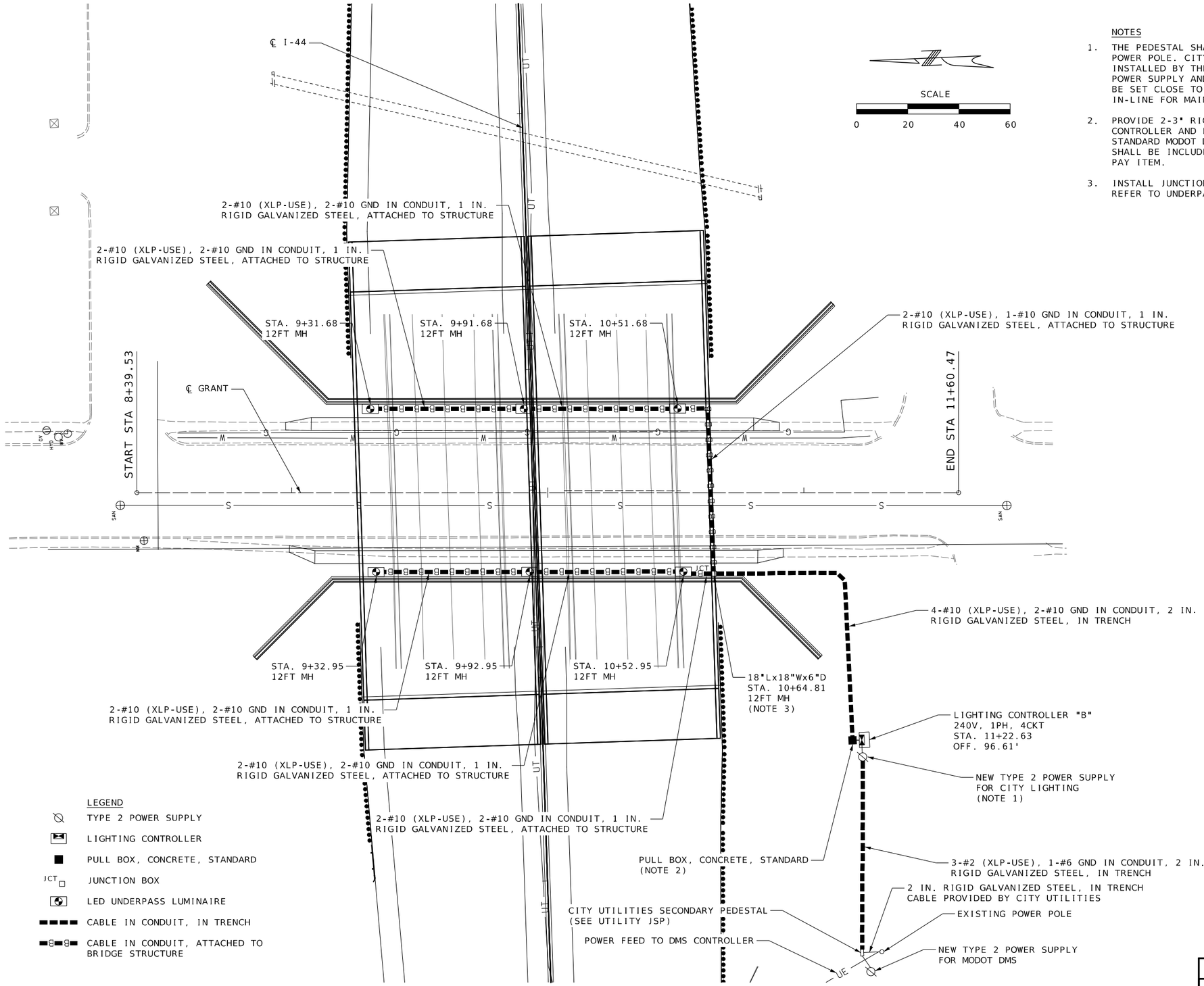
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
LIGHTING SHEET
10 OF 17



GRANT UNDERPASS LIGHTING

NOTES

1. THE PEDESTAL SHALL BE 5FT MIN. FROM THE POWER POLE. CITY UTILITIES TO PROVIDE AND INSTALLED BY THE CONTRACTOR. THE TYPE 2 POWER SUPPLY AND LIGHTING CONTROLLER SHALL BE SET CLOSE TO EACH OTHER AND IN-LINE FOR MAINTENANCE PURPOSES.
2. PROVIDE 2-3" RIGID CONDUIT BETWEEN LIGHTING CONTROLLER AND PULL BOX AS SHOWN IN THE STANDARD MODOT DETAIL 901.30F. CONDUIT SHALL BE INCLUDED IN LIGHTING CONTROLLER PAY ITEM.
3. INSTALL JUNCTION BOX ON FRONT OF MSE WALL, REFER TO UNDERPASS LIGHITNG DETAIL.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/20/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	226
COUNTY	
GREENE	
JOB NO.	
JSU0076, J8I3044C, & JST0088B	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

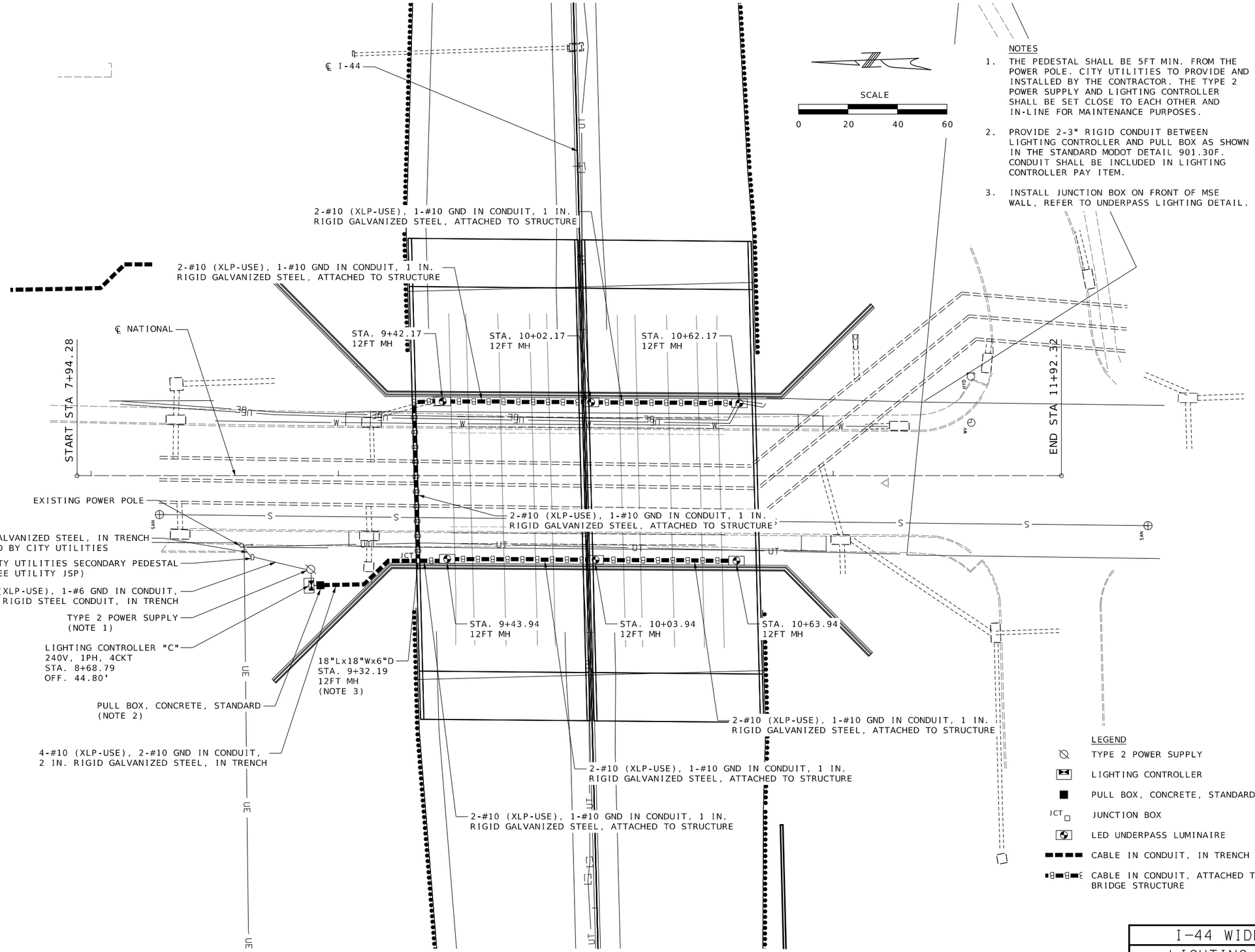
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING

LIGHTING SHEET
11 OF 17

REV.

L:\MoDOT\22004246-00_New\424600\Lighting\Sheets\JSU0076_BridgeLighting_Sheets.dgn 11:48:48 AM 8/20/2024



NATIONAL UNDERPASS LIGHTING

I-44 WIDENING

LIGHTING SHEET
12 OF 17

RYAN STEHN
NUMBER PE-2020000089
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/20/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	227

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

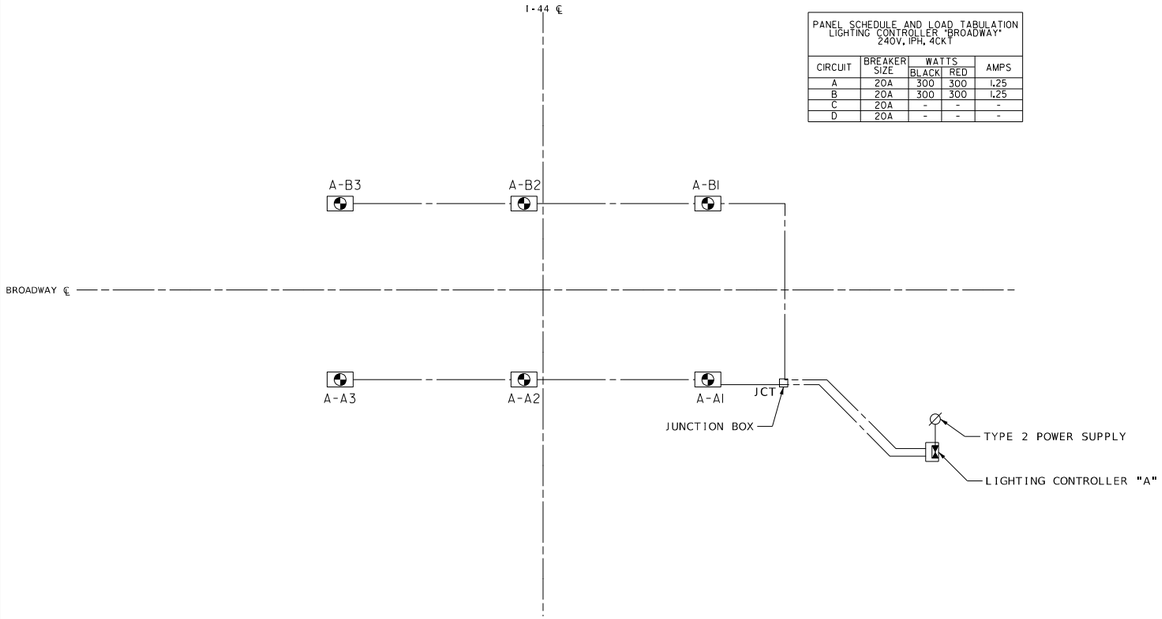
CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

PANEL SCHEDULE AND LOAD TABULATION LIGHTING CONTROLLER "BROADWAY" 240V, 1PH, 4CKT				
CIRCUIT	BREAKER SIZE	WATTS BLACK	WATTS RED	AMPS
A	20A	300	300	1.25
B	20A	300	300	1.25
C	20A	-	-	-
D	20A	-	-	-

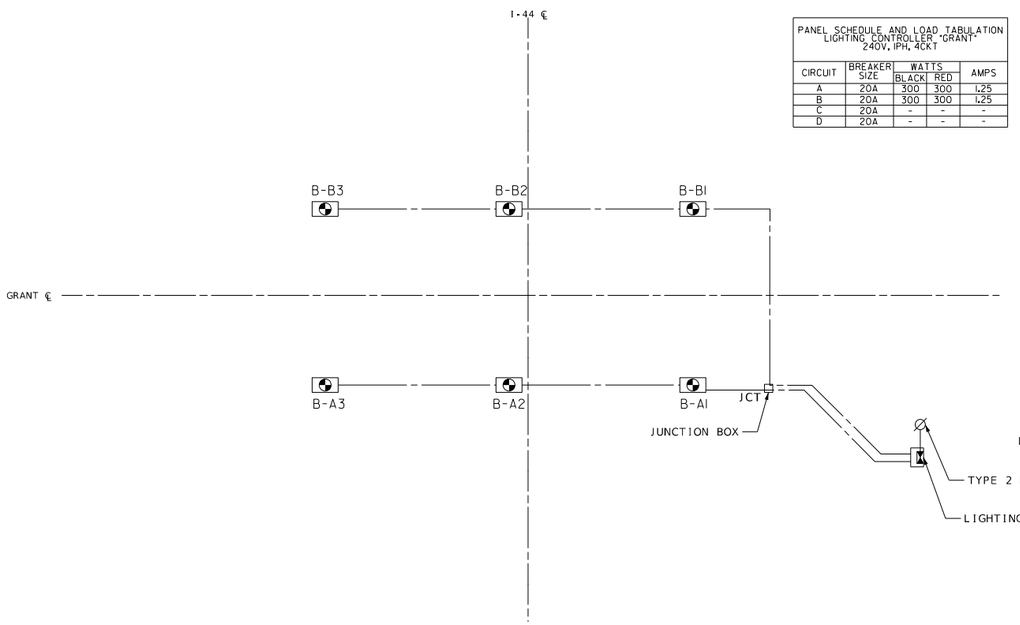
SYMBOL	DESCRIPTION
	UNDERPASS LIGHTING UNIT, LED LUMINAIRE, 277V, 111 WATT, 7,671LUMENS, 35K, 12' MOUNTING HEIGHT
	LIGHTING UNIT DUCT. REFER TO SITE PLAN FOR SIZES
JCT	JUNCTION BOX
	LIGHTING CONTROLLER CABINET, BASE MOUNTED, 240V, 100A, 1-PH, 3W
	EXISTING POWER POLE POLE

ALL CABLE SPLICES SHALL BE DONE IN LIGHT POLE BASES. NO BURIED OR HANDHOLE SPLICES ALLOWED.



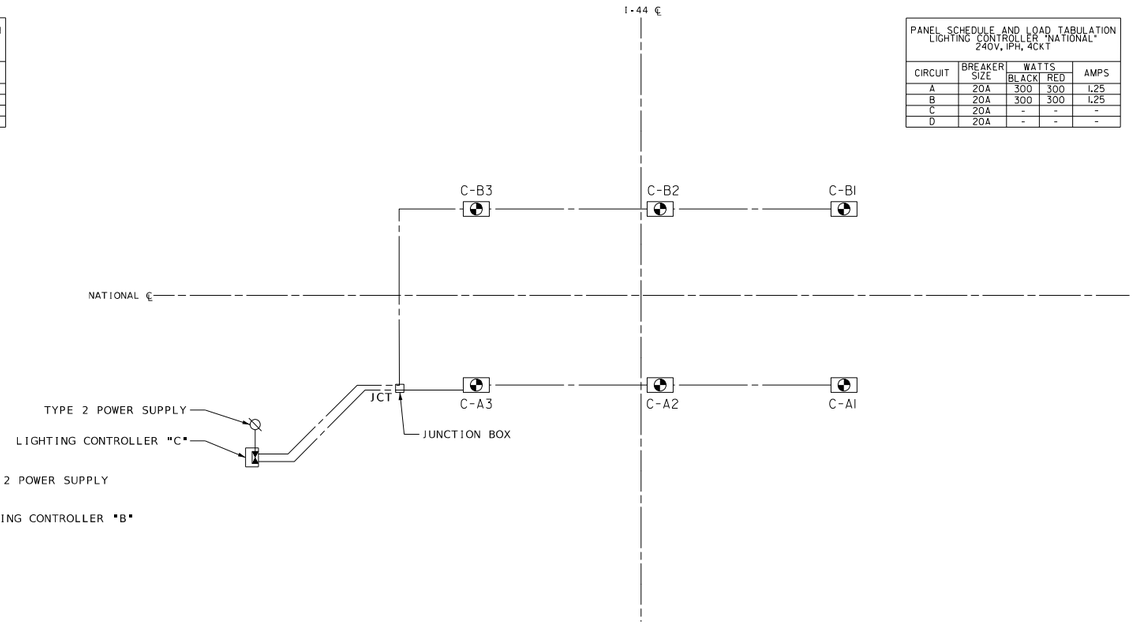
BROADWAY ONE-LINE
UNDERPASS LIGHTING

PANEL SCHEDULE AND LOAD TABULATION LIGHTING CONTROLLER "GRANT" 240V, 1PH, 4CKT				
CIRCUIT	BREAKER SIZE	WATTS BLACK	WATTS RED	AMPS
A	20A	300	300	1.25
B	20A	300	300	1.25
C	20A	-	-	-
D	20A	-	-	-



GRANT ONE-LINE
UNDERPASS LIGHTING

PANEL SCHEDULE AND LOAD TABULATION LIGHTING CONTROLLER "NATIONAL" 240V, 1PH, 4CKT				
CIRCUIT	BREAKER SIZE	WATTS BLACK	WATTS RED	AMPS
A	20A	300	300	1.25
B	20A	300	300	1.25
C	20A	-	-	-
D	20A	-	-	-



NANTIONAL ONE-LINE
UNDERPASS LIGHTING

I-44 WIDENING

LIGHTING SHEET
13 OF 17

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	228

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

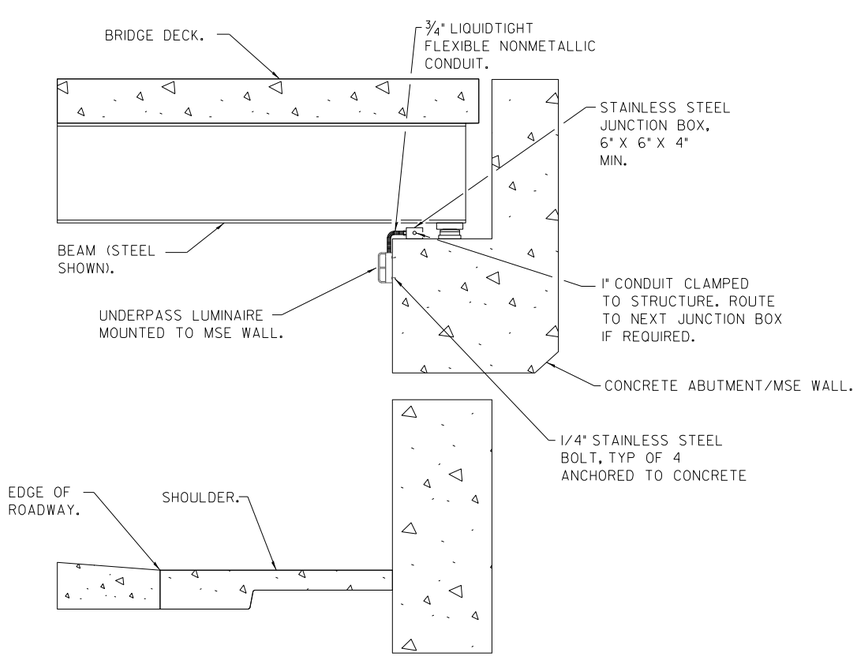
DESCRIPTION	DATE

REV.

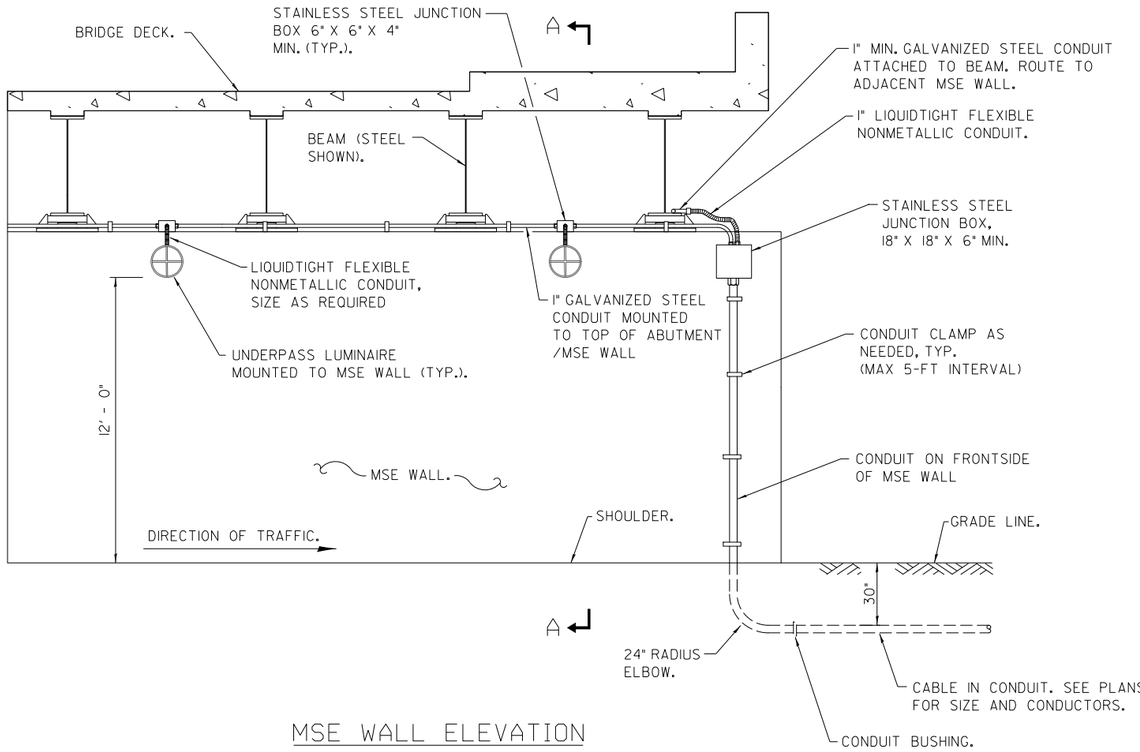
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Lighting\Sheets\JSU0076_OneLine.dgn 11:48:55 AM 8/20/2024



SECTION A-A



MSE WALL ELEVATION

CONDUIT BEAM CLAMP

CONDUIT CLAMP

GENERAL NOTES

1. SEE PLANS FOR UNDERPASS LUMINAIRE LOCATIONS.
2. RIGID CONDUIT MAY BE USED IN LIEU OF FLEXIBLE CONDUIT.
3. ALL DIMENSIONS ARE IN INCHES.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	229

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT

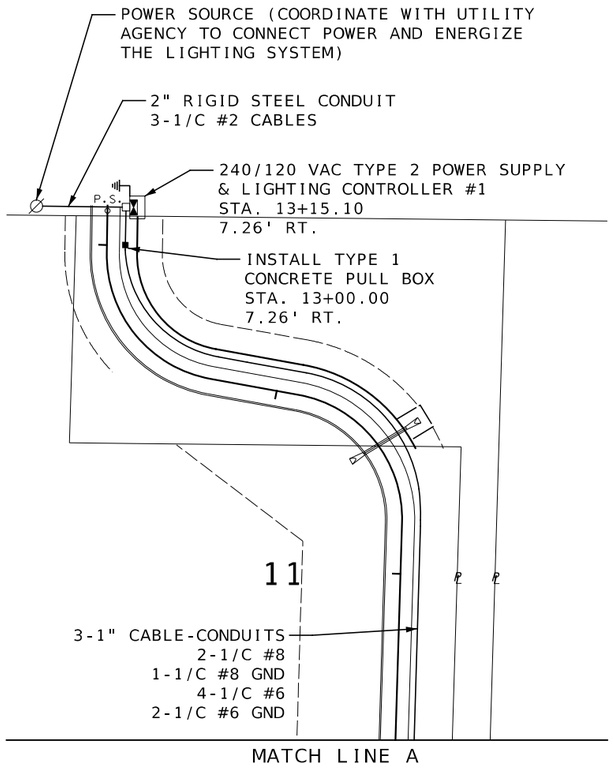
©Copyright CMT, Inc.

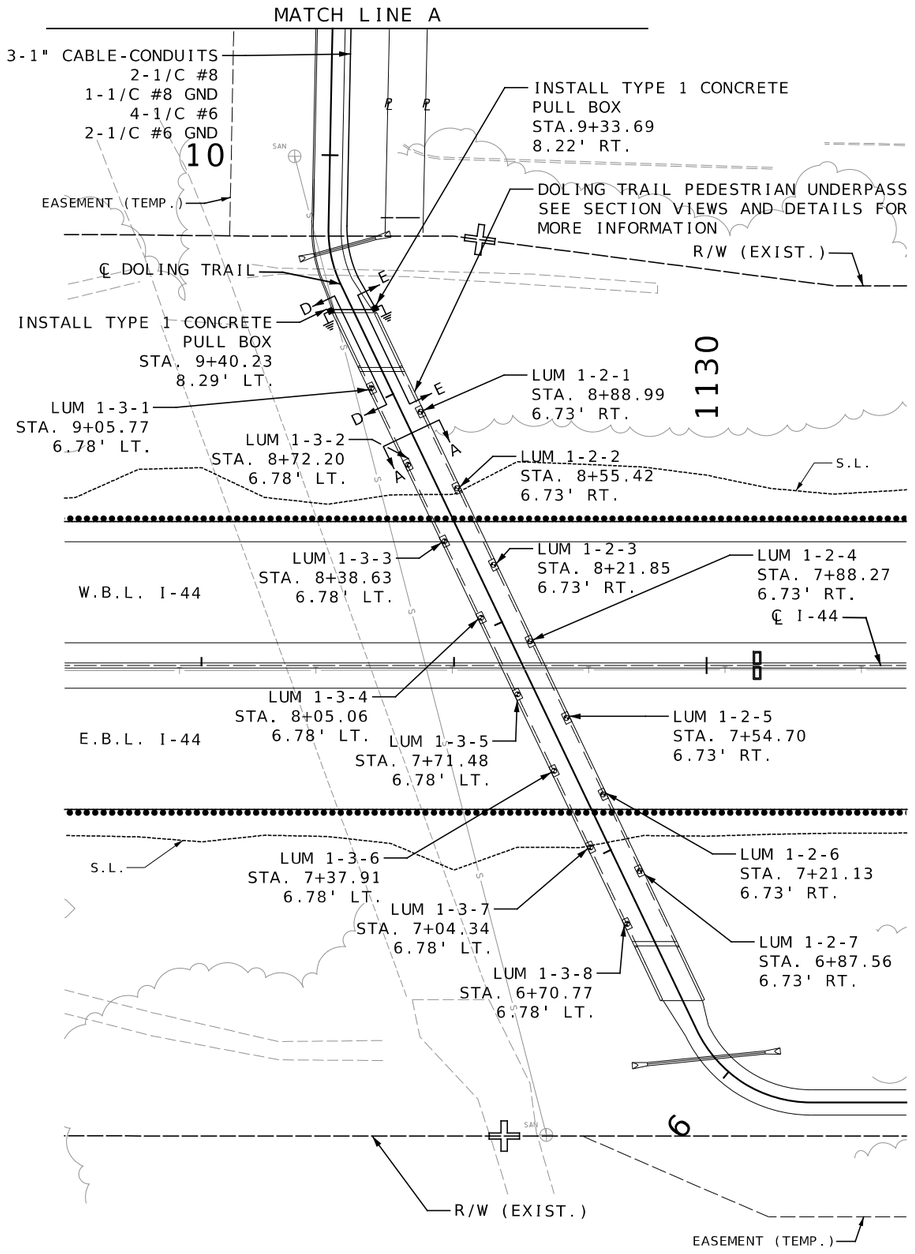
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

I-44 WIDENING

LIGHTING SHEET 14 OF 17





SCALE

0 30 60 90

LIGHTING LEGEND

	CONTROLLER, LIGHTING
■	PULL BOX CONCRETE TYPE 1
∅	POWER SOURCE
P.S. □	POWER SUPPLY
———	CABLE-CONDUIT
	LED TUNNEL LUMINAIRE, 100W
	GROUND ROD

TUNNEL LIGHTING SYSTEM NOTES:

1. CONSTRUCTION AND MATERIALS FOR THE LIGHTING SYSTEM SHALL COMPLY WITH THE FOLLOWING MODOT SPEC SECTIONS:
   - 707 CONDUIT SYSTEMS ON STRUCTURE
   - 901 HIGHWAY LIGHTING
   - 1060 ELECTRICAL CONDUIT
   - 1061 ELECTRICAL CONDUCTORS
   - 1062 PULL AND JUNCTION BOXES
   - 1091 LIGHTING EQUIPMENT
2. CONDUIT FITTINGS, BUSHINGS, AND ADAPTERS REQUIRED ON THE TUNNEL LIGHTING SYSTEM ARE SUBSIDIARY TO THE "CONDUIT 2 IN, EXTERNAL ON STRUCTURE" PAY ITEM.
3. LUMINAIRES, CONTROLLERS, CONDUIT AND JUNCTION BOXES SHALL BE MOUNTED TO THE CONCRETE TUNNEL WALLS PER THE MANUFACTURER RECOMMENDATIONS AND PER MODOT SPECIFICATIONS. SEE NOTES ON SUBSEQUENT PAGES FOR ADDITIONAL MOUNTING DETAILS AND INFORMATION.
4. SPLICE KITS ALLOWED PER THE SPECIFICATIONS. SPLICES SHALL ONLY OCCUR WITHIN ENCLOSURES.
5. THE LIGHTING SYSTEM SHALL BE IN COMPLIANCE WITH THE LATEST VERSION OF THE NATIONAL ELECTRIC CODE AND MODOT SPECIFICATIONS.
6. THE FOLLOWING EQUIPMENT IS SPECIFIED FOR USE ON THE DOLING TRAIL TUNNEL LIGHTING SYSTEM:
   - NLIGHT ECLYPSE SYSTEM CONTROLLER
     MODEL #: NECY_MVOLT_ENC_NECYD NLIGHTAIR G2
   - NLIGHT AIR RPP20 POWER PACK
     MODEL #: RPP20_D_EFP_G2
   - LED LUMINAIRE
     MODEL #: ARV17HO_MIN10_100W_35_MVOLT_OP_GRY

     INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. TUNNEL LIGHTING BASIS OF DESIGN:
   - RP-43-22 LIGHTING FOR EXTERIOR APPLICATIONS
     - LIGHTING ZONE 2
     - DAYTIME HORIZONTAL ILLUMINANCE = 8.0 - 10.0 FC @ 4:1 UNIFORMITY
     - DAYTIME VERTICAL ILLUMINANCE = 10.0 - 15.0 FC @ 3:1 UNIFORMITY
     - NIGHTTIME HORIZONTAL ILLUMINANCE = 1.0 - 2.0 FC @ 4:1 UNIFORMITY
     - NIGHTTIME VERTICAL ILLUMINANCE = 1.0 - 2.0 FC @ 3:1 UNIFORMITY
8. NLIGHT ECLYPSE SYSTEM CONTROLLER SETTINGS:
   - DAYTIME OUTPUT = 60%
   - NIGHTTIME OUTPUT = 12%

DOLING TRAIL
PEDESTRAIN UNDERPASS

I-44 WIDENING
JSU0076 & JST0088B

LIGHTING PLAN
SHEET 15 OF 17

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED 8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	230

COUNTY: GREENE

JOB NO. JSU0076, JB13044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

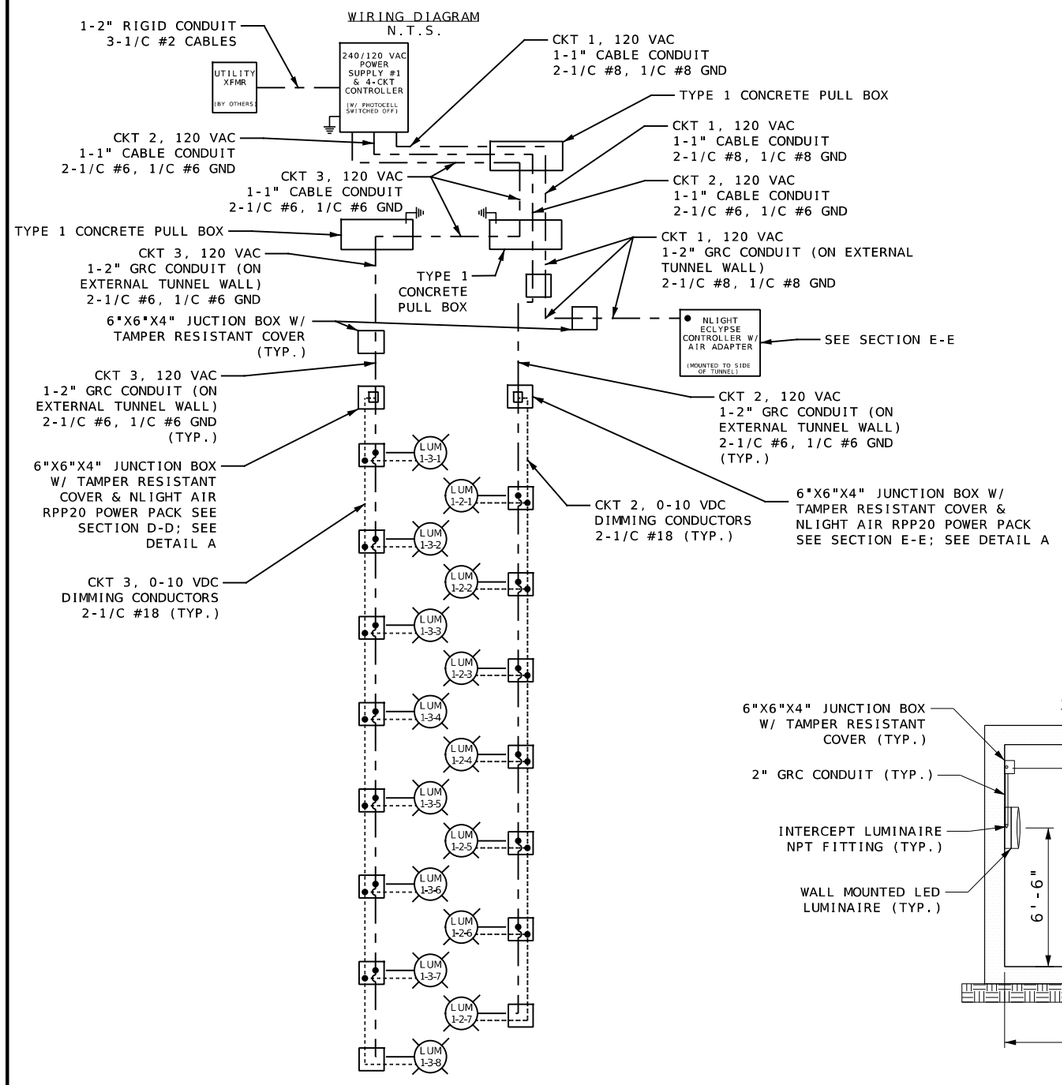
DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\dms87279\230_LT_JSU0076_I30.dgn 10:12:01 AM 8/19/2024

WIRING DIAGRAM
N.T.S.



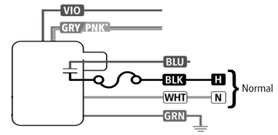
WIRING DIAGRAM LEGEND

- 0-10 VDC, 600V RATED DIMMING CONDUCTORS
- CKT 1, 120 VAC, 600V RATED LINE CONDUCTORS
- CKT 2, 120 VAC, 600V RATED LINE CONDUCTORS
- CKT 3, 120 VAC, 600V RATED LINE CONDUCTORS
- LUM 1-2-1 — TUNNEL LUMINAIRE POWER SUPPLY #-CKT #-LUM #
- GROUND/JUNCTION BOX, POWER SUPPLY, OR OTHER ENCLOSURE
- CABLE SPLICE
- GROUND ROD

CIRCUIT VOLTAGE DROP CALCULATIONS

CKT 1 0.18% @ 0.42 AMPS
CKT 2 2.28% @ 5.83 AMPS
CKT 3 2.53% @ 6.67 AMPS

DETAIL A
RPP20 POWER PACK

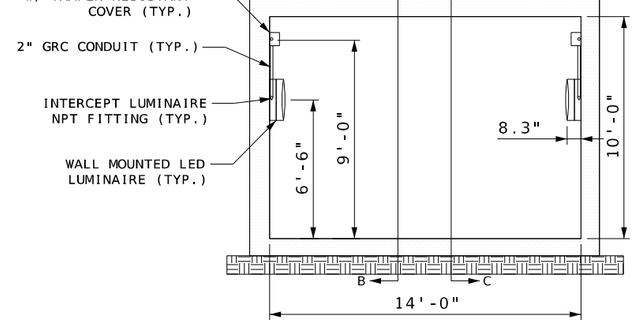


POWER PACK LEGEND

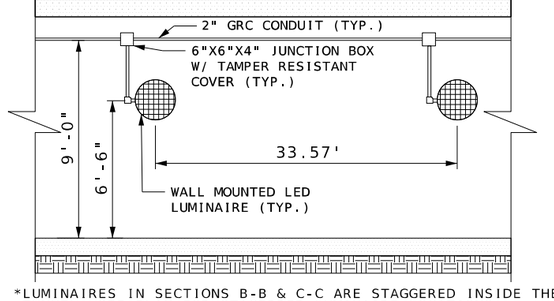
BLK-UNSWITCHED HOT 120 VAC
WHT-NEUTRAL
BLU-SWITCHED OUTPUT 120 VAC
VIO-0-10V DIM
PNK*-0-10V COMMON
GRN-GROUND

*0-10V DIMMING COMMON FROM LUMINAIRE MAY BE PINK OR AS OTHERWISE INDICATED PER SECTION 410.69 OF THE 2020 NEC.

SECTION A-A
TUNNEL ELEVATION VIEW

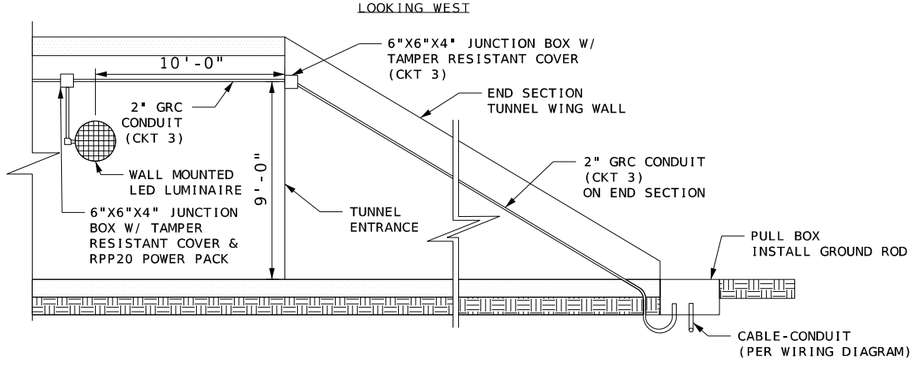


SECTION B-B & SECTION C-C*
TUNNEL ELEVATION VIEW

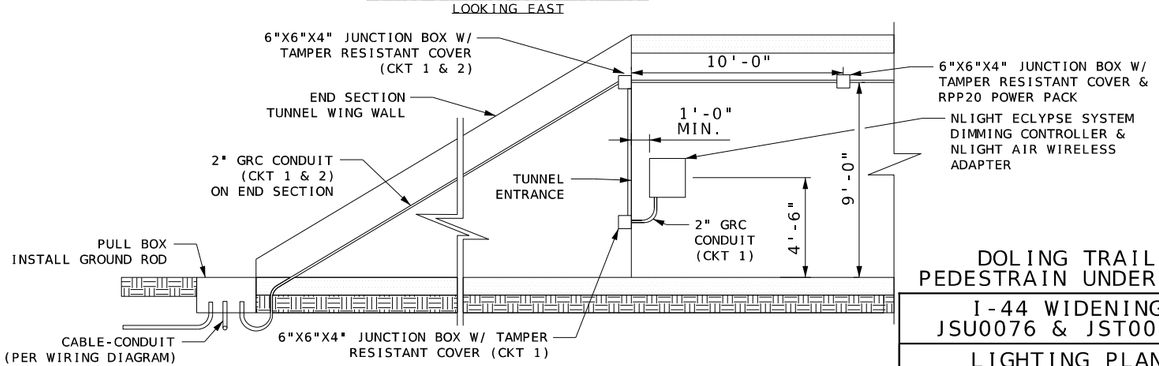


*LUMINAIRES IN SECTIONS B-B & C-C ARE STAGGERED INSIDE THE TUNNEL. SEE PLAN FOR STAGERRED LUMINAIRE LOCATIONS.

SECTION D-D
TUNNEL ENTRANCE ELEVATION VIEW
LOOKING WEST



SECTION E-E
TUNNEL ENTRANCE ELEVATION VIEW
LOOKING EAST



DOLING TRAIL PEDESTRAIN UNDERPASS

I-44 WIDENING
JSU0076 & JST0088B

LIGHTING PLAN
SHEET 16 OF 17

JOHN HERMAN
NUMBER PE-2015000556
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

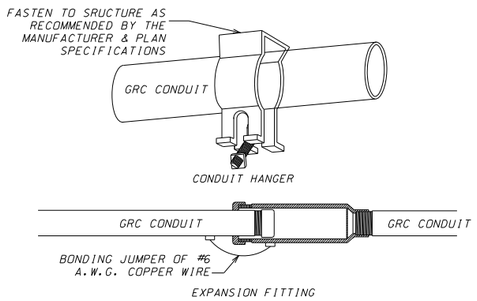
DATE PREPARED: 8/19/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 231
COUNTY: GREENE
JOB NO.: JSU0076, JB13044C, & JST0088B
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

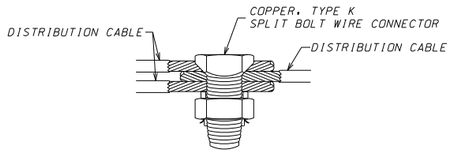
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\dms87279\231_LT_JSU0076_130.dgn 10:12:21 AM 8/19/2024



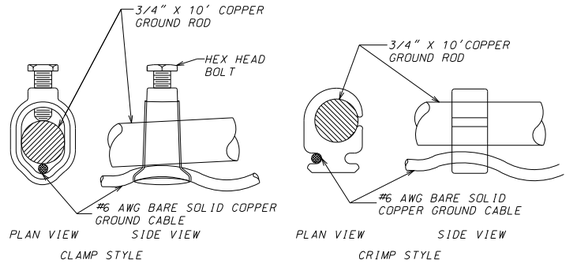
GRC CONDUIT DETAILS

NOTES:
1. ALL CONDUITS INSTALLED ABOVE GROUND SHALL BE GRC.
2. CONDUIT ATTACHED TO STRUCTURES SHALL HAVE EXPANSION FITTINGS INSTALLED AT EACH END OF THE STRUCTURE AND AT EACH EXPANSION JOINT ON THE STRUCTURE.
3. ALL GRC CONDUITS SHALL BE ELECTRICALLY BONDED BY A GROUNDING BUSHING AND GROUND WIRE AS DETAILED.
4. INSTALL THE CONDUIT AND CONNECTOR ASSEMBLY TO PERMIT A 1/2" MINIMUM LONGITUDINAL TRAVEL IN EITHER DIRECTION.

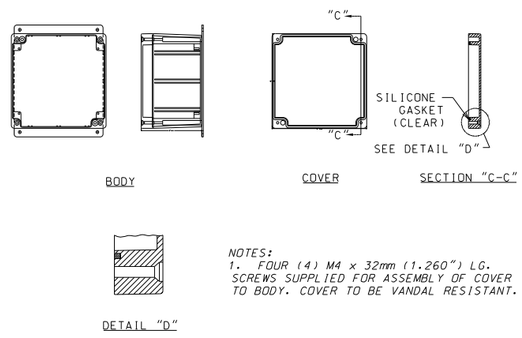


SPLICE KIT DETAILS

NOTES:
1. TO BE USED ONLY IN JUNCTION OR PULL BOXES WHERE CIRCUITS BRANCH OR "TEE".
2. ALL SPLICES SHALL BE PROTECTED WITH A RESIN SPLICE KIT (NOT SHOWN) INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.



GROUND ROD CONNECTION DETAILS



NOTES:
1. FOUR (4) M4 x 32mm (1.260") LG. SCREWS SUPPLIED FOR ASSEMBLY OF COVER TO BODY. COVER TO BE VANDAL RESISTANT.

PULL BOX, TYPE METAL NEMA

ADDITIONAL TUNNEL LIGHTING SYSTEM NOTES:

GRC CONDUIT ON STRUCTURE:
GRC CONDUIT SHALL BE USED WHEN CONDUIT IS TO BE INSTALLED EXTERNALLY ON TUNNELS, WING WALLS OR OTHER STRUCTURES, AND SHALL BE INSTALLED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE FINAL LOCATION OF ALL CONDUIT AND JUNCTION BOXES SHALL BE APPROVED BY THE ENGINEER BEFORE INSTALLATION BEGINS. THE CONDUIT SHALL BE SECURED TO THE CONCRETE WITH CLAMPS AT NO MORE THAN 5-FOOT INTERVALS. CONCRETE ANCHORS SHALL BE IN ACCORDANCE WITH FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153, B 695-91 CLASS 50, OR CONSTRUCTED OF STAINLESS STEEL. THE MINIMUM EMBEDMENT IN CONCRETE SHALL BE 3 INCHES. A SUFFICIENT NUMBER OF CONDUIT HANGERS SHALL BE SUPPLIED TO ATTACH THE GRC CONDUIT TO THE STRUCTURE, AS RECOMMENDED BY THE MANUFACTURER. ONE (1) NO. 6 AWG, BARE COPPER GROUND WIRE SHALL BE ATTACHED TO EACH END OF THE GRC CONDUIT WITH A GROUNDING BUSHING. THE GROUND WIRE SHALL BE CONNECTED TO A GROUND ROD AT EACH END OF A GRC CONDUIT RUN, OR EXTENDED TO AN ADJACENT GRC CONDUIT OR GROUND ROD.

EXPANSION FITTINGS SHALL BE INSTALLED AT EACH END OF A STRUCTURE AND EACH LOCATION WHERE THE GRC CONDUIT CROSSES A STRUCTURE EXPANSION JOINT. THE EXPANSION FITTING SHALL PROVIDE A MINIMUM MOVEMENT IN EITHER DIRECTION AS SHOWN ON THE PLANS OR AS SPECIFIED BY THE ENGINEER. CLAMPS, CONCRETE ANCHORS, EXPANSION FITTINGS, AND ANY HARDWARE OR MATERIAL REQUIRED FOR CONDUIT INSTALLATION ON STRUCTURES SHALL BE AT THE CONTRACTOR'S EXPENSE.

SPLICES
SPLICES SHALL BE MADE IN JUNCTION BOXES OR PULL BOXES WITH COPPER TYPE K SPLIT BOLT CONNECTORS. ALL SPLICES SHALL BE PROTECTED WITH A WATERPROOF RESIN SPLICE KIT INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. IN LIEU OF TYPE K SPLIT BOLT CONNECTORS, CONTRACTOR MAY USE FUSED SLIP CONNECTOR ASSEMBLIES PER MODOT SPECS. LOW-VOLTAGE WIRING SPLICES SHALL BE CONNECTED PER THE LOW-VOLTAGE APPURTENANCE MANUFACTURER RECOMMENDATIONS AND PER THE NEC.

PULL BOXES, TYPE METAL NEMA
METAL PULL BOXES SHALL BE MADE OF DIE CAST ALUMINUM ALLOY WITH A GRAY OR NATURAL FINISH. THEY SHALL BE DESIGNED TO IP65 OF IEC529 AND NEMA 1, 2, 4, 4X, 12, AND 13 SPECIFICATIONS. THE BOXES SHALL BE SUITABLE FOR APPLICATIONS REQUIRING MOUNTING ON A WALL OR CEILING. THE COVER SHALL BE VANDAL RESISTANT AND INCORPORATE A RECESSED GASKET AND THE COVER ATTACHING SCREWS SHOULD BE OUTSIDE THE SEALING/GASKETED AREA TO PREVENT MOISTURE AND DUST INGRESS. THE METAL BOXES SHALL BE A MINIMUM NOMINAL SIZE OF 6"X6"X4" DEEP AND A MAXIMUM NOMINAL SIZE OF 8"X8"X6" DEEP AND ABLE TO ACCEPT THE CONDUITS AS SIZED ON THE PLANS. CONTRACTOR SHALL SEAL OFF ALL INGRESS/EGRESS OF CONDUITS THAT ENTER/EXIT THE BOX.

DOLING TRAIL
PEDESTRAIN UNDERPASS

I-44 WIDENING
JSU0076 & JST0088B

LIGHTING PLAN
SHEET 17 OF 17

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED
8/19/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	232

COUNTY
GREENE

JOB NO.
JSU0076, JBI3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

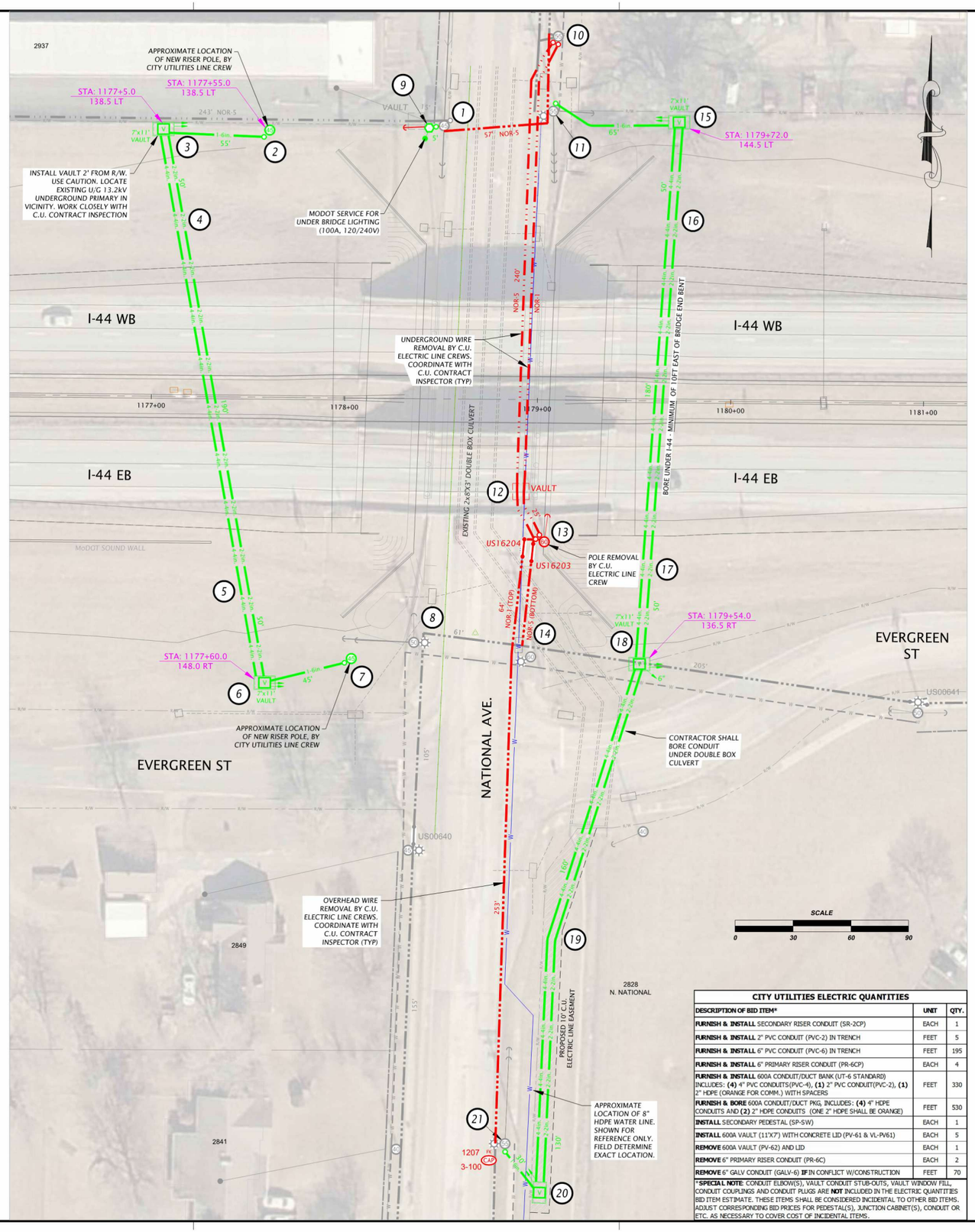
BRIDGE NO.

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



MISSOURI ONE CALL SYSTEM, INC.
800 DIAL-RITE (347-4827)
STOP! CALL BEFORE YOU DIG

EXISTING
INSTALL
REMOVE
REPLACE or TRANSFER
NOTE TO G.I.S. DEPT.

CONTRACTOR UNDERGROUND DISTRIBUTION CONSTRUCTION
E11 ~ 7003366/8001469 ~ UGD ~ 107000/108010

1	INSTALL:	1	EACH	SR-2CP (SECONDARY RISER CONDUIT)
2	INSTALL:	1	EACH	PR-6CP
3	INSTALL:	1	EACH	PV-61 (7'x11'x6' CONCRETE VAULT)
		1	EACH	VL-PV-61 (VAULT LID)
		1	EACH	PV-C6G (6" C. THRU VAULT WINDOW)
		4	EACH	PV-C4G (4" C. THRU VAULT WINDOW)
		4	EACH	PV-C2G (2" C. THRU VAULT WINDOW)
		5	FEET	CONTRCTR (1-2" ORANGE HDPE)
		5	FEET	PVC-2
	NOTE:	CONTRACTOR SHALL INSTALL CABLE RACK ASSEMBLY. STUB OUT AND CAP SPARE 2" CONDUITS, 5 FT. MIN.		
4	INSTALL:	4	EACH	ELOC4
		2	EACH	ELOC2
5	INSTALL:	4	EACH	ELOC4
		2	EACH	ELOC2
6	INSTALL:	1	EACH	PV-61 (7'x11'x6' CONCRETE VAULT)
		1	EACH	VL-PV-61 (VAULT LID)
		1	EACH	PV-C6G (6" C. THRU VAULT WINDOW)
		4	EACH	PV-C4G (4" C. THRU VAULT WINDOW)
		4	EACH	PV-C2G (2" C. THRU VAULT WINDOW)
		5	FEET	CONTRCTR (1-2" ORANGE HDPE)
		5	FEET	PVC-2
	NOTE:	CONTRACTOR SHALL INSTALL CABLE RACK ASSEMBLY. STUB OUT AND CAP SPARE 2" CONDUITS, 5 FT. MIN.		
7	INSTALL:	1	EACH	PR-6CP
9	INSTALL:	1	EACH	SP-SW (SECONDARY PEDESTAL)
		2	EACH	P218-90V
11	INSTALL:	1	EACH	PR-6CP
12	REMOVE:	1	EACH	PV-62 (4'x11' VAULT)
		1	EACH	VL-PV-62 (VAULT LID)
13	REMOVE:	2	EACH	PR-6CP
15	INSTALL:	1	EACH	PV-61 (7'x11'x6' CONCRETE VAULT)
		1	EACH	VL-PV-61 (VAULT LID)
		1	EACH	PV-C6G (6" C. THRU VAULT WINDOW)
		4	EACH	PV-C4G (4" C. THRU VAULT WINDOW)
		4	EACH	PV-C2G (2" C. THRU VAULT WINDOW)
		5	FEET	CONTRCTR (1-2" ORANGE HDPE)
		5	FEET	PVC-2
	NOTE:	CONTRACTOR SHALL INSTALL CABLE RACK ASSEMBLY. STUB OUT AND CAP SPARE 2" CONDUITS, 5 FT. MIN.		
16	INSTALL:	4	EACH	ELOC4
		2	EACH	ELOC2
17	INSTALL:	4	EACH	ELOC4
		2	EACH	ELOC2
18	INSTALL:	1	EACH	PV-61 (7'x11'x6' CONCRETE VAULT)
		1	EACH	VL-PV-61 (VAULT LID)
		8	EACH	PV-C4G (4" C. THRU VAULT WINDOW)
		6	EACH	PV-C2G (2" C. THRU VAULT WINDOW)
		1	EACH	PV-C6G (6" C. THRU VAULT WINDOW)
		5	FEET	CONTRCTR (1-2" ORANGE HDPE)
		5	FEET	PVC-2
	NOTE:	CONTRACTOR SHALL INSTALL CABLE RACK ASSEMBLY. STUB OUT AND CAP SPARE 2" CONDUITS, 5 FT. MIN.		
19	INSTALL:	4	EACH	ELOC4
		2	EACH	ELOC2

CONTRACTOR UNDERGROUND DISTRIBUTION CONSTRUCTION
E11 ~ 7003366/8001469 ~ UGD ~ 107000/108010

20	INSTALL:	1	EACH	PV-61 (7'x11'x6' CONCRETE VAULT)
		1	EACH	VL-PV-61 (VAULT LID)
		1	EACH	PV-C6G (6" C. THRU VAULT WINDOW)
		4	EACH	PV-C4G (4" C. THRU VAULT WINDOW)
		4	EACH	PV-C2G (2" C. THRU VAULT WINDOW)
		5	FEET	CONTRCTR (1-2" ORANGE HDPE)
		5	FEET	PVC-2
	NOTE:	CONTRACTOR SHALL INSTALL CABLE RACK ASSEMBLY. STUB OUT AND CAP SPARE 2" CONDUITS, 5 FT. MIN.		
21	INSTALL:	1	EACH	PR-6CP
1-9	INSTALL:	5	FEET	PVC-2
		5	FEET	UT-524
2-3	INSTALL:	55	FEET	PVC-6 (1-6" PVC)
		55	FEET	UT-536
3-4	INSTALL:	200	FEET	PVC-4 (4-4" PVC)
		100	FEET	PVC-2 (2-2" PVC)
		50	FEET	UT-6
4-5	INSTALL:	190	FEET	UT-BORE-436 (4" HDPE)
		570	FEET	UT-BORE-4 (3-4" HDPE)
		190	FEET	UT-BORE-236 (2" HDPE)
		190	FEET	UT-BORE-2 (1-2" HDPE)
	NOTE:	BORE UNDER I-44. BORE SHALL BE MIN. OF 36" DEEP AND SHALL MEET OR EXCEED MODOT REQ'TS. REFER TO JSP.		
5-6	INSTALL:	200	FEET	PVC-4 (4-4" PVC)
		100	FEET	PVC-2 (2-2" PVC)
		50	FEET	UT-6
6-7	INSTALL:	45	FEET	PVC-6 (1-6" PVC)
		45	FEET	UT-536
10-12	REMOVE:	480	FEET	GALV-6 (2-6" GRC)
	NOTE:	ABANDON CONDUIT BELOW GRADE.		
11-15	INSTALL:	65	FEET	PVC-6 (1-6" PVC)
		65	FEET	UT-536
12-13	REMOVE:	50	FEET	GALV-6 (2-6" GRC)
	NOTE:	ABANDON CONDUIT BELOW GRADE.		
15-16	INSTALL:	200	FEET	PVC-4 (4-4" PVC)
		100	FEET	PVC-2 (2-2" PVC)
		50	FEET	UT-6
16-17	INSTALL:	180	FEET	UT-BORE-436 (4" HDPE)
		540	FEET	UT-BORE-4 (3-4" HDPE)
		180	FEET	UT-BORE-236 (2" HDPE)
		180	FEET	UT-BORE-2 (1-2" HDPE)
	NOTE:	BORE UNDER I-44. BORE SHALL BE MIN. OF 36" DEEP AND SHALL MEET OR EXCEED MODOT REQ'TS. REFER TO JSP.		
17-18	INSTALL:	200	FEET	PVC-4 (4-4" PVC)
		100	FEET	PVC-2 (2-2" PVC)
		50	FEET	UT-6
18-19	INSTALL:	160	FEET	UT-BORE-436 (4" HDPE)
		480	FEET	UT-BORE-4 (3-4" HDPE)
		160	FEET	UT-BORE-236 (2" HDPE)
		160	FEET	UT-BORE-2 (1-2" HDPE)
	NOTE:	BORE MIN. OF 12" BELOW STORM WATER STRUCTURE.		
19-20	INSTALL:	520	FEET	PVC-4 (4-4" PVC)
		260	FEET	PVC-2 (2-2" PVC)
		130	FEET	UT-6
20-21	INSTALL:	30	FEET	PVC-6 (1-6" PVC)
		30	FEET	UT-536

GENERAL NOTES:

1 CITY UTILITIES CONTACTS:
**** ELECTRIC CONDUIT INSPECTION: 417-450-7347 ****
**** CONTACT 24 HOURS PRIOR TO INSPECTIONS AND RECEIVING C.U. MATERIAL ****
ENGINEERING: ERIC COCHRAN, ELECTRIC LINE ENGINEERING, 417-831-8612

2 ALL CONTRACTOR WORK SHALL BE DONE IN COMPLIANCE WITH C.U. SPECIFICATIONS. C.U. ELECTRIC DISTRIBUTION CONSTRUCTION STANDARDS AND HOW-TO VIDEOS CAN BE FOUND AT https://www.cityutilities.net/business/construction/ OR SCAN QR CODE.

3 C.U. ELECTRIC LINE ENGINEERING DRAWINGS ARE DIAGRAMMATIC AND SHOULD NOT BE SCALED.

4 C.U. ELECTRIC SYMBOLS LEGEND CAN BE FOUND IN "GENERAL SPECIFICATIONS" SECTION OF C.U. ELECTRIC DISTRIBUTION CONSTRUCTION STANDARDS.

5 C.U. WILL FURNISH RISER STAND-OFF BRACKETS, JUNCTION CABINET(S), CONCRETE VAULTS AND LIDS (600A), SECONDARY PEDESTAL(S), E-LOC(S), RGS TO PVC ADAPTER(S), AND BELL END(S) FOR CONTRACTOR INSTALLATION. CONTRACTOR SHALL FURNISH ALL TRENCH BACKFILL MATERIAL. CONTRACTOR SHALL LOAD & TRANSPORT C.U.-FURNISHED MATERIAL FROM THE C.U. STOREROOM AT 742 N. BELCREST. THE STOREROOM IS TYPICALLY OPEN FROM 9 AM TO 3 PM. AT THE STOREROOM, THE CONTRACTOR WILL NEED TO REFERENCE THE SIX DIGIT PROJECT NUMBER FOR "CONDUIT BY OTHERS", AS SHOWN IN THE TITLE BLOCK OF THIS SHEET.

6 CONTRACTOR SHALL TRENCH AS INDICATED IN NOTES, AND/OR BORE STREETS, DRIVEWAYS, PARKING LOTS, ETC. AS REQ'D.

7 CONTRACTOR SHALL PRIMER ALL PVC-PVC CONNECTIONS PRIOR TO CEMENTING.

8 CONTRACTOR SHALL INSTALL A PULL STRING IN ALL CONDUITS TO ENSURE THE INTEGRITY OF THE CONDUIT SYSTEM.

9 IF C.U. ENCOUNTERS PROBLEMS WITH THESE FACILITIES DURING THE INITIAL INSTALLATION OF CABLES, ELBOWS, ETC., CONTRACTOR SHALL REPAIR/REPLACE CONDUIT SYSTEM, TRANSFORMER PAD, JUNCTION BOX, ETC. PER C.U. REQUIREMENTS.

10 CONTRACTOR SHALL CONTACT C.U. PRIOR TO BACKFILLING TRENCH. CONTRACTOR MAY BE REQUIRED TO EXPOSE CONDUIT INFRASTRUCTURE TO VERIFY SIZE, DEPTH, ETC. IF TRENCH IS BACKFILLED PRIOR TO INSPECTION.

11 IN LIEU OF PVC CONDUIT, HIGH DENSITY POLYETHYLENE CONDUIT (HDPE) SDR-11 AND FITTINGS MAY BE SUBSTITUTED FOR CONDUIT SPECIFIED IN NOTES (EXCLUDING RISERS). CONTRACTOR SHALL FURNISH ALL POLYETHYLENE CONDUIT MATERIAL AND C.U.-APPROVED FITTINGS. PIPE SHALL BE BLACK PIPE WITH RED STRIPE. CONTRACTOR SHALL GET APPROVAL FROM INSPECTOR BEFORE SUBSTITUTION OF PVC CONDUIT. ANY ADDITIONAL COST INCURRED BY THE USE OF HDPE PIPE SHALL BE BORNE BY THE CONTRACTOR. A BORING LOG SHALL BE PROVIDED TO C.U. INSPECTOR FOR ALL ELECTRICAL CONDUIT BORING.

12 WHERE CONSTRUCTION NOTES STATE THAT THE CONTRACTOR MAY ABANDON CONDUIT BELOW GRADE, THE INTENT IS THAT IT MAY BE ABANDONED BELOW GRADE, BUT ONLY IF NOT IN CONFLICT WITH THE NEW CONSTRUCTION. CONTRACTOR SHALL REMOVE UNUSED CONDUIT THAT IS IN CONFLICT WITH NEW CONSTRUCTION.

CITY UTILITIES ELECTRIC QUANTITIES

DESCRIPTION OF BID ITEM*	UNIT	QTY.
FURNISH & INSTALL SECONDARY RISER CONDUIT (SR-2CP)	EACH	1
FURNISH & INSTALL 2" PVC CONDUIT (PVC-2) IN TRENCH	FEET	5
FURNISH & INSTALL 6" PVC CONDUIT (PVC-6) IN TRENCH	FEET	195
FURNISH & INSTALL 6" PRIMARY RISER CONDUIT (PR-6CP)	EACH	4
FURNISH & INSTALL 600A CONDUIT/DUCT BANK (UT-6 STANDARD) INCLUDES: **(4)** 4" PVC CONDUITS(PVC-4), **(1)** 2" PVC CONDUIT(PVC-2), **(1)** 2" HDPE (ORANGE FOR COMM.) WITH SPACERS	FEET	330
FURNISH & BORE 600A CONDUIT/DUCT PKG, INCLUDES: **(4)** 4" HDPE CONDUITS AND **(2)** 2" HDPE CONDUITS (ONE 2" HDPE SHALL BE ORANGE)	FEET	530
INSTALL SECONDARY PEDESTAL (SP-SW)	EACH	1
INSTALL 600A VAULT (11'X7') WITH CONCRETE LID (PV-61 & VL-PV61)	EACH	5
REMOVE 600A VAULT (PV-62) AND LID	EACH	1
REMOVE 6" PRIMARY RISER CONDUIT (PR-6C)	EACH	2
REMOVE 6" GALV CONDUIT (GALV-6) **IF** IN CONFLICT W/CONSTRUCTION	FEET	70

* **SPECIAL NOTE**: CONDUIT ELBOW(S), VAULT CONDUIT STUB-OUTS, VAULT WINDOW FILL, CONDUIT COUPLINGS AND CONDUIT PLUGS ARE **NOT** INCLUDED IN THE ELECTRIC QUANTITIES BID ITEM ESTIMATE. THESE ITEMS SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS. ADJUST CORRESPONDING BID PRICES FOR PEDESTAL(S), JUNCTION CABINET(S), CONDUIT OR ETC. AS NECESSARY TO COVER COST OF INCIDENTAL ITEMS.

CITY UTILITIES ELECTRIC PLAN SHEET 1 OF 1

ELECTRIC LINE CONSTRUCTION					
1/4 SEC, SEC-TWN-RNG: **NW, 06-29-21**		☑ LOCATES REQD			
CONSTRUCTION: ☐ OVERHEAD ☑ UNDERGROUND		☐ CUSTOMER TREE TRIM			
MAXIMUM VOLTAGE: ☑ 0V ☐ 120V ☐ 240V ☐ 7.62kV ☐ 13.2kV ☐ 69kV ☐ 161kV ☐ 345kV		☐ CU TREE TRIM			
		☐ SPRINGNET - WORK REQD			
SUB/FEEDER(S): **NOR-1** HOT LINE TAG AVAILABLE: ☐		☐ CATV - WORK REQD			
SUB/FEEDER(S): **NOR-5** HOT LINE TAG AVAILABLE: ☐		☐ PHONE - WORK REQD			
CREW LEADER:		☑ **MoDOT** PERMIT REQD			
COMPLETION DATE:		☐ EASEMENT REQD			

PROJECT NUMBERS			
WORK TYPE	OH	UG	PROJ
TRANSMISSION			
DISTRIBUTION			
CONDUIT (BY OTHERS)		7003366 8001469	ELOC04
STREETLIGHT			
OTHER			

STATE OF MISSOURI
R. ERIC COCHRAN
NUMBER E-028959
07-24-24
PROFESSIONAL ENGINEER

ENGINEER: ERIC COCHRAN
LICENSE NO.: E-28959

DATE: **7-24-24**

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	E1

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

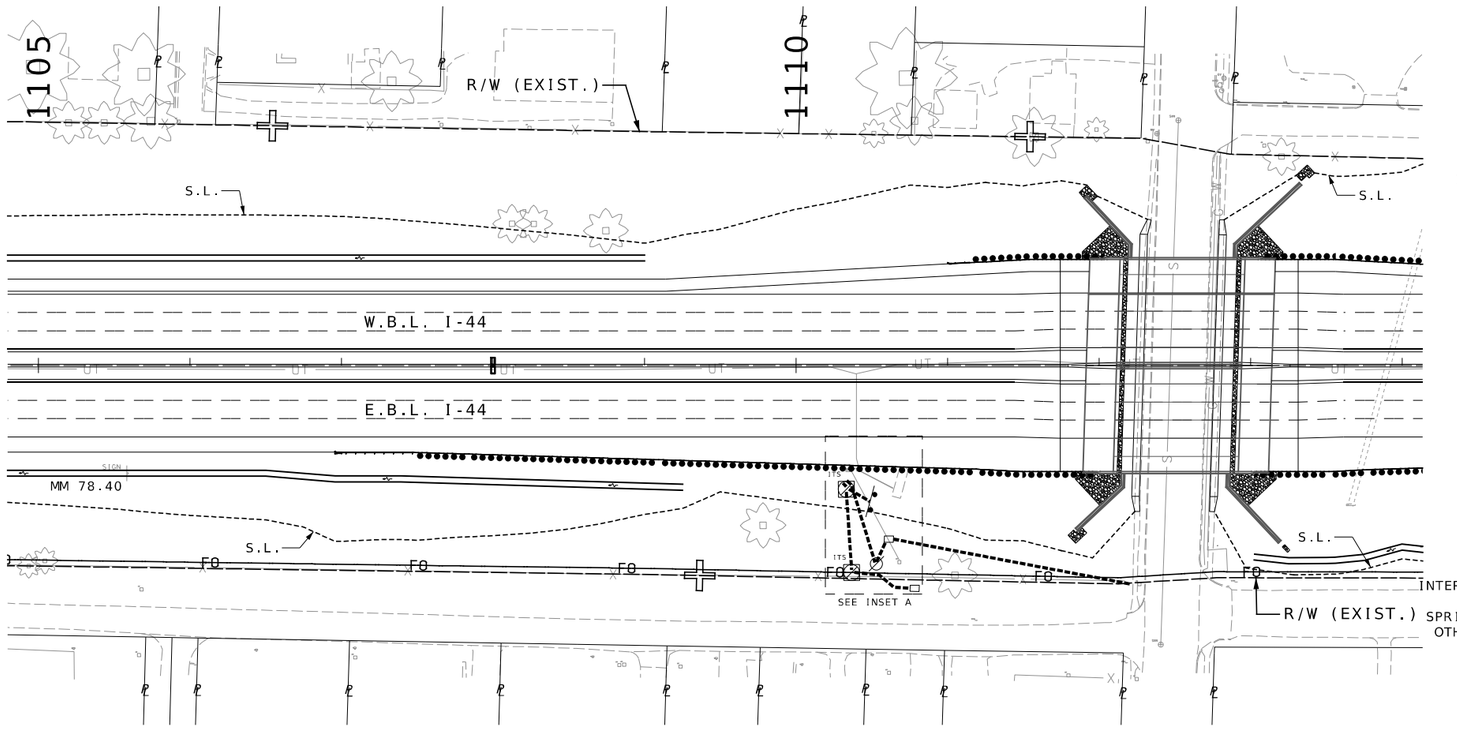
NATIONAL AVE AND EVERGREEN ST.

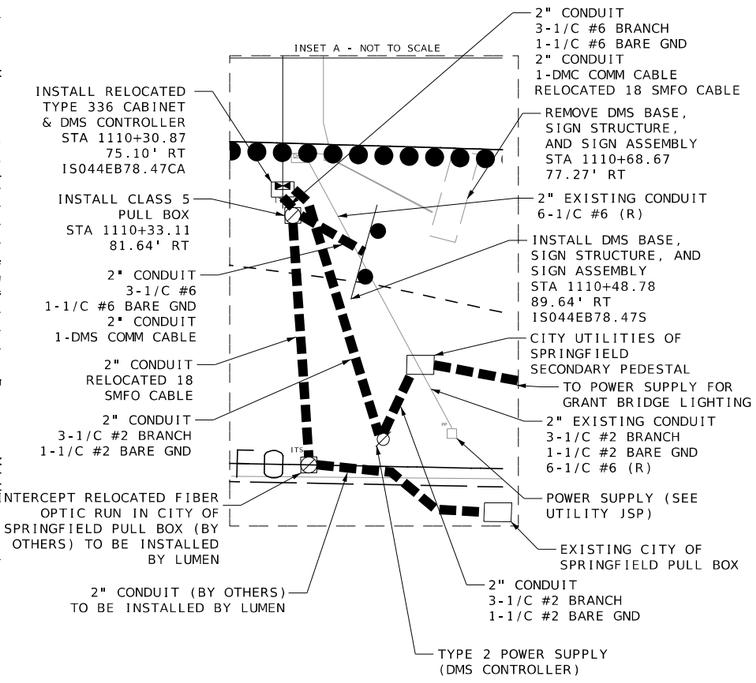
UNDERGROUND CONDUIT AND INFRASTRUCTURE FOR C.U. FOR MoDOT BRIDGE WIDENING

DESIGNATION NO.:	240044	PLOT DATE:	7-24-24
FED. AID NO.:		SCALE:	1" = 30'
DRAWING NO.:	92213	MAP NO.:	NE-G03
		SHEET:	1 OF 1

City Utilities
Connecting Our Community
301 E CENTRAL ST
SPRINGFIELD, MO. 65802
417-831-8000

DESIGNED: COCHRAN
DRAWN: COCHRAN
REVIEWED/APPROVED BY: LINDSEY





SCALE
0 50 100 150

ITS LEGEND	
	CONTROLLER
	CONTROLLER (EXISTING)
	POWER SUPPLY
	DYNAMIC MESSAGE BOARD (DMS)
ITS	ITS PULL BOX TYPE 5
	CONDUIT TRENCHED

1-44 EASTBOUND MM 78.47 (IS044EB78.47S)

1. REPLACE EXISTING DMS WITH CONTRACTOR FURNISHED COLOR HIGH RESOLUTION DMS. REPLACE DMS CONTROLLER IN EXISTING CABINET WITH NEW CONTROLLER. SEE THE SPECIAL PROVISIONS FOR MORE INFORMATION.
2. REFER TO DMS STRUCTURAL DETAIL SHEETS FOR INFORMATION ON MOUNTING THE DMS ON NEW POSTS.
3. PROVIDE ADDITIONAL PHASE CONDUCTOR BETWEEN POWER SUPPLY PEDESTAL AND DMS CONTROL CABINET FOR 120/240V 3W+G FEEDER IN LIEU OF EXISTING 120V 2W+G FEEDER.
4. JACKETED 0.10" THHN SOLID BLUE LOCATOR WIRE SHALL BE PLACED IN ALL UNDERGROUND NON-METALLIC CONDUITS BONDED TO GROUNDING RODS WITHIN A PULL BOX. APPROVED LOCATOR WIRE SHALL BE MOUNTED TO THE SIDE WALL OF EACH PULL BOX. TRACER WIRE IS SUBSIDIARY TO THE CONDUIT AND PULL BOX PAY ITEMS.
5. EXISTING DMS IS BEING SERVED BY CITY OF SPRINGFIELD 18 SMFO CABLE. THIS EXISTING 18 SMFO CABLE IS TO BE REMOVED AND REUSED IN NEW CONDUIT TO CONNECT TO THE NEW DMS CONTROLLER. REFER TO UTILITY JSP FOR DETAILS.

I-44 DMS DETAILS

I-44 WIDENING JSU0076 & JST0088B

DMS PLAN SHEET 1 OF 5

STATE OF MISSOURI
JOHN HERRMAN
NUMBER PE-2015000556
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE PREPARED 8/19/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	233

COUNTY: GREENE

JOB NO. JSU0076, JBI3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

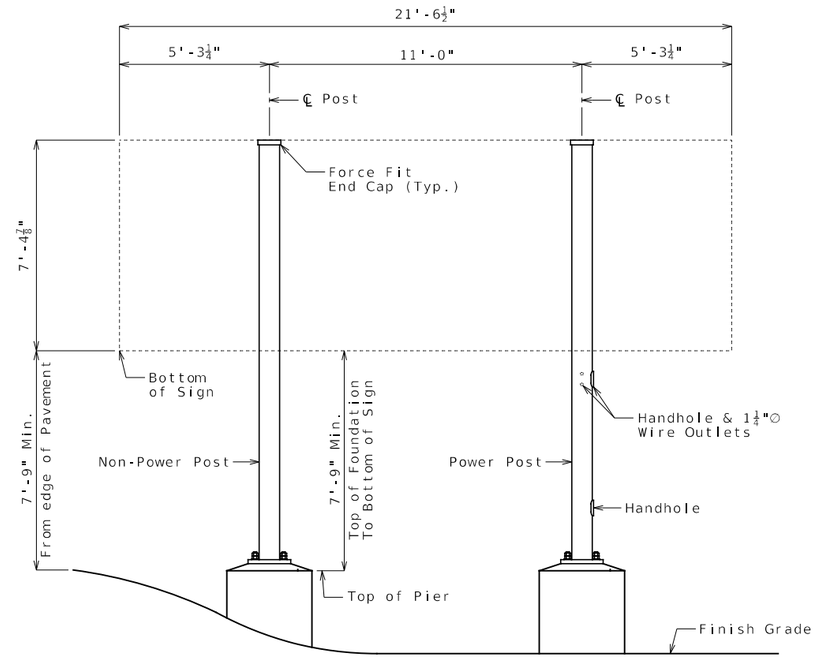
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

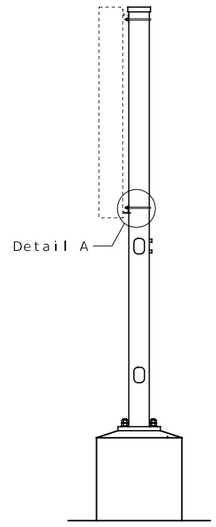
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0181667\233_DMS_JSU0076_I50.dgn 10:13:24 AM 8/19/2024



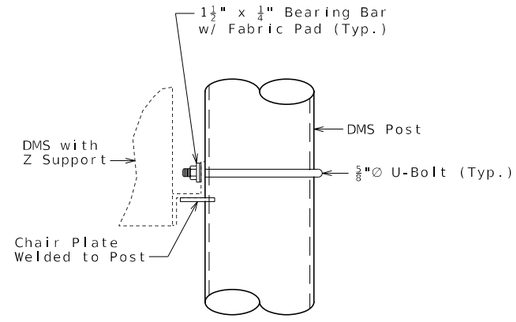
ELEVATION



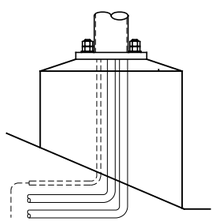
SIDE VIEW

DISCLAIMER

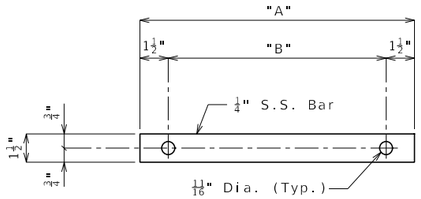
The Professional whose signature and personal seal appear hereon assumes responsibility only for what appears on this page, and disclaims (pursuant to Section 327.411 RSMO) specification, estimates, reports, or other documents or instruments not sealed by the undersigned professional relating to or intended to be used for any part or parts of the project to which this page refers.



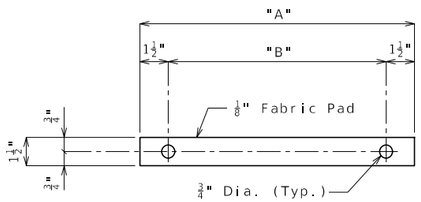
DETAIL A
Bottom Connection Shown
(Top Connection Similar but without Chair Plate)



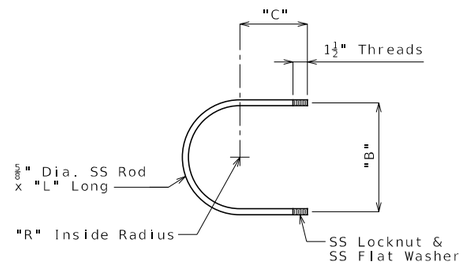
GROUNDING & CONDUIT DETAIL



U-BOLT BEARING BAR



FABRIC PAD



U-BOLT

DMS MOUNTING HARDWARE					
PIPE SIZE	A	B	C*	L*	R
8" STD. PIPE	12⅜"	9⅜"	6"	2'-2¾"	4⅜"

* Confirm U-Bolt lengths are compatible with selected DMS

Detailed: Jun. 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

I-44 DMS DETAILS - JSU0076 & JST0088B

TYPICAL DMS STRUCTURE
SHEET 2 OF 5

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	234

COUNTY
GREENE

JOB NO.
JSU0076, J8P3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0178930\234_DMS_JSU0076_I1.dgn 4:19:40 PM 8/16/2024

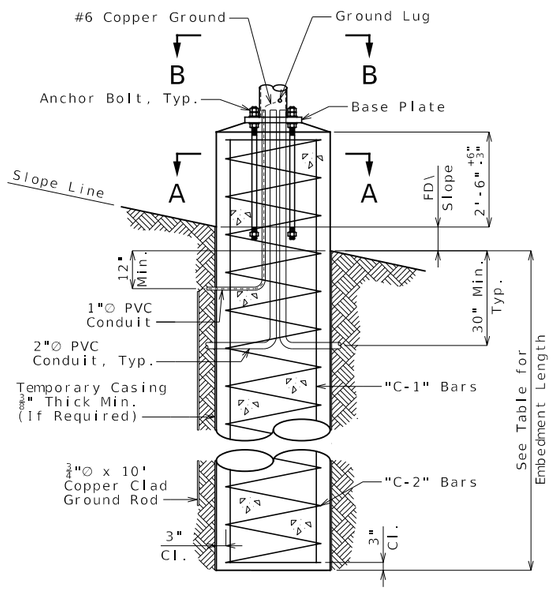
SCHEDULE OF NEW DMS POLE FOUNDATION

LOCATION	EMBEDMENT LENGTH	FOUNDATION DIAMETER FD	TYPE "C-1"		*TYPE "C-2"			REMARKS
			NO. & SIZE	LENGTH	NO. & SIZE	RD	LENGTH	
Sta. 1110+45 Offset 89' Rt.	9'-0"	3'-0"	11-#9	12'-1"	1-#4	2'-6"	118'-2"	If rock is encountered shallower than the plan foundation length, a Rock Socket will be used. The Rock Socket shall be drilled to the shallower of: Design Depth, 3.5' (Hard Rock) or 5.0' (Poor Rock).

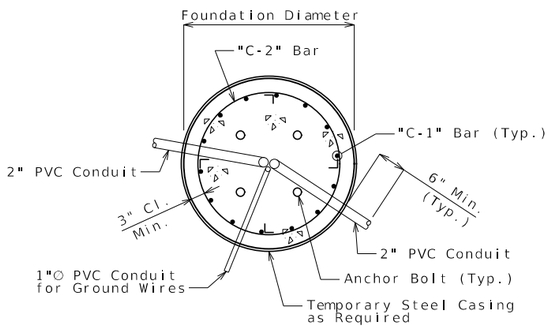
* Four angle or channel spacers are required for each spiral. Spacers are to be placed on inside of spirals. Length and weight of spirals do not include splices or spacers.

POLE BASE PLATE ASSEMBLY AND ANCHOR BOLTS

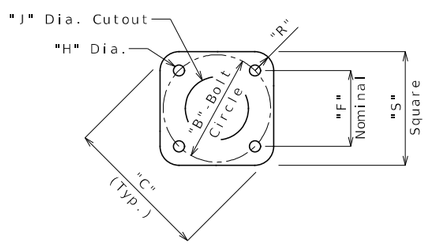
LOCATION	POLE HEIGHT	BASE PLATE								ANCHOR BOLTS		
	L	B	C	F	H	J	S	R	T	P	SIZE DIA. x LENGTH	E
Sta. 1110+45 Offset 89' Rt.	15'-1 7/8"	17"	23"	12"	1 3/4"	8 11/16"	18"	3"	1 3/4"	5"	1 1/2" x 3'-6"	8"



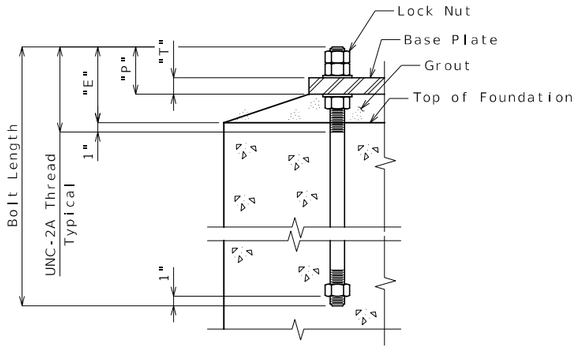
TYPICAL DMS POLE FOUNDATION



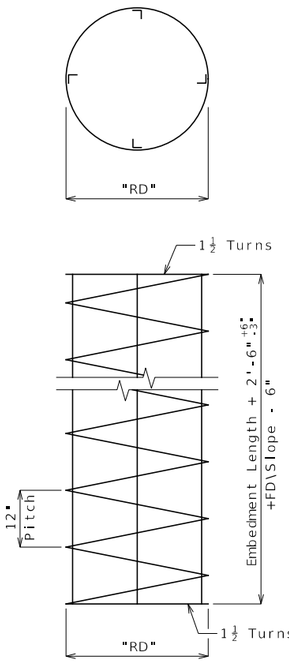
SECTION A-A



SECTION B-B
Base Plate



ANCHOR BOLT DETAIL



TYPE "C-2" SPIRAL DETAIL

NOTES:

Two foundations required at each location.

Integrity testing on completed drilled shafts will not be required.

Temporary steel casing may be required in each shaft to prevent soil collapse.

All foundations shall be grounded. Ground wire shall be exothermically welded to ground rod.

If the ground rod cannot be installed vertically without damage, the ground rod may be installed at 45 degrees (max.) from vertical.

All conduit and anchor bolts shall be rigidly installed before the concrete is placed. Anchor bolts shall be spaced by means of a templete. The center of which shall coincide with the center of the foundation.

Anchor bolts shall conform to the requirements of ASTM F1554, Grade 36 and be galvanized per ASTM A153.

DISCLAIMER

The Professional whose signature and personal seal appear hereon assumes responsibility only for what appears on this page, and disclaims (pursuant to Section 327.411 RSMO) specification, estimates, reports, or other documents or instruments not sealed by the undersigned professional relating to or intended to be used for any part or parts of the project to which this page refers.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	235

COUNTY GREENE

JOB NO. JSU0076, J8P3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: Jun. 2024
Checked: Jun. 2024

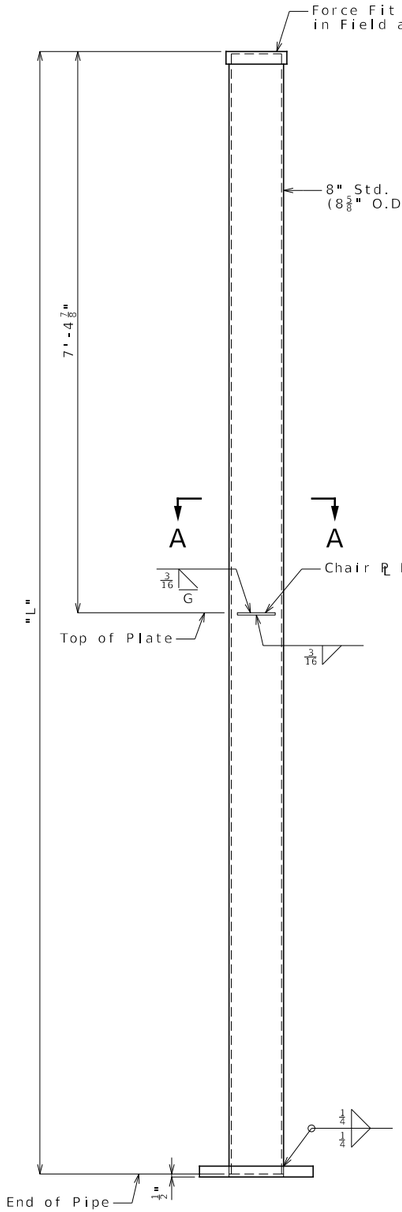
Note: This drawing is not to scale. Follow dimensions.

I-44 DMS DETAILS - JSU0076 & JST0088B

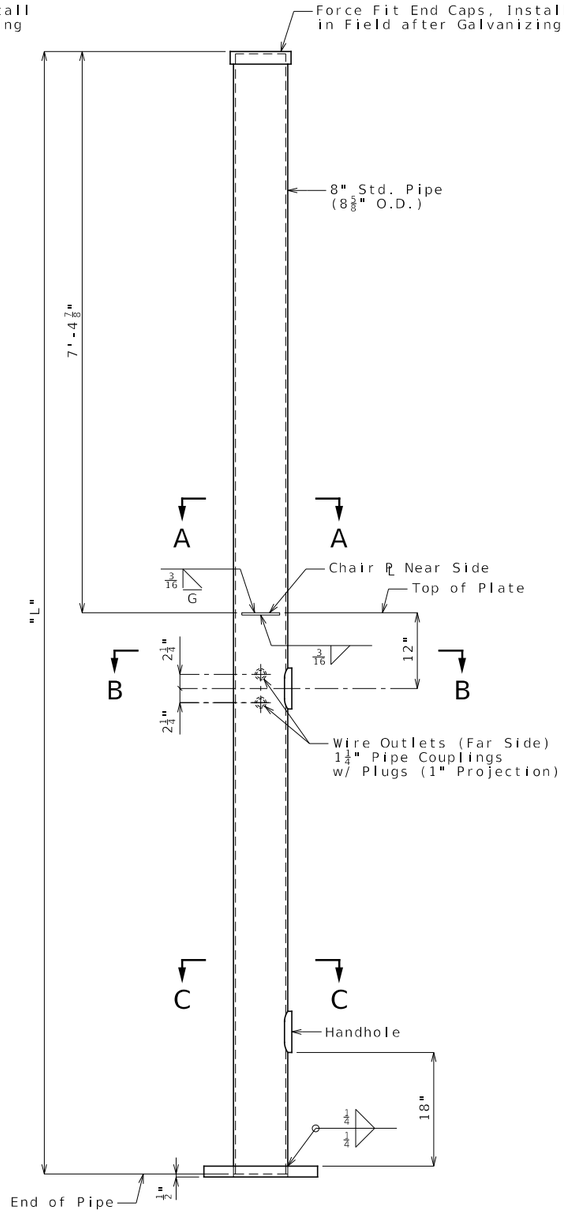
DMS SUPPORT FOUNDATION
SHEET 3 OF 5

c:\bmcd_lib\pw_connect\trn\d0178930\235_DMS_JSU0076_I1.dgn 4:19:51 PM 8/16/2024

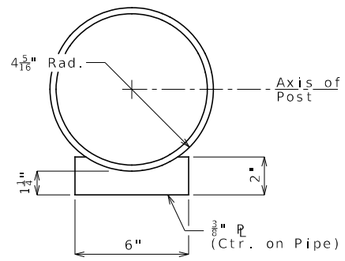
DISCLAIMER
The Professional whose signature and personal seal appear hereon assumes responsibility only for what appears on this page, and disclaims (pursuant to Section 327.411 RSMO) specification, estimates, reports, or other documents or instruments not sealed by the undersigned professional relating to or intended to be used for any part or parts of the project to which this page refers.



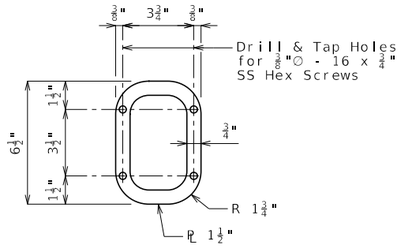
PIPE POST
(NON-POWER)



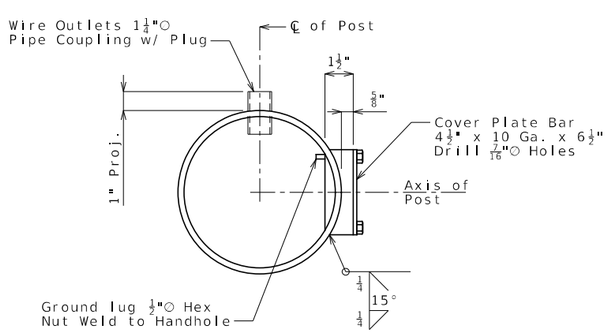
PIPE POST
(POWER)



SECTION A-A
CHAIR PLATE



HANDHOLE DETAIL



SECTION B-B
UPPER HANDHOLE
(Section C-C Similar but without Couplings)

NOTES:

Pipe shall conform to the requirements of ASTM A53, Grade B.

Other steel shall conform to the requirements of ASTM A709, Grade 36.

Galvanize steel after fabrication per ASTM A123.

Welding shall be done in accordance with AWS D1.1.

Detailed: Jun. 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

I-44 DMS DETAILS - JSU0076 & JST0088B

DMS SUPPORT
SHEET 4 OF 5

c:\bmcd_lib\pw_connect\trn\d0178930\236_DMS_JSU0076_I1.dgn 4:20:00 PM 8/16/2024

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	236

COUNTY
GREENE

JOB NO.
JSU0076, J8P3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

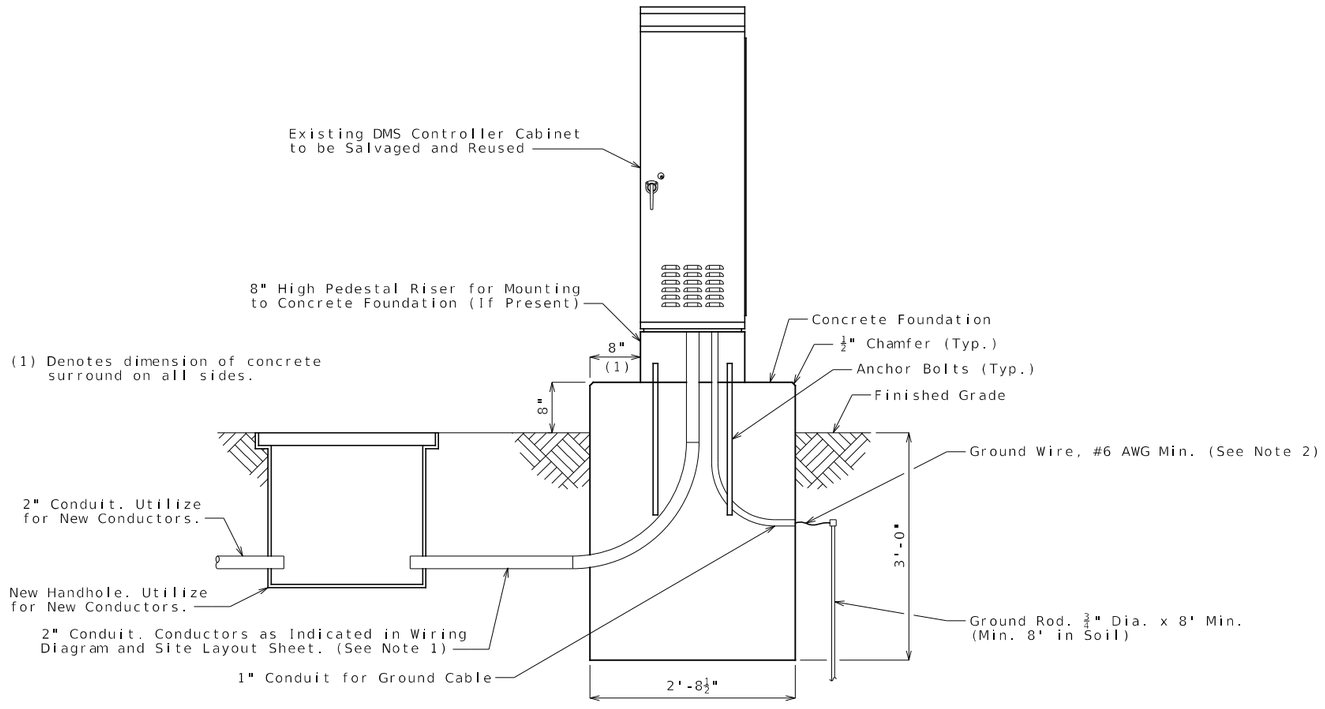
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

DISCLAIMER

The Professional whose signature and personal seal appear hereon assumes responsibility only for what appears on this page, and disclaims (pursuant to Section 327.411 RSMO) specification, estimates, reports, or other documents or instruments not sealed by the undersigned professional relating to or intended to be used for any part or parts of the project to which this page refers.



DMS CONTROLLER CABINET BASE DETAIL

NOTES:

1. Conduit shall transition to rigid metal conduit prior to 90 degree elbow up into DMS controller cabinet.
2. Grounding electrode conductor shall be exothermically welded to ground rod, connected to incoming equipment grounding conductor, and bonded to equipment and cabinet as required by NEC.
3. See Special Provisions for further info.
4. Approximate location of DMS controller cabinet is Sta. 1010+30 Offset 80' Rt.

Detailed: Jun. 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

I-44 DMS DETAILS - JSU0076 & JST0088B

DMS CONTROLLER CABINET BASE
SHEET 5 OF 5

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
8/16/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	237

COUNTY
GREENE

JOB NO.
JSU0076, J8P3044C, & JST0088B

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

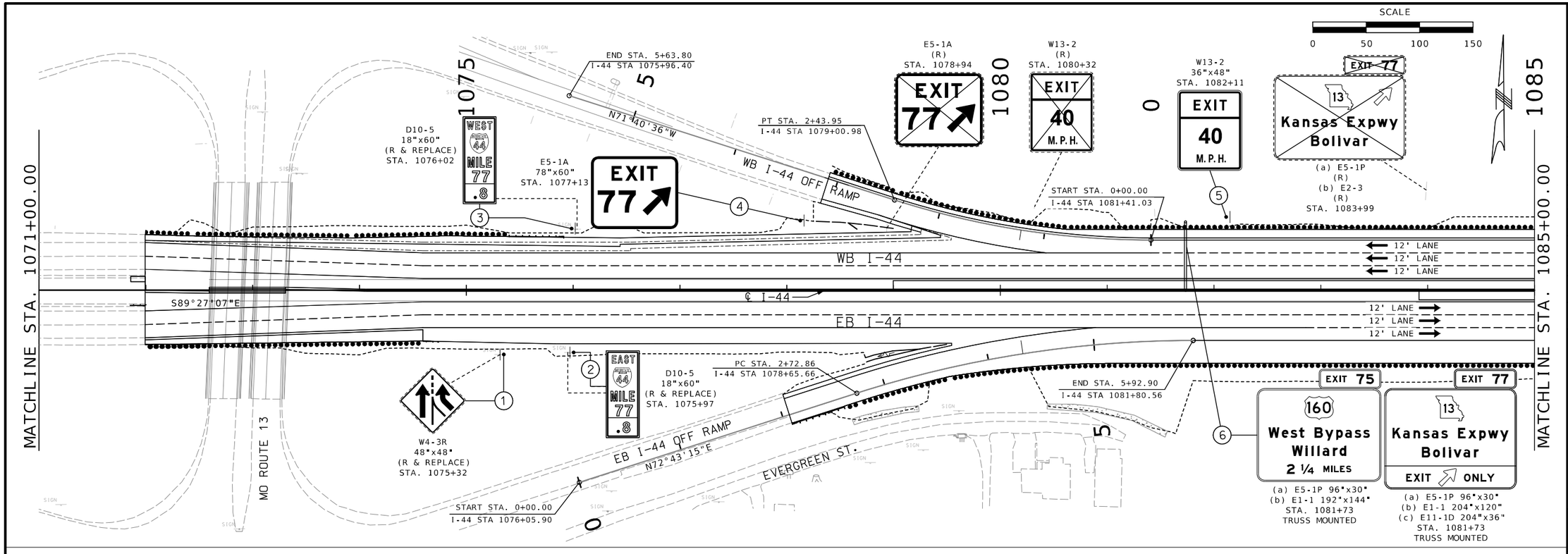
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0178930\237_DMS_JSU0076_I1.dgn 4:20:09 PM 8/16/2024



STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	238

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE | REV.

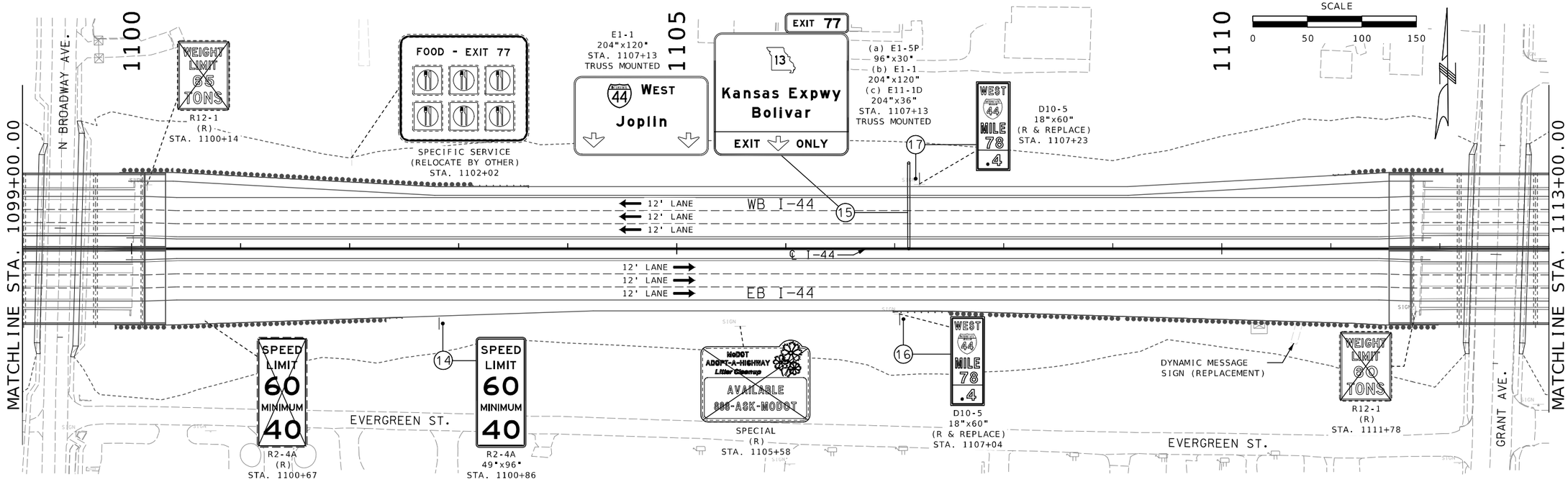
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076 & JST0088B

SIGNING PLAN
1 OF 37

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\200_SN_JSU0076.dgn 11:50:19 AM 8/20/2024



STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2010000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
8/20/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	239

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

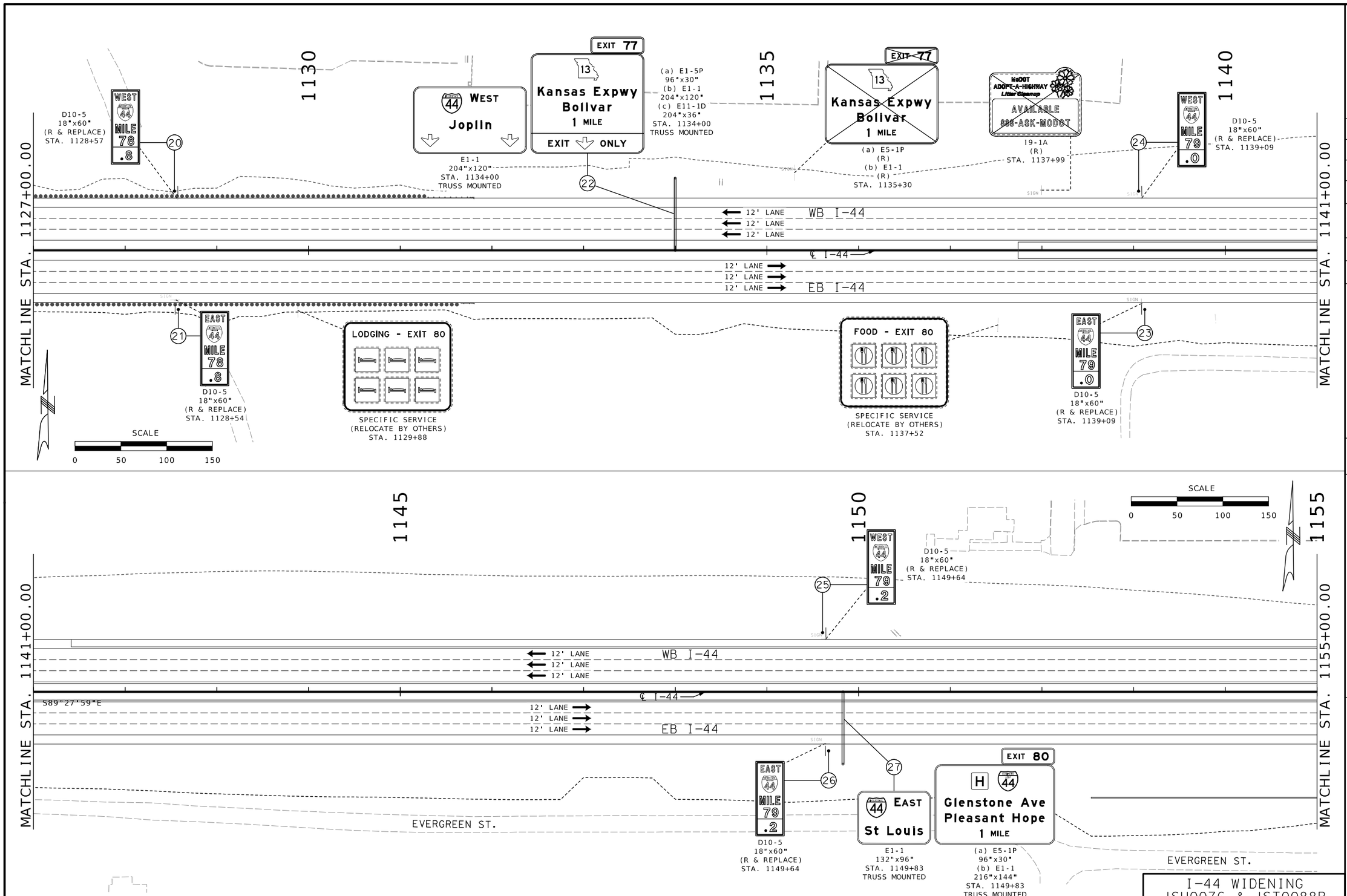
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076 & JST0088B

SIGNING PLAN
2 OF 37

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\200_SN_JSU0076.dgn 11:50:20 AM 8/20/2024



RYAN STEHN
NUMBER PE-2020000089
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	240

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

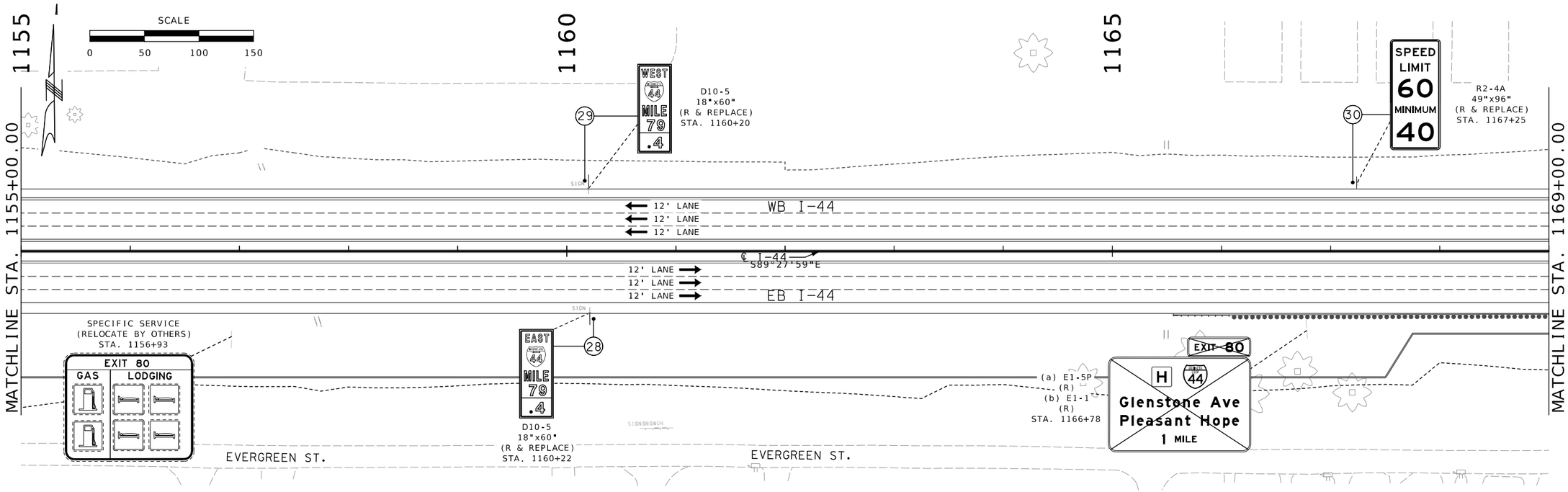
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

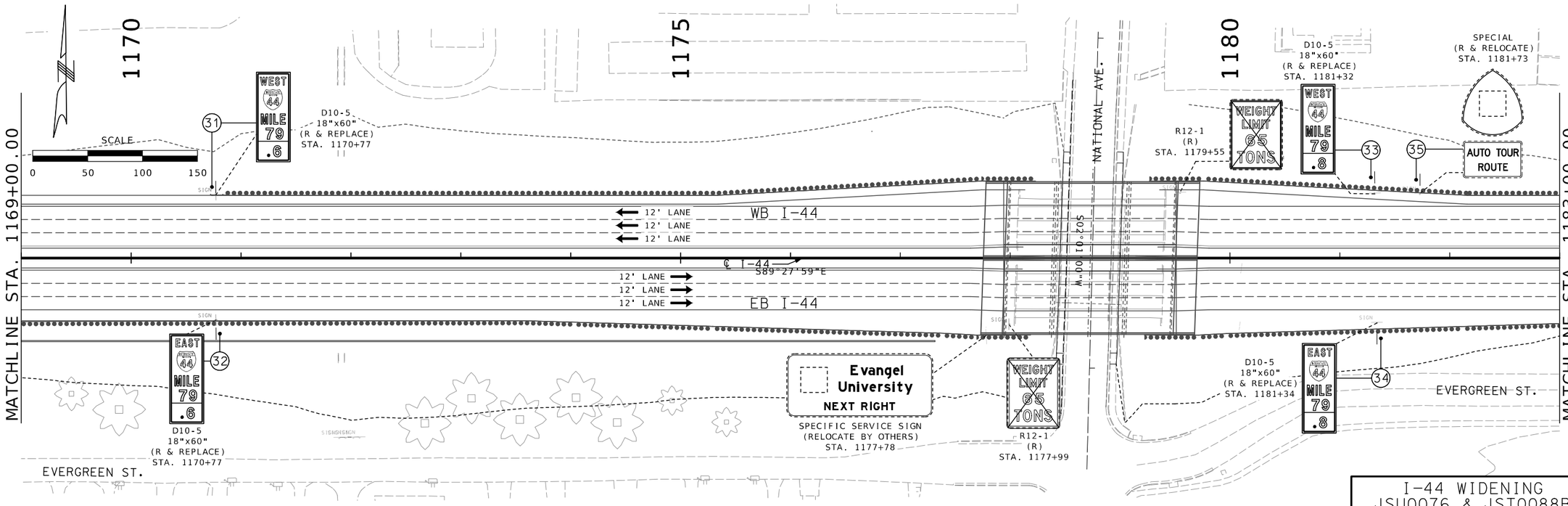
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076 & JST0088B

SIGNING PLAN
3 OF 37

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\200_SN_JSU0076.dgn 11:50:23 AM 8/20/2024





STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	241

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

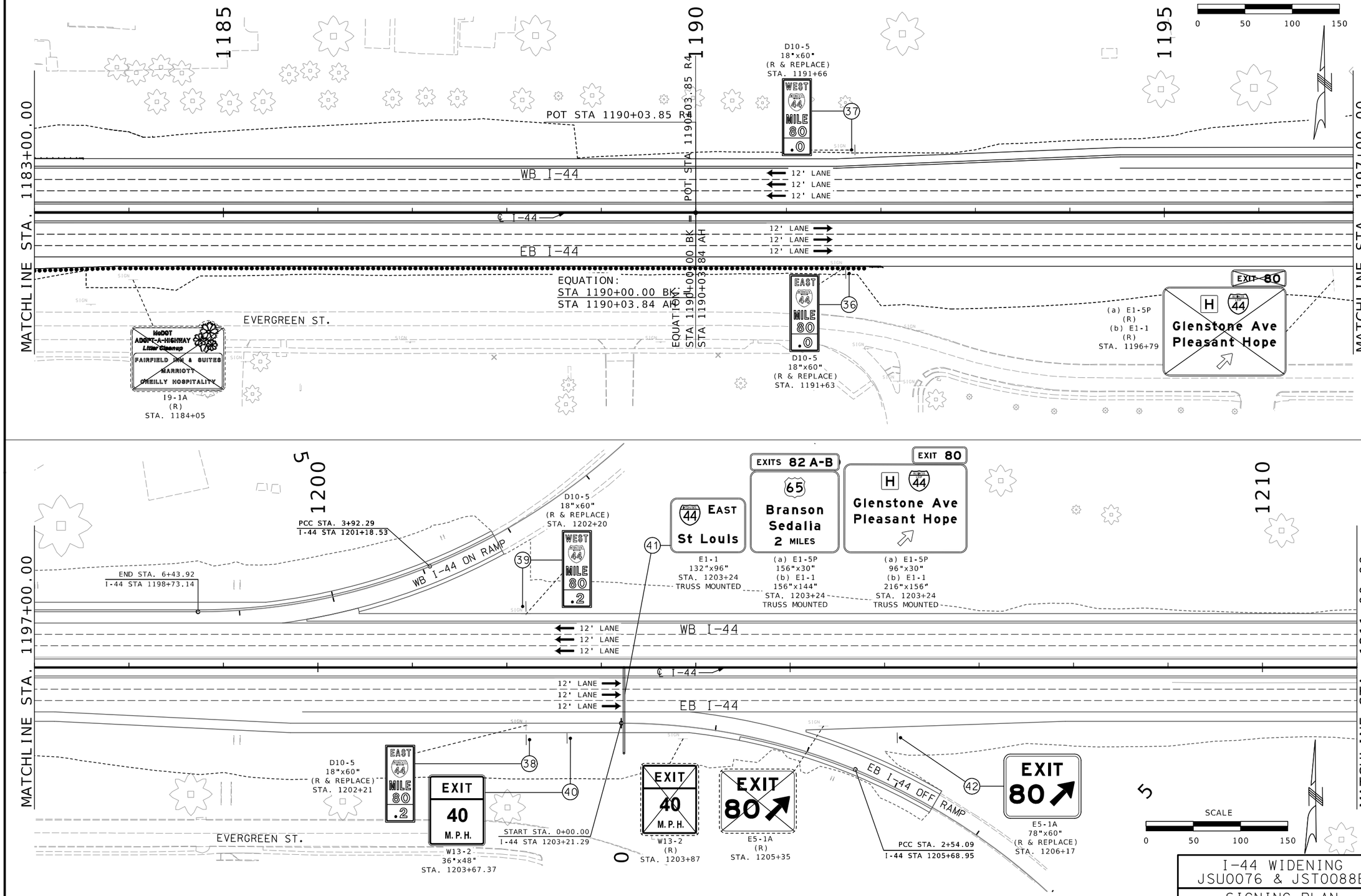
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076 & JST0088B

SIGNING PLAN
4 OF 37

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\200_SN_JSU0076.dgn 11:50:24 AM 8/20/2024



STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	8/20/2024
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	242
COUNTY	GREENE
JOB NO.	JSU0076, J8I3044C, & JST0088B
PROJECT NO.	
BRIDGE NO.	

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

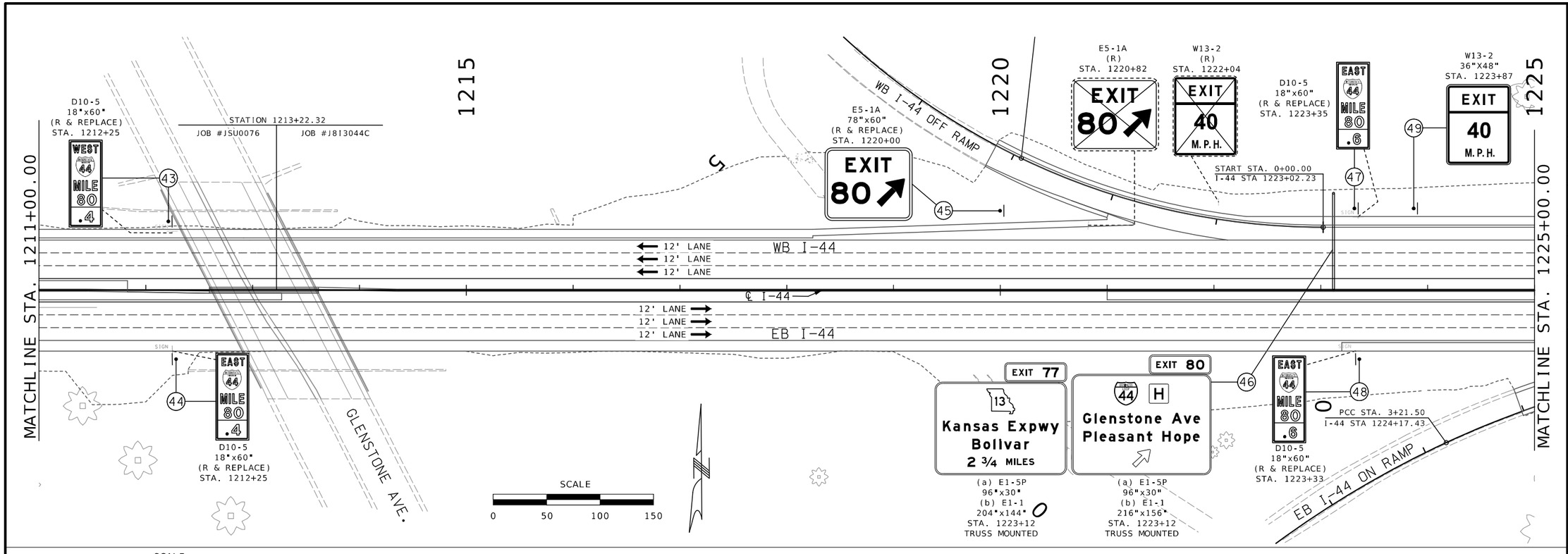
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076 & JST0088B

SIGNING PLAN
5 OF 37

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\200_SN_JSU0076.dgn 11:50:26 AM 8/20/2024



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

RYAN STEHN
NUMBER PE-2020000088
STATE OF MISSOURI
PROFESSIONAL ENGINEER

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	243

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

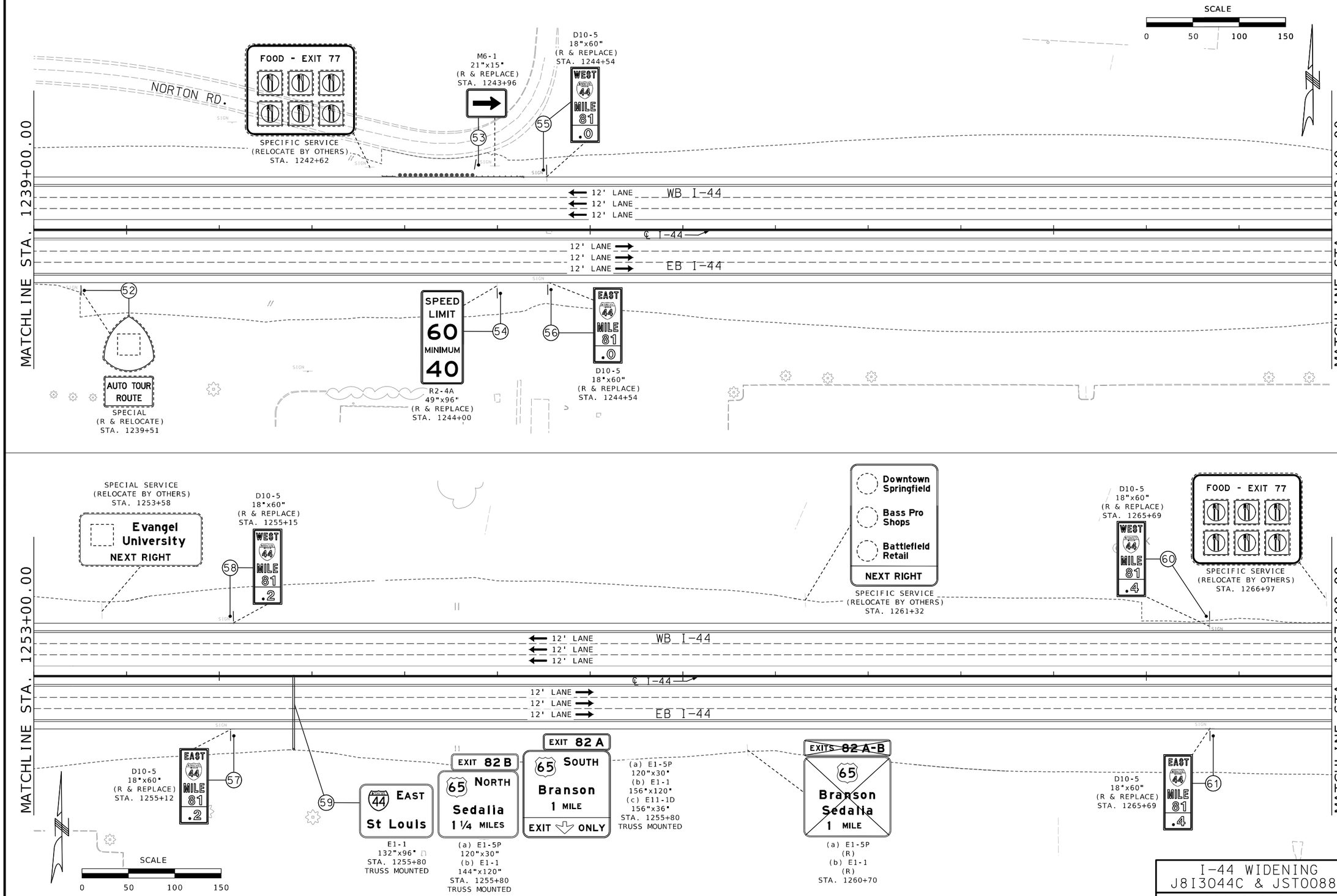
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
JSU0076, J8I3044C, & JST0088B

SIGNING PLAN
6 OF 37

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\201_SN_J8I3044C.dgn 11:50:41 AM 8/20/2024



I-44 WIDENING
J8I3044C & JST0088B

SIGNING PLAN
7 OF 37

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	244

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\201_SN_J8I3044C.dgn 11:50:42 AM 8/20/2024

MATCHLINE STA. 1267+00.00

1270

DYNAMIC MESSAGE SIGN (DND)

E1-1
132"x96"
STA. 1276+14
TRUSS MOUNTED

EXIT 80

44 H

Glenstone Ave
Pleasant Hope
1 MILE

(a) E1-5P
96"x30"
(b) E1-1
216"x144"
STA. 1276+14
TRUSS MOUNTED

1275

W4-2R
(R)
STA. 1275+25

63

WEST 44
MILE 81 .6

D10-5
18"x60"
(R & REPLACE)
STA. 1276+26

62

LANE ENDS MERGE LEFT

400 FEET

(a) W9-2L
(R)
(b) W16-2P
(R)
STA. 1279+12

1280

POT STA 1279+61.81 R5

MATCHLINE STA. 1281+00.00

12' LANE
12' LANE
12' LANE
WB I-44

℄ I-44

12' LANE
12' LANE
12' LANE
EB I-44

EAST 44
MILE 81 .6

D10-5
18"x60"
(R & REPLACE)
STA. 1276+26

64

AUTHORIZED AND EMERGENCY VEHICLES ONLY

(a) R3-4
(R)
(b) R5-11
(R)
STA. 1276+43

EQUATION:
STA 1279+56.21 BK =
STA 1279+61.80 AH

Bull Shoals Lake
NEXT RIGHT

E4-3
(R)
STA. 1280+82

SCALE
0 50 100 150

MATCHLINE STA. 1281+00.00

EXIT 80

44 H

~~Glenstone Ave~~
~~Pleasant Hope~~
~~1 MILE~~

(a) E5-1P
(R)
(b) E2-3
(R)
STA. 1281+81

1285

D10-5
18"x60"
(R & REPLACE)
STA. 1286+84

WEST 44
MILE 81 .8

66

R2-4A
49"x96"
(R & REPLACE)
STA. 1289+00

SPEED LIMIT
60
MINIMUM
40

68

1290

FOOD - EXIT 77

SPECIFIC SERVICE
(UIP)
STA. 1294+59

1295

MATCHLINE STA. 1295+00.00

12' LANE
12' LANE
12' LANE
WB I-44

℄ I-44

12' LANE
12' LANE
12' LANE
EB I-44

65

EXIT 82 B

44 EAST
St Louis

E1-1 132"x96"
STA. 1283+50
TRUSS MOUNTED

EXIT 82 B

65 NORTH
Sedalia
¾ MILE

(a) E1-5P 120"x30"
(b) E1-1 144"x120"
STA. 1283+50
TRUSS MOUNTED

EXIT 82 A

65 SOUTH
Branson
½ MILE
EXIT ONLY

(a) E1-5P 120"x30"
(b) E1-1 156"x96"
(c) E11-1D 156"x36"
STA. 1283+50
TRUSS MOUNTED

Missouri Sports Hall of Fame
NEXT RIGHT

E4-3
(R)
STA. 1284+64

67

EAST 44
MILE 77 .8

D10-5
18"x60"
(R & REPLACE)
STA. 1286+89

69

Buffalo
EXIT 82 B

E4-3
132"x60"
(R & REPLACE)
STA. 1290+84

SCALE
0 50 100 150

I-44 WIDENING
J8I3044C & JST0088B

SIGNING PLAN
8 OF 37

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	245

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION	REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

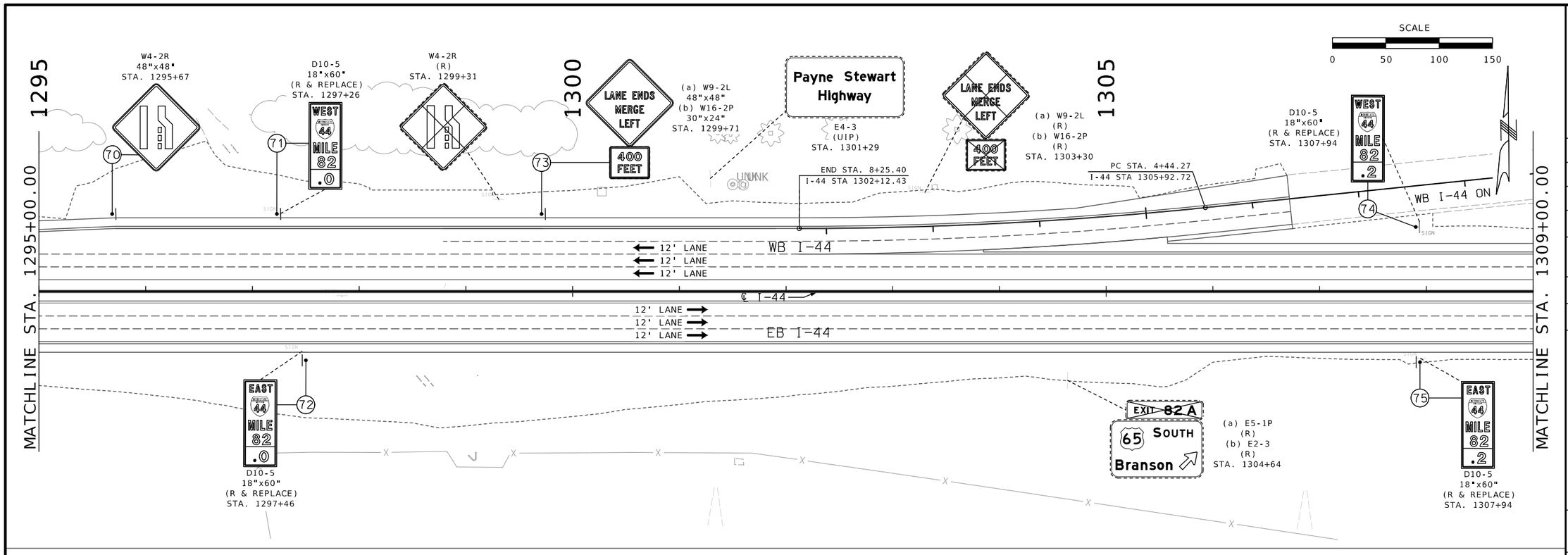
MoDOT

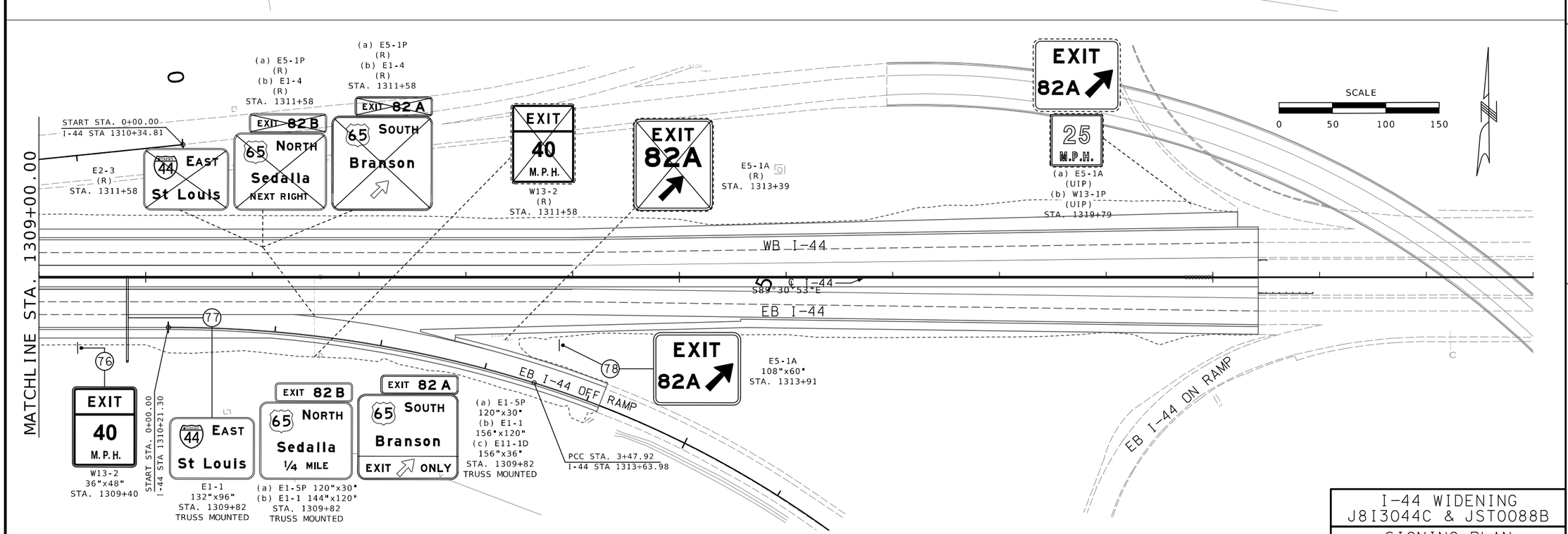
CMT

© Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\201_SN_J8I3044C.dgn 11:50:44 AM 8/20/2024





STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2012000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	246

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
J8I3044C & JST0088B

SIGNING PLAN
9 OF 37

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\201_SN_J8I3044C.dgn 11:50:46 AM 8/20/2024

EFFECTIVE: 07-01-2024

SIGNS

902 SIGNAL SIGNS TABULATED ON D-37A SHEET

SIGN NO.	SIGN SIZE	STATION	HORZ CLEAR IF NOT STD	LOCATION	SIGN DTL. SHT. NO.	CONCRETE FOOTINGS EMBEDDED ITEM NO. 9031010 CY	STRUCTURAL STEEL POSTS * POST DES NO.	POST NO.1 LF	POST NO.2 LF	POST NO.3 LF	LBS PER FT	TOTAL ITEM NO. 9031210 LBS	PIPE POSTS * PIPE SIZE IN.	POST NO.1 LF	POST NO.2 LF	LBS PER FT	TOTAL ITEM NO. 9031220 LBS	BACKING BARS ** 2" X 3/8" BARS @ 2.55 LBS PER FT NO. EACH	LGTH IN.	TOTAL LF	TOTAL LBS	U-CHANNEL POST ITEM NO. 9031250A LF	PERFORATED SQUARE STEEL TUBE 2.5 IN. POST POST NO.1 LF	POST NO.2 LF	TOTAL ITEM NO. 9031280 LF	2.25" INSERT (6 FT) ITEM NO. 9031272A EA	ANCHORS DRIVEN 7-GA. ITEM NO. 9031281A EA	CONCRETE 7-GA. ITEM NO. 9031285 EA	BREAK-AWAY ASSEMBLY ITEM NO. 9031241 EA	4" SQUARE PIPE POST POST SIZE IN.	TOTAL ITEM NO. 9031230 LF	TOTAL ITEM NO. 9031005 EA	REMARKS AND OTHER REQUIRED ITEMS
1	48"X48"	1075+32		I-44 RT		0.36						0	4	18.50		10.79	200							0								
2	18"X60"	1075+97		I-44 RT								0					0					16		16			1					
3	18"X60"	1076+02		I-44 LT								0					0					16		16			1					
4	78"X60"	1078+13		I-44 LT		0.33						0					0							0					4	17.75	1	
5	36"X48"	1082+11		I-44 LT								0					0							0								
7	18"X60"	1086+05		I-44 RT								0					0					16		16			1					
8	18"X60"	1086+08		I-44 LT								0					0					16		16			1					
9	SPECIAL	1089+60		I-44 RT								0					0					16		16			1					RELOCATE SPECIALTY SIGN ASSEMBLY
10	48"X48"	1092+27		I-44 LT		0.36						0	4	18.00		10.79	195							0								
11	48"X48"	1092+27	TBD	I-44								0					0					9		9			1					BARRIER MOUNTED SIGN
12	18"X60"	1096+57		I-44 RT								0					0					16		16			1					
13	18"X60"	1096+57		I-44 LT								0					0					16		16			1					
14	48"X96"	1100+86		I-44 RT		0.72						0	4	22.50	23.50	10.79	513							0								
16	18"X60"	1107+04		I-44 RT								0					0					16		16			1					
17	18"X60"	1107+23		I-44 LT								0					0					16		16			1					
18	18"X60"	1118+12		I-44 RT								0					0					16		16			1					
19	18"X60"	1118+13		I-44 RT								0					0					16		16			1					
20	18"X60"	1128+57		I-44 LT								0					0					16		16			1					
21	18"X60"	1128+57		I-44 RT								0					0					16		16			1					
23	18"X60"	1139+09		I-44 RT								0					0					16		16			1					
24	18"X60"	1139+09		I-44 LT								0					0					16		16			1					
25	18"X60"	1149+63		I-44 LT								0					0					16		16			1					
26	18"X60"	1149+63		I-44 RT								0					0					16		16			1					
28	18"X60"	1160+21		I-44 RT								0					0					16		16			1					
29	18"X60"	1160+21		I-44 LT								0					0					16		16			1					
30	48"X96"	1167+25		I-44 LT		0.72						0	4	21.25	21.00	10.79	456							0								
31	18"X60"	1170+77		I-44 LT								0					0					16		16			1					
32	18"X60"	1170+77		I-44 RT								0					0					16		16			1					
33	18"X60"	1181+32		I-44 LT								0					0					16		16			1					
34	18"X60"	1181+34		I-44 RT								0					0					16		16			1					
35	SPECIAL	1181+73		I-44 LT								0					0					16		16			1					RELOCATE SPECIALTY SIGN ASSEMBLY
36	18"X60"	1191+63		I-44 RT								0					0					16		16			1					
37	18"X60"	1191+66		I-44 LT								0					0					16		16			1					
38	18"X60"	1202+20		I-44 RT								0					0					16		16			1					
39	18"X60"	1202+20		I-44 LT								0					0					16		16			1					
40	36"X48"	1203+86		I-44 RT								0					0					16		16			1					
42	78"X60"	1206+17		I-44 RT		0.33						0					0							0					4	17.75	1	
43	18"X60"	1212+25		I-44 LT								0					0					16		16			1					
44	18"X60"	1212+25		I-44 RT								0					0					16		16			1					
												0					0							0		

EFFECTIVE: 07-01-2024

SIGNS (902 SIGNAL SIGNS TABULATED ON D-37A SHEET)						CONCRETE FOOTINGS EMBEDDED	STRUCTURAL STEEL POSTS *						PIPE POSTS *					BACKING BARS **				U-CHANNEL POST	PERFORATED SQUARE STEEL TUBE							4" SQUARE PIPE POST			REMARKS AND OTHER REQUIRED ITEMS
																			2" X 3/8" BARS @ 2.55 LBS PER FT					2.5 IN. POST				ANCHORS		BREAK-AWAY ASSEMBLY				
SIGN NO.	SIGN SIZE	STATION	HORZ CLEAR IF NOT STD	LOCATION	SIGN DTL. SHT. NO.	ITEM NO. 9031010	POST DES NO.	POST NO.1	POST NO.2	POST NO.3	LBS PER FT	TOTAL ITEM NO. 9031210	PIPE SIZE	POST NO.1	POST NO.2	LBS PER FT	TOTAL ITEM NO. 9031220	NO. EACH	LGTH	TOTAL	TOTAL	ITEM NO. 9031250A	POST NO.1	POST NO.2	TOTAL ITEM NO. 9031280	2.25" INSERT (6 FT) ITEM NO. 9031272A	DRIVEN 7-GA. ITEM NO. 9031281A	CONCRETE 7-GA. ITEM NO. 9031285	ITEM NO. 9031241	POST SIZE	TOTAL ITEM NO. 9031230	TOTAL ITEM NO. 9031005	
						CY		LF	LF	LF		LBS	IN.	LF	LF		LBS	EACH	IN.	LF	LBS	LF	LF	LF	LF	EA	EA	EA	EA	IN.	LF	EA	
45	78"X60"	1220+00		I-44 LT		0.33						0					0								0					4	17.50	1	
47	18"X60"	1223+32		I-44 LT								0					0						16		16			1			0	0	
48	18"X60"	1223+36		I-44 RT								0					0						16		16			1			0	0	
49	36"X48"	1223+87		I-44 LT								0					0						16		16			1			0	0	
50	18"X60"	1233+50		I-44 RT								0					0						16		16			1			0	0	
51	18"X60"	1234+00		I-44 LT								0					0						16		16			1			0	0	
52	ASSEMBLY	1239+51		I-44 RT								0					0						16		16			1			0	0	
53	21"X15"	1243+96		I-44 LT								0					0						16		16			1			0	0	
54	49"X96"	1244+00		I-44 RT		0.72						0	4	21.00	21.50	10.79	459								0						0	0	
55	18"X60"	1244+54		I-44 LT								0					0						16		16			1			0	0	
56	18"X60"	1244+54		I-44 RT								0					0						16		16			1			0	0	
57	18"X60"	1255+12		I-44 RT								0					0						16		16			1			0	0	
58	18"X60"	1255+15		I-44 LT								0					0						16		16			1			0	0	
60	18"X60"	1265+69		I-44 LT								0					0						16		16			1			0	0	
61	18"X60"	1265+69		I-44 RT								0					0						16		16			1			0	0	
63	18"X60"	1276+26		I-44 LT								0					0						16		16			1			0	0	
64	18"X60"	1276+26		I-44 RT								0					0						16		16			1			0	0	
66	18"X60"	1286+84		I-44 LT								0					0						16		16			1			0	0	
67	18"X60"	1286+89		I-44 RT								0					0						16		16			1			0	0	
68	49"X96"	1289+00		I-44 LT		0.72						0	4	21.75	22.00	10.79	473								0						0	0	
69	132"X60"	1290+84	10.85'	I-44 RT		0.34	1	16.25	14.00		9	272.25					0								0						0	0	
70	48"X48"	1295+67		I-44 LT		0.36						0	4	19.75		10.79	214								0						0	0	
71	18"X60"	1297+26		I-44 LT								0					0						16		16			1			0	0	
72	18"X60"	1297+46		I-44 RT								0					0						16		16			1			0	0	
73	ASSEMBLY	1299+71		I-44 LT		0.36						0	4	21.50		10.79	232								0						0	0	
74	18"X60"	1307+94		I-44 LT								0					0						16		16			1			0	0	
75	18"X60"	1307+94		I-44 RT								0					0						16		16			1			0	0	
76	36"X48"	1309+40		I-44 RT								0					0						16		16			1			0	0	
78	108"X60"	1313+91		I-44 RT		0.33						0					0								0					4	17.25	1	
												0					0								0						0	0

STANDARD SIGN ASSEMBLIES

SIGN NUMBER	STATION	LOCATION	TYPE: D10-5 18"X60"	E5-1A 78"X60"	R2-4A 49"X96"	W4-3R 48"X48"	W12-2 48"X48"	W13-2 36"X48"
			SIGN DESCRIPTION, SIZES & NUMBER OF EACH					
1	1075+32	I-44 RT	–	–	–	1	–	–
2	1075+97	I-44 RT	1	–	–	–	–	–
3	1076+02	I-44 LT	1	–	–	–	–	–
4	1078+76	I-44 LT	–	1	–	–	–	–
5	1082+11	I-44 LT	–	–	–	–	–	1
7	1086+05	I-44 RT	1	–	–	–	–	–
8	1086+08	I-44 LT	1	–	–	–	–	–
10	1092+27	I-44 LT	–	–	–	–	1	–
11	1092+27	I-44 LT	–	–	–	–	1	–
12	1096+57	I-44 RT	1	–	–	–	–	–
13	1096+57	I-44 LT	1	–	–	–	–	–
14	1100+86	I-44 RT	–	–	1	–	–	–
16	1107+04	I-44 RT	1	–	–	–	–	–
17	1107+23	I-44 LT	1	–	–	–	–	–
18	1118+12	I-44 LT	1	–	–	–	–	–
19	1118+13	I-44 RT	1	–	–	–	–	–
20	1128+57	I-44 LT	1	–	–	–	–	–
21	1128+57	I-44 RT	1	–	–	–	–	–
23	1139+09	I-44 RT	1	–	–	–	–	–
24	1139+09	I-44 LT	1	–	–	–	–	–
25	1149+63	I-44 LT	1	–	–	–	–	–
26	1149+63	I-44 RT	1	–	–	–	–	–
28	1160+21	I-44 RT	1	–	–	–	–	–
29	1160+21	I-44 LT	1	–	–	–	–	–
30	1167+25	I-44 LT	–	–	1	–	–	–
31	1170+77	I-44 LT	1	–	–	–	–	–
32	1170+77	I-44 LT	1	–	–	–	–	–
33	1181+32	I-44 LT	1	–	–	–	–	–
34	1181+34	I-44 RT	1	–	–	–	–	–
36	1191+63	I-44 RT	1	–	–	–	–	–
37	1191+66	I-44 LT	1	–	–	–	–	–
38	1202+20	I-44 RT	1	–	–	–	–	–
39	1202+20	I-44 LT	1	–	–	–	–	–
40	1203+86	I-44 RT	–	–	–	–	–	1
42	1205+58	I-44 RT	–	1	–	–	–	–
43	1212+25	I-44 LT	1	–	–	–	–	–
44	1212+25	I-44 RT	1	–	–	–	–	–
		TOTAL	28	2	2	1	2	2

SIGN SUMMARY (JSU0076)

STANDARD SIGN OR SPECIAL SIGN NUMBER	SIGN DETAIL SHEET NO.	NO. EACH	SIZE (SQFT)	SIZE, TYPE & SQUARE FEET: FLAT SHEET SH ITEM NO. 9035004A	FLAT SHEET FLOURESCENT SHF * ITEM NO. 9035069A	STRUCTURAL STRUCTURAL ITEM NO. 9035011A	STRUCTURAL FLOURESCENT STF * ITEM NO. 9035071A
D10-5 – 2, 3, 7, 8, 12, 13, 16, 17, 18, 19, 20, 21, 23, 24, 25, 26, 28, 29, 31, 32, 33, 34, 36, 37, 38, 39, 43, 44	–	28	7.50	210	–	–	–
E5-1A – 4, 42	–	2	32.50	65	–	–	–
R2-4A – 14, 30	–	2	32.75	65.50	–	–	–
W4-3R – 1	–	1	16.00	16	–	–	–
W12-2 – 10, 11	–	2	16.00	32	–	–	–
W13-2 – 5, 40	–	2	12.00	24	–	–	–
EXIT 75 WEST BYPASS (SIGN 6A)	14 OF 37	1	212.00	–	–	212	–
EXIT 77 KANSAS EXPWY (SIGN 6B)	14 OF 37	1	241.00	–	–	190	51
JOPLIN (SIGN 15A)	15 OF 37	1	170.00	–	–	170	–
EXIT 77 KANSAS EXPWY (SIGN 15B)	15 OF 37	1	241.00	–	–	190	51
JOPLIN (SIGN 22A)	15 OF 37	1	170.00	–	–	170	–
EXIT 77 KANSAS EXPWY (SIGN 22B)	16 OF 37	1	275.00	–	–	224	51
ST LOUIS (SIGN 27A)	16 OF 37	1	88.00	–	–	88	–
EXIT 80 GLENSTONE AVE (SIGN 27B)	17 OF 37	1	236.00	–	–	236	–
ST LOUIS (SIGN 41A)	16 OF 37	1	88.00	–	–	88	–
EXIT 82 A-B BRANSON (SIGN 41B)	17 OF 37	1	236.00	–	–	236	–
EXIT 80 GLENSTONE AVE (SIGN 41C)	18 OF 37	1	254.00	–	–	254	–
TOTAL		48		413	–	2058	153

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	249

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

D-30
JSU0076

SIGNING PLAN
12 OF 37

STANDARD SIGN ASSEMBLIES

SIGN NUMBER	STATION	LOCATION	TYPE: D10-5 18"X60"	E5-1A 78"X60"	M6-1 21"X15"	R2-4A 49"X96"	W4-2R 48"X48"	W9-2L 48"X48"	W13-2 36"X48"	W16-2P 30"X24"
			SIGN DESCRIPTION, SIZES & NUMBER OF EACH							
45	1220+59	I-44 LT	–	1	–	–	–	–	–	–
47	1223+32	I-44 LT	1	–	–	–	–	–	–	–
48	1223+35	I-44 RT	1	–	–	–	–	–	–	–
49	1223+87	I-44 LT	–	–	–	–	–	–	1	–
50	1233+50	I-44 RT	1	–	–	–	–	–	–	–
51	1234+00	I-44 LT	1	–	–	–	–	–	–	–
53	1243+96	I-44 LT	–	–	1	–	–	–	–	–
54	1244+00	I-44 RT	–	–	–	1	–	–	–	–
55	1244+54	I-44 LT	1	–	–	–	–	–	–	–
56	1244+54	I-44 RT	1	–	–	–	–	–	–	–
57	1255+12	I-44 RT	1	–	–	–	–	–	–	–
58	1255+15	I-44 LT	1	–	–	–	–	–	–	–
60	1265+69	I-44 LT	1	–	–	–	–	–	–	–
61	1265+69	I-44 RT	1	–	–	–	–	–	–	–
63	1276+26	I-44 LT	1	–	–	–	–	–	–	–
64	1276+26	I-44 RT	1	–	–	–	–	–	–	–
66	1286+84	I-44 LT	1	–	–	–	–	–	–	–
67	1286+89	I-44 RT	1	–	–	–	–	–	–	–
68	1289+00	I-44 LT	–	–	–	1	–	–	–	–
70	1295+67	I-44 LT	–	–	–	–	1	–	–	–
71	1297+26	I-44 LT	1	–	–	–	–	–	–	–
72	1297+26	I-44 RT	1	–	–	–	–	–	–	–
73	1299+71	I-44 LT	–	–	–	–	–	1	–	1
74	1307+94	I-44 LT	1	–	–	–	–	–	–	–
75	1307+94	I-44 RT	1	–	–	–	–	–	–	–
76	1309+40	I-44 RT	–	–	–	–	–	–	1	–
78	1313+45	I-44 RT	–	1	–	–	–	–	–	–
		TOTAL	18	2	1	2	1	2	1	1

SIGN SUMMARY (J8I3044C)

STANDARD SIGN OR SPECIAL SIGN NUMBER	SIGN DETAIL SHEET NO.	NO. EACH	SIZE, TYPE & SQUARE FEET: SIZE (SQFT)	FLAT SHEET SH ITEM NO. 9035004A	FLAT SHEET FLOURESCENT SHF * ITEM NO. 9035069A	STRUCTURAL STRUCTURAL ITEM NO. 9035011A	STRUCTURAL FLOURESCENT STF * ITEM NO. 9035071A
D10-5 – 47, 48, 50, 51, 55, 56, 57, 58, 60, 61, 63, 64, 66, 67, 71, 72, 74, 75	–	18	7.50	135	–	–	–
E5-1A – 45, 78	–	2	32.50	65	–	–	–
M6-1 – 53	–	1	2.25	2.25	–	–	–
R2-4A – 54, 68	–	2	32.75	65.50	–	–	–
W4-2R – 70	–	1	16.00	16	–	–	–
W9-2L – 73	–	1	16.00	16	–	–	–
W13-2 – 49, 76	–	2	12.00	24	–	–	–
W16-2P – 73	–	1	5.00	5	–	–	–
EXIT 77 KANSAS EXPWY (SIGN 46A)	19 OF 37	1	214.50	–	–	214.50	–
EXIT 80 GLENSTONE AVE (SIGN 46B)	19 OF 37	1	244.50	–	–	244.50	–
ST LOUIS (SIGN 59A)	20 OF 37	1	88.00	–	–	88	–
EXIT 82B SEDALIA (SIGN 59B)	20 OF 37	1	145.00	–	–	145	–
EXIT 82A BRANSON (SIGN 59C)	20 OF 37	1	194.00	–	–	155	39
JOPLIN (SIGN 62A)	21 OF 37	1	88.00	–	–	88	–
EXIT 80 GLENSTONE AVE (SIGN 62B)	21 OF 37	1	236.00	–	–	236	–
ST LOUIS (SIGN 65A)	20 OF 37	1	88.00	–	–	88	–
EXIT 82B SEDALIA (SIGN 65B)	22 OF 37	1	145.00	–	–	145	–
EXIT 82A BRANSON (SIGN 65C)	22 OF 37	1	194.00	–	–	155	39
EXIT 82B BUFFALO (SIGN 69)	23 OF 37	1	55.00	–	–	55	–
ST LOUIS (SIGN 77A)	20 OF 37	1	88.00	–	–	88	–
EXIT 82B SEDALIA (SIGN 77B)	23 OF 27	1	145.00	–	–	145	–
EXIT 82A BRANSON (SIGN 77C)	23 OF 37	1	168.00	–	–	129	39
TOTAL		42		329	–	1976	117

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	250

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

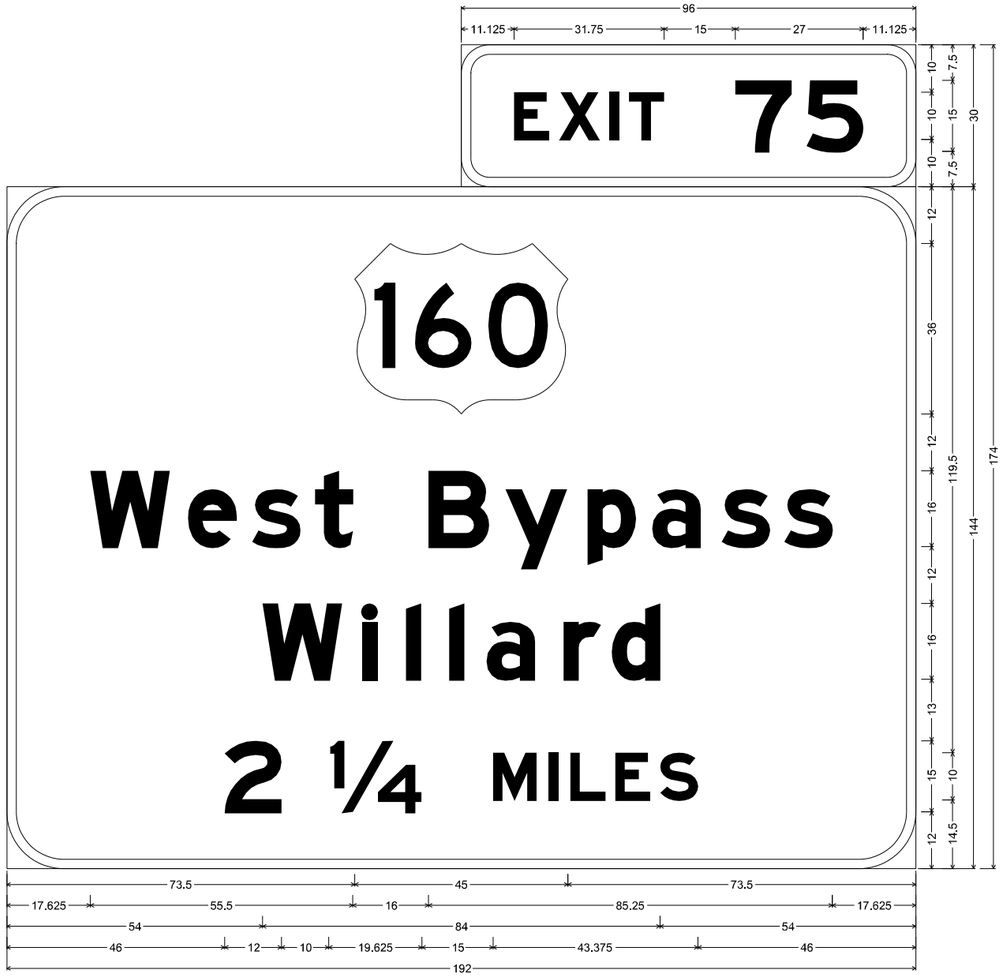
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

©Copyright CMT, Inc.

D-30
J8I3044C

SIGNING PLAN
13 OF 37

REV.

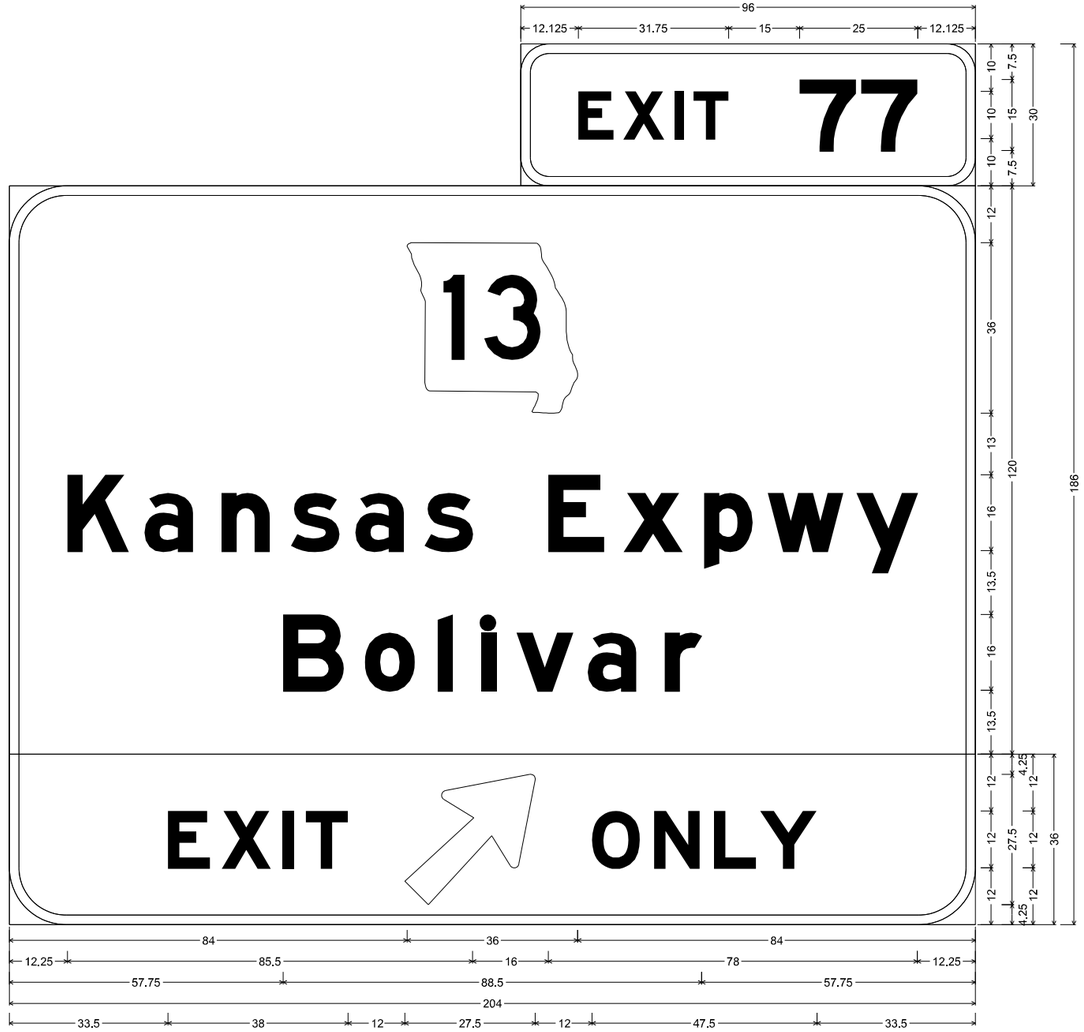


E1-5P ST-STRUCTURAL;
6.000" Radius, 2.000" Border, White on, Green;
"EXIT", E Mod; "75", E Mod;

E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
"West Bypass", E Mod; "Willard", E Mod; "2 ¼", E Mod; "MILES", E Mod;
Table of letter and object lefts

E 107.125	X 116.625	I 127.375	T 131.375	7 153.875	5 168.875	
63 73.500						
W 17.625	e 38.250	s 51.750	t 65.125	B 89.125	y 105.250	p 122.625
a 136.375	s 151.000	s 164.250				
W 54.000	I 75.125	I 84.250	I 93.375	a 101.375	r 117.625	d 127.750
2 46.000	¼ 68.000	M 102.625	I 114.500	L 119.000	E 128.500	S 138.000

SIGN NO.	6A
STATION	1081+73
ROADWAY	I-44 (EB)



E1-5P ST-STRUCTURAL;
6.000" Radius, 2.000" Border, White on, Green;
"EXIT", E Mod; "77", E Mod;

E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
State Highway 13 M1-6a3 18.000" D; "Kansas Expwy", E Mod; "Bolivar", E Mod;

STF-STRUCTURAL FLUORESCENT;
12.000" Radius, 2.000" Border, Black on, Yellow;
"EXIT", E Mod; Arrow 160 - 35.000" 45°; "ONLY", E Mod;
Table of letter and object lefts

E 120.125	X 129.625	I 140.375	T 144.500	7 166.875	7 179.875	
13 84.000						
K 12.250	a 28.500	n 44.750	s 59.500	a 73.000	s 87.625	E 113.750
x 129.750	p 146.750	w 160.125	y 178.875			
B 57.750	o 75.000	I 90.500	I 99.625	v 107.125	a 122.125	r 138.375
E 33.500	X 44.875	I 57.750	T 62.625	↗ 83.500	O 123.000	N 136.125
L 148.750	Y 158.500					

SIGN NO.	6B
STATION	1081+73
ROADWAY	I-44 (EB)

D-31
JSU0076

SIGNING PLAN
14 OF 37

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	251

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

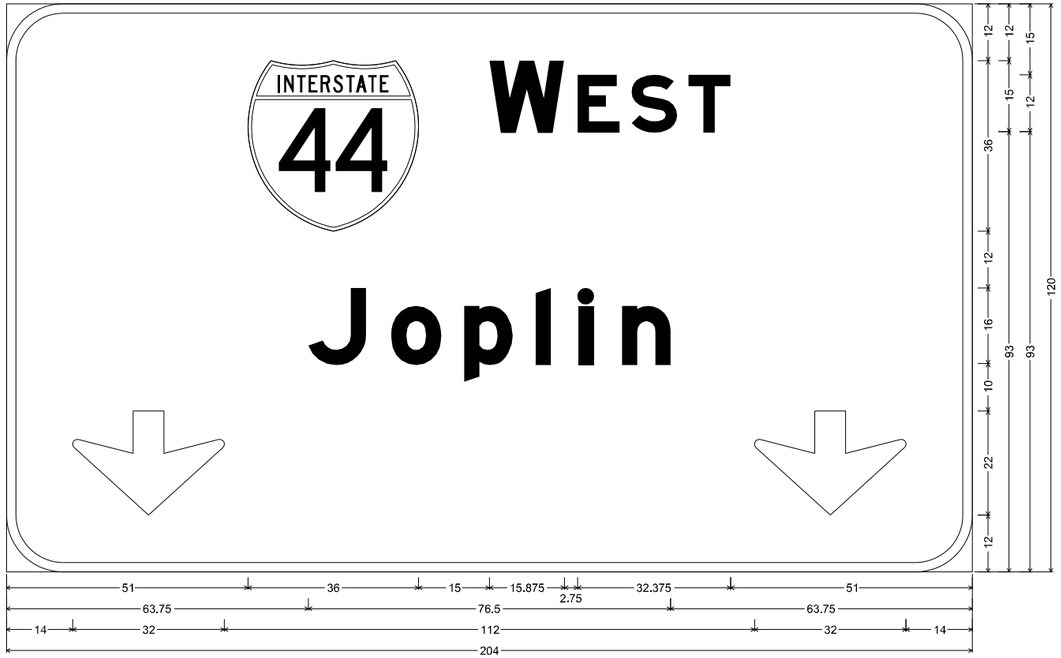
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

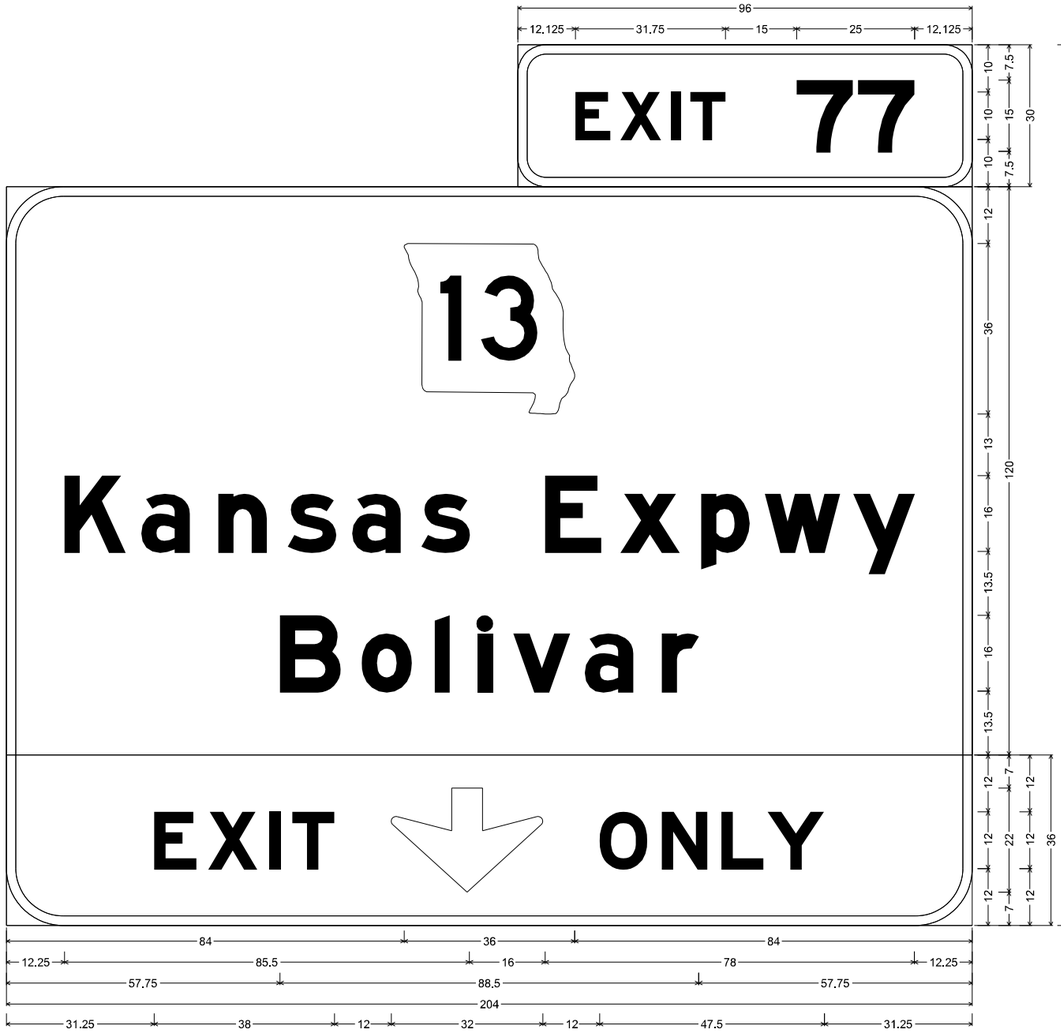


E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
Interstate 44 18.000" C; "WEST", E Mod; "Joplin", E Mod; Down Arrow 22.000" 270'; Down Arrow 22.000" 270';
Table of letter and object lefts

51.000	**W** 102.000	**E** 120.625	**S** 132.000	**T** 144.000
J 63.750	**o** 81.250	**p** 96.625	**l** 111.750	**l** 120.875	**n** 130.000
14.000	158.000				

SIGN NO.	15A
STATION	1107+13
ROADWAY	I-44 (WB)

SIGN NO.	22A
STATION	1134+00
ROADWAY	I-44 (WB)



E1-5P ST-STRUCTURAL;
6.000" Radius, 2.000" Border, White on, Green;
"EXIT", E Mod; "77", E Mod;

E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
State Highway 13 M1-6a3 18.000" D; "Kansas Expwy", E Mod; "Bolivar", E Mod;

STF-STRUCTURAL FLUORESCENT;
12.000" Radius, 2.000" Border, Black on, Yellow;
"EXIT", E Mod; Down Arrow 22.000" 270'; "ONLY", E Mod;
Table of letter and object lefts

E 120.125	**X** 129.625	**I** 140.375	**T** 144.500	**7** 166.875	**7** 179.875	
84.000						
K 12.250	**a** 28.500	**n** 44.750	**s** 59.500	**a** 73.000	**s** 87.625	**E** 113.750	**x** 129.750	**p** 146.750	**w** 160.125	**y** 178.875
B 57.750	**o** 75.000	**l** 90.500	**i** 99.625	**v** 107.125	**a** 122.125	**r** 138.375				
E 31.250	**X** 42.625	**I** 55.500	**T** 60.375	81.250	**O** 125.250	**N** 138.375	**L** 151.000	**Y** 160.750		

SIGN NO.	15B
STATION	1107+13
ROADWAY	I-44 (WB)

D-31
JSU0076

SIGNING PLAN
15 OF 37

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

DATE PREPARED: 8/20/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 252
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

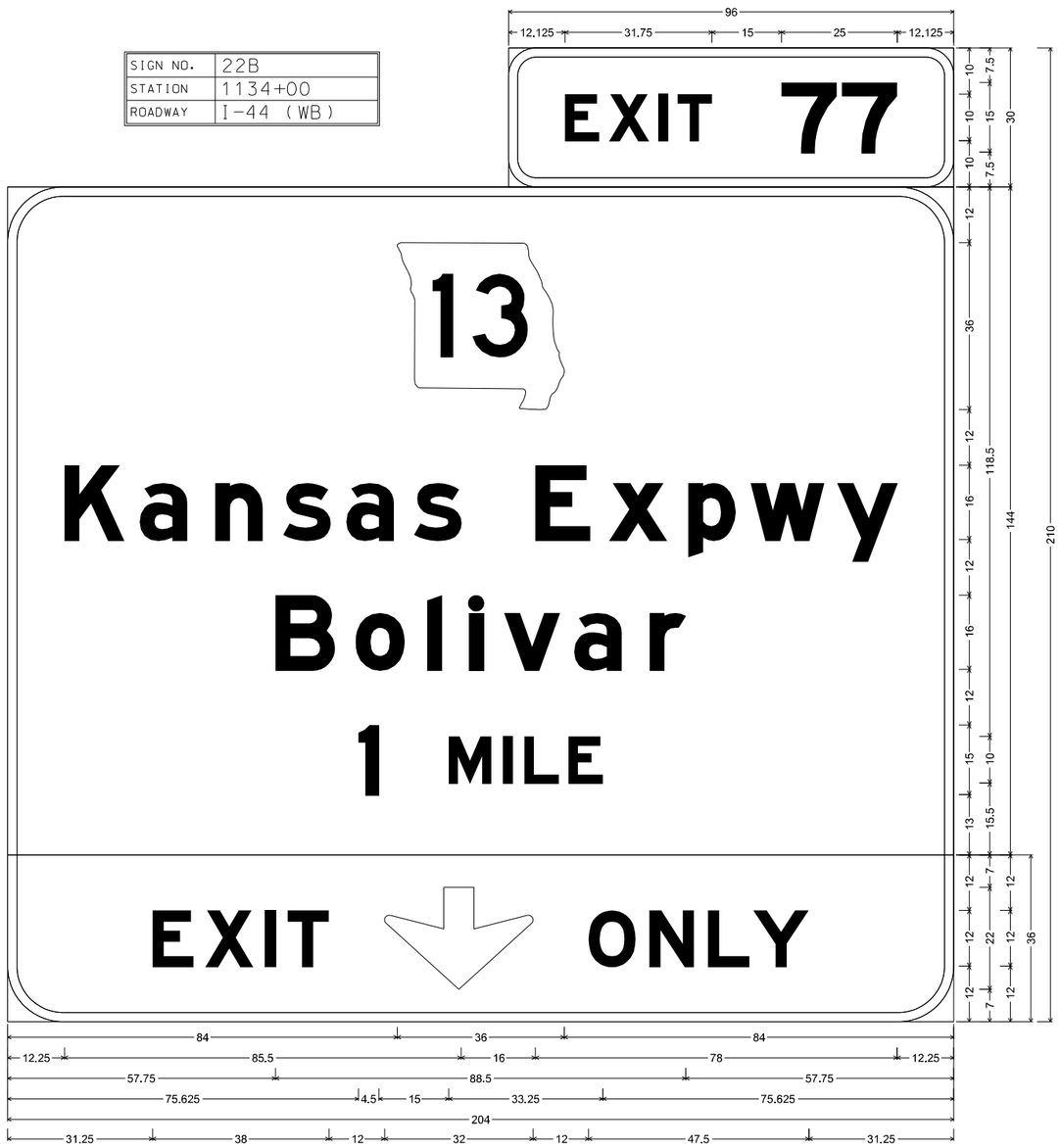
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

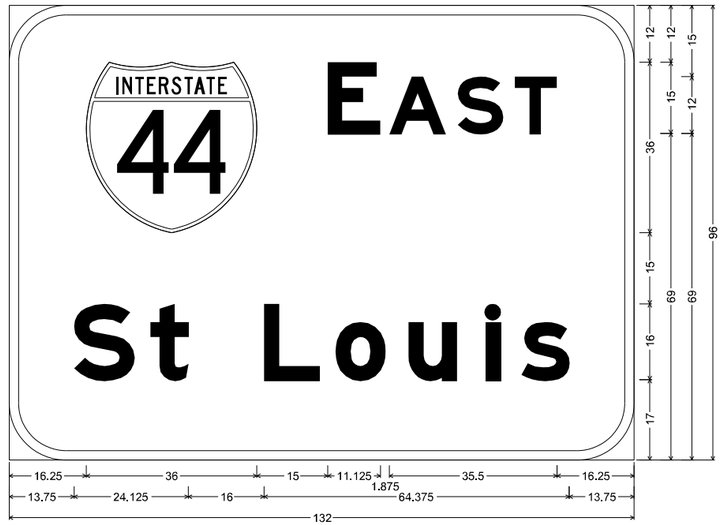
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\213_SN_JSU0076_D31.dgn 11:51:55 AM 8/20/2024

SIGN NO.	22B
STATION	1134+00
ROADWAY	I-44 (WB)





E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
Interstate 44 18.000" C; "EAST", E Mod; "St Louis", E Mod;
Table of letter and object lefts

E 16.250	E 67.250	A 80.250	S 94.750	T 106.750		
S 13.750	t 29.875	L 53.875	o 69.000	u 84.375	l 100.625	s 108.125

SIGN NO.	27A
STATION	1149+83
ROADWAY	I-44 (EB)

SIGN NO.	41A
STATION	1203+24
ROADWAY	I-44 (EB)

E1-5P ST-STRUCTURAL;
6.000" Radius, 2.000" Border, White on, Green;
"EXIT", E Mod; "77", E Mod;

E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
State Highway 13 M1-6a3 18.000" D; "Kansas Expwy", E Mod; "Bolivar", E Mod; "1", E Mod; "MILE", E Mod;

STF-STRUCTURAL FLUORESCENT;
12.000" Radius, 2.000" Border, Black on, Yellow;
"EXIT", E Mod; Down Arrow 22.000" 270°; "ONLY", E Mod;
Table of letter and object lefts

E 120.125	X 129.625	I 140.375	T 144.500	7 166.875	7 179.875	
84.000						
K 12.250	a 28.500	n 44.750	s 59.500	a 73.000	s 87.625	E 113.750	x 129.750	p 146.750	w 160.125	y 178.875
B 57.750	o 75.000	l 90.500	i 99.625	v 107.125	a 122.125	r 138.375				
I 75.625	M 95.125	I 106.875	L 111.500	E 120.875						
E 31.250	X 42.625	I 55.500	T 60.375	81.250	O 125.250	N 138.375	L 151.000	Y 160.750		

D-31
JSU0076

SIGNING PLAN
16 OF 37

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	253

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

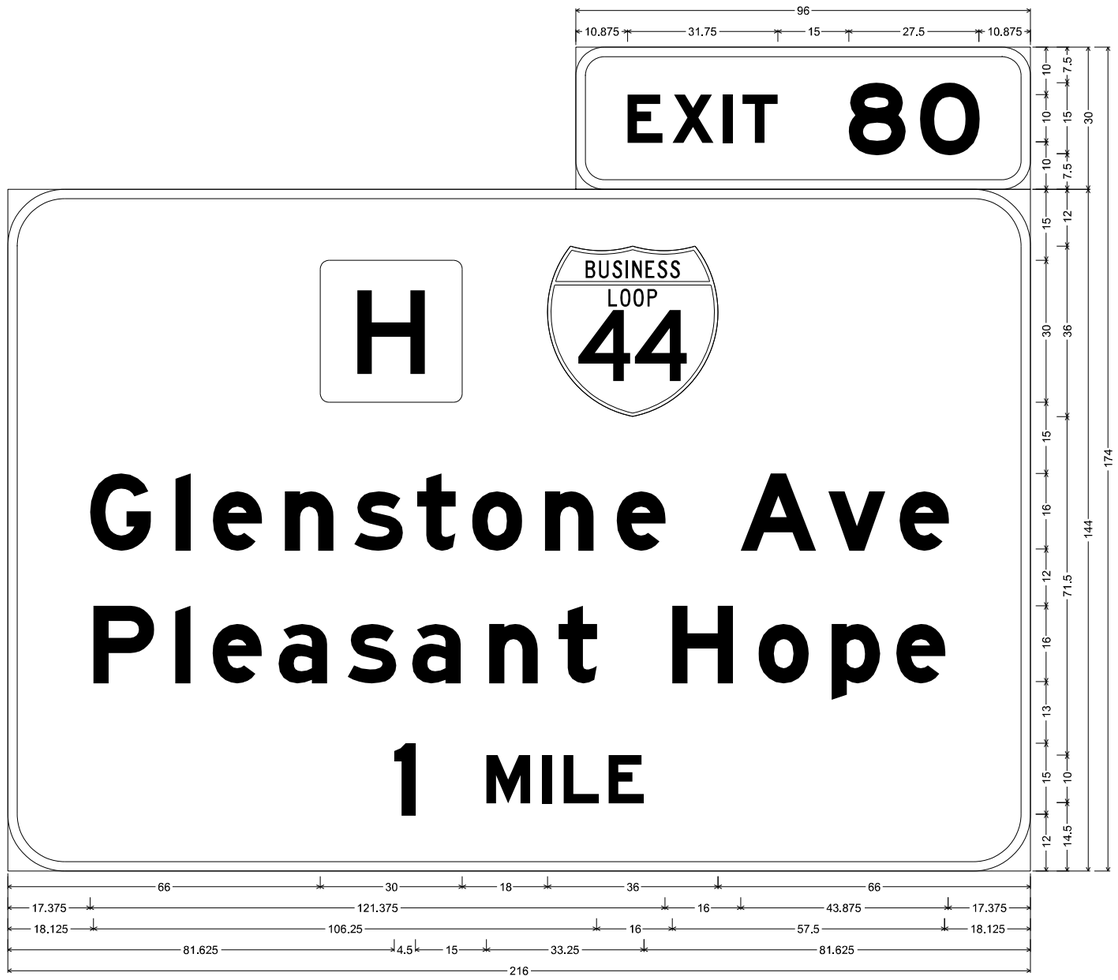
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\213_SN_JSU0076_D31.dgn 11:51:56 AM 8/20/2024



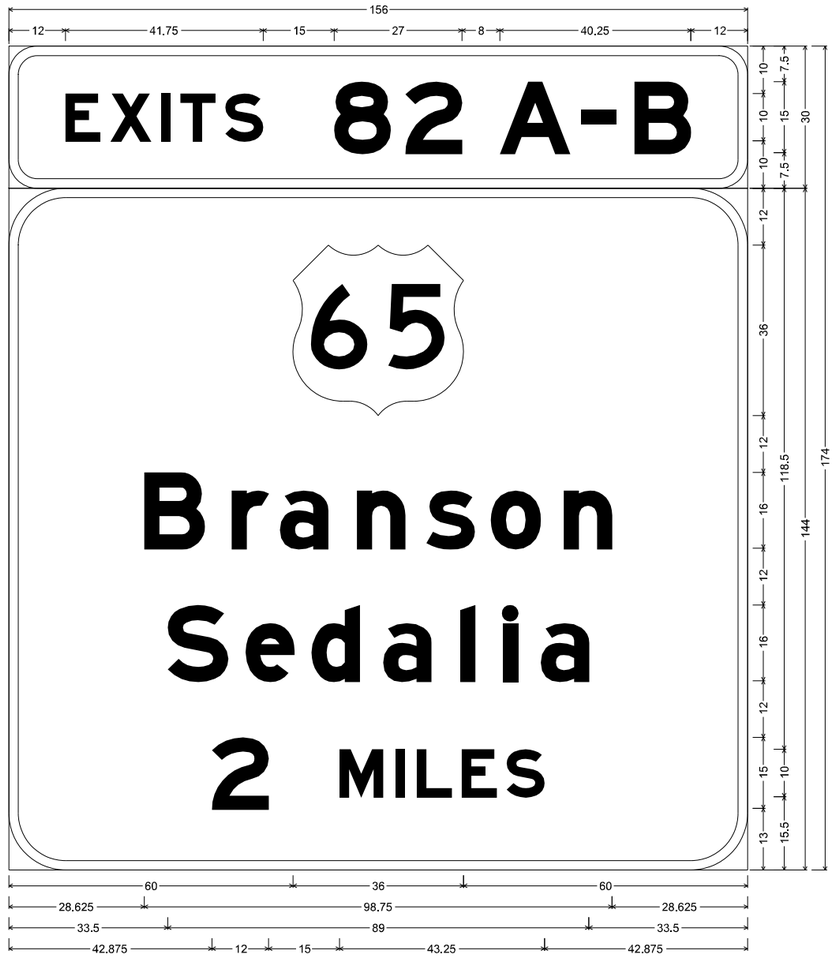
E1-5P ST-STRUCTURAL;
6.000" Radius, 2.000" Border, White on, Green;
"EXIT", E Mod; "80", E Mod;

E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
Rounded Rectangle 1.875" Radius;
"Glenstone Ave", E Mod; "Pleasant Hope", E Mod; "1", E Mod; "MILE", E Mod;
Table of letter and object lefts

E 130.875	X 140.375	I 151.125	T 155.250	B 177.625	O 192.625
66.000	114.000				

G 17.375	l 35.375	e 43.250	n 58.500	s 73.250	t 86.500	o 98.125	n 113.500	e 128.625	A 154.750	v 173.375	e 188.375		
P 18.125	l 35.375	e 43.250	a 57.125	s 71.750	a 85.375	n 101.625	t 116.375	H 140.375	o 158.625	p 174.000	e 187.625		
l 81.625	M 101.125	l 112.875	L 117.500	E 126.875									

SIGN NO.	27B
STATION	1149+83
ROADWAY	I-44 (EB)



E1-5P ST-STRUCTURAL;
6.000" Radius, 2.000" Border, White on, Green;
"EXITS", E Mod; "82 A-B", E Mod;

E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
"Branson", E Mod; "Sedalia", E Mod; "2", E Mod; "MILES", E Mod;
Table of letter and object lefts

E 12.000	X 21.375	I 32.125	T 36.250	S 45.750	B 68.750	2 83.750	A 103.750	- 120.750	B 132.125	
60.000										

B 28.625	r 47.125	a 57.250	n 73.500	s 88.125	o 101.750	n 117.250	
S 33.500	e 50.000	d 63.875	a 79.000	l 95.250	l 104.375	a 112.375	
2 42.875	M 69.875	l 81.625	L 86.125	E 95.625	S 105.125		

SIGN NO.	41B
STATION	1203+24
ROADWAY	I-44 (EB)

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/20/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 254
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

D-31
JSU0076

SIGNING PLAN
17 OF 37

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\213_SN_JSU0076_D31.dgn 11:51:56 AM 8/20/2024

E1-5P ST-STRUCTURAL;
6.000" Radius, 2.000" Border, White on, Green;
"EXIT", E Mod; "80", E Mod;

E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
Rounded Rectangle 1.875" Radius;
"Glenstone Ave", E Mod; "Pleasant Hope", E Mod; Arrow 160 - 35.000" 45';
Table of letter and object lefts

E 130.875	X 140.375	I 151.125	T 155.250	B 177.625	O 192.625

□ 66.000	⊕ 114.000

G 17.375	l 35.375	e 43.250	n 58.500	s 73.250	t 86.500	o 98.125	n 113.500	e 128.625	A 154.750	v 173.375	e 188.375		
P 18.125	l 35.375	e 43.250	a 57.125	s 71.750	a 85.375	n 101.625	t 116.375	H 140.375	o 158.625	p 174.000	e 187.625		

⇗ 94.250

SIGN NO.	41C
STATION	1203+24
ROADWAY	I-44 (EB)

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	255

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

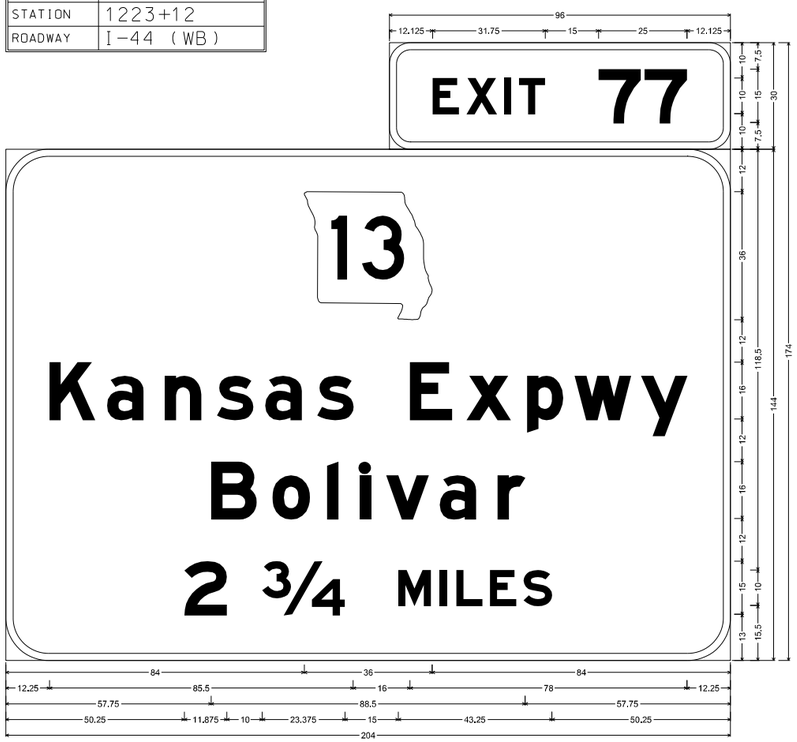
CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

D-31
JSU0076

SIGNING PLAN
18 OF 37

SIGN NO.	46A
STATION	1223+12
ROADWAY	I-44 (WB)



E1-5P ST-STRUCTURAL;
6.000" Radius, 2.000" Border, White on, Green;
"EXIT", E Mod; "77", E Mod;

E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
State Highway 13 M1-6a3 18.000" D; "Kansas Expwy", E Mod; "Bolivar", E Mod; "2 3/4", E Mod; "MILES", E Mod;
Table of letter and object lefts

E 120.125	X 129.625	I 140.375	T 144.500	7 166.875	7 179.875	
13 84.000						
K 12.250	a 28.500	n 44.750	s 59.500	a 73.000	s 87.625	E 113.750	x 129.750	p 146.750	w 160.125	y 178.875
B 57.750	o 75.000	l 90.500	l 99.625	v 107.125	a 122.125	r 138.375				
2 50.250	¾ 72.125	M 110.500	I 122.250	L 126.875	E 136.375	S 145.750				

SIGN NO.	46B
STATION	1223+12
ROADWAY	I-44 (WB)

E1-5P ST-STRUCTURAL;
6.000" Radius, 2.000" Border, White on, Green;
"EXIT", E Mod; "80", E Mod;

E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
Rounded Rectangle 1.875" Radius;
"Glenstone Ave", E Mod; "Pleasant Hope", E Mod; Arrow 160 - 35.000" 45';
Table of letter and object lefts

E 130.875	X 140.375	I 151.125	T 155.250	B 177.625	O 192.625	
66.000	120.000					
G 17.375	l 35.375	e 43.250	n 58.500	s 73.250	t 86.500	o 98.125	n 113.500	e 128.625	A 154.750	v 173.375	e 188.375
P 18.125	l 35.375	e 43.250	a 57.125	s 71.750	a 85.375	n 101.625	t 116.375	H 140.375	o 158.625	p 174.000	e 187.625
94.250											

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	256

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

©Copyright CMT, Inc.

REV.

D-31
J8I3044C

SIGNING PLAN
19 OF 37

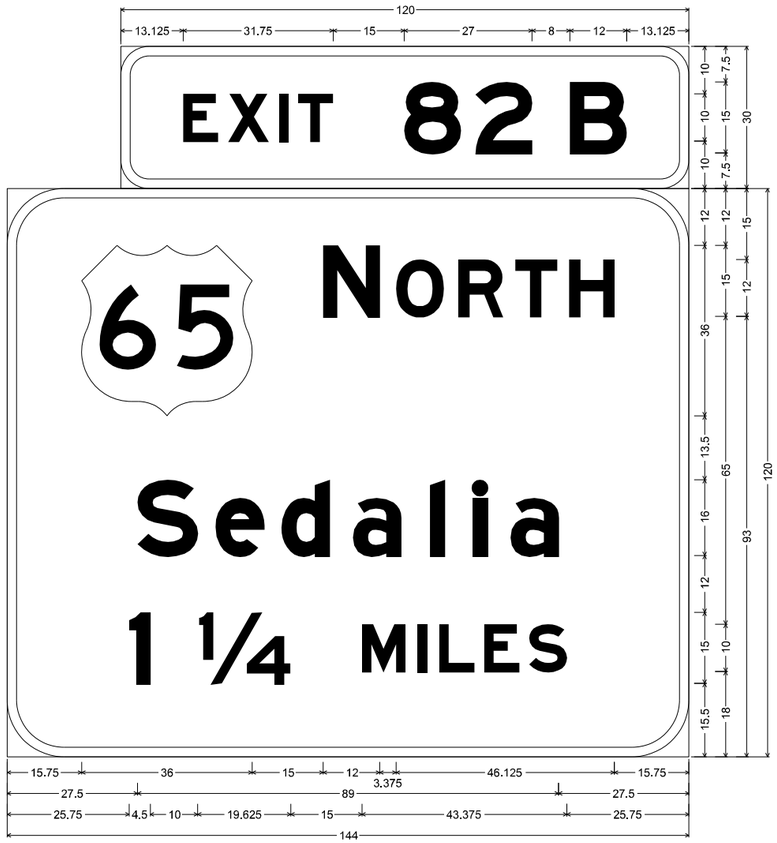
SIGN NO.	59A
STATION	1255+80
ROADWAY	I-44 (EB)

SIGN NO.	65A
STATION	1283+50
ROADWAY	I-44 (EB)

SIGN NO.	77A
STATION	1309+82
ROADWAY	I-44 (EB)

E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
Interstate 44 18.000" C; "EAST", E Mod; "St Louis", E Mod;
Table of letter and object lefts

44	E 16.250	A 67.250	S 80.250	T 94.750	106.750		
S 13.750	t 29.875	L 53.875	o 69.000	u 84.375	l 100.625	s 108.125	

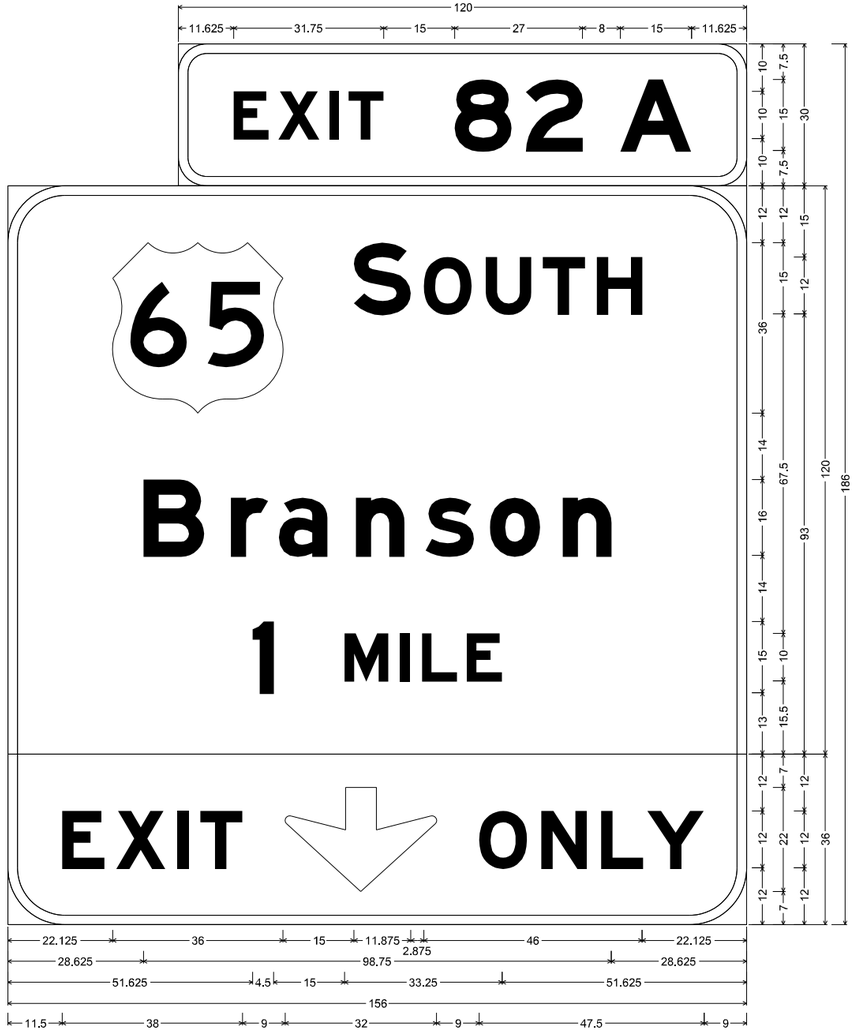


SIGN NO.	59B
STATION	1255+80
ROADWAY	I-44 (EB)

E1-5P ST-STRUCTURAL;
6.000" Radius, 2.000" Border, White on, Green;
"EXIT", E Mod; "82 B", E Mod;

E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
"NORTH", E Mod; "Sedalia", E Mod; "1 ¼", E Mod; "MILES", E Mod;
Table of letter and object lefts

E 13.125	X 22.625	I 33.375	T 37.500	B 59.875	2 74.875	B 94.875	
65 15.750	N 66.750	O 82.125	R 95.250	T 107.250	H 118.750		
S 27.500	e 44.000	d 57.875	a 73.000	l 89.250	l 98.375	a 106.375	
l 25.750	¼ 40.250	M 74.875	I 86.750	L 91.250	E 100.750	S 110.250	



E1-5P ST-STRUCTURAL;
6.000" Radius, 2.000" Border, White on, Green;
"EXIT", E Mod; "82 A", E Mod;

E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
"SOUTH", E Mod; "Branson", E Mod; "1", E Mod; "MILE", E Mod;

STF-STRUCTURAL FLUORESCENT;
12.000" Radius, 2.000" Border, Black on, Yellow;
"EXIT", E Mod; Down Arrow 22.000" 270°; "ONLY", E Mod;
Table of letter and object lefts

E 47.625	X 57.125	I 67.875	T 71.875	B 94.375	2 109.375	A 129.375
65 22.125	S 73.125	O 87.875	U 100.875	T 113.000	H 124.375	
B 28.625	r 47.125	a 57.250	n 73.500	s 88.125	o 101.750	n 117.250
l 51.625	M 71.125	I 82.875	L 87.500	E 96.875		
E 11.500	X 22.875	I 35.750	T 40.625	58.500	O 99.500	N 112.625	L 125.250	Y 135.000

SIGN NO.	59C
STATION	1255+80
ROADWAY	I-44 (EB)

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	257

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

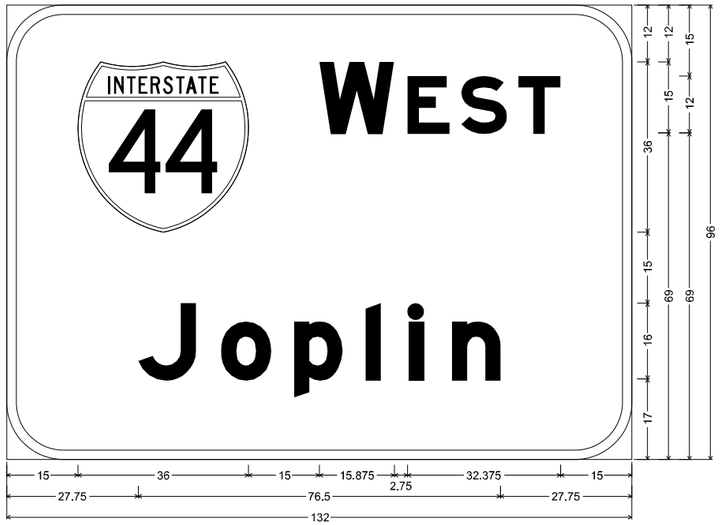
REV.

D-31
J8I3044C

SIGNING PLAN
20 OF 37

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\214_SN_J8I3044C_D31.dgn 11:52:03 AM 8/20/2024

SIGN NO.	62A
STATION	1276+14
ROADWAY	I-44 (WB)



E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
Interstate 44 18.000" C; "WEST", E Mod; "JopIIn", E Mod;
Table of letter and object lefts

15.000	W 66.000	E 84.625	S 96.000	T 108.000
J 27.750	o 45.250	p 60.625	l 75.750	i 84.875	n 94.000

SIGN NO.	62B
STATION	1276+14
ROADWAY	I-44 (WB)

E1-5P ST-STRUCTURAL;
6.000" Radius, 2.000" Border, White on, Green;
"EXIT", E Mod; "80", E Mod;

E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
Rounded Rectangle 1.875" Radius;
"Glenstone Ave", E Mod; "Pleasant Hope", E Mod; "1", E Mod; "MILE", E Mod;
Table of letter and object lefts

E 130.875	X 140.375	I 151.125	T 155.250	B 177.625	O 192.625

66.000	120.000

G 17.375	l 35.375	e 43.250	n 58.500	s 73.250	t 86.500	o 98.125	n 113.500	e 128.625	A 154.750	v 173.375	e 188.375		
P 18.125	l 35.375	e 43.250	a 57.125	s 71.750	a 85.375	n 101.625	t 116.375	H 140.375	o 158.625	p 174.000	e 187.625		
l 81.625	M 101.125	I 112.875	L 117.500	E 126.875									

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2012000088
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	258

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

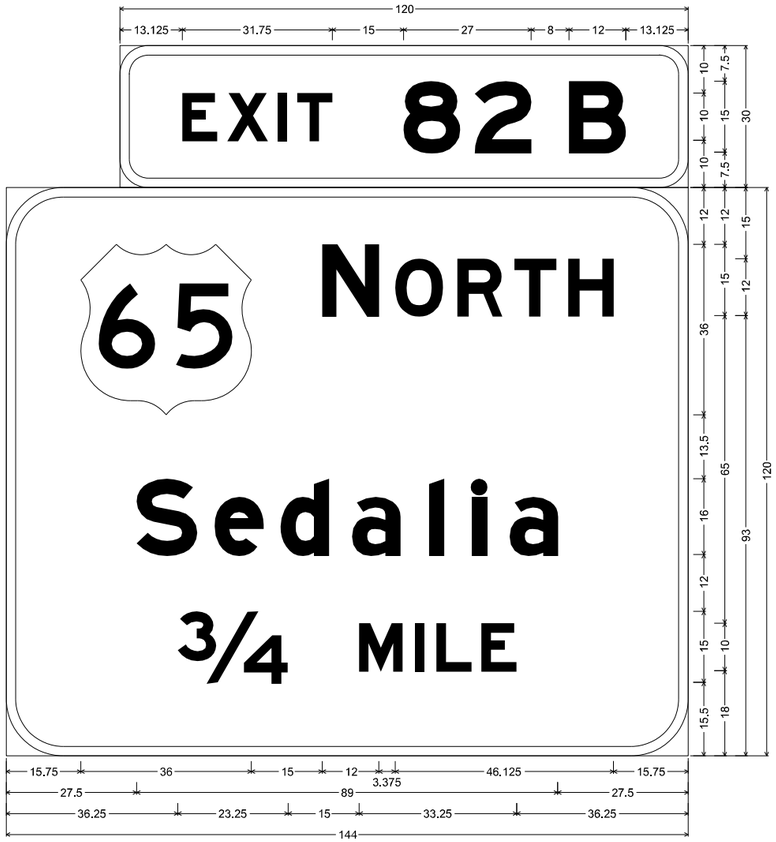
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.

D-31
J8I3044C

SIGNING PLAN
21 OF 37

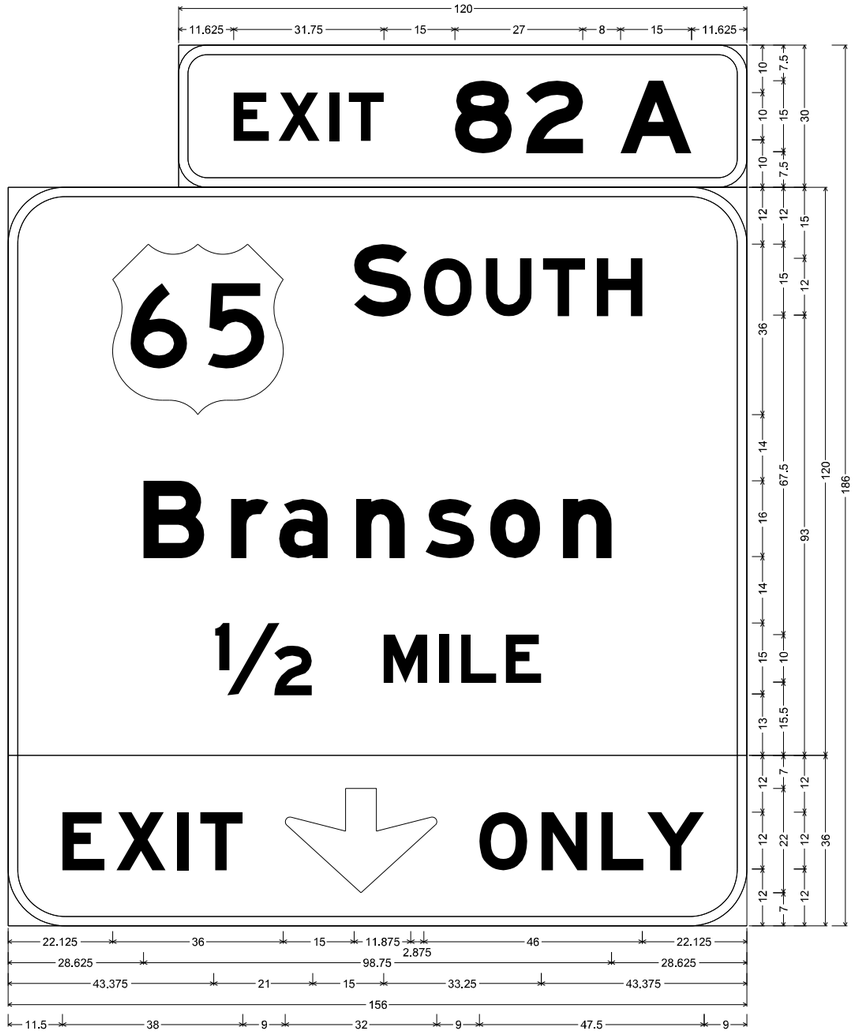


E1-5P ST-STRUCTURAL;
6.000" Radius, 2.000" Border, White on, Green;
"EXIT", E Mod; "82 B", E Mod;

E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
"NORTH", E Mod; "Sedalia", E Mod; "3/4", E Mod; "MILE", E Mod;
Table of letter and object lefts

E 13.125	X 22.625	I 33.375	T 37.500	8 59.875	2 74.875	B 94.875
65 15.750	N 66.750	O 82.125	R 95.250	T 107.250	H 118.750	
S 27.500	e 44.000	d 57.875	a 73.000	l 89.250	l 98.375	a 106.375
3/4 36.250	M 74.500	I 86.250	L 90.875	E 100.375		

SIGN NO.	65B
STATION	1283+50
ROADWAY	I-44 (EB)



E1-5P ST-STRUCTURAL;
6.000" Radius, 2.000" Border, White on, Green;
"EXIT", E Mod; "82 A", E Mod;

E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
"SOUTH", E Mod; "Branson", E Mod; "1/2", E Mod; "MILE", E Mod;

STF-STRUCTURAL FLUORESCENT;
12.000" Radius, 2.000" Border, Black on, Yellow;
"EXIT", E Mod; Down Arrow 22.000' 270'; "ONLY", E Mod;
Table of letter and object lefts

E 47.625	X 57.125	I 67.875	T 71.875	8 94.375	2 109.375	A 129.375	
65 22.125	S 73.125	O 87.875	U 100.875	T 113.000	H 124.375		
B 28.625	r 47.125	a 57.250	n 73.500	s 88.125	o 101.750	n 117.250	
1/2 43.375	M 79.375	I 91.125	L 95.625	E 105.125			
E 11.500	X 22.875	I 35.750	T 40.625	58.500	O 99.500	N 112.625	L 125.250	Y 135.000

SIGN NO.	65C
STATION	1283+50
ROADWAY	I-44 (EB)

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	8/20/2024
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	259
COUNTY	GREENE
JOB NO.	JSU0076, J8I3044C, & JST0088B
PROJECT NO.	
BRIDGE NO.	

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

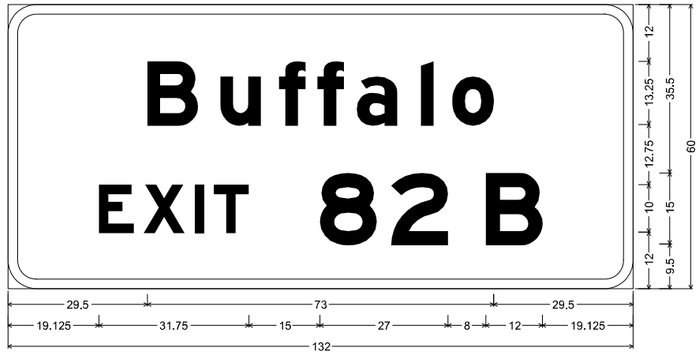
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

D-31
J8I3044C

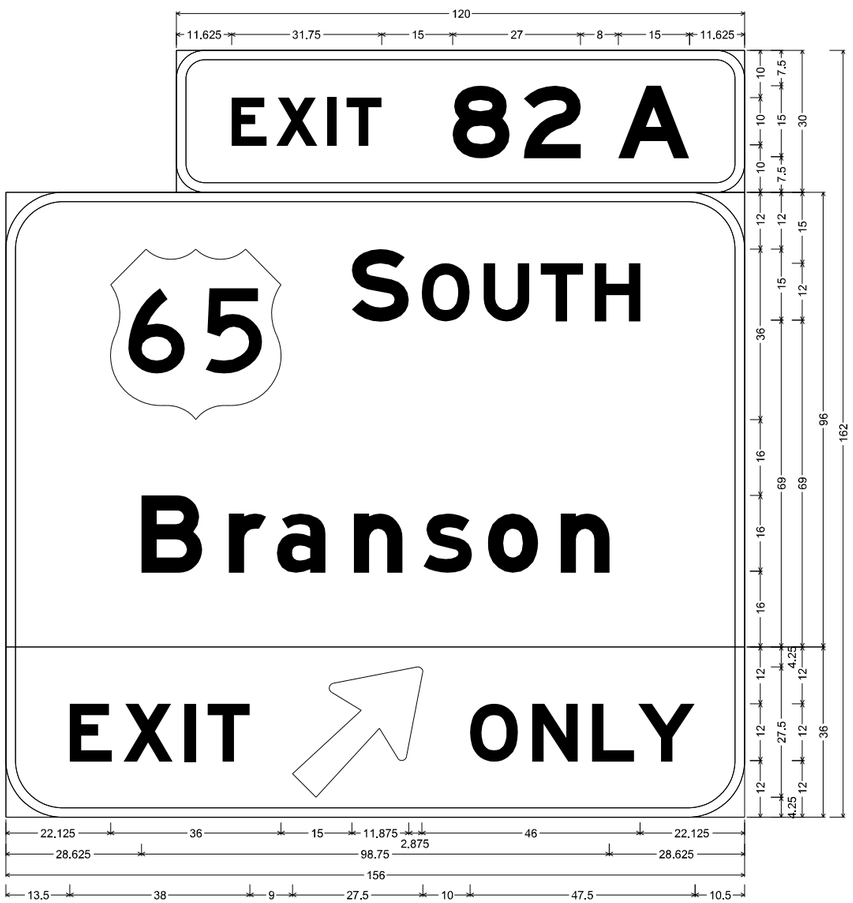
SIGNING PLAN
22 OF 37



SIGN NO.	69
STATION	1290+84
ROADWAY	I-44 (EB)

E4-3 ST-STRUCTURAL;
6.000" Radius, 2.000" Border, White on, Green;
"Buffalo", E Mod; "EXIT", E Mod; "82 B", E Mod;
Table of letter and object lefts

B 29.500	u 44.875	f 57.250	f 65.375	a 73.625	l 87.250	o 93.750
E 19.125	X 28.625	I 39.375	T 43.500	8 65.875	2 80.875	B 100.875



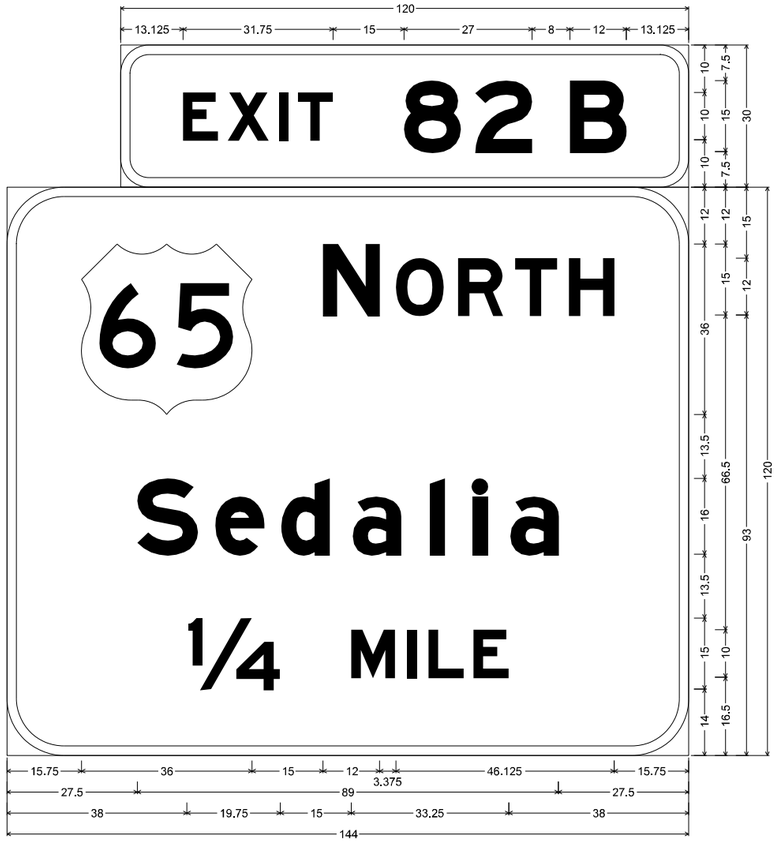
SIGN NO.	77C
STATION	1309+82
ROADWAY	I-44 (EB)

E1-5P ST-STRUCTURAL;
6.000" Radius, 2.000" Border, White on, Green;
"EXIT", E Mod; "82 A", E Mod;

E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
"SOUTH", E Mod; "Branson", E Mod;

STF-STRUCTURAL FLUORESCENT;
12.000" Radius, 2.000" Border, Black on, Yellow;
"EXIT", E Mod; Arrow 160 - 35.000" 45°; "ONLY", E Mod;
Table of letter and object lefts

E 47.625	X 57.125	I 67.875	T 71.875	B 94.375	2 109.375	A 129.375
65 22.125	S 73.125	O 87.875	U 100.875	T 113.000	H 124.375	
B 28.625	r 47.125	a 57.250	n 73.500	s 88.125	o 101.750	n 117.250
E 13.500	X 24.875	I 37.750	T 42.625	60.500	O 98.000	N 111.125	L 123.750	Y 133.500



E1-5P ST-STRUCTURAL;
6.000" Radius, 2.000" Border, White on, Green;
"EXIT", E Mod; "82 B", E Mod;

E1-1 ST-STRUCTURAL;
12.000" Radius, 2.000" Border, White on, Green;
"NORTH", E Mod; "Sedalia", E Mod; "1/4", E Mod; "MILE", E Mod;
Table of letter and object lefts

E 13.125	X 22.625	I 33.375	T 37.500	B 59.875	2 74.875	B 94.875
65 15.750	N 66.750	O 82.125	R 95.250	T 107.250	H 118.750	
S 27.500	e 44.000	d 57.875	a 73.000	l 89.250	l 98.375	a 106.375
1/4 38.000	M 72.750	I 84.500	L 89.125	E 98.500		

SIGN NO.	77B
STATION	1309+82
ROADWAY	I-44 (EB)

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	260

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DATE	DESCRIPTION	REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

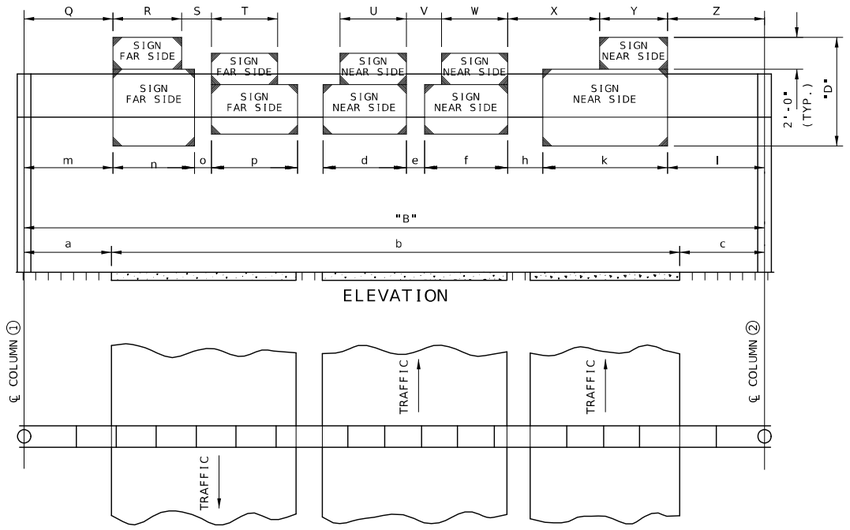
CMT
ENGINEERING CORPORATION - 000631
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009

©Copyright CMT, Inc.

D-31
J8I3044C

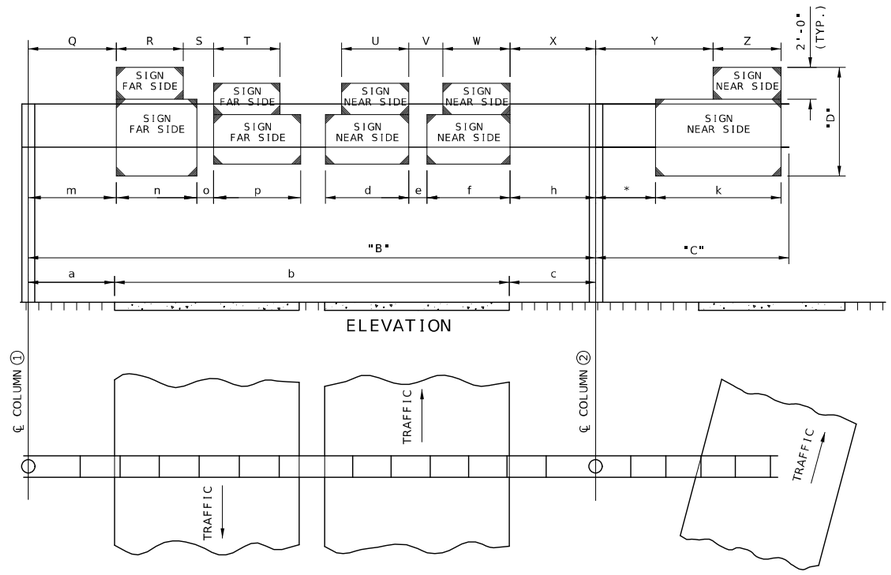
SIGNING PLAN
23 OF 37

EFFECTIVE 04-01-1999



PLAN

DIMENSIONS
TYPE 'B' SIGN BRIDGE



PLAN

DIMENSIONS
TYPE 'BC' SIGN BRIDGE

NOTE: ABOVE MINIMUMS ARE RECOMMENDED DIMENSIONS.

* MINIMUM = 6'-0" WHEN ALUMINUM IS USED.

SIGN BRIDGE DIMENSIONS

SIGN NO.	STATION NUMBER	TRUSS DESCRIPTION					ROADWAY DESCRIPTION			"D"	SIGN SPACING																COLUMN DATA				
					CHORD						NEAR SIDE							FAR SIDE									COLUMN 1		COLUMN 2		CONCRETE FOOTINGS (CU. YD.)
		Type	"B"	"C"	ALUM.	STEEL	a	b	c		d	Ht.	e	f	Ht.	h	k	Ht.	l	m	n	Ht.	o	p	Ht.	H	TYPE	H	TYPE	
6	1081+73	B	64'-0"	·	4"Ø X ¼"	4"X4"X ⅜"	17'-0"	36'	11'	15'-6"	·	·	·	·	·	·	·	·	·	14'-6"	17'-0"	15'-6"	1'-6"	16'-0"	14'-6"	21'-1"	II	19'-5"	II	27.2
15	1107+13	B	78'-9"	·	4"Ø X ¼"	4"X4"X ⅜"	31'-9"	36'	11'	15'-6"	·	·	·	·	·	·	·	·	·	29'-7"	17'-0"	15'-6"	0'-8"	17'-0"	10'-0"	21'-1"	II	19'-1"	II	27.2
22	1134+00	B	78'-10"	·	4-½"Ø X ¼"	5"X5"X ⅝"	31'-11"	36'	11'	17'-6"	·	·	·	·	·	·	·	·	·	21'-9"	17'-0"	17'-6"	0'-8"	17'-0"	10'-0"	23'-7"	III	20'-7"	III	31.3
27	1149+83	B	78'-10"	·	4-½"Ø X ¼"	5"X5"X ⅝"	11'	36'	31'-10"	14'-6"	·	·	·	11'-0"	8'-0"	3'-6"	18'-0"	14'-6"	28'-10"	·	·	·	·	·	·	20'-7"	III	21'-0"	III	31.3
41	1203+24	B	90'-10"	·	4-½"Ø X ½"	5"X5"X ⅝"	11'	36'	31'-10"	15'-6"	11'-0"	8'-0"	6'-0"	13'-0"	14'-6"	2'-6"	18'-0"	15'-6"	28'-10"	·	·	·	·	·	·	19'-1"	II	24'-2"	III	29.2
·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·

SIGN BRIDGE DIMENSIONS

SIGN NO.	STATION NUMBER	TRUSS DESCRIPTION					ROADWAY DESCRIPTION			"D"	SIGN SPACING											
					CHORD						NEAR SIDE							FAR SIDE				
		Type	"B"	"C"	ALUM.	STEEL	a	b	c		U	V	W	X	Y	Z		Q	R	S	T	
6	1081+73	B	64'-0"	·	4"Ø X ¼"	4"X4"X ⅜"	17'-0"	36'	11'	15'-6"	·	·	·	·	·	·	·	14'-6"	8'-0"	10'-6"	8'-0"	·
15	1107+13	B	78'-9"	·	4"Ø X ¼"	4"X4"X ⅜"	31'-9"	36'	11'	15'-6"	·	·	·	·	·	·	·	29'-7"	8'-0"	9'-8"	·	·
22	1134+00	B	78'-10"	·	4-½"Ø X ¼"	5"X5"X ⅝"	31'-11"	36'	11'	17'-6"	·	·	·	·	·	·	·	21'-9"	8'-0"	9'-8"	·	·
27	1149+83	B	78'-10"	·	4-½"Ø X ¼"	5"X5"X ⅝"	11'	36'	31'-10"	14'-6"	·	·	·	13'-6"	8'-0"	28'-10"	·	·	·	·	·	·
41	1203+24	B	90'-10"	·	4-½"Ø X ¼"	5"X5"X ⅝"	11'	36'	31'-10"	15'-6"	·	6'-0"	13'-0"	12'-6"	8'-0"	28'-10"	·	·	·	·	·	·
·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·

OVERHEAD SIGN TRUSSES
STRUCTURAL STEEL OR ALUMINUM

DATA SHEET
(SEE STANDARD 903.10 OR 903.60)

GENERAL NOTES

DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS - 1985 AND LATEST INTERIM.

BASIC ASSUMPTIONS: WIND VELOCITY = 70 mph, WIND PRESSURE ON SIGN AREA = 27 psf, ICE LOAD = 3 psf.

STRUCTURAL ALUMINUM STRESS = 10,000 psi.

STRUCTURAL CARBON STEEL (ASTM A709 GRADE 36) fs = 20,000 psi.

REINFORCING STEEL (GRADE 40) fs= 20,000 psi.

CLASS B CONCRETE fc = 1,200 psi.

ALLOWABLE SOIL PRESSURE = 2,750 psf.

ALLOWABLE UNIT STRESSES DUE TO WIND LOAD OR WIND LOAD IN COMBINATION WITH OTHER FORCES ARE INCREASED 40%.

MINIMUM CLEARANCE: VERTICAL ROADWAY CLEARANCE = 17~6".

MINIMUM CLEARANCE TO REINFORCING SHALL BE 2", UNLESS OTHERWISE SHOWN.

TRUSS SHALL BE ALL WELDED CONSTRUCTION. ALL WELDING TO BE CONTINUOUS UNLESS OTHERWISE SHOWN.

QUALIFICATION OF WELDING OPERATORS WILL BE REQUIRED.

STRUCTURAL STEEL WELDING AND WELDER QUALIFICATION SHALL BE PERFORMED IN ACCORDANCE WITH THE A.W.S. D1.2 BRIDGE WELDING CODE AS AMENDED BY THE MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS ON STRUCTURAL STEEL CONSTRUCTION.

ALUMINUM WELDING AND WELDER QUALIFICATION SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITION OF A.W.S. D1.2 STRUCTURAL WELDING CODE - ALUMINUM, EXCEPT AS AMENDED BY SECTION 903 OF THE MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

ALL ALUMINUM FILLET WELDS SHALL BE 3/16" UNLESS OTHERWISE SHOWN.

COATING: ALL COLUMNS SHALL BE GALVANIZED AS PER AASHTO M 111. ALL STRUCTURAL STEEL (EXCEPT THE COLUMNS) SHALL BE CLEANED AND COATED WITH SYSTEM G IN ACCORDANCE WITH STANDARD SPECIFICATIONS, SECTIONS 712.12 AND 903.3.4. COLOR OF THE FINISHED COAT SHALL BE GRAY.

PAYMENT FOR GALVANIZING, CLEANING AND COATING SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER SIGN TRUSS. ALL THE STRUCTURAL STEEL MAY BE GALVANIZED IN LIEU OF COATING PORTIONS OF THE STEEL MAY BE GALVANIZED WITH THE APPROVAL OF THE ENGINEER.

PERMITS MUST BE OBTAINED FOR ALL TRUCK LOADS OVER LEGAL LENGTH.

D-33
JSU0076

SIGNING PLAN
24 OF 37

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	261

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

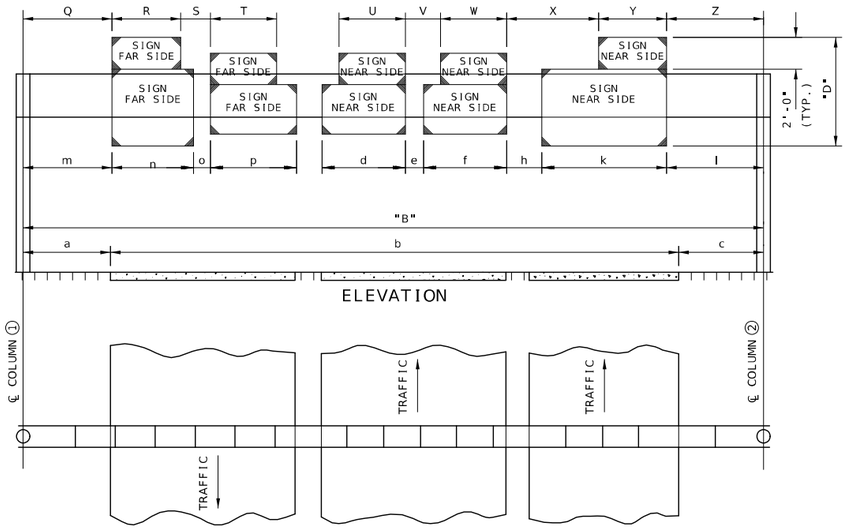
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

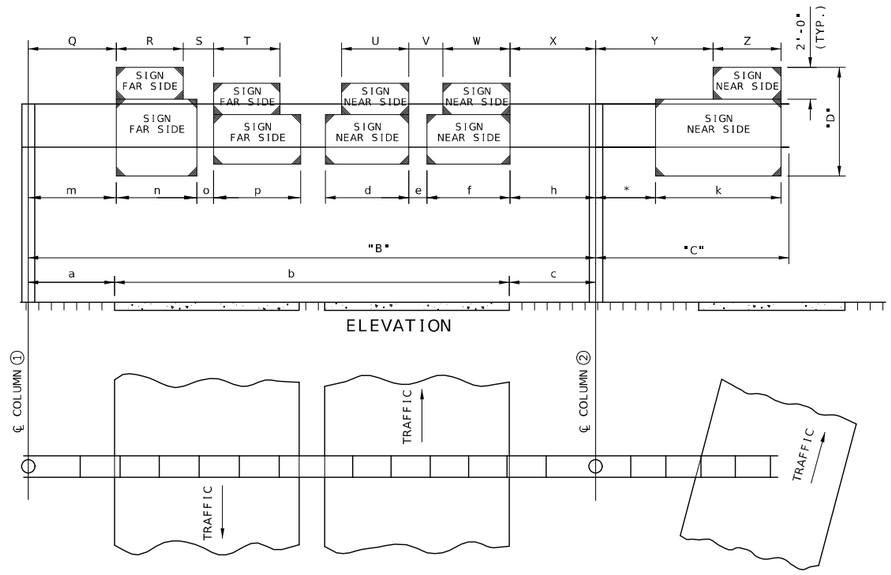
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\223_SN_JSU0076_D33.dgn 11:52:11 AM 8/20/2024

EFFECTIVE 04-01-1999



PLAN

DIMENSIONS
TYPE 'B' SIGN BRIDGE



PLAN

DIMENSIONS
TYPE 'BC' SIGN BRIDGE

NOTE: ABOVE MINIMUMS ARE RECOMMENDED DIMENSIONS.

SIGN BRIDGE DIMENSIONS

SIGN NO.	STATION NUMBER	TRUSS DESCRIPTION Type	"B"	"C"	CHORD ALUM.	CHORD STEEL	ROADWAY DESCRIPTION a	b	c	"D"	SIGN SPACING NEAR SIDE d	Ht.	e	f	Ht.	h	k	Ht.	l	FAR SIDE m	n	Ht.	o	p	Ht.	COLUMN DATA COLUMN 1 H	TYPE	COLUMN 2 H	TYPE	CONCRETE FOOTINGS (CU. YD.)
46	1223+12	B	90'-10"		4-½"ØX¼"	5"X5"X⅝"	31'-10"	48'	11'	15'-6"										28'-10"	18'-0"	15'-6"	0'-6"	17'-0"	14'-6"	20'-0"	II	19'-1"	II	27.2
59	1255+80	B	78'-10"		4"ØX¼"	4"X4"X¼"	11'	36'	31'-10"	15'-6"	11'-0"	8'-0"	0'-2"	12'-0"	12'-6"	0'-2"	13'-0"	15'-6"	31'-0"							20'-0"	III	21'-1"	III	31.3
62	1276+14	B	89'-5"		4-½"ØX¼"	5"X5"X½"	42'-5"	36'	11'	14'-6"										39'-5"	18'-0"	14'-6"	3'-6"	11'-0"	8'-0"	21'-4"	III	20'-7"	III	31.3
65	1283+50	B	78'-10"		4"ØX¼"	4"X4"X¼"	11'	36'	31'-10"	15'-6"	11'-0"	8'-0"	0'-2"	12'-0"	12'-6"	0'-2"	13'-0"	15'-6"	31'-1"							19'-1"	II	23'-8"	II	27.2
77	1309+82	B	78'-10"		4"ØX¼"	4"X4"X¼"	11'	36'	31'-10"	13'-6"	11'-0"	8'-0"	0'-2"	12'-0"	12'-6"	0'-2"	13'-0"	13'-6"	31'-0"							18'-1"	II	17'-3"	III	27.2

SIGN BRIDGE DIMENSIONS

SIGN NO.	STATION NUMBER	TRUSS DESCRIPTION Type	"B"	"C"	CHORD ALUM.	CHORD STEEL	ROADWAY DESCRIPTION a	b	c	"D"	SIGN SPACING NEAR SIDE U	V	W	X	Y	Z	FAR SIDE Q	R	S	T
46	1223+12	B	90'-10"		4-½"ØX¼"	5"X5"X⅝"	31'-10"	48'	11'	15'-6"							28'-10"	8'-0"	10'-6"	8'-0"
59	1255+80	B	78'-10"		4"ØX¼"	4"X4"X¼"	11'	36'	31'-10"	15'-6"		2'-2"	10'-0"	3'-2"	10'-0"	31'-0"				
62	1276+14	B	89'-5"		4-½"ØX¼"	5"X5"X½"	42'-5"	36'	11'	14'-6"							39'-5"	8'-0"	13'-6"	
65	1283+50	B	78'-10"		4"ØX¼"	4"X4"X¼"	11'	36'	31'-10"	15'-6"		2'-2"	10'-0"	3'-2"	10'-0"	31'-1"				
77	1309+82	B	78'-10"		4"ØX¼"	4"X4"X¼"	11'	36'	31'-10"	13'-6"		2'-2"	10'-0"	3'-2"	10'-0"	31'-0"				

* MINIMUM = 6'-0" WHEN ALUMINUM IS USED.

OVERHEAD SIGN TRUSSES
STRUCTURAL STEEL OR ALUMINUM

DATA SHEET
(SEE STANDARD 903.10 OR 903.60)

GENERAL NOTES

DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS - 1985 AND LATEST INTERIM.

BASIC ASSUMPTIONS: WIND VELOCITY = 70 mph, WIND PRESSURE ON SIGN AREA = 27 psf, ICE LOAD = 3 psf.

STRUCTURAL ALUMINUM STRESS = 10,000 psi.

STRUCTURAL CARBON STEEL (ASTM A709 GRADE 36) fs = 20,000 psi.

REINFORCING STEEL (GRADE 40) fs= 20,000 psi.

CLASS B CONCRETE fc = 1,200 psi.

ALLOWABLE SOIL PRESSURE = 2,750 psf.

ALLOWABLE UNIT STRESSES DUE TO WIND LOAD OR WIND LOAD IN COMBINATION WITH OTHER FORCES ARE INCREASED 40%.

MINIMUM CLEARANCE: VERTICAL ROADWAY CLEARANCE = 17~6".

MINIMUM CLEARANCE TO REINFORCING SHALL BE 2", UNLESS OTHERWISE SHOWN.

TRUSS SHALL BE ALL WELDED CONSTRUCTION. ALL WELDING TO BE CONTINUOUS UNLESS OTHERWISE SHOWN.

QUALIFICATION OF WELDING OPERATORS WILL BE REQUIRED.

STRUCTURAL STEEL WELDING AND WELDER QUALIFICATION SHALL BE PERFORMED IN ACCORDANCE WITH THE A.W.S. D1.2 BRIDGE WELDING CODE AS AMENDED BY THE MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS ON STRUCTURAL STEEL CONSTRUCTION.

ALUMINUM WELDING AND WELDER QUALIFICATION SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITION OF A.W.S. D1.2 STRUCTURAL WELDING CODE - ALUMINUM, EXCEPT AS AMENDED BY SECTION 903 OF THE MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

ALL ALUMINUM FILLET WELDS SHALL BE 3/16" UNLESS OTHERWISE SHOWN.

COATING: ALL COLUMNS SHALL BE GALVANIZED AS PER AASHTO M 111. ALL STRUCTURAL STEEL (EXCEPT THE COLUMNS) SHALL BE CLEANED AND COATED WITH SYSTEM G IN ACCORDANCE WITH STANDARD SPECIFICATIONS, SECTIONS 712.12 AND 903.3.4. COLOR OF THE FINISHED COAT SHALL BE GRAY.

PAYMENT FOR GALVANIZING, CLEANING AND COATING SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER SIGN TRUSS. ALL THE STRUCTURAL STEEL MAY BE GALVANIZED IN LIEU OF COATING PORTIONS OF THE STEEL MAY BE GALVANIZED WITH THE APPROVAL OF THE ENGINEER.

PERMITS MUST BE OBTAINED FOR ALL TRUCK LOADS OVER LEGAL LENGTH.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	262

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

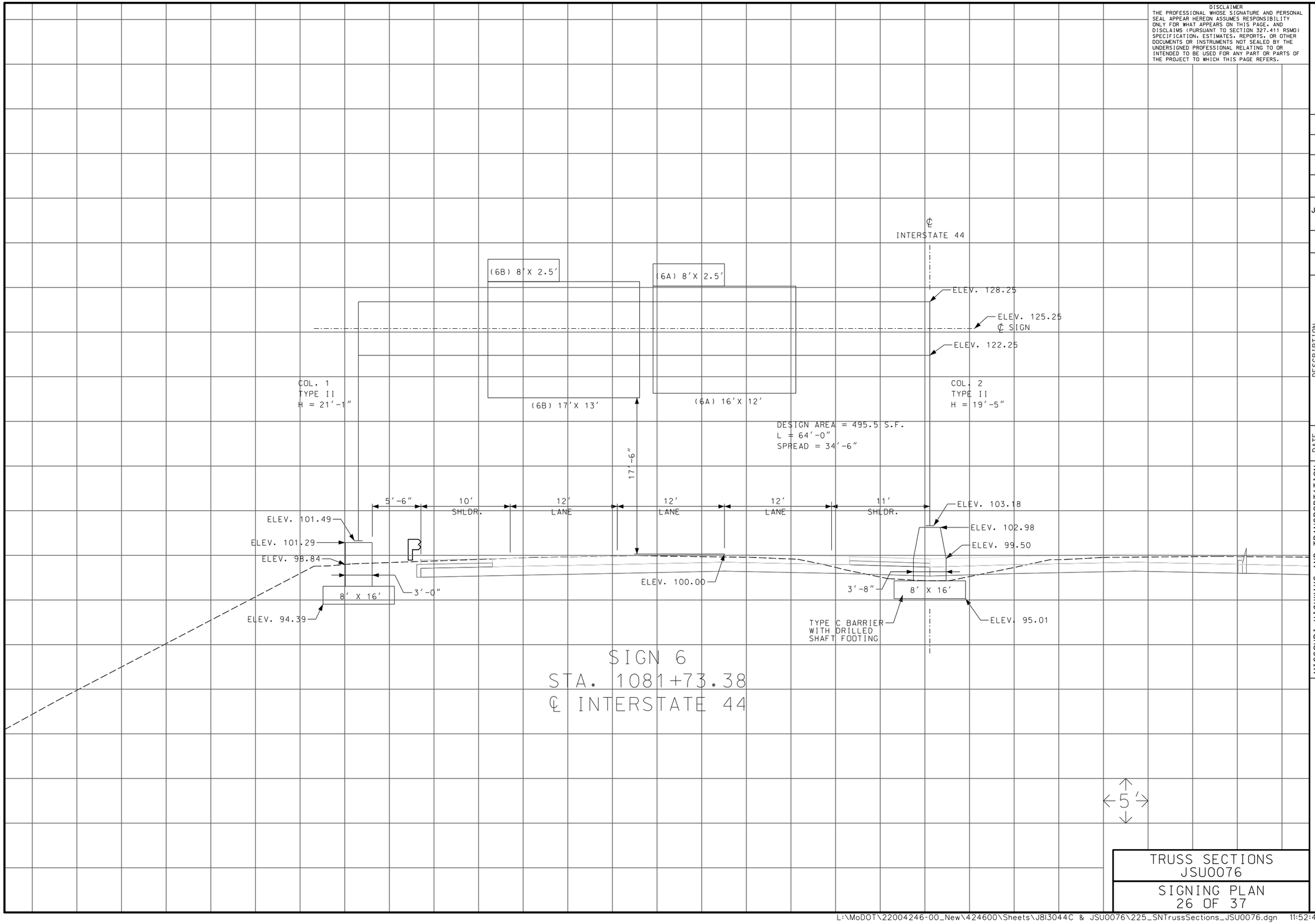
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

D-33
J8I3044C

SIGNING PLAN
25 OF 37

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



TRUSS SECTIONS
JSU0076

SIGNING PLAN
26 OF 37

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	263

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

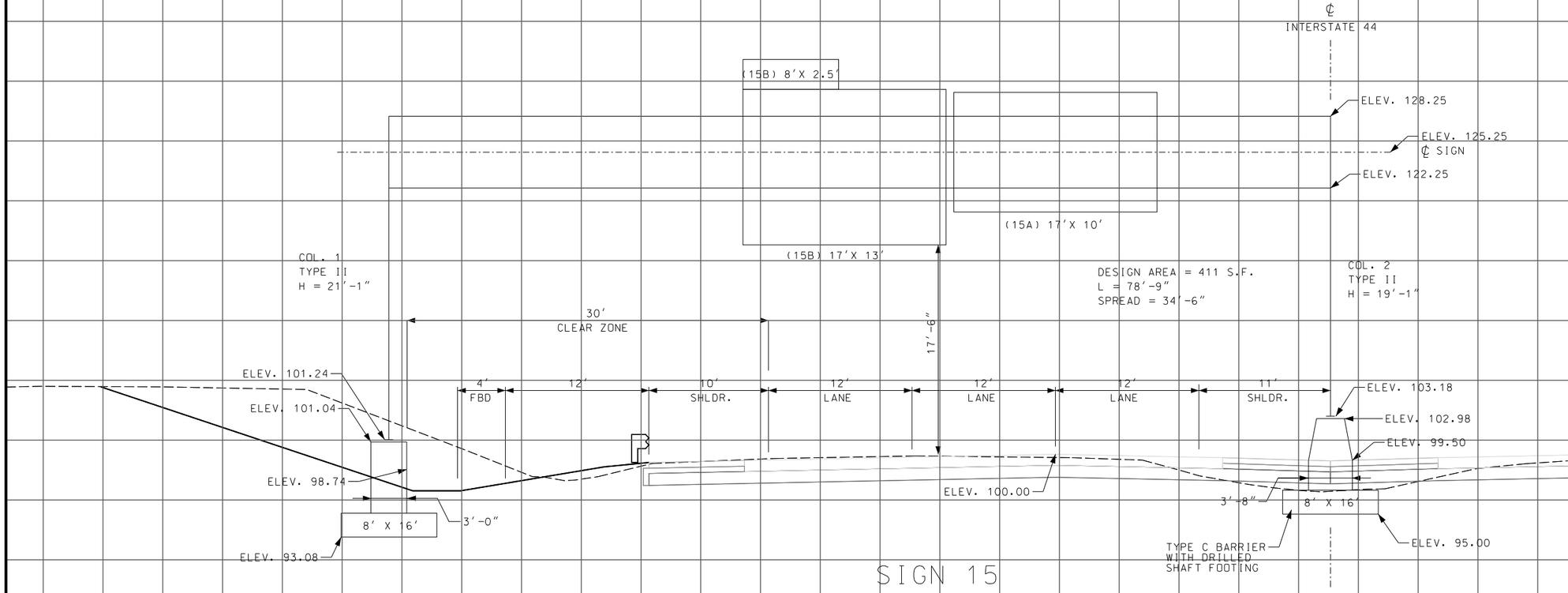
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
©Copyright CMT, Inc.

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\225_SNTrussSections_JSU0076.dgn 11:52:43 AM 8/20/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



NOTE

DESIGN OF SIGN TRUSS AND CONCRETE FOOTINGS PREPARED TO ACCOMMODATE FUTURE AUXILIARY LANES

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	264

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

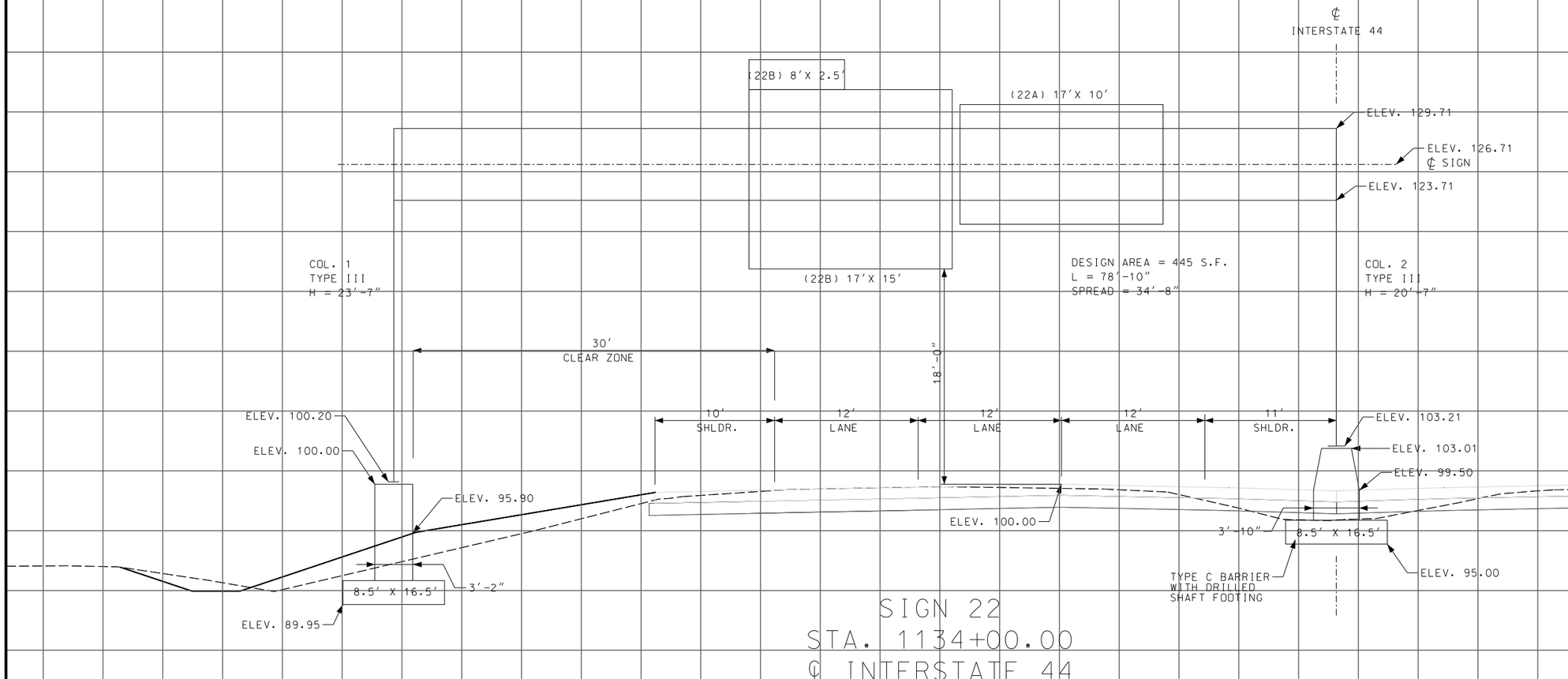
TRUSS SECTIONS
JSU0076

SIGNING PLAN
27 OF 37

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\225_SNTrussSections_JSU0076.dgn 11:52:44 AM 8/20/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE. AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION. ESTIMATES. REPORTS. OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



NOTE

DESIGN OF SIGN TRUSS AND CONCRETE FOOTINGS PREPARED TO ACCOMMODATE FUTURE AUXILIARY LANES

TRUSS SECTIONS
JSU0076

SIGNING PLAN
28 OF 37

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED. SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	265

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

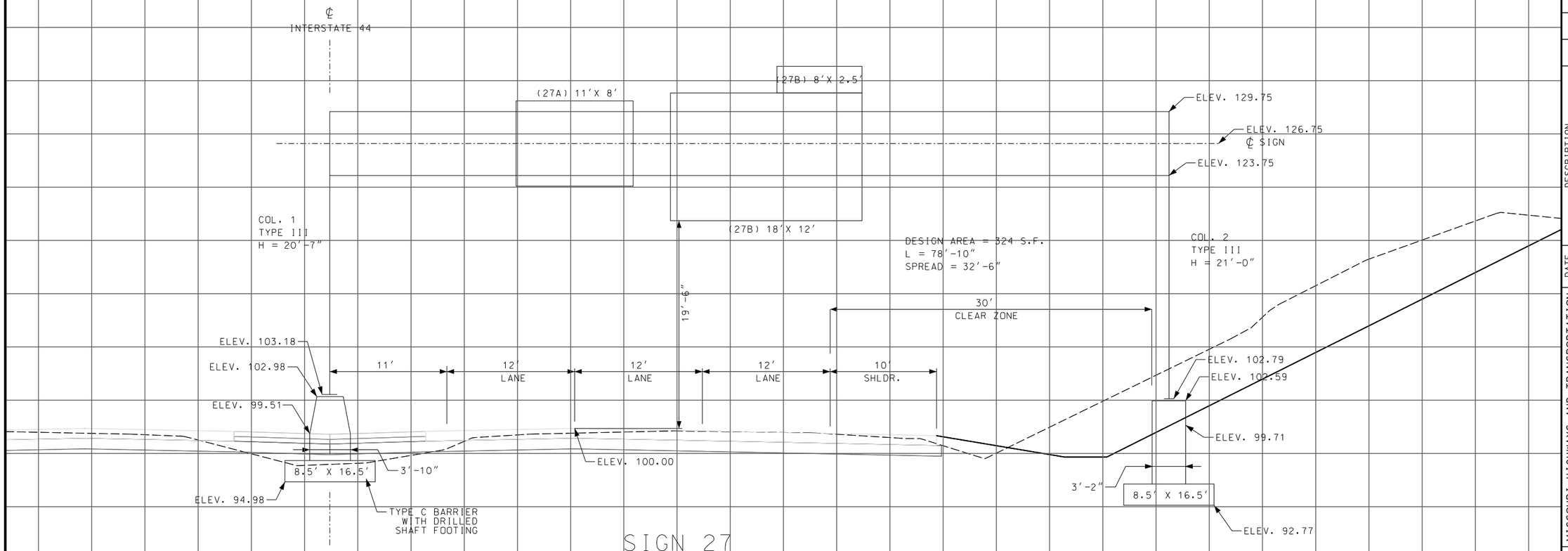
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
©Copyright CMT, Inc.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\225_SNTrussSections_JSU0076.dgn 11:52:46 AM 8/20/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



SIGN 27
STA. 1149+83.08
℄ INTERSTATE 44

NOTE

DESIGN OF SIGN TRUSS AND CONCRETE FOOTINGS PREPARED TO ACCOMMODATE FUTURE AUXILIARY LANES

TRUSS SECTIONS
JSU0076

SIGNING PLAN
29 OF 37

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	266

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

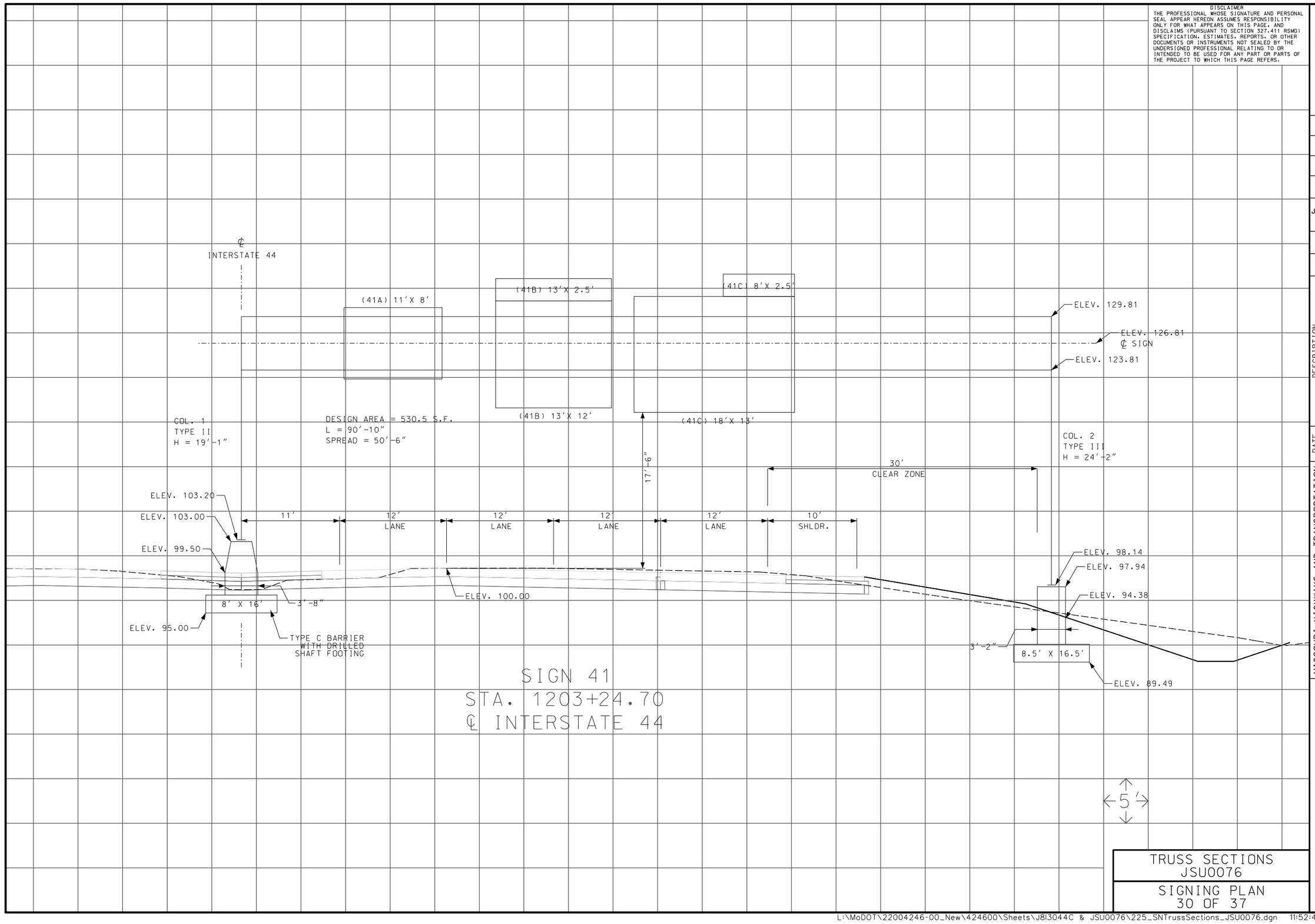
BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



SIGN 41
STA. 1203+24.70
℄ INTERSTATE 44

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	267

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

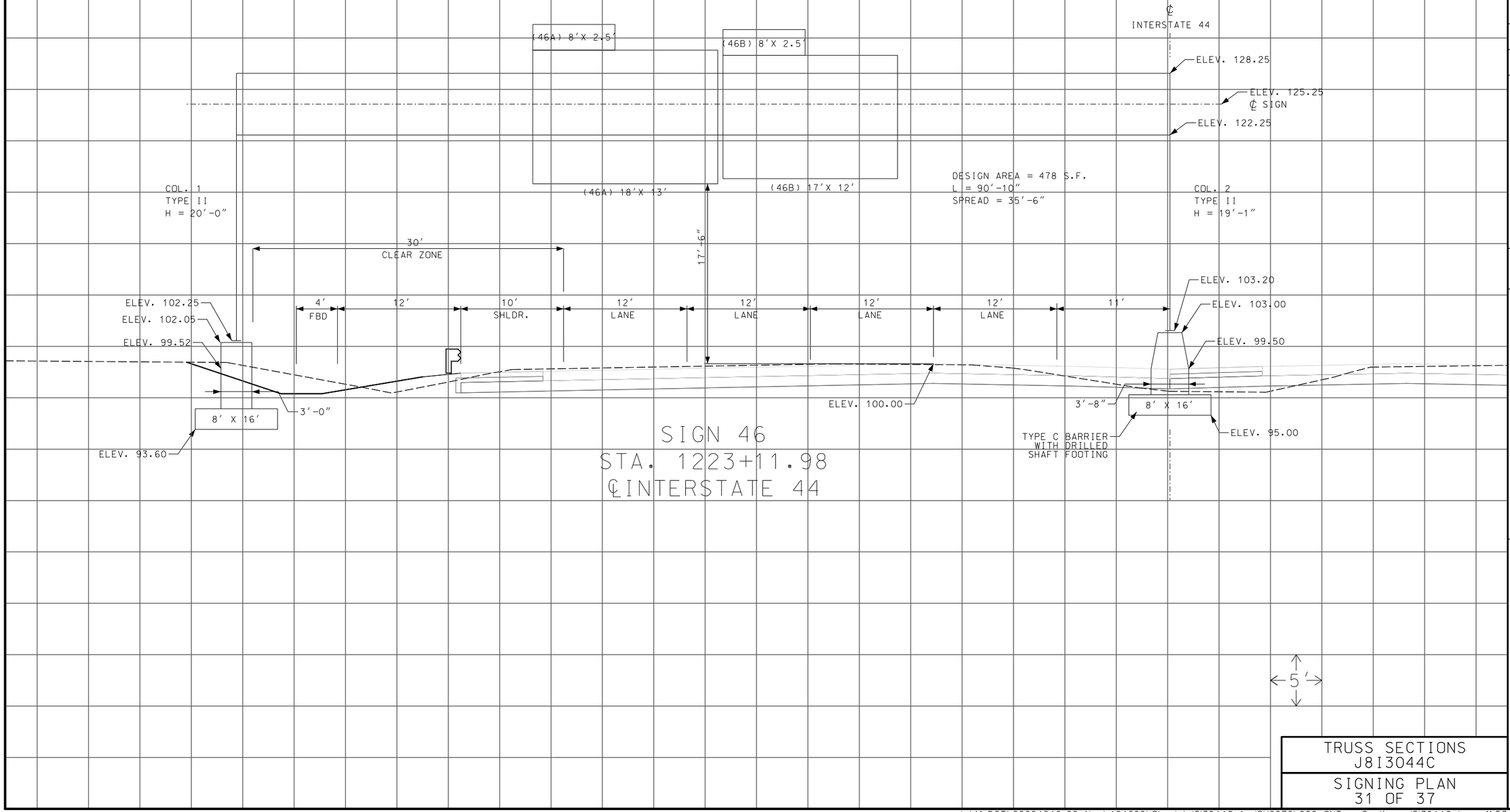
TRUSS SECTIONS
JSU0076

SIGNING PLAN
30 OF 37

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\225_SNTrussSections_JSU0076.dgn 11:52:48 AM 8/20/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



TRUSS SECTIONS
J8I3044C

SIGNING PLAN
31 OF 37

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	268

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

REV.	DATE	DESCRIPTION

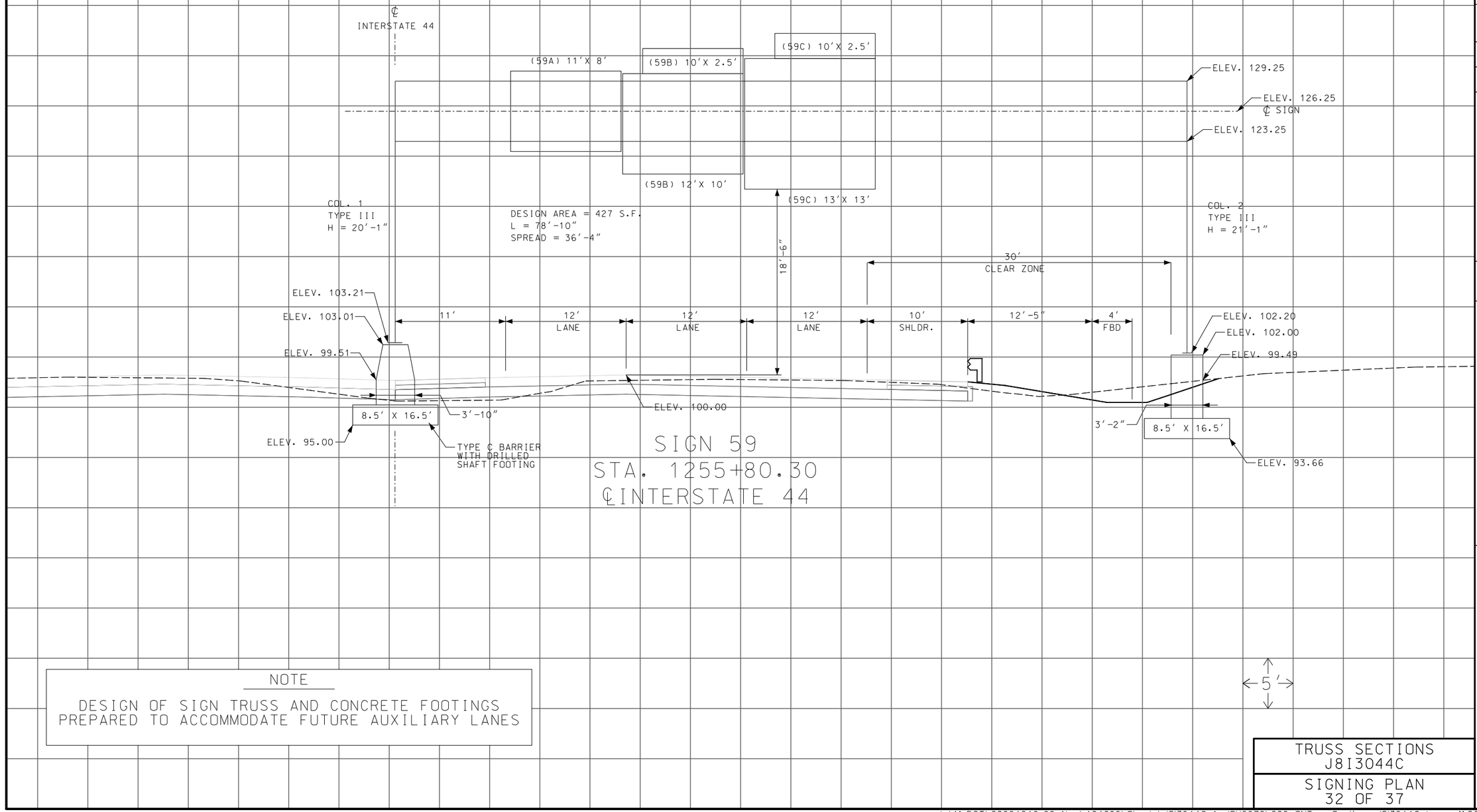
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\226_SNTrussSections_J8I3044C.dgn 11:53:00 AM 8/20/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



NOTE

DESIGN OF SIGN TRUSS AND CONCRETE FOOTINGS PREPARED TO ACCOMMODATE FUTURE AUXILIARY LANES

TRUSS SECTIONS
J8I3044C

SIGNING PLAN
32 OF 37

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	269

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

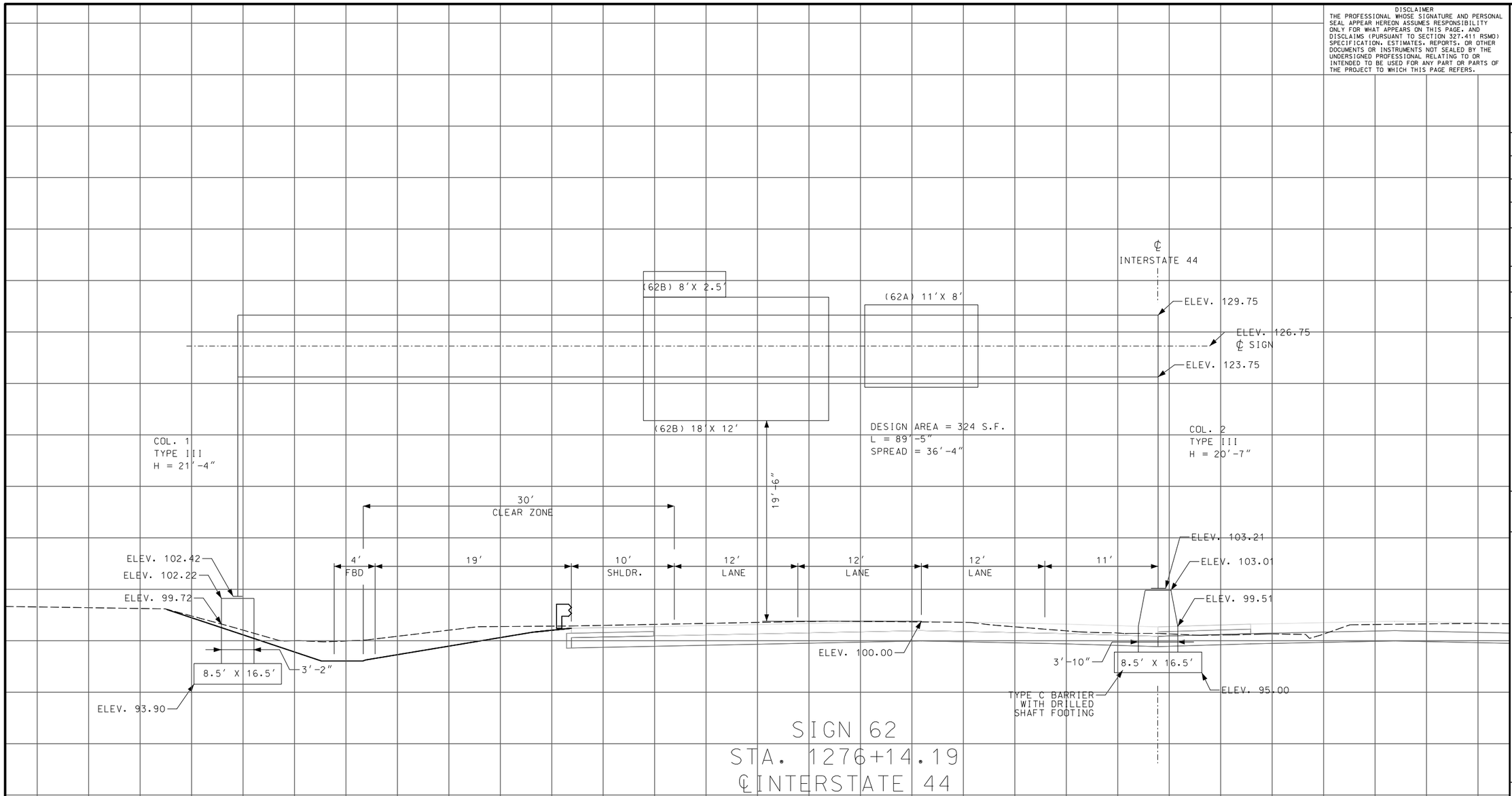
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\226_SNTrussSections_J8I3044C.dgn 11:53:01 AM 8/20/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



SIGN 62
STA. 1276+14.19
℄INTERSTATE 44

NOTE

DESIGN OF SIGN TRUSS AND CONCRETE FOOTINGS PREPARED TO ACCOMMODATE FUTURE AUXILIARY LANES

TRUSS SECTIONS
J8I3044C

SIGNING PLAN
33 OF 37

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	270

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

REV.	DATE	DESCRIPTION

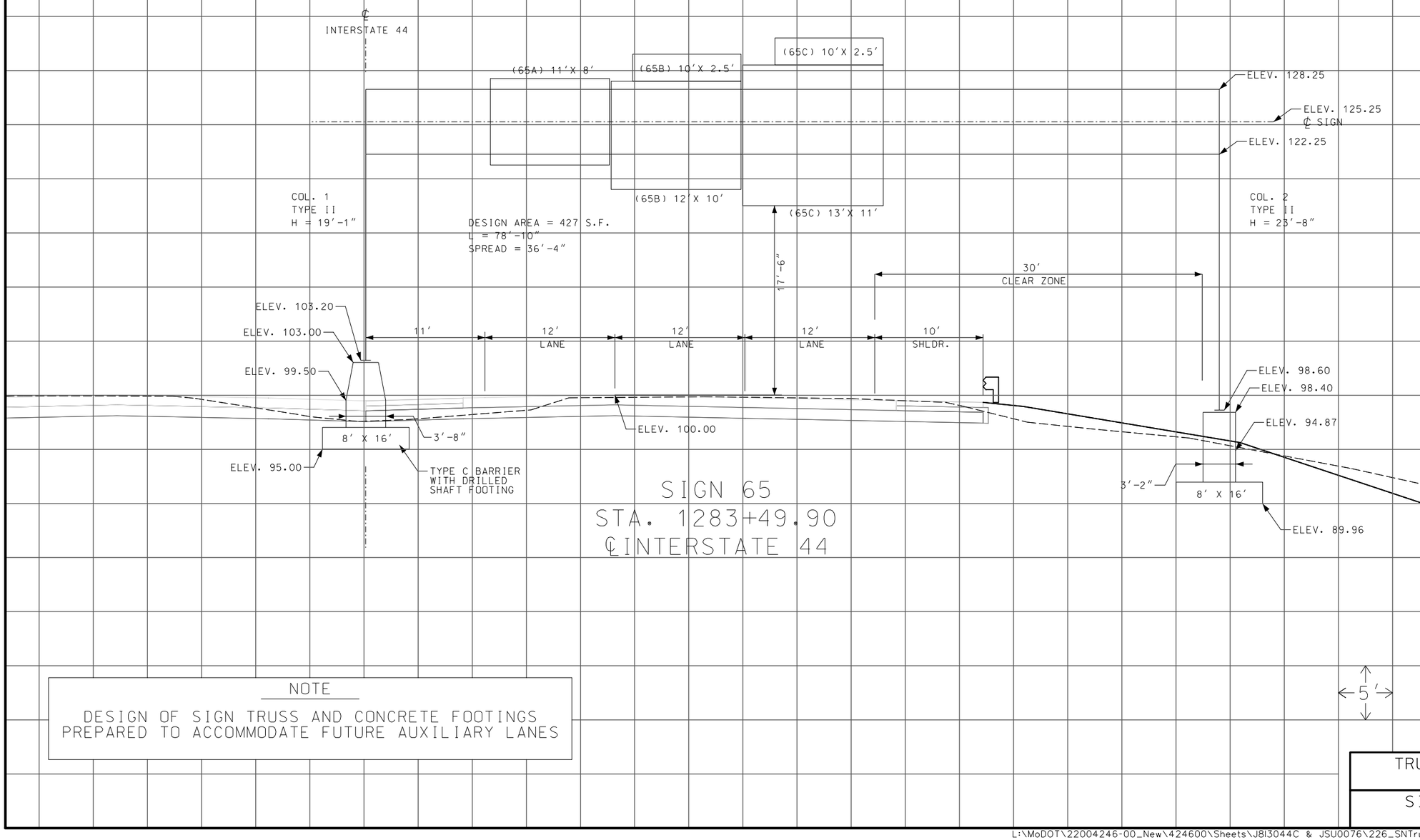
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\226_SNTrussSections_J8I3044C.dgn 11:53:02 AM 8/20/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



NOTE

DESIGN OF SIGN TRUSS AND CONCRETE FOOTINGS PREPARED TO ACCOMMODATE FUTURE AUXILIARY LANES

TRUSS SECTIONS
J8I3044C

SIGNING PLAN
34 OF 37

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	271

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

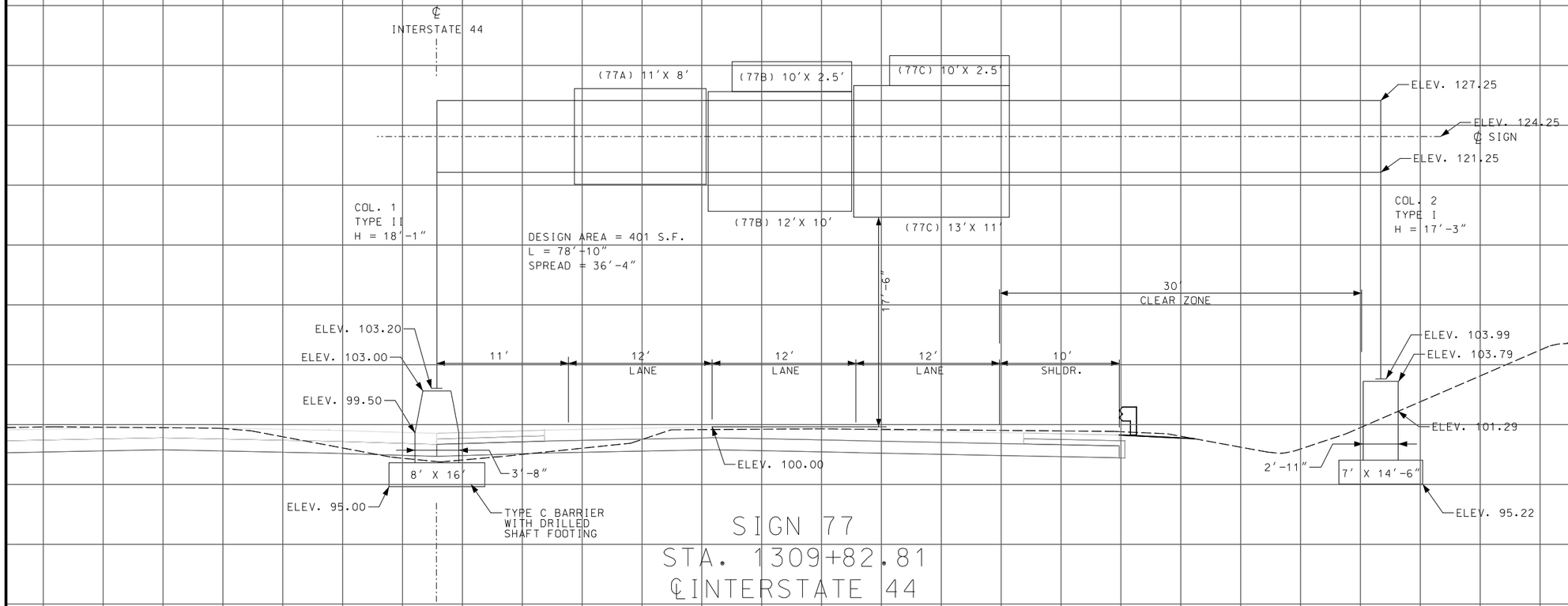
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
©Copyright CMT, Inc.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE. AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION. ESTIMATES. REPORTS. OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



SIGN 77
STA. 1309+82.81
℄INTERSTATE 44

NOTE

DESIGN OF SIGN TRUSS AND CONCRETE FOOTINGS PREPARED TO ACCOMMODATE FUTURE AUXILIARY LANES

TRUSS SECTIONS
J8I3044C

SIGNING PLAN
35 OF 37

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED. SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	272

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
© Copyright CMT, Inc.

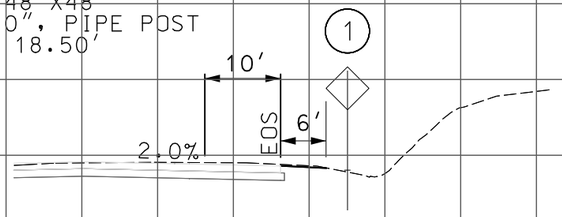
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\226_SNTrussSections_J8I3044C.dgn 11:53:04 AM 8/20/2024

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

(1)
STA. 1075+32
I-44 - RT

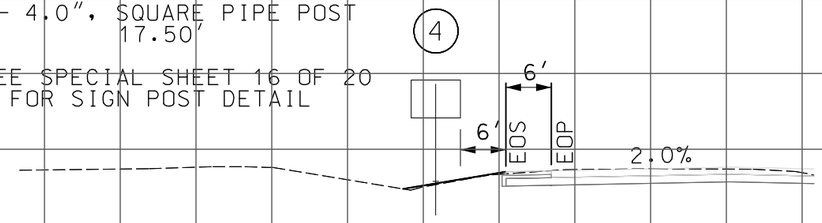
W4-3R
48"X48"
1 - 4.0", PIPE POST
18.50'



(4)
STA. 1078+13
I-44 - LT

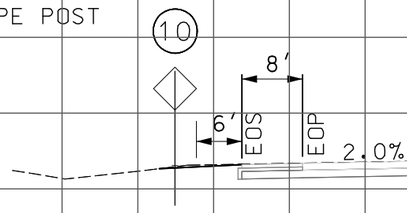
E5-1A
78"X60"
1 - 4.0", SQUARE PIPE POST
17.50'

✳ SEE SPECIAL SHEET 16 OF 20 FOR SIGN POST DETAIL



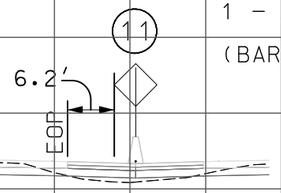
(10)
STA. 1092+27
I-44 - LT

W12-2
48"X48"
1 - 4.0", PIPE POST
18.00'



(11)
STA. 1092+27
I-44 - RT

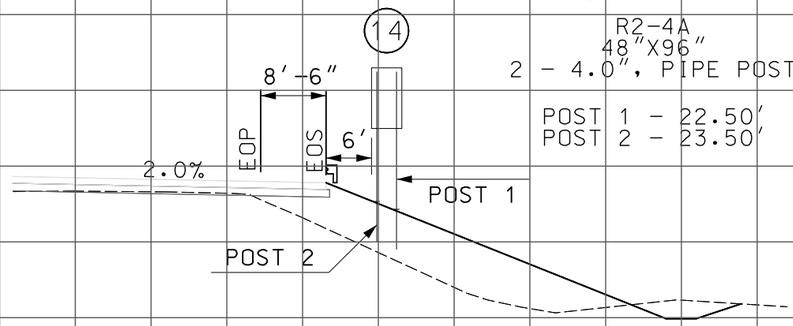
W12-2
48"X48"
1 - 2.5", 7 GAUGE
PSST POST
(BARRIER MOUNTED)
9.00'



(14)
STA. 1100+86
I-44 - RT

R2-4A
48"X96"
2 - 4.0", PIPE POST

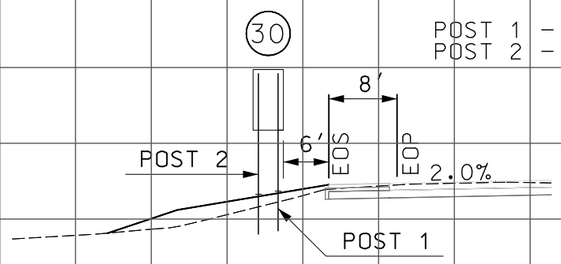
POST 1 - 22.50'
POST 2 - 23.50'



(30)
STA. 1167+25
I-44 - LT

R2-4A
48"X96"
2 - 4.0", PIPE POST

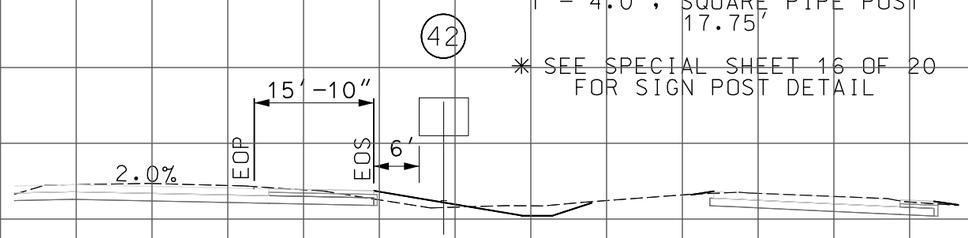
POST 1 - 21.00'
POST 2 - 21.25'



(42)
STA. 1206+17
I-44 - RT

E5-1A
78"X60"
1 - 4.0", SQUARE PIPE POST
17.75'

✳ SEE SPECIAL SHEET 16 OF 20 FOR SIGN POST DETAIL



NOTE

MINIMUM VERTICAL CLEARANCE ARE TAKEN FROM EDGE OF PAVEMENT AND ARE TO BE 7' UNLESS SPECIFIED OTHERWISE.

10'

SIGN SECTIONS
JSU0076

SIGNING PLAN
36 OF 37

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	273

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION	REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

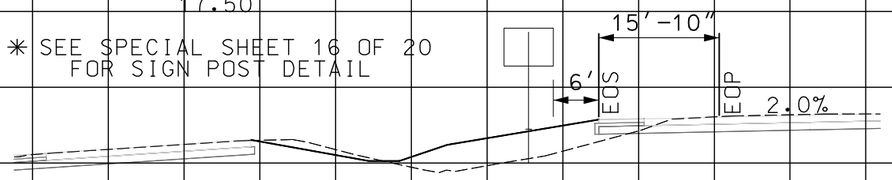
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\235_SNSections_JSU0076.dgn 11:53:17 AM 8/20/2024

(45)
STA. 1220+59.00
I-44 - LT

E5-1A
78"X60"
1 - 4.0", SQUARE PIPE POST
17.50'

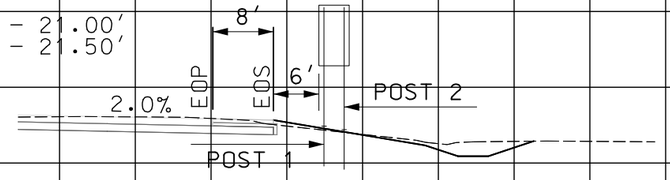
✳ SEE SPECIAL SHEET 16 OF 20
FOR SIGN POST DETAIL



(58)
STA. 1244+00.00
I-44 - RT

R2-4A
48"X96"
2 - 4.0", PIPE POST

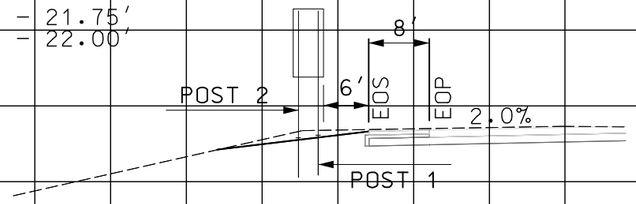
POST 1 - 21.00'
POST 2 - 21.50'



(72)
STA. 1289+00.00
I-44 - LT

R2-4A
48"X96"
2 - 4.0", PIPE POST

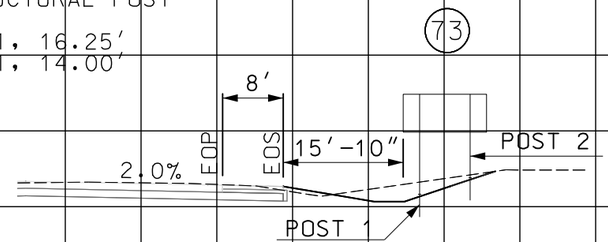
POST 1 - 21.75'
POST 2 - 22.00'



(73)
STA. 1290+84.00
I-44 - RT

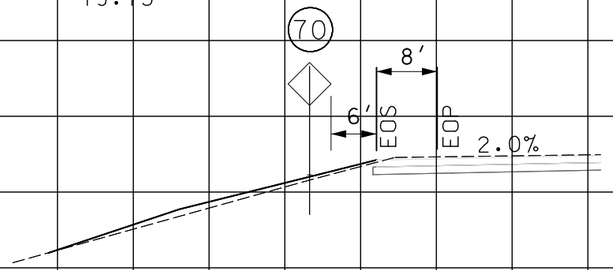
E4-3
132"X60"
2 - NO. 1, STRUCTURAL POST

POST 1 - WF1, 16.25'
POST 2 - WF1, 14.00'



(70)
STA. 1295+67.00
I-44 - LT

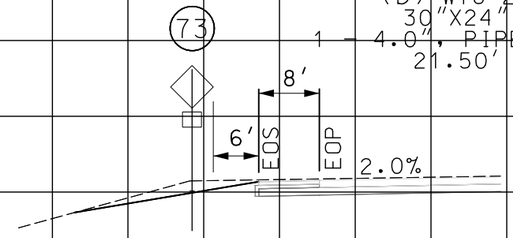
W4-2R
48"X48"
1 - 4.0", PIPE POST
19.75'



(73)
STA. 1299+71.00
I-44 - LT

MINIMUM VERT.
CLEARANCE = 6'

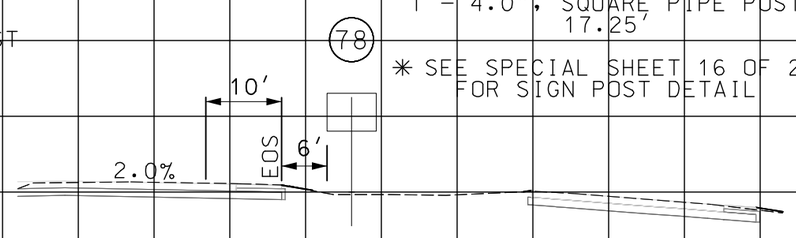
(a) W9-2L
48"X48"
(b) W16-2P
30"X24"
1 - 4.0", PIPE POST
21.50'



(78)
STA. 1313+45.00
I-44 - LT

E4-3
108"X60"
1 - 4.0", SQUARE PIPE POST
17.25'

✳ SEE SPECIAL SHEET 16 OF 20
FOR SIGN POST DETAIL



NOTE

MINIMUM VERTICAL CLEARANCE ARE TAKEN FROM EDGE OF PAVEMENT AND ARE TO BE 7' UNLESS SPECIFIED OTHERWISE.

10'

SIGN SECTIONS
J8I3044C

SIGNING PLAN
37 OF 37

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	274

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

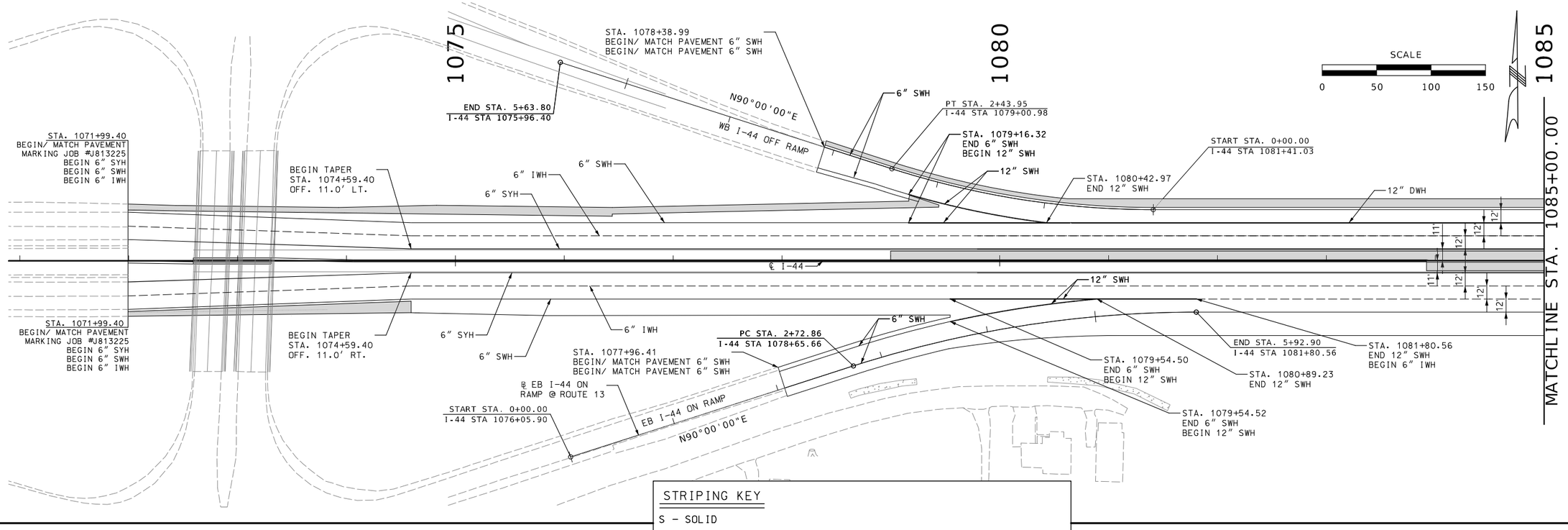
DATE	DESCRIPTION	REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



STRIPING KEY

S - SOLID

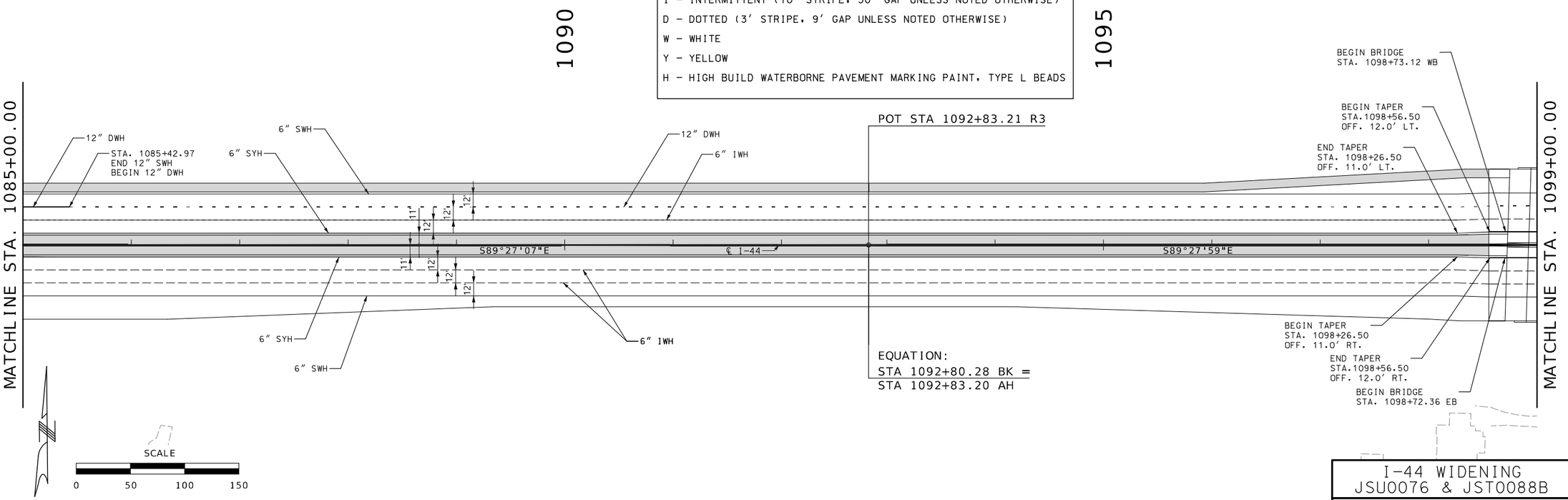
I - INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)

D - DOTTED (3' STRIPE, 9' GAP UNLESS NOTED OTHERWISE)

W - WHITE

Y - YELLOW

H - HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS



I-44 WIDENING
JSU0076 & JST0088B

PAVEMENT MARKING
1 OF 9

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	275

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C,
& JST0088B

PROJECT NO.

BRIDGE NO.

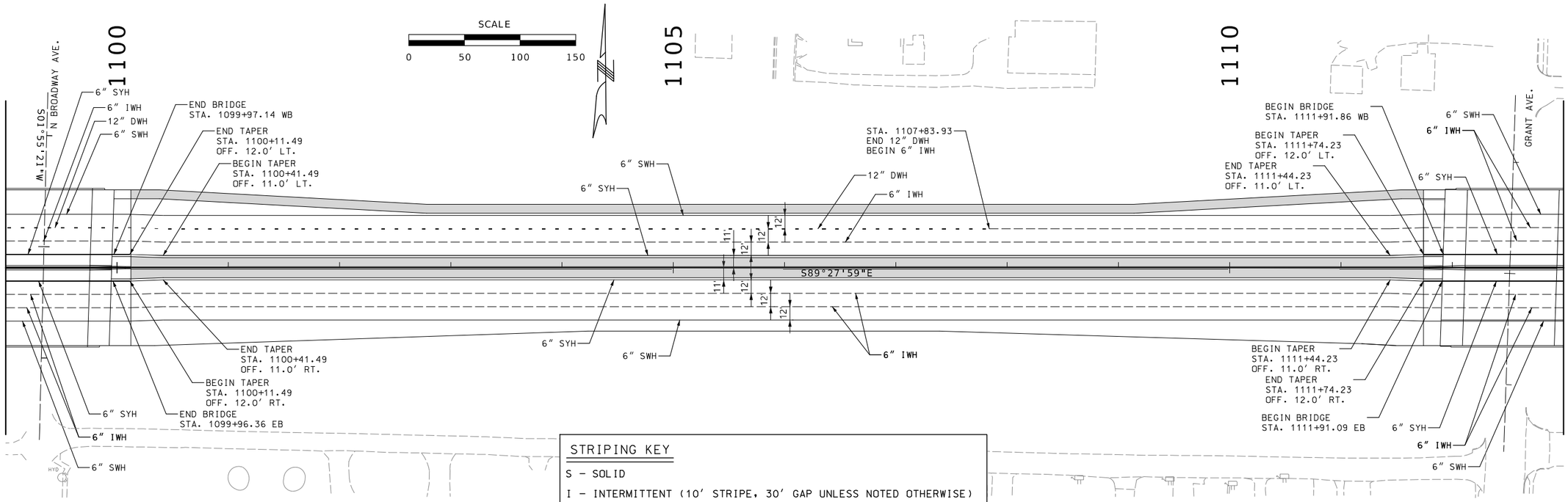
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\237-245_PM_Sheets_JSU0076_J8I3044C.dgn 11:55:32 AM 8/20/2024



STRIPING KEY

S – SOLID

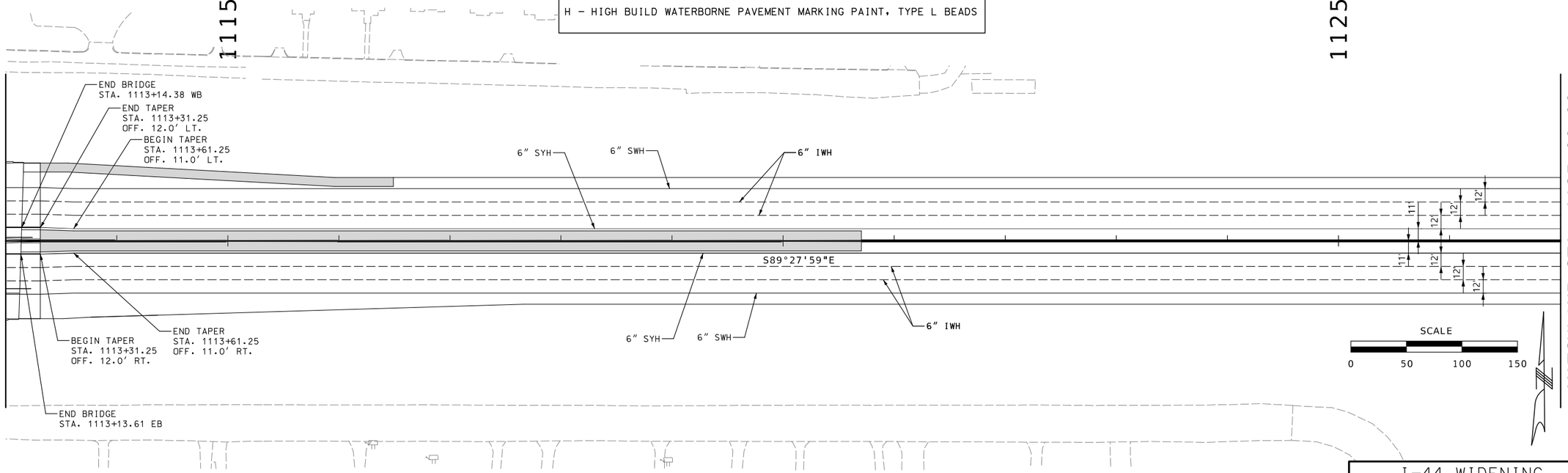
I – INTERMITTENT (10′ STRIPE, 30′ GAP UNLESS NOTED OTHERWISE)

D – DOTTED (3′ STRIPE, 9′ GAP UNLESS NOTED OTHERWISE)

W – WHITE

Y – YELLOW

H – HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS



I-44 WIDENING
JSU0076 & JST0088B

PAVEMENT MARKING
2 OF 9

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

RYAN STEHN
NUMBER PE-2020000089
STATE OF MISSOURI
PROFESSIONAL ENGINEER

DATE PREPARED: 8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	276

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

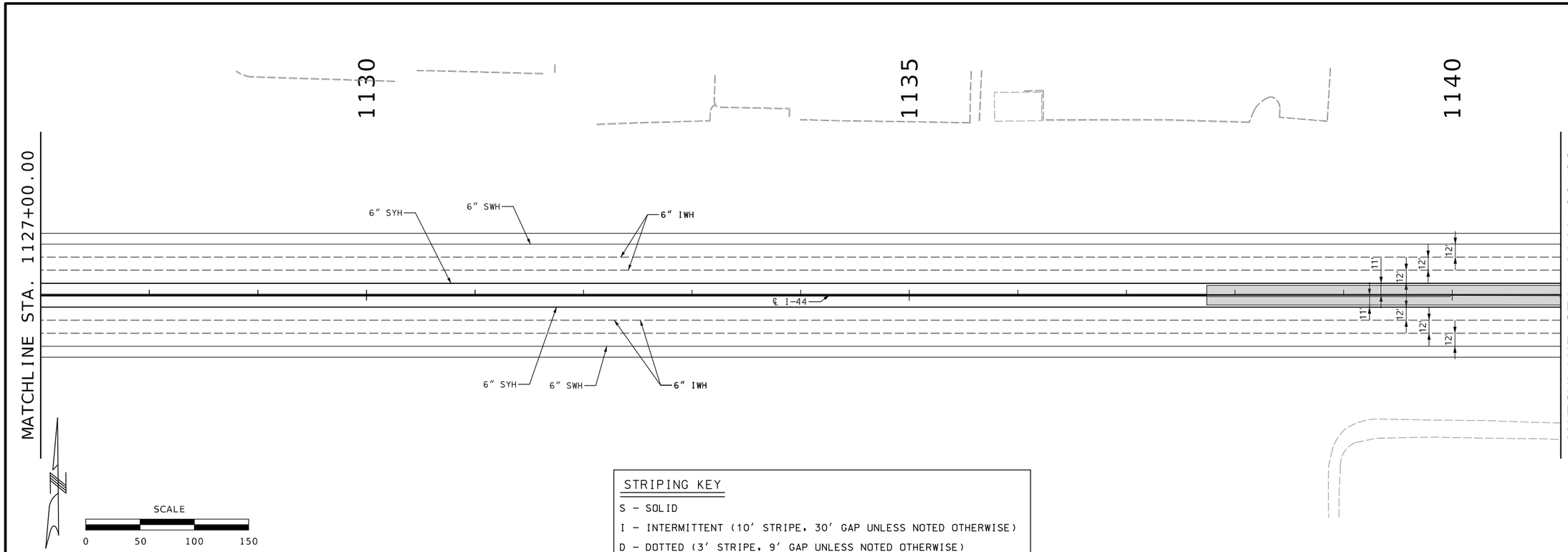
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\237-245_PM_Sheets_JSU0076_J8I3044C.dgn 11:55:33 AM 8/20/2024



STRIPING KEY

S – SOLID

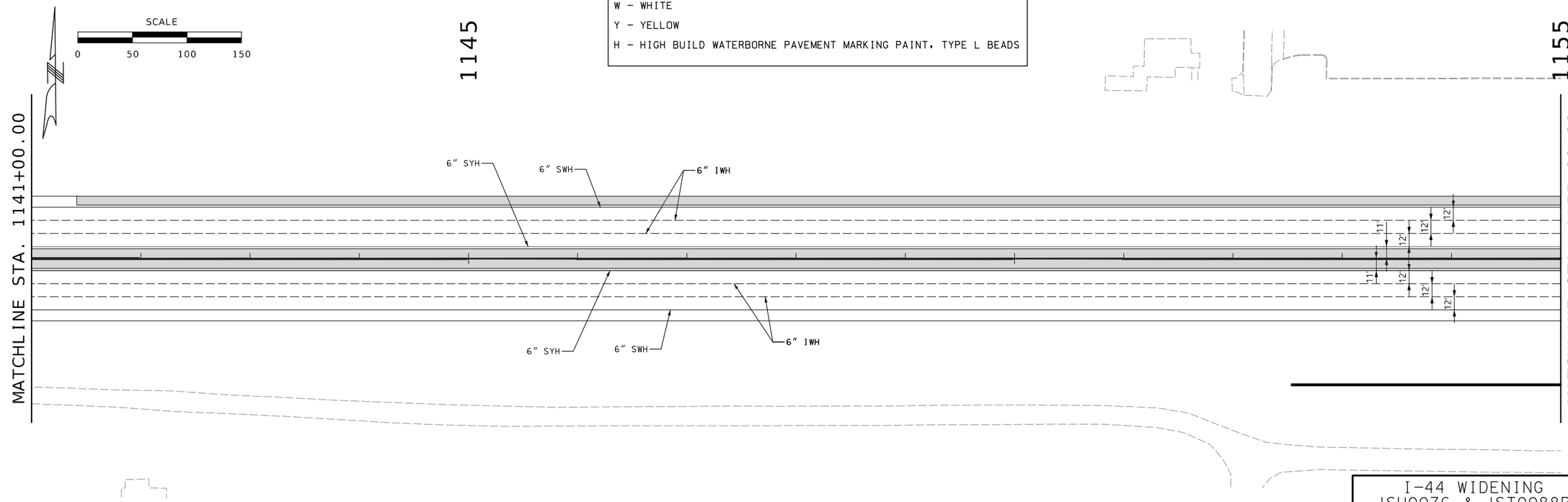
I – INTERMITTENT (10′ STRIPE, 30′ GAP UNLESS NOTED OTHERWISE)

D – DOTTED (3′ STRIPE, 9′ GAP UNLESS NOTED OTHERWISE)

W – WHITE

Y – YELLOW

H – HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS



STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	277

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

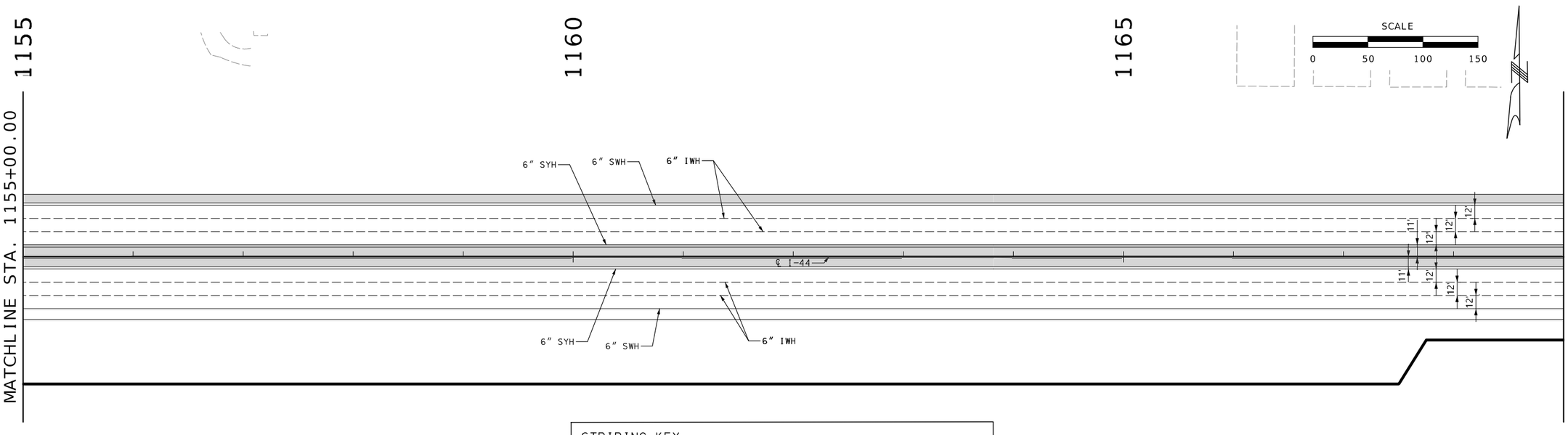
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

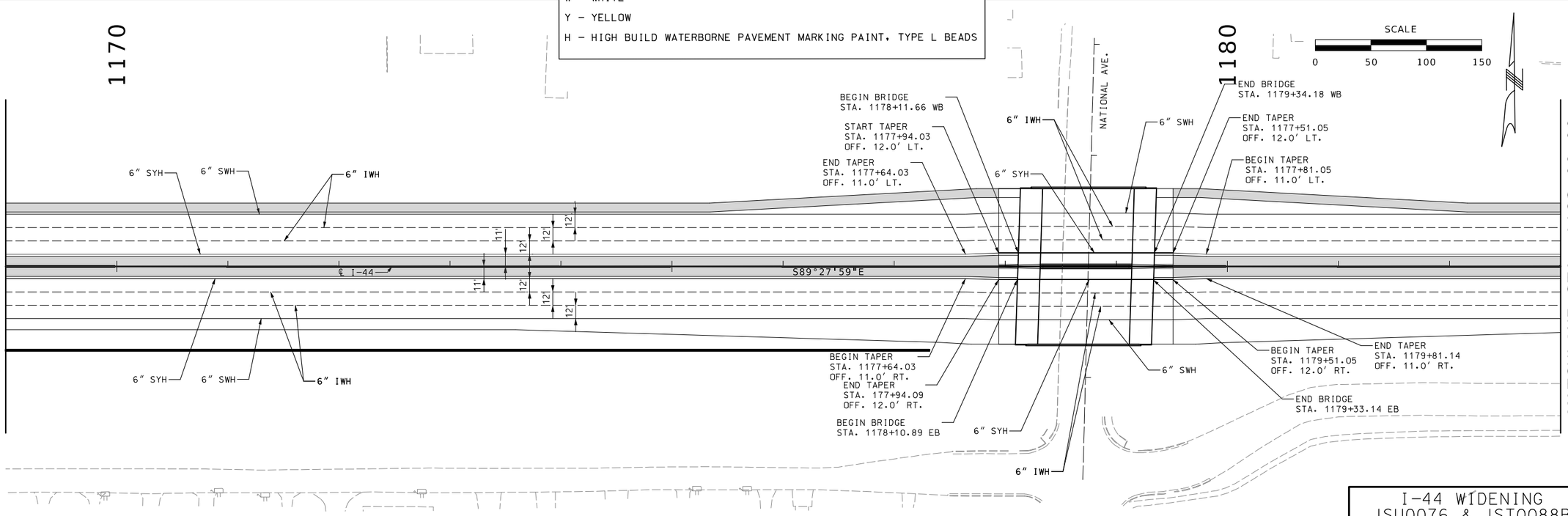
I-44 WIDENING
JSU0076 & JST0088B

PAVEMENT MARKING
3 OF 9



STRIPING KEY

S – SOLID
I – INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)
D – DOTTED (3' STRIPE, 9' GAP UNLESS NOTED OTHERWISE)
W – WHITE
Y – YELLOW
H – HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS



I-44 WIDENING
JSU0076 & JST0088B

PAVEMENT MARKING
4 OF 9

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	278

COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

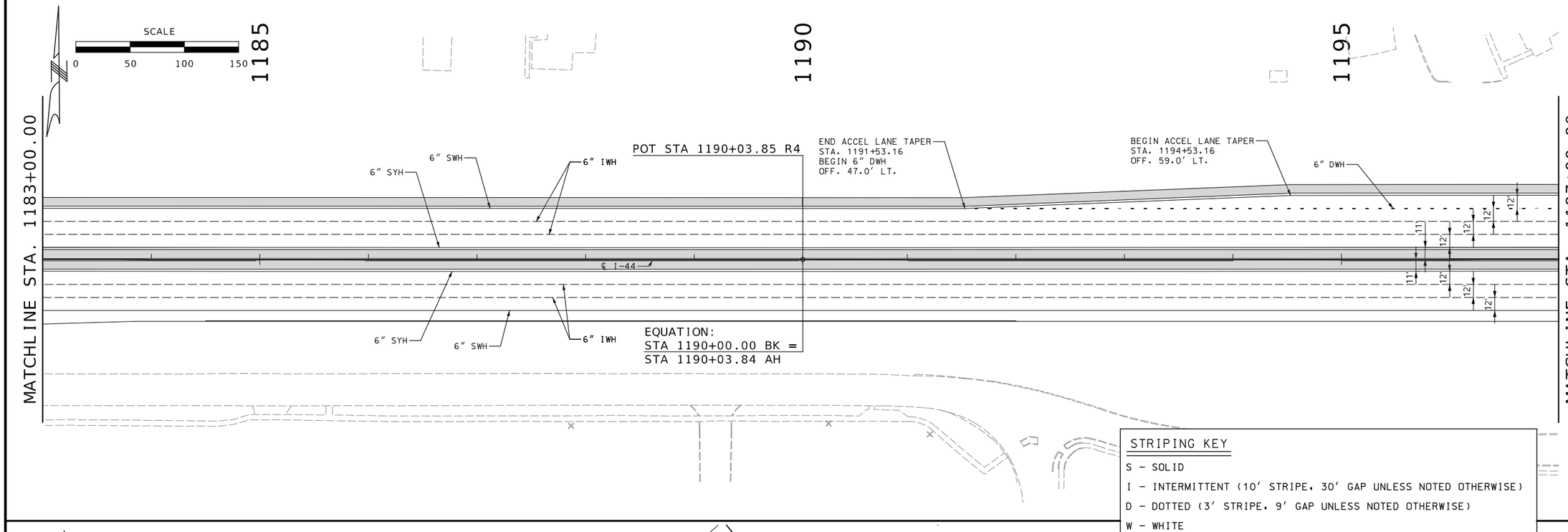
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.



STRIPING KEY

S – SOLID

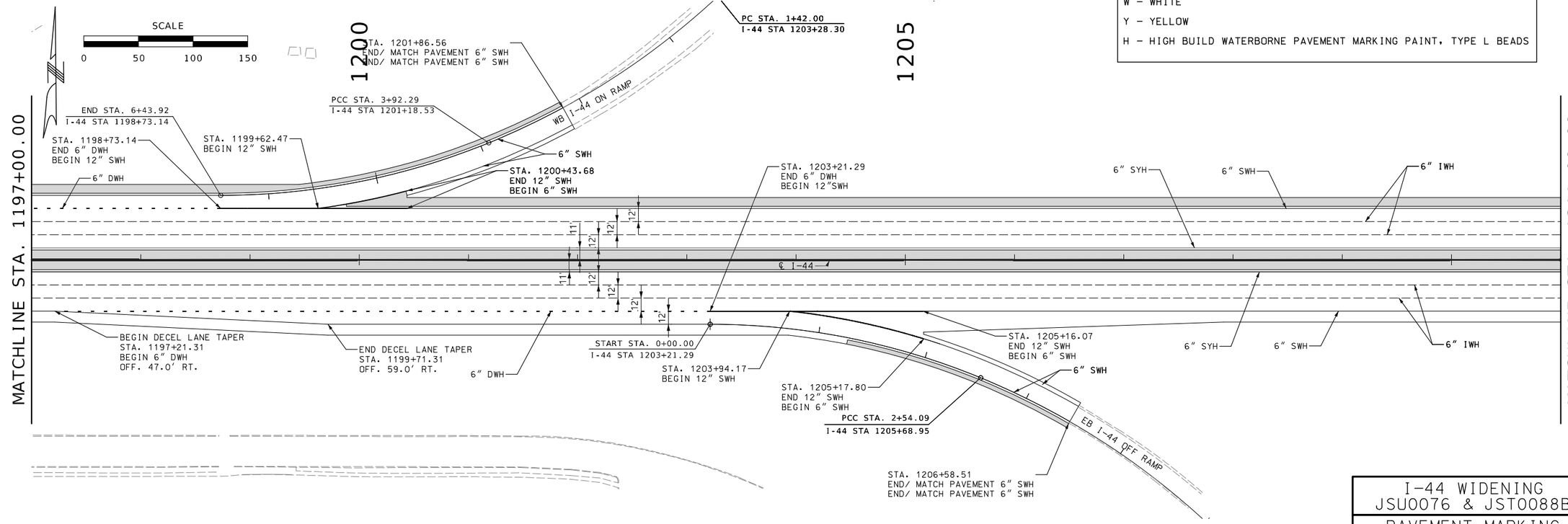
I – INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)

D – DOTTED (3' STRIPE, 9' GAP UNLESS NOTED OTHERWISE)

W – WHITE

Y – YELLOW

H – HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS



I-44 WIDENING
JSU0076 & JST0088B

PAVEMENT MARKING
5 OF 9

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	8/20/2024
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	279
COUNTY	GREENE
JOB NO.	JSU0076, J8I3044C, & JST0088B
PROJECT NO.	
BRIDGE NO.	

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

STATION 1213+22.32
END JOB #JSU0076 BEGIN JOB #J8I3044C

1215 1220 1225

MATCHLINE STA. 1211+00.00

MATCHLINE STA. 1225+00.00

WB I-44 OFF RAMP

STA. 1219+86.44
BEGIN/ MATCH PAVEMENT 6" SWH
BEGIN/ MATCH PAVEMENT 6" SWH

PCC STA. 2+92.28
I-44 STA 1220+19.71

STA. 1220+99.76
END 6" SWH
BEGIN 12" SWH

STA. 1221+00.61
END 6" SWH
BEGIN 12" SWH

12" SWH

STA. 1222+12.90
END 12" SWH

START STA. 0+00.00
I-44 STA 1223+02.23

STA. 1223+02.23
END 12" SWH
BEGIN 6" DWH

6" SYH
6" SWH
6" IWH
6" DWH

℄ I-44

11' 12' 12' 12'
11' 12' 12' 12'

STA. 1224+82.13
BEGIN/ MATCH PAVEMENT 6" SWH
BEGIN/ MATCH PAVEMENT 6" SWH

PCC STA. 3+21.50
I-44 STA 1224+18.64

EB I-44 ON RAMP

SCALE
0 50 100 150

STRIPING KEY

S - SOLID
I - INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)
D - DOTTED (3' STRIPE, 9' GAP UNLESS NOTED OTHERWISE)
W - WHITE
Y - YELLOW
H - HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS

1225 1230 1235

MATCHLINE STA. 1225+00.00

MATCHLINE STA. 1239+00.00

SCALE
0 50 100 150

END DECEL LANE TAPER
STA. 1226+52.23
OFF. 59.0' LT.

BEGIN DECEL LANE TAPER
STA. 1229+02.2
END 6" DWH
OFF. 47.0' LT.

6" SYH
6" SWH
6" IWH

℄ I-44

11' 12' 12' 12'
11' 12' 12' 12'

12" SWH

STA. 1225+96.28
END 6" SWH
BEGIN 12" SWH

6" SWH

STA. 1226+91.71
END 12" SWH

END STA. 7+12.77
I-44 STA 1227+96.49

STA. 1227+96.49
END 12" SWH
BEGIN 6" DWH

6" SYH
6" DWH
6" IWH

BEGIN ACCEL LANE TAPER
STA. 1235+41.71
OFF. 59.0' RT.

END ACCEL LANE TAPER
STA. 1238+41.71
END 6" DWH
OFF. 47.0' RT.

℄ EB I-44 ON
RAMP @ GLENSTONE

I-44 WIDENING
JSU0076, J8I3044C, & JST0088B

PAVEMENT MARKING
6 OF 9

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	280

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

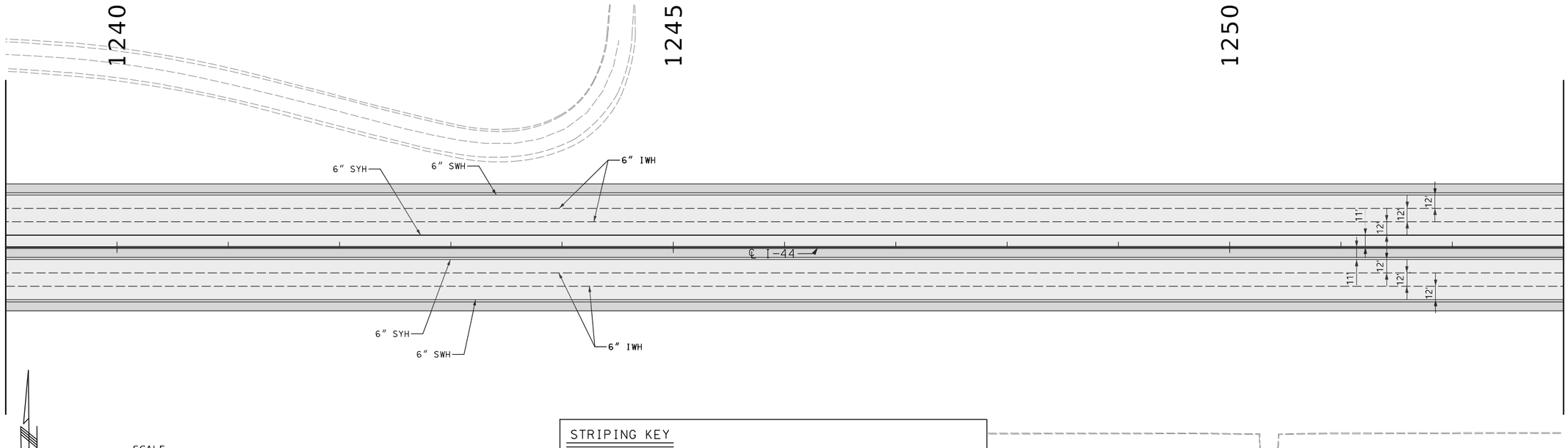
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\237-245_PM_Sheets_JSU0076_J8I3044C.dgn 11:55:38 AM 8/20/2024



STRIPING KEY

S – SOLID

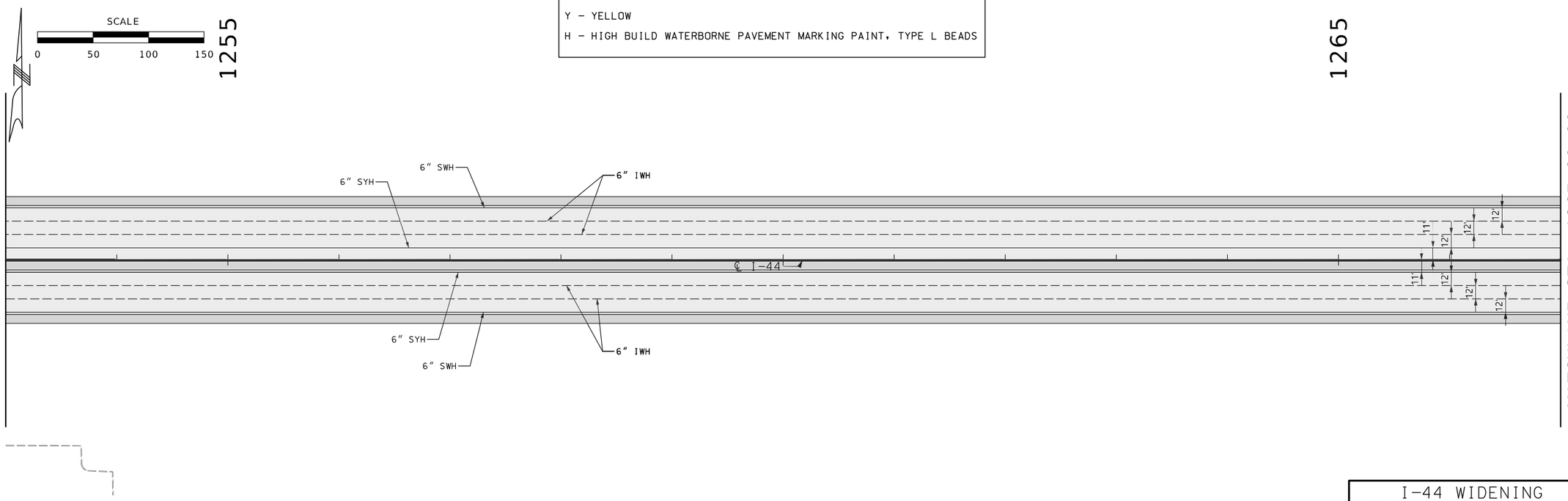
I – INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)

D – DOTTED (3' STRIPE, 9' GAP UNLESS NOTED OTHERWISE)

W – WHITE

Y – YELLOW

H – HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS



I-44 WIDENING
J8I3044C & JST0088B

PAVEMENT MARKING
7 OF 9

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	281

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

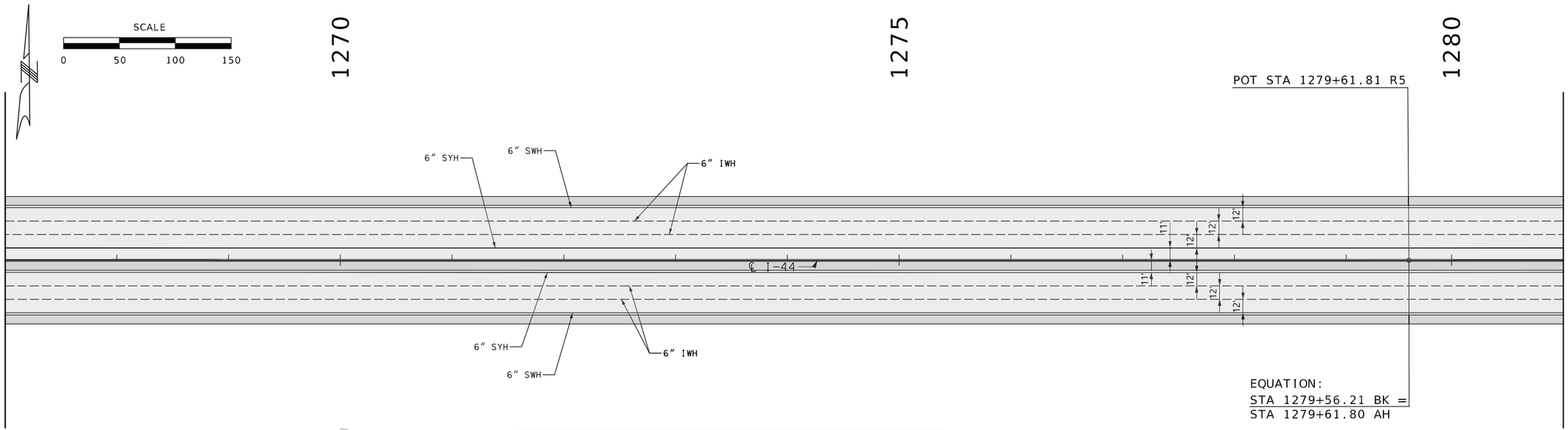
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\237-245_PM_Sheets_JSU0076_J8I3044C.dgn 11:55:39 AM 8/20/2024



STRIPING KEY

S – SOLID

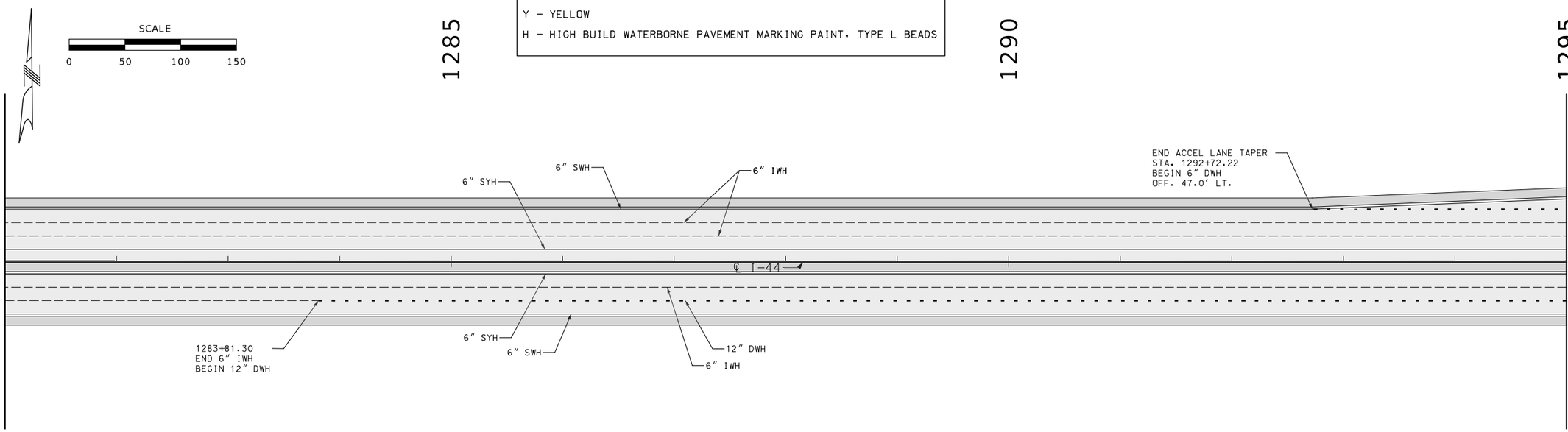
I – INTERMITTENT (10' STRIPE, 30' GAP UNLESS NOTED OTHERWISE)

D – DOTTED (3' STRIPE, 9' GAP UNLESS NOTED OTHERWISE)

W – WHITE

Y – YELLOW

H – HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS



I-44 WIDENING
J8I3044C & JST0088B

PAVEMENT MARKING
8 OF 9

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED	
8/20/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	282

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

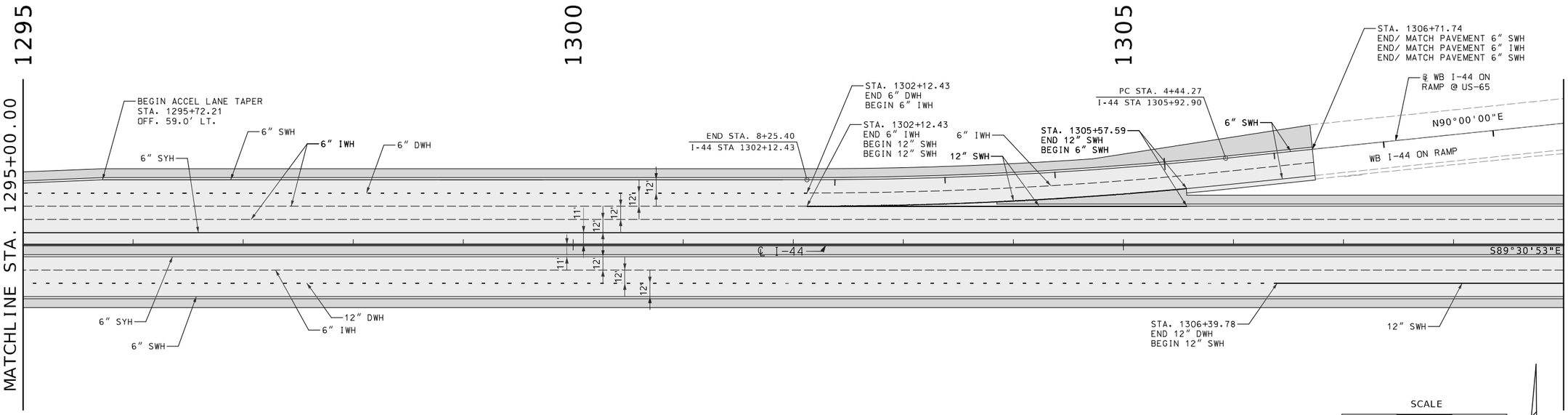
DESCRIPTION	DATE

REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\237-245_PM_Sheets_JSU0076_J8I3044C.dgn 11:55:41 AM 8/20/2024



STRIPING KEY

S – SOLID

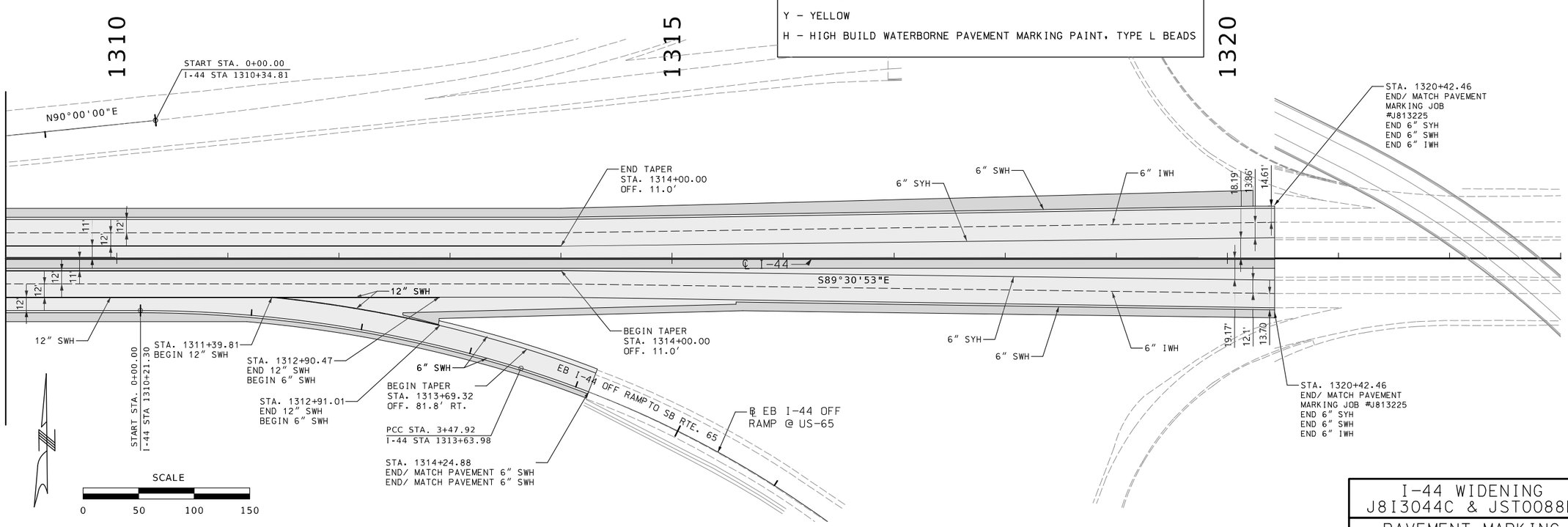
I – INTERMITTENT (10′ STRIPE, 30′ GAP UNLESS NOTED OTHERWISE)

D – DOTTED (3′ STRIPE, 9′ GAP UNLESS NOTED OTHERWISE)

W – WHITE

Y – YELLOW

H – HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS



STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	283

COUNTY: GREENE

JOB NO.: JSU0076, J8I3044C, & JST0088B

PROJECT NO.:

BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
J8I3044C & JST0088B

PAVEMENT MARKING
9 OF 9

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\237-245_PM_Sheets_JSU0076_J8I3044C.dgn 11:55:42 AM 8/20/2024

LEGEND:

EGL = EXISTING GROUND LINE

PGL = PROPOSED GROUND LINE

LIMITS OF CLASS 3 CULVERT EXCAVATION

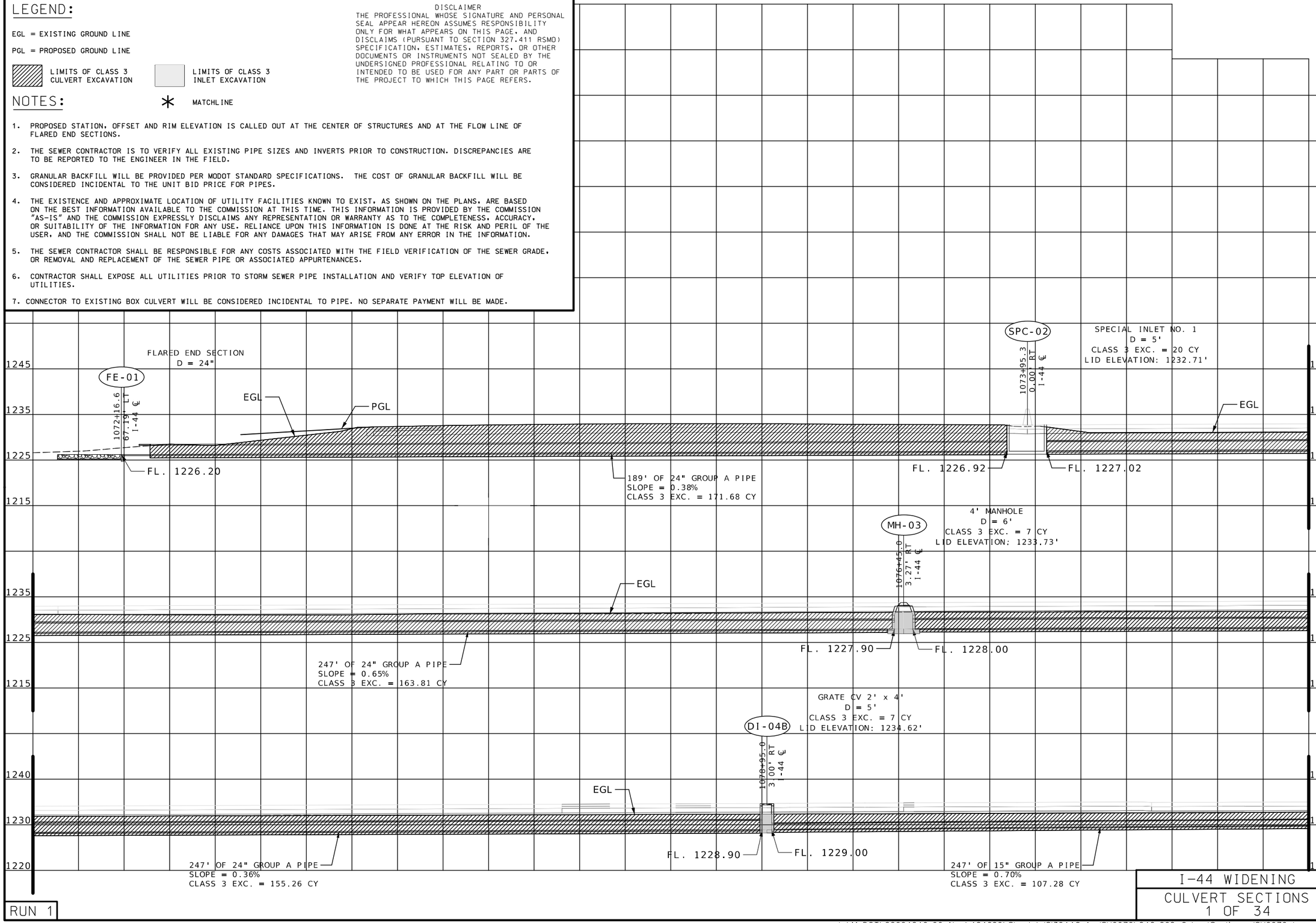
LIMITS OF CLASS 3 INLET EXCAVATION

MATCHLINE

NOTES:

1. PROPOSED STATION, OFFSET AND RIM ELEVATION IS CALLED OUT AT THE CENTER OF STRUCTURES AND AT THE FLOW LINE OF FLARED END SECTIONS.
2. THE SEWER CONTRACTOR IS TO VERIFY ALL EXISTING PIPE SIZES AND INVERTS PRIOR TO CONSTRUCTION. DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER IN THE FIELD.
3. GRANULAR BACKFILL WILL BE PROVIDED PER MODOT STANDARD SPECIFICATIONS. THE COST OF GRANULAR BACKFILL WILL BE CONSIDERED INCIDENTAL TO THE UNIT BID PRICE FOR PIPES.
4. THE EXISTENCE AND APPROXIMATE LOCATION OF UTILITY FACILITIES KNOWN TO EXIST, AS SHOWN ON THE PLANS, ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE COMMISSION AT THIS TIME. THIS INFORMATION IS PROVIDED BY THE COMMISSION "AS-IS" AND THE COMMISSION EXPRESSLY DISCLAIMS ANY REPRESENTATION OR WARRANTY AS TO THE COMPLETENESS, ACCURACY, OR SUITABILITY OF THE INFORMATION FOR ANY USE. RELIANCE UPON THIS INFORMATION IS DONE AT THE RISK AND PERIL OF THE USER, AND THE COMMISSION SHALL NOT BE LIABLE FOR ANY DAMAGES THAT MAY ARISE FROM ANY ERROR IN THE INFORMATION.
5. THE SEWER CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH THE FIELD VERIFICATION OF THE SEWER GRADE, OR REMOVAL AND REPLACEMENT OF THE SEWER PIPE OR ASSOCIATED APPURTENANCES.
6. CONTRACTOR SHALL EXPOSE ALL UTILITIES PRIOR TO STORM SEWER PIPE INSTALLATION AND VERIFY TOP ELEVATION OF UTILITIES.
7. CONNECTOR TO EXISTING BOX CULVERT WILL BE CONSIDERED INCIDENTAL TO PIPE. NO SEPARATE PAYMENT WILL BE MADE.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



RUN 1

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	284

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

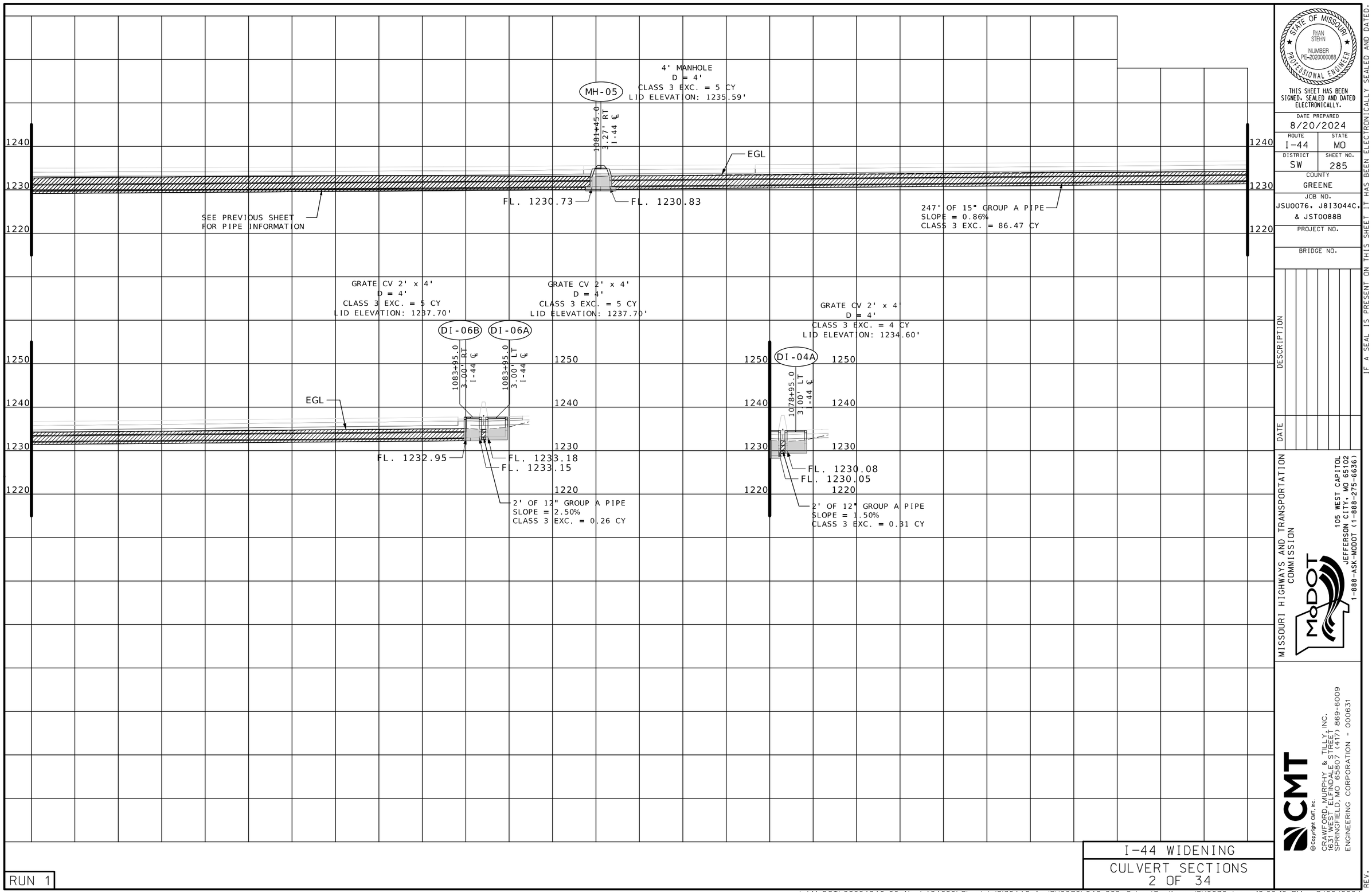
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING

CULVERT SECTIONS
1 OF 34

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\246-262_CulvertSections_JSU0076.dgn 12:00:10 PM 8/20/2024



RUN 1

I-44 WIDENING

CULVERT SECTIONS
2 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	285

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

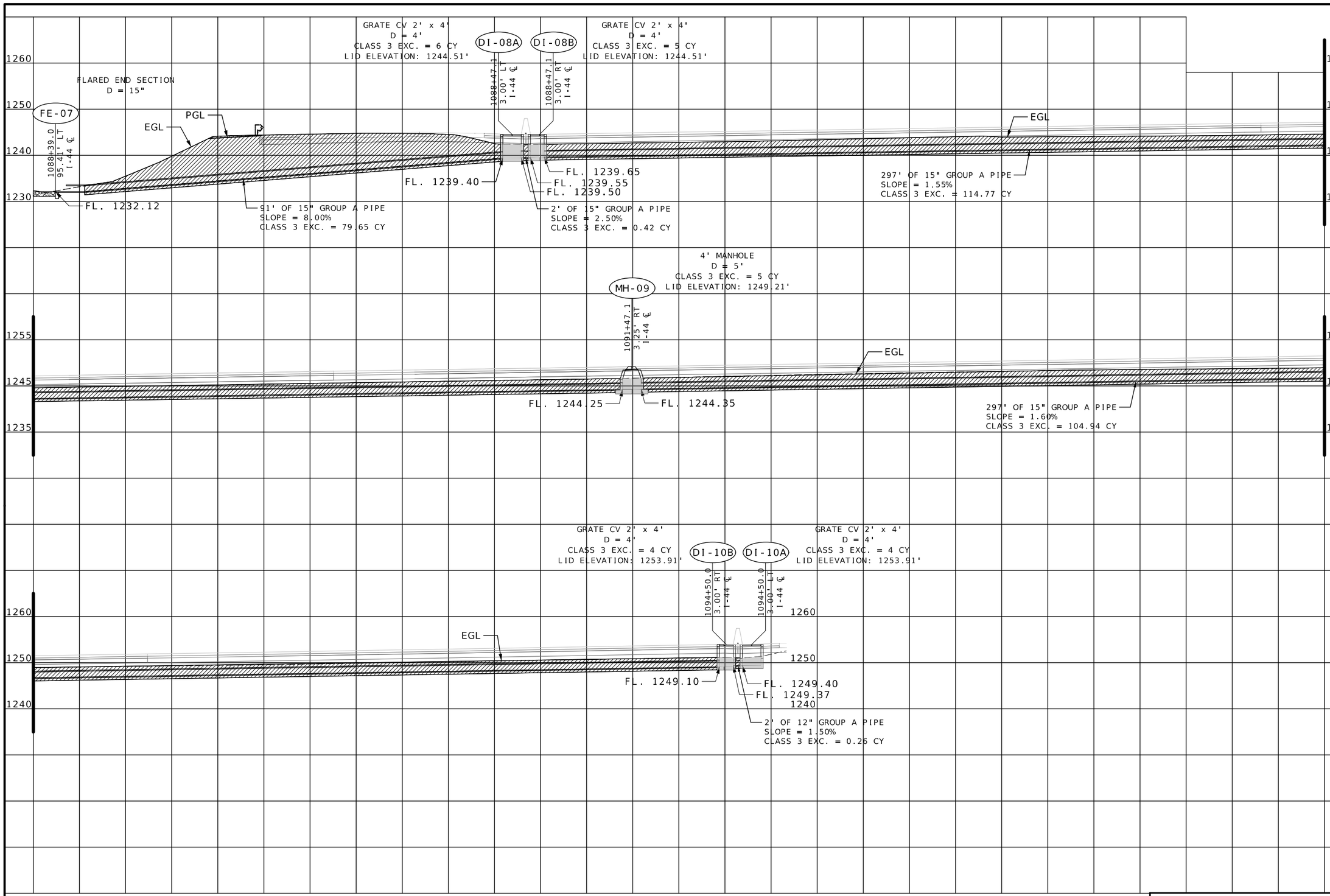
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

© Copyright CMT, Inc.

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



RUN 2

I-44 WIDENING

CULVERT SECTIONS
3 OF 34

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	286

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

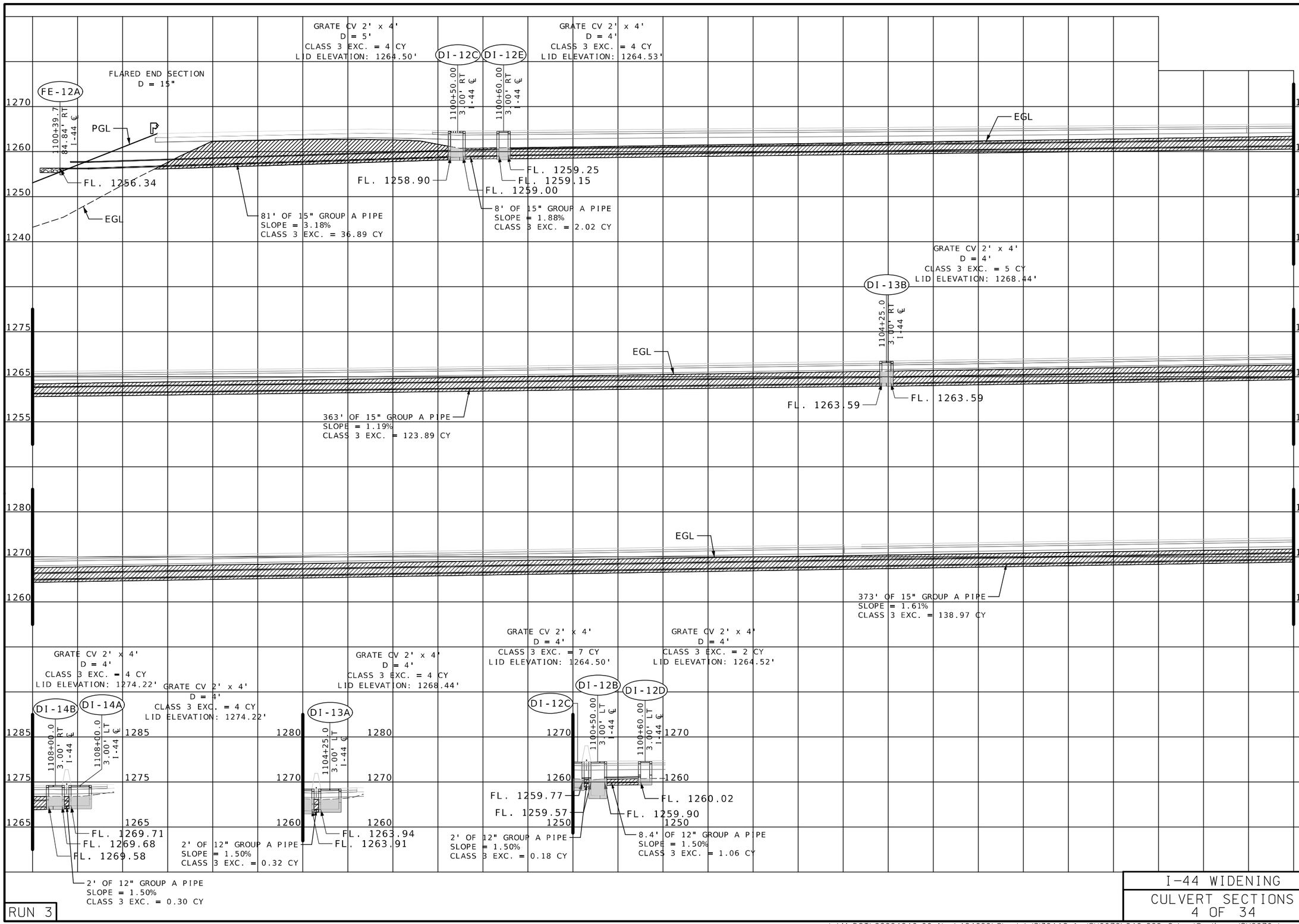
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

©Copyright CMT, Inc.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\246-262_CulvertSections_JSU0076.dgn 12:00:24 PM 8/20/2024



STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	287

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING

CULVERT SECTIONS
4 OF 34

DI-17A
DI-17B
GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 2 CY
LID ELEVATION: 1274.27'
1115+75.00
3.00' LT
I-44 ℄
1115+75.00
3.00' RT
I-44 ℄
GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 2 CY
LID ELEVATION: 1274.27'
FL. 1269.50
FL. 1269.72
FL. 1269.75
2' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.15 CY
EGL
247' OF 15" GROUP A PIPE
SLOPE = 1.94%
CLASS 3 EXC. = 70.90 CY
4' MANHOLE
D = 5'
CLASS 3 EXC. = 5 CY
LID ELEVATION: 1269.48'
MH-18
1118+25.0
3.25' RT
I-44 ℄
FL. 1264.70
FL. 1264.60
DI-19B
1120+75.0
3.00' RT
I-44 ℄
GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 5 CY
LID ELEVATION: 1265.47'
EGL
247' OF 15" GROUP A PIPE
SLOPE = 1.57%
CLASS 3 EXC. = 86.95 CY
FL. 1260.71
FL. 1260.61
4 MANHOLE
D = 5'
CLASS 3 EXC. = 4 CY
LID ELEVATION: 1261.74'
MH-20
1123+25.1
3.25' RT
I-44 ℄
EGL
247' OF 15" GROUP A PIPE
SLOPE = 1.42%
CLASS 3 EXC. = 84.73 CY
FL. 1257.10
FL. 1257.00
SPECIAL INLET NO. 1
D = 4'
CLASS 3 EXC. = 10 CY
LID ELEVATION: 1257.78'
SPC1-21
1125+75.0
0.00 CL
I-44 ℄
EGL
1.89%
-2.10%
-2.10%
PGL
EGL
FLARED END SECTION
D = 18"
FE-22
1125+81.1
92.0' LT
I-44 ℄
FL. 1252.59
FL. 1245.52
247' OF 15" GROUP A PIPE
SLOPE = 1.60%
CLASS 3 EXC. = 97.00 CY
87' OF 18" GROUP A PIPE
SLOPE = 8.15%
CLASS 3 EXC. = 78.65 CY
GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 4 CY
LID ELEVATION: 1265.46'
DI-19A
1120+75.0
3.00' LT
I-44 ℄
FL. 1260.95
FL. 1260.92
2' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.29 CY
RUN 4

1280 1270 1260 1275 1265 1255 1250 1245

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	288

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

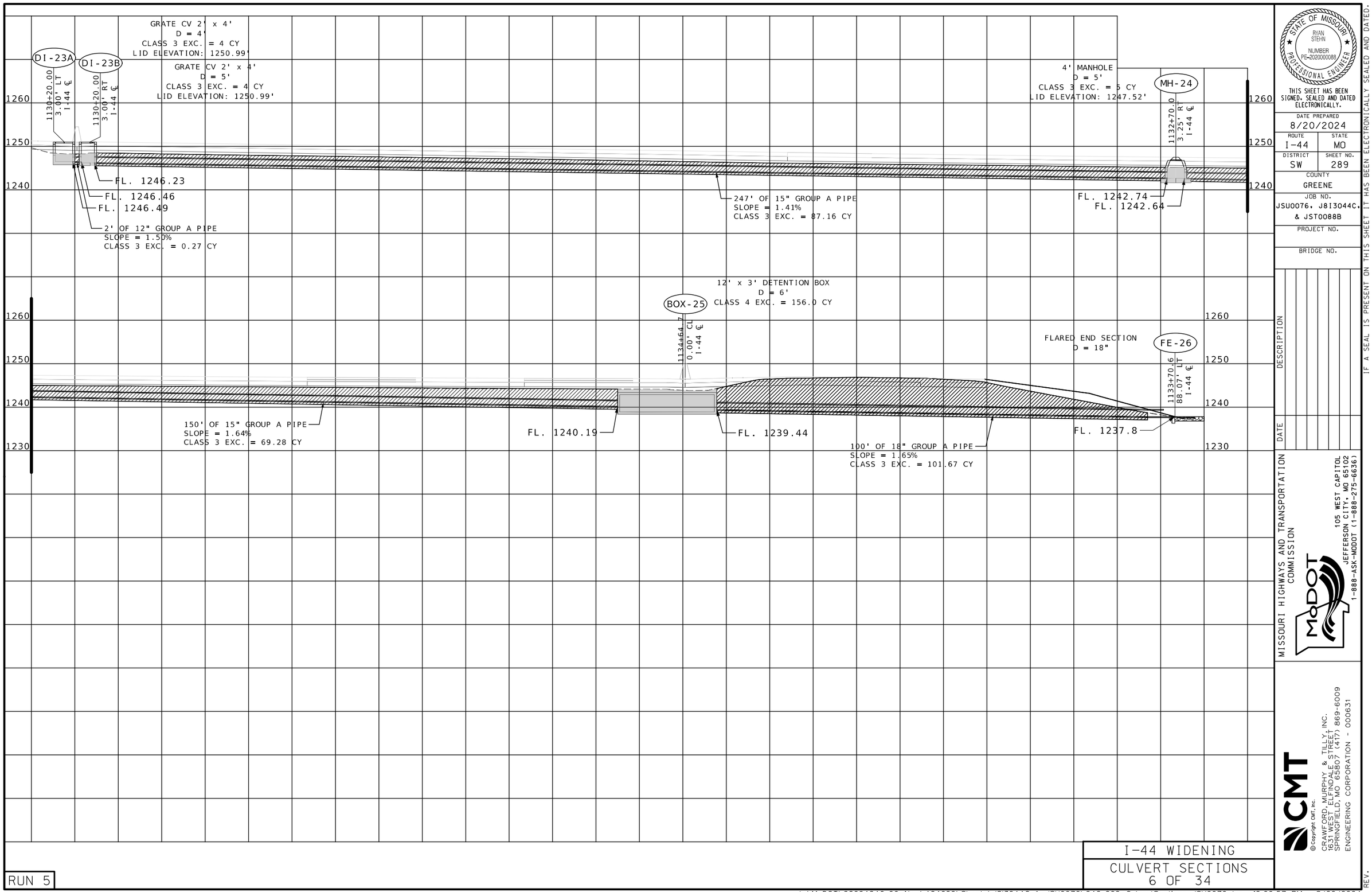
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
CULVERT SECTIONS
5 OF 34

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\246-262_CulvertSections_JSU0076.dgn 12:00:51 PM 8/20/2024



RUN 5

I-44 WIDENING

CULVERT SECTIONS
6 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	289

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\246-262_CulvertSections_JSU0076.dgn 12:00:57 PM 8/20/2024

FE-26
FLARED END SECTION
D = 18"
1133+70.6
88.07' LT
I-44 ℄
FL. 1237.80
SEE PREVIOUS SHEET
FOR PIPE INFORMATION
FL. 1239.44
BOX-25
12' x 3' DETENTION BOX
D = 6'
CLASS 4 EXC. = 156.0 CY
1134+64.7
0.00' CL
I-44 ℄
FL. 1239.69
164' OF 24" GROUP A PIPE
SLOPE = 1.53%
CLASS 3 EXC. = 110.22 CY
MH-27
4' MANHOLE
D = 6'
CLASS 3 EXC. = 7 CY
LID ELEVATION: 1247.83'
1136+87.50
3.25' RT
I-44 ℄
FL. 1242.20
FL. 1242.30
GRATE CV 2' x 4'
D = 5'
CLASS 3 EXC. = 6 CY
LID ELEVATION: 1251.52'
285' OF 24" GROUP A PIPE
SLOPE = 1.27%
CLASS 3 EXC. = 160.77 CY
DI-28B
1139+75.0
3.00' RT
I-44 ℄
FL. 1245.91
FL. 1246.01
4' MANHOLE
D = 6'
CLASS 3 EXC. = 6 CY
LID ELEVATION: 1255.42'
MH-29
1142+62.50
3.25' RT
I-44 ℄
FL. 1249.79
FL. 1249.89
285' OF 24" GROUP A PIPE
SLOPE = 1.33%
CLASS 3 EXC. = 156.65 CY
285' OF 24" GROUP A PIPE
SLOPE = 1.32%
CLASS 3 EXC. = 158.36 CY
GRATE CV 2' x 4'
D = 5'
CLASS 3 EXC. = 6 CY
LID ELEVATION: 1259.15'
DI-30B
1145+50.0
3.00' RT
I-44 ℄
FL. 1253.64
FL. 1254.06
285' OF 18" GROUP A PIPE
SLOPE = 1.33%
CLASS 3 EXC. = 121.22 CY

1250 1240 1230 1255 1245 1235 1260 1250 1240 1260 1250 1240 1265 1255 1245

RUN 6

I-44 WIDENING
CULVERT SECTIONS
7 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	290

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\246-262_CulvertSections_JSU0076.dgn 12:01:04 PM 8/20/2024

MH-31
4' MANHOLE
D = 5'
CLASS 3 EXC. = 5 CY
LID ELEVATION: 1263.04'
1148+37.5
3.25' RT
I-44 ℄
FL. 1257.84
FL. 1257.94
SEE PREVIOUS SHEET
FOR PIPE INFORMATION
285' OF 18" GROUP A PIPE
SLOPE = 1.31%
CLASS 3 EXC. = 116.61 CY
GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 5 CY
LID ELEVATION: 1266.76'
DI-32B
1151+25.0
3.00' RT
I-44 ℄
FL. 1261.67
FL. 1262.01
285' OF 15" GROUP A PIPE
SLOPE = 1.21%
CLASS 3 EXC. = 100.54 CY
4' MANHOLE
D = 5'
CLASS 3 EXC. = 5 CY
LID ELEVATION: 1270.32'
MH-33
1154+12.5
3.25' RT
I-44 ℄
FL. 1265.45
FL. 1265.55
GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 9 CY
LID ELEVATION: 1273.19'
DI-34B
1157+00.0
3.00' RT
I-44 ℄
DI-34A
1157+00.0
3.00' LT
I-44 ℄
GRATE CV 2 x 4'
D = 4
CLASS 3 EXC. = 4 CY
LID ELEVATION: 1273.19'
DI-28A
1139+75.0
3.00' LT
I-44 ℄
GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 4 CY
LID ELEVATION: 1251.52'
DI-30A
1145+50.0
3.00' LT
I-44 ℄
GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 4 CY
LID ELEVATION: 1259.14'
FL. 1268.42
FL. 1268.68
FL. 1268.65
2' OF 12" GROUP A PIPE
SLOPE = 1.37%
CLASS 3 EXC. = 0.29 CY
285' OF 15" GROUP A PIPE
SLOPE = 1.01%
CLASS 3 EXC. = 97.99 CY
FL. 1247.00
FL. 1246.97
2' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.32 CY
FL. 1254.64
FL. 1254.61
2' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.27 CY
DI-32A
1151+25.0
3.00' LT
I-44 ℄
GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 4 CY
LID ELEVATION: 1266.76'
FL. 1262.26
FL. 1262.23
2' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.26 CY
RUN 6

I-44 WIDENING
CULVERT SECTIONS
8 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	291

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION | DATE

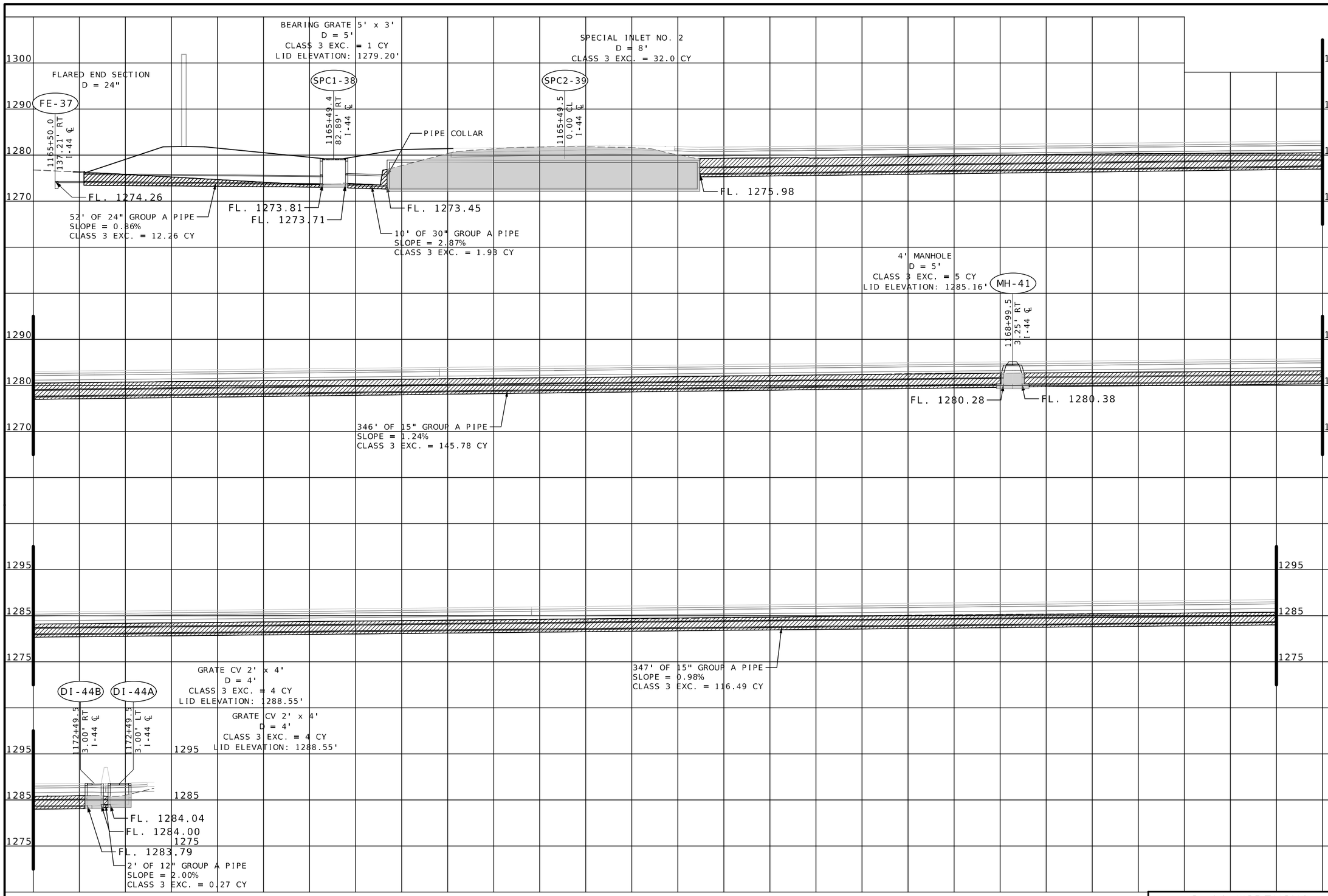
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

©Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\246-262_CulvertSections_JSU0076.dgn 12:01:12 PM 8/20/2024



RUN 7

I-44 WIDENING

CULVERT SECTIONS
9 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	292

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

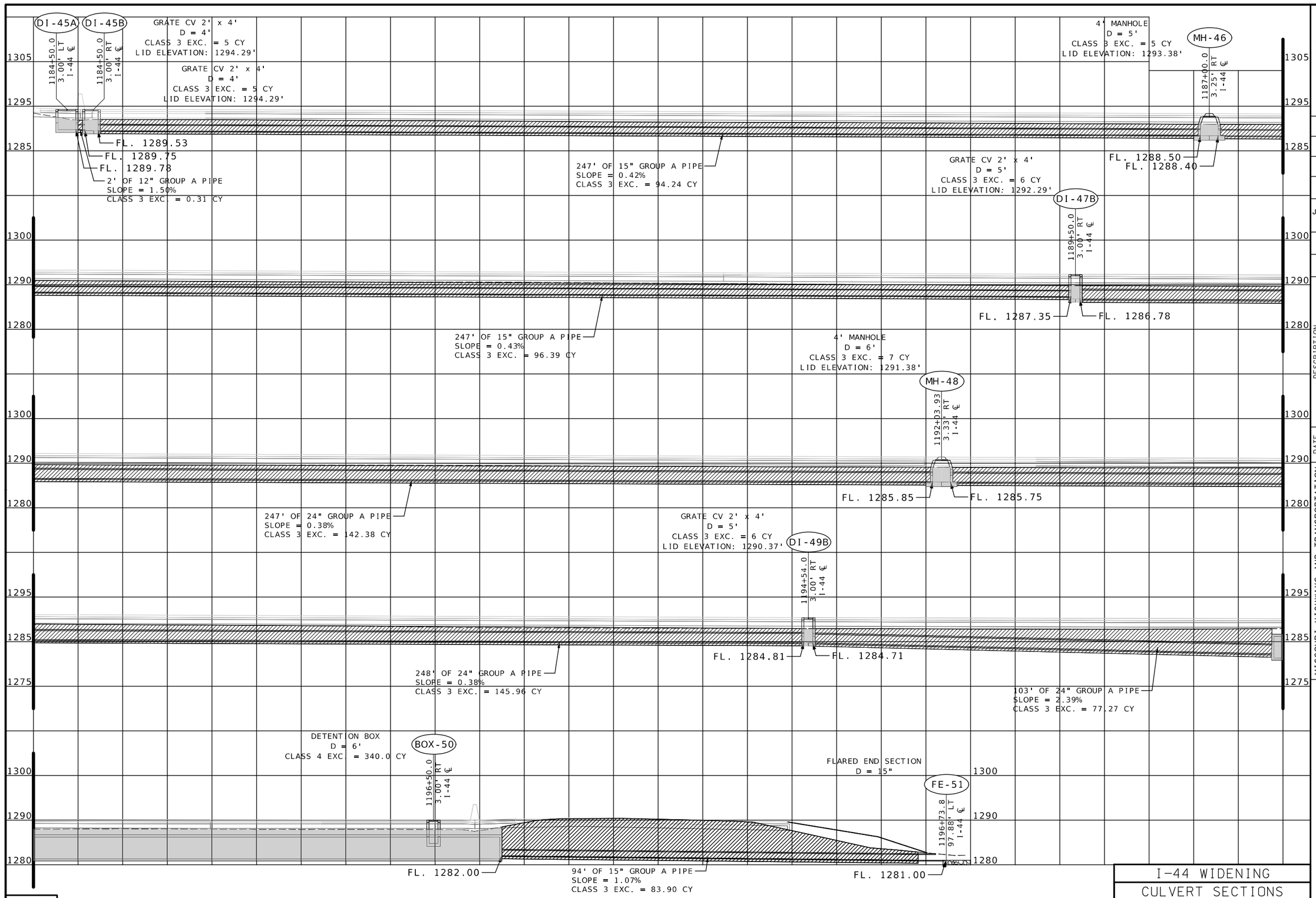
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

©Copyright CMT, Inc.



RUN 8

I-44 WIDENING

CULVERT SECTIONS
10 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	293

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\246-262_CulvertSections_JSU0076.dgn 12:01:28 PM 8/20/2024

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 4 CY
LID ELEVATION: 1292.29'

DI-47A
1189+50.0
3.00' LT
I-44 ℄

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 5 CY
LID ELEVATION: 1290.31'

DI-49A
1194+54.0
3.00' LT
I-44 ℄

FL. 1287.75
FL. 1287.72
2' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.28 CY

FL. 1285.81
FL. 1285.78
2' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.31 CY

RUN 8

FE-51
FLARED END SECTION
D = 15"
1196+73.8
97.88' LT
I-44 ℄
FL. 1281.00

SEE PREVIOUS SHEET
FOR PIPE INFORMATION

BOX-50
DETENTION BOX
D = 6'
CLASS 4 EXC. = 340.0 CY
1196+50.0
3.00' RT
I-44 ℄

GRATE CV 2' x 4'
D = 6'
CLASS 3 EXC. = 8 CY
LID ELEVATION: 1290.73'

DI-52B
1200+00.0
3.00' RT
I-44 ℄

FL. 1284.20
FL. 1284.30

242' OF 30" GROUP A PIPE
SLOPE = 0.33%
CLASS 3 EXC. = 211.50 CY

4' MANHOLE
D = 7'
CLASS 3 EXC = 9 CY
LID ELEVATION: 1291.50'

MH-53A
1202+50.0
3.75' RT
I-44 ℄

FL. 1285.00
FL. 1285.10

247' OF 30" GROUP A PIPE
SLOPE = 0.28%
CLASS 3 EXC. = 210.84 CY

247' OF 30" GROUP A PIPE
SLOPE = 0.51%
CLASS 3 EXC. = 240.95 CY

RUN 9

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	294

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE | REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
CULVERT SECTIONS
11 OF 34

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\246-262_CulvertSections_JSU0076.dgn 12:01:35 PM 8/20/2024

GRATE CV 2' x 4'
D = 5'
CLASS 3 EXC. = 6 CY
LID ELEVATION: 1292.22'

DI-54B
1205+00.0
3.04' RT
I-44 ℄

FL. 1286.35
FL. 1286.45

SEE PREVIOUS SHEET
FOR PIPE INFORMATION

247' OF 24" GROUP A PIPE
SLOPE = 0.30%
CLASS 3 EXC. = 165.99 CY

4' MANHOLE
D = 6'
CLASS 3 EXC. = 8 CY
LID ELEVATION: 1293.04'

MH-55
1207+50.0
3.25' RT
I-44 ℄

FL. 1287.20
FL. 1287.30

247' OF 24" GROUP A PIPE
SLOPE = 0.37%
CLASS 3 EXC. = 168.12 CY

SPECIAL INLET NO. 1
D = 5'
CLASS 3 EXC. = 14 CY
LID ELEVATION: 1293.68'

SPC1-56
1210+00.0
0.00 CL
I-44 ℄

FL. 1288.10
FL. 1288.20

4' MANHOLE
D = 6'
CLASS 3 EXC. = 10 CY
LID ELEVATION: 1294.75'

MH-57
1213+10.0
5.05' LT
I-44 ℄

FL. 1289.05
FL. 1289.15

307' OF 24" GROUP A PIPE
SLOPE = 0.28%
CLASS 3 EXC. = 250.09 CY

187' OF 24" GROUP A PIPE
SLOPE = 0.29%
CLASS 3 EXC. = 149.90 CY

GRATE CV 2' x 4'
D = 5'
CLASS 3 EXC. = 8 CY
LID ELEVATION: 1295.25'

DI-58A
1215+00.0
3.00' LT
I-44 ℄

FL. 1290.19
FL. 1289.69

247' OF 18" GROUP A PIPE
SLOPE = 0.29%
CLASS 3 EXC. = 134.17 CY

4' MANHOLE
D = 5'
CLASS 3 EXC. = 7 CY
LID ELEVATION: 1296.02'

MH-59
1217+50.0
3.25' LT
I-44 ℄

FL. 1290.91
FL. 1291.01

1300
1290
1280

RUN 9

I-44 WIDENING
CULVERT SECTIONS
12 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2010000088
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	295

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

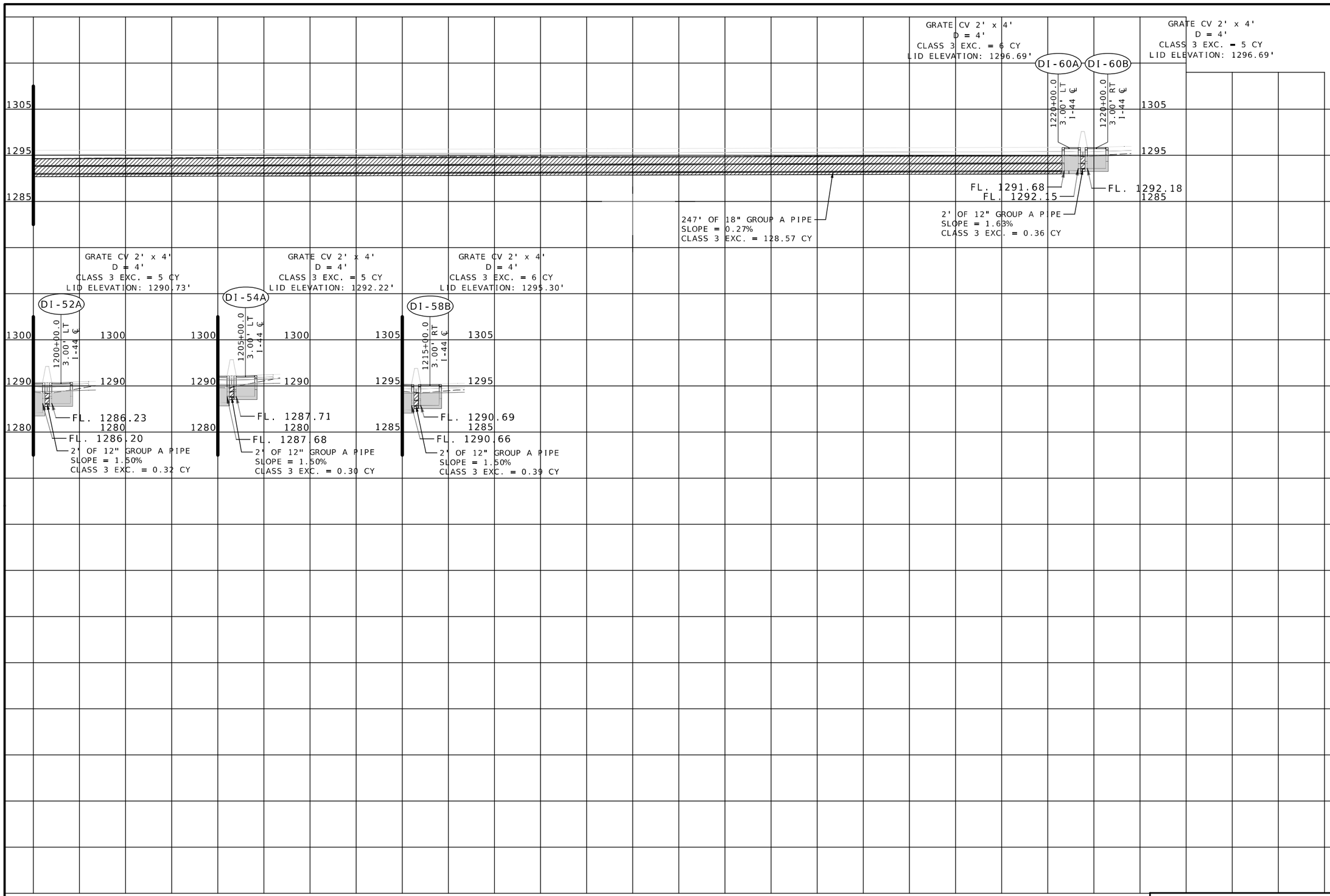
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\246-262_CulvertSections_JSU0076.dgn 12:01:43 PM 8/20/2024



RUN 9

I-44 WIDENING

CULVERT SECTIONS
13 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2010000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	296

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
©Copyright CMT, Inc.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\246-262_CulvertSections_JSU0076.dgn 12:01:54 PM 8/20/2024

RUN 10

FE-15
FLARED END SECTION
D = 42"
1113+59.1
117.41' RT
I-44 ℄
PIPE COLLAR
FL. 1256.50
28' OF 42" GROUP A PIPE
SLOPE = 15.95%
CLASS 3 EXC. = 11.87 CY

FLARED END SECTION
D = 42"
FE-16
1114+20.3
111.66' LT
I-44 ℄
PIPE COLLAR
FL. 1249.02
FL. 1248.77
16' OF 42" GROUP A PIPE
SLOPE = 1.62%
CLASS 3 EXC. = 13.70 CY

RUN 11

FLARED END SECTION
D = 24"
FE-36B
1157+98.5
137.53' RT
I-44 ℄
FL. 1278.34
FL. 1278.34
46' OF 24" GROUP A PIPE
SLOPE = 8.46%
CLASS 3 EXC. = 21.51 CY

SOUND WALL

FLARED END SECTION
D = 24"
FE-36A
1157+83.15
94.95' RT
I-44 ℄
FL. 1274.50
FL. 1274.50

FLARED END SECTION
D = 30"
FE-35B
1157+75.96
74.68' RT
I-44 ℄
PIPE COLLAR
17' OF 30" GROUP A PIPE
SLOPE = 18.39%
CLASS 3 EXC. = 1.06 CY
FL. 1271.50

FLARED END SECTION
D = 30"
FE-35A
1157+20.08
78.54' LT
I-44 ℄
PIPE COLLAR
6' OF 30" GROUP A PIPE
SLOPE = 1.32%
CLASS 3 EXC. = 1.56 CY
FL. 1266.69

RUN 12

6' MANHOLE
D = 9'
CLASS 3 EXC. = 26 CY
LID ELEVATION: 1242.14'

6' MANHOLE
D = 5'
CLASS 3 EXC. = 21 CY
LID ELEVATION: 1240.11'

5' x 3' BEARING GRATE
D = 5'
CLASS 3 EXC. = 14 CY
LID ELEVATION: 1241.81'

FLARED END SECTION
D = 42"
FE-11D
1098+92.0
101.22' LT
I-44 ℄
MH-11C
1099+14.7
84.50' LT
I-44 ℄
MH-11B
1099+08.4
90.58' RT
I-44 ℄
DI-11A
1098+94.3
116.73' RT
I-44 ℄
FL. 1233.26
FL. 1233.56
FL. 1233.46
170' OF 42" GROUP A PIPE
SLOPE = 0.80%
CLASS 3 EXC. = 265.00 CY
FL. 1234.91
FL. 1236.80
FL. 1237.22
28' OF 18" GROUP A PIPE
SLOPE = 1.55%
CLASS 3 EXC. = 15.54 CY
26' OF 42" GROUP A PIPE
SLOPE = 0.78%
CLASS 3 EXC. = 26.86 CY

I-44 WIDENING
CULVERT SECTIONS
14 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/20/2024
ROUTE I-44 | STATE MO
DISTRICT SW | SHEET NO. 297
COUNTY GREENE
JOB NO. JSU0076, J8I3044C, & JST0088B
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

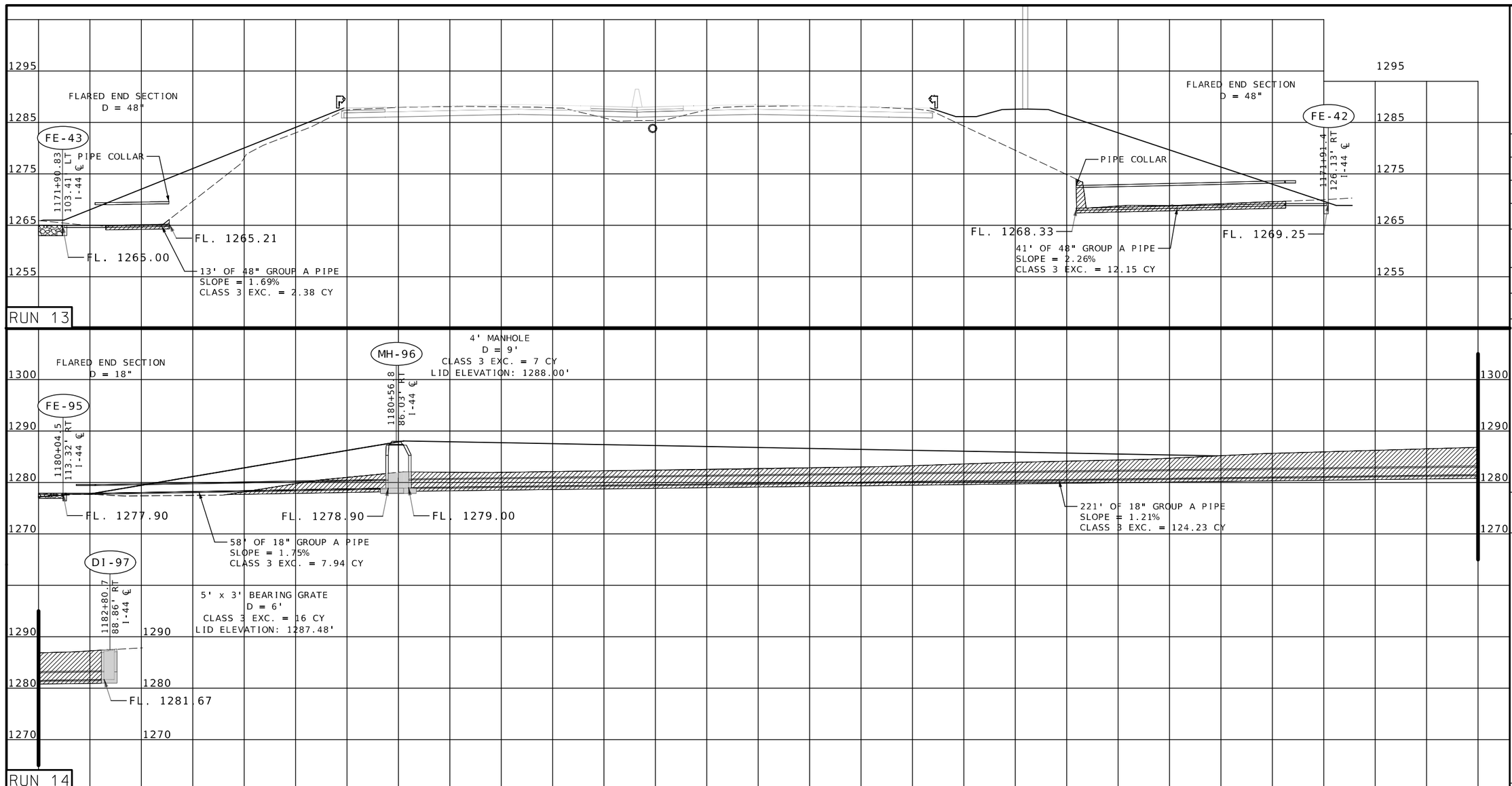
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\246-262_CulvertSections_JSU0076.dgn 12:01:57 PM 8/20/2024



STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	298

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

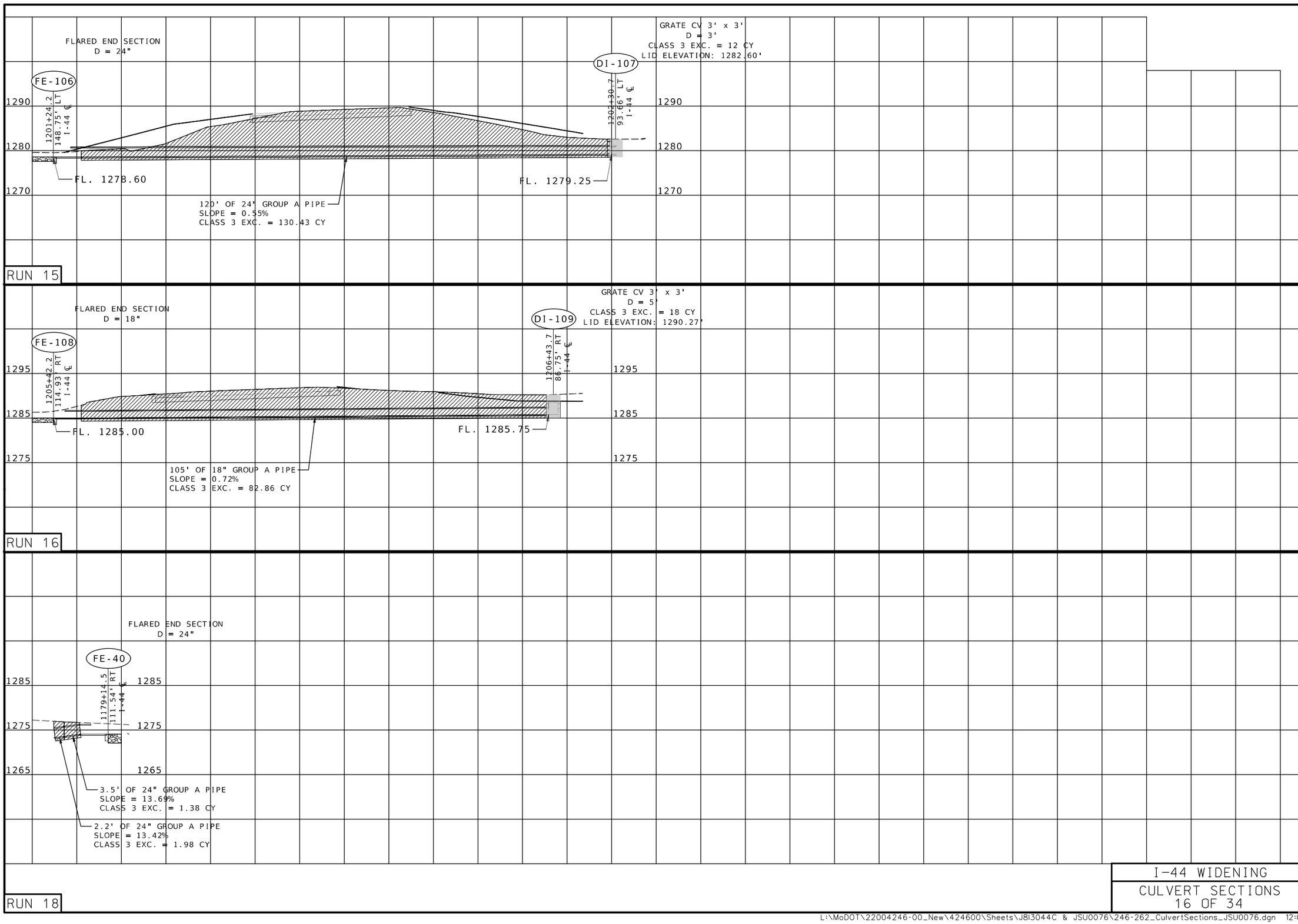
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING
CULVERT SECTIONS
15 OF 34



STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	299

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING

CULVERT SECTIONS
16 OF 34

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 9 CY
LID ELEVATION: 1293.50'

DI-98
1186+10.0
56.5' RT
I-44 ℄

FL. 1288.74

123' OF 15" GROUP A PIPE
SLOPE = 0.40%
CLASS 3 EXC. = 77.61 CY

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 9 CY
LID ELEVATION: 1293.00'

DI-99
1187+35.0
56.5' RT
I-44 ℄

FL. 1288.25
FL. 1288.15

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 9 CY
LID ELEVATION: 1292.49'

DI-100
1188+60.0
56.5' RT
I-44 ℄

FL. 1287.70
FL. 1287.60

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 9 CY
LID ELEVATION: 1292.10'

123' OF 15" GROUP A PIPE
SLOPE = 0.37%
CLASS 3 EXC. = 77.32 CY

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 9 CY
LID ELEVATION: 1291.70

DI-101
1189+60.0
56.5' RT
I-44 ℄

FL. 1287.25
FL. 1287.15

DI-102
1190+63.81
56.5' RT
I-44 ℄

FL. 1286.80
FL. 1286.62

98' OF 15" GROUP A PIPE
SLOPE = 0.35%
CLASS 3 EXC. = 60.99 CY

98' OF 18" GROUP A PIPE
SLOPE = 0.35%
CLASS 3 EXC. = 67.45 CY

133' OF 18" GROUP A PIPE
SLOPE = 0.39%
CLASS 3 EXC. = 95.97 CY

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 9 CY
LID ELEVATION: 1291.16'

DI-103
1191+98.1
56.5' RT
I-44 ℄

FL. 1286.10
FL. 1286.00

467' OF 18" GROUP A PIPE
SLOPE = 0.21%
CLASS 3 EXC. = 251.32 CY

4' MANHOLE
D = 6'
CLASS 3 EXC. = 4 CY
LID ELEVATION: 1291.29'

MH-104
1196+67.5
65.40' RT
I-44 ℄

FL. 1285.00
FL. 1285.00

27' OF 18" GROUP A PIPE
SLOPE = 0.38%
CLASS 3 EXC. = 5.36 CY

FLARED END SECTION
D = 18"

FE-105
1196+92.4
79.24' RT
I-44 ℄

FL. 1284.90

1300
1290
1280

RUN 17

I-44 WIDENING

CULVERT SECTIONS
17 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	300

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

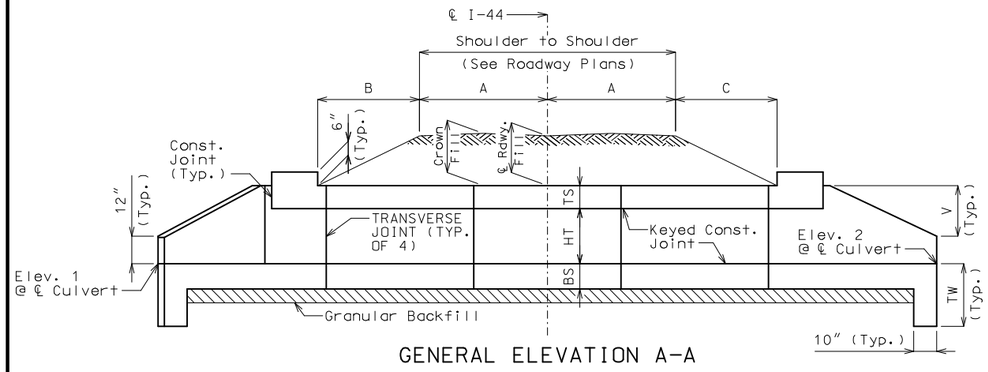
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\246-262_CulvertSections_JSU0076.dgn 12:02:17 PM 8/20/2024

SINGLE (14′ x 10′) CONCRETE BOX CULVERT

Elevations	Fill Heights
Upstream (Elev. 1) = 1219.55	Crown WB I-44 at ℄ Culvert = 21.41 ft
Downstream (Elev. 2) = 1221.06	℄ Rdwy at ℄ Culvert = 20.54 ft
Pr. Gr. at Tie Sta. = 1252.70	Design (All units) = 22 ft

Dimensions are based on end units.
Fill heights are measured from the top of top slab to the top of earth fill or roadway.



GENERAL ELEVATION A-A

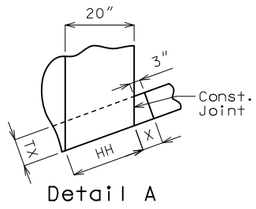
Construction joint key not shown for clarity, see standard plans for details.

If any part of the barrel is exposed, the roadway fill shall be warped to provide 12 inches minimum cover. (Roadway Item)

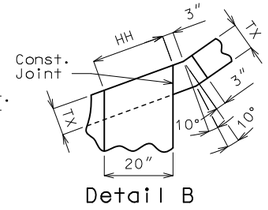
If unsuitable material is encountered, excavation of unsuitable material and furnishing and placing of granular backfill shall be in accordance with Sec 206.

Layout Dimensions

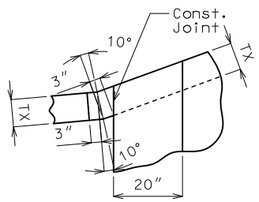
Var.	Equation	Dim.	Var.	Equation	Dim.	Var.	Equation	Dim.
S	- - -	14′-0″	I	3″(cos Z)	0′-2¾″	BB	(A + B)(sec Z)	129′-0¼″
HT	- - -	10′-0″	J	(A + B + E)(tan Z)	66′-8⅝″	CC	(A + C)(sec Z)	121′-1⅜″
TS	SEE MEMBER THICKNESS TABLE	18″	K	S(sec Z) / 2	7′-9⅛″	EE	E(sec Z)	25′-10⅛″
BS	SEE MEMBER THICKNESS TABLE	20″	L	2EE + BB + CC	301′-9¾″	HH	20″(sec Z)	1′-10⅛″
TX	SEE MEMBER THICKNESS TABLE	12″	O	I + YY	0′-7⅞″	QQ	TX(cos Z)	0′-10⅞″
A	- - -	57′-0″	P1	(G+O-I-YY1)(sec(Z-20°))-3″-TX(tan 10°)	0′-7⅞″	QQ1	TX(cos (Z - 20°))	0′-12″
B	- - -	59′-5⅛″	P2	(G+O-I-YY2)(sec(Z+20°)-3″	29′-3⅞″	QQ2	TX(cos (Z + 20°))	0′-8⅜″
C	- - -	52′-3⅜″	T	G(sec Z)	23′-3¾″	YY	TX(sin Z)	0′-5⅛″
E	G + O + 20″	23′-3⅞″	V	HT + TS - 12″	10′-6″	YY1	TX(sin (Z - 20°))	0′-1⅛″
F	S + 2TX	16′-0″	W	2A + B + C + 2E	272′-4½″	YY2	TX(sin (Z + 20°))	0′-8½″
G	2V	21′-0″	X	3″ + TX(tan Z)	0′-8¾″	TW	Max{3′-4″ or (BS + 12″)}	3′-4″
H	(A + C + E)(tan Z)	63′-3¾″	Z	SKEW ANGLE	25°31′14″			



Detail A

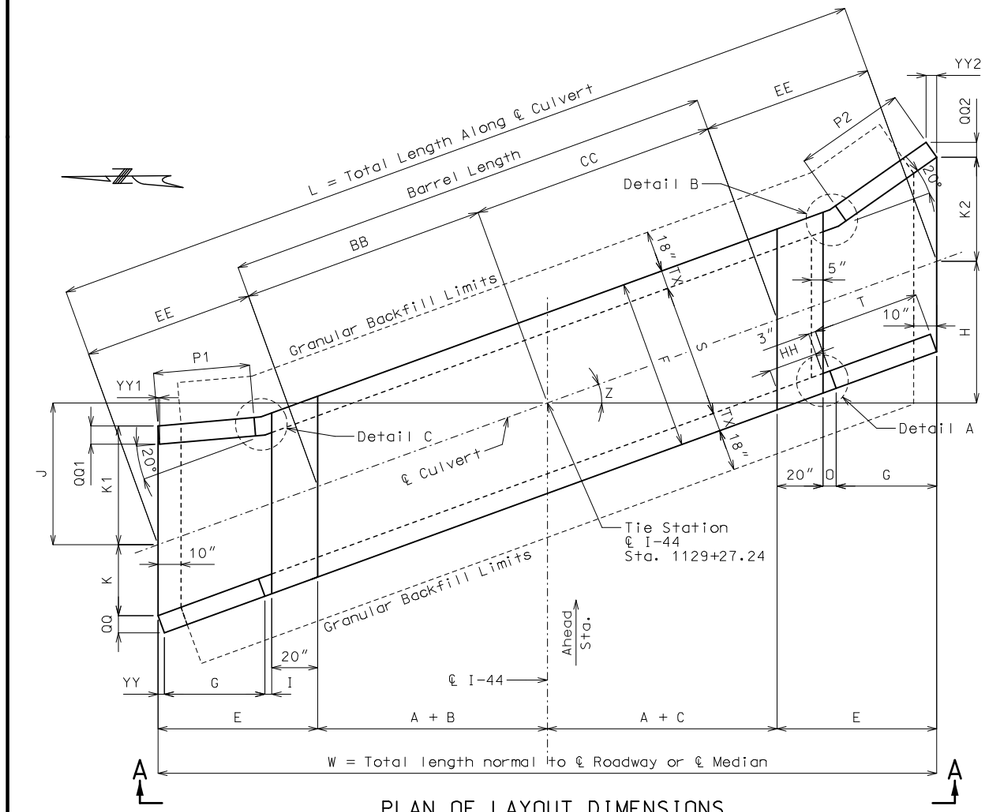


Detail B

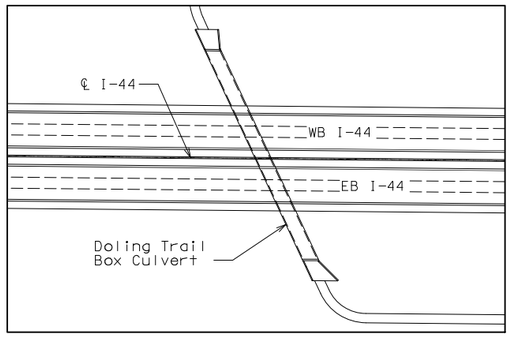


Detail C

Estimated Quantities		TOTAL
Class 4 Excavation	cu. yard	4.676
Class 4 Excavation in Rock	cu. yard	520
Class B-1 Concrete (Culverts-Bridge)	cu. yard	751.9
Reinforcing Steel (Culverts-Bridge)	pound	102,140



PLAN OF LAYOUT DIMENSIONS



Location Sketch

General Notes:

Design Specifications:
2010 AASHTO LRFD Bridge Design Specifications and 2010 Interim Revisions

Design Loading:
Vehicular = HL-93 minus lane load, Earth = 120 lb/cf
Equivalent Fluid Pressure = 30 lb/cf (min.), 60 lb/cf (max.)

Design Unit Stresses:
Class B-1 Concrete (Box Culvert) f′c = 4,000 psi
Reinforcing Steel (Grade 60) fy = 60,000 psi

Miscellaneous:
Seee Standard Plans for reinforcement details.

Drawing not to scale. Follow dimensions.

Dimensions are in inches unless otherwise noted.

MoDOT Construction personnel will indicate the type of box culvert constructed:
☐ Precast Concrete Box used
☐ Cast-in-Place Concrete Box used

When alternate precast concrete box sections are used, the minimum distance from inside face of headwalls to precast sections measured along the shortest wall shall be 3 feet. Reinforcement and dimensions for wings and headwalls shall be in accordance with Missouri Standard Plans.

Channel bottom shall be graded within the right of way for transition of channel bed to culvert openings. Channel banks shall be tapered to match culvert openings. (Roadway Item)

Traffic Handling:
Structure to be closed during construction. Traffic to be maintained on detour during construction. See roadway plans for traffic control.

B.M.
Control Point #519
N:516936.87 E:1409536.49
EL. 1270.576
STA. 1122+80.16, 92.35′ Lt (I-44)
5/8″ I.B. w/ aluminum cap set top
North bank WB I-44

Culvert: I-44
Tie Station 1129+27.24

DOLING TRAIL UNDERPASS
CULVERT SECTIONS
18 OF 34

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 8/20/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 301
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

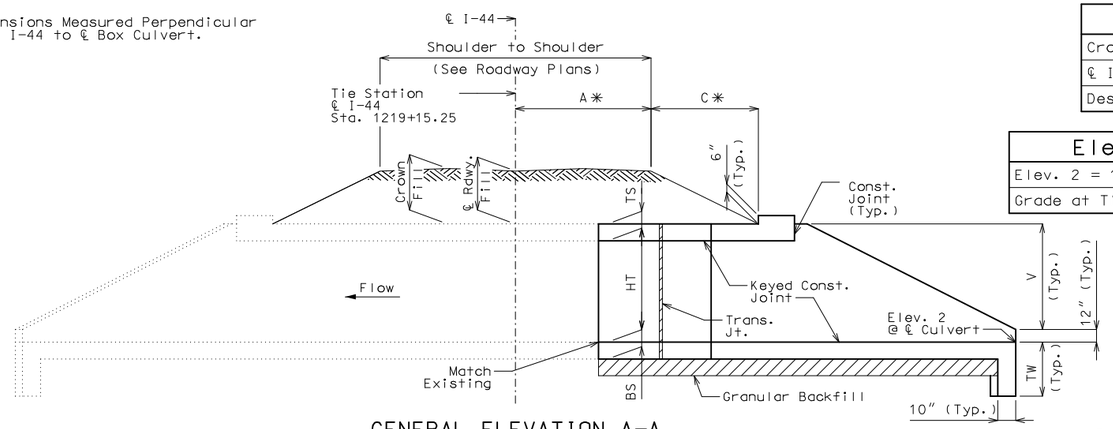
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
©Copyright CMT, Inc.

SINGLE (6′ x 5′) CONCRETE BOX CULVERT

Fill Heights
Crown WB I-44 at ℄ Culvert = 6.21 ft
℄ I-44 at ℄ Culvert = 5.75 ft
Design (All Units) = 8 ft

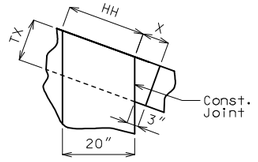
Estimated Quantities		Total
Class 4 Excavation	cu. yard	52
Class 4 Excavation in Rock	cu. yard	3
Class B-1 Concrete (Culverts)	cu. yard	19.9
Reinforcing Steel (Culverts)	pound	3,000

✳ Dimensions Measured Perpendicular to ℄ I-44 to ℄ Box Culvert.



GENERAL ELEVATION A-A

Elevations
Elev. 2 = 1280.20
Grade at Tie Sta. = 1290.42



Detail A

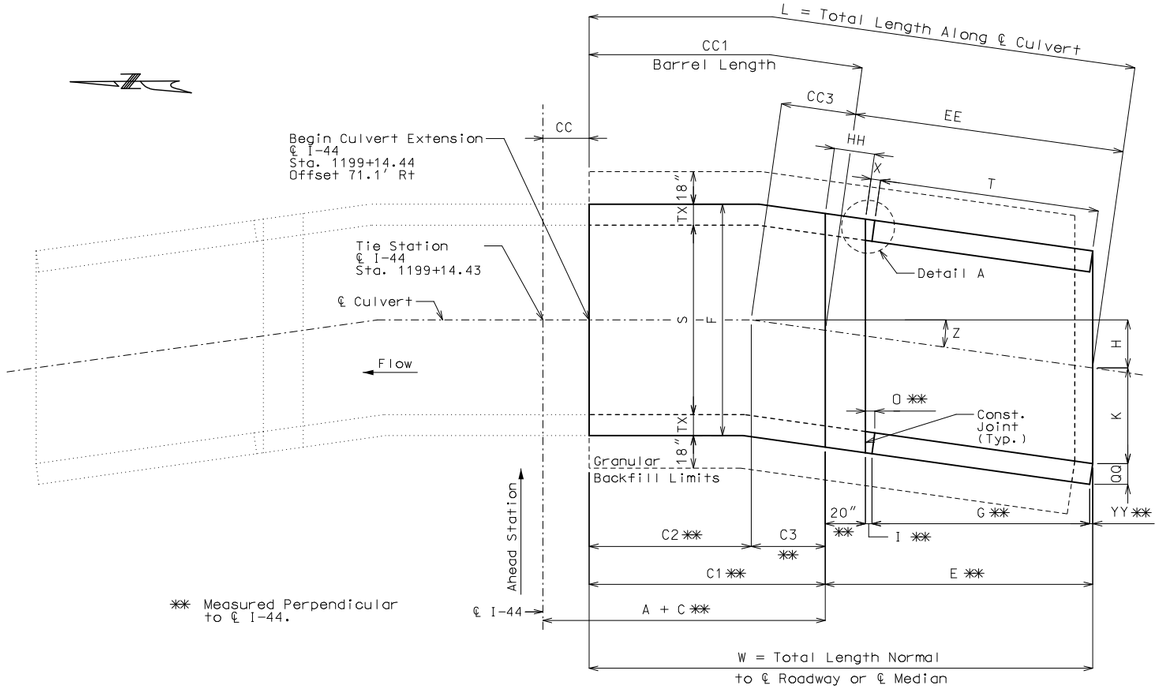
Construction joint key not shown for clarity, see standard plans for details.

If any part of the barrel is exposed, the roadway fill shall be warped to provide 12 inches minimum cover. (Roadway Item)

If unsuitable material is encountered, excavation of unsuitable material and furnishing and placing of granular backfill shall be in accordance with Sec 206.

Layout Dimensions

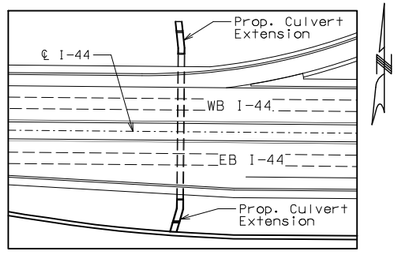
Variable	Equation	Dimension	Variable	Equation	DIMENSION
S	---	6′-0″	L	CC1 + EE	35′-6⅜″
HT	---	5′-0″	O	I + YY	5″
TS	---	8″	T	G(SEC Z)	9′-8⅜″
BS	---	8″	V	HT + TS - 12″	4′-8″
TX	---	8″	W	C1 + E	34′-7″
A	---	66′-3⅜″	X	3″ + TX(TAN Z)	5¼″
C	---	27′-11¾″	Z	SKEW ANGLE	15°44′8″
C1	---	23′-1⅞″	CC	(A + C - C1)	71′-1¼″
C2	---	10′-1⅞″	CC1	(C2 + CC3)	23′-8″
C3	---	13′-0″	CC3	(C3)(SEC Z)	13′-6⅛″
E	G + O + 20″	11′-5″	EE	E(SEC Z)	11′-10⅜″
F	S + 2TX	7′-4″	HH	20″(SEC Z)	1′-8¾″
G	2V	9′-4″	QQ	TX(COS Z)	7¾″
H	(C1 + E - C2)(TAN Z)	6′-10⅝″	YY	TX(SIN Z2)	2⅛″
I	3″(COS Z)	2⅞″	TW	MAX{3′-4″ OR (BS + 12″)}	3′-4″
K	S(SEC Z)/2	3′-1⅜″			



✳✳ Measured Perpendicular to ℄ I-44.

PLAN OF LAYOUT DIMENSIONS

Hydrologic Data
Drainage Area = 0.33 Sq. Miles
Design Flood Frequency = 100 Years
Design Flood Discharge = 253 cfs
Design Flood (D.F.) Elevation = 1287.25
Base Flood (100 Year)
Estimated Backwater = 7.05 ft
Outlet Velocity = 14.90 ft/s
Roadway Overtopping
Overtopping Flood Discharge = 410 cfs
Overtopping Flood Frequency = >500 Years
>500 Flood Elevation = 1290.14



Location Sketch

General Notes:

Design Specifications:
2010 AASHTO LRFD Bridge Design Specifications and 2010 Interim Revisions

Design Loading:
Vehicular = HL-93 minus lane load, Earth = 120 lb/cf
Equivalent Fluid Pressure = 30 lb/cf (min.), 60 lb/cf (max.)

Design Unit Stresses:
Class B-1 Concrete (Box Culvert) f′c = 4,000 psi
Reinforcing Steel (Grade 60) fy = 60,000 psi

Miscellaneous:
Seee Standard Plans for reinforcement details.

Drawing not to scale. Follow dimensions.

Dimensions are in inches unless otherwise noted.

MoDOT Construction personnel will indicate the type of box culvert constructed:
☐ Precast Concrete Box used
☐ Cast-in-Place Concrete Box used

When alternate precast concrete box sections are used, the minimum distance from inside face of headwalls to precast sections measured along the shortest wall shall be 3 feet. Reinforcement and dimensions for wings and headwalls shall be in accordance with Missouri Standard Plans.

Channel bottom shall be graded within the right of way for transition of channel bed to culvert openings. Channel banks shall be tapered to match culvert openings. (Roadway Item)

Traffic Handling:
Structure to be closed during construction. Traffic to be maintained on detour during construction. See roadway plans for traffic control.

B.M.
Control Point #521
N:516902.41 E:1415632.78
EL. 1294.629
STA. 1183.76.50, 114.67′ Lt (I-44)
5/8″ I.B. w/ aluminum cap set
North Top Bank of WB I-44

Culvert: I-44
Tie Station 1199+14.43

Note: This drawing is not to scale. Follow dimensions.

I-44 WIDENING
CULVERT SECTIONS
19 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2012000089
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/20/2024
ROUTE I-44 | STATE MO
DISTRICT SW | SHEET NO. 302
COUNTY GREENE
JOB NO. JSU0076, J8I3044C, & JST0088B
PROJECT NO.
BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	DESCRIPTION	REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\264_CS_19_6x5_Box Culvert Extension_Upstream_JSU0076.dgn 12:02:40 PM 8/20/2024

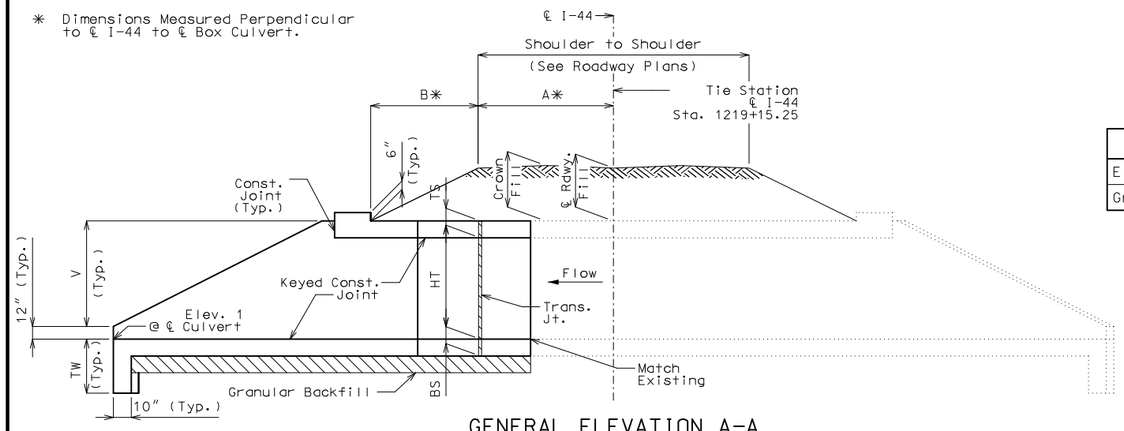
SINGLE (6′ x 5′) CONCRETE BOX CULVERT

Fill Heights
Crown WB I-44 at ℄ Culvert = 6.21 ft
℄ I-44 at ℄ Culvert = 5.75 ft
Design (All Units) = 8 ft

Estimated Quantities		Total
Class 4 Excavation	cu. yard	44
Class 4 Excavation in Rock	cu. yard	3
Class B-1 Concrete (Culverts)	cu. yard	19.3
Reinforcing Steel (Culverts)	pound	2,930

Elevations
Elev. 1 = 1277.70
Grade at Tie Sta. = 1290.42

✳ Dimensions Measured Perpendicular to ℄ I-44 to ℄ Box Culvert.

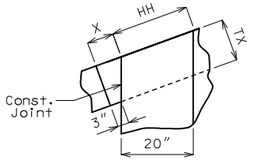


GENERAL ELEVATION A-A

Construction joint key not shown for clarity, see standard plans for details.

If any part of the barrel is exposed, the roadway fill shall be warped to provide 12 inches minimum cover. (Roadway Item)

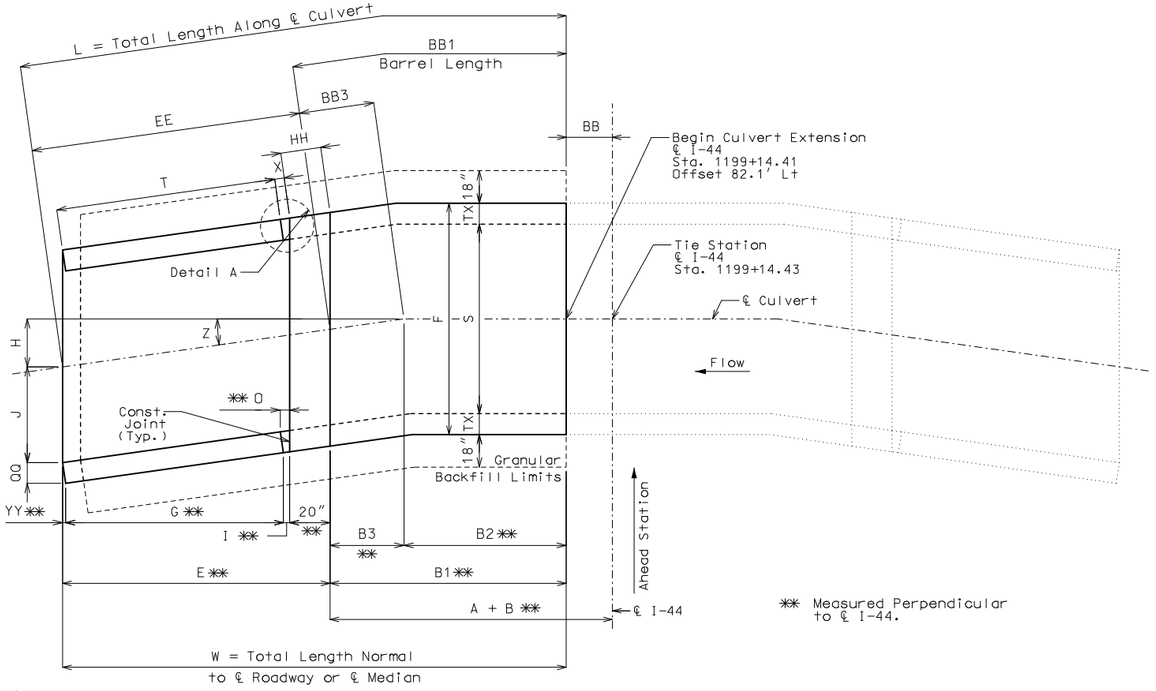
If unsuitable material is encountered, excavation of unsuitable material and furnishing and placing of granular backfill shall be in accordance with Sec 206.



Detail A

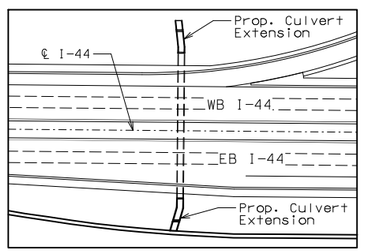
Layout Dimensions

Variable	Equation	Dimension	Variable	Equation	DIMENSION
S	---	6′-0″	L	BB1 + EE	34′-5⅝″
HT	---	5′-0″	O	I + YY	3⅞″
TS	---	8″	T	G(SEC Z)	9′-4¾″
BS	---	8″	V	HT + TS - 12″	4′-8″
TX	---	8″	W	B1 + E	34′-2⅜″
A	---	69′-0″	X	3″ + TX(TAN Z)	4″
B	---	35′-11⅜″	Z	SKEW ANGLE	6°41′48″
B1	---	22′-10½″	BB	(A + B - B1)	82′-1″
B2	---	6′-3¾″	BB1	(B2 + BB3)	22′-11⅞″
B3	---	16′-6¾″	BB3	(B3)(SEC Z)	16′-8⅛″
E	G + O + 20″	11′-3⅜″	EE	E(SEC Z)	11′-4⅞″
F	S + 2TX	7′-4″	HH	20″(SEC Z)	1′-8¾″
G	2V	9′-4″	QQ	TX(COS Z)	8″
H	(B1 + E - B2)(TAN Z)	3′-3¼″	YY	TX(SIN Z2)	0⅞″
I	3″(COS Z)	3″	TW	MAX{3′-4″ OR (BS + 12″)}	3′-4″
J	S(SEC Z)/2	3′-0¼″			



PLAN OF LAYOUT DIMENSIONS

✳✳ Measured Perpendicular to ℄ I-44.



Location Sketch

General Notes:

Design Specifications:
2010 AASHTO LRFD Bridge Design Specifications and 2010 Interim Revisions

Design Loading:
Vehicular = HL-93 minus lane load, Earth = 120 lb/cf
Equivalent Fluid Pressure = 30 lb/cf (min.), 60 lb/cf (max.)

Design Unit Stresses:
Class B-1 Concrete (Box Culvert) f′c = 4,000 psi
Reinforcing Steel (Grade 60) fy = 60,000 psi

Miscellaneous:
Seee Standard Plans for reinforcement details.

Drawing not to scale. Follow dimensions.

Dimensions are in inches unless otherwise noted.

MoDOT Construction personnel will indicate the type of box culvert constructed:
☐ Precast Concrete Box used
☐ Cast-in-Place Concrete Box used

When alternate precast concrete box sections are used, the minimum distance from inside face of headwalls to precast sections measured along the shortest wall shall be 3 feet. Reinforcement and dimensions for wings and headwalls shall be in accordance with Missouri Standard Plans.

Channel bottom shall be graded within the right of way for transition of channel bed to culvert openings. Channel banks shall be tapered to match culvert openings. (Roadway Item)

Traffic Handling:
Structure to be closed during construction. Traffic to be maintained on detour during construction. See roadway plans for traffic control.

B.M.
Control Point #521
N:516902.41 E:1415632.78
EL. 1294.629
STA. 1183.76.50, 114.67′ Lt (I-44)
5/8″ I.B. w/ aluminum cap set
North Top Bank of WB I-44

Culvert: I-44
Tie Station 1199+14.43

Note: This drawing is not to scale. Follow dimensions.

I-44 WIDENING

CULVERT SECTIONS
20 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2012000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 8/20/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 303
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

LEGEND:

EGL = EXISTING GROUND LINE

PGL = PROPOSED GROUND LINE

LIMITS OF CLASS 3 CULVERT EXCAVATION

LIMITS OF CLASS 3 INLET EXCAVATION

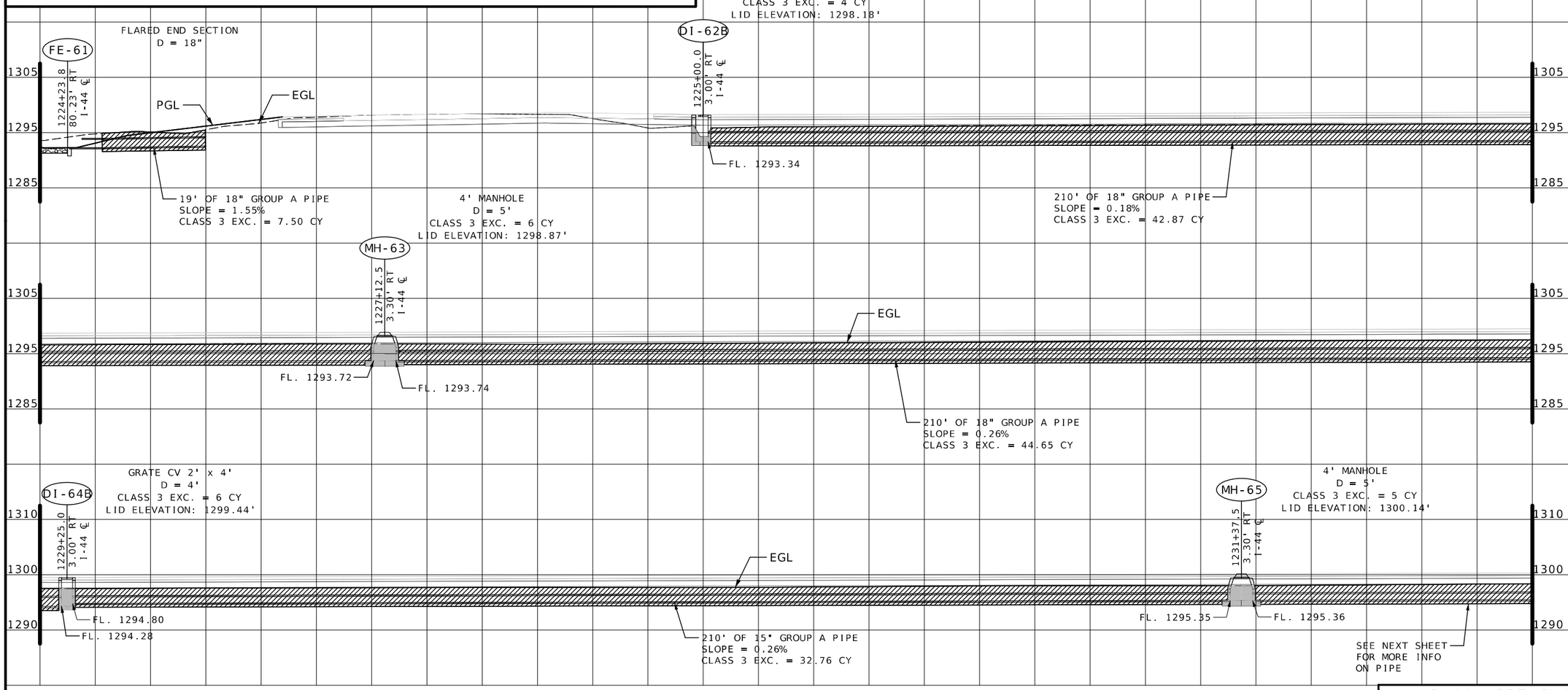
MATCHLINE

DISCLAIMER

THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

NOTES:

1. PROPOSED STATION, OFFSET AND RIM ELEVATION IS CALLED OUT AT THE CENTER OF STRUCTURES AND AT THE FLOW LINE OF FLARED END SECTIONS.
2. THE SEWER CONTRACTOR IS TO VERIFY ALL EXISTING PIPE SIZES AND INVERTS PRIOR TO CONSTRUCTION. DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER IN THE FIELD.
3. GRANULAR BACKFILL WILL BE PROVIDED PER MODOT STANDARD SPECIFICATIONS. THE COST OF GRANULAR BACKFILL WILL BE CONSIDERED INCIDENTAL TO THE UNIT BID PRICE FOR PIPES.
4. THE EXISTENCE AND APPROXIMATE LOCATION OF UTILITY FACILITIES KNOWN TO EXIST, AS SHOWN ON THE PLANS, ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE COMMISSION AT THIS TIME. THIS INFORMATION IS PROVIDED BY THE COMMISSION "AS-IS" AND THE COMMISSION EXPRESSLY DISCLAIMS ANY REPRESENTATION OR WARRANTY AS TO THE COMPLETENESS, ACCURACY, OR SUITABILITY OF THE INFORMATION FOR ANY USE. RELIANCE UPON THIS INFORMATION IS DONE AT THE RISK AND PERIL OF THE USER, AND THE COMMISSION SHALL NOT BE LIABLE FOR ANY DAMAGES THAT MAY ARISE FROM ANY ERROR IN THE INFORMATION.
5. THE SEWER CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH THE FIELD VERIFICATION OF THE SEWER GRADE, OR REMOVAL AND REPLACEMENT OF THE SEWER PIPE OR ASSOCIATED APPURTENANCES.
6. CONTRACTOR SHALL EXPOSE ALL UTILITIES PRIOR TO STORM SEWER PIPE INSTALLATION AND VERIFY TOP ELEVATION OF UTILITIES.
7. CONNECTOR TO EXISTING BOX CULVERT WILL BE CONSIDERED INCIDENTAL TO PIPE. NO SEPARATE PAYMENT WILL BE MADE.



STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	304

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING

CULVERT SECTIONS
21 OF 34

RUN 1

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\266-274_CulvertSections_J8I3044C.dgn 12:04:33 PM 8/20/2024

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 6 CY
LID ELEVATION: 1300.70'

DI-66B
1233+50.0
3.00' RT
I-44 ℄

EGL

EGL

FL. 1295.90

FL. 1295.90

210' OF 15" GROUP A PIPE
SLOPE = 0.26%
CLASS 3 EXC. = 34.48 CY

4' MANHOLE
D = 5'
CLASS 3 EXC. = 6 CY
LID ELEVATION: 1301.41'

MH-67
1235+62.5
3.40' RT
I-44 ℄

EGL

FL. 1296.60

FL. 1296.60

210' OF 15" GROUP A PIPE
SLOPE = 0.33%
CLASS 3 EXC. = 34.09 CY

210' OF 15" GROUP A PIPE
SLOPE = 0.34%
CLASS 3 EXC. = 35.52 CY

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 6 CY
LID ELEVATION: 1302.12'

DI-68B
1237+75.0
3.00' RT
I-44 ℄

DI-68A
1237+75.0
3.00' LT
I-44 ℄

EGL

FL. 1297.32

FL. 1297.54

FL. 1297.57

2' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.14 CY

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 6 CY
LID ELEVATION: 1302.12'

GRATE CV 2' x 4'
D = 3'
CLASS 3 EXC. = 4 CY
LID ELEVATION: 1298.17'

DI-62A
1225+00.0
3.00' LT
I-44 ℄

FL. 1293.96

FL. 1293.93

2' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.02 CY

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 6 CY
LID ELEVATION: 1299.44'

DI-64A
1229+25.0
3.00' LT
I-44 ℄

FL. 1294.93

FL. 1294.90

2' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.12 CY

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 6 CY
LID ELEVATION: 1300.70'

DI-66A
1233+50.0
3.00' LT
I-44 ℄

FL. 1296.20

FL. 1296.17

2' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.13 CY

1310
1300
1290

RUN 1

I-44 WIDENING

CULVERT SECTIONS
22 OF 34

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	305

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

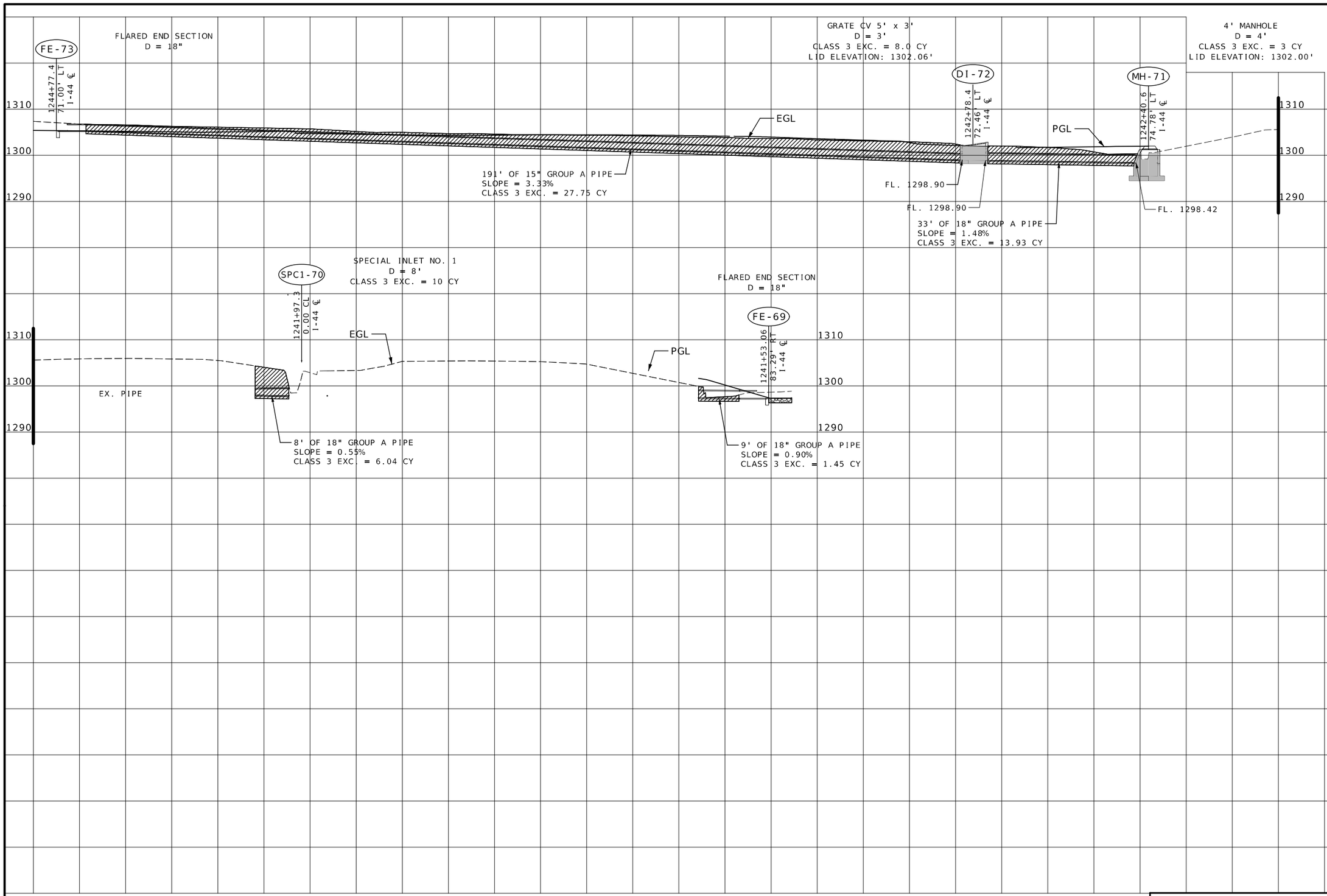
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\266-274_CulvertSections_J8I3044C.dgn 12:04:41 PM 8/20/2024



STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	306

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING

CULVERT SECTIONS
23 OF 34

RUN 2

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\266-274_CulvertSections_J8I3044C.dgn 12:04:47 PM 8/20/2024

SEE PREVIOUS SHEET
FOR STRUCTURE DETAILS

SPC1-70
1241+97.3
0.00' CL
I-44 ℄

FL. 1299.80

EGL

257' OF 15" GROUP A PIPE
SLOPE = 1.06%
CLASS 3 EXC. = 36.22 CY

4' MANHOLE
D = 5'
CLASS 3 EXC. = 6 CY
LID ELEVATION: 1307.43'

MH-74
1244+57.0
3.31' RT
I-44 ℄

FL. 1302.52
FL. 1302.52

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 5 CY
LID ELEVATION: 1309.52'

DI-75B
1247+17.0
3.00' RT
I-44 ℄

FL. 1304.60
FL. 1304.71

EGL

257' OF 15" GROUP A PIPE
SLOPE = 0.77%
CLASS 3 EXC. = 31.24 CY

4' MANHOLE
D = 5'
CLASS 3 EXC. = 5 CY
LID ELEVATION: 1311.74'

MH-76
1249+77.0
3.25' RT
I-44 ℄

FL. 1306.84
FL. 1306.94

EGL

257' OF 15" GROUP A PIPE
SLOPE = 0.87%
CLASS 3 EXC. = 30.85 CY

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 5 CY
LID ELEVATION: 1313.83'

DI-77B
1252+37.0
3.00' RT
I-44 ℄

DI-77A
1252+37.0
3.00' LT
I-44 ℄

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 5 CY
LID ELEVATION: 1313.83'

EGL

257' OF 15" GROUP A PIPE
SLOPE = 0.81%
CLASS 3 EXC. = 30.06 CY

FL. 1309.03
FL. 1309.28
FL. 1309.25

2' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.11 CY

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 5 CY
LID ELEVATION: 1309.52'

DI-75A
1247+17.0
3.00' LT
I-44 ℄

FL. 1304.96
FL. 1304.93

2' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.11 CY

RUN 3

1310
1300
1290
1315
1305
1295

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	307

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

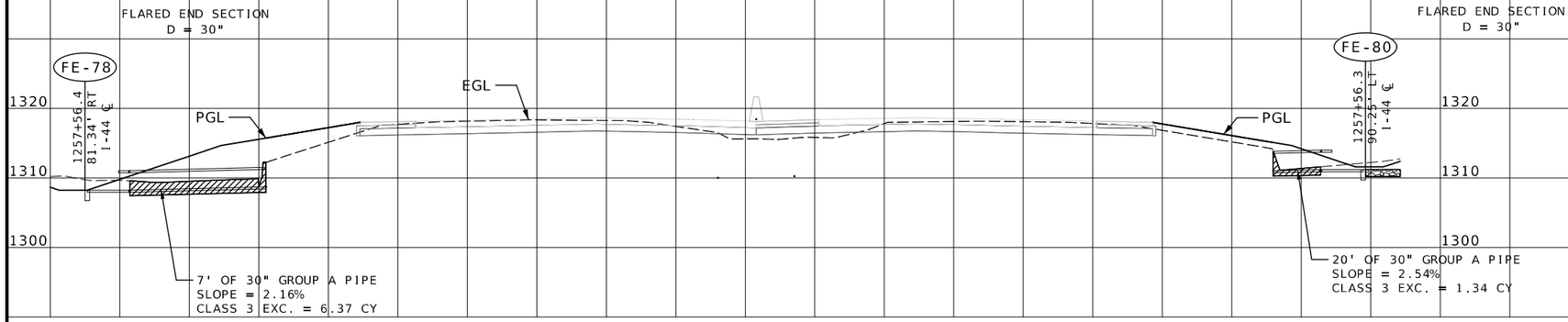
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

I-44 WIDENING

CULVERT SECTIONS
24 OF 34

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\266-274_CulvertSections_J8I3044C.dgn 12:04:55 PM 8/20/2024



RUN 4

I-44 WIDENING

CULVERT SECTIONS
25 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	308

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\266-274_CulvertSections_J8I3044C.dgn 12:05:00 PM 8/20/2024

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 5 CY
LID ELEVATION: 1319.06'

DI-81B DI-81A

1269+50.0
3.00' RT
I-44 ℄

1269+50.0
3.00' LT
I-44 ℄

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 5 CY
LID ELEVATION: 1319.06'

1325
1315
1305

FL. 1314.26
FL. 1314.48
FL. 1314.51

6' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.11 CY

EGL

272' OF 15" GROUP A PIPE
SLOPE = 0.70%
CLASS 3 EXC. = 46.27 CY

MH-82

4' MANHOLE
D = 5'
CLASS 3 EXC. = 7 CY
LID ELEVATION: 1317.16'

1272+25.0
3.22' LT
I-44 ℄

1325
1315
1305

FL. 1312.26
FL. 1312.36

EGL

272' OF 15" GROUP A PIPE
SLOPE = 0.72%
CLASS 3 EXC. = 47.95 CY

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 6 CY
LID ELEVATION: 1315.12'

DI-83A

1275+00.0
3.00' LT
I-44 ℄

1325
1315
1305

FL. 1310.21
FL. 1310.31

EGL

273' OF 18" GROUP A PIPE
SLOPE = 0.76%
CLASS 3 EXC. = 60.35 CY

4' MANHOLE
D = 5'
CLASS 3 EXC. = 6 CY
LID ELEVATION: 1313.22'

MH-84

1277+75.4
3.35' LT
I-44 ℄

1315
1305
1295

FL. 1308.15
FL. 1308.05

EGL

274' OF 18" GROUP A PIPE
SLOPE = 0.71%
CLASS 3 EXC. = 60.78 CY

RUN 5

I-44 WIDENING

CULVERT SECTIONS
26 OF 34

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\266-274_CulvertSections_J8I3044C.dgn 12:05:06 PM 8/20/2024

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	309

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

GRATE CV 2' x 4'
D = 5'
CLASS 3 EXC. = 7 CY
LID ELEVATION: 1311.16'

DI-85A
1280+57.0
3.00' LT
I-44 ℄

1315
1305
1295

FL. 1306.10
FL. 1305.60

EGL

272' OF 24" GROUP A PIPE
SLOPE = 0.70%
CLASS 3 EXC. = 88.80 CY

4' MANHOLE
D = 6'
CLASS 3 EXC. = 8 CY
LID ELEVATION: 1309.26'

MH-86
1283+31.9
3.25' LT
I-44 ℄

1315
1305
1295

FL. 1303.70
FL. 1303.60

EGL

141' OF 24" GROUP A PIPE
SLOPE = 1.85%
CLASS 3 EXC. = 114.50 CY

12' x 3' DETENTION BOX
D = 6'
CLASS 3 EXC. = XX.XX CY

BOX-87A
1286+10.0
0.00 CL
I-44 ℄

1315
1305
1295
1285

EGL

25' OF 15" GROUP A PIPE
SLOPE = 47.00%
CLASS 3 EXC. = 36.70 CY

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 5 CY
LID ELEVATION: 1315.12'

DI-83B
1275+00.0
3.00' RT
I-44 ℄

1325
1315
1305

FL. 1310.56
FL. 1310.53

2' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.12 CY

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 6 CY
LID ELEVATION: 1311.16'

DI-85B
1280+57.0
3.00' RT
I-44 ℄

1320
1310
1300

FL. 1306.60
FL. 1306.57

2' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.12 CY

RUN 5

I-44 WIDENING

CULVERT SECTIONS
27 OF 34

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\266-274_CulvertSections_J8I3044C.dgn 12:05:13 PM 8/20/2024

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	310

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

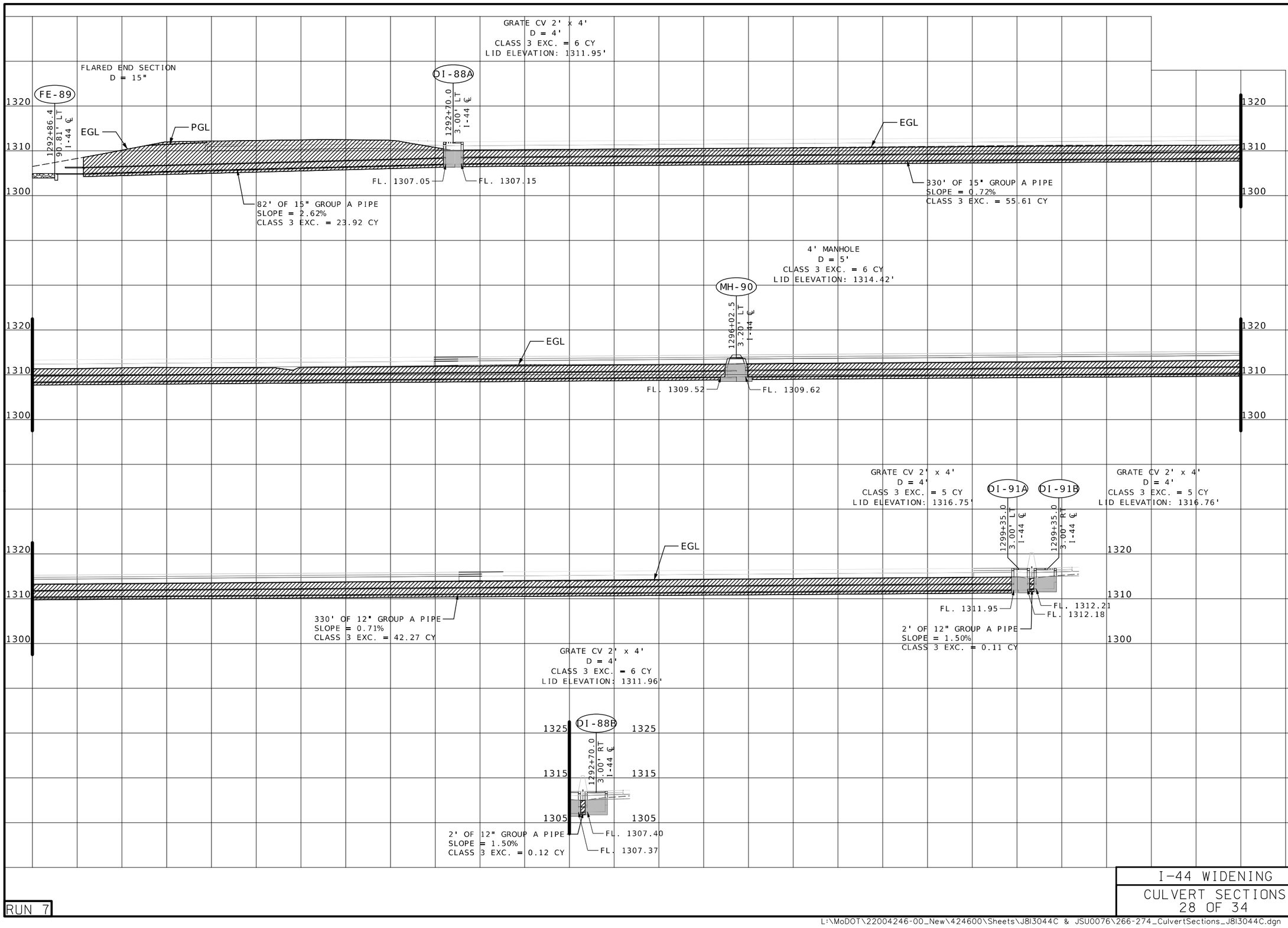
BRIDGE NO.

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



RUN 7

I-44 WIDENING

CULVERT SECTIONS
28 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000088
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	311

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\266-274_CulvertSections_J8I3044C.dgn 12:05:21 PM 8/20/2024

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 8 CY
LID ELEVATION: 1316.88'

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 9 CY
LID ELEVATION: 1316.87'

DI-92B
1312+00.0
3.00' RT
I-44 ℄

DI-92A
1312+00.0
3.00' LT
I-44 ℄

1320
1310
1300

FL. 1312.09
FL. 1312.35
FL. 1312.38

2' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.18 CY

EGL

297' OF 12" GROUP A PIPE
SLOPE = 0.84%
CLASS 3 EXC. = 42.03 CY

4' MANHOLE
D = 5'
CLASS 3 EXC. = 6 CY
LID ELEVATION: 1314.38'

MH-93
1315+00.0
3.23' LT
I-44 ℄

FL. 1309.59
FL. 1309.49

EGL

297' OF 12" GROUP A PIPE
SLOPE = 0.92%
CLASS 3 EXC. = 41.82 CY

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 7 CY
LID ELEVATION: 1311.56'

DI-94A
1318+00.0
3.00' LT
I-44 ℄

FL. 1306.76
FL. 1306.66

EGL

348' OF 15" GROUP A PIPE
SLOPE = 0.96%
CLASS 3 EXC. = 72.92 CY

EXISTING STRUCTURE
95
1321+51.3
0.71' LT
I-44 ℄

1315
1305
1295

FL. 1303.31

GRATE CV 2' x 4'
D = 4'
CLASS 3 EXC. = 6 CY
LID ELEVATION: 1311.56'

DI-94B
1318+00.0
3.00' RT
I-44 ℄

FL. 1307.07
FL. 1307.02

2' OF 12" GROUP A PIPE
SLOPE = 1.50%
CLASS 3 EXC. = 0.14 CY

RUN 9

I-44 WIDENING

CULVERT SECTIONS
29 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	312

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

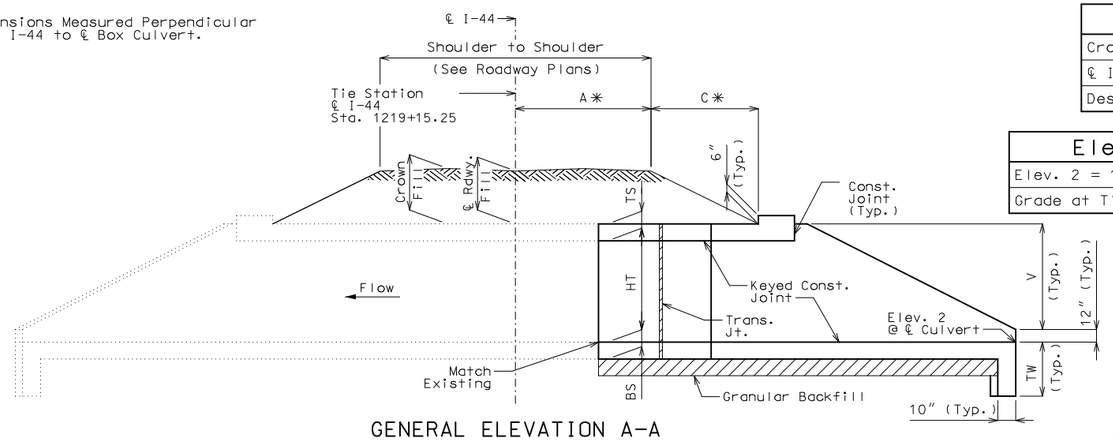
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\266-274_CulvertSections_J8I3044C.dgn 12:05:30 PM 8/20/2024

SINGLE (9′ x 6′) CONCRETE BOX CULVERT

Fill Heights
Crown WB I-44 at ℄ Culvert = 10.89 ft
℄ I-44 at ℄ Culvert = 10.31 ft
Design (All Units) = 12 ft

Estimated Quantities		Total
Class 4 Excavation	cu. yard	134
Class 4 Excavation in Rock	cu. yard	8
Class B-1 Concrete (Culverts)	cu. yard	38.0
Reinforcing Steel (Culverts)	pound	6,620

✳ Dimensions Measured Perpendicular to ℄ I-44 to ℄ Box Culvert.



GENERAL ELEVATION A-A

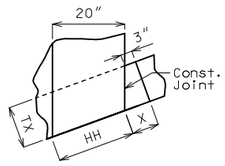
Elevations
Elev. 2 = 1280.53
Grade at Tie Sta. = 1296.72

Layout Dimensions					
Variable	Equation	Dimension	Variable	Equation	DIMENSION
S	---	9′-0″	L	CC1 + EE	50′-6⅛″
HT	---	6′-0″	O	I + YY	8⅜″
TS	---	8″	T	G(SEC Z2)	20′-11¼″
BS	---	10″	V	HT + TS - 12″	5′-8″
TX	---	8″	W	C1 + E	31′-4⅛″
A	---	57′-0″	X	3″ + TX(TAN Z2)	1′-3½″
C	---	38′-8″	Z1	SKEW ANGLE	39°55′14″
C1	---	17′-7¾″	Z2	SKEW ANGLE	57°17′54″
C2	---	13′-8⅜″	CC	(A + C - C1)(SEC Z1)	101′-8¾″
C3	---	3′-11⅛″	CC1	(CC2 + CC3)	25′-1⅞″
E	G + O + 20″	13′-8⅜″	CC2	(C2)(SEC Z1)	17′-10¾″
F	S + 2TX	10′-4″	CC3	(C3)(SEC Z2)	7′-3⅛″
G	2V	11′-4″	EE	E(SEC Z2)	25′-4¼″
H1	(C1 + E - C2)(TAN Z2)	27′-5⅜″	HH	20″(SEC Z2)	3′-1″
H2	(C2)(TAN Z1)	11′-5¼″	QQ	TX(COS Z2)	4⅜″
H3	(A + C - C1)(TAN Z2)	65′-3⅜″	YY	TX(SIN Z2)	6¼″
I	3″(COS Z2)	1⅝″	TW	MAX{3′-4″ OR (BS + 12″)}	3′-4″
K	S(SEC Z2)/2	8′-4″			

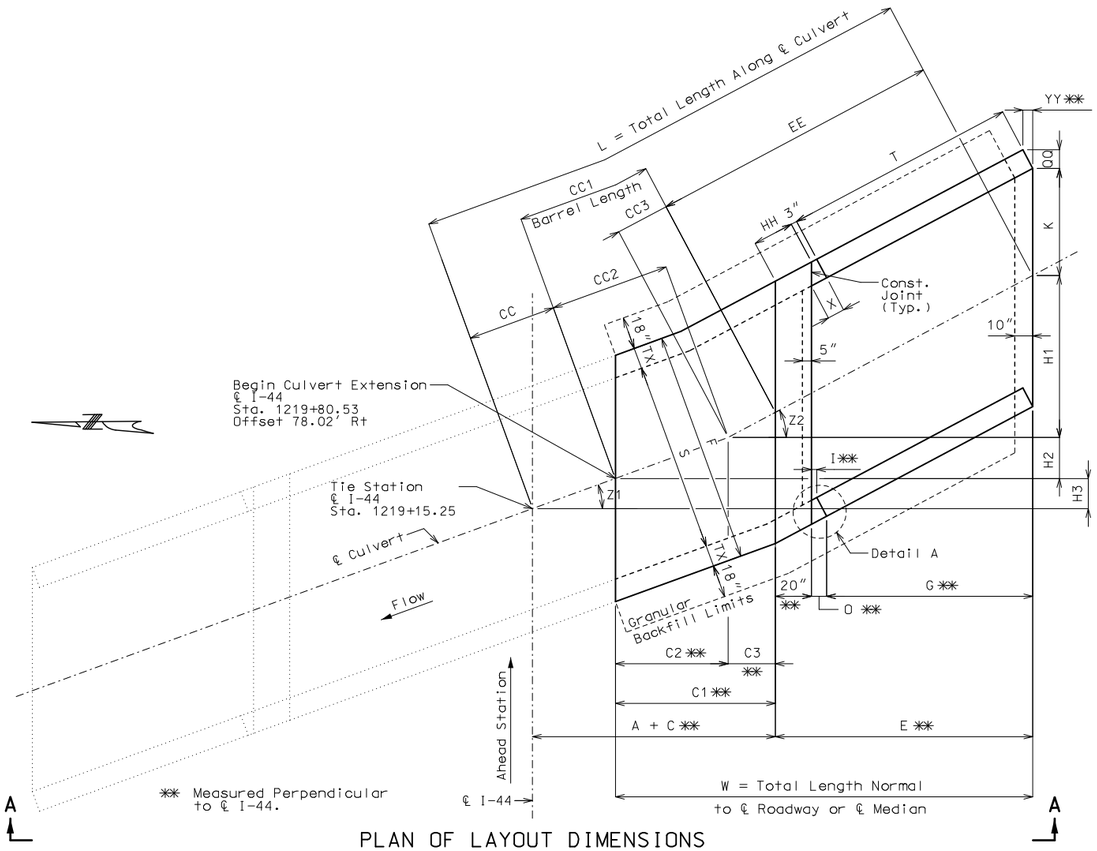
Construction joint key not shown for clarity, see standard plans for details.

If any part of the barrel is exposed, the roadway fill shall be warped to provide 12 inches minimum cover. (Roadway Item)

If unsuitable material is encountered, excavation of unsuitable material and furnishing and placing of granular backfill shall be in accordance with Sec 206.



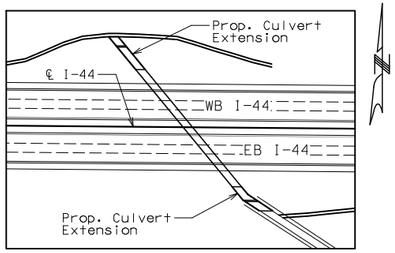
Detail A



✳✳ Measured Perpendicular to ℄ I-44.

PLAN OF LAYOUT DIMENSIONS

Hydrologic Data
Drainage Area = 0.75 Sq. Miles
Design Flood Frequency = 100 Years
Design Flood Discharge = 578 cfs
Design Flood (D.F.) Elevation = 1289.06
Base Flood (100 Year)
Estimated Backwater = 8.53 ft
Outlet Velocity = 12.04 ft/s
Roadway Overtopping
Overtopping Flood Discharge = 845 cfs
Overtopping Flood Frequency = >500 Years
>500 Flood Elevation = 1296.45



Location Sketch

General Notes:

Design Specifications:
2010 AASHTO LRFD Bridge Design Specifications and 2010 Interim Revisions

Design Loading:
Vehicular = HL-93 minus lane load, Earth = 120 lb/cf
Equivalent Fluid Pressure = 30 lb/cf (min.), 60 lb/cf (max.)

Design Unit Stresses:
Class B-1 Concrete (Box Culvert) f′c = 4,000 psi
Reinforcing Steel (Grade 60) fy = 60,000 psi

Miscellaneous:
Seee Standard Plans for reinforcement details.

Drawing not to scale. Follow dimensions.

Dimensions are in inches unless otherwise noted.

MoDOT Construction personnel will indicate the type of box culvert constructed:
☐ Precast Concrete Box used
☐ Cast-in-Place Concrete Box used

When alternate precast concrete box sections are used, the minimum distance from inside face of headwalls to precast sections measured along the shortest wall shall be 3 feet. Reinforcement and dimensions for wings and headwalls shall be in accordance with Missouri Standard Plans.

Channel bottom shall be graded within the right of way for transition of channel bed to culvert openings. Channel banks shall be tapered to match culvert openings. (Roadway Item)

Traffic Handling:
Structure to be closed during construction. Traffic to be maintained on detour during construction. See roadway plans for traffic control.

B.M.
Control Point #522
N:516659.82 E:1418805.95
EL. 1300.485
STA. 1215+55.60, 99.42′ Rt (I-44)
5/8″ I.B. w/ aluminum cap set
South Top Bank of EB I-44

Culvert: I-44
Tie Station 1219+15.25

Note: This drawing is not to scale. Follow dimensions.

I-44 WIDENING
CULVERT SECTIONS
30 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2012000088
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/20/2024
ROUTE I-44 | STATE MO
DISTRICT SW | SHEET NO. 313
COUNTY GREENE
JOB NO. JSU0076, J8I3044C, & JST0088B
PROJECT NO.
BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE | REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

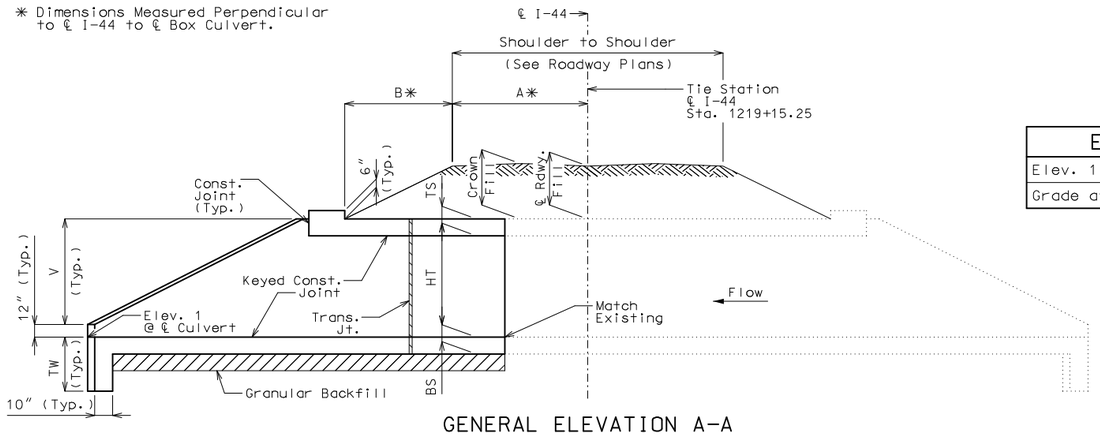
L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\275_CS_31_9x6_Box Culvert Extension_Upstream_J8I3044C.dgn 12:05:42 PM 8/20/2024

SINGLE (9′ x 6′) CONCRETE BOX CULVERT

Fill Heights
Crown WB I-44 at ℄ Culvert = 10.89 ft
℄ I-44 at ℄ Culvert = 10.31 ft
Design (All Units) = 12 ft

Estimated Quantities		Total
Class 4 Excavation	cu. yard	88
Class 4 Excavation in Rock	cu. yard	5
Class B-1 Concrete (Culverts)	cu. yard	45.5
Reinforcing Steel (Culverts)	pound	7,950

Elevations
Elev. 1 = 1278.56
Grade at Tie Sta. = 1296.72

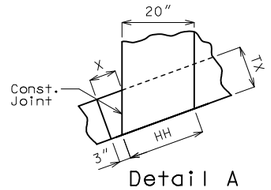


GENERAL ELEVATION A-A

Construction joint key not shown for clarity, see standard plans for details.

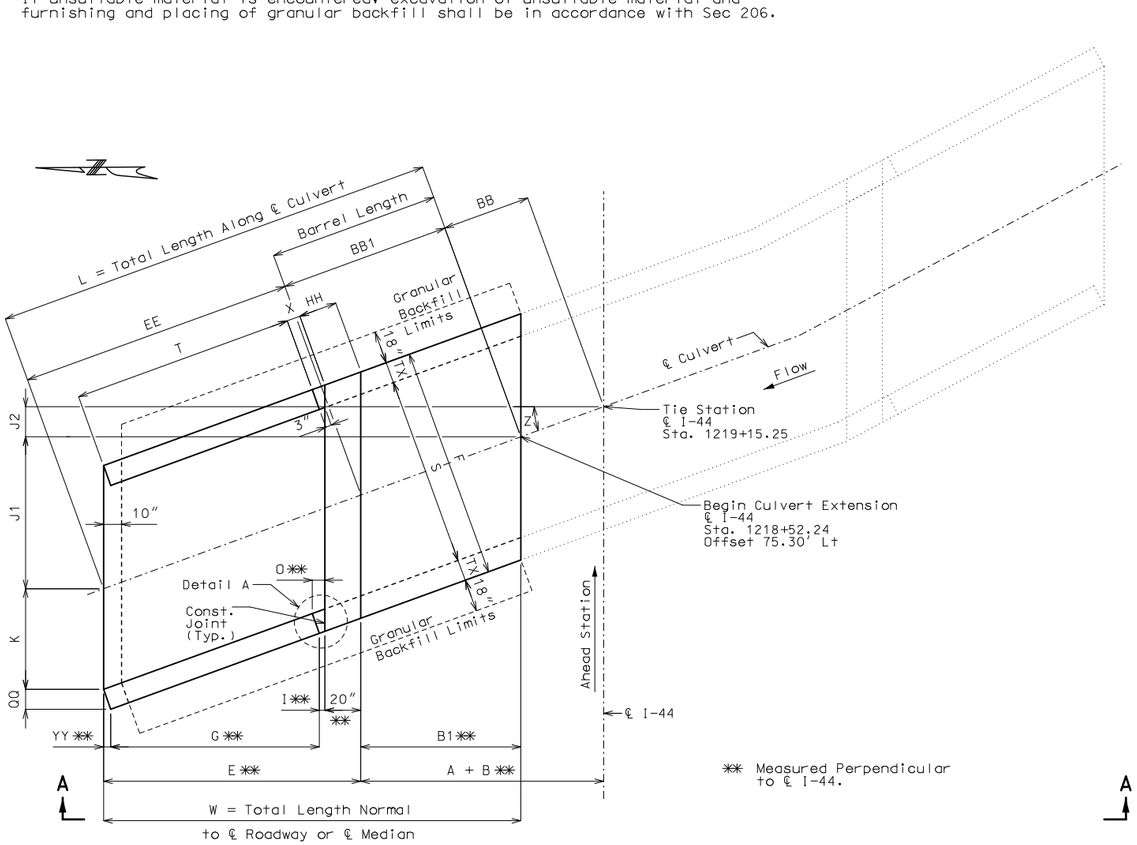
If any part of the barrel is exposed, the roadway fill shall be warped to provide 12 inches minimum cover. (Roadway Item)

If unsuitable material is encountered, excavation of unsuitable material and furnishing and placing of granular backfill shall be in accordance with Sec 206.



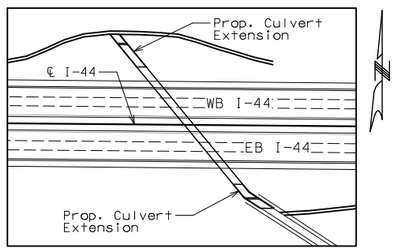
Detail A

Layout Dimensions					
Variable	Equation	Dimension	Variable	Equation	Dimension
S	---	9′-0″	L	BB1 + EE	57′-0″
HT	---	6′-0″	O	I + YY	$7\frac{3}{8}$″
TS	---	8″	T	G(SEC Z)	$14′-9\frac{3}{8}$″
BS	---	10″	V	HT + TS - 12″	5′-8″
TX	---	8″	W	B1 + E	$43′-8\frac{5}{8}$″
A	---	57′-0″	X	3″ + TX(TAN Z)	$9\frac{3}{4}$″
B	---	$48′-4\frac{3}{4}$″	Z	SKEW ANGLE	39°55′14″
B1	---	$30′-1\frac{1}{8}$″	BB	(A + B - B1)(SEC Z)	$98′-2\frac{1}{4}$″
E	G + O + 20″	$13′-7\frac{3}{8}$″	BB1	B1(SEC Z)	$39′-2\frac{7}{8}$″
F	S + 2TX	10′-4″	EE	E(SEC Z)	$17′-9\frac{1}{8}$″
G	2V	11′-4″	HH	20″(SEC Z)	$2′-2\frac{1}{8}$″
J1	(B1 + E)(TAN Z)	36′-7″	QQ	TX(COS Z)	$6\frac{1}{8}$″
J2	(A + B - B1)(TAN Z)	$63′-0\frac{1}{8}$″	YY	TX(SIN Z)	$5\frac{1}{8}$″
I	3″(COS Z)	$2\frac{1}{4}$″	TW	MAX{3′-4″ OR (BS + 12″)}	3′-4″
K	S(SEC Z)/2	$5′-10\frac{3}{8}$″			



✳✳ Measured Perpendicular to ℄ I-44.

PLAN OF LAYOUT DIMENSIONS



Location Sketch

General Notes:

Design Specifications:
2010 AASHTO LRFD Bridge Design Specifications and 2010 Interim Revisions

Design Loading:
Vehicular = HL-93 minus lane load, Earth = 120 lb/cf
Equivalent Fluid Pressure = 30 lb/cf (min.), 60 lb/cf (max.)

Design Unit Stresses:
Class B-1 Concrete (Box Culvert) f′c = 4,000 psi
Reinforcing Steel (Grade 60) fy = 60,000 psi

Miscellaneous:
Seee Standard Plans for reinforcement details.

Drawing not to scale. Follow dimensions.

Dimensions are in inches unless otherwise noted.

MoDOT Construction personnel will indicate the type of box culvert constructed:
☐ Precast Concrete Box used
☐ Cast-in-Place Concrete Box used

When alternate precast concrete box sections are used, the minimum distance from inside face of headwalls to precast sections measured along the shortest wall shall be 3 feet. Reinforcement and dimensions for wings and headwalls shall be in accordance with Missouri Standard Plans.

Channel bottom shall be graded within the right of way for transition of channel bed to culvert openings. Channel banks shall be tapered to match culvert openings. (Roadway Item)

Traffic Handling:
Structure to be closed during construction. Traffic to be maintained on detour during construction. See roadway plans for traffic control.

B.M.
Control Point #522
N:516659.82 E:1418805.95
EL. 1300.485
STA. 1215+55.60, 99.42′ Rt (I-44)
5/8″ I.B. w/ aluminum cap set
South Top Bank of EB I-44

Note: This drawing is not to scale. Follow dimensions.

Culvert: I-44
Tie Station 1219+15.25

I-44 WIDENING
CULVERT SECTIONS
31 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 8/20/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 314
COUNTY: GREENE
JOB NO.: JSU0076, J8I3044C, & JST0088B
PROJECT NO.:
BRIDGE NO.:

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

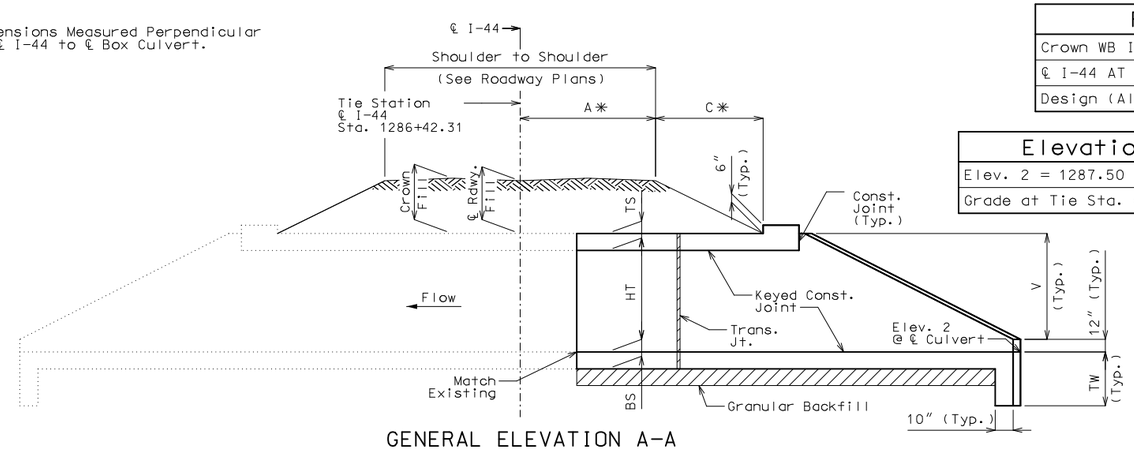
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SINGLE (6′x6′) CONCRETE BOX CULVERT

Fill Heights
Crown WB I-44 at ℄ Culvert = 15.85 ft
℄ I-44 AT ℄ CULVERT = 15.70 ft
Design (All Units) = 16 ft

Estimated Quantities		Total
Class 4 Excavation	cu. yard	72
Class 4 Excavation in Rock	cu. yard	4
Class B-1 Concrete (Culverts)	cu. yard	30.9
Reinforcing Steel (Culverts)	pound	5,510

✳ Dimensions Measured Perpendicular to ℄ I-44 to ℄ Box Culvert.



GENERAL ELEVATION A-A

Elevations
Elev. 2 = 1287.50
Grade at Tie Sta. = 1308.16

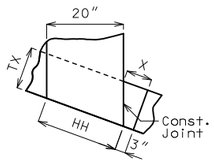
Layout Dimensions

Variable	Equation	Dimension	Variable	Equation	DIMENSION
S	---	6′-0″	L	CC1 + EE	49′-8⅛″
HT	---	6′-0″	O	I + YY	6⅝″
TS	---	8″	T	G(SEC Z)	13′-1⅛″
BS	---	9″	V	HT + TS - 12″	5′-8″
TX	---	8″	W	C1 + E	42′-11⅞″
A	---	57′-0″	X	3″ + TX(TAN Z)	7⅝″
C	---	55′-0⅛″	Z	SKEW ANGLE	30°4′58″
C1	---	29′-5¼″	CC	(A + C - C1)(SEC Z)	95′-5¼″
E	G + O + 20″	13′-6⅜″	CC1	(C1)(SEC Z)	34′-0¼″
F	S + 2TX	7′-4″	EE	E(SEC Z)	15′-7⅜″
G	2V	11′-4″	HH	20″(SEC Z)	1′-11⅛″
H1	(W)(TAN Z)	24′-10¾″	QQ	TX(COS Z)	6⅞″
H2	(A + C - C1)(TAN Z)	47′-10″	YY	TX(SIN Z)	4″
I	3″(COS Z)	2⅝″	TW	MAX{3′-4″ OR (BS + 12″)}	3′-4″
K	S(SEC Z)/2	3′-5⅝″			

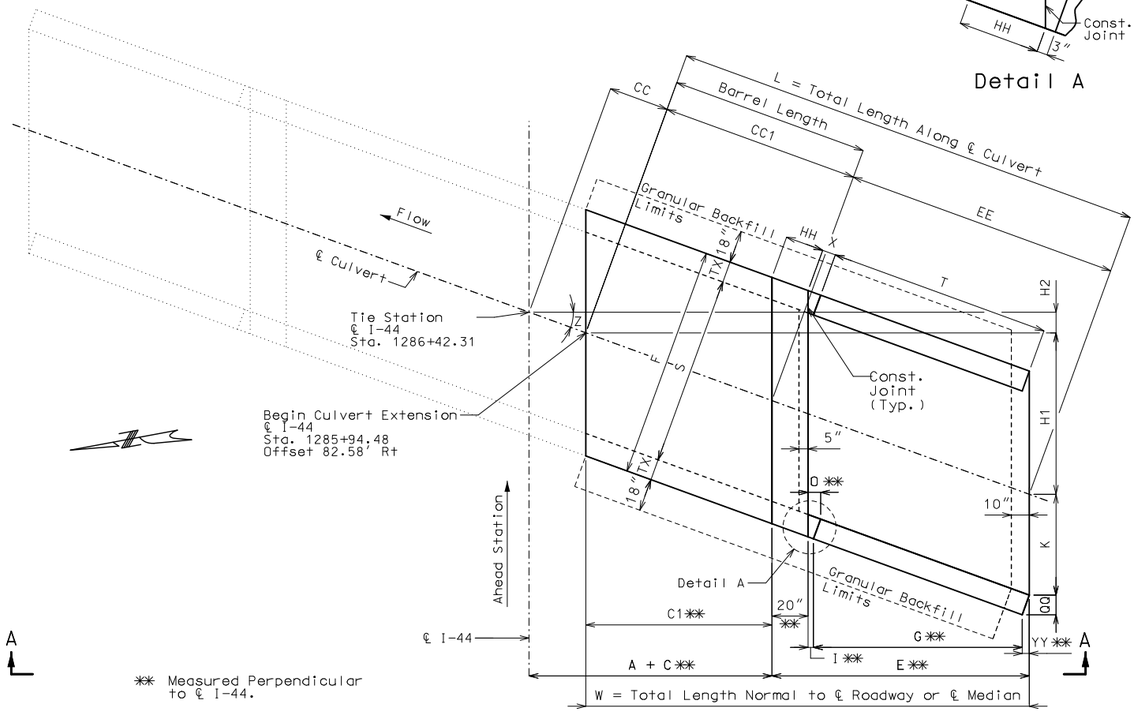
Construction joint key not shown for clarity, see standard plans for details.

If any part of the barrel is exposed, the roadway fill shall be warped to provide 12 inches minimum cover. (Roadway Item)

If unsuitable material is encountered, excavation of unsuitable material and furnishing and placing of granular backfill shall be in accordance with Sec 206.



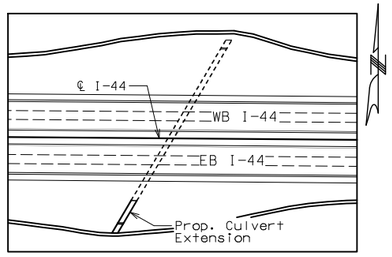
Detail A



✳✳ Measured Perpendicular to ℄ I-44.

PLAN OF LAYOUT DIMENSIONS

Hydrologic Data
Drainage Area = 0.44 Sq. Miles
Design Flood Frequency = 100 Years
Design Flood Discharge = 423 cfs
Design Flood (D.F.) Elevation = 1297.79
Base Flood (100 Year)
Estimated Backwater = 10.3 ft
Outlet Velocity = 17.0 ft/s
Roadway Overtopping
Overtopping Flood Discharge = 680 cfs
Overtopping Flood Frequency = >500 Years
>500 Flood Elevation = 1306.65



Location Sketch

General Notes:

Design Specifications:
2010 AASHTO LRFD Bridge Design Specifications and 2010 Interim Revisions

Design Loading:
Vehicular = HL-93 minus lane load, Earth = 120 lb/cf
Equivalent Fluid Pressure = 30 lb/cf (min.), 60 lb/cf (max.)

Design Unit Stresses:
Class B-1 Concrete (Box Culvert) f′c = 4,000 psi
Reinforcing Steel (Grade 60) fy = 60,000 psi

Miscellaneous:
Seee Standard Plans for reinforcement details.

Drawing not to scale. Follow dimensions.

Dimensions are in inches unless otherwise noted.

MoDOT Construction personnel will indicate the type of box culvert constructed:
☐ Precast Concrete Box used
☐ Cast-in-Place Concrete Box used

When alternate precast concrete box sections are used, the minimum distance from inside face of headwalls to precast sections measured along the shortest wall shall be 3 feet. Reinforcement and dimensions for wings and headwalls shall be in accordance with Missouri Standard Plans.

Channel bottom shall be graded within the right of way for transition of channel bed to culvert openings. Channel banks shall be tapered to match culvert openings. (Roadway Item)

Traffic Handling:
Structure to be closed during construction. Traffic to be maintained on detour during construction. See roadway plans for traffic control.

B.M.
Control Point #525
N:516837.12 E:1425425.70
EL. 1309.181
STA. 1281+79.15, 136.67′ Lt (I-44)
5/8″ I.B. w/ aluminum cap set 25′
North of North Top Slope of WB I-44

Culvert: I-44
Tie Station 1286+42.31

Note: This drawing is not to scale. Follow dimensions.

I-44 WIDENING
CULVERT SECTIONS
32 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2012000088
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	315

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE | REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

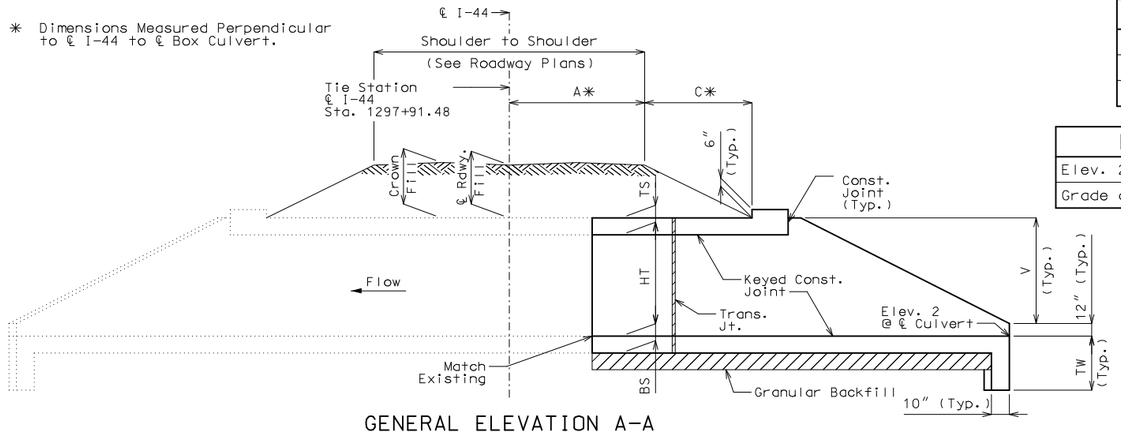
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

SINGLE (5′x5′) CONCRETE BOX CULVERT

Fill Heights
Crown WB I-44 at ℄ Culvert = 14.92 ft
℄ I-44 at ℄ Culvert = 14.05 ft
Design (All Units) = 16 ft

Estimated Quantities		Total
Class 4 Excavation	cu. yard	64
Class 4 Excavation in Rock	cu. yard	4
Class B-1 Concrete (Culverts)	cu. yard	24.7
Reinforcing Steel (Culverts)	pound	3,820

Elevations
Elev. 2 = 1300.10
Grade at Tie Sta. = 1316.00



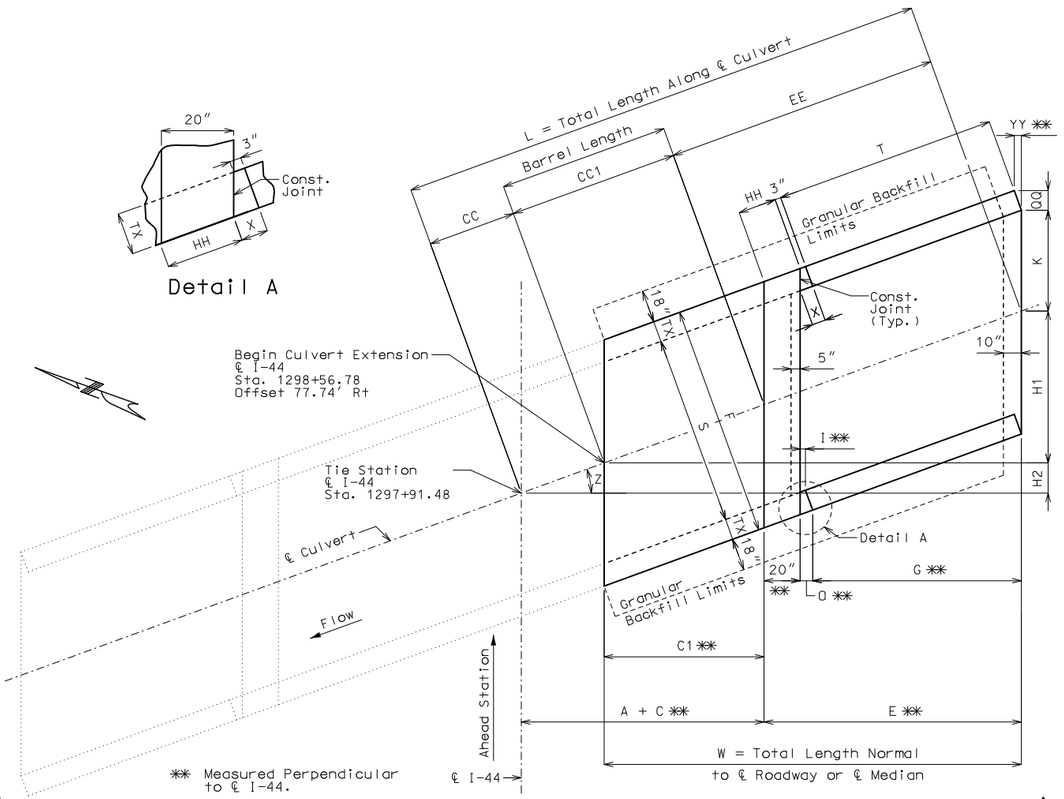
GENERAL ELEVATION A-A

Construction joint key not shown for clarity, see standard plans for details.

If any part of the barrel is exposed, the roadway fill shall be warped to provide 12 inches minimum cover. (Roadway Item)

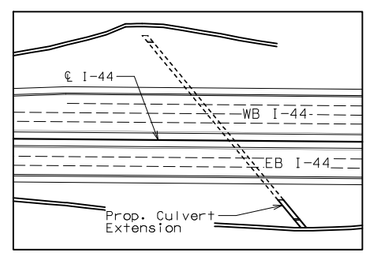
If unsuitable material is encountered, excavation of unsuitable material and furnishing and placing of granular backfill shall be in accordance with Sec 206.

Layout Dimensions					
Variable	Equation	Dimension	Variable	Equation	Dimension
S	---	5′-0″	L	CC1 + EE	47′-9¾″
HT	---	5′-0″	O	I + YY	7½″
TS	---	8″	T	G(SEC Z)	12′-2¼″
BS	---	8″	V	HT + TS - 12″	4′-8″
TX	---	8″	W	C1 + E	36′-7¼″
A	---	57′-0″	X	3″ + TX(TAN Z)	9¾″
C	---	45′-8⅝″	Z	SKEW ANGLE	40°1′58″
C1	---	24′-11⅞″	CC	(A + C + C1)(SEC Z)	101′-6¼″
E	G + O + 20″	11′-7½″	CC1	(C1)(SEC Z)	32′-7⅝″
F	S + 2TX	6′-4″	EE	E(SEC Z)	15′-2⅛″
G	2V	9′-4″	HH	20″(SEC Z)	2′-2⅛″
H1	(W)(TAN Z)	30′-9″	QQ	TX(COS Z)	6⅛″
H2	(A + C - C1)(TAN Z)	65′-3⅝″	YY	TX(SIN Z)	5⅛″
I	3″(COS Z)	2¼″	TW	MAX{3′-4″ OR (BS + 12″)}	3′-4″
K	S(SEC Z)/2	3′-3⅛″			



PLAN OF LAYOUT DIMENSIONS

Hydrologic Data
Drainage Area = 0.25 Sq. Miles
Design Flood Frequency = 100 Years
Design Flood Discharge = 275 cfs
Design Flood (D.F.) Elevation = 1308.88
Base Flood (100 Year)
Estimated Backwater = 8.78 ft
Outlet Velocity = 20.73 ft/s
Roadway Overtopping
Overtopping Flood Discharge = 430 cfs
Overtopping Flood Frequency = <200 Years
<200 Flood Elevation = 1315.90



Location Sketch

General Notes:

Design Specifications:
2010 AASHTO LRFD Bridge Design Specifications and 2010 Interim Revisions

Design Loading:
Vehicular = HL-93 minus lane load, Earth = 120 lb/cf
Equivalent Fluid Pressure = 30 lb/cf (min.), 60 lb/cf (max.)

Design Unit Stresses:
Class B-1 Concrete (Box Culvert) f′c = 4,000 psi
Reinforcing Steel (Grade 60) fy = 60,000 psi

Miscellaneous:
Seee Standard Plans for reinforcement details.

Drawing not to scale. Follow dimensions.

Dimensions are in inches unless otherwise noted.

MoDOT Construction personnel will indicate the type of box culvert constructed:
☐ Precast Concrete Box used
☐ Cast-in-Place Concrete Box used

When alternate precast concrete box sections are used, the minimum distance from inside face of headwalls to precast sections measured along the shortest wall shall be 3 feet. Reinforcement and dimensions for wings and headwalls shall be in accordance with Missouri Standard Plans.

Channel bottom shall be graded within the right of way for transition of channel bed to culvert openings. Channel banks shall be tapered to match culvert openings. (Roadway Item)

Traffic Handling:
Structure to be closed during construction. Traffic to be maintained on detour during construction. See roadway plans for traffic control.

B.M.
Control Point #525
N:516837.12 E:1425425.70
EL. 1309.181
STA. 1281+79.15, 136.67′ Lt (I-44)
5/8″ I.B. w/ aluminum cap set 25′
North of North Top Slope of WB I-44

Note: This drawing is not to scale. Follow dimensions.

Culvert: I-44
Tie Station 1297+91.48

I-44 WIDENING
CULVERT SECTIONS
33 OF 34

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	316

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

REVISION	DESCRIPTION	DATE
1	ADDENDUM 02 (BID 16)	10/15/2024

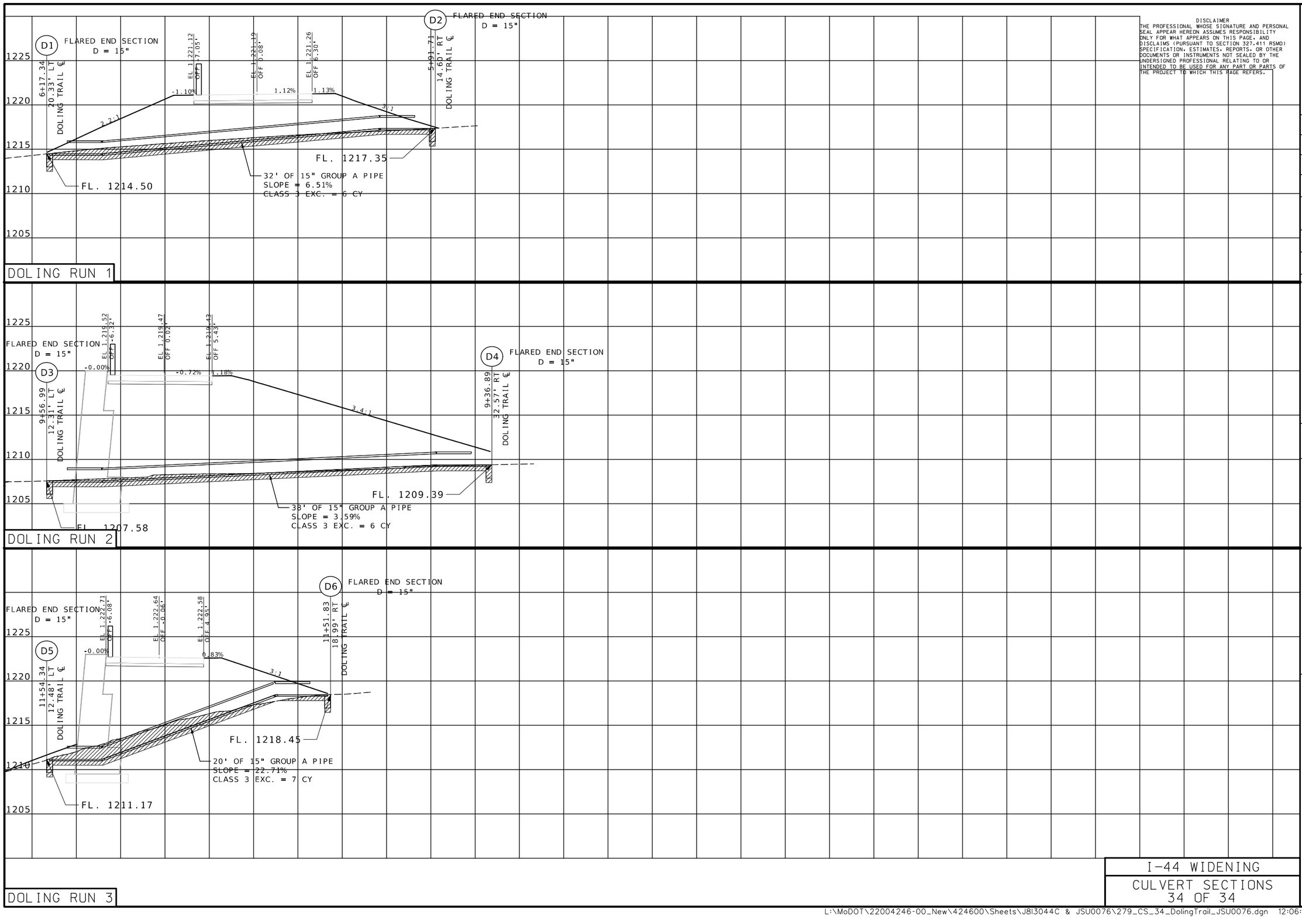
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\278_CS_34_5x5_Box Culvert Extension_Upstream_J8I3044C.dgn 12:06:13 PM 8/20/2024



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
RYAN STEHN
NUMBER PE-2020000089
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/20/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	317

COUNTY
GREENE

JOB NO.
JSU0076, J8I3044C, & JST0088B

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

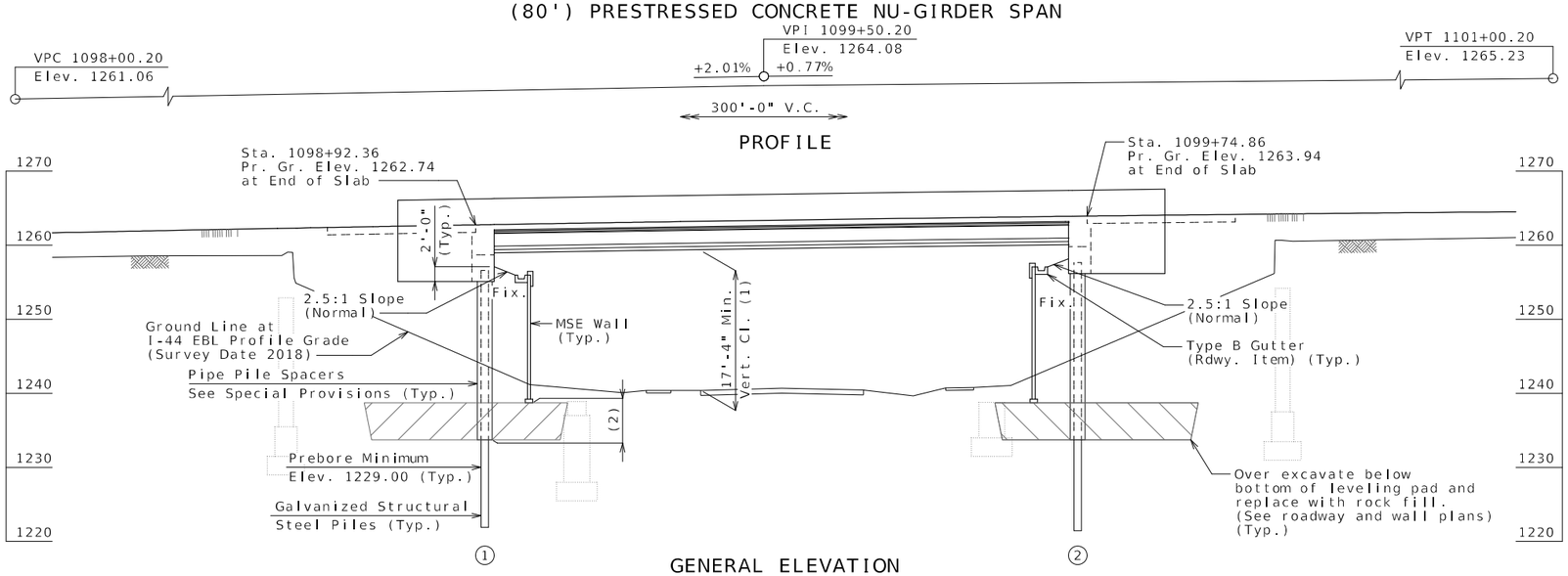
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

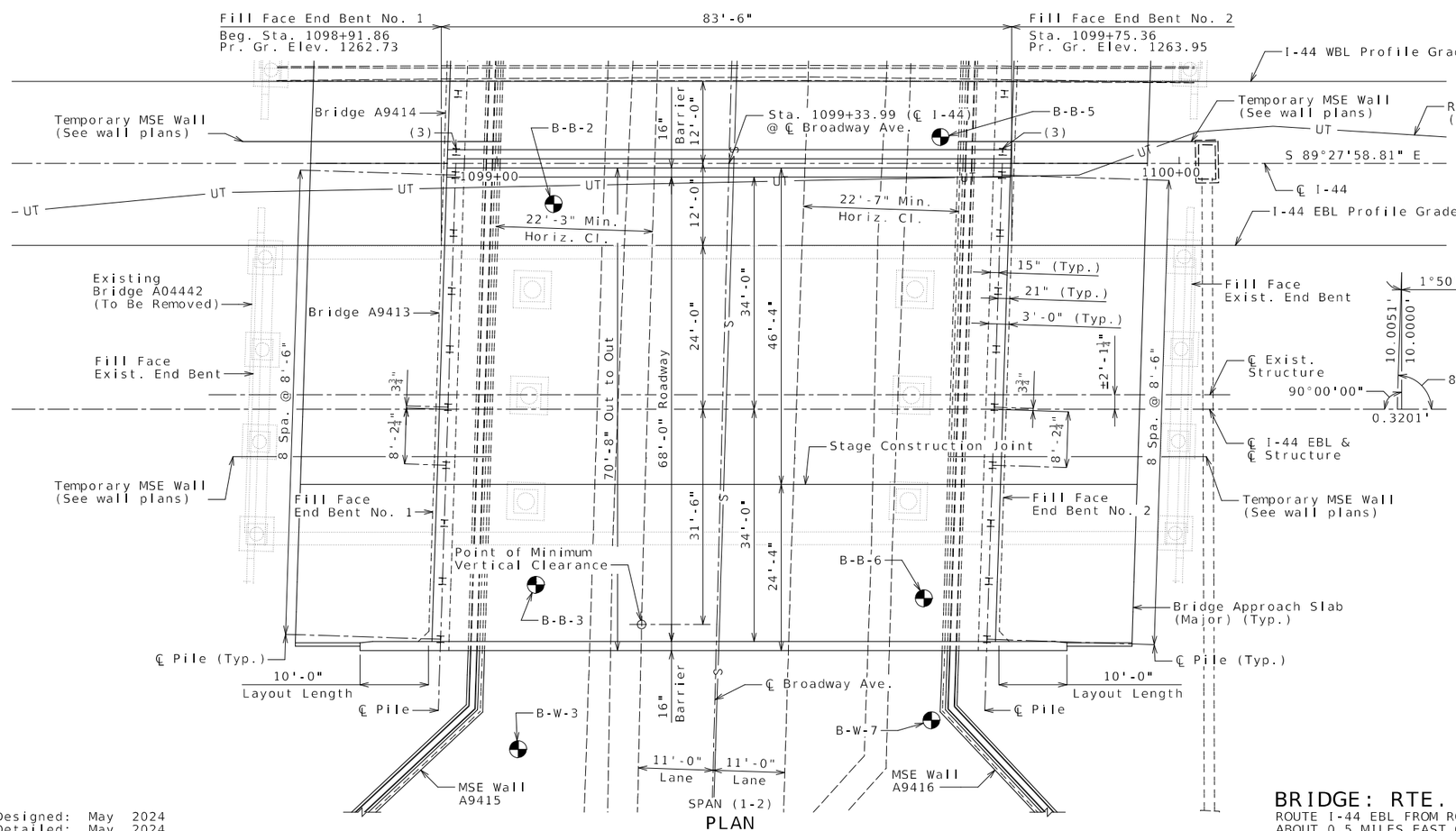
I-44 WIDENING
CULVERT SECTIONS
34 OF 34

L:\MoDOT\22004246-00_New\424600\Sheets\J8I3044C & JSU0076\279_CS_34_DolingTrail_JSU0076.dgn 12:06:23 PM 8/20/2024

(80') PRESTRESSED CONCRETE NU-GIRDER SPAN

SEC/SUR 2 TWP 29N RGE 22W





PLAN

Pile Encasement	Option Used (✓)
Pipe Pile Spacer	
Pile Jacket	

MoDOT Construction personnel will indicate the pile encasement used.

(1) Minimum vertical clearance is controlled by adjacent Bridge A9414 at 15'-10".

(2) Bottom of pipe pile spacer shall be 5'-0" minimum below bottom of leveling pad.

(3) Pile in Bridge A9414 shall be driven during Stage 2 Construction of Bridge A9413.

NOTES:

◐ Indicates location of borings.

For notice and disclaimer regarding boring log data, see Sheet No. 2.

Roadway fill, exclusive of Select Granular Backfill for Structural Systems, shall be completed to the final roadway section and up to the elevation of the bottom of the concrete beam within the limits of the structure and for not less than 25 feet in back of the fill face of the end bents before any piles are driven for any bents falling within the embankment section.

C.P. #518 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1106+18.78, 110.87' Lt. of ℄ I-44
Elev. 1277.59

C.P. #519 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1122+80.16, 92.35' Lt. of ℄ I-44
Elev. 1270.58

BRIDGE: RTE. I-44 EBL OVER BROADWAY AVE.

ROUTE I-44 EBL FROM ROUTE 13 TO ROUTE H
ABOUT 0.5 MILES EAST OF ROUTE 13
BEGINNING STATION 1098+91.86

Designed: May 2024
Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	1

COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9413

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

GENERAL NOTES:

DESIGN SPECIFICATIONS:

2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)
Operational Importance = Essential
2011 AASHTO Guide Specifications for LRFD Seismic Bridge Design (2nd Ed.)
and 2014 Interim Revisions (Seismic)
Seismic Design Category = A
Design earthquake response spectral acceleration coefficient at 1.0 second period, S_{D1} = 0.104g
Acceleration Coefficient (effective peak ground acceleration coefficient), A_S = 0.089g

DESIGN LOADING:

Vehicular = HL-93
Future Wearing Surface = 35 lb/sf
Earth = 120 lb/cf
Equivalent Fluid Pressure = 45 lb/cf (Min.)
Superstructure: Non-composite for dead load.
Composite for live load.

DESIGN UNIT STRESSES:

Class B Concrete (Substructure)	f'c = 3,000 psi
Class B-1 Concrete (Type D Barrier)	f'c = 4,000 psi
Class B-2 Concrete (Superstructure, except Prestressed Girders and Type D Barrier)	f'c = 4,000 psi
Reinforcing Steel (Grade 60)	fy = 60,000 psi
Structural Steel HP Pile (ASTM A709 Grade 50S)	fy = 50,000 psi

For precast prestressed panel stresses, see Sheet No. 18.
For prestressed girder stresses, see Sheets No. 16 thru 17.

NEOPRENE PADS:

Neoprene bearing pads shall be 60 durometer and shall be in accordance with Sec 716.

JOINT FILLER:

All joint filler shall be in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

REINFORCING STEEL:

Minimum clearance to reinforcing steel shall be 1½", unless otherwise shown.

MBS refers to mechanical bar splices. Mechanical bar splices shall be in accordance with Sec 706 or 710 except that no measurement will be made for mechanical bar splices and they will be considered conpletely covered by the contract unit price for other items.

TRAFFIC HANDLING:

Vertical clearance for Broadway Avenue traffic during construction shall be 14'-6" minimum over a 11'-0" wide horizontal opening of the roadway in each direction.

Traffic to be maintained on structures during construction. See roadway plans for traffic control and Sheets No. 3 thru 4 for staged construction details.

MISCELLANEOUS:

MoDOT Construction personnel will indicate the type of joint filler option used under the precast panels for this structure:

☐ Constant Joint Filler
☐ Variable Joint Filler

NOTICE AND DISCLAIMER REGARDING BORING LOG DATA:

The locations of all subsurface borings for this structure are shown on the plan sheets for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheets No. 28 thru 31 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.

Foundation Data

Type	Design Data		Bent Number 1	Bent Number 2
Load Bearing Pile	Pile Type and Size		HP 12x53	HP 12x53
	Number	ea	9	9
	Approximate Length Per Each	ft	30	30
	Pile Point Reinforcement	ea	All	All
	Min. Galvanized Penetration (Elev.)	ft	Full Length	Full Length
	Pile Driving Verification Method		DF	DF
	Resistance Factor		0.4	0.4
	Minimum Nominal Axial Compressive Resistance	kip	590	590

DF = FHWA - modified Gates Dynamic Pile Formula.

Minimum Nominal Axial Compressive Resistance = $\frac{\text{Maximum Factored Loads}}{\text{Resistance Factor}}$

Manufactured pile point reinforcement shall be used on all piles in this structure.

Pile point reinforcement need not be galvanized. Shop drawings will not be required for pile point reinforcement.

Prebore for piles at Bents No. 1 and 2 to elevation 1229.0.

HP piles are anticipated to be driven to refusal on rock. Review all borings for depth of rock and restrict driving as appropriate to comply with hard rock driving criteria in accordance with Sec 702. When pile refusal on rock occurs, as approved by the engineer, the minimum nominal axial compressive resistance is verified and no additional pile driving verification method is required.

The contractor shall make every effort to achieve the minimum galvanized penetration (elevation) shown on the plans for all piles.

Estimated Quantities

Item		Substr.	Superstr.	Total
Removal of Miscellaneous ACM (Non-Friable)	sq. foot			12
Removal of Bridges (A04442)	lump sum			1
Bridge Approach Slab (Major)	sq. yard		314	314
Galvanized Structural Steel Piles (12 in.)	linear foot	534		534
Pre-Bore for Piling	linear foot	189		189
Pile Point Reinforcement	each	18		18
Class B Concrete (Substructure)	cu. yard	58.4		58.4
Type D Barrier	linear foot		226	226
Slab on Concrete NU-Girder	sq. yard		648	648
NU 35, Prestressed Concrete NU-Girder	linear foot		647	647
Vertical Drain at End Bents	each	2		2
Plain Neoprene Bearing Pad	each		8	8
Laminated Neoprene Bearing Pad (Tapered)	each		8	8
Pile Spacers	each	18		18

All concrete above the construction joint in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

All reinforcement in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Estimated Quantities for Slab on Concrete NU-Girder

Item		Total
Class B-2 Concrete	cu. yard	204
Reinforcing Steel (Epoxy Coated)	pound	46,160

The table of Estimated Quantities for Slab on Concrete NU-Girder represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab (or with the horizontal dimensions as shown on the plan of slab). Payment for prestressed panels, conventional forms, all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slab shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type I, II or III.

PRECAST PRESTRESSED PANELS:

The Estimated Quantities for Slab on Concrete NU-Girder are based on skewed precast prestressed end panels.

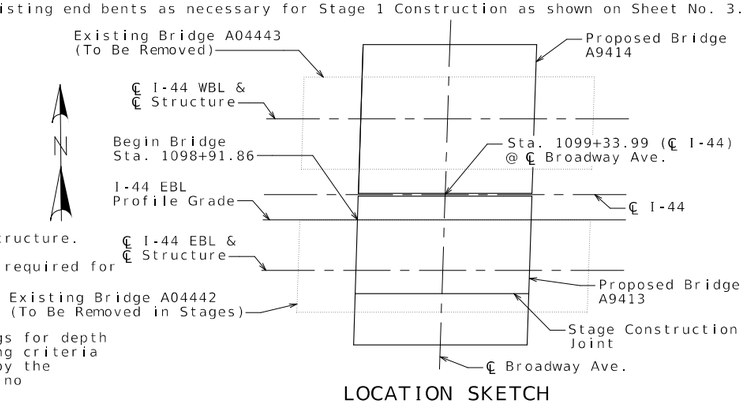
Class B-2 Concrete quantity is based on minimum top flange and minimum joint material thickness.

The prestressed panel quantities are not included in the table of Estimated Quantities for Slab on Concrete NU-Girder.

STAGED CONSTRUCTION:

The Contractor shall verify that the existing bridge is sufficient to carry traffic during Stage 1 Construction. The design, installation and monitoring of any temporary supports will be considered completely covered by the contract unit price for the Removal of Bridges (A04442).

The Contractor shall remove the existing end bents as necessary for Stage 1 Construction as shown on Sheet No. 3.



LOCATION SKETCH

GENERAL NOTES & QUANTITIES

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

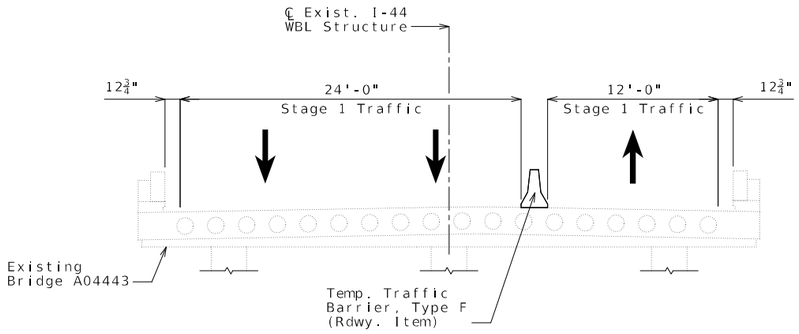
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

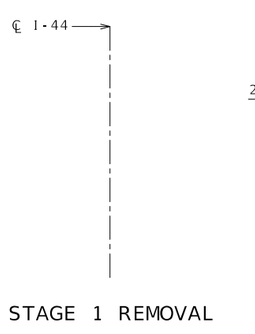
DATE PREPARED: 11/7/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 2
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9413

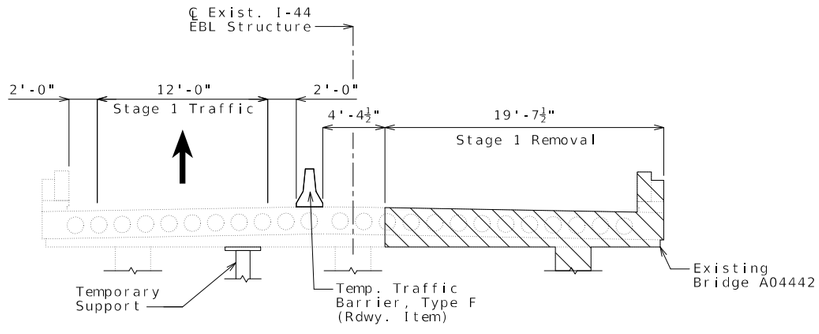
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

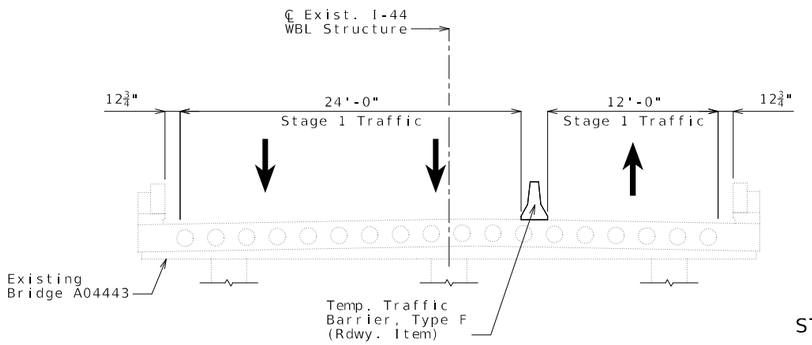
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

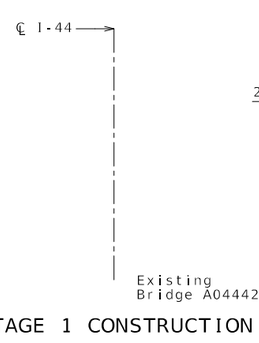


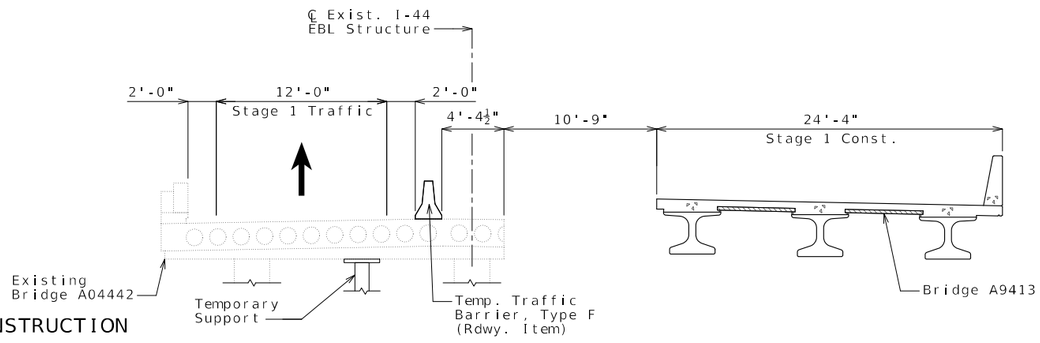




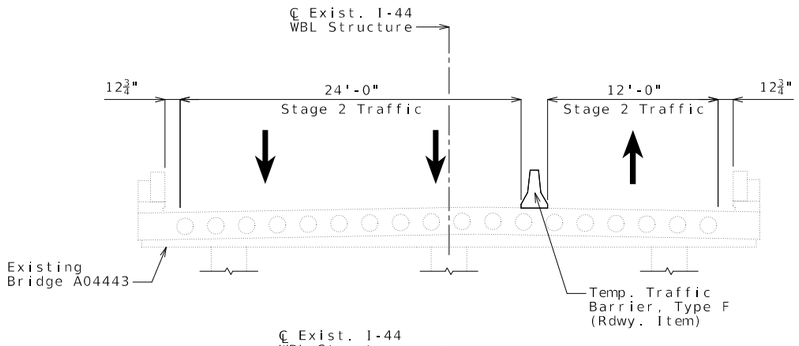
STAGE 1 REMOVAL

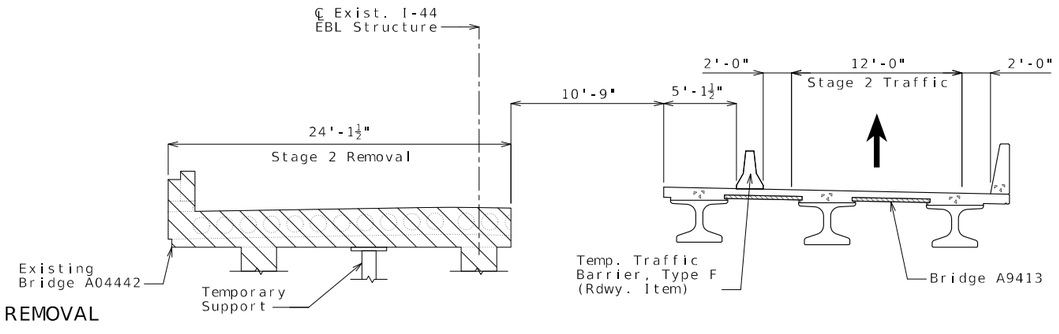




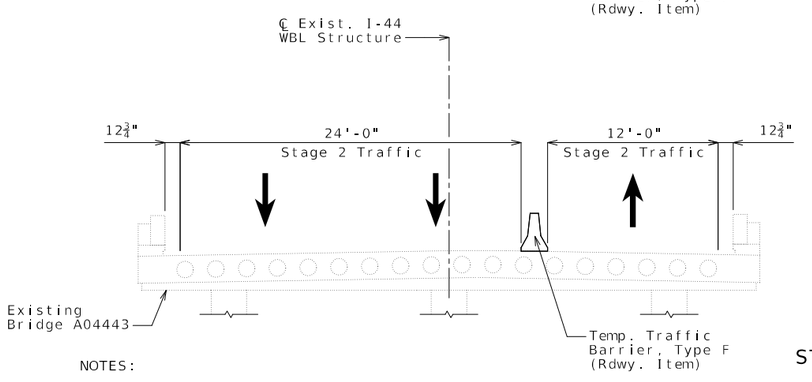


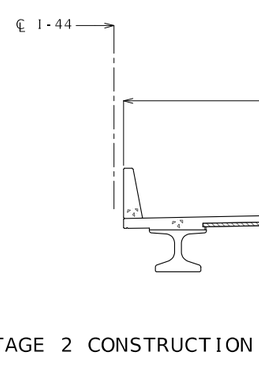
STAGE 1 CONSTRUCTION

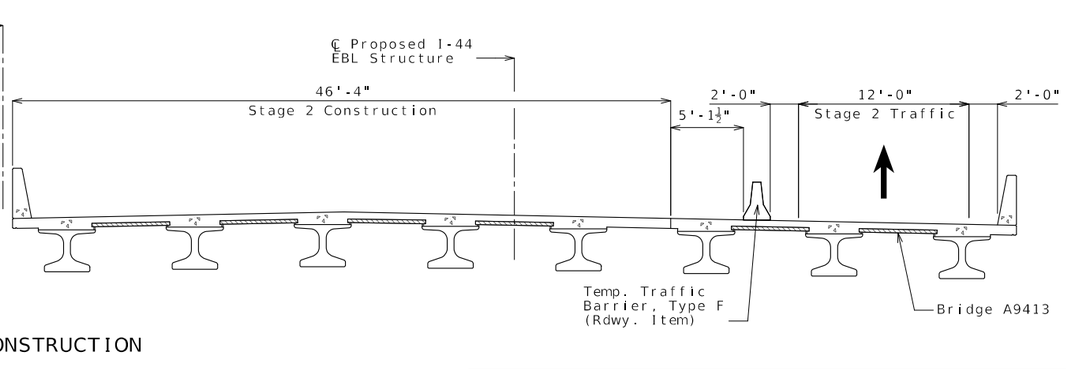




STAGE 2 REMOVAL







STAGE 2 CONSTRUCTION

NOTES:

All typical sections are looking east.

Hatched area indicates removal of existing structures.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 31

STAGED CONSTRUCTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	3

COUNTY: GREENE

JOB NO.: JSU0076

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A9413

DESCRIPTION	DATE

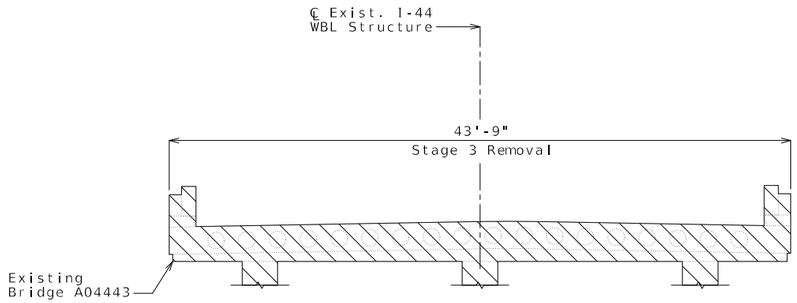
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

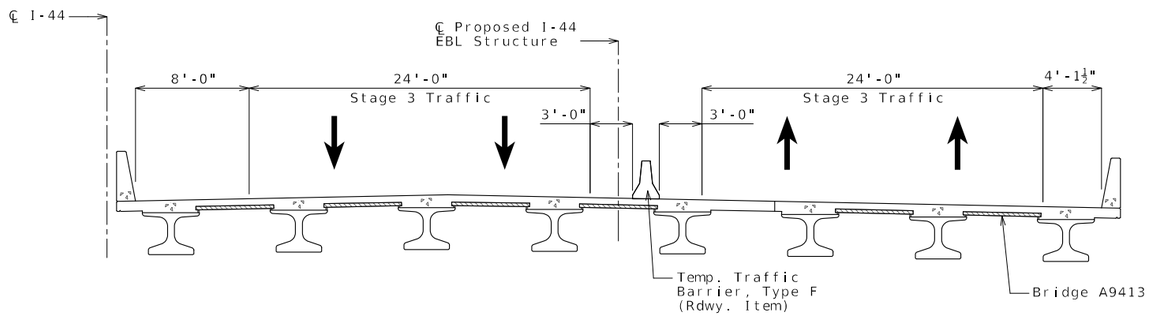
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165

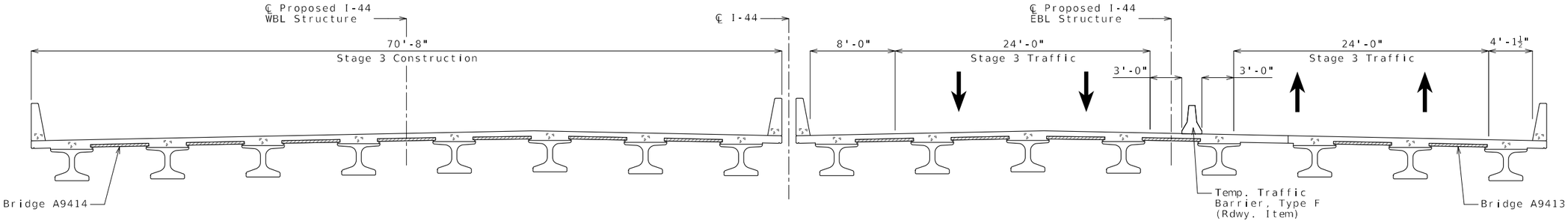
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171046\B_A9413_003_JSU0076.dgn 5:12:16 PM 9/5/2024

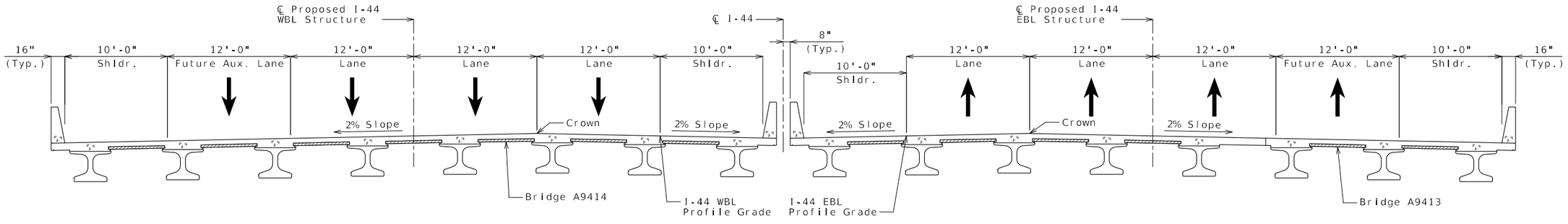




STAGE 3 REMOVAL



STAGE 3 CONSTRUCTION



FINAL SECTION THRU SLAB

NOTES:

All typical sections are looking east.

Hatched area indicates removal of existing structures.

STAGED CONSTRUCTION

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	4

COUNTY: GREENE

JOB NO.: JSU0076

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A9413

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

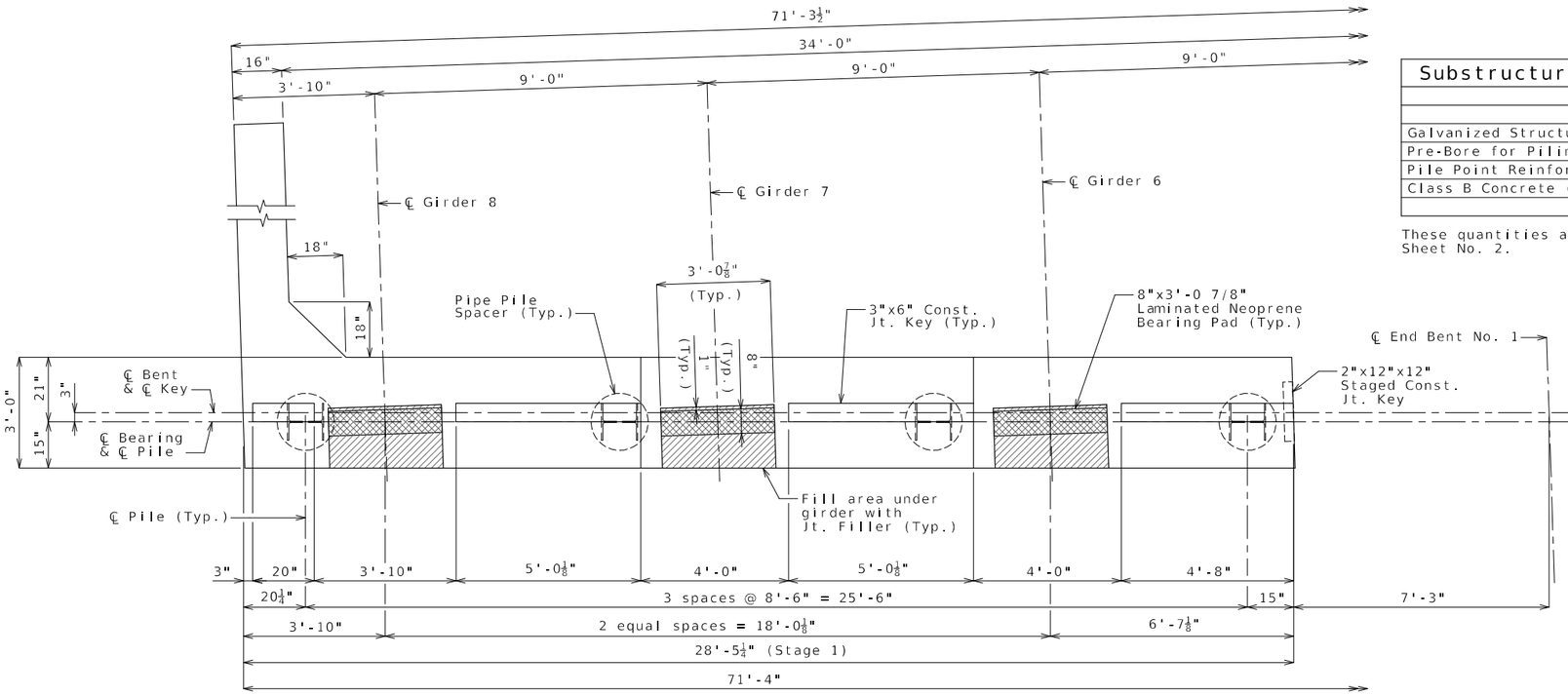
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

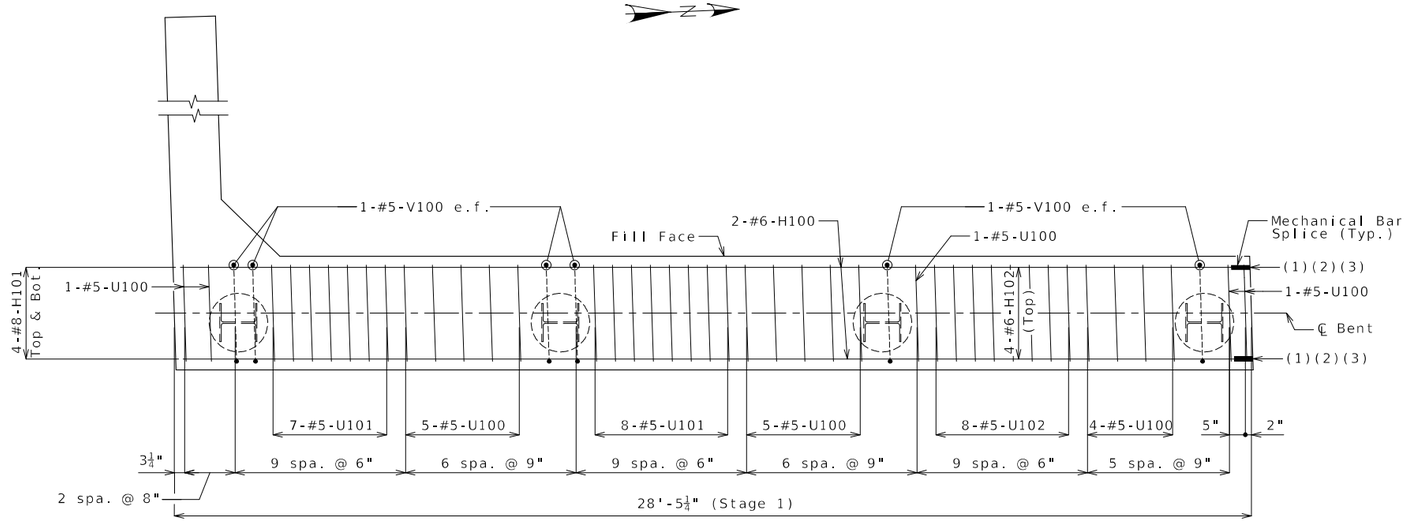
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171046\B_A9413_004_JSU0076.dgn 5:12:29 PM 9/5/2024



PART PLAN OF BEAM

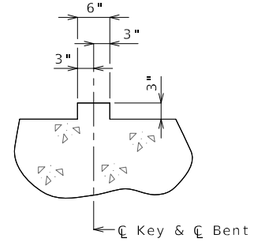


PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

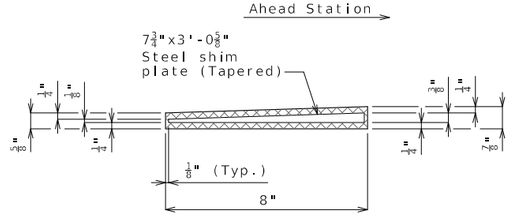
Substructure Quantity Table for End Bent No. 1

Item		Quantity
Galvanized Structural Steel Piles (12 in.)	linear foot	266
Pre-Bore for Piling	linear foot	90
Pile Point Reinforcement	each	9
Class B Concrete (Substructure)	cu. yard	29.2

These quantities are included in the Estimated Quantities table on Sheet No. 2.



SECTION THRU KEY



TYPICAL SECTION THRU
8"X3'-0 7/8"X3/4"
LAMINATED NEOPRENE BEARING PAD
(8 Required)

NOTES:

Work this sheet with Sheets No. 6 thru 9.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) 4-MBS H101-H104 Top & Bot.
(2) 2-MBS H100-H103 Each Face
(3) 4-MBS H102-H105 Top

END BENT NO. 1
BEAM DETAILS 1 OF 2

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
STATE OF MISSOURI
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

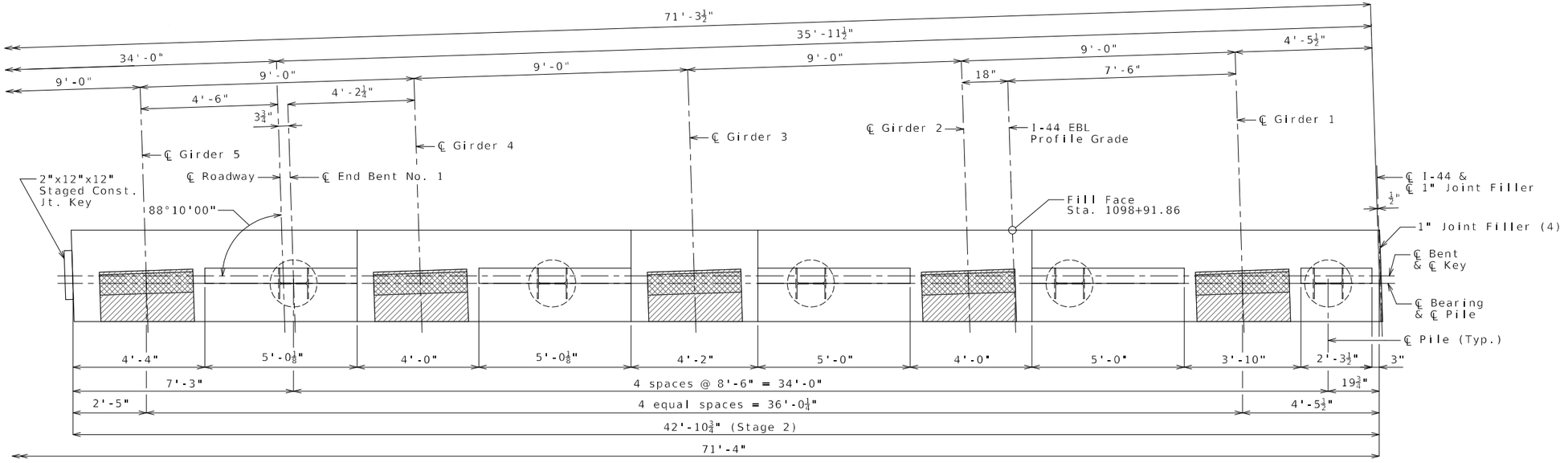
DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 5
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9413

DESCRIPTION | DATE | REV.

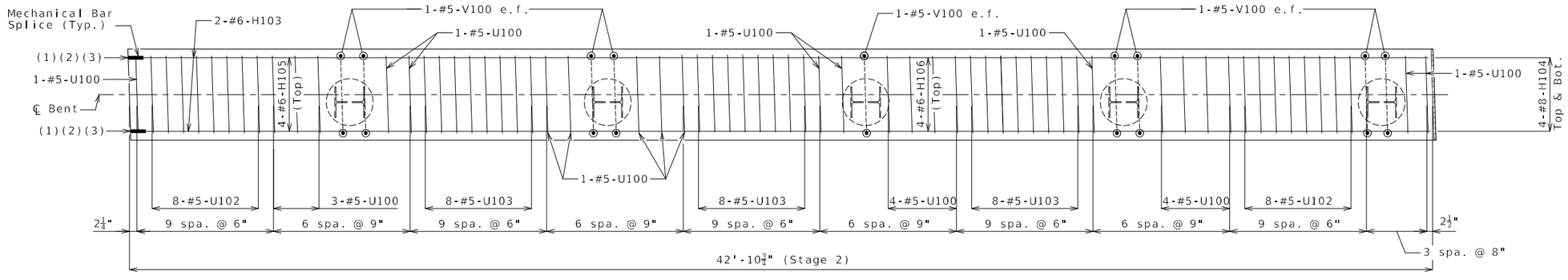
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



PART PLAN OF BEAM



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5 and 7 thru 9.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) 4-MBS H101-H104 Top & Bot.
(2) 2-MBS H100-H103 Each Face
(3) 4-MBS H102-H105 Top
(4) Seal joint between vertical face of EB and WB bearing beams with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6 of 31

END BENT NO. 1
BEAM DETAILS 2 OF 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	6

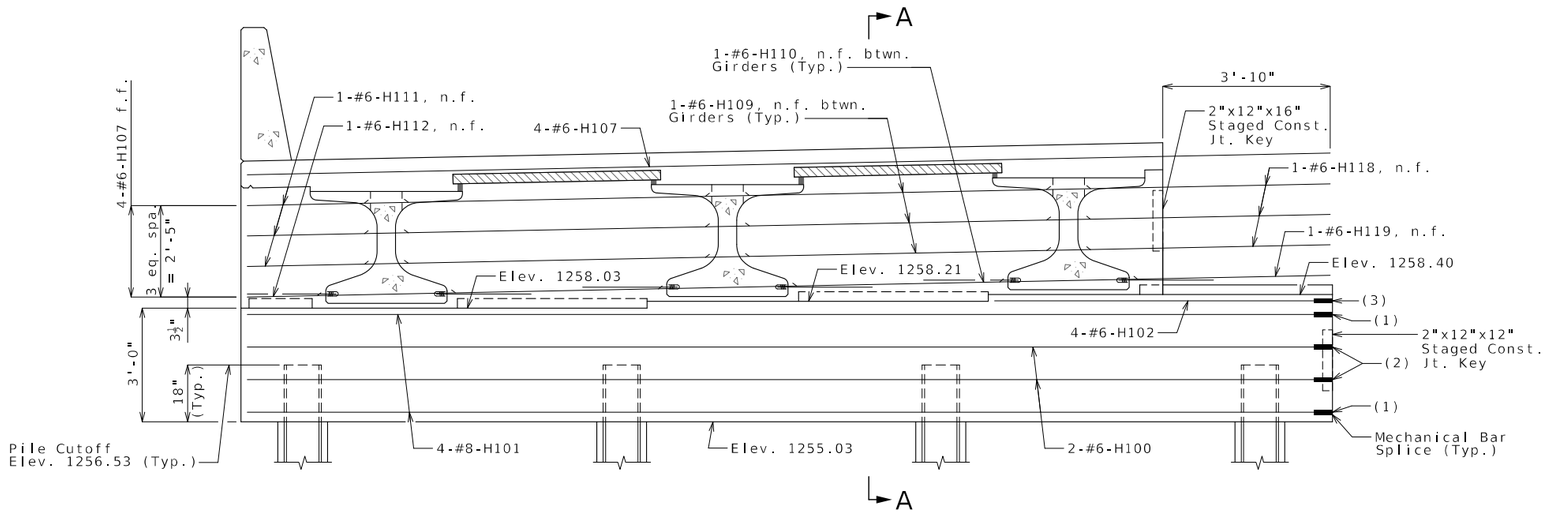
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9413

REV.	DESCRIPTION	DATE

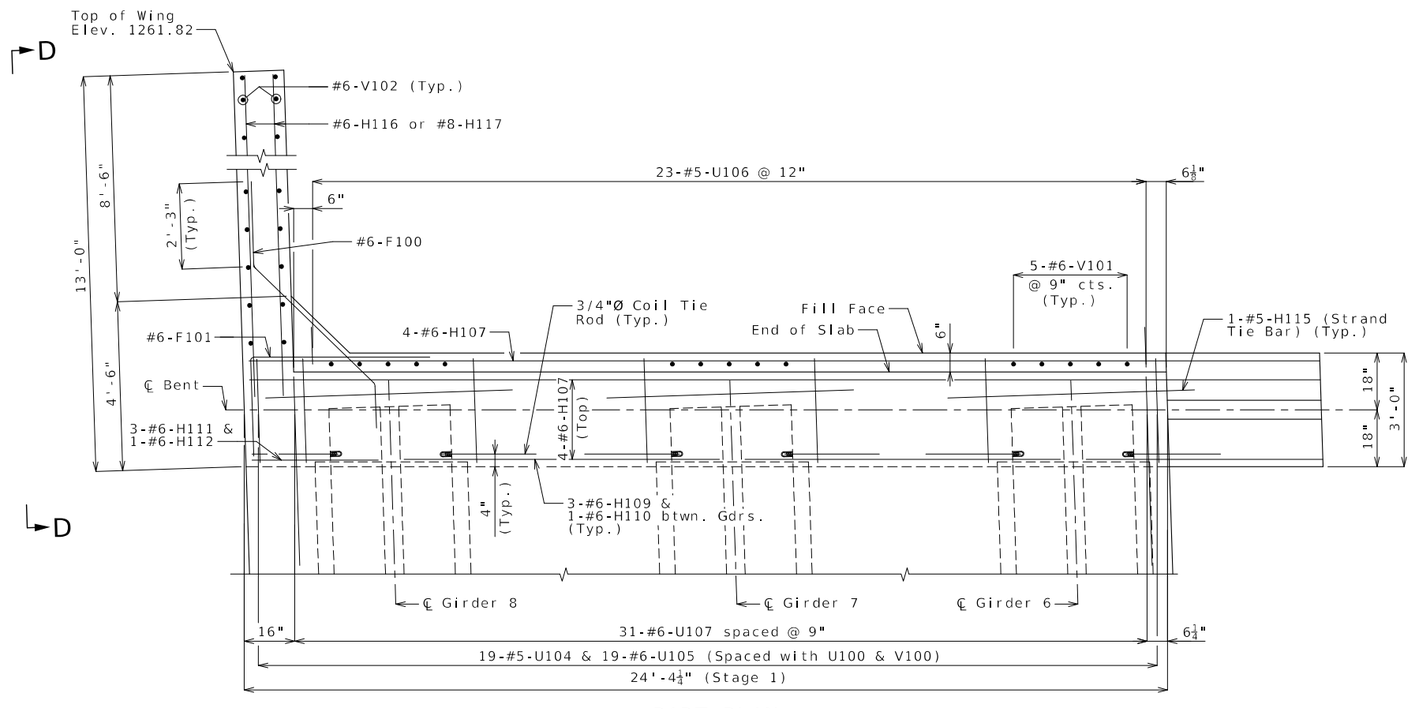
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171046\B_A9413_006_JSU0076.dgn 5:12:54 PM 9/5/2024



SECTION NEAR END BENT
(Looking Back Station)



PART PLAN
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5 & 6 and 8 & 9.

For Section A-A see Sheet No. 9.

The #6-F100 shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H115, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) 4-MBS H101-H104 Top & Bot.
(2) 2-MBS H100-H103 Each Face
(3) 4-MBS H102-H105 Top

END BENT NO. 1
DIAPHRAGM DETAILS 1 of 2

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

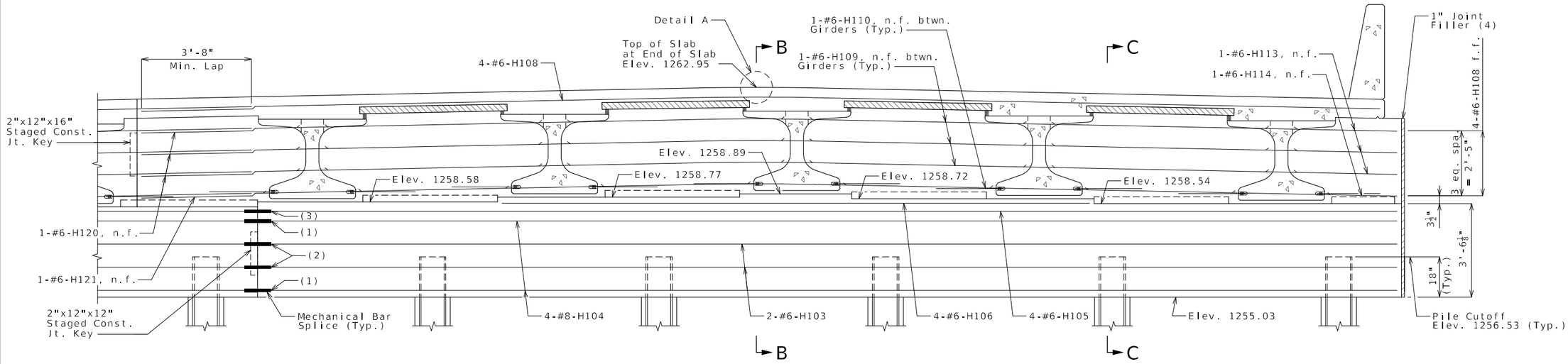
DATE PREPARED: 9/5/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 7
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9413

REV.	DESCRIPTION	DATE

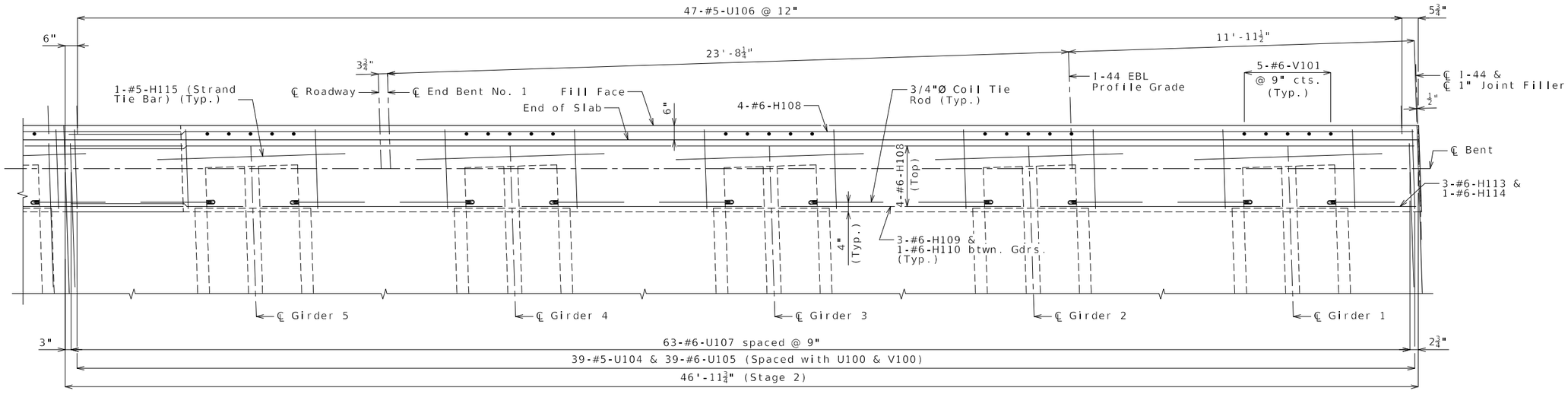
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165

BMcD Project No. 146617



SECTION NEAR END BENT
(Looking Back Station)



PART PLAN
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5 thru 7 & 9.

For Section A-A see Sheet No. 9.

For Detail A see Sheet No. 21.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H115, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) 4-MBS H101-H104 Top & Bot.
(2) 2-MBS H100-H103 Each Face
(3) 4-MBS H102-H105 Top
(4) Seal joint between vertical face of EB and WB bearing beams and diaphragms with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 31

END BENT NO. 1
DIAPHRAGM DETAILS 2 of 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	8

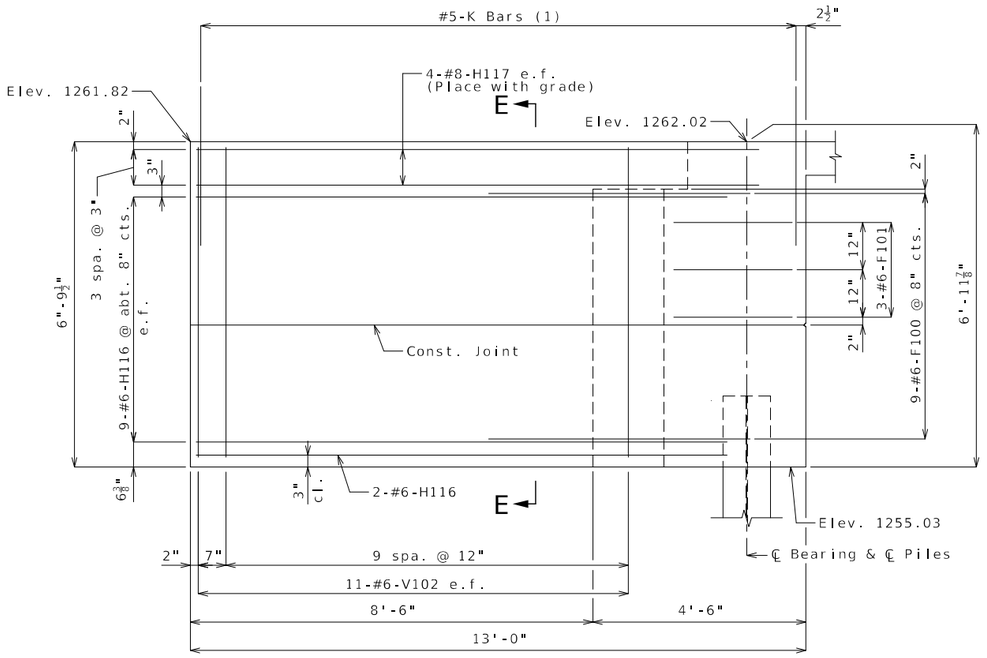
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9413

REV.	DESCRIPTION	DATE

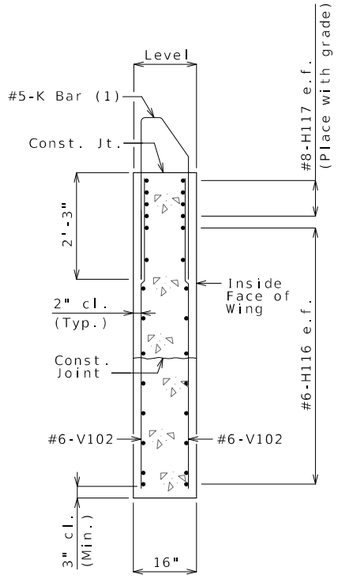
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

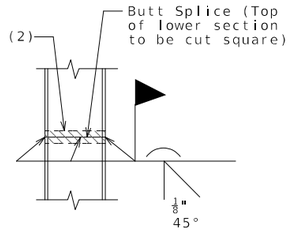
c:\bmcd_lib\pw_connect\trn\d0171046\B_A9413_008_JSU0076.dgn 5:13:20 PM 9/5/2024



ELEVATION D-D



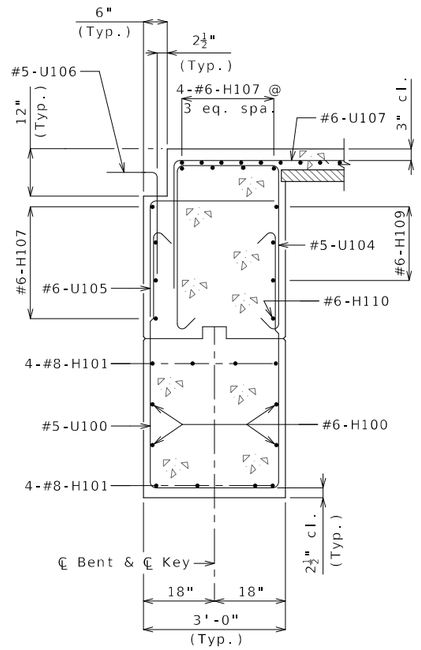
SECTION E-E



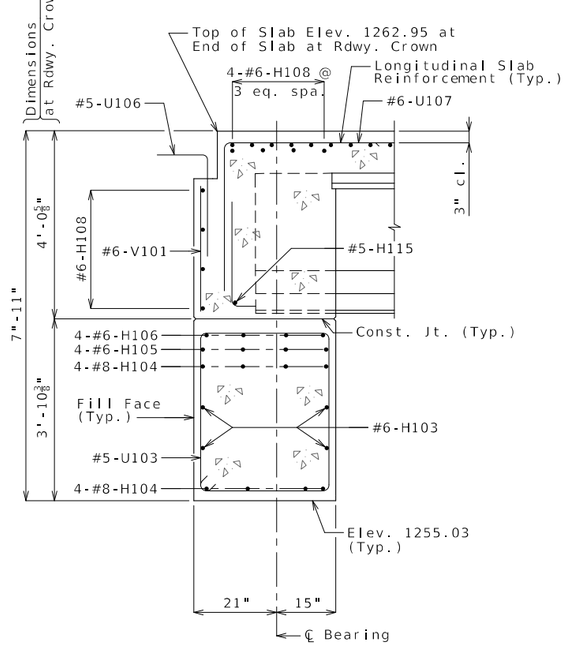
STEEL PILE SPLICE

(If required)

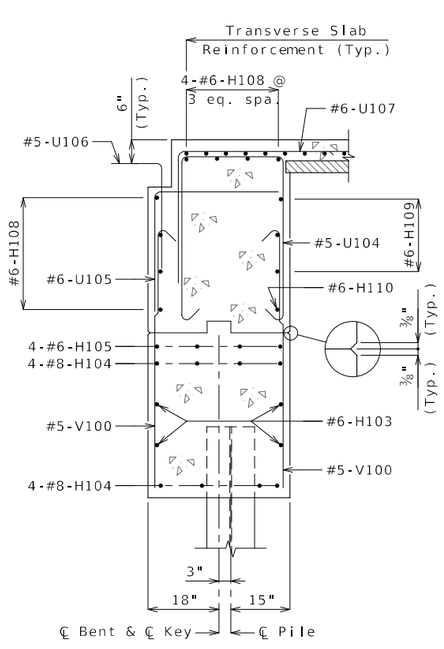
(2) Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

(1) For reinforcement of the Type D Barrier at End Bents, see Sheet No. 23.

e.f. denotes each face.

For details of bridge approach slab, see Sheet No. 24.

Work this sheet with Sheets No. 5 thru 8.

END BENT NO. 1
WING DETAILS & SECTIONS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9 of 31

5:13:33 PM 9/5/2024

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	9

COUNTY: GREENE

JOB NO.: JSU0076

CONTRACT ID.:

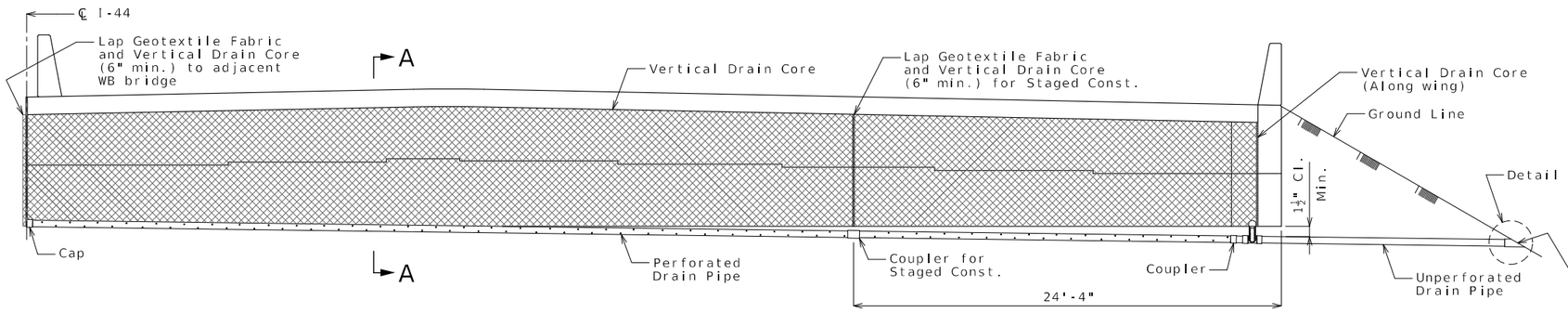
PROJECT NO.:

BRIDGE NO.: A9413

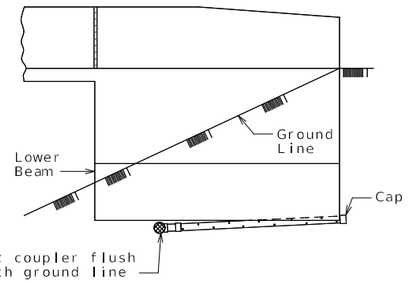
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

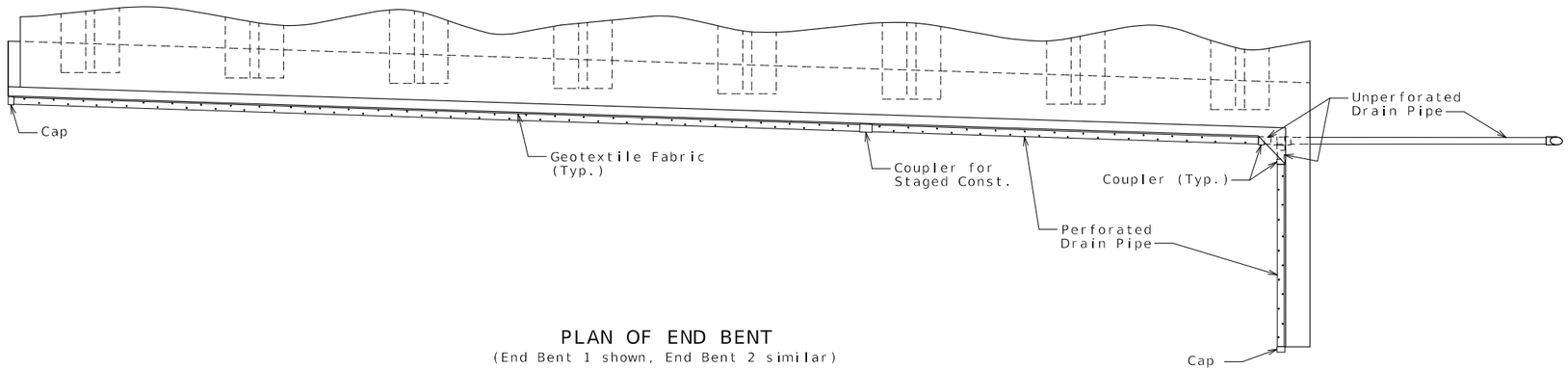
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



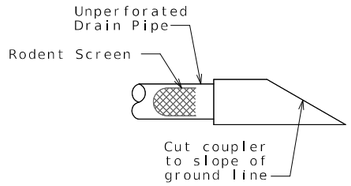
ELEVATION OF END BENT



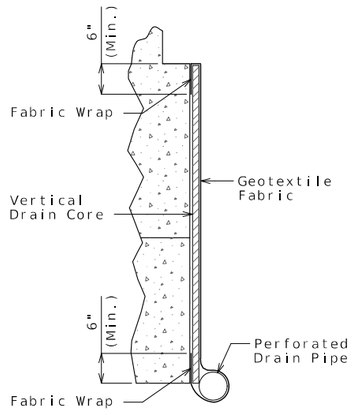
ELEVATION OF WING



PLAN OF END BENT
(End Bent 1 shown, End Bent 2 similar)



DETAIL A



PART SECTION A-A
(Section thru wing similar)

General Notes:

All drain pipe shall be sloped 1 to 2 percent.

Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.

Drain pipe shall be placed at fill face of end bent and inside face of wings. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.

Perforated pipe shall be placed at fill face side and inside face of wings at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.

VERTICAL DRAIN AT END BENTS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 9/5/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 10
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9413

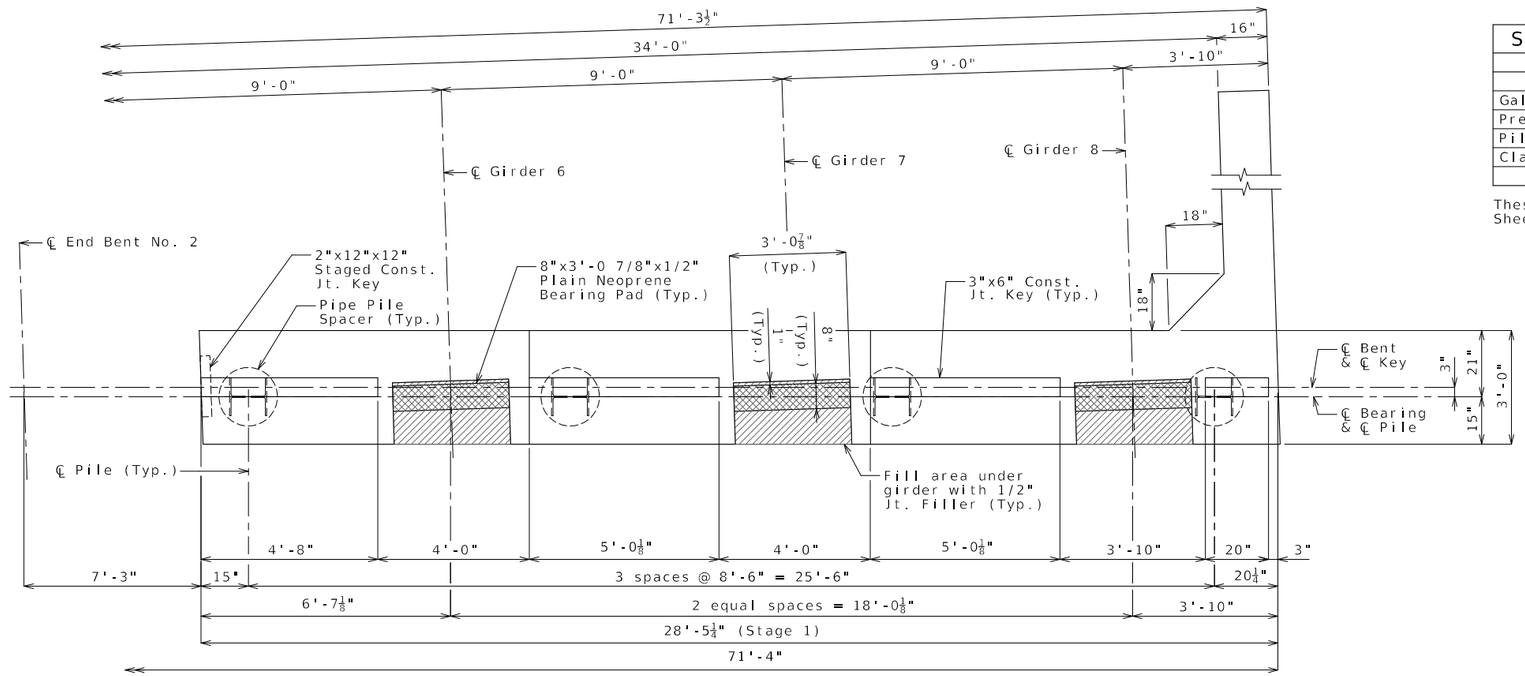
DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

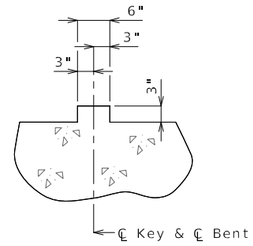
c:\bmcd_lib\pw_connect\trn\d0171046\B_A9413_010_JSU0076.dgn 5:13:46 PM 9/5/2024



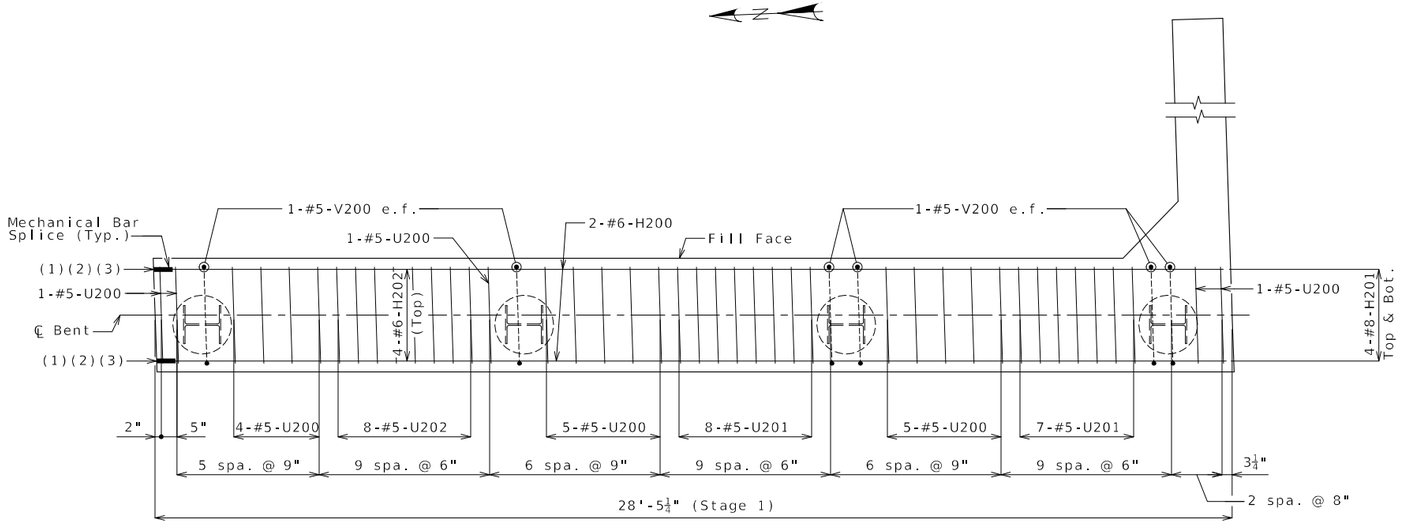
PART PLAN OF BEAM

Substructure Quantity Table for End Bent No. 2		
Item		Quantity
Galvanized Structural Steel Piles (12 in.)	linear foot	268
Pre-Bore for Piling	linear foot	99
Pile Point Reinforcement	each	9
Class B Concrete (Substructure)	cu. yard	29.2

These quantities are included in the Estimated Quantities table on Sheet No. 2.



SECTION THRU KEY



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 12 thru 15.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) 4-MBS H201-H204 Top & Bot.
(2) 2-MBS H200-H203 Each Face
(3) 4-MBS H202-H205 Top

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 11 of 31

END BENT NO. 2
BEAM DETAILS 1 OF 2

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

DATE PREPARED: 9/5/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 11
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9413

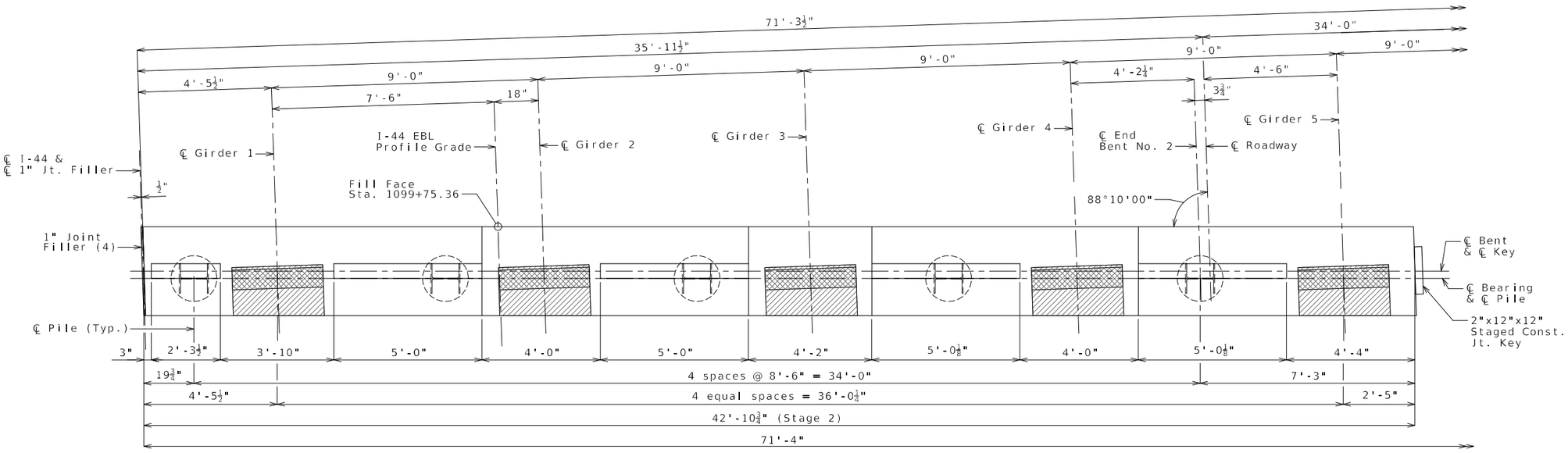
DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

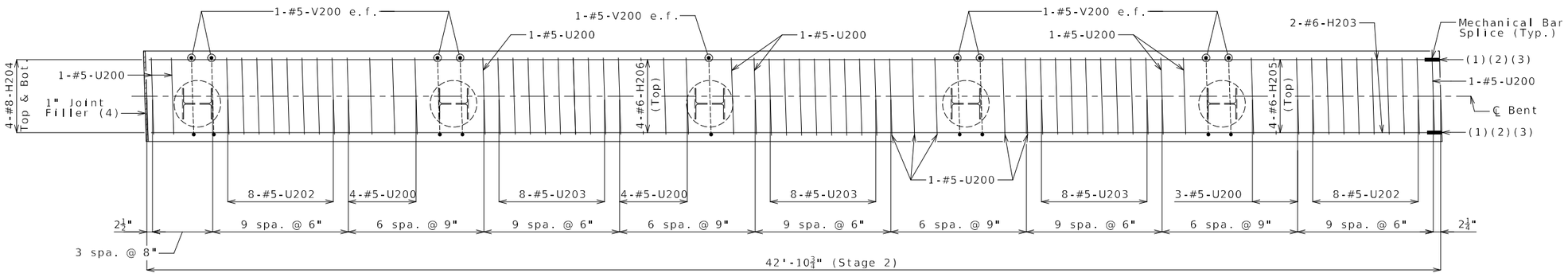
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171046\B_A9413_011_JSU0076.dgn 5:13:59 PM 9/5/2024



PART PLAN OF BEAM



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No.11 &13 thru15.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) 4-MBS H201-H204 Top & Bot.
(2) 2-MBS H200-H203 Each Face
(3) 4-MBS H202-H205 Top
(4) Seal joint between vertical face of EB and WB bearing beams with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 12 of 31

END BENT NO. 2
BEAM DETAILS 2 OF 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	12

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9413

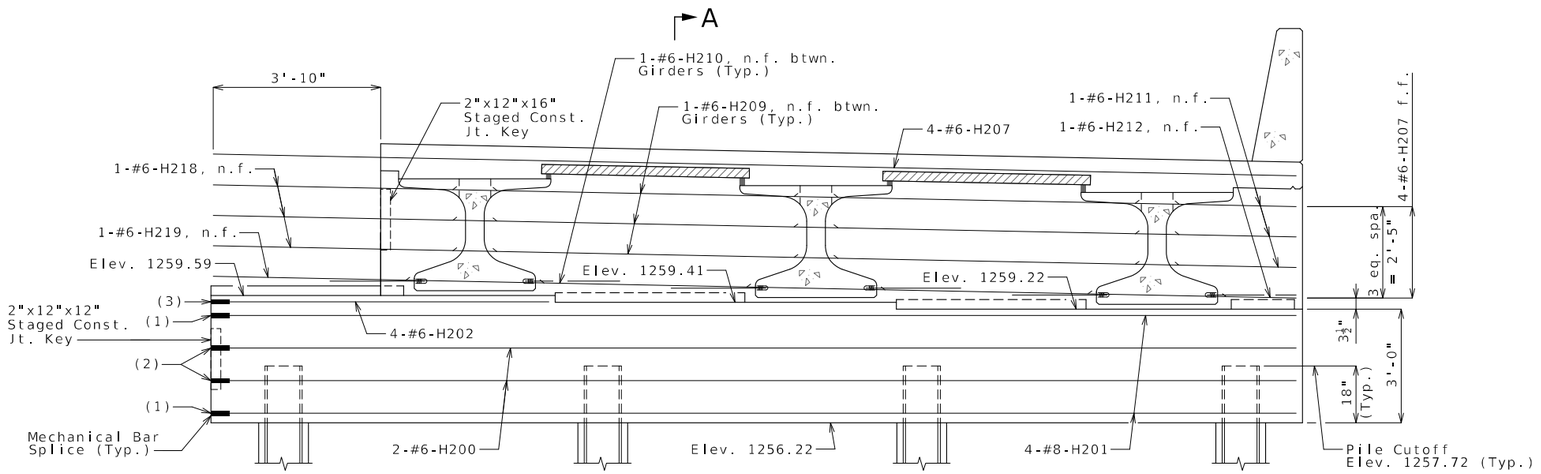
DESCRIPTION	DATE

REV.

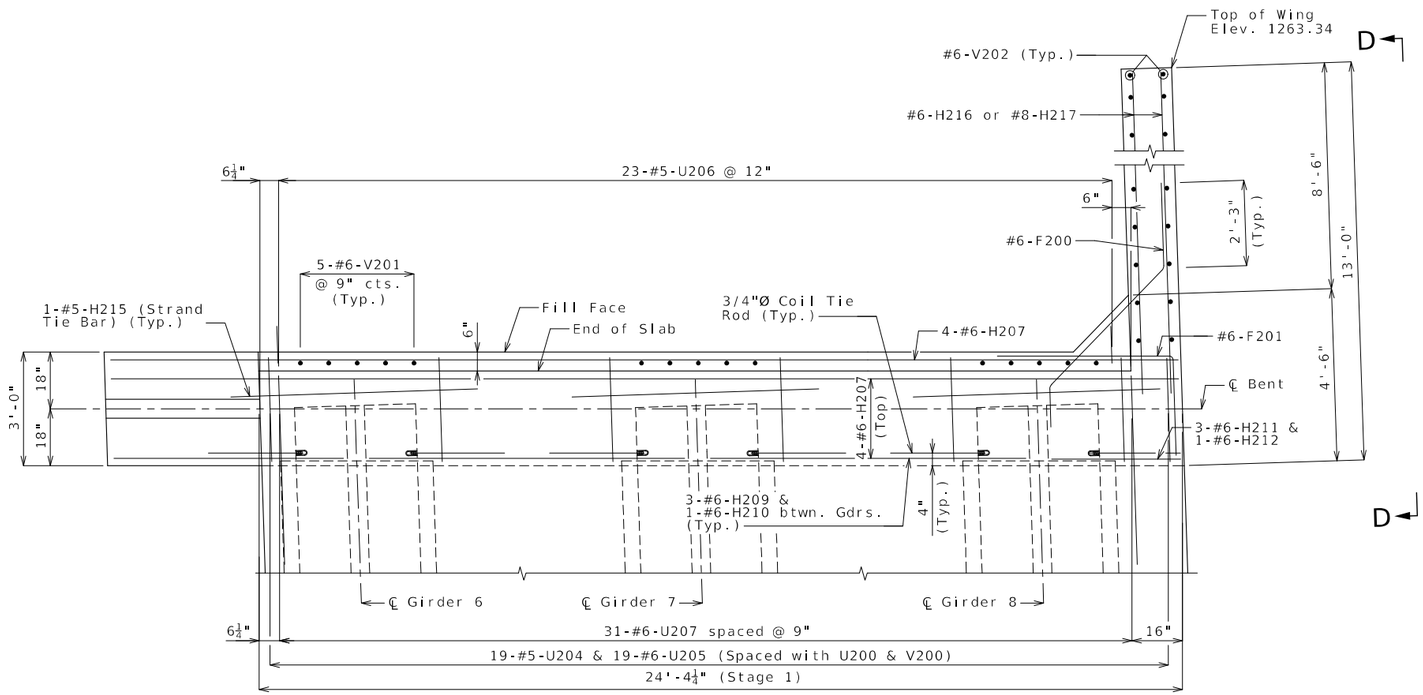
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171046\B_A9413_012_JSU0076.dgn 5:14:12 PM 9/5/2024



SECTION NEAR END BENT
(Looking Ahead Station)



PART PLAN
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 11 & 12 and 14 & 15.

For Section A-A see Sheet No. 15.

The #6-F200 shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H215, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) 4-MBS H201-H204 Top & Bot.
(2) 2-MBS H200-H203 Each Face
(3) 4-MBS H202-H205 Top

END BENT NO. 2
DIAPHRAGM DETAILS 1 of 2

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 13 of 31

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

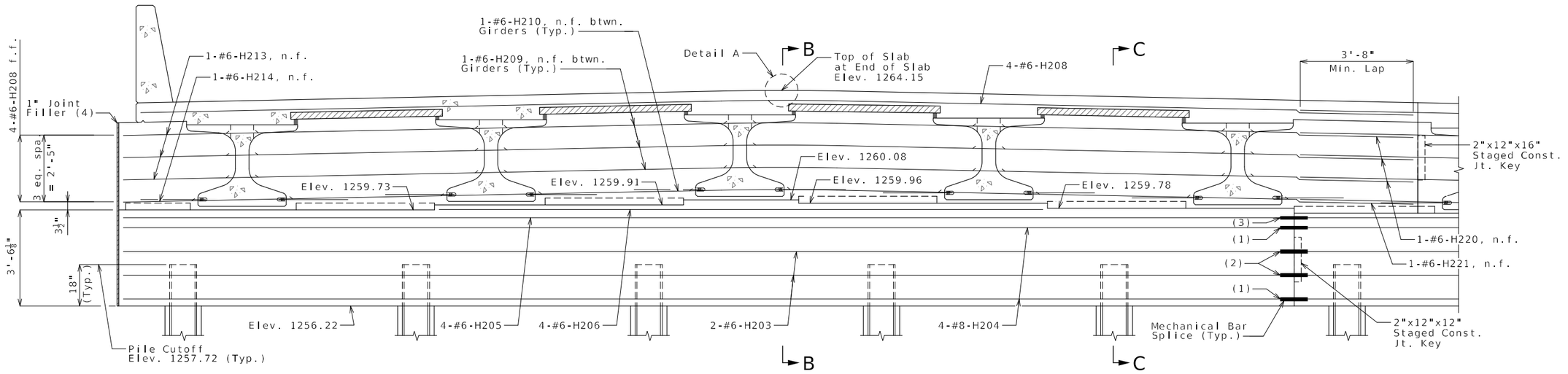
DATE PREPARED: 9/5/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 13
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9413

DESCRIPTION | DATE | REV.

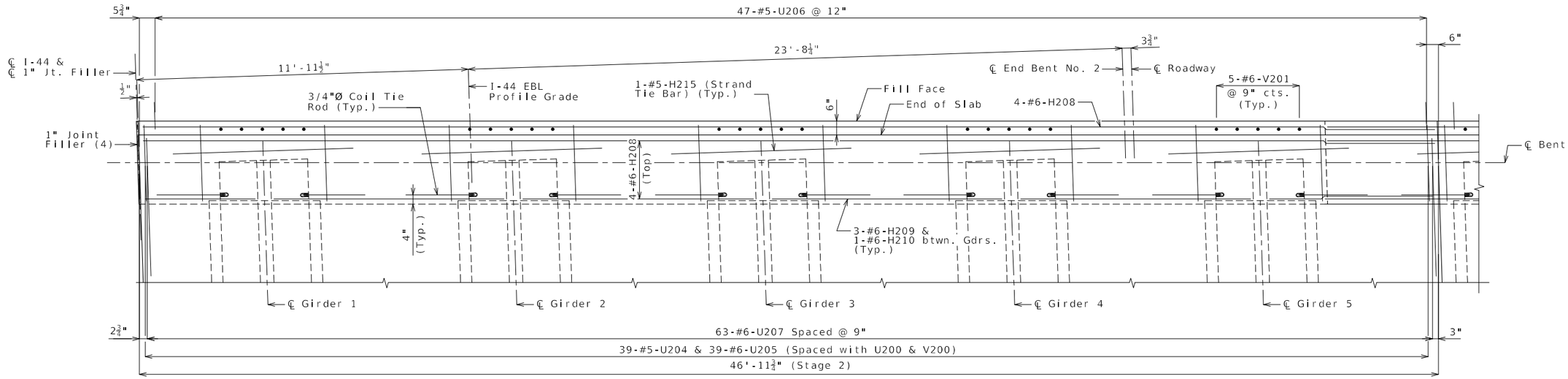
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171046\B_A9413_013_JSU0076.dgn 5:14:25 PM 9/5/2024



SECTION NEAR END BENT
(Looking Ahead Station)



PART PLAN
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No.11 thru 13 & 15.

For Section A-A see Sheet No.15.

For Detail A see Sheet No. 21.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H215, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No.10.

For details of bridge approach slab, see Sheet No.24.

f.f. denotes far face
n.f. denotes near face

(1) 4-MBS H201-H204 Top & Bot.
(2) 2-MBS H200-H203 Each Face
(3) 4-MBS H202-H205 Top
(4) Seal joint between vertical face of EB and WB bearing beams and diaphragms with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 14 of 31

END BENT NO. 2
DIAPHRAGM DETAILS 2 of 2

c:\bmcd_lib\pw_connect\trn\d0171046\B_A9413_014_JSU0076.dgn 5:14:38 PM 9/5/2024

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

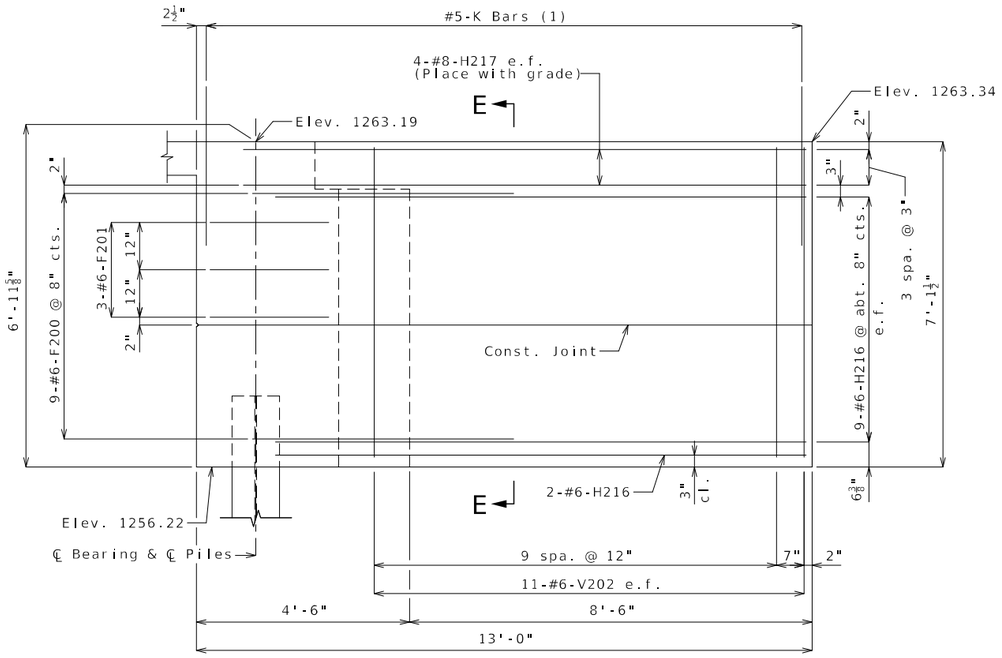
DATE PREPARED: 9/5/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 14
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9413

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

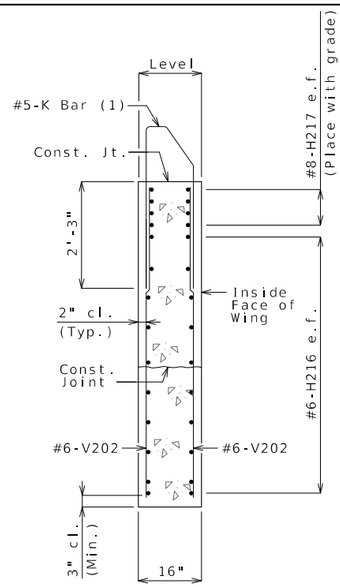
REV. | DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

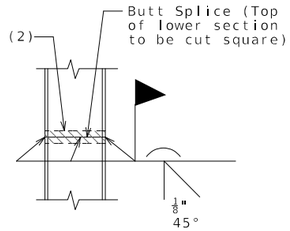
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



ELEVATION D-D



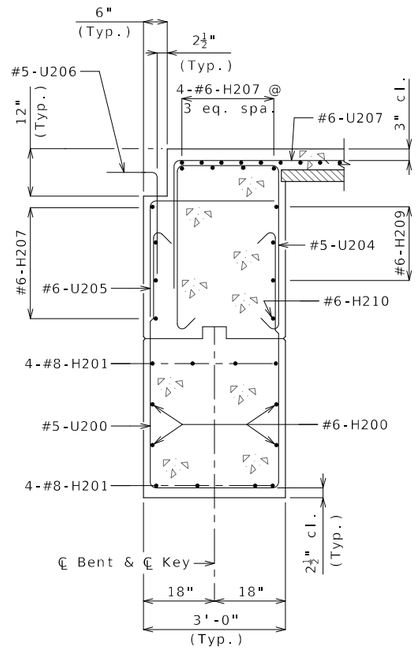
SECTION E-E



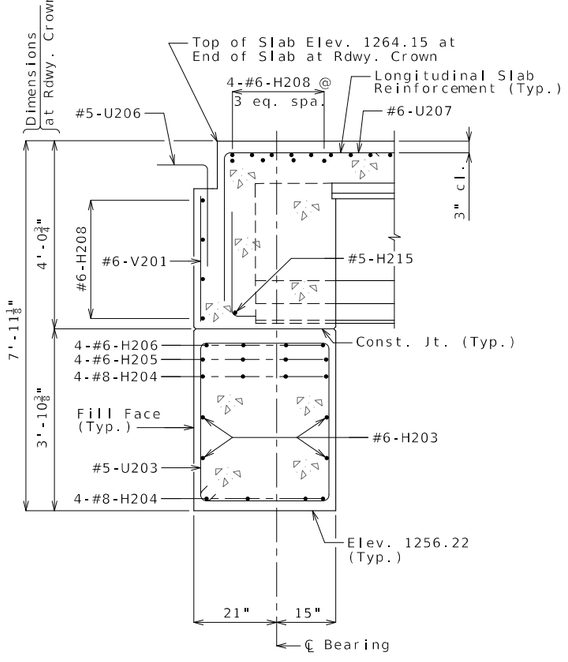
STEEL PILE SPLICE

(If required)

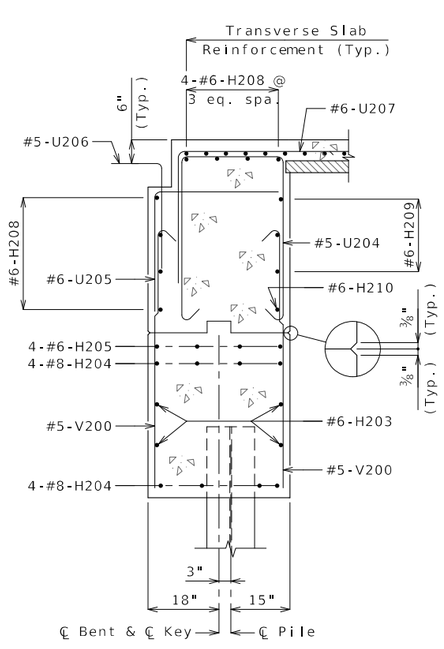
(2) Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

(1) For reinforcement of the Type D Barrier at End Bent, see Sheet No. 23.

e.f. denotes each face.

For details of bridge approach slab, see Sheet No. 24.

Work this sheet with Sheets No. 11 thru 14.

END BENT NO. 2
WING DETAILS & SECTIONS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 15 of 31

5:14:51 PM 9/5/2024

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

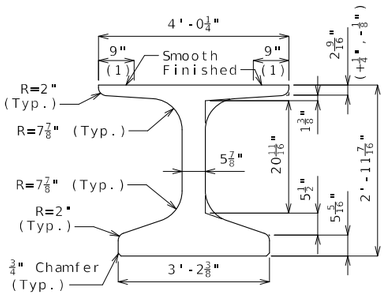
DATE PREPARED: 9/5/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 15
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9413

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

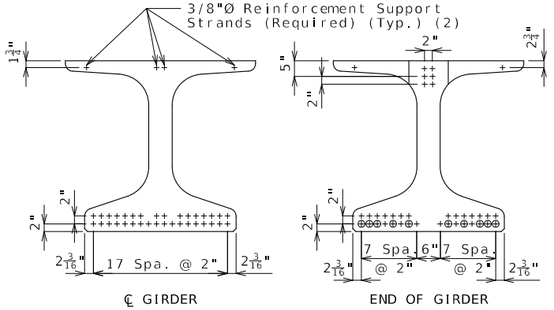
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.



DIMENSIONS
AT MID SPAN

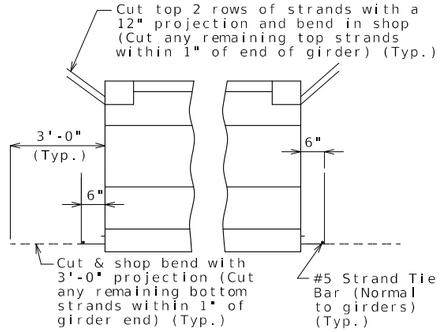
(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.



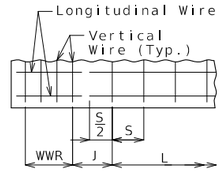
STRAND ARRANGEMENT

\+ Indicates prestressing strand.

○ Indicates cut & shop bend with 3'-0" projection.



STRANDS AT GIRDER ENDS



WELDED WIRE PLACEMENT

S = Vertical wire spacing

L = Length of WWR mats

J = Distance between WWR mats

Bill of Reinforcing Steel

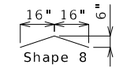
Bars Each Girder

No.	Size/Mark		Length	Shape
102	3	G1	2'-10"	8
2	4	G3	3'-10¼"	20

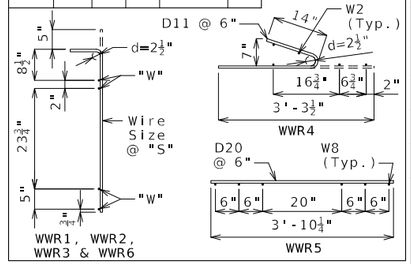
Welded Wire Each Girder

Mark	Size	S	W	L	J
WWR1	D31	4"	W12	6'-4"	4"
WWR2	D31	12"	W12	24'-0"	12"
WWR3	D31	2'-0"	W12	6'-0"	12"
WWR6	D31	2"	W12	16"	3½"

Bending Diagrams



Shape 20



All dimensions are out to out.

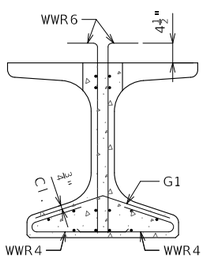
Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Actual bar lengths are measured along centerline of bar to the nearest inch.

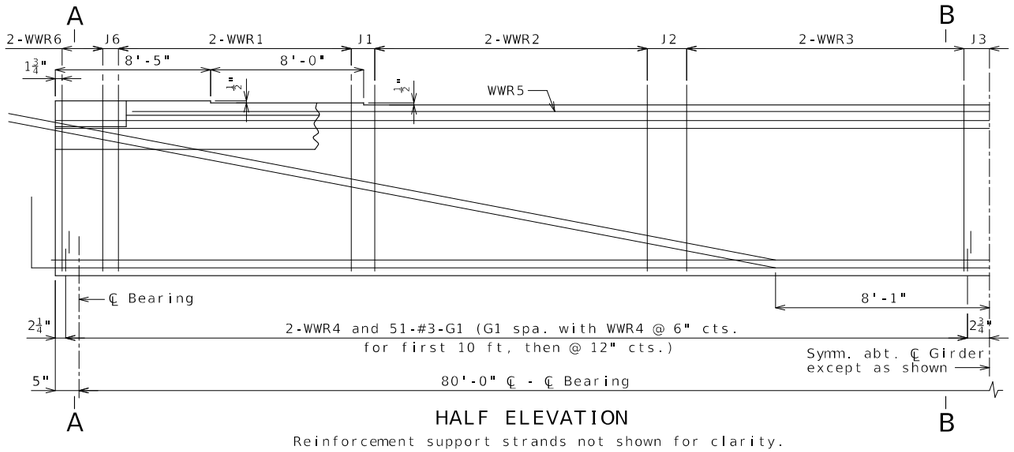
Minimum clearance to reinforcing shall be 1", unless otherwise shown.

All bar reinforcement shall be Grade 60.

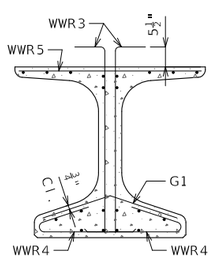
WWR shall not be epoxy coated.



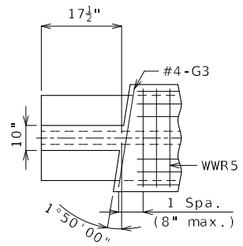
SECTION A-A
Strands not shown for clarity.



HALF ELEVATION
Reinforcement support strands not shown for clarity.



SECTION B-B
Strands not shown for clarity.



TOP FLANGE BLOCKOUT

General Notes:

Concrete for prestressed beams shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 34 strands, 0.6"Ø Grade 270, with an initial prestress force of 1494 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

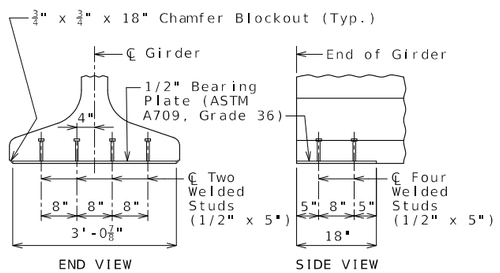
Exterior and interior girders are the same except for coil ties and application of bond breaker.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. 19.

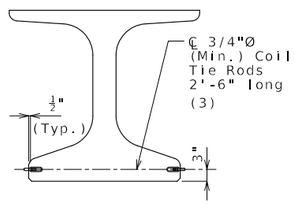
For location of coil ties at integral bents, see Sheets No. 7, 8, 13 and 14.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.



END VIEW SIDE VIEW

BEARING PLATE



COIL TIES

(3) 2'-3" at exterior face of Girder 8 at end bents

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
STATE OF MISSOURI
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED	
9/5/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	16
COUNTY	
GREENE	
JOB NO.	
JSU0076	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
A9413	

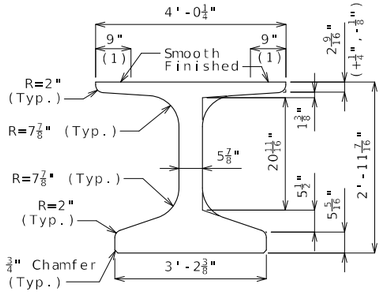
DESCRIPTION | DATE

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

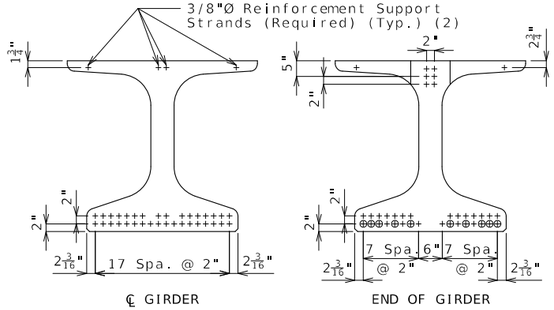
NU-GIRDERS - SPAN (1-2)

(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.



DIMENSIONS
AT MID-SPAN

(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.

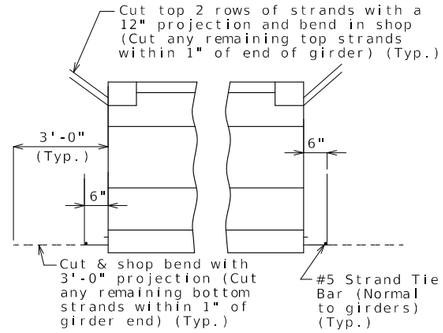


℄ GIRDER END OF GIRDER

STRAND ARRANGEMENT

\+ Indicates prestressing strand.

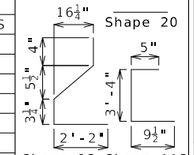
o Indicates cut & shop bend with 3'-0" projection.



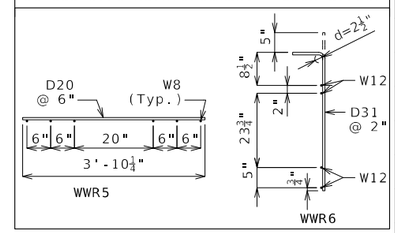
STRANDS AT GIRDER ENDS

Bill of Reinforcing Steel - Each Girder			
No.	Size/ Mark	Length	Shape
180	5 B1	4'-4"	11S
200	4 D1	4'-0"	9S
2	4 G3	3'-10¼"	20

Bending Diagrams



Welded Wire Reinforcement - Each Girder



All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

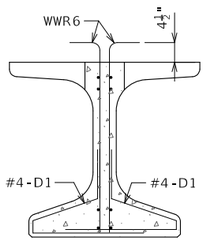
Actual bar lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be one inch.

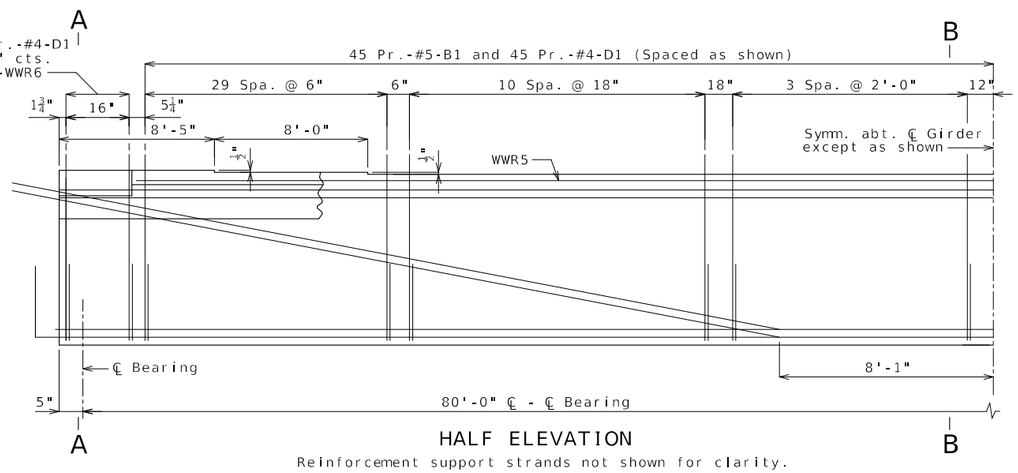
All bar reinforcement shall be Grade 60.

The two D1 bars may be furnished as one bar at the fabricator's option.

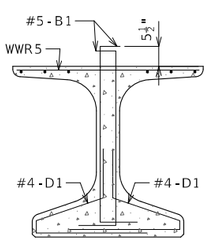
All B1 bars shall be epoxy coated.



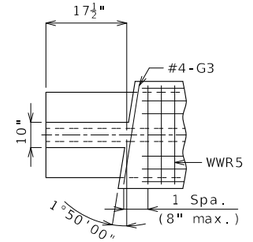
SECTION A-A
Strands not shown for clarity.



HALF ELEVATION
Reinforcement support strands not shown for clarity.



SECTION B-B
Strands not shown for clarity.



TOP FLANGE BLOCKOUT

General Notes:

Concrete for prestressed girders shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 34 strands, 0.6"Ø Grade 270, with an initial prestress force of 1494 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

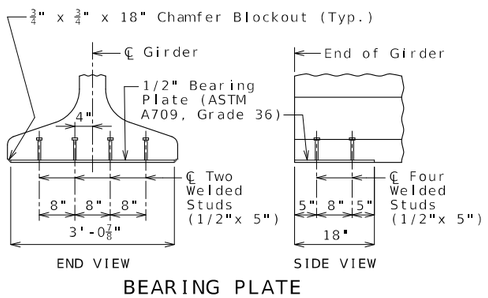
Exterior and interior girders are the same except for coil ties and application of bond breaker.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

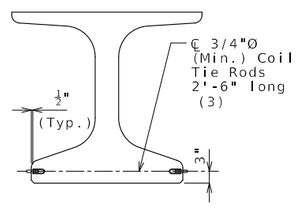
For Girder Camber Diagram, see Sheet No.19.

For location of coil ties at integral bents, see Sheets No. 7, 8, 13 and 14.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.



BEARING PLATE



COIL TIES

(3) 2'-3" at exterior face of Girder 8 at end bents

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	17

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9413

DESCRIPTION | DATE

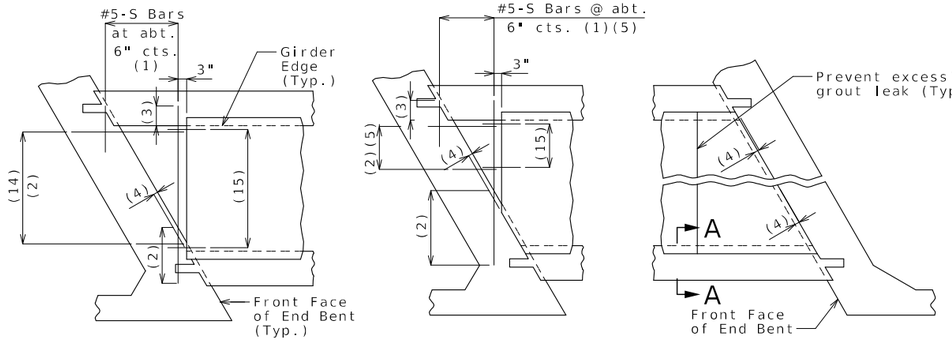
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

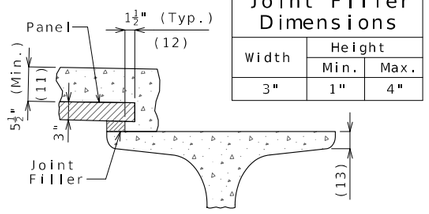
NU-GIRDERS (ALTERNATE REINFORCEMENT) - SPAN (1-2)



SQUARED END PANELS OR TRUNCATED END PANELS

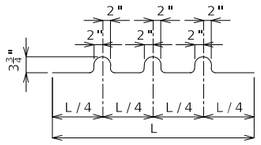
SKEWED END PANELS

PLAN SHOWING PANEL PLACEMENT



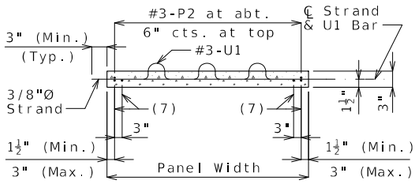
Joint Filler Dimensions		
Width	Height	
	Min.	Max.
3"	1"	4"

SECTION A-A



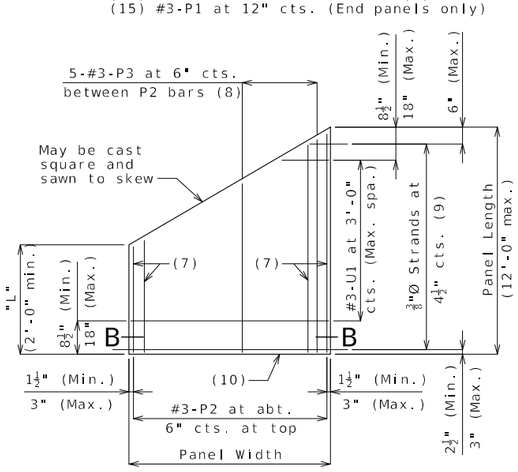
BENDING DIAGRAM FOR U1 BAR

U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars.

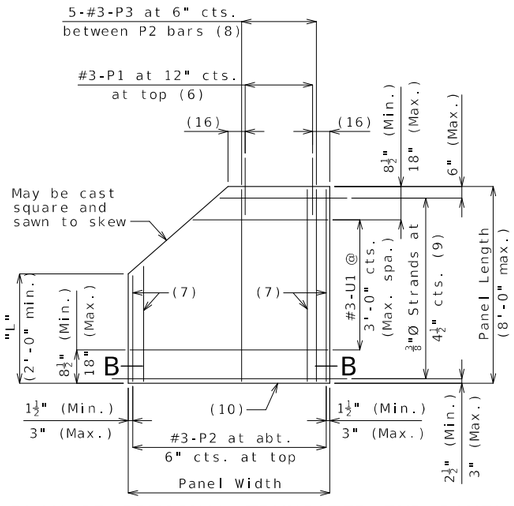


SECTION B-B

(14) #5-S Bars at abt. 9" cts. (1)
(15) #3-P1 at 12" cts. (End panels only)

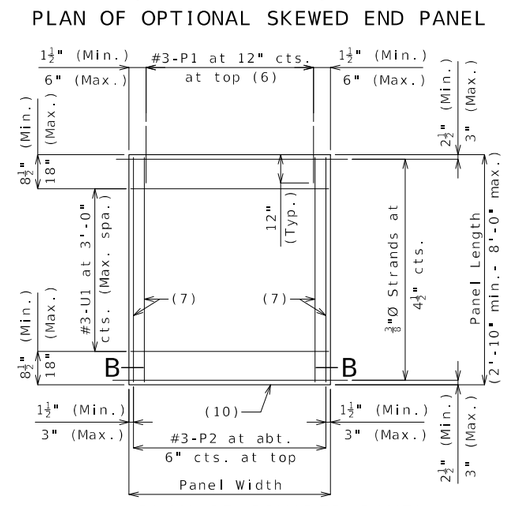


PLAN OF OPTIONAL SKEWED END PANEL



PLAN OF OPTIONAL TRUNCATED END PANEL

(16) 3" (Min.), 6" (Max.)



PLAN OF SQUARED PANEL

Reference Notes:

Plan of Panel Placement:
(1) S-bars shown are bottom steel in slab between panels and used with squared and truncated end panels only.

(2) Extend S-bars 18 inches beyond the front face of end bents for squared and truncated end panels only.

(3) Extend S-bars 9 inches beyond edge of girder (Typ.).

(4) End panels shall be dimensioned 1/2" min. to 1 1/2" max. from the inside face of diaphragm.

(5) For truncated end panels, use a min. of #5-S bars at 6" crossings in openings, or min. 4x4-W7xW7.

Plans of Panels:
(6) For end panels only, P1 bars shall be 2'-0" in length and embedded 12". P1 bars will not be required for panels at squared integral end bents.

(7) #3-P2 bars near edge of panel at bottom (under strands).

(8) Use #3-P3 bars if panel is skewed 45° or greater.

(9) Any strand 2'-0" or shorter shall have a #4 reinforcing bar on each side of it, centered between strands. Strands 2'-0" or shorter may then be debonded at the fabricator's option.

(10) Optional 1/2" x 45° Chamfer one or both sides at bottom.

Section A-A:
(11) Slab thickness over prestressed panels varies due to girder camber. In order to maintain minimum slab thickness, it may be necessary to raise the grade uniformly throughout the structure. No payment will be made for additional labor or materials required for necessary grade adjustment.

(12) Contractor shall ensure proper consolidation under and between panels.

(13) At the contractor's option, the variation in slab thickness over prestressed panels may be eliminated or reduced by increasing and varying the girder top flange thickness. Dimensions shall be shown on the shop drawings.

General Notes:

Prestressed Panels:
Concrete for prestressed panels shall be Class A-1 with f'c = 6,000 psi, f'ci = 4,000 psi.

The top surface of all panels shall receive a scored finish with a depth of scoring of 1/8" perpendicular to the prestressing strands in the panels.

Prestressing tendons shall be high-tensile strength, uncoated, seven-wire, low-relaxation strands for prestressed concrete in accordance with AASHTO M 203 Grade 270, with nominal diameter of strand = 3/8" and nominal area = 0.085 sq.in. and minimum ultimate strength = 22.95 kips (270 ksi). Larger strands may be used with the same spacing and initial tension.

Initial prestressing force = 17.2 kips/strand.

The method and sequence of releasing the strands shall be shown on the shop drawings.

Suitable anchorage devices for lifting panels may be cast in panels, provided the devices are shown on the shop drawings and approved by the engineer. Panel lengths shall be determined by the contractor and shown on the shop drawings.

When squared end panels are used at skewed bents, the skewed portion shall be cast full depth. No separate payment will be made for additional concrete and reinforcing required.

Support from diaphragm forms is required under the optional skewed end until cast-in-place concrete has reached 3,000 psi compressive strength.

Prestressed panels shall be brought to saturated surface-dry (SSD) condition just prior to the deck pour. There shall be no free standing water on the panels or in the area to be cast.

The prestressed panel quantities are not included in the table of estimated quantities for the slab.

Reinforcing Steel:
All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

If U1 bars interfere with placement of slab steel, U1 loops may be bent over, as necessary, to clear slab steel.

Deformed welded wire reinforcement (WWR) providing a minimum area of reinforcing perpendicular to strands of 0.22 sq in./ft, with spacing parallel to strands sufficient to ensure proper handling, may be used in lieu of the #3-P2 bars shown. Wire diameter shall not be larger than 0.375 inch. The above alternative reinforcement criteria may be used in lieu of the #3-P3 bars, when required, and placed over a width not less than 2 feet.

The following reinforcing steel shall be tied securely to the strands with the following maximum spacing in each direction:
#3-P2 bars at 16 inches.
WWR at 24 inches.

The #3-U1 bars shall be tied securely to #3-P2 bars, to WWR or to strands (when placed between P1 bars) at about 3-foot centers.

Minimum reinforcement steel length shall be 2'-0".

All reinforcement other than prestressing strands shall be epoxy coated.

Precast panels may be in contact with stirrup reinforcing in diaphragms.

S-bars are not listed in the bill of reinforcing.

Cost of S-bars will be considered completely covered by the contract unit price for the slab.

Joint Filler:
Joint filler shall be preformed fiber expansion joint material in accordance with Sec 1057 or expanded or extruded polystyrene bedding material in accordance with Sec 1073.

Use Slab Haunching Diagram on Sheet No. 19 for determining thickness of joint filler within the limits noted in the table of Joint Filler Dimensions.

Thicker material may be used on one or both sides of the girder to reduce cast-in-place concrete thickness to within tolerances.

The same thickness of preformed fiber expansion joint material shall be used under any one edge of any panel except at locations where top flange thickness may be stepped. The maximum change in thickness between adjacent panels shall be 1/2 inch. The polystyrene bedding material may be cut with a transition to match haunch height above top of flange.

Joint filler shall be glued to the girder. When thickness exceeds 1 1/2 inches, the joint filler shall be glued top and bottom. The glue used shall be the type recommended by the joint filler manufacturer.

Edges of panels shall be uniformly seated on the joint filler before slab reinforcement is placed.

PRESTRESSED PANELS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	18

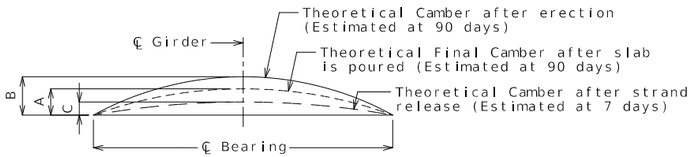
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9413

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



Girder	Span (1-2)		
	A	B	C
Exterior	3"	4⅝"	2⅝"
Interior	2⅞"		

GIRDER CAMBER DIAGRAM

Conversion Factors for Girder Camber (Estimated at 90 days):

0.1 pt. = 0.314 x 0.5 pt.
0.2 pt. = 0.593 x 0.5 pt.
0.3 pt. = 0.813 x 0.5 pt.
0.4 pt. = 0.952 x 0.5 pt.

Theoretical Bottom of Slab Elevations at Centerline of Girder (Prior to forming for slab) (Estimated at 90 days)

Girder Number	Span (1-2) (80'-0" ℄ Brg. - ℄ Brg.)										
	℄ Brg.	.10	.20	.30	.40	.50	.60	.70	.80	.90	℄ Brg.
1	1261.90	1262.07	1262.23	1262.38	1262.52	1262.65	1262.76	1262.85	1262.93	1263.00	1263.07
2	1262.08	1262.25	1262.41	1262.57	1262.71	1262.83	1262.94	1263.03	1263.11	1263.18	1263.24
3	1262.25	1262.42	1262.59	1262.74	1262.88	1263.01	1263.12	1263.21	1263.29	1263.36	1263.42
4	1262.13	1262.30	1262.46	1262.62	1262.76	1262.88	1262.99	1263.09	1263.17	1263.24	1263.30
5	1261.94	1262.12	1262.28	1262.43	1262.57	1262.70	1262.81	1262.90	1262.98	1263.05	1263.11
6	1261.76	1261.93	1262.10	1262.25	1262.39	1262.52	1262.62	1262.72	1262.80	1262.87	1262.93
7	1261.57	1261.75	1261.91	1262.07	1262.21	1262.33	1262.44	1262.53	1262.61	1262.68	1262.75
8	1261.39	1261.56	1261.72	1261.87	1262.01	1262.14	1262.25	1262.34	1262.43	1262.50	1262.56

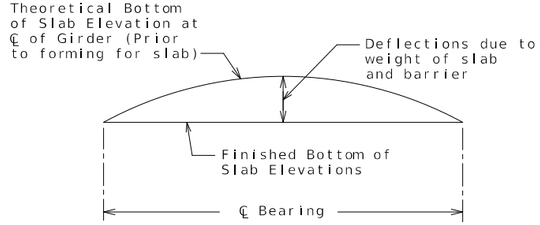
Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoretical dead load deflections due to weight of slab (including precast panel) and barrier.

THEORETICAL SLAB HAUNCHING DIAGRAM (ESTIMATED AT 90 DAYS)

If girder camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an adjustment of the slab haunches, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Concrete in the slab haunches is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Theoretical slab haunches are measured at ℄ Girder.



TYPICAL SLAB ELEVATIONS DIAGRAM

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

GIRDER CAMBER AND SLAB HAUNCHING

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

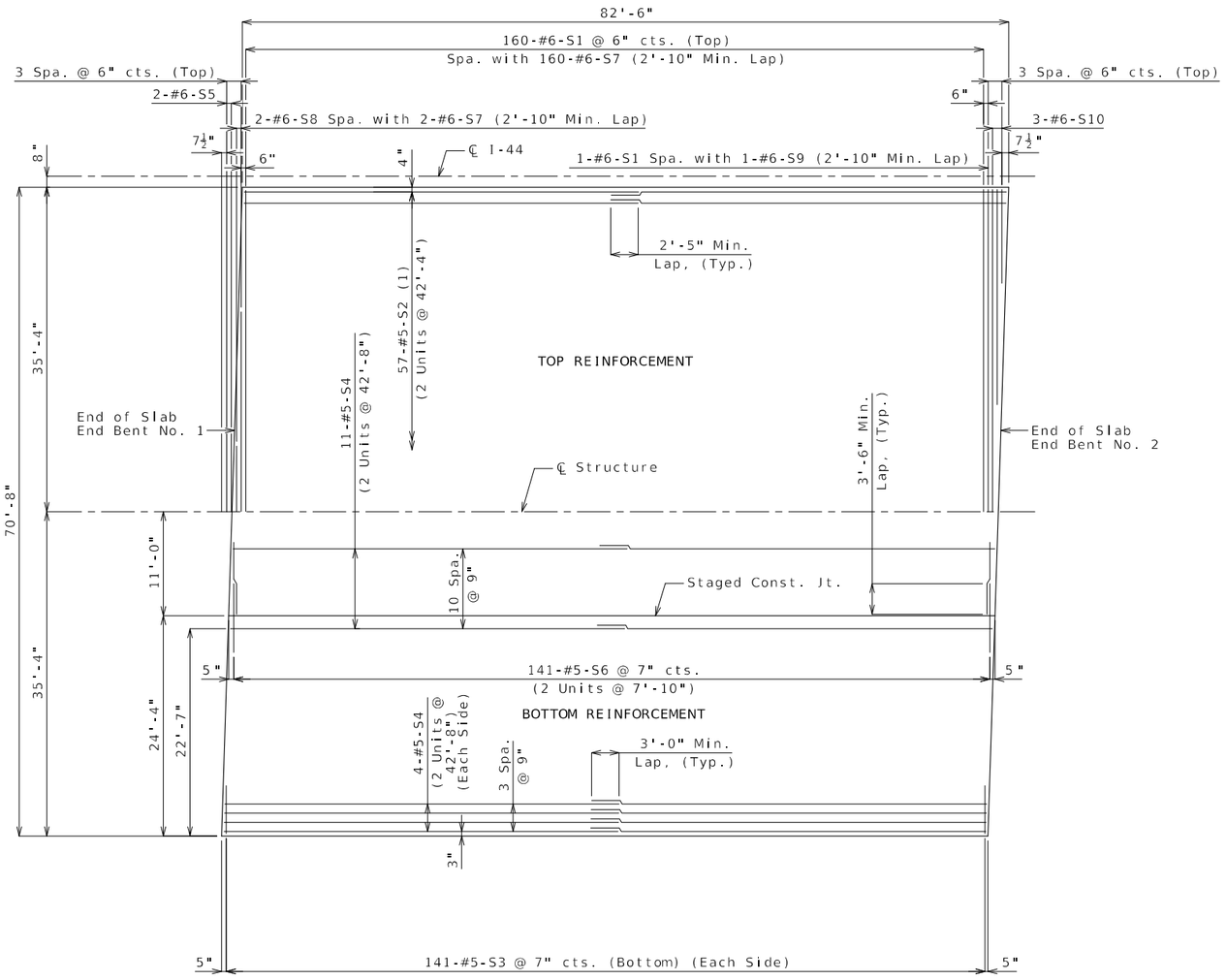
DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 19
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9413

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE

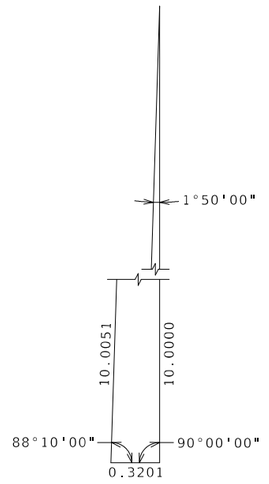
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617



SPAN (1-2)

PLAN OF SLAB REINFORCEMENT



NOTES:

Longitudinal slab dimensions shown are horizontal.

For Theoretical Slab Haunching Diagram and Theoretical Bottom of Slab Elevations, see Sheet No. 19.

For Details of Precast Prestressed Panels, see Sheet No. 18.

For Details and Reinforcement of Safety Barrier Curb not shown, see Sheets No. 22 & 23.

(1) For spacing of longitudinal bars not shown, see Slab Section & Details on Sheet No. 21.

SLAB PLAN

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	20

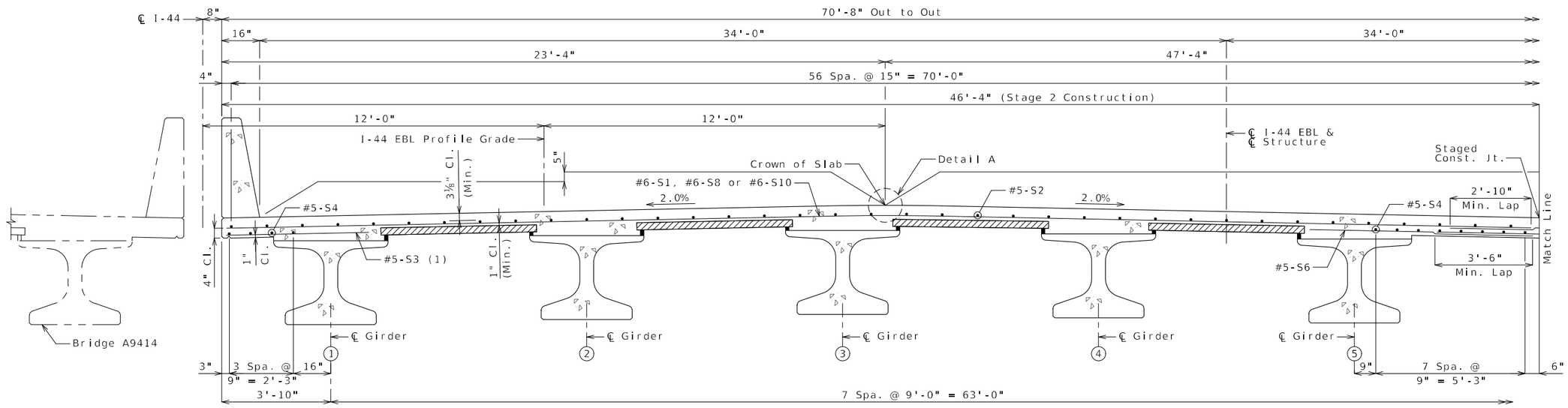
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9413

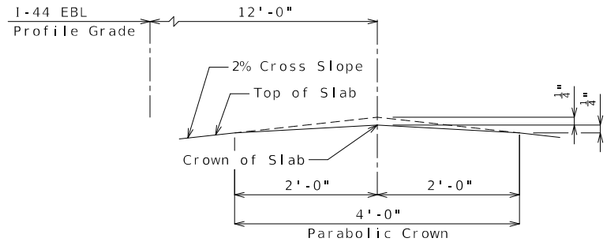
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

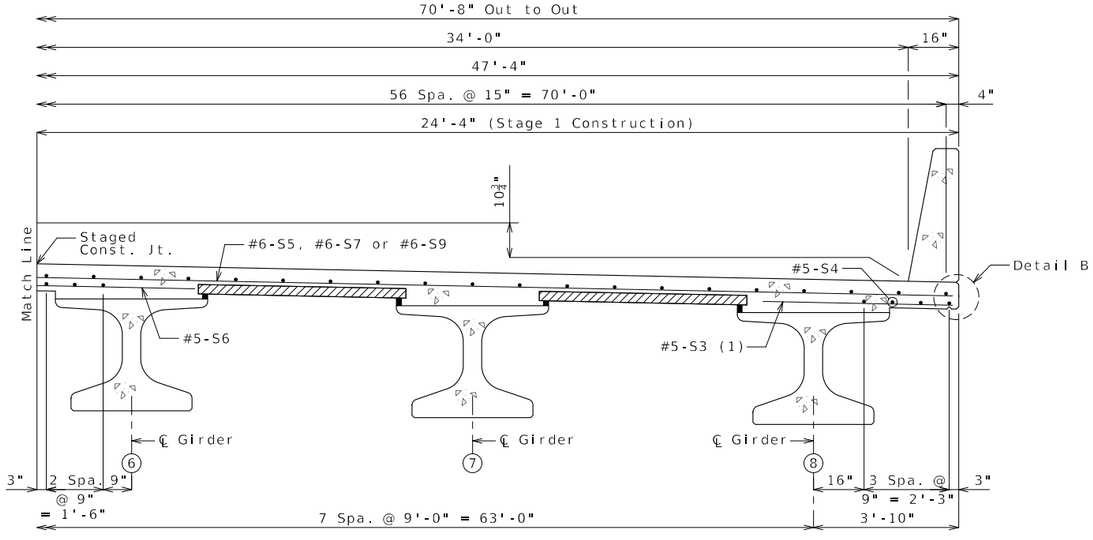
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

REV.



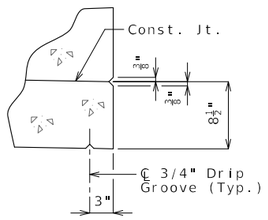


DETAIL A

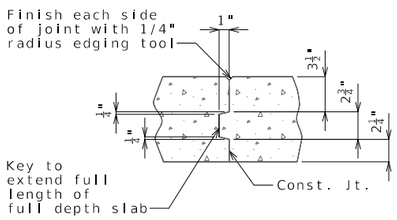


SECTION THRU SLAB

(1) Alternate bar shape available, see Sheet No. 22.



DETAIL B



FULL DEPTH SLAB

SLAB CONSTRUCTION JOINT

NOTES:

For details of precast prestressed panels, see Sheet No. 18.

For reinforcement of barrier not shown, see Sheet No. 22.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram and Theoretical Slab Haunching Diagram, see Sheet No. 19.

For Plan of Slab Showing Reinforcement, see Sheet No. 20.

Bridge will be cast in a single pour.

TYPICAL SLAB SECTION

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	21

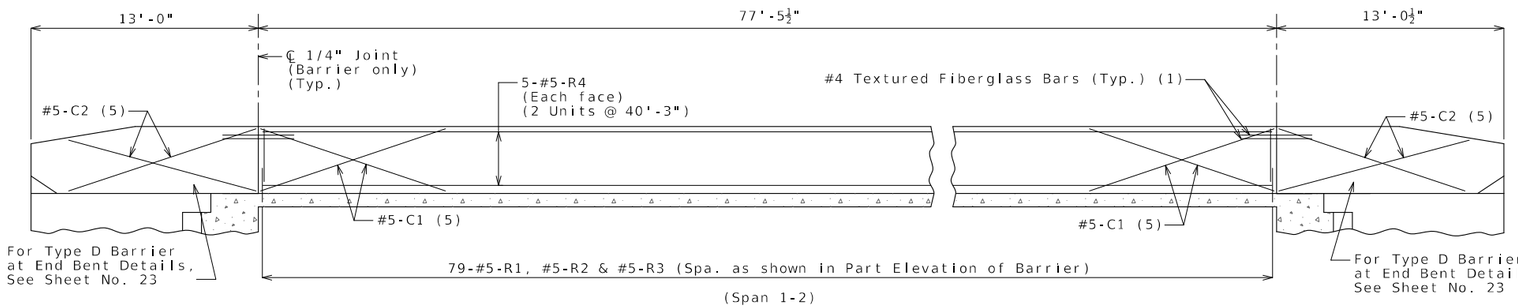
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9413

DESCRIPTION | DATE

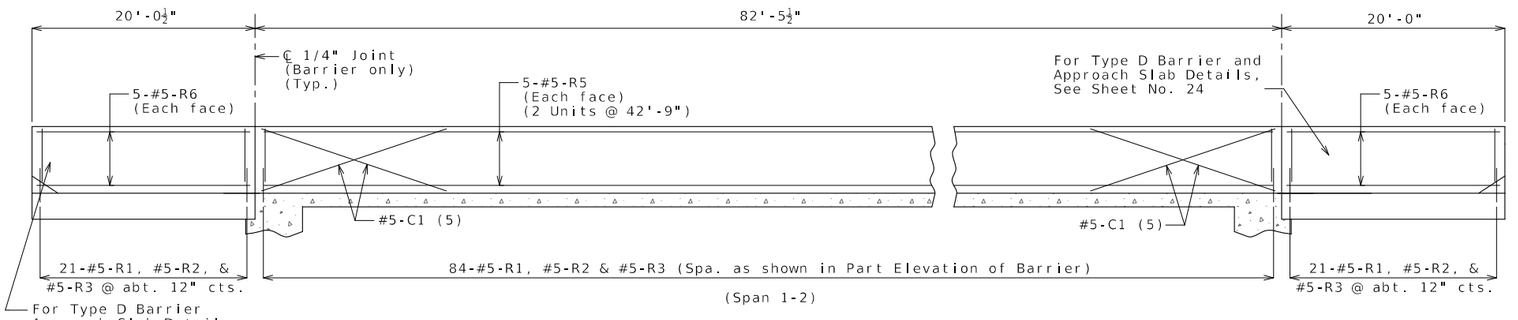
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

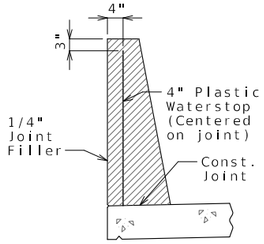
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



ELEVATION OF BARRIER - RIGHT BARRIER



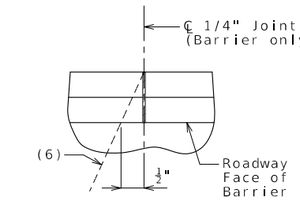
ELEVATION OF BARRIER - LEFT BARRIER



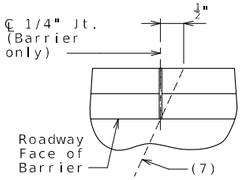
WATERSTOP DETAIL

Plastic waterstop shall be placed in all formed joints, except structures with superelevation, use on lower joints only.

Cost of plastic waterstop, complete in place, will be considered completely covered by the contract unit price for Type D Barrier.



(6) Front Face of End Bent No. 2 for Right Barrier
End of Slab at End Bent No. 1 for Left Barrier



(7) Front Face of End Bent No. 1 for Right Barrier
End of Slab at End Bent No. 2 for Left Barrier

PART PLAN SHOWING JOINT LOCATION

General Notes:

Longitudinal dimensions are horizontal.

Conventional forming or slip forming may be used. Saw cut joints may be used with conventional forming.

Top of barrier shall be built parallel to grade and barrier joints (except at end bents) normal to grade.

All exposed edges of barrier shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type D Barrier per linear foot.

Concrete in barrier shall be Class B-1.

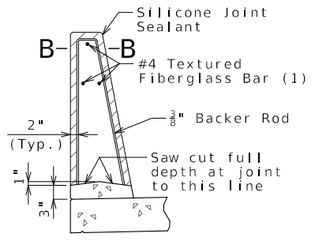
Measurement of barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of wing to end of wing for Right Barrier and from end of approach slab to end of approach slab for Left Barrier.

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

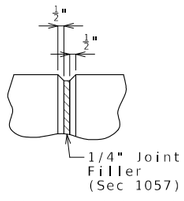
Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

For slip-formed option, both sides of barrier shall have a vertically broomed finish and the top shall have a transversely broomed finish.

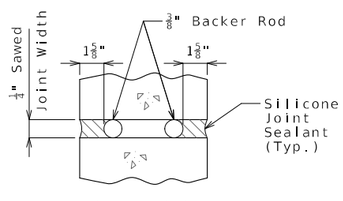
Plastic waterstop shall not be used with saw cut joints.



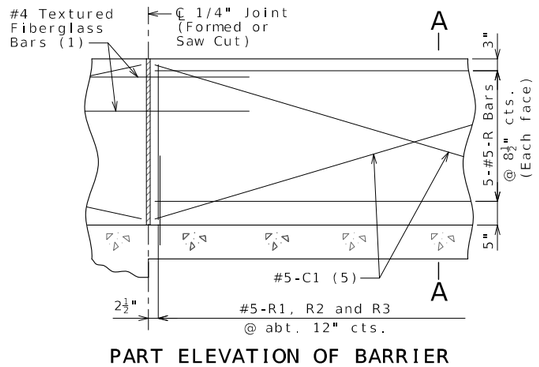
SECTION THRU SAW CUT JOINT



PART ELEVATION AT FORMED JOINT

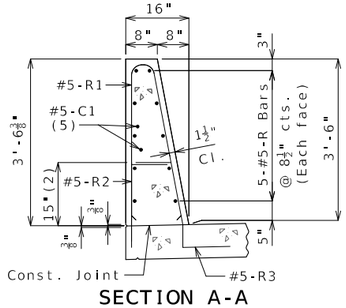


SECTION B-B



PART ELEVATION OF BARRIER

(1) Four feet long, centered on joint, slip-formed option only

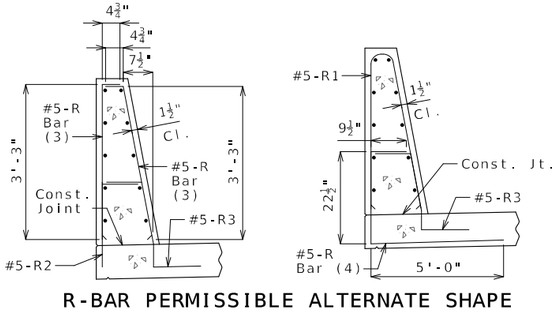


SECTION A-A

Use a minimum lap of 3'-1" for #5 horizontal barrier bars.

The cross-sectional area above the slab is 3.52 square feet.

(2) To top of bar



R-BAR PERMISSIBLE ALTERNATE SHAPE

(3) The R1 bar may be separated into two bars as shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)

(4) The R2 bar and #5 bottom transverse slab bar in cantilever (prestressed panels only) combination may be furnished as one bar as shown, at the contractor's option.

(5) Slip-formed option only.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

TYPE D BARRIER

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

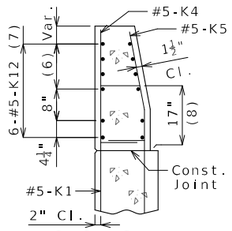
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	22

COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9413

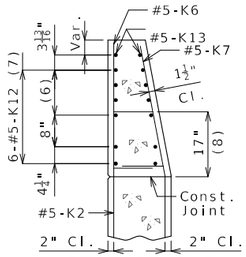
DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

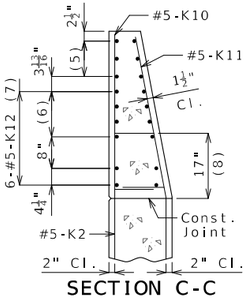
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



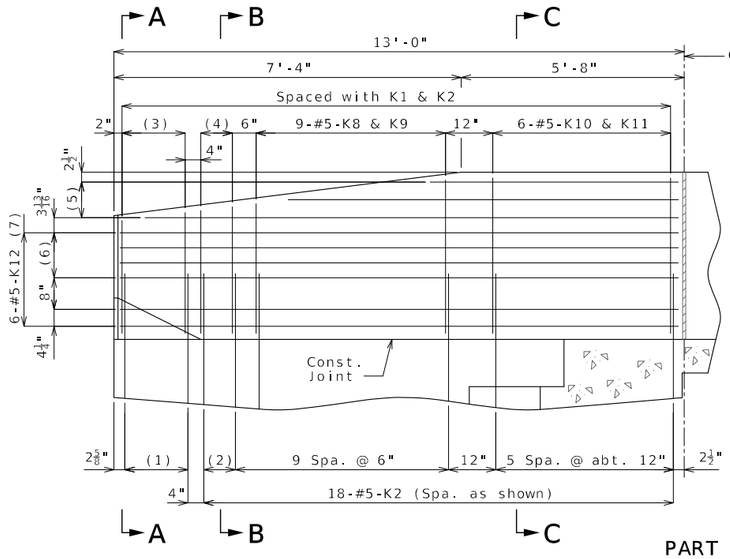
SECTION A-A

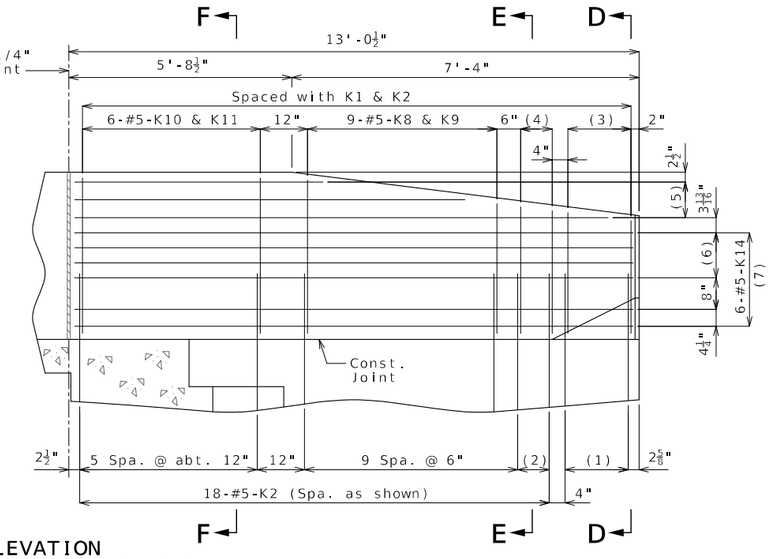


SECTION B-B

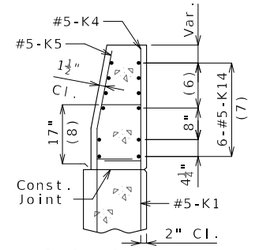


SECTION C-C

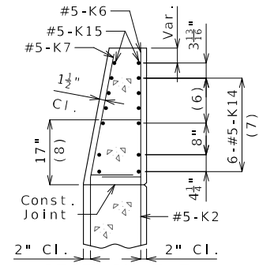




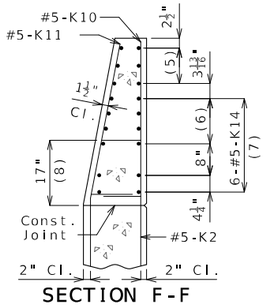
PART ELEVATION
(Looking at Front Face of Right Barrier)



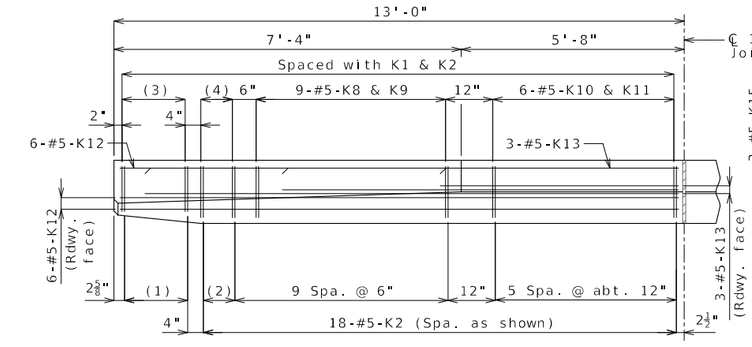
SECTION D-D

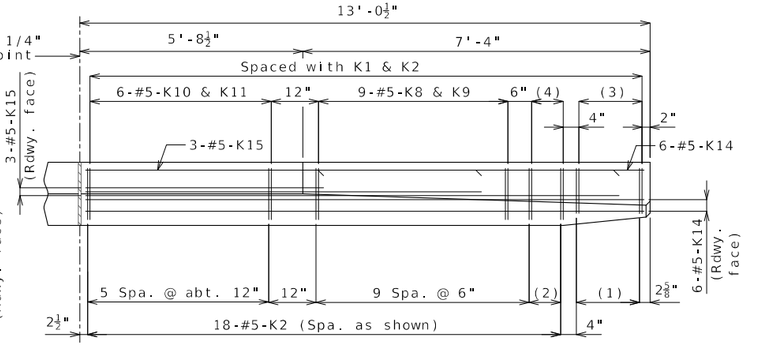


SECTION E-E

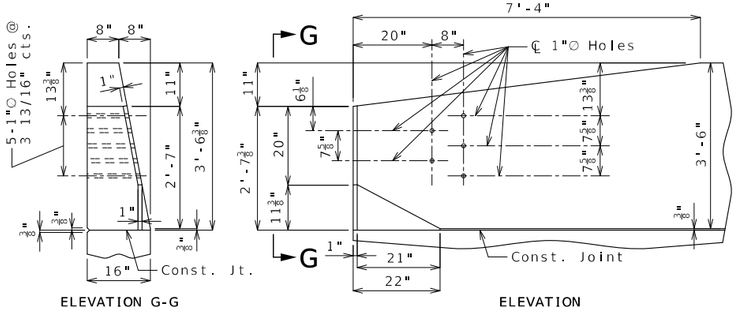


SECTION F-F



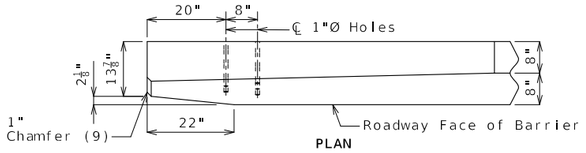


PART PLAN
(Right barrier shown)



ELEVATION G-G

ELEVATION



PLAN

DETAILS OF GUARD RAIL ATTACHMENT

(1) 5-#5-K1 @ 4" cts.

(2) 2 spaces @ 4"

(3) 5-#5-K4 & K5

(4) 3-#5-K6 & K7

(5) 3-#5-K13 or K15 @ 4½" cts., each face

(6) 3 spaces @ 3 13/16"

(7) Spaced as shown, each face

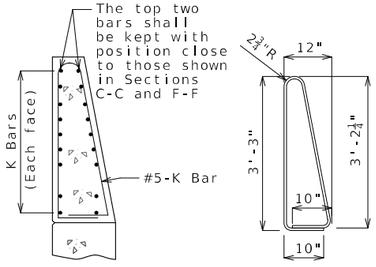
(8) To top of bar

(9) Transition to zero at Type A curb for gutter lines to match.

General Notes:

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

Reinforcing Steel:
Minimum clearance to reinforcing steel shall be 1 1/2" except as shown for bars embedded into end bent.



K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE
(Other K bars not shown for clarity)

The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

TYPE D BARRIER AT END BENTS

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

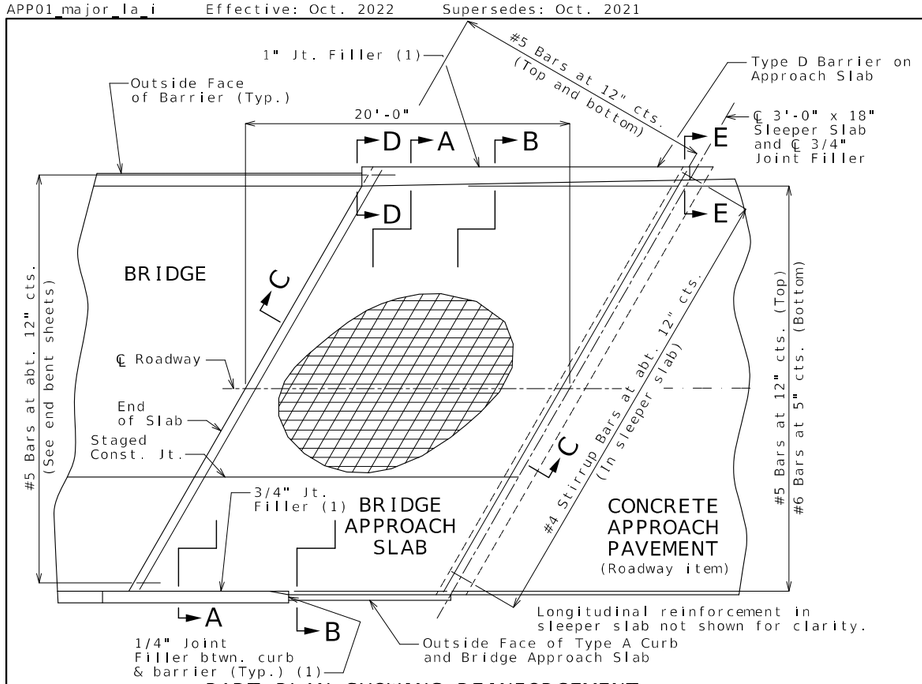
DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 23
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9413

DESCRIPTION | DATE

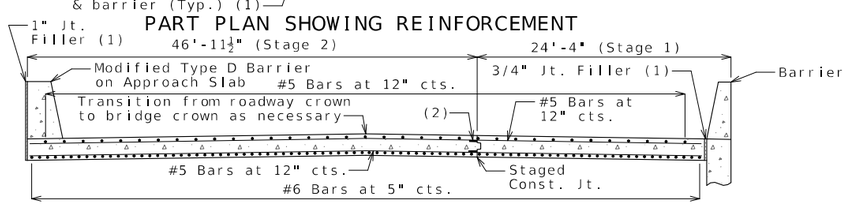
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

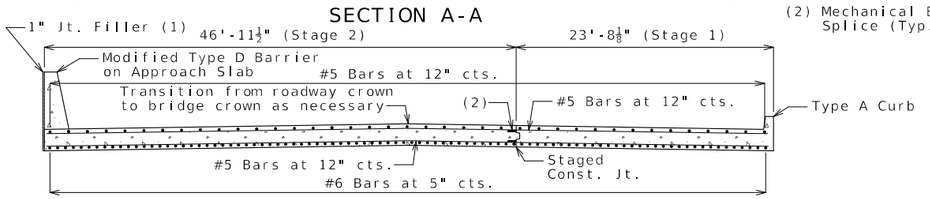
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



PART PLAN SHOWING REINFORCEMENT

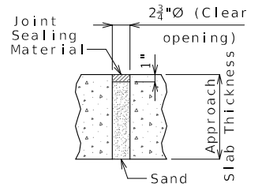


SECTION A-A



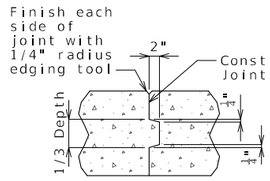
SECTION B-B

With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.

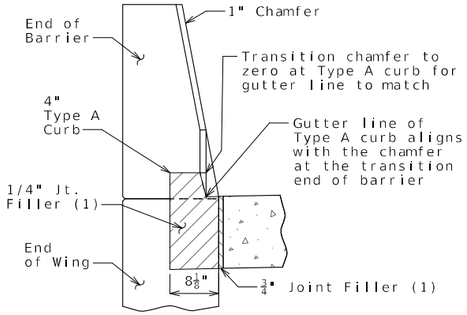


UNDERSEAL ACCESS HOLE DETAIL

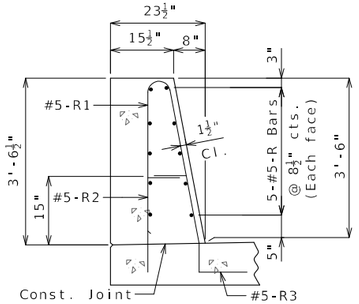
(If required)



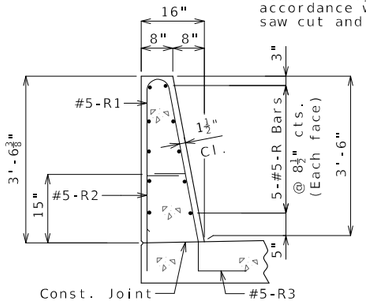
CONSTRUCTION JOINT DETAIL



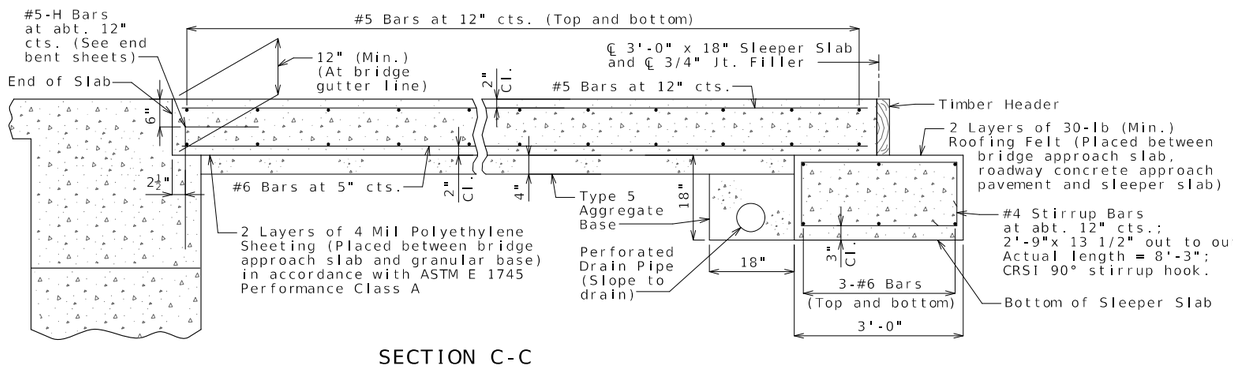
SECTION BETWEEN CURB AND BARRIER



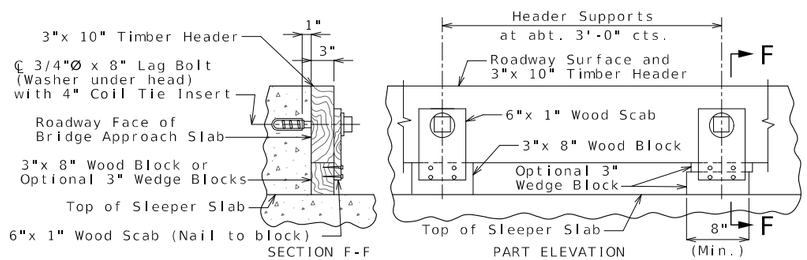
SECTION D-D



SECTION E-E



SECTION C-C



DETAILS OF TIMBER HEADER

Remove timber header when concrete pavement is placed.

General Notes:

All concrete for the bridge approach slab and sleeper slab shall be in accordance with Sec 503 (f'c = 4,000 psi).

The reinforcing steel in the bridge approach slab and the sleeper slab shall be epoxy coated Grade 60 with fy = 60,000 psi.

Drain pipe may be either 6" diameter corrugated metallic-coated pipe underdrain, 4" diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4" diameter corrugated polyethylene (PE) drain pipe.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

The reinforcing steel in the bridge approach slab and the sleeper slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 29 inches for #5 bars and 44 inches for #6 bars, or by mechanical bar splice.

Mechanical bar splices shall be in accordance with Sec. 710. (Estimated 48 splices per slab)

All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler except as noted.

The contractor shall pour and satisfactorily finish the bridge slab before placing the bridge approach slab.

Longitudinal construction joints in approach slab and sleeper slab shall be aligned with longitudinal construction joints in bridge slab.

For concrete approach pavement details, see roadway plans.

See Missouri Standard Plan 609.00 for details of Type A curb.

Payment for furnishing all materials, labor and excavation necessary to construct the approach slab, including the timber header, sleeper slab, underdrain, Type 5 aggregate base, joint filler and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Major) per square yard.

For details of Type D Barrier on Approach Slab, See Sheet No. 22.

(1) Seal joint between vertical face of approach slab and wing and joint between vertical face of the approach slabs and Type D barriers along ℄ I-44 with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

BRIDGE APPROACH SLAB (MAJOR)

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

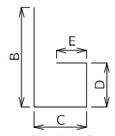
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	24

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9413

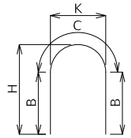
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

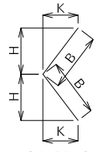
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



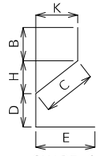
SHAPE 6 or 6S



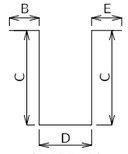
SHAPE 7



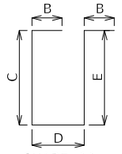
SHAPE 8 or 8S



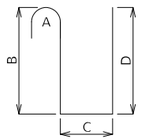
SHAPE 9 or 9S



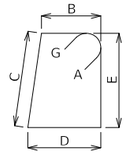
SHAPE 10 or 10S



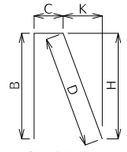
SHAPE 11 or 11S



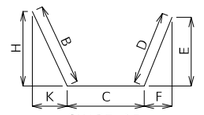
SHAPE 12



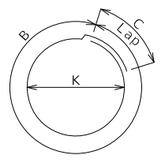
SHAPE 13S



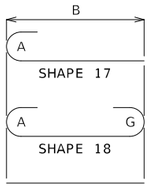
SHAPE 14 or 14S



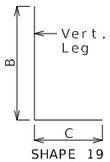
SHAPE 15 or 15S



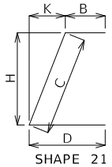
SHAPE 16



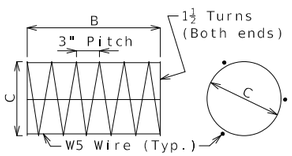
SHAPE 17
SHAPE 18
SHAPE 20



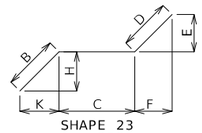
SHAPE 19 or 19S



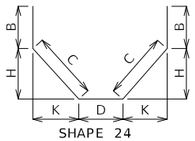
SHAPE 21 or 21S



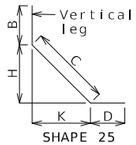
SHAPE 22



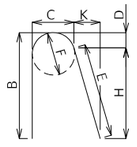
SHAPE 23 or 23S



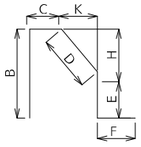
SHAPE 24 or 24S



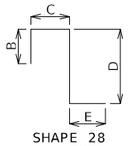
SHAPE 25 or 25S



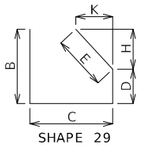
SHAPE 26



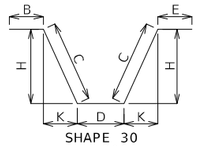
SHAPE 27S



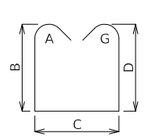
SHAPE 28 or 28S



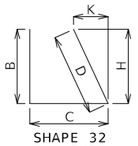
SHAPE 29 or 29S



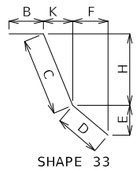
SHAPE 30 or 30S



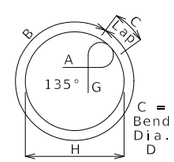
SHAPE 31S



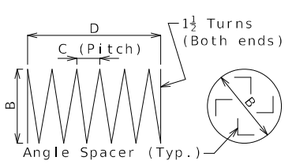
SHAPE 32 or 32S



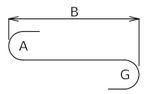
SHAPE 33 or 33S



SHAPE 34S



SHAPE 35 (1)

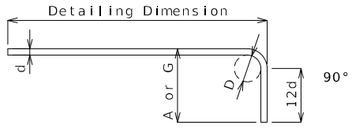


SHAPE 36

Finished Bend Diameters D and Hook Dimensions

Standard Pin Bend Shapes

Size	Case	D	A or G		J
			90°	180°	180°
#4	1	3"	8"	6"	4"
#5	1	3¾"	10"	7"	5"
#6	1	4½"	12"	8¼"	6"
#7	2	5¼"	14"	9⅜"	7"
	3	7"	15"	11½"	8¾"
#8	2	6"	16"	11"	8"
	3	8"	17"	13¼"	10"
#9	1	9½"	19½"	15½"	11¾"
#10	1	10¾"	22"	17½"	13¼"
#11	1	12"	24½"	19½"	14⅞"
#14	1	18¼"	31¼"	27½"	21⅝"
#18	1	24"	41½"	36¾"	28½"

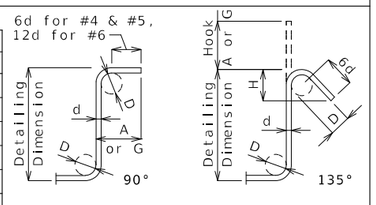


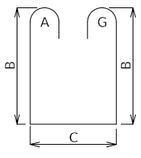
Stirrup Pin Bend Shapes (S)

Size	Case	D	A or G			H	J
			90°	135°	180°	135°	180°
#4	2	2"	4½"	4½"	5"	2⅝"	3"
	3	3"	5"	5¼"	6"	3"	4"
#5	2	2½"	5¾"	5¾"	5¾"	3⅝"	3¾"
	3	3¾"	6¼"	6½"	7"	3⅞"	5"
#6	1	4½"	12"	7¾"	8¼"	4⅝"	6"

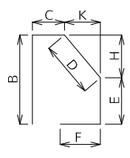
Applicable for all grades of steel.

Case 1 applies to all reinforcement. Case 2 applies to all reinforcement except for galvanized bars. Case 3 applies to galvanized bars only.





SHAPE 37S



SHAPE 38S

BENDING DIAGRAMS

All dimensions are out to out.

Shapes ending with an S shall be bent in accordance with stirrup pin bend shapes.

Unless otherwise noted, finished bending diameter D is the same for all bends of a shape.

(1) Shall be a deformed or plain spiral bar or wire.

Four angle or channel spacers are required for each column spiral. Spacers are to be placed on inside of spirals. Length and weight of column spirals do not include splices or spacers.

Reinforcing Steel Totals (Pounds)

		Substructure		Superstructure				Entire Bridge	
				Slab					
	Size	Plain	Epoxy	Plain	Epoxy	Barrier	Slip Form	Plain	Epoxy
By Size	W5	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	15,550	5,989	141	0	21,680
	6	0	0	0	27,052	0	0	0	27,052
	7	0	0	0	0	0	0	0	0
	8	0	0	0	3,562	0	0	0	3,562
	9	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0
	11	0	0	0	0	0	0	0	0
	14	0	0	0	0	0	0	0	0
	18	0	0	0	0	0	0	0	0
By Type		0	0	0	46,164	5,989	141	0	52,294

All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 25
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9413

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B	C	D	E	F	H	K	Nom. Length	Actual Length	Weight
		END BENT 1													
9	6 F100	Wing	E	23S		2 3.000	4 5.000	14.000	9.750	10.000	18.750	19.375	7 10	7 9	105
3	6 F101	Diaphragm	E	6S		5 5.000	2 7.000						8 0	7 10	35
4	6 H100	Beam	E	20		28 3.000							28 3	28 3	170
8	8 H101	Beam	E	20		28 3.000							28 3	28 3	603
4	6 H102	Beam	E	20		8 6.000							8 6	8 6	51
4	6 H103	Beam	E	20		42 8.000							42 8	42 8	256
8	8 H104	Beam	E	20		42 8.000							42 8	42 8	911
4	6 H105	Beam	E	20		42 8.000							42 8	42 8	256
4	6 H106	Beam	E	20		21 10.00							21 10	21 10	131
8	6 H107	Diaphragm	E	20		28 0.000							28 0	28 0	336
8	6 H108	Diaphragm	E	20		46 8.000							46 8	46 8	561
18	6 H109	Diaphragm	E	20		7 11.000							7 11	7 11	214
6	6 H110	Diaphragm	E	20		5 6.000							5 6	5 6	50
3	6 H111	Diaphragm	E	20		3 2.000							3 2	3 2	14
1	6 H112	Diaphragm	E	20		23.000							0 23	0 23	3
3	6 H113	Diaphragm	E	20		3 9.000							3 9	3 9	17
1	6 H114	Diaphragm	E	20		2 6.000							2 6	2 6	4
8	5 H115	Strand Tie	E	20		5 0.000							5 0	5 0	42
20	6 H116	Wing	E	20		11 8.000							11 8	11 8	350
8	8 H117	Wing	E	20		12 6.000							12 6	12 6	267
3	6 H118	Diaphragm	E	20		5 11.000							5 11	5 11	27
1	6 H119	Diaphragm	E	20		4 7.000							4 7	4 7	7
3	6 H120	Diaphragm	E	20		5 10.000							5 10	5 10	26
1	6 H121	Diaphragm	E	20		4 7.000							4 7	4 7	7
43	5 U100	Beam	E	31S		5 8.000	2 9.000	5 8.000					15 1	14 10	665
15	5 U101	Beam	E	13S		2 9.000	2 8.000	2 9.000	2 8.000				11 10	11 6	180
24	5 U102	Beam	E	13S		2 9.000	3 0.000	2 9.000	3 0.000				12 6	12 2	305
24	5 U103	Beam	E	13S		2 9.000	3 4.000	2 9.000	3 4.000				13 2	12 10	321
58	5 U104	Diaphragm	E	31S		3 4.000	2 3.000	3 4.000					9 11	9 8	585
58	6 U105	Diaphragm	E	19S		2 7.000	2 8.000						5 3	5 1	443
70	5 U106	Diaphragm	E	19S		2 0.000	15.000						3 3	3 2	231
94	6 U107	Diaphragm	E	19S		3 3.000	4 7.000						7 10	7 8	1082
30	5 V100	Beam	E	17		5 8.000							6 3	6 3	196
40	6 V101	Diaphragm	E	20		2 7.000							2 7	2 7	155
22	6 V102	Wing	E	20		6 7.000							6 7	6 7	218
		END BENT 2													
9	6 F200	Wing	E	23S		2 3.000	4 5.000	14.000	9.750	10.000	18.750	19.375	7 10	7 9	105
3	6 F201	Diaphragm	E	6S		5 5.000	2 7.000						8 0	7 10	35
4	6 H200	Beam	E	20		28 3.000							28 3	28 3	170
8	8 H201	Beam	E	20		28 3.000							28 3	28 3	603
4	6 H202	Beam	E	20		8 6.000							8 6	8 6	51
4	6 H203	Beam	E	20		42 8.000							42 8	42 8	256
8	8 H204	Beam	E	20		42 8.000							42 8	42 8	911
4	6 H205	Beam	E	20		42 8.000							42 8	42 8	256
4	6 H206	Beam	E	20		21 10.00							21 10	21 10	131
8	6 H207	Diaphragm	E	20		28 0.000							28 0	28 0	336
8	6 H208	Diaphragm	E	20		46 8.000							46 8	46 8	561
18	6 H209	Diaphragm	E	20		7 11.000							7 11	7 11	214
6	6 H210	Diaphragm	E	20		5 6.000							5 6	5 6	50
3	6 H211	Diaphragm	E	20		3 2.000							3 2	3 2	14
1	6 H212	Diaphragm	E	20		23.000							0 23	0 23	3
3	6 H213	Diaphragm	E	20		3 9.000							3 9	3 9	17
1	6 H214	Diaphragm	E	20		2 6.000							2 6	2 6	4
8	5 H215	Strand Tie	E	20		5 0.000							5 0	5 0	42
20	6 H216	Wing	E	20		11 8.000							11 8	11 8	350
8	8 H217	Wing	E	20		12 6.000							12 6	12 6	267
3	6 H218	Diaphragm	E	20		5 11.000							5 11	5 11	27
1	6 H219	Diaphragm	E	20		4 7.000							4 7	4 7	7
3	6 H220	Diaphragm	E	20		5 10.000							5 10	5 10	26
1	6 H221	Diaphragm	E	20		4 7.000							4 7	4 7	7
43	5 U200	Beam	E	31S		5 8.000	2 9.000	5 8.000					15 1	14 10	665
15	5 U201	Beam	E	13S		2 9.000	2 8.000	2 9.000	2 8.000				11 10	11 6	180
24	5 U202	Beam	E	13S		2 9.000	3 0.000	2 9.000	3 0.000				12 6	12 2	305
24	5 U203	Beam	E	13S		2 9.000	3 4.000	2 9.000	3 4.000				13 2	12 10	321

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B	C	D	E	F	H	K	Nom. Length	Actual Length	Weight
		END BENT 2 Cont.													
58	5 U204	Diaphragm	E	31S		3 4.000	2 3.000	3 4.000					9 11	9 8	585
58	6 U205	Diaphragm	E	19S		2 7.000	2 8.000						5 3	5 1	443
70	5 U206	Diaphragm	E	19S		2 0.000	15.000						3 3	3 2	231
94	6 U207	Diaphragm	E	19S		3 3.000	4 7.000						7 10	7 8	1082
30	5 V200	Beam	E	17		5 8.000							6 3	6 3	196
40	6 V201	Diaphragm	E	20		2 7.000							2 7	2 7	155
22	6 V202	Wing	E	20		6 7.000							6 7	6 7	218
		SLAB													
161	6 S1	Slab	E	20		46 0.000							46 0	46 0	11124
114	5 S2	Slab	E	20		42 4.000							42 4	42 4	5034
282	5 S3	Slab	E	20		5 0.000							5 0	5 0	1471
38	5 S4	Slab	E	20		42 8.000							42 8	42 8	1691
2	6 S5	Slab	E	20	1	11 7.000							11 7	11 7	
		Inc. = 15'-7"				27 2.000							27 2	27 2	58
282	5 S6	Slab	E	20		7 10.000							7 10	7 10	2304
162	6 S7	Slab	E	20		27 2.000							27 2	27 2	6610
2	6 S8	Slab	E	20	1	18 6.000							18 6	18 6	
		Inc. = 15'-7"				34 1.000							34 1	34 1	79
1	6 S9	Slab	E	20		15 3.000							15 3	15 3	23
3	6 S10	Slab	E	20	1	42 9.000							42 9	42 9	
		Inc. = 15'-7"				11 7.000							11 7	11 7	122
		BARRIER													
10	5 K1	Barrier	E	27S		3 8.000	9.250	5.375	3 2.750		5.250	1.000	8 1	7 11	83
36	5 K2	Barrier	E	27S		3 8.000	9.250	14.500	2 5.750		14.250	2.750	8 2	7 11	297
10	5 K4	Barrier	E	19S	2	2 4.250	10.000						3 2	3 1	
		Inc. = 0.500"				2 6.250	10.000						3 4	3 3	33
10	5 K5	Barrier	E	38S	2			18.500	9.500	8.250	18.000	4.000	3 0	2 11	
		Inc. = 0.500"						20.500	9.500	8.250	20.000	4.500	3 2	3 1	31
6	5 K6	Barrier	E	19S		2 6.750	10.000						3 5	3 4	21
6	5 K7	Barrier	E	21S			2 6.625	10.000			2 6.000	6.250	3 5	3 3	20
18	5 K8	Barrier	E	19S	2	2 8.500	10.000						3 7	3 5	
		Inc. = 0.750"				3 2.500	10.000						4 1	3 11	70
18	5 K9	Barrier	E	21S	2		2 8.500	10.000			2 7.750	6.750	3 6	3 5	
		Inc. = 0.750"					3 2.500	10.000			3 1.750	7.750	4 1	3 11	68
12	5 K10	Barrier	E	19S		3 3.000	10.000						4 1	4 0	50
12	5 K11	Barrier	E	21S			3 3.000	10.000			3 2.250	7.750	4 1	3 11	49
12	5 K12	Barrier	E	20		12 9.000							12 9	12 9	160
6	5 K13	Barrier	E	20	2	6 0.000							6 0	6 0	
		Inc. = 3'-0"				12 0.000							12 0	12 0	56
12	5 K14	Barrier	E	20		12 9.000							12 9	12 9	160
6	5 K15	Barrier	E	20	2	6 0.000							6 0	6 0	
		Inc. = 3'-0"				12 0.000							12 0	12 0	56
205	5 R1	Barrier	E	26		3 3.000	5.500	2.250	3 1.375	5.500	3 0.750	6.750	6 11	6 10	1461
205	5 R2	Barrier	E	19S		20.500	9.500						2 6	2 5	517
205	5 R3	Barrier	E	27S			9.500	15.250	5.000	12.000	15.000	3.000	3 6	3 4	713
20	5 R4	Barrier	E	20		40 3.000							40 3	40 3	840
20	5 R5	Barrier	E	20		42 9.000							42 9	42 9	892
20	5 R6	Barrier	E	20		19 9.000							19 9	19 9	412
		SLIP FORM													
8	5 C1	Slip Form	E	20		12 0.000							12 0	12 0	100
4	5 C2	Slip Form	E	20		9 9.000							9 9	9 9	41

Nominal lengths are based on out to out dimensions shown in bending diagrams and are listed to the nearest inch for fabricator's use. Actual lengths are measured along centerline bar to the nearest inch. Weights are based on actual lengths.

For bending diagrams and steel reinforcing totals, see Sheet No. 25.

Detailed: May 2024
Checked: Jun. 2024

Codes:
C = Required coatings, where E = Epoxy Coated and G = Galvanized.
SH = Required shape, see bending diagrams.
V = Sets of varied bars and number of bars of each length. Bar dimensions vary in equal increments between dimensions shown on this line and the following line and the actual length dimension shown on this line and the following line vary by the specified increment.

All bars shall be Grade 60.

Note: This drawing is not to scale. Follow dimensions.

BILL OF REINFORCING STEEL

Sheet No. 26 of 31

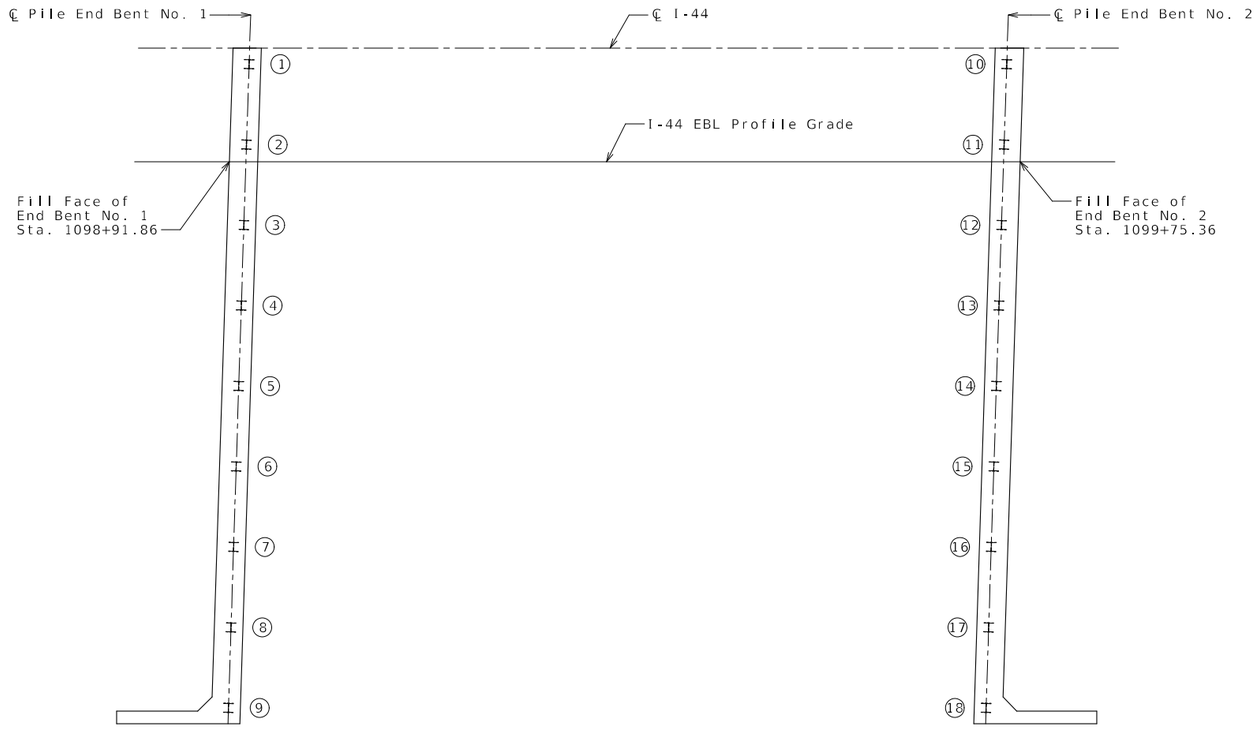
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
STATE OF MISSOURI
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 26
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9413

NO.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



SPAN (1-2)

PART PLAN SHOWING PILE NUMBERING FOR RECORDING AS-BUILT PILE DATA

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
End Bent No. 1 (HP 12x53)			
1			
2			
3			
4			
5			
6			
7			
8			
9			

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
End Bent No. 2 (HP 12x53)			
10			
11			
12			
13			
14			
15			
16			
17			
18			

Note:
Indicate in remarks column:
A. Pile type and grade
B. Batter
C. Driven to practical refusal

This sheet to be completed by MoDOT construction personnel.

AS-BUILT PILE DATA

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 27
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9413

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-2
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516860.6864 **Date of Work:** 07/13/23-07/13/23
Offset: 4.5' S, 2' E **Easting:** 1407163.8597 **Depth to Water:**
Elevation: 1241.3 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-8.0' (CH) FILL: Red and brown, fat CLAY, trace sand, gravel and organics	1240		56	4-4-4 (12)		PP = 3.50 tsf	MC = 39.2%
5		3.0' -trace chert below 3.0 ft.			38		Qu Test Results MC = 35.8% γ_{moist} = 94.9 pcf	PP >4.50 tsf	
			1235		11	4-3-6 (14)			MC = 34.1%
10		8.0-16.0' (CH) Brown, fat CLAY, trace sand and gravel			83	2-2-3 (8)		PP = 2.00 tsf	LL = 56 PL = 20 MC = 24.4%
		11.0' -trace chert below 11.0 ft.	1230		67	9-11-5 (24)		PP >4.50 tsf	MC = 25.3%
15		13.5' -with chert below 13.5 ft.			44	2-7-4 (17)		PP = 2.00 tsf	MC = 33.2%
20		16.0-30.5' LIMESTONE, gray, hard, slightly weathered, very finely to finely crystalline, thin bedded	1225		100 (83)		Qu Test Results UCS = 900 ksf		
			1220		100 (90)		Qu Test Results UCS = 1120 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-2
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516860.6864 **Date of Work:** 07/13/23-07/13/23
Offset: 4.5' S, 2' E **Easting:** 1407163.8597 **Depth to Water:**
Elevation: 1241.3 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		16.0-30.5' LIMESTONE, gray, hard, slightly weathered, very finely to finely crystalline, thin bedded *(continued)*	1215		100 (97)		Qu Test Results UCS = 1240 ksf		
30		Refusal at 16.0 feet. Bottom of borehole at 30.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 28
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9413

DESCRIPTION
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No: 146617

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 28 of 31

BORING DATA

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-3
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516804.9433 **Date of Work:** 07/13/23-07/13/23
Offset: **Easting:** 1407160.7242 **Depth to Water:**
Elevation: 1241.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-10.0' (CH) Red and brown, fat CLAY, trace sand and gravel	1240						
					83	4-9-6 (23)		PP >4.50 tsf	LL = 159 PL = 34 MC = 24.4%
					56	12-9-10 (29)		PP >4.50 tsf	MC = 12.2%
5									
			1235				Qu Test Results UCS = 2.26 ksf MC = 22.6% γ_{moist} = 126.6 pcf		
					50			PP = 3.50 tsf	
		8.5' -dark brown below 8.5 ft.							MC = 20.1%
10					78	6-3-28 (47)		PP = 3.00 tsf	
		10.0-12.7' weathered LIMESTONE	1230						
		12.7-28.0' LIMESTONE, gray, hard, slightly weathered, very finely crystalline, thin bedded			72 (43)		Qu Test Results UCS = 1250 ksf		
15									
			1225		100 (88)		Qu Test Results UCS = 1220 ksf		
20									
		20.7' -chert nodules from 20.7 to 21.0 ft.	1220		100 (80)		Qu Test Results UCS = 1330 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-3
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516804.9433 **Date of Work:** 07/13/23-07/13/23
Offset: **Easting:** 1407160.7242 **Depth to Water:**
Elevation: 1241.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		12.7-28.0' LIMESTONE, gray, hard, slightly weathered, very finely crystalline, thin bedded *(continued)*	1215		100 (72)		Qu Test Results UCS = 1680 ksf		
		26.5' -chert nodules below 26.5 ft.							
		Refusal at 12.7 feet. Bottom of borehole at 28.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 29
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9413

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 29 of 31

BORING DATA

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-5
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516869.9543 **Date of Work:** 07/13/23-07/13/23
Offset: 4' N, 2' E **Easting:** 1407220.5685 **Depth to Water:**
Elevation: 1242.5 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-8.0' (CH) Red and brown, fat CLAY, trace sand, gravel, and organics							
			1240		67	4-4-8 (18)		PP = 2.50 tsf	MC = 23.3%
		3.5' -with gravel from 3.5 to 5.0 ft.			44	10-15-9 (36)		PP = 4.25 tsf	MC = 40.3%
5		6.0' -brown from 6.0 to 7.5 ft.	1235		22	10-13-5 (27)			MC = 19.1%
		8.0-9.0' weathered LIMESTONE							
10		9.0-24.0' LIMESTONE, gray, hard, slightly weathered, very finely crystalline, thin bedded 9.6' -1" clay seam	1230		100 (79)		Qu Test Results UCS = 1120 ksf		
					100 (82)		Qu Test Results UCS = 1480 ksf		
15									
			1225		100 (88)		Qu Test Results UCS = 1810 ksf		
20		22.3' -chert nodules from 22.3 to 23.2 ft.	1220		100 (56)		Qu Test Results UCS = 1090 ksf		
		Refusal at 19.0 feet. Bottom of borehole at 24.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-6
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516802.4399 **Date of Work:** 07/12/23-07/12/23
Offset: **Easting:** 1407217.508 **Depth to Water:**
Elevation: 1241.7 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-5.5' (CH) Brown, fat CLAY, with gravel							
			1240		44	12-9-13 (33)		PP >4.50 tsf	MC = 20.7%
		3.5' -red and brown from 3.5 to 5.0 ft.			33	4-7-6 (20)		PP = 1.50 tsf	MC = 14.9%
5		5.5-7.7' (CL) Brown, lean CLAY, trace sand and gravel 6.0' -trace sand and gravel below 6.0 ft.	1235		44	2-2-3 (8)		PP = 1.50 tsf	LL = 42 PL = 20 MC = 21.6%
		7.7-12.0' (GC) Brown, clayey GRAVEL			33	13-12-11 (35)			MC = 16.7% Sieve Analysis Sieve # % Passing #200 6.3
10			1230						
		12.0-13.5' LIMESTONE, gray and light gray, hard, slightly weathered, very finely to finely crystalline, thin bedded			81 (60)		Qu Test Results UCS = 1410 ksf		
		13.5-14.3' LIMESTONE, gray, highly weathered							
15		14.3-27.1' LIMESTONE, gray and light gray, hard, slightly weathered, very finely to finely crystalline, thin bedded	1225		98 (88)		Qu Test Results UCS = 1340 ksf		
20			1220		100 (88)		Qu Test Results UCS = 1270 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024
ROUTE I-44 STATE MO
DISTRICT BR SHEET NO. 30
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9413

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 30 of 31

BORING DATA

c:\bmcd_lib\pw_connect\trn\d0171046\B_A9413_030_JSU0076.dgn 5:18:33 PM 9/5/2024

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-6
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516802.4399 **Date of Work:** 07/12/23-07/12/23
Offset: **Easting:** 1407217.508 **Depth to Water:**
Elevation: 1241.7 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		14.3-27.1' LIMESTONE, gray and light gray, hard, slightly weathered, very finely to finely crystalline, thin bedded *(continued)*	1215		100 (100)				
		Refusal at 12.0 feet. Bottom of borehole at 27.1 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 31
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9413

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.

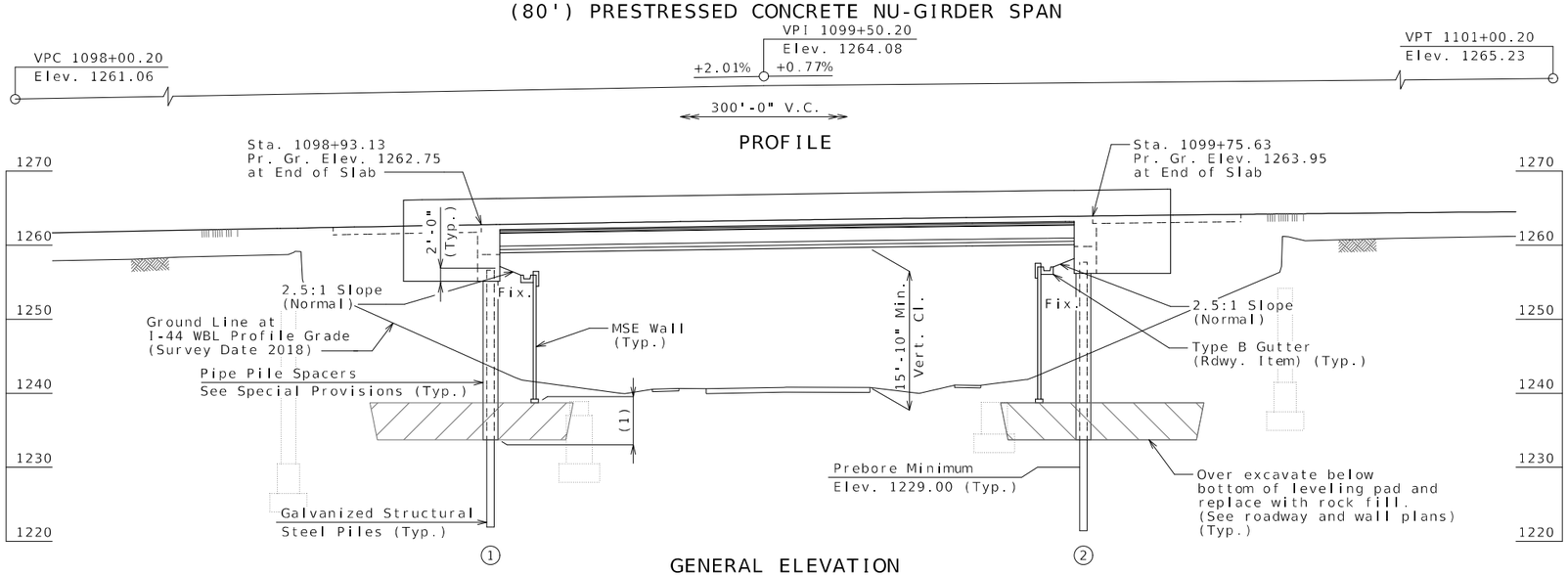
Sheet No. 31 of 31

BORING DATA

c:\bmcd_lib\pw_connect\trn\d0171046\B_A9413_031_JSU0076.dgn 5:18:53 PM 9/5/2024

(80') PRESTRESSED CONCRETE NU-GIRDER SPAN

SEC/SUR 2 TWP 29N RGE 22W



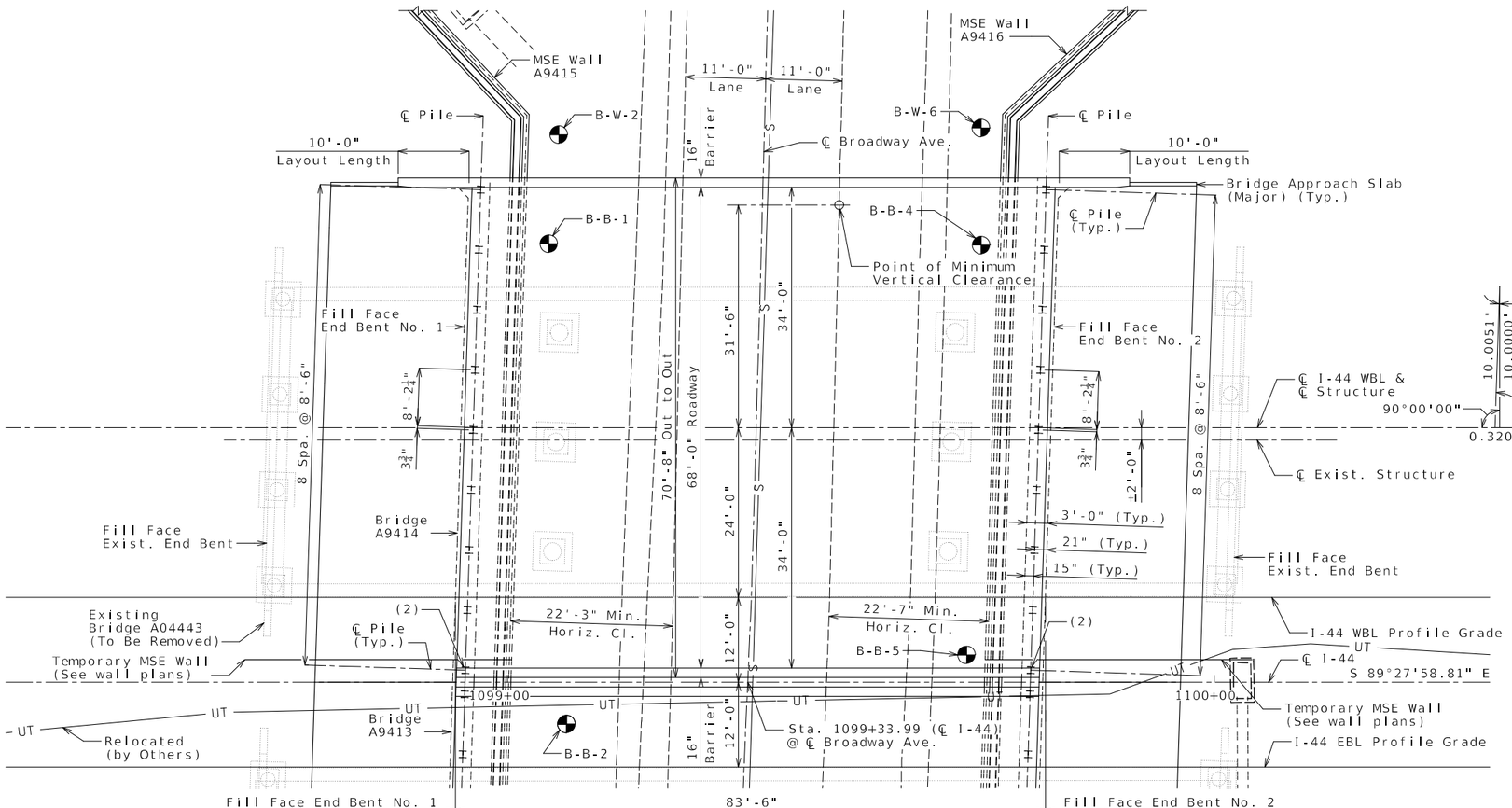
Pile Encasement	Option Used (√)
Pipe Pile Spacer	
Pile Jacket	

MoDOT Construction personnel will indicate the pile encasement used.

(1) Bottom of pipe pile spacer shall be 5'-0" minimum below bottom of leveling pad.

(2) Pile in Bridge A9414 shall be driven during Stage 2 Construction of Bridge A9413.

GENERAL ELEVATION



PLAN

NOTES:

Indicates location of borings.

For notice and disclaimer regarding boring log data, see Sheet No. 2.

Roadway fill, exclusive of Select Granular Backfill for Structural Systems, shall be completed to the final roadway section and up to the elevation of the bottom of the concrete beam within the limits of the structure and for not less than 25 feet in back of the fill face of the end bents before any piles are driven for any bents falling within the embankment section.

C.P. #518 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1106+18.78, 110.87' Lt. of ℄ I-44
Elev. 1277.59

C.P. #519 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1122+80.16, 92.35' Lt. of ℄ I-44
Elev. 1270.58

BRIDGE: RTE. I-44 WBL OVER BROADWAY AVE.

ROUTE I-44 WBL FROM ROUTE H TO ROUTE 13
ABOUT 2.2 MILES WEST OF ROUTE H
BEGINNING STATION 1098+92.63

Designed: May 2024
Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 30

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED
9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	1

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9414

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165

BMcD Project No. 146617

GENERAL NOTES:

DESIGN SPECIFICATIONS:

2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)
Operational Importance = Essential
2011 AASHTO Guide Specifications for LRFD Seismic Bridge Design (2nd Ed.)
and 2014 Interim Revisions (Seismic)
Seismic Design Category = A
Design earthquake response spectral acceleration coefficient at 1.0 second period, S_{D1} = 0.104g
Acceleration Coefficient (effective peak ground acceleration coefficient), A_S = 0.089g

DESIGN LOADING:

Vehicular = HL-93
Future Wearing Surface = 35 lb/sf
Earth = 120 lb/cf
Equivalent Fluid Pressure = 45 lb/cf (Min.)
Superstructure: Non-composite for dead load.
Composite for live load.

DESIGN UNIT STRESSES:

Class B Concrete (Substructure)	f'c = 3,000 psi
Class B-1 Concrete (Type D Barrier)	f'c = 4,000 psi
Class B-2 Concrete (Superstructure, except Prestressed Girders and Type D Barrier)	f'c = 4,000 psi
Reinforcing Steel (Grade 60)	fy = 60,000 psi
Structural Steel HP Pile (ASTM A709 Grade 50S)	fy = 50,000 psi

For precast prestressed panel stresses, see Sheet No. 18.
For prestressed girder stresses, see Sheets No. 16 thru 17.

NEOPRENE PADS:

Neoprene bearing pads shall be 60 durometer and shall be in accordance with Sec 716.

JOINT FILLER:

All joint filler shall be in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

REINFORCING STEEL:

Minimum clearance to reinforcing steel shall be 1½", unless otherwise shown.

TRAFFIC HANDLING:

Vertical clearance for Broadway Avenue traffic during construction shall be 14'-6" minimum over a 11'-0" wide horizontal opening of the roadway in each direction.

Traffic to be maintained on structures during construction. See roadway plans for traffic control and Sheets No. 3 thru 4 for staged construction details.

MISCELLANEOUS:

MoDOT Construction personnel will indicate the type of joint filler option used under the precast panels for this structure:

☐ Constant Joint Filler
☐ Variable Joint Filler

NOTICE AND DISCLAIMER REGARDING BORING LOG DATA:

The locations of all subsurface borings for this structure are shown on the plan sheets for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheets No. 28 thru 30 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.

Estimated Quantities

Item		Substr.	Superstr.	Total
Removal of Miscellaneous ACM (Non-Friable)	sq. foot			12
Removal of Bridges (A04443)	lump sum			1
Bridge Approach Slab (Major)	sq. yard		314	314
Galvanized Structural Steel Piles (12 in.)	linear foot	539		539
Pre-Bore for Piling	linear foot	207		207
Pile Point Reinforcement	each	18		18
Class B Concrete (Substructure)	cu. yard	59.0		59.0
Type D Barrier	linear foot		226	226
Slab on Concrete NU-Girder	sq. yard		648	648
NU 35, Prestressed Concrete NU-Girder	linear foot		647	647
Vertical Drain at End Bents	each	2		2
Plain Neoprene Bearing Pad	each		8	8
Laminated Neoprene Bearing Pad (Tapered)	each		8	8
Pile Spacers	each	18		18

All concrete above the construction joint in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

All reinforcement in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Estimated Quantities for Slab on Concrete NU-Girder

Item		Total
Class B-2 Concrete	cu. yard	200
Reinforcing Steel (Epoxy Coated)	pound	43,110

The table of Estimated Quantities for Slab on Concrete NU-Girder represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab (or with the horizontal dimensions as shown on the plan of slab). Payment for prestressed panels, conventional forms, all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slab shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type I, II or III.

PRECAST PRESTRESSED PANELS:

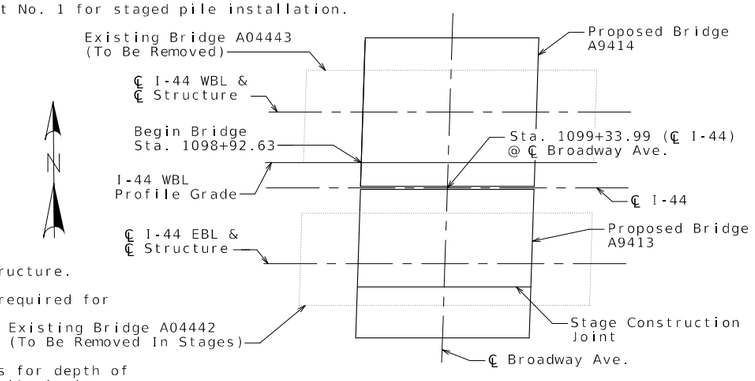
The Estimated Quantities for Slab on Concrete NU-Girder are based on skewed precast prestressed end panels.

Class B-2 Concrete quantity is based on minimum top flange and minimum joint material thickness.

The prestressed panel quantities are not included in the table of Estimated Quantities for Slab on Concrete NU-Girder.

STAGED CONSTRUCTION:

See General Plan and Elevation Sheet No. 1 for staged pile installation.



LOCATION SKETCH

Foundation Data

Type	Design Data		Bent Number 1	Bent Number 2
Load Bearing Pile	Pile Type and Size		HP 12x53	HP 12x53
	Number	ea	9	9
	Approximate Length Per Each	ft	31	29
	Pile Point Reinforcement	ea	All	All
	Min. Galvanized Penetration (Elev.)	ft	Full Length	Full Length
	Pile Driving Verification Method		DF	DF
	Resistance Factor		0.4	0.4
	Minimum Nominal Axial Compressive Resistance	kip	590	590

DF = FHWA - modified Gates Dynamic Pile Formula.

Minimum Nominal Axial Compressive Resistance = $\frac{\text{Maximum Factored Loads}}{\text{Resistance Factor}}$

Manufactured pile point reinforcement shall be used on all piles in this structure.

Pile point reinforcement need not be galvanized. Shop drawings will not be required for pile point reinforcement.

Prebore for piles at Bents No. 1 and 2 to elevation 1229.0.

HP piles are anticipated to be driven to refusal on rock. Review all borings for depth of rock and restrict driving as appropriate to comply with hard rock driving criteria in accordance with Sec 702. When pile refusal on rock occurs, as approved by the engineer, the minimum nominal axial compressive resistance is verified and no additional pile driving verification method is required.

The contractor shall make every effort to achieve the minimum galvanized penetration (elevation) shown on the plans for all piles.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

GENERAL NOTES & QUANTITIES

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

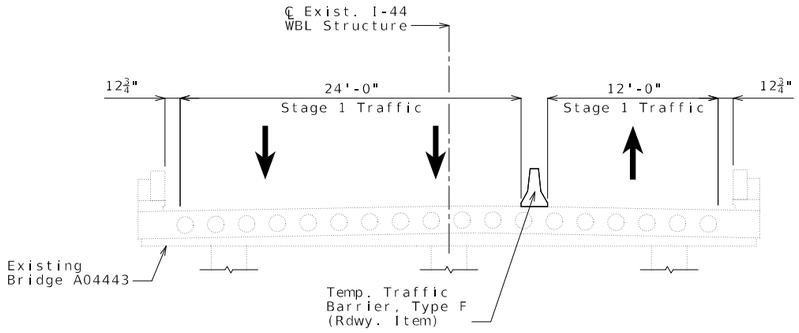
DATE PREPARED 11/7/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 2
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9414

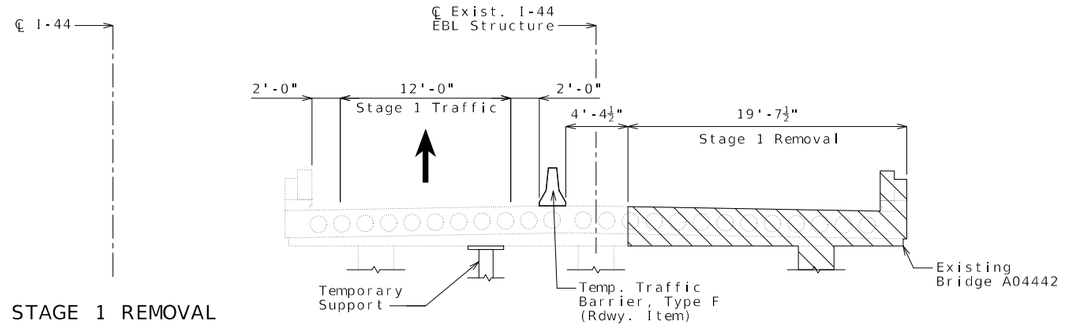
DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

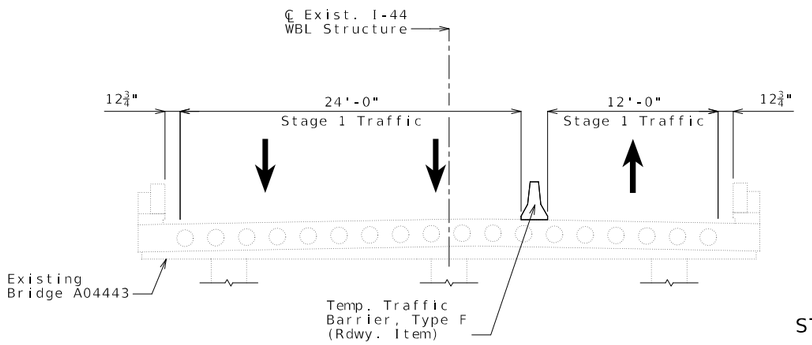
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

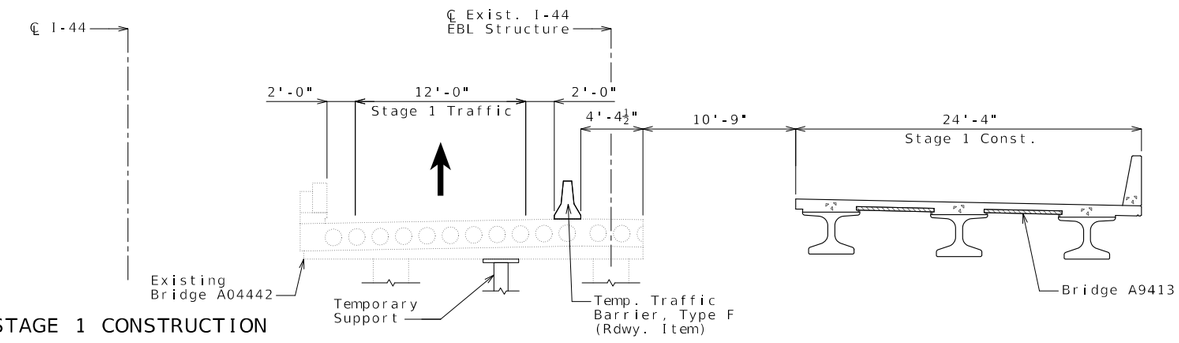
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



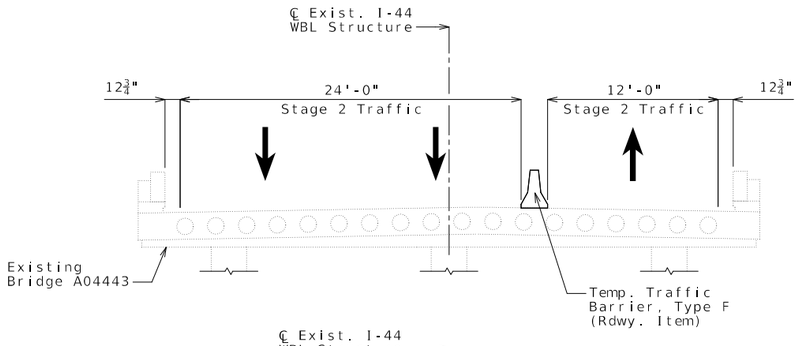


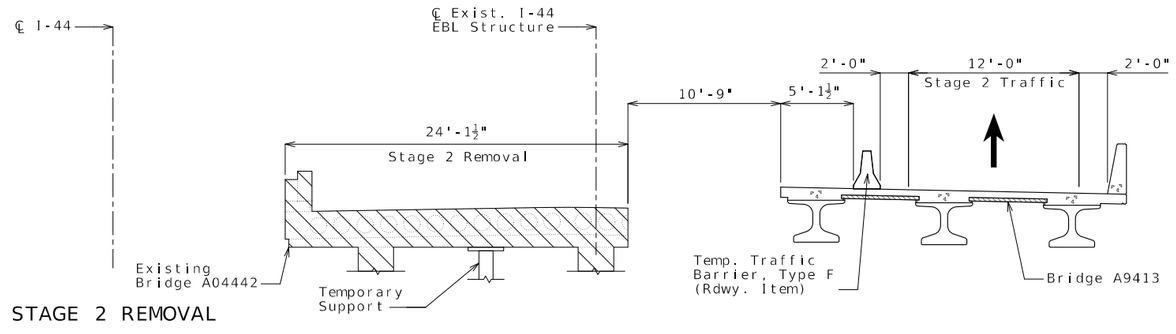
STAGE 1 REMOVAL



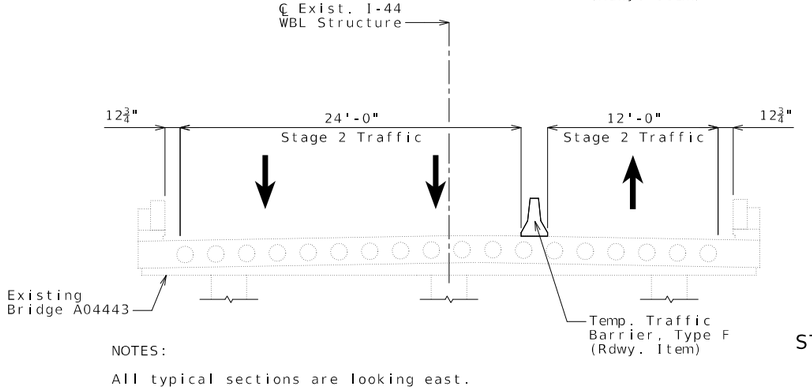


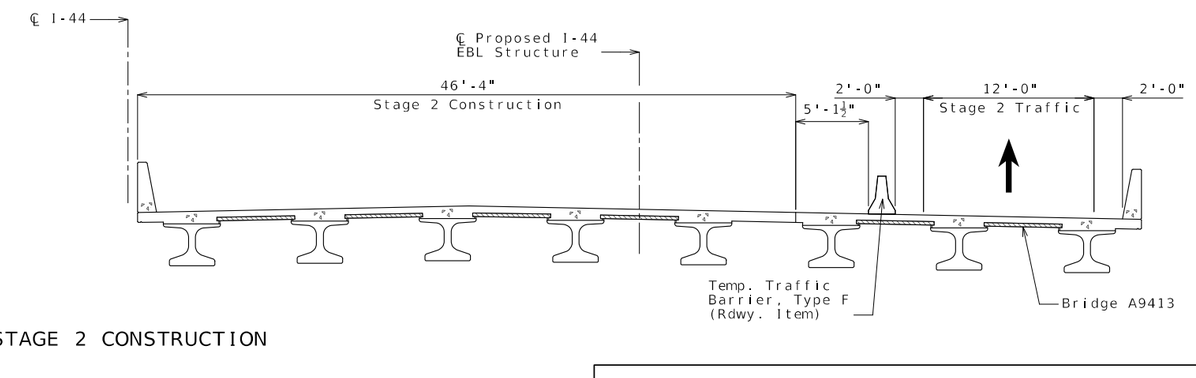
STAGE 1 CONSTRUCTION





STAGE 2 REMOVAL





STAGE 2 CONSTRUCTION

NOTES:

All typical sections are looking east.

Hatched area indicates removal of existing structures.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 30

STAGED CONSTRUCTION

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	3

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

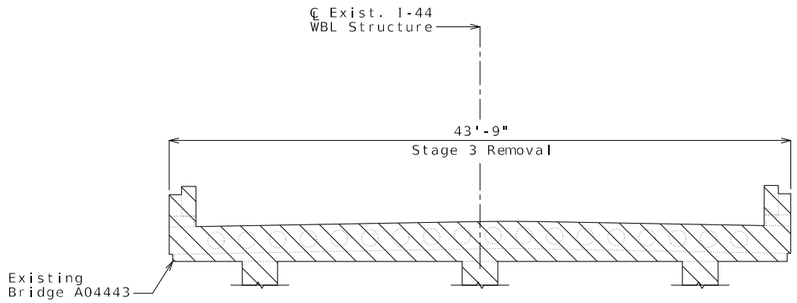
BRIDGE NO.
A9414

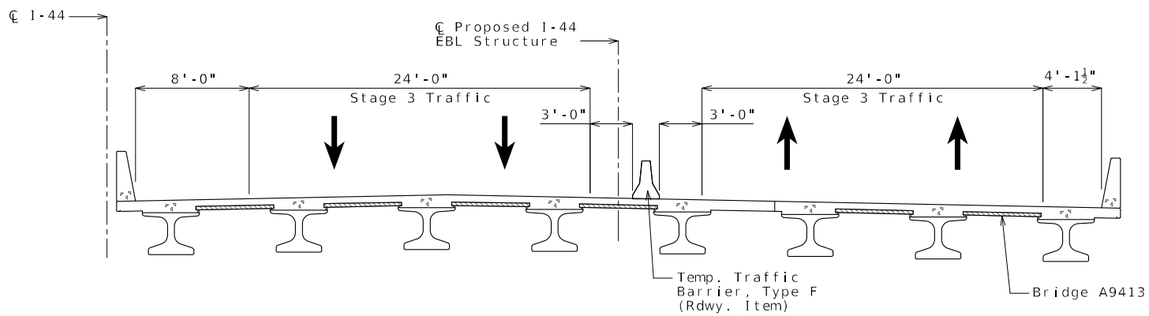
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

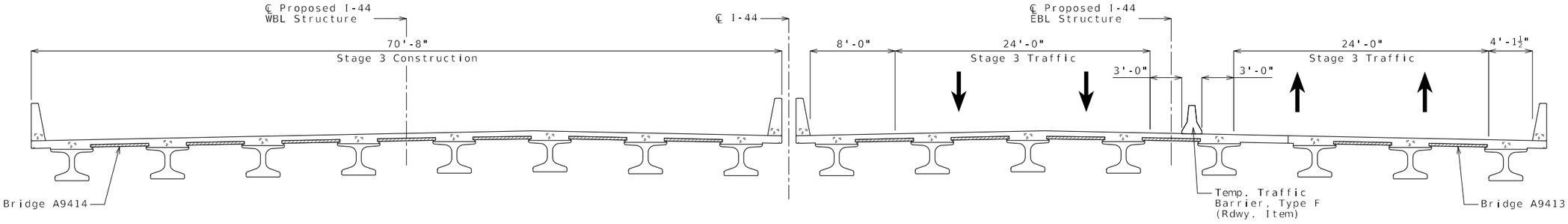
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

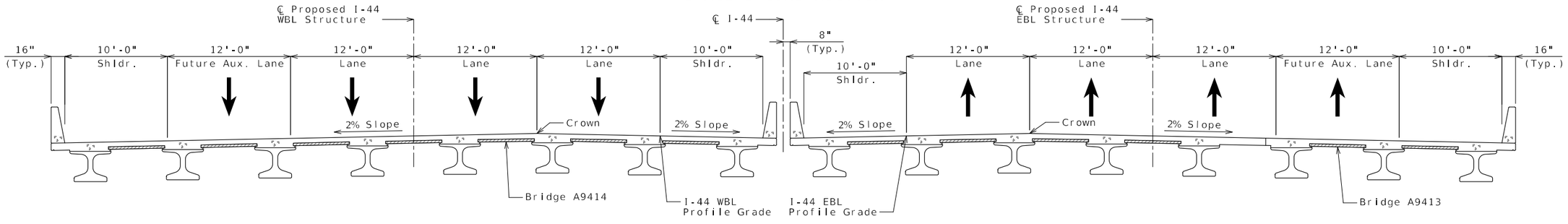




STAGE 3 REMOVAL



STAGE 3 CONSTRUCTION



FINAL SECTION THRU SLAB

NOTES:

All typical sections are looking east.

Hatched area indicates removal of existing structures.

STAGED CONSTRUCTION

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	4

COUNTY: GREENE

JOB NO.: JSU0076

CONTRACT ID.:

PROJECT NO.:

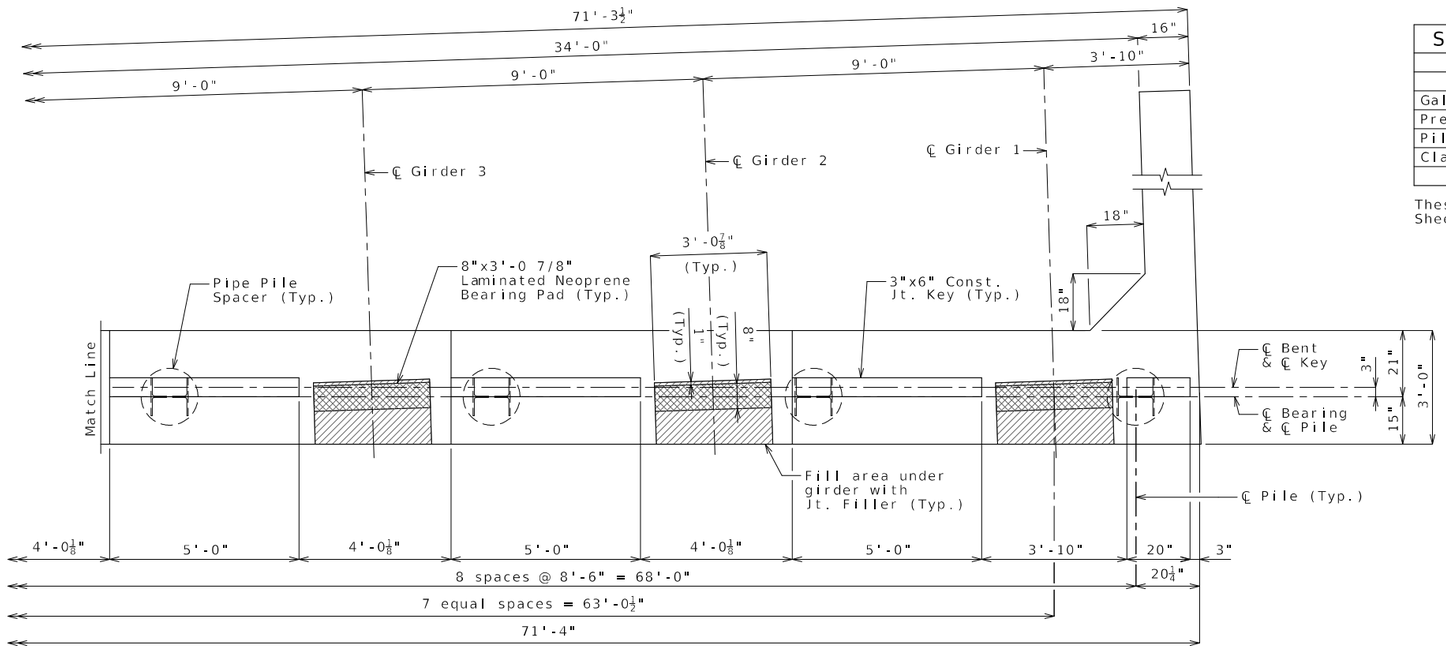
BRIDGE NO.: A9414

DESCRIPTION	DATE

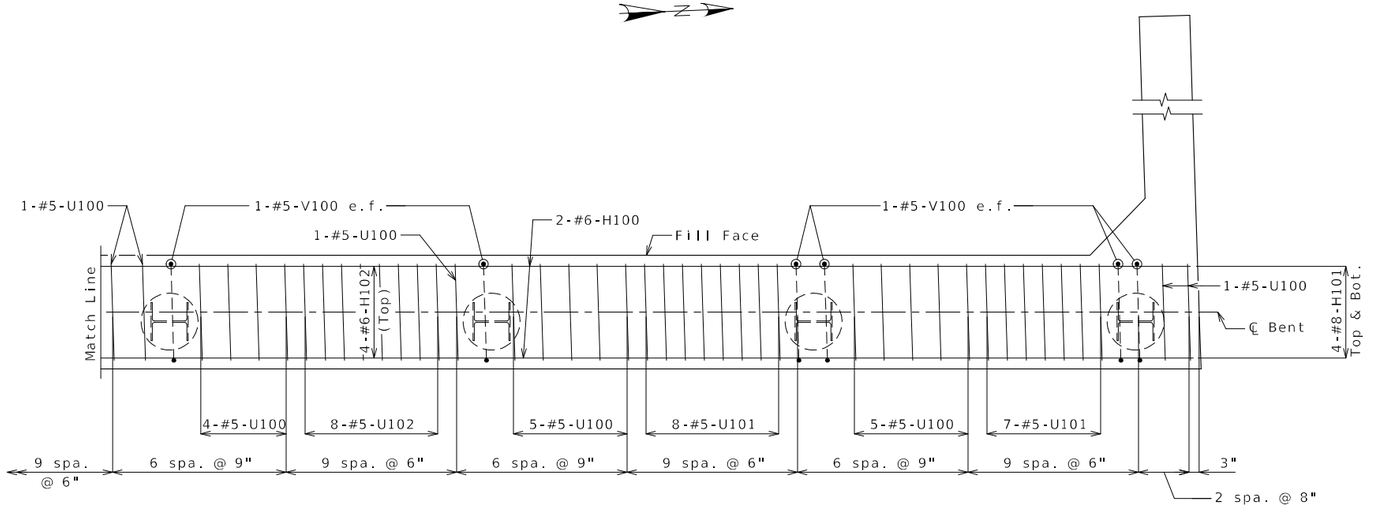
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



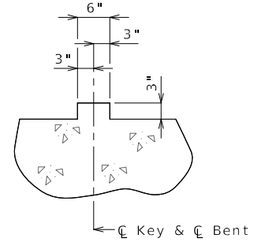
PART PLAN OF BEAM



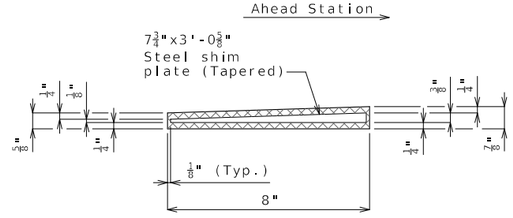
PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

Substructure Quantity Table for End Bent No. 1		
Item		Quantity
Galvanized Structural Steel Piles (12 in.)	linear foot	280
Pre-Bore for Piling	linear foot	99
Pile Point Reinforcement	each	9
Class B Concrete (Substructure)	cu. yard	29.5

These quantities are included in the Estimated Quantities table on Sheet No. 2.



SECTION THRU KEY



TYPICAL SECTION THRU
8"X3'-0 7/8"X3/4"
LAMINATED NEOPRENE BEARING PAD
(8 Required)

NOTES:

Work this sheet with Sheets No. 6 thru 9.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

END BENT NO. 1
BEAM DETAILS 1 OF 2

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

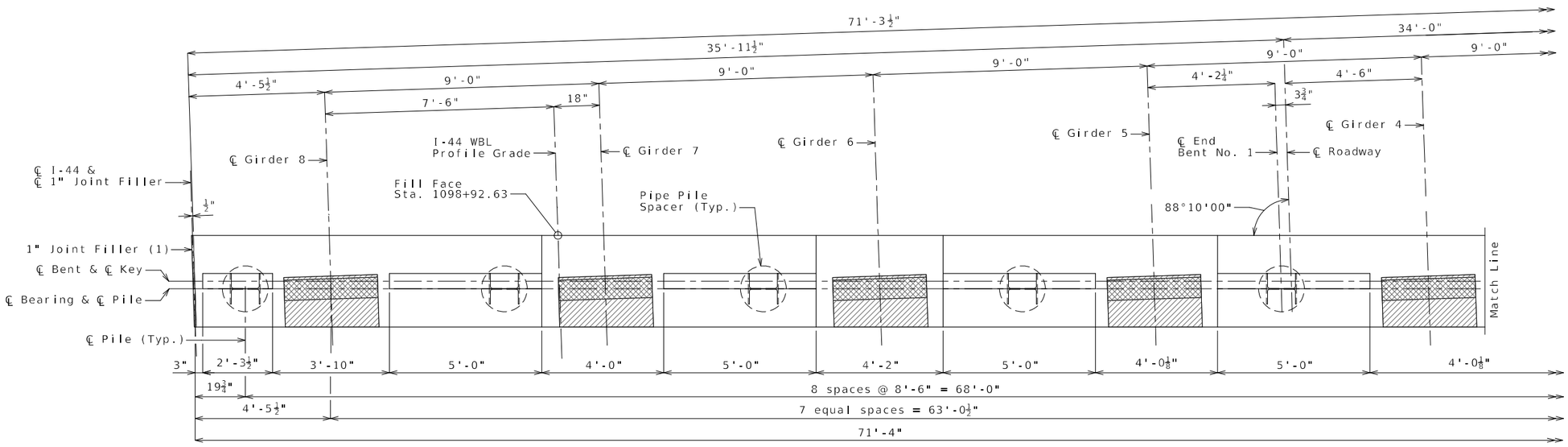
STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 5
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9414

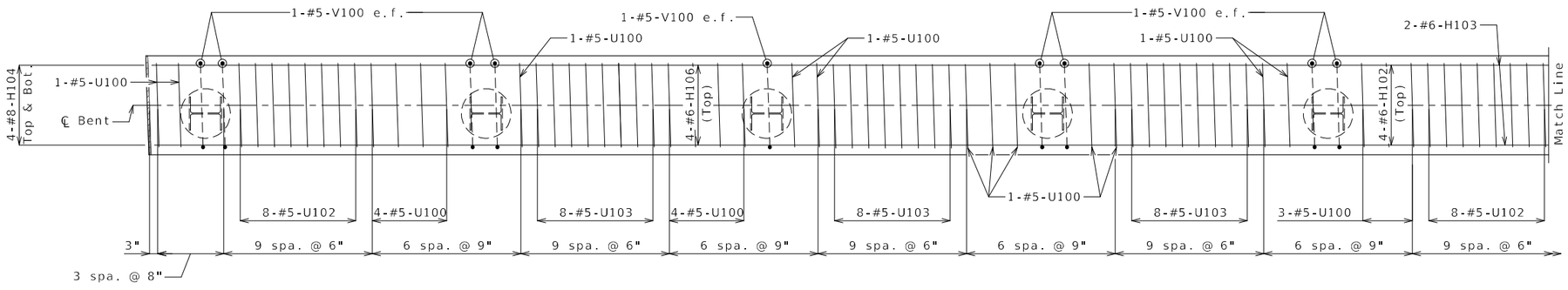
DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617



PART PLAN OF BEAM



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5 & 7 thru 9.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) Seal joint between vertical face of EB and WB bearing beams with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6 of 30

END BENT NO. 1
BEAM DETAILS 2 OF 2

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	6

COUNTY: GREENE

JOB NO.: JSU0076

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A9414

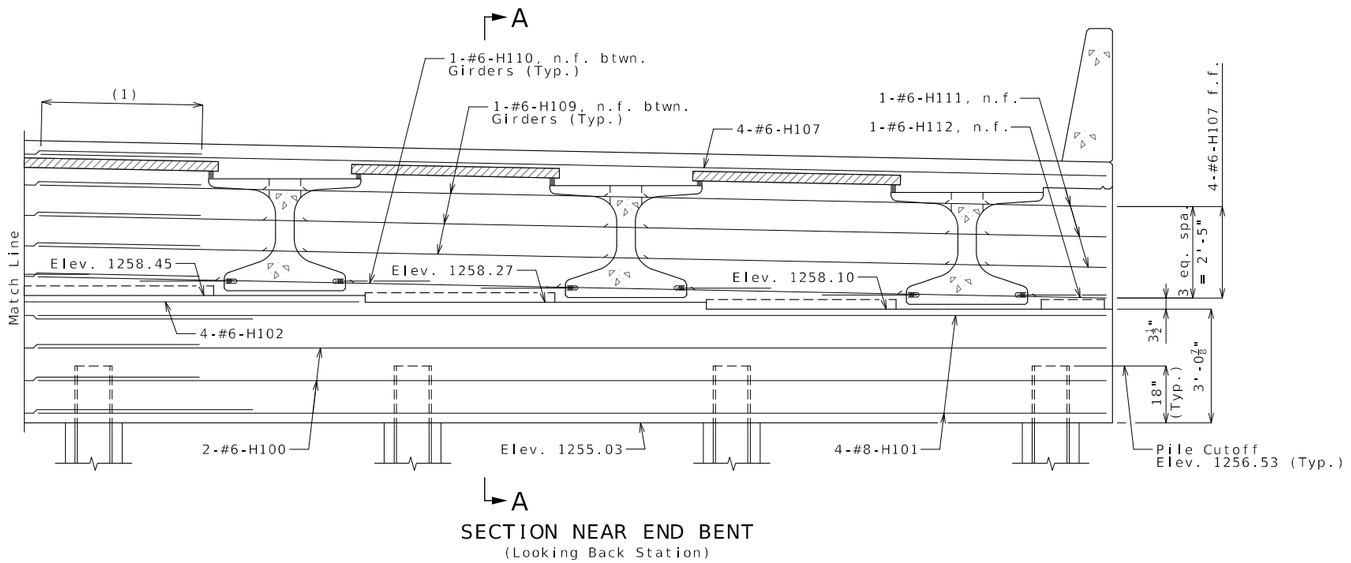
DESCRIPTION	DATE

REV.

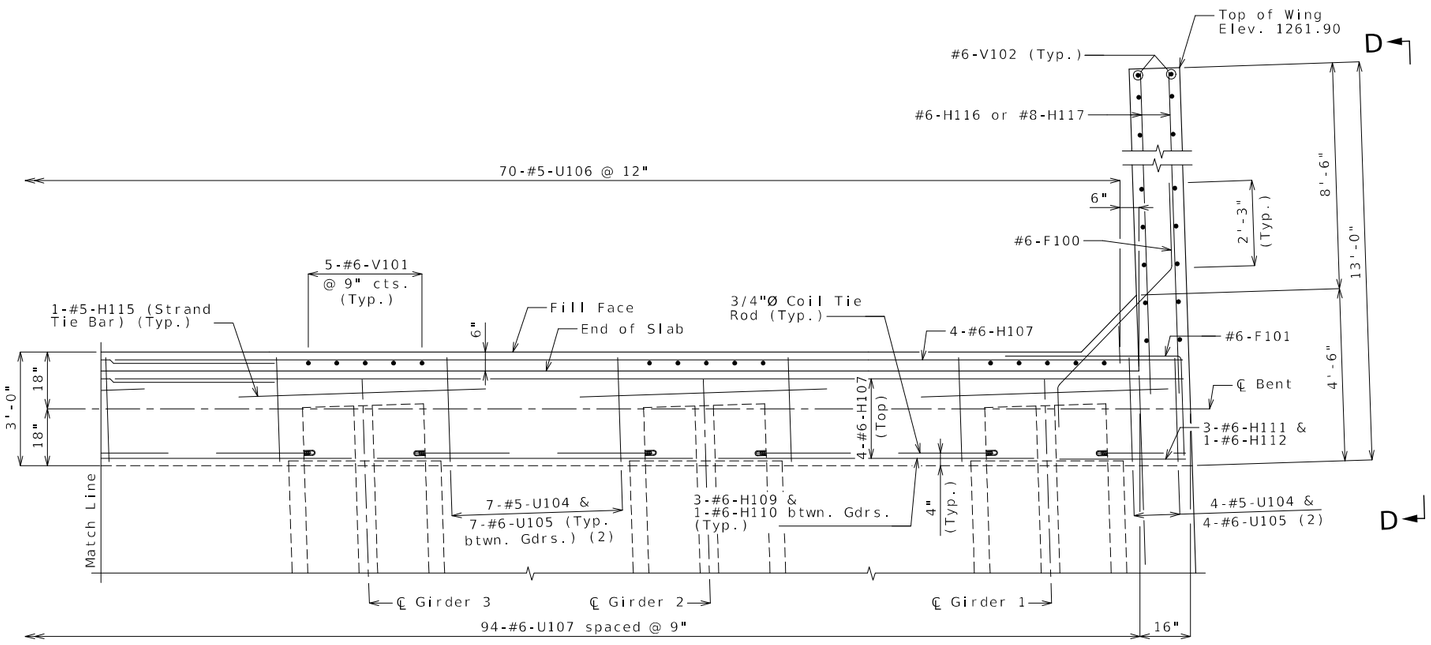
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171052\B_A9414_006_JSU0076.dgn 4:46:10 PM 9/5/2024



SECTION NEAR END BENT
(Looking Back Station)



PART PLAN
(2) Space bars to match #5-V100 & #5-U100 bars.
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5, 6, 8 and 9.

For Section A-A see Sheet No. 9.

The #6-F100 shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H115, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) Minimum Lap #6 Bars = 4'-3"
Minimum Lap #8 Bars = 5'-8"

END BENT NO. 1
DIAPHRAGM DETAILS 1 of 2

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 7 of 30

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	7

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9414

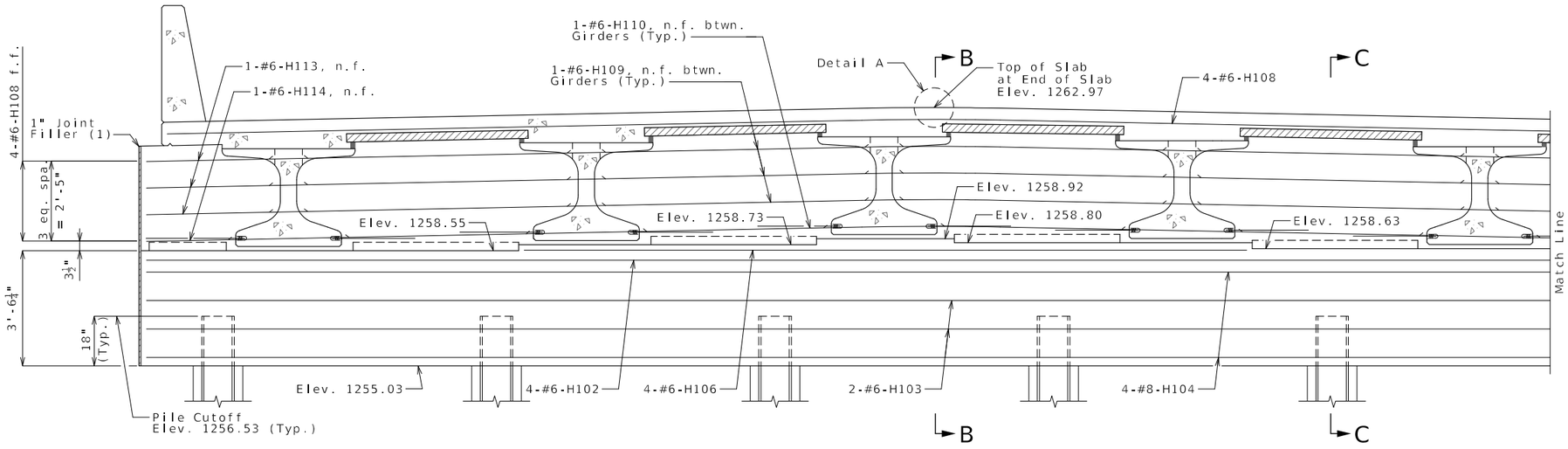
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

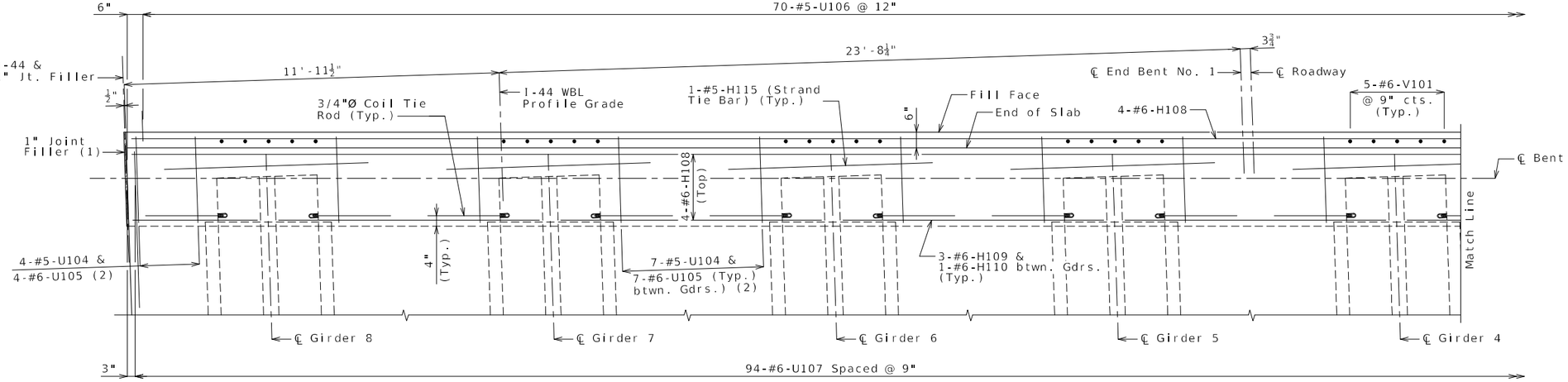
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171052\B_A9414_007_JSU0076.dgn 4:46:23 PM 9/5/2024



SECTION NEAR END BENT
(Looking Back Station)



PART PLAN
(2) Space bars to match #5-V100 & #5-U100 bars.
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5 thru 7 and 9.

For Section A-A see Sheet No. 9.

For Detail A see Sheet No. 21.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H115, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) Seal joint between vertical face of EB and WB bearing beams and diaphragms with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 30

END BENT NO. 1
DIAPHRAGM DETAILS 2 of 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	8

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9414

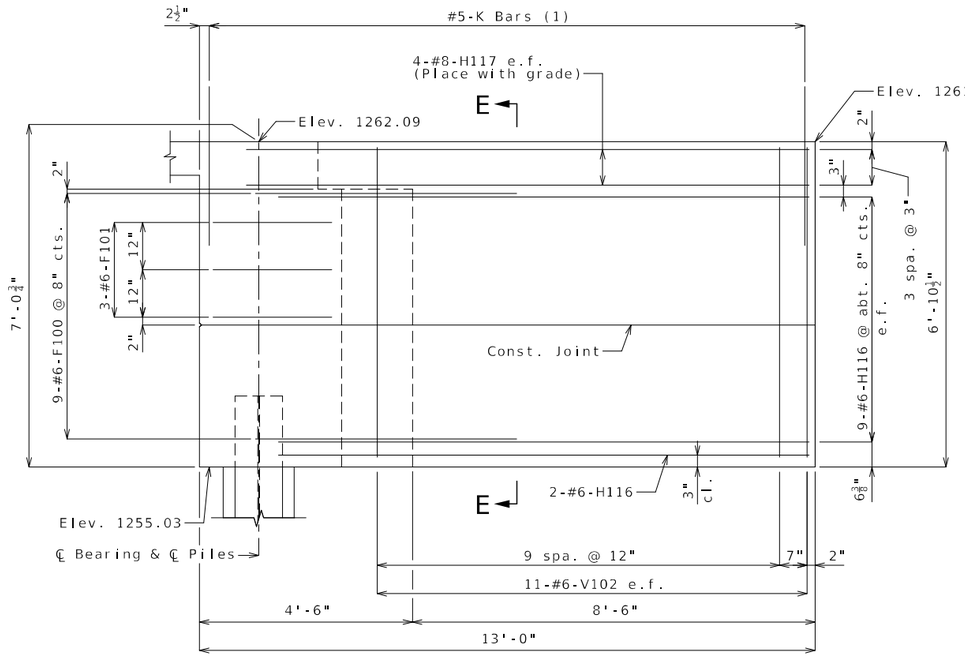
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

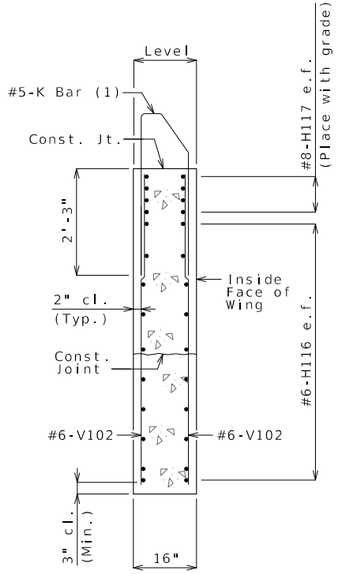
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

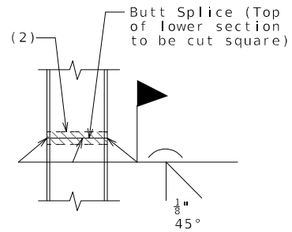
c:\bmcd_lib\pw_connect\trn\d0171052\B_A9414_008_JSU0076.dgn 4:46:35 PM 9/5/2024



ELEVATION D-D



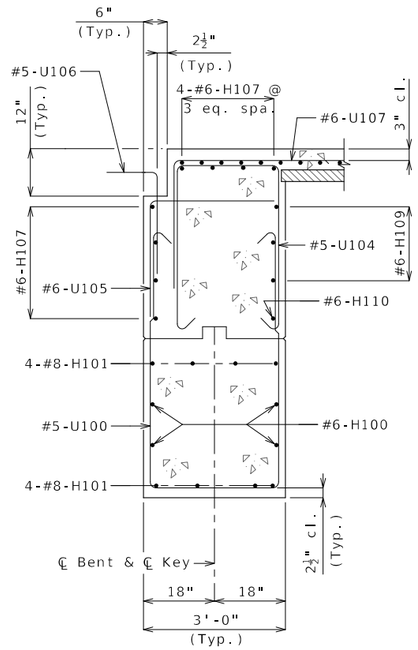
SECTION E-E



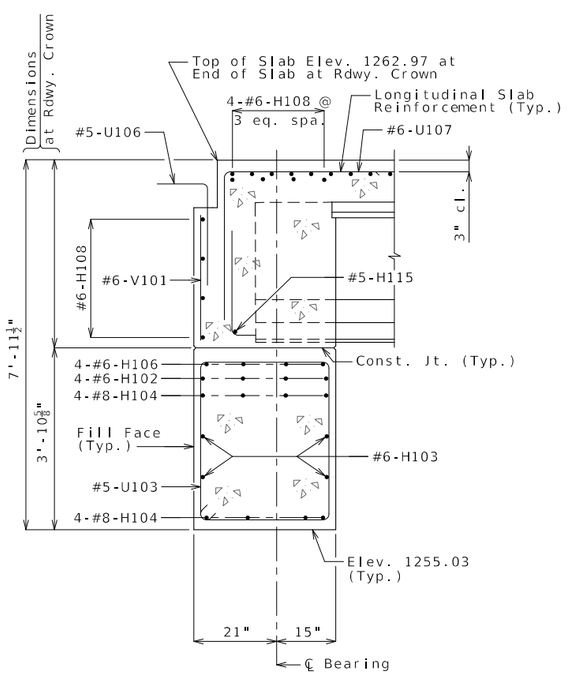
STEEL PILE SPLICE

(If required)

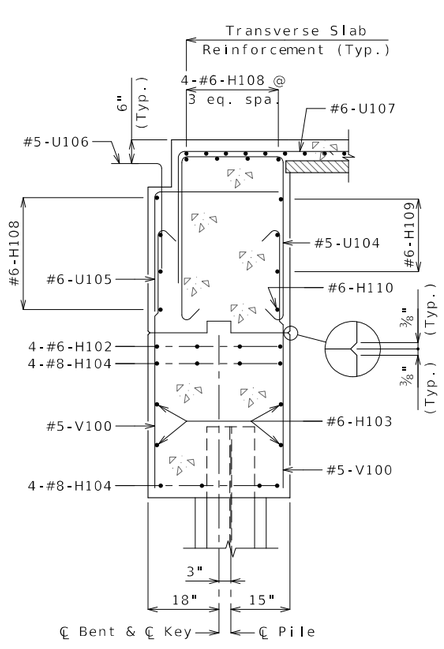
(2) Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

(1) For reinforcement of the Type D Barrier at End Bent, see Sheet No. 23.

e.f. denotes each face.

For details of bridge approach slab, see Sheet No. 24.

Work this sheet with Sheets No. 5 thru 8.

END BENT NO. 1
WING DETAILS & SECTIONS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9 of 30

4:46:47 PM 9/5/2024

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	9

COUNTY: GREENE

JOB NO.: JSU0076

CONTRACT ID.:

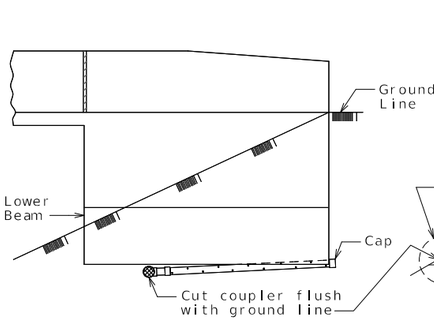
PROJECT NO.:

BRIDGE NO.: A9414

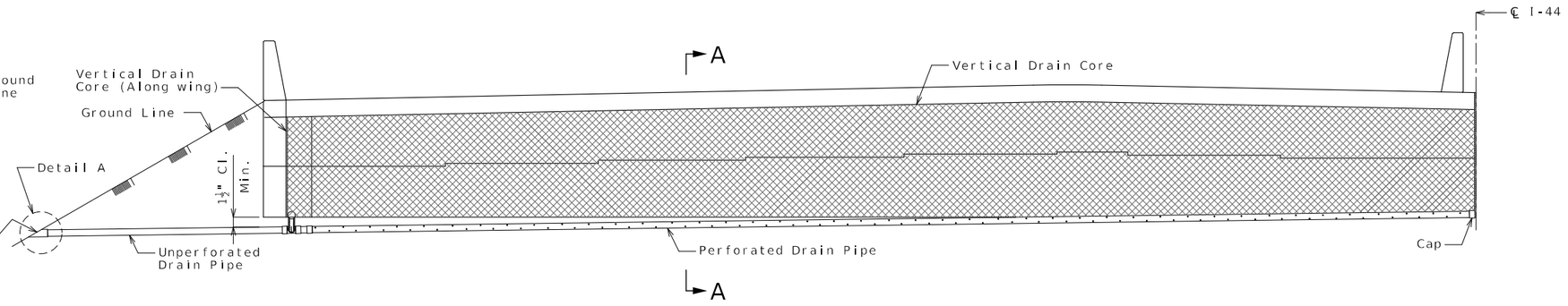
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

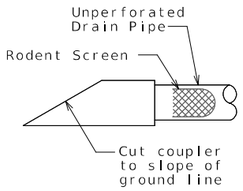
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



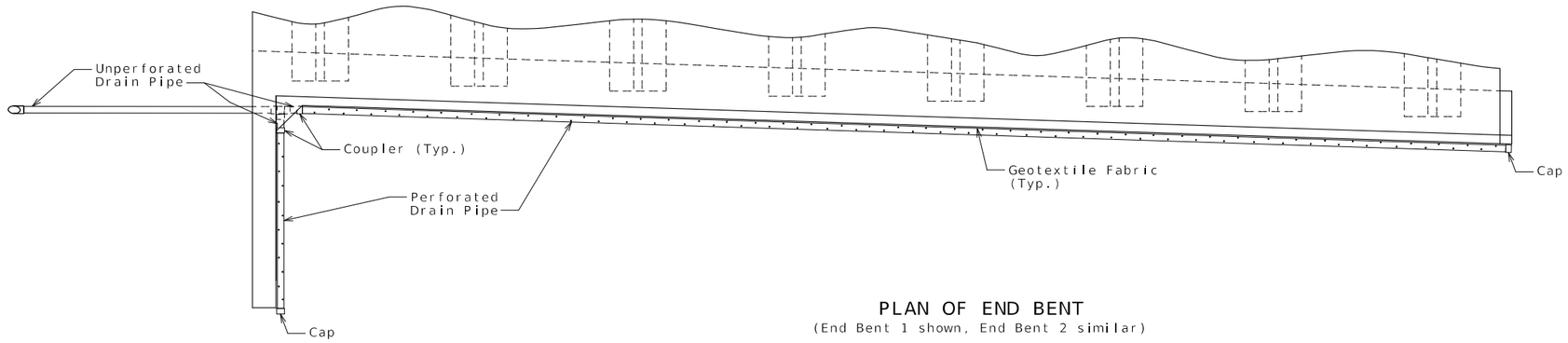
ELEVATION OF WING



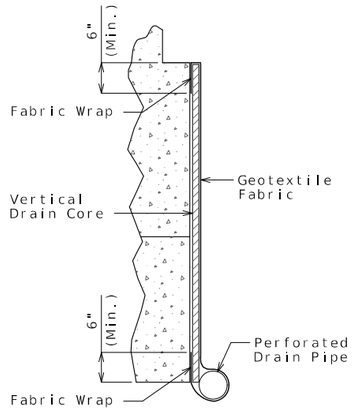
ELEVATION OF END BENT



DETAIL A



PLAN OF END BENT
(End Bent 1 shown, End Bent 2 similar)



PART SECTION A-A
(Section thru wing similar)

General Notes:

All drain pipe shall be sloped 1 to 2 percent.

Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.

Drain pipe shall be placed at fill face of end bent and inside face of wings. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.

Perforated pipe shall be placed at fill face side and inside face of wings at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.

VERTICAL DRAIN AT END BENTS

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	10

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9414

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

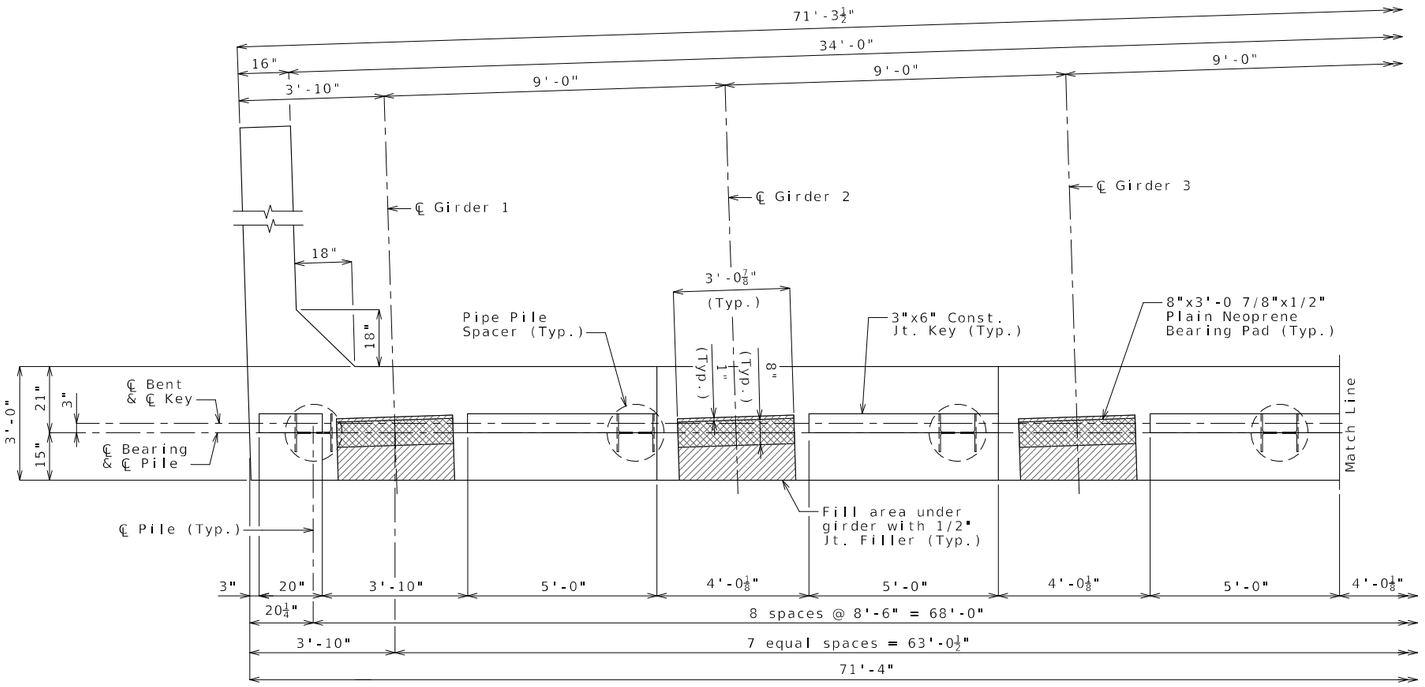
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

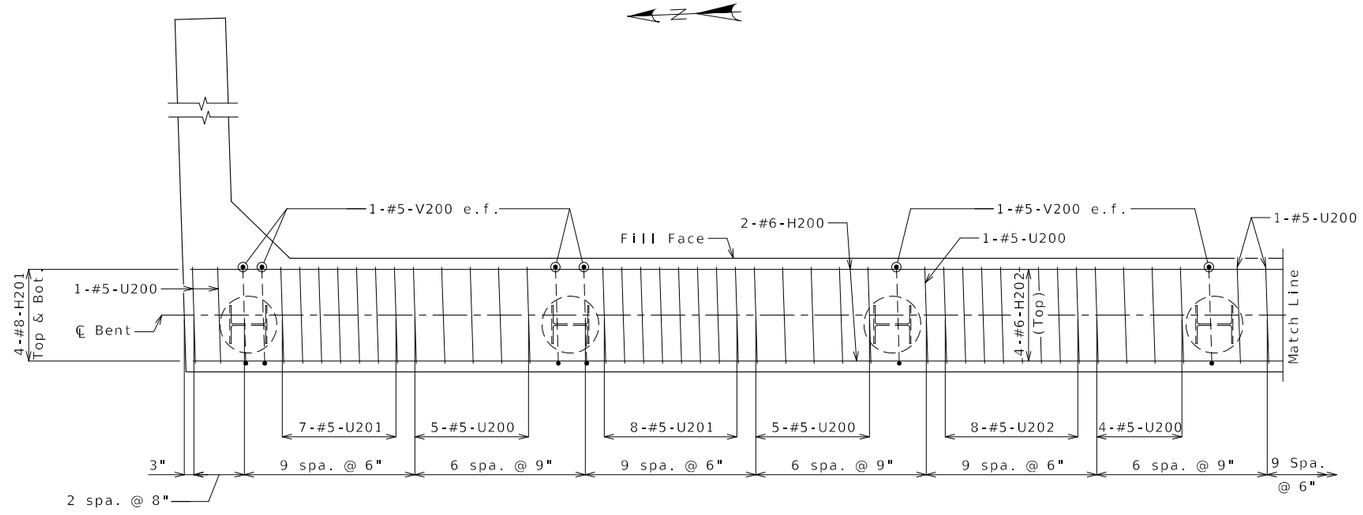
Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

c:\bmcd_lib\pw_connect\trn\d0171052\B_A9414_010_JSU0076.dgn 4:47:01 PM 9/5/2024



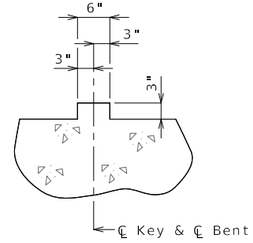
PART PLAN OF BEAM



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

Substructure Quantity Table for End Bent No. 2		
Item		Quantity
Galvanized Structural Steel Piles (12 in.)	linear foot	259
Pre-Bore for Piling	linear foot	108
Pile Point Reinforcement	each	9
Class B Concrete (Substructure)	cu. yard	29.5

These quantities are included in the Estimated Quantities table on Sheet No. 2.



SECTION THRU KEY

NOTES:

Work this sheet with Sheets No. 12 thru 15.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 11 of 30

END BENT NO. 2
BEAM DETAILS 1 OF 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

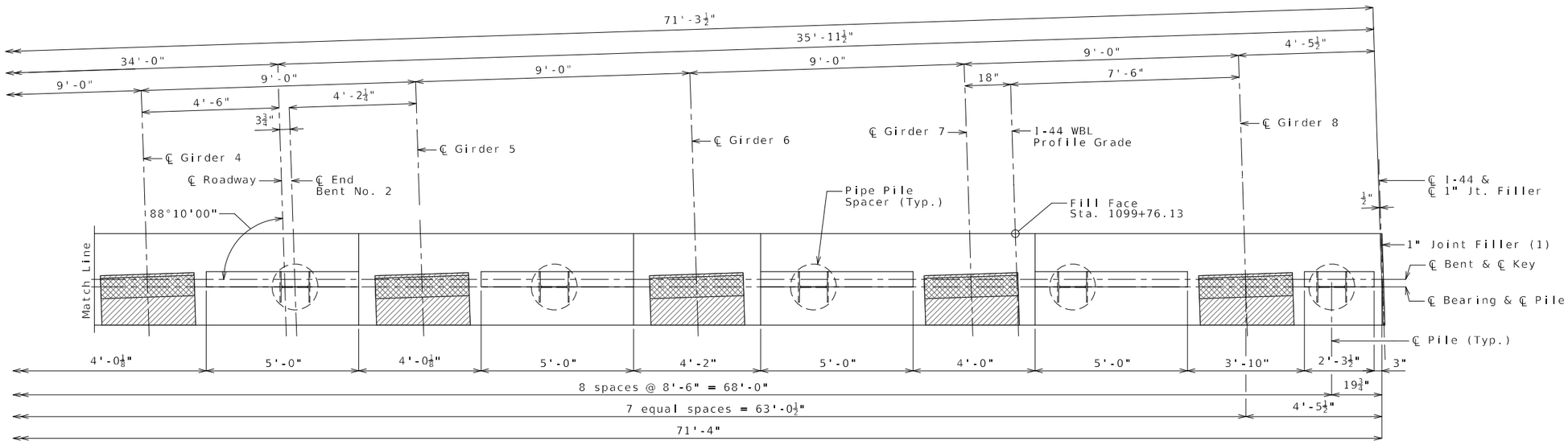
DATE PREPARED: 9/5/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 11
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9414

DESCRIPTION | DATE | REV.

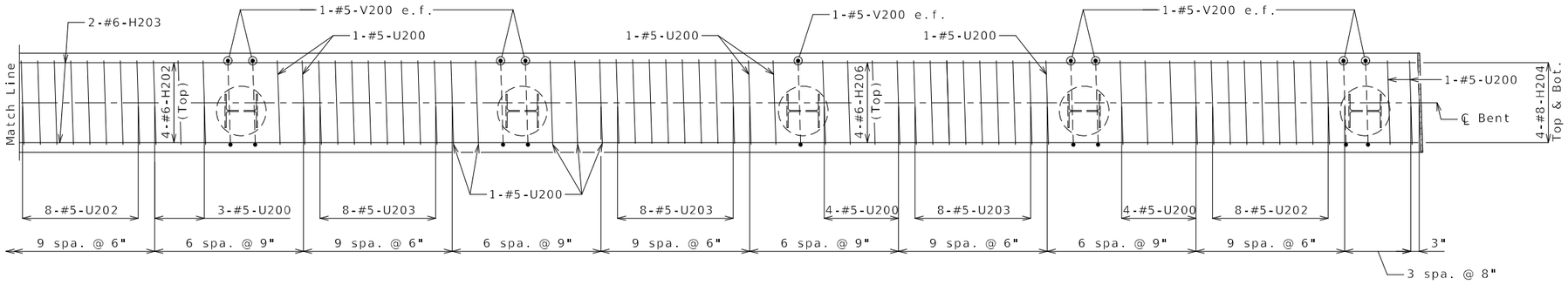
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171052\B_A9414_011_JSU0076.dgn 4:47:13 PM 9/5/2024



PART PLAN OF BEAM



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 11 & 13 thru 15.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) Seal joint between vertical face of EB and WB bearing beams with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

END BENT NO. 2
BEAM DETAILS 2 OF 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/5/2024

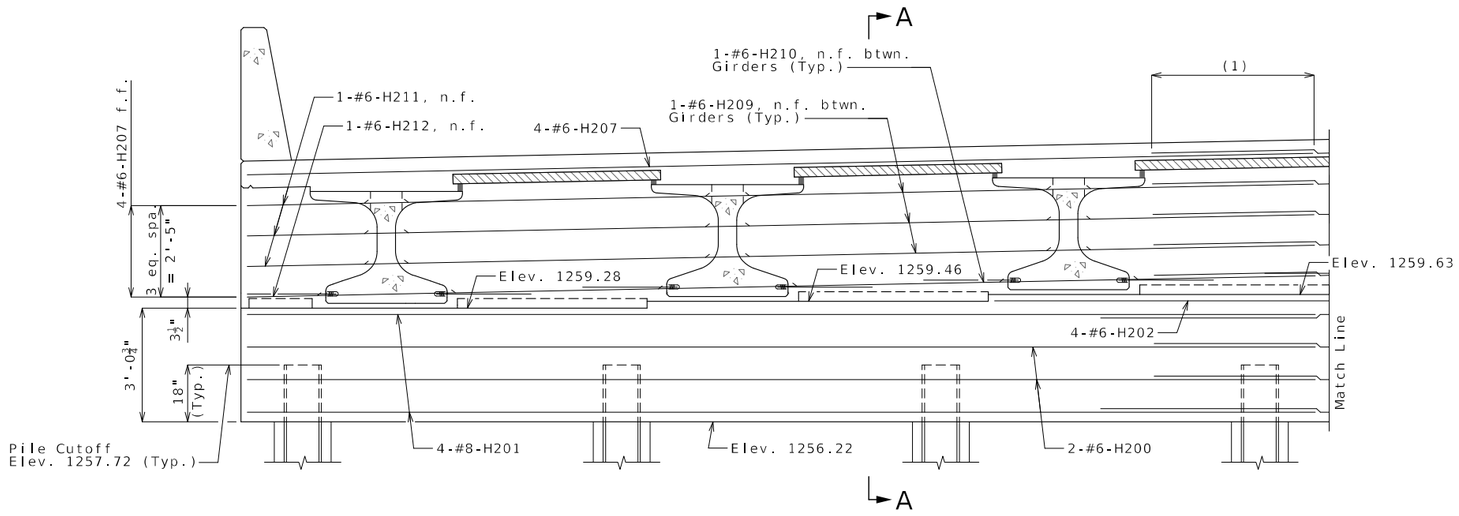
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	12

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9414

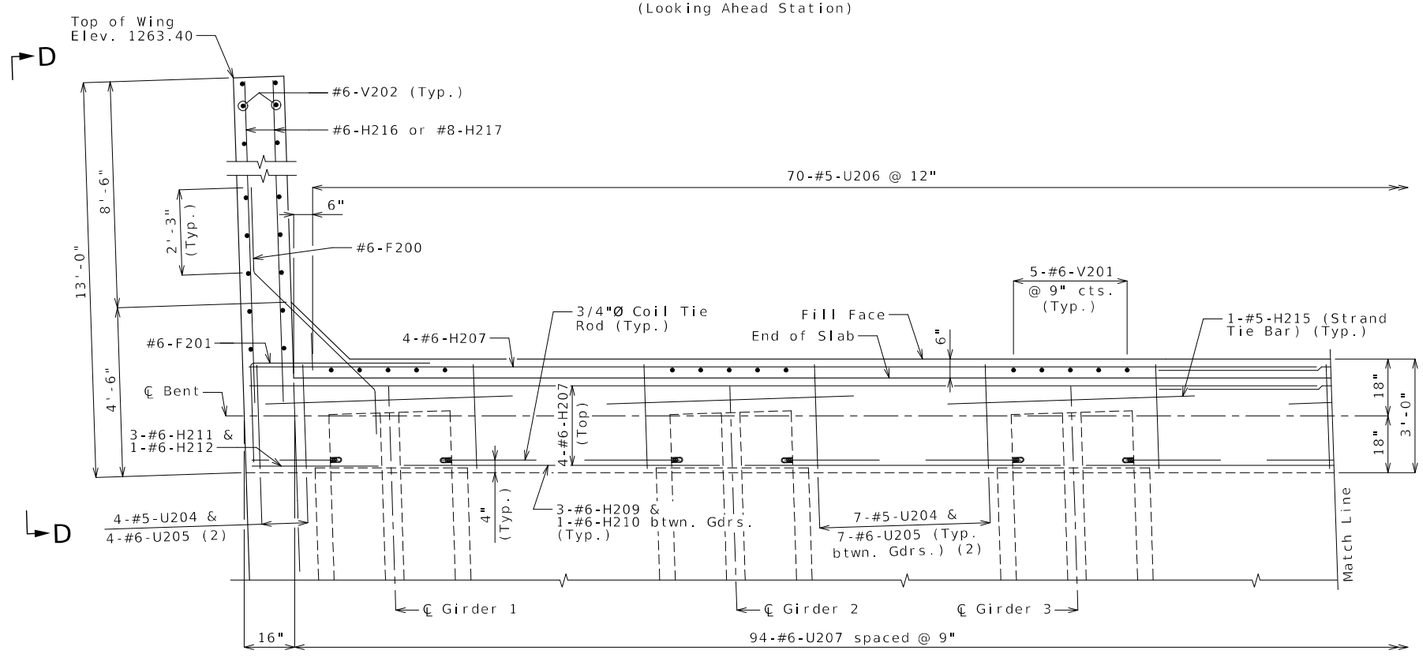
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



SECTION NEAR END BENT
(Looking Ahead Station)



PART PLAN
(2) Space bars to match #5-V200 & #5-U200 bars.
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 11, 12, 14 and 15.

For Section A-A see Sheet No. 15.

The #6-F200 shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H215, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) Minimum Lap #6 Bars = 4'-3"
Minimum Lap #8 Bars = 5'-8"

END BENT NO. 2
DIAPHRAGM DETAILS 1 of 2

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

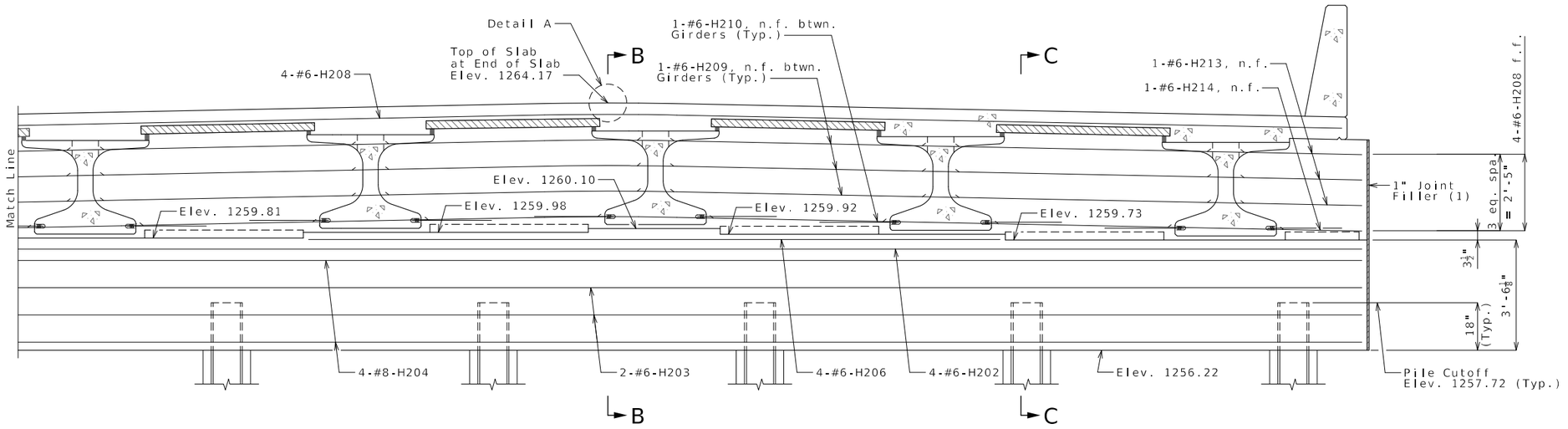
TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 13
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9414

DESCRIPTION | DATE | REV.

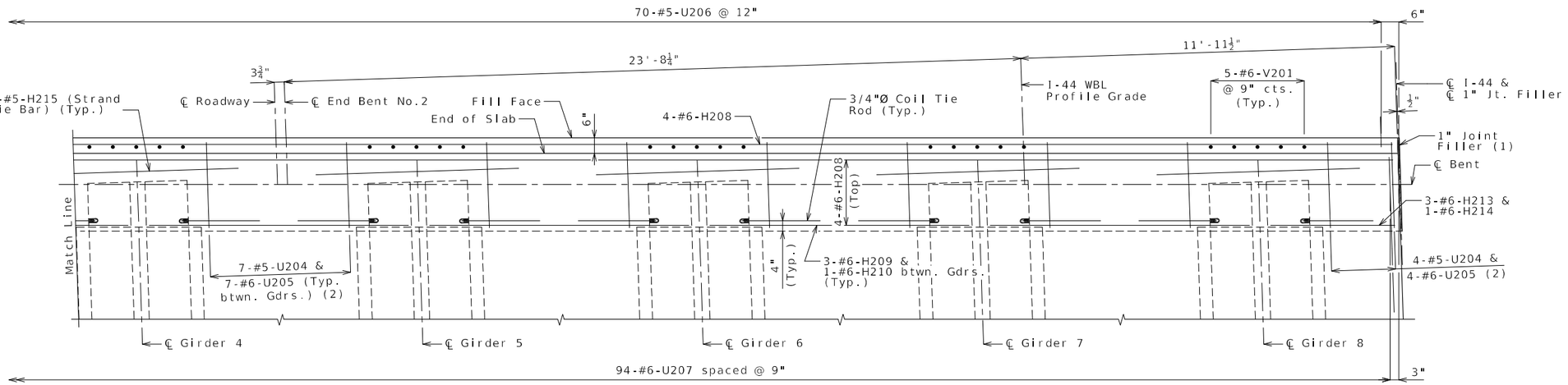
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



SECTION NEAR END BENT

(Looking Ahead Station)



PART PLAN

(2) Space bars to match #5-V200 & #5-U200 bars.

NOTES:

Work this sheet with Sheets No. 11 thru 13 and 15.

For Section A-A see Sheet No. 15.

For Detail A see Sheet No. 21.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H215, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) Seal joint between vertical face of EB and WB bearing beam and diaphragms with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 14 of 30

END BENT NO. 2 DIAPHRAGM DETAILS 2 of 2

c:\bmcd_lib\pw_connect\trn\d0171052\B_A9414_014_JSU0076.dgn 4:47:53 PM 9/5/2024

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	14

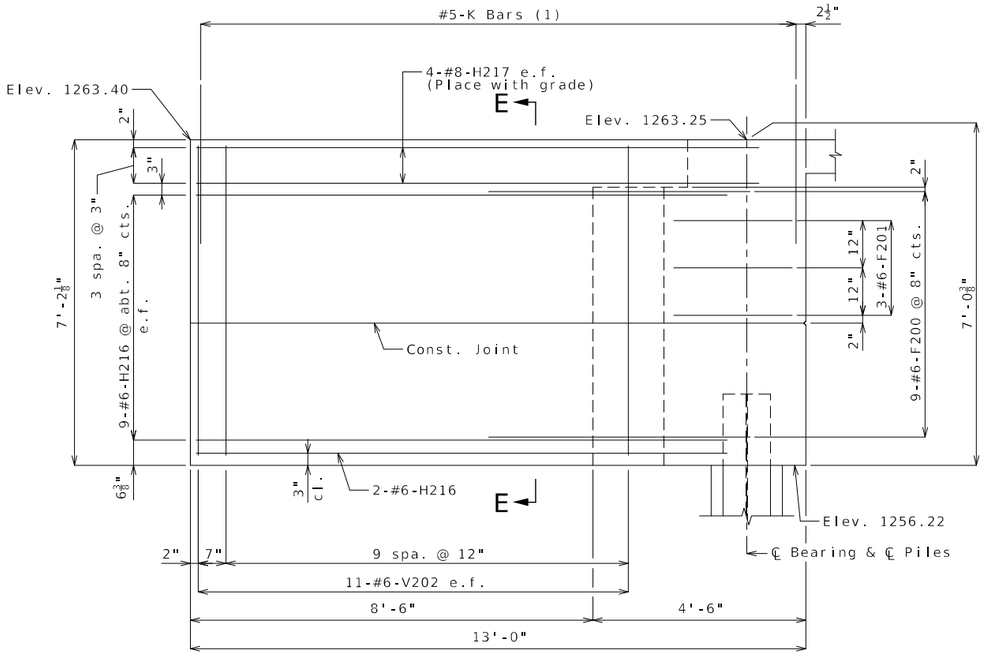
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9414

REV.	DESCRIPTION	DATE

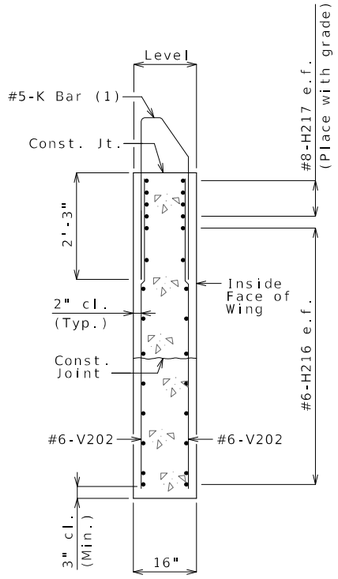
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

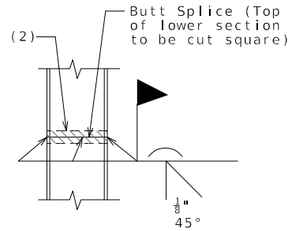
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



ELEVATION D-D



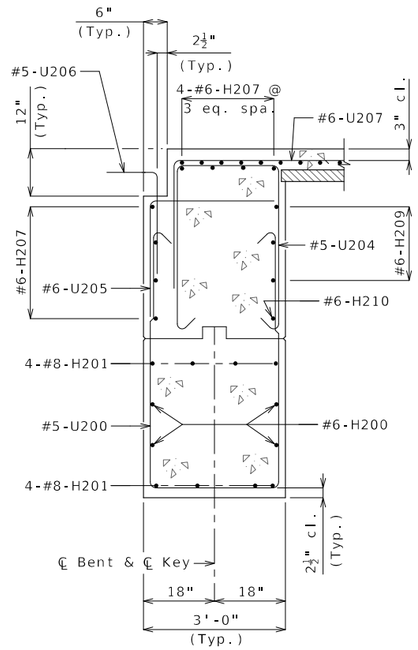
SECTION E-E



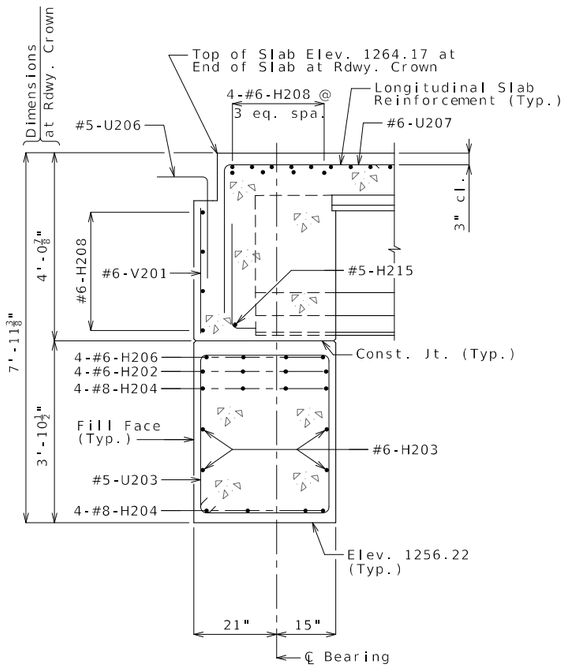
STEEL PILE SPLICE

(If required)

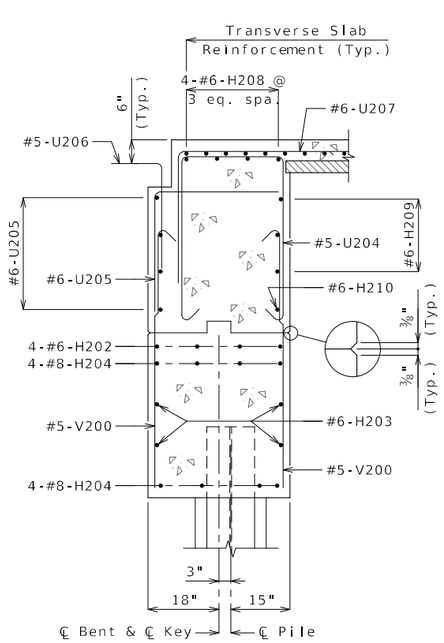
(2) Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

(1) For reinforcement of the Type D Barrier at End Bent, see Sheet No. 23.

e.f. denotes each face.

For details of bridge approach slab, see Sheet No. 24.

Work this sheet with Sheets No. 11 thru 14.

END BENT NO. 2
WING DETAILS & SECTIONS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 15 of 30

4:48:07 PM 9/5/2024

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	15

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9414

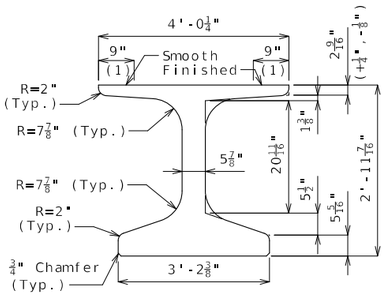
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

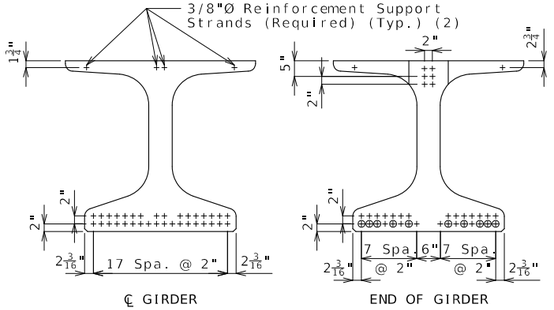
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.



DIMENSIONS
AT MID SPAN

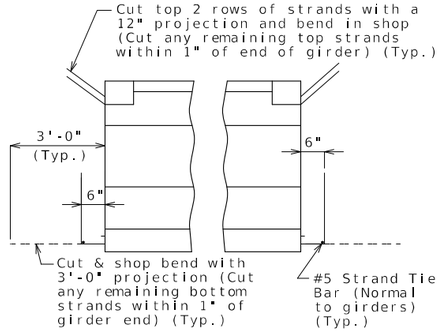
(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.



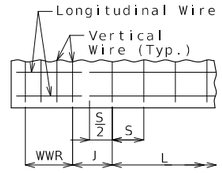
STRAND ARRANGEMENT

\+ Indicates prestressing strand.

o Indicates cut & shop bend with 3'-0" projection.



STRANDS AT GIRDER ENDS



WELDED WIRE PLACEMENT

S = Vertical wire spacing

L = Length of WWR mats

J = Distance between WWR mats

Bill of Reinforcing Steel

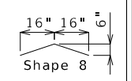
Bars Each Girder

No.	Size/Mark		Length	Shape
102	3	G1	2'-10"	8
2	4	G3	3'-10¼"	20

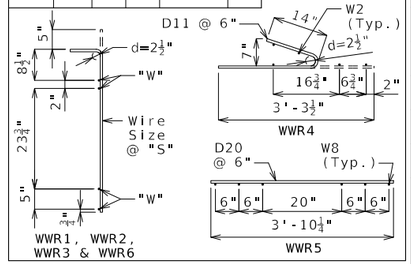
Welded Wire Each Girder

Mark	Size	S	W	L	J
WWR1	D31	4"	W12	6'-4"	4"
WWR2	D31	12"	W12	24'-0"	12"
WWR3	D31	2'-0"	W12	6'-0"	12"
WWR6	D31	2"	W12	16"	3½"

Bending Diagrams



Shape 20



All dimensions are out to out.

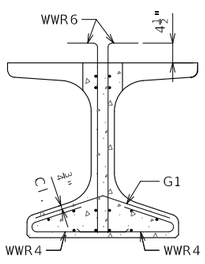
Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Actual bar lengths are measured along centerline of bar to the nearest inch.

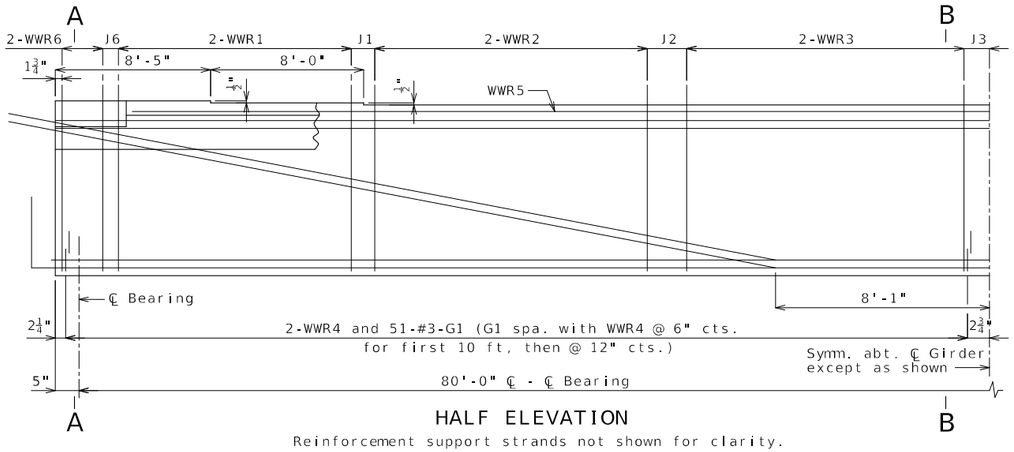
Minimum clearance to reinforcing shall be 1", unless otherwise shown.

All bar reinforcement shall be Grade 60.

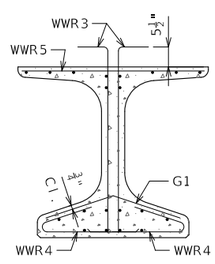
WWR shall not be epoxy coated.



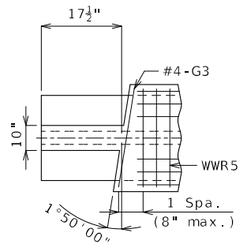
SECTION A-A
Strands not shown for clarity.



HALF ELEVATION
Reinforcement support strands not shown for clarity.



SECTION B-B
Strands not shown for clarity.



TOP FLANGE BLOCKOUT

General Notes:

Concrete for prestressed beams shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 34 strands, 0.6"Ø Grade 270, with an initial prestress force of 1494 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

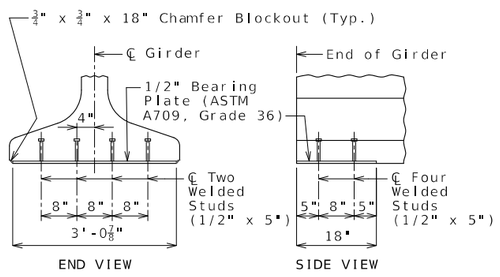
Exterior and interior girders are the same except for coil ties and application of bond breaker.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

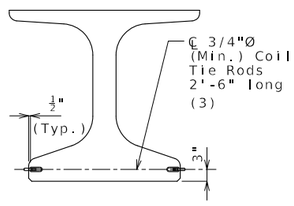
For Girder Camber Diagram, see Sheet No. 19.

For location of coil ties at integral bents, see Sheets No. 7, 8, 13 and 14.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.



BEARING PLATE



COIL TIES

(3) 2'-3" at exterior face of Girder 1 at end bents

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

STATE OF MISSOURI · TRAVIS M. RAPP · NUMBER PE-2011019033 · PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	16

COUNTY GREENE

JOB NO. JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9414

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

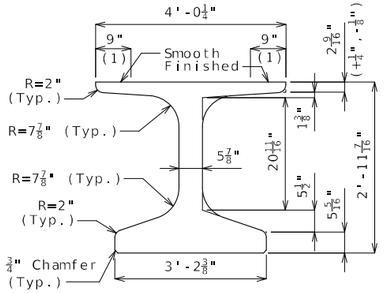
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

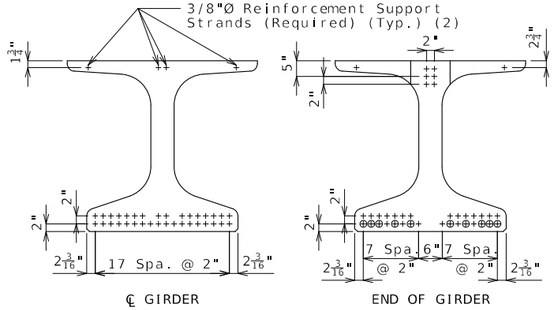
NU-GIRDERS - SPAN (1-2)

(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.



DIMENSIONS
AT MID-SPAN

(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.

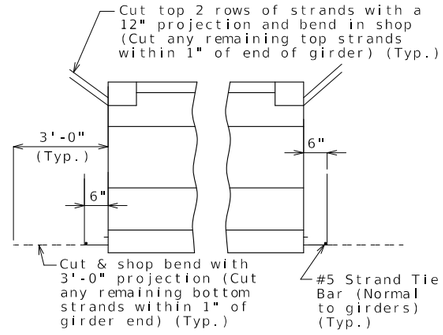


℄ GIRDER END OF GIRDER

STRAND ARRANGEMENT

+ Indicates prestressing strand.

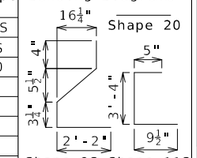
o Indicates cut & shop bend with 3'-0" projection.



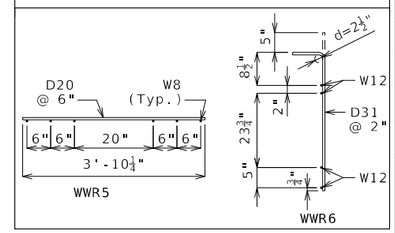
STRANDS AT GIRDER ENDS

Bill of Reinforcing Steel - Each Girder			
No.	Size/ Mark	Length	Shape
180	5 B1	4'-4"	11S
200	4 D1	4'-0"	9S
2	4 G3	3'-10¼"	20

Bending Diagrams



Welded Wire Reinforcement - Each Girder



All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

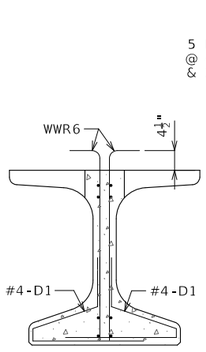
Actual bar lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be one inch.

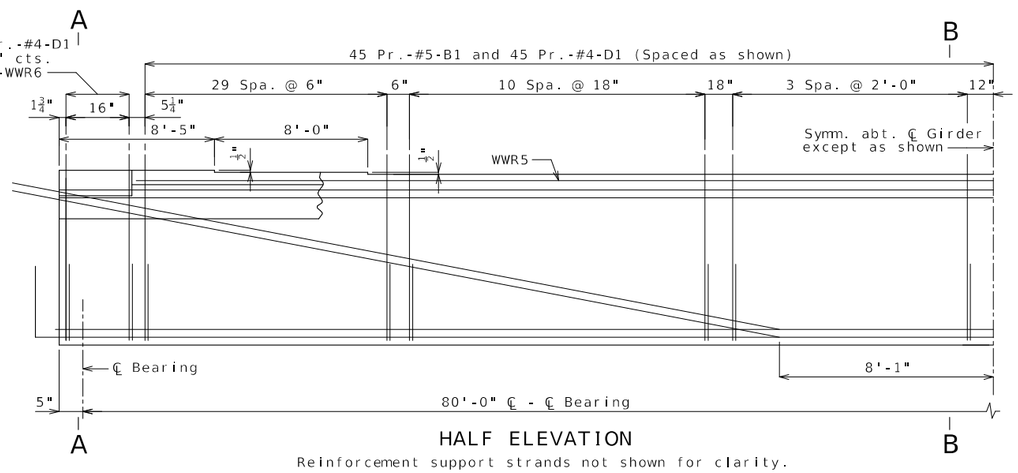
All bar reinforcement shall be Grade 60.

The two D1 bars may be furnished as one bar at the fabricator's option.

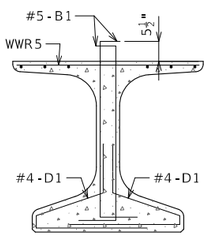
All B1 bars shall be epoxy coated.



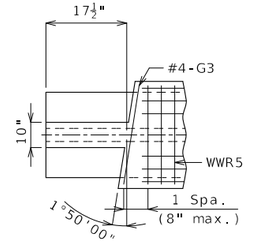
SECTION A-A
Strands not shown for clarity.



HALF ELEVATION
Reinforcement support strands not shown for clarity.



SECTION B-B
Strands not shown for clarity.



TOP FLANGE BLOCKOUT

General Notes:

Concrete for prestressed girders shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 34 strands, 0.6"Ø Grade 270, with an initial prestress force of 1494 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

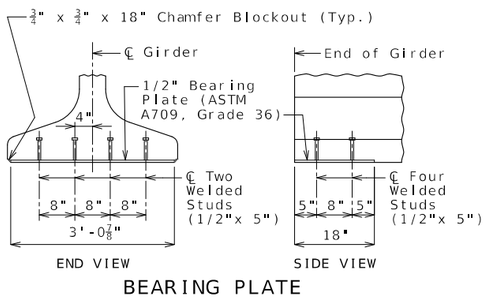
Exterior and interior girders are the same except for coil ties and application of bond breaker.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

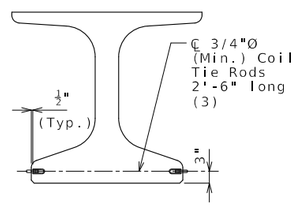
For Girder Camber Diagram, see Sheet No.19.

For location of coil ties at integral bents, see Sheets No. 7, 8, 13 and 14.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.



BEARING PLATE



COIL TIES

(3) 2'-3" at exterior face of Girder 1 at end bents

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

NU-GIRDERS (ALTERNATE REINFORCEMENT) - SPAN (1-2)

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE I-44 | STATE MO

DISTRICT BR | SHEET NO. 17

COUNTY GREENE

JOB NO. JSU0076

CONTRACT ID.

PROJECT NO.

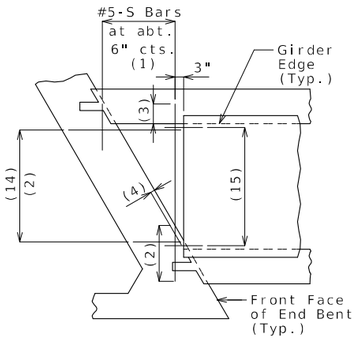
BRIDGE NO. A9414

DESCRIPTION | DATE

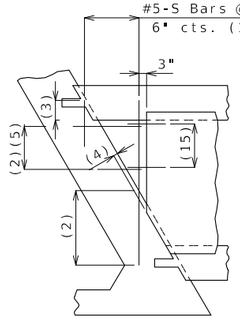
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

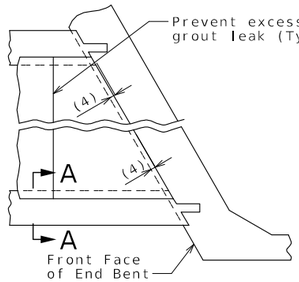
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



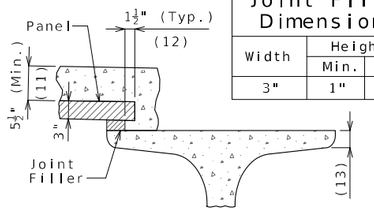
SQUARED END PANELS OR TRUNCATED END PANELS





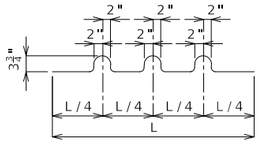
SKEWED END PANELS

PLAN SHOWING PANEL PLACEMENT



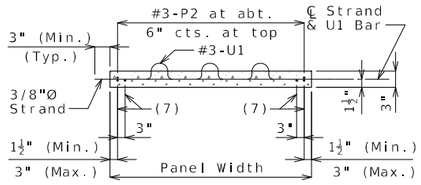
SECTION A-A

Joint Filler Dimensions		
Width	Height	
	Min.	Max.
3"	1"	4"



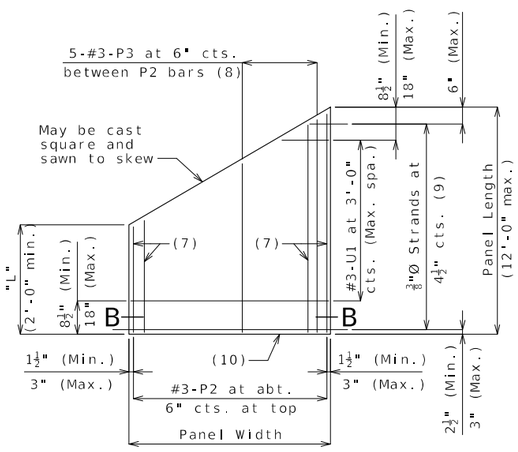
BENDING DIAGRAM FOR U1 BAR

U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars.

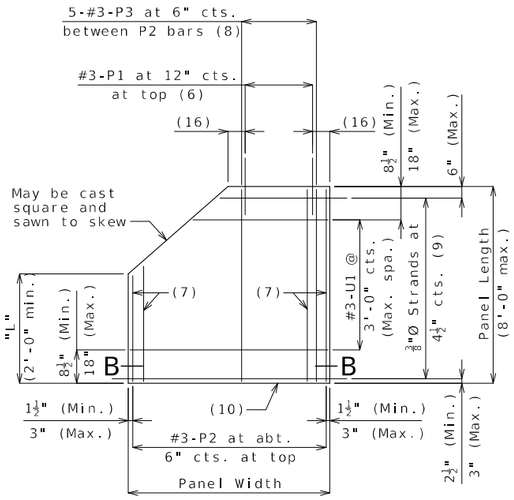


SECTION B-B

(14) #5-S Bars at abt. 9" cts. (1)
(15) #3-P1 at 12" cts. (End panels only)

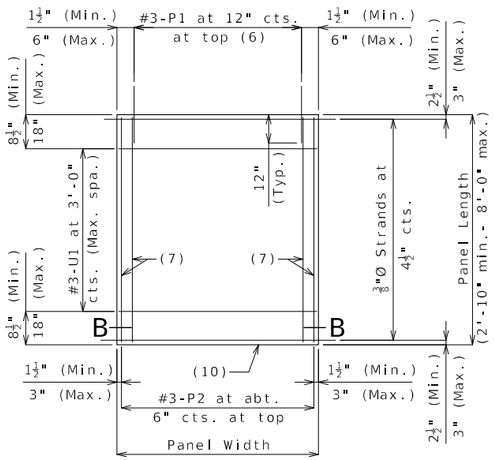


PLAN OF OPTIONAL SKEWED END PANEL



PLAN OF OPTIONAL TRUNCATED END PANEL

(16) 3" (Min.), 6" (Max.)



PLAN OF SQUARED PANEL

Reference Notes:

Plan of Panel Placement:
(1) S-bars shown are bottom steel in slab between panels and used with squared and truncated end panels only.

(2) Extend S-bars 18 inches beyond the front face of end bents for squared and truncated end panels only.

(3) Extend S-bars 9 inches beyond edge of girder (Typ.).

(4) End panels shall be dimensioned 1/2" min. to 1 1/2" max. from the inside face of diaphragm.

(5) For truncated end panels, use a min. of #5-S bars at 6" crossings in openings, or min. 4x4-W7xW7.

Plans of Panels:
(6) For end panels only, P1 bars shall be 2'-0" in length and embedded 12". P1 bars will not be required for panels at squared integral end bents.

(7) #3-P2 bars near edge of panel at bottom (under strands).

(8) Use #3-P3 bars if panel is skewed 45° or greater.

(9) Any strand 2'-0" or shorter shall have a #4 reinforcing bar on each side of it, centered between strands. Strands 2'-0" or shorter may then be debonded at the fabricator's option.

(10) Optional 1/2" x 45° Chamfer one or both sides at bottom.

Section A-A:
(11) Slab thickness over prestressed panels varies due to girder camber. In order to maintain minimum slab thickness, it may be necessary to raise the grade uniformly throughout the structure. No payment will be made for additional labor or materials required for necessary grade adjustment.

(12) Contractor shall ensure proper consolidation under and between panels.

(13) At the contractor's option, the variation in slab thickness over prestressed panels may be eliminated or reduced by increasing and varying the girder top flange thickness. Dimensions shall be shown on the shop drawings.

General Notes:

Prestressed Panels:
Concrete for prestressed panels shall be Class A-1 with f'c = 6,000 psi, f'ci = 4,000 psi.

The top surface of all panels shall receive a scored finish with a depth of scoring of 1/8" perpendicular to the prestressing strands in the panels.

Prestressing tendons shall be high-tensile strength, uncoated, seven-wire, low-relaxation strands for prestressed concrete in accordance with AASHTO M 203 Grade 270, with nominal diameter of strand = 3/8" and nominal area = 0.085 sq.in. and minimum ultimate strength = 22.95 kips (270 ksi). Larger strands may be used with the same spacing and initial tension.

Initial prestressing force = 17.2 kips/strand.

The method and sequence of releasing the strands shall be shown on the shop drawings.

Suitable anchorage devices for lifting panels may be cast in panels, provided the devices are shown on the shop drawings and approved by the engineer. Panel lengths shall be determined by the contractor and shown on the shop drawings.

When squared end panels are used at skewed bents, the skewed portion shall be cast full depth. No separate payment will be made for additional concrete and reinforcing required.

Support from diaphragm forms is required under the optional skewed end until cast-in-place concrete has reached 3,000 psi compressive strength.

Prestressed panels shall be brought to saturated surface-dry (SSD) condition just prior to the deck pour. There shall be no free standing water on the panels or in the area to be cast.

The prestressed panel quantities are not included in the table of estimated quantities for the slab.

Reinforcing Steel:
All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

If U1 bars interfere with placement of slab steel, U1 loops may be bent over, as necessary, to clear slab steel.

Deformed welded wire reinforcement (WWR) providing a minimum area of reinforcing perpendicular to strands of 0.22 sq in./ft, with spacing parallel to strands sufficient to ensure proper handling, may be used in lieu of the #3-P2 bars shown. Wire diameter shall not be larger than 0.375 inch. The above alternative reinforcement criteria may be used in lieu of the #3-P3 bars, when required, and placed over a width not less than 2 feet.

The following reinforcing steel shall be tied securely to the strands with the following maximum spacing in each direction:
#3-P2 bars at 16 inches.
WWR at 24 inches.

The #3-U1 bars shall be tied securely to #3-P2 bars, to WWR or to strands (when placed between P1 bars) at about 3-foot centers.

Minimum reinforcement steel length shall be 2'-0".

All reinforcement other than prestressing strands shall be epoxy coated.

Precast panels may be in contact with stirrup reinforcing in diaphragms.

S-bars are not listed in the bill of reinforcing.

Cost of S-bars will be considered completely covered by the contract unit price for the slab.

Joint Filler:
Joint filler shall be preformed fiber expansion joint material in accordance with Sec 1057 or expanded or extruded polystyrene bedding material in accordance with Sec 1073.

Use Slab Haunching Diagram on Sheet No. 19 for determining thickness of joint filler within the limits noted in the table of Joint Filler Dimensions.

Thicker material may be used on one or both sides of the girder to reduce cast-in-place concrete thickness to within tolerances.

The same thickness of preformed fiber expansion joint material shall be used under any one edge of any panel except at locations where top flange thickness may be stepped. The maximum change in thickness between adjacent panels shall be 1/2 inch. The polystyrene bedding material may be cut with a transition to match haunch height above top of flange.

Joint filler shall be glued to the girder. When thickness exceeds 1 1/2 inches, the joint filler shall be glued top and bottom. The glue used shall be the type recommended by the joint filler manufacturer.

Edges of panels shall be uniformly seated on the joint filler before slab reinforcement is placed.

PRESTRESSED PANELS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

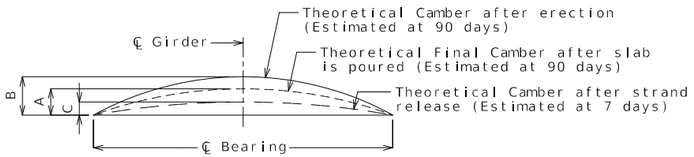
DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 18
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9414

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



Girder	Span (1-2)		
	A	B	C
Exterior	3"	4⅝"	2⅝"
Interior	2⅞"		

GIRDER CAMBER DIAGRAM

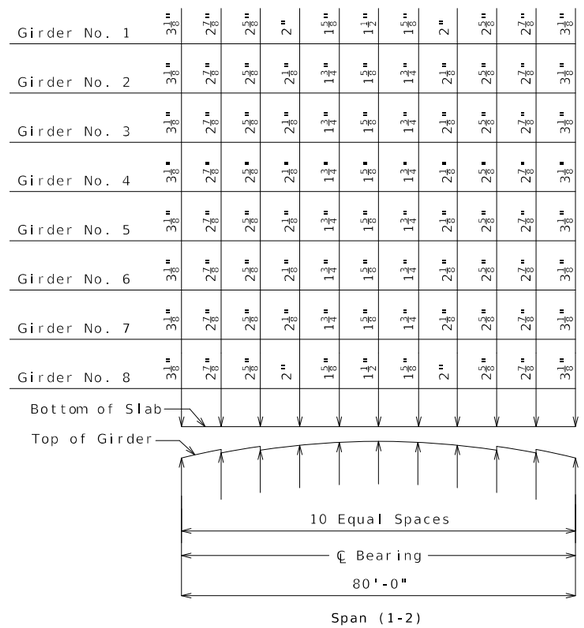
Conversion Factors for Girder Camber (Estimated at 90 days):

0.1 pt. = 0.314 x 0.5 pt.
0.2 pt. = 0.593 x 0.5 pt.
0.3 pt. = 0.813 x 0.5 pt.
0.4 pt. = 0.952 x 0.5 pt.

Theoretical Bottom of Slab Elevations at Centerline of Girder (Prior to forming for slab) (Estimated at 90 days)

Girder Number	Span (1-2) (80'-0" ℄ Brg. - ℄ Brg.)										
	℄ Brg.	.10	.20	.30	.40	.50	.60	.70	.80	.90	℄ Brg.
1	1261.46	1261.63	1261.79	1261.94	1262.08	1262.20	1262.31	1262.40	1262.48	1262.55	1262.62
2	1261.63	1261.81	1261.97	1262.12	1262.26	1262.39	1262.49	1262.59	1262.67	1262.73	1262.79
3	1261.81	1261.98	1262.14	1262.30	1262.44	1262.56	1262.67	1262.76	1262.84	1262.91	1262.97
4	1261.98	1262.16	1262.32	1262.47	1262.61	1262.74	1262.85	1262.94	1263.02	1263.09	1263.15
5	1262.16	1262.33	1262.50	1262.65	1262.79	1262.91	1263.02	1263.11	1263.19	1263.26	1263.32
6	1262.28	1262.45	1262.61	1262.76	1262.90	1263.03	1263.14	1263.23	1263.31	1263.38	1263.44
7	1262.09	1262.26	1262.43	1262.58	1262.72	1262.84	1262.95	1263.05	1263.13	1263.19	1263.26
8	1261.91	1262.08	1262.24	1262.39	1262.53	1262.65	1262.76	1262.85	1262.94	1263.01	1263.07

Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoretical dead load deflections due to weight of slab (including precast panel) and barrier.

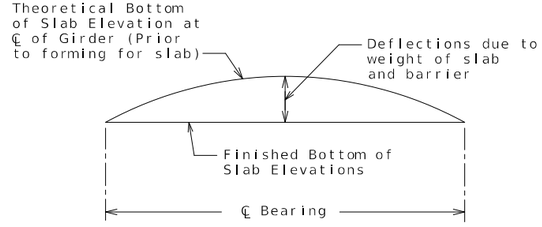


THEORETICAL SLAB HAUNCHING DIAGRAM (ESTIMATED AT 90 DAYS)

If girder camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an adjustment of the slab haunches, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Concrete in the slab haunches is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Theoretical slab haunches are measured at ℄ Girder.



TYPICAL SLAB ELEVATIONS DIAGRAM

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

GIRDER CAMBER AND SLAB HAUNCHING

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

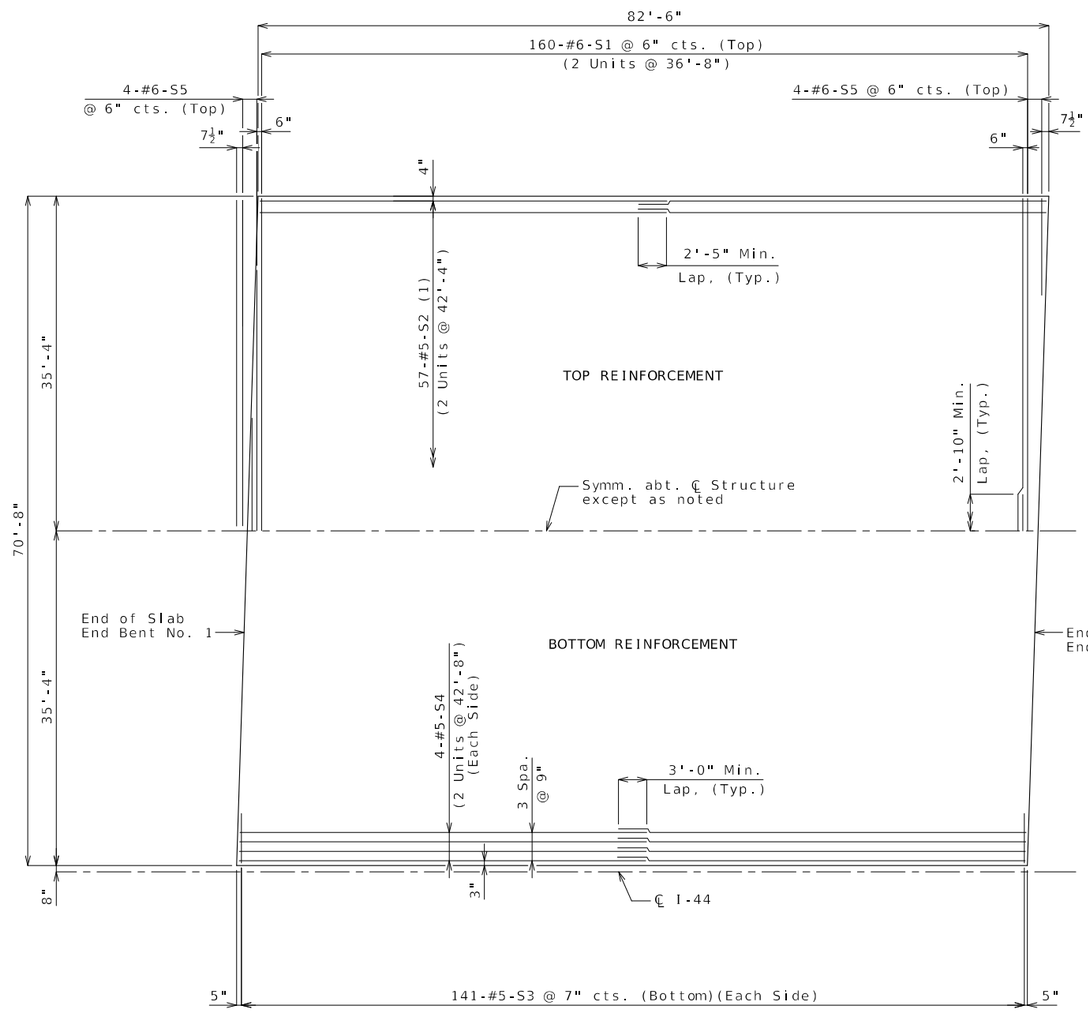
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/5/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 19
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9414

DESCRIPTION | DATE

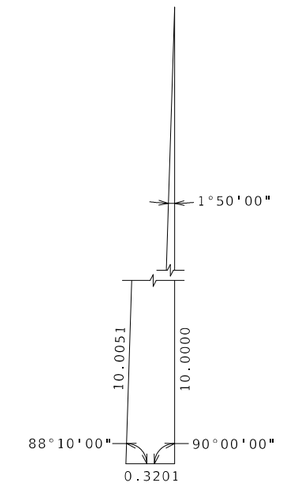
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



SPAN (1-2)

PLAN OF SLAB REINFORCEMENT



NOTES:

Longitudinal slab dimensions shown are horizontal.

For Theoretical Slab Haunching Diagram and Theoretical Bottom of Slab Elevations, see Sheet No. 19.

For Details of Precast Prestressed Panels, see Sheet No. 18.

For Details and Reinforcement of Safety Barrier Curb not shown, see Sheets No. 22 & 23.

(1) For spacing of longitudinal bars not shown, see Slab Section & Details on Sheet No. 21.

SLAB PLAN

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

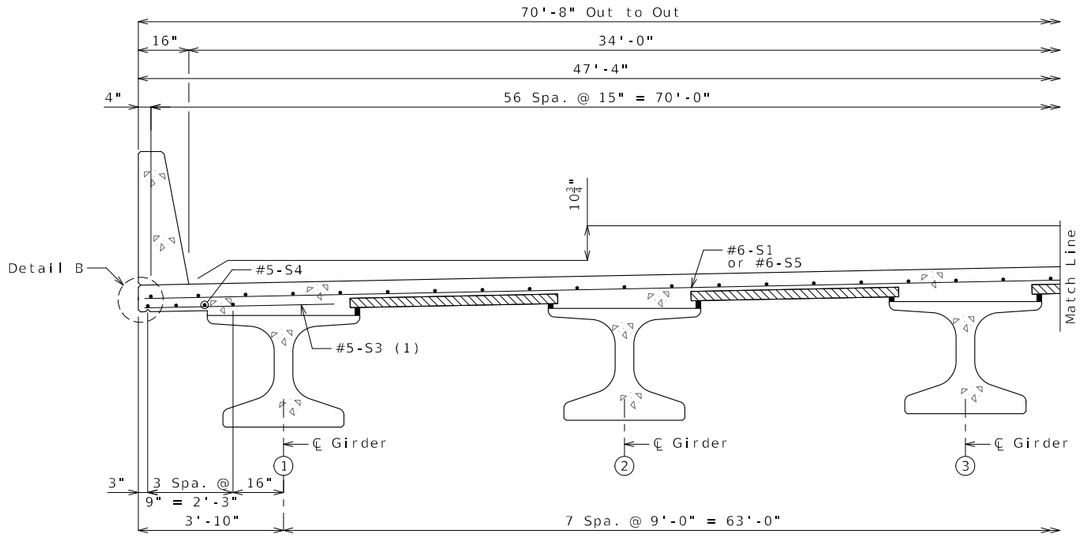
DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 20
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9414

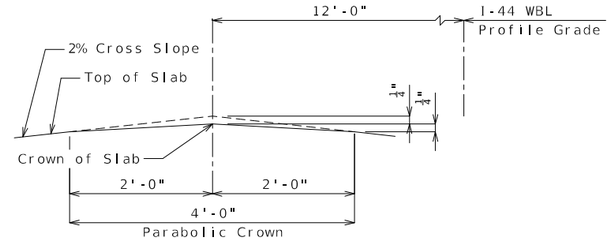
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

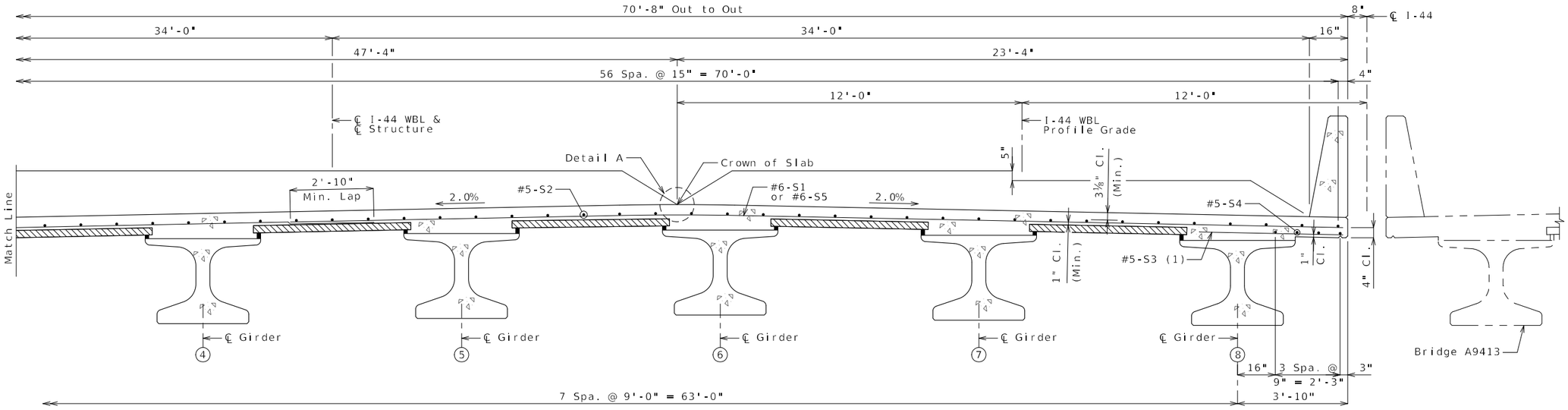
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

REV.



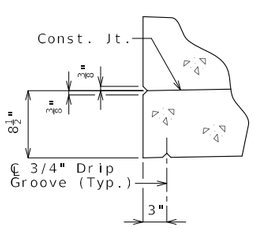


DETAIL A



SECTION THRU SLAB

(1) Alternate bar shape available, see Sheet No. 22.



DETAIL B

NOTES:

For details of precast prestressed panels, see Sheet No. 18.

For reinforcement of barrier not shown, see Sheet No. 22.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram and Theoretical Slab Haunching Diagram, see Sheet No. 19.

For Plan of Slab Showing Reinforcement, see Sheet No. 20.

Bridge will be cast in a single pour.

TYPICAL SLAB SECTION

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	21

COUNTY: GREENE

JOB NO.: JSU0076

CONTRACT ID.:

PROJECT NO.:

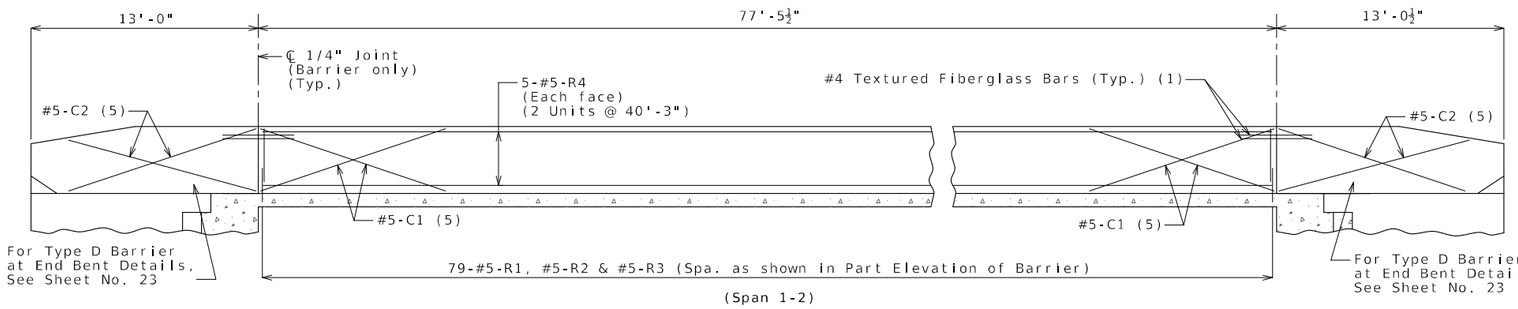
BRIDGE NO.: A9414

DESCRIPTION	DATE

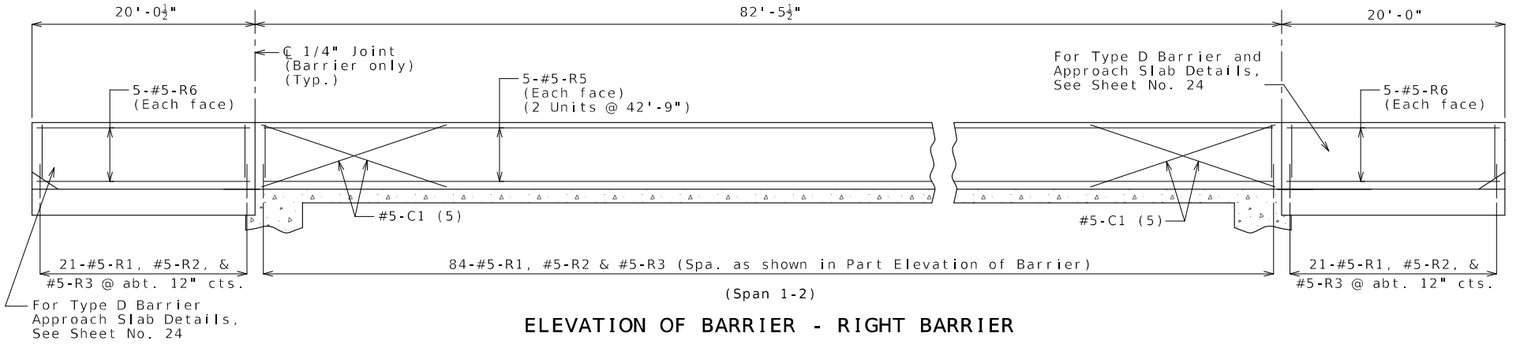
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

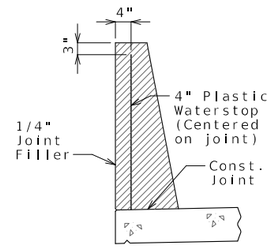
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



ELEVATION OF BARRIER - LEFT BARRIER



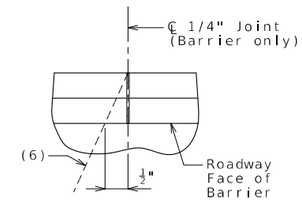
ELEVATION OF BARRIER - RIGHT BARRIER



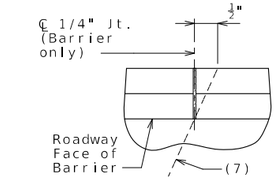
WATERSTOP DETAIL

Plastic waterstop shall be placed in all formed joints, except structures with superelevation, use on lower joints only.

Cost of plastic waterstop, complete in place, will be considered completely covered by the contract unit price for Type D Barrier.



(6) Front Face of End Bent No. 1 for Left Barrier
End of Slab at End Bent No. 2 for Right Barrier



(7) Front Face of End Bent No. 2 for Left Barrier
End of Slab at End Bent No. 1 for Right Barrier

PART PLAN SHOWING JOINT LOCATION

General Notes:

Longitudinal dimensions are horizontal.

Conventional forming or slip forming may be used. Saw cut joints may be used with conventional forming.

Top of barrier shall be built parallel to grade and barrier joints (except at end bents) normal to grade.

All exposed edges of barrier shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type D Barrier per linear foot.

Concrete in barrier shall be Class B-1.

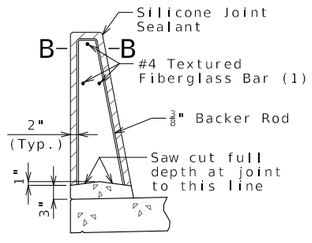
Measurement of barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of wing to end of wing for Right Barrier and from end of approach slab to end of approach slab for Left Barrier.

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

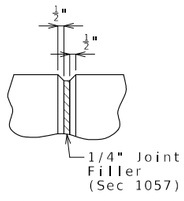
Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

For slip-formed option, both sides of barrier shall have a vertically broomed finish and the top shall have a transversely broomed finish.

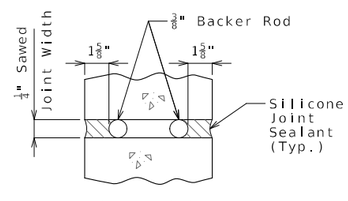
Plastic waterstop shall not be used with saw cut joints.



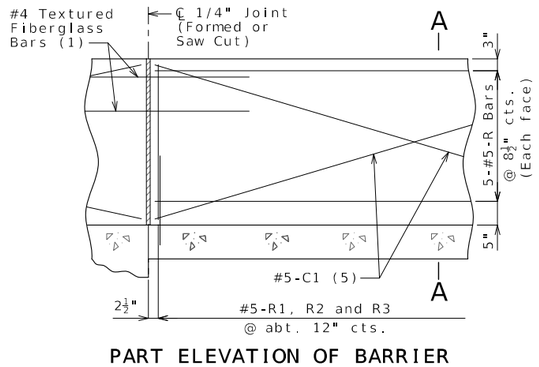
SECTION THRU SAW CUT JOINT



PART ELEVATION AT FORMED JOINT

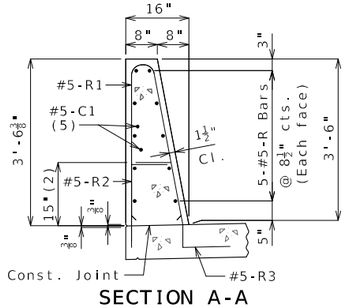


SECTION B-B



PART ELEVATION OF BARRIER

(1) Four feet long, centered on joint, slip-formed option only

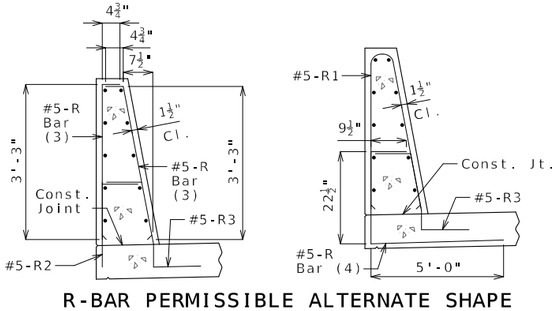


SECTION A-A

Use a minimum lap of 3'-1" for #5 horizontal barrier bars.

The cross-sectional area above the slab is 3.52 square feet.

(2) To top of bar



R-BAR PERMISSIBLE ALTERNATE SHAPE

(3) The R1 bar may be separated into two bars as shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)

(4) The R2 bar and #5 bottom transverse slab bar in cantilever (prestressed panels only) combination may be furnished as one bar as shown, at the contractor's option.

(5) Slip-formed option only.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 22 of 30

TYPE D BARRIER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	22

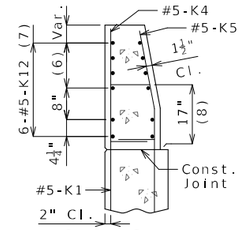
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9414

DESCRIPTION | DATE

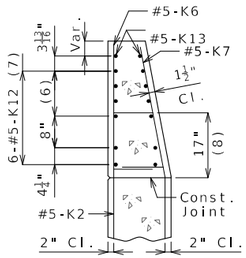
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

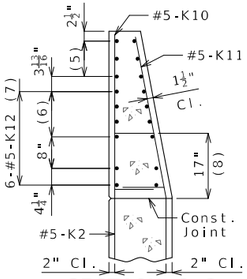
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



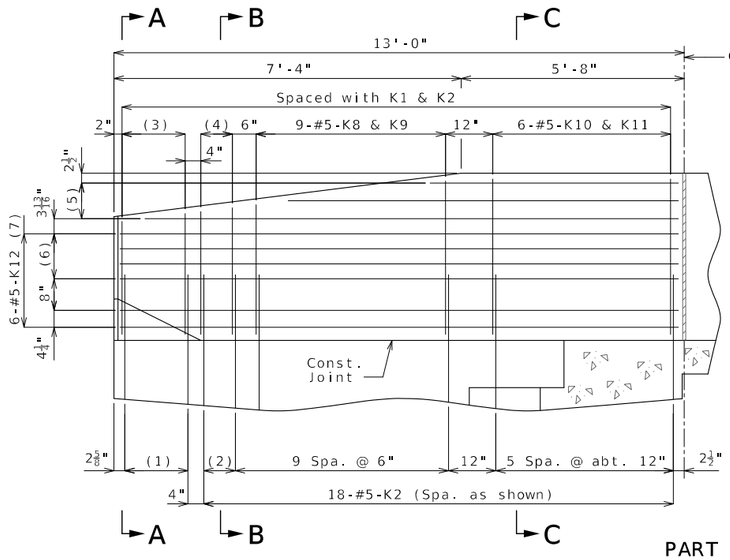
SECTION A-A

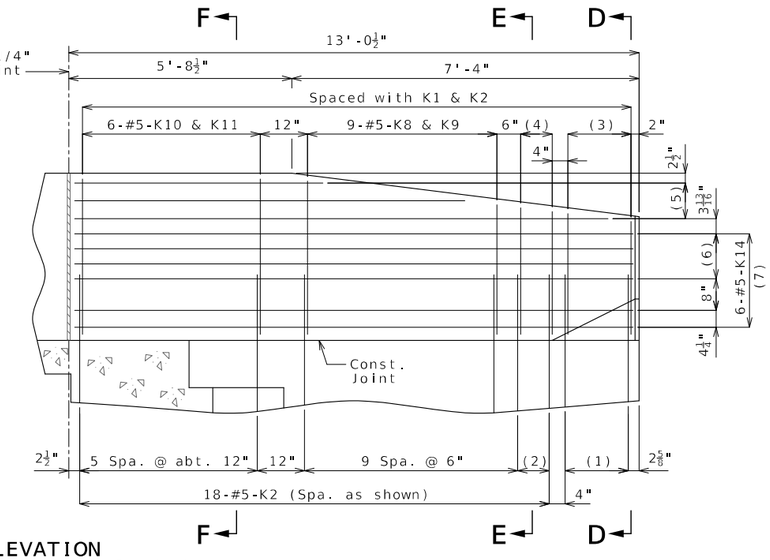


SECTION B-B

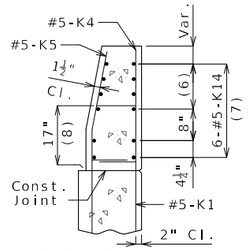


SECTION C-C

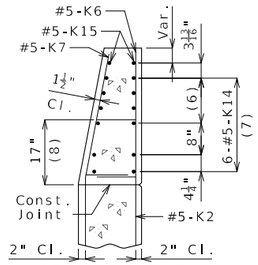




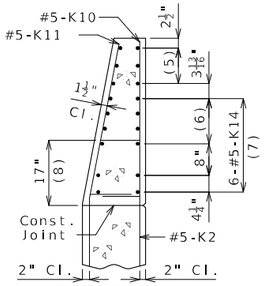
PART ELEVATION
(Looking at Front Face of Left Barrier)



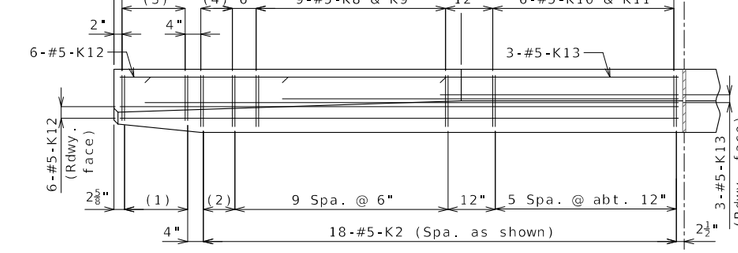
SECTION D-D

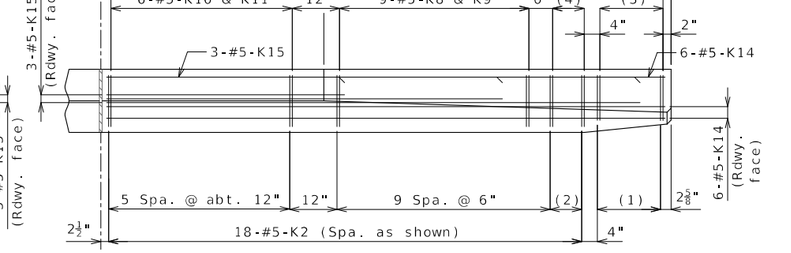


SECTION E-E

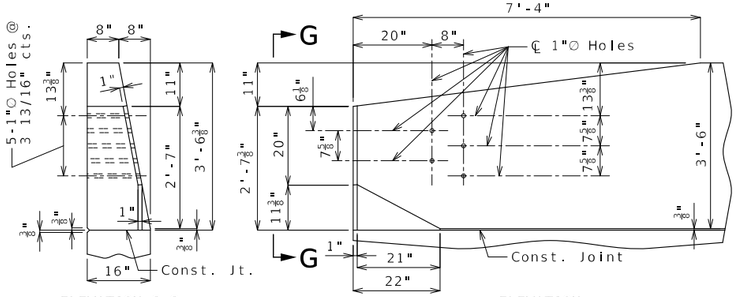


SECTION F-F

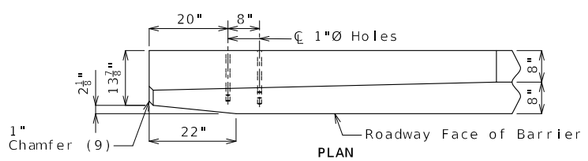




PART PLAN
(Left barrier shown)



ELEVATION G-G ELEVATION



PLAN

DETAILS OF GUARD RAIL ATTACHMENT

(1) 5-#5-K1 @ 4" cts.

(2) 2 spaces @ 4"

(3) 5-#5-K4 & K5

(4) 3-#5-K6 & K7

(5) 3-#5-K13 or K15 @ 4½" cts., each face

(6) 3 spaces @ 3 13/16"

(7) Spaced as shown, each face

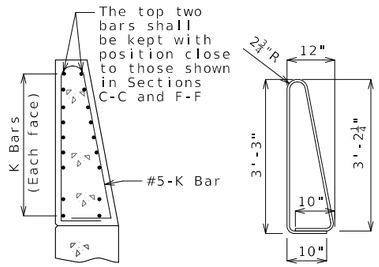
(8) To top of bar

(9) Transition to zero at Type A curb for gutter lines to match.

General Notes:

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

Reinforcing Steel:
Minimum clearance to reinforcing steel shall be 1 1/2" except as shown for bars embedded into end bent.



K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE
(Other K bars not shown for clarity)

The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

TYPE D BARRIER AT END BENTS

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	23

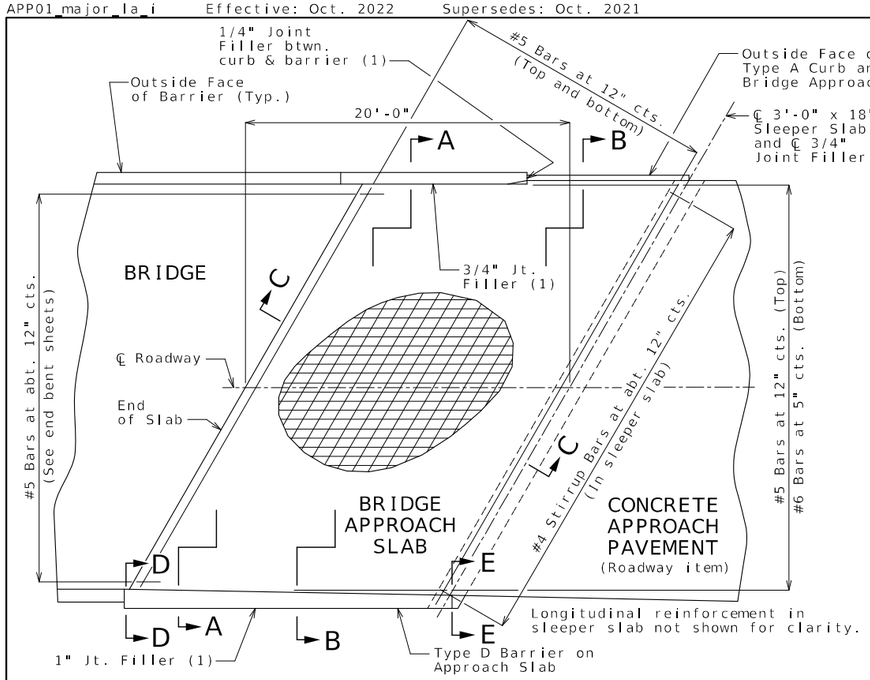
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9414

DESCRIPTION | DATE

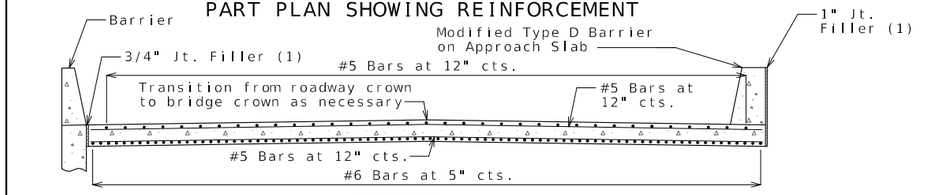
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

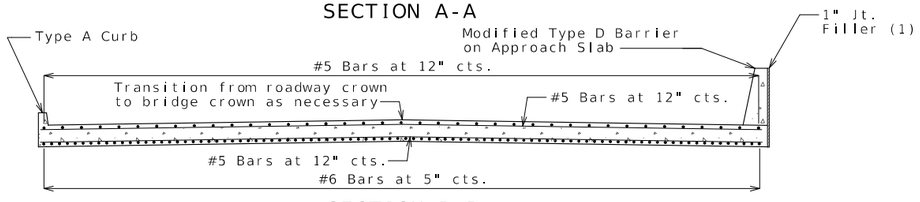
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



PART PLAN SHOWING REINFORCEMENT

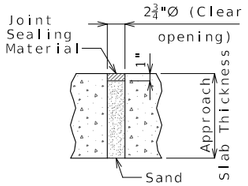


SECTION A-A



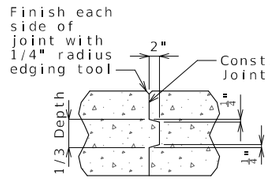
SECTION B-B

With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.

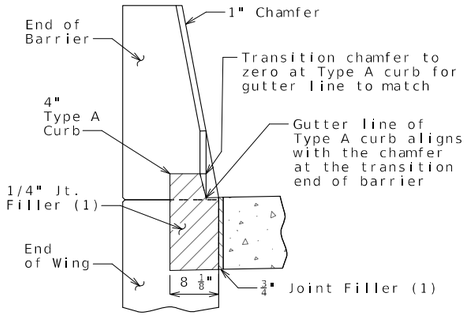


UNDERSEAL ACCESS HOLE DETAIL

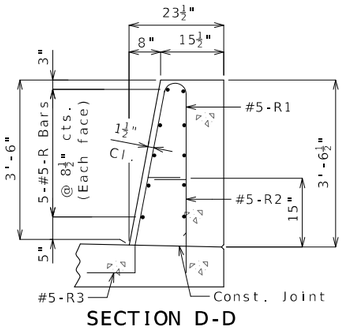
(If required)



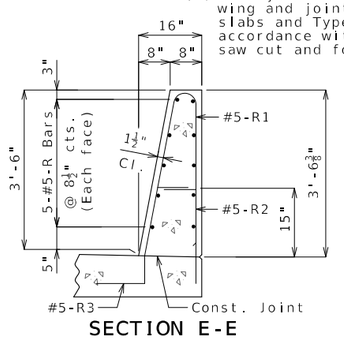
CONSTRUCTION JOINT DETAIL



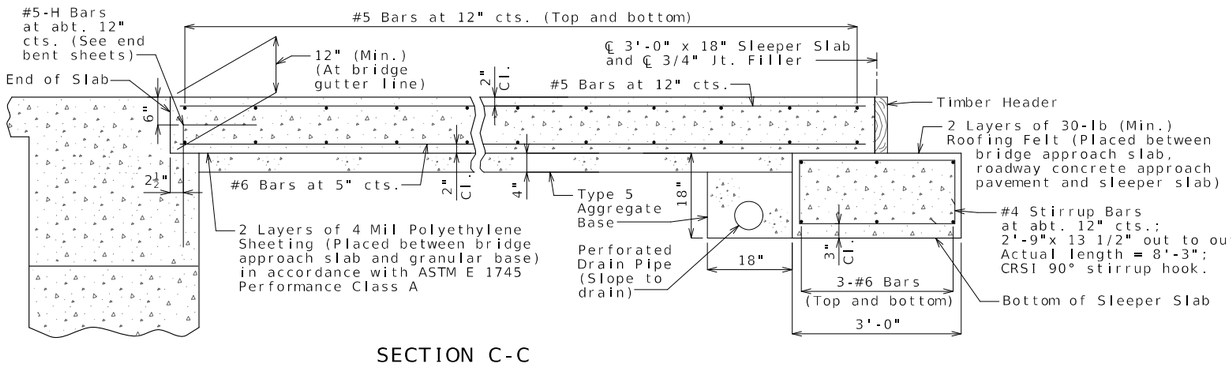
SECTION BETWEEN CURB AND BARRIER



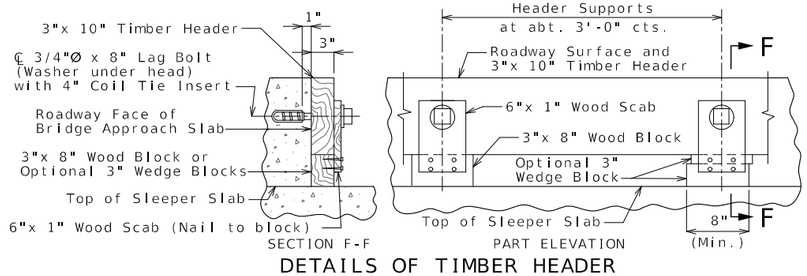
SECTION D-D



SECTION E-E



SECTION C-C



DETAILS OF TIMBER HEADER

Remove timber header when concrete pavement is placed.

General Notes:

All concrete for the bridge approach slab and sleeper slab shall be in accordance with Sec 503 (f'c = 4,000 psi).

The reinforcing steel in the bridge approach slab and the sleeper slab shall be epoxy coated Grade 60 with fy = 60,000 psi.

Drain pipe may be either 6" diameter corrugated metallic-coated pipe underdrain, 4" diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4" diameter corrugated polyethylene (PE) drain pipe.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

The reinforcing steel in the bridge approach slab and the sleeper slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 29 inches for #5 bars and 44 inches for #6 bars, or by mechanical bar splice.

Mechanical bar splices shall be in accordance with Sec. 710.

All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler except as noted.

The contractor shall pour and satisfactorily finish the bridge slab before placing the bridge approach slab.

Longitudinal construction joints in approach slab and sleeper slab shall be aligned with longitudinal construction joints in bridge slab.

For concrete approach pavement details, see roadway plans.

See Missouri Standard Plan 609.00 for details of Type A curb.

Payment for furnishing all materials, labor and excavation necessary to construct the approach slab, including the timber header, sleeper slab, underdrain, Type 5 aggregate base, joint filler and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Major) per square yard.

For details of Type D Barrier on Approach Slab, see Sheet No. 22.

(1) Seal joint between vertical face of approach slab and wing and joint between vertical face of the approach slabs and Type D barriers along ℄ I-44 with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	24

COUNTY GREENE

JOB NO. JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9414

DESCRIPTION	DATE

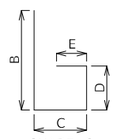
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

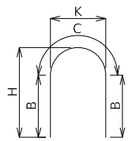
BRIDGE APPROACH SLAB (MAJOR)

Detailed: May 2024
Checked: Jun. 2024

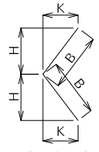
Note: This drawing is not to scale. Follow dimensions.



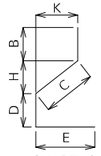
SHAPE 6 or 6S



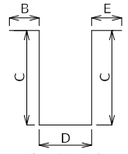
SHAPE 7



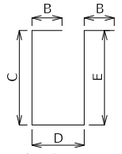
SHAPE 8 or 8S



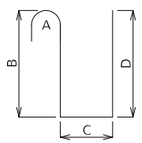
SHAPE 9 or 9S



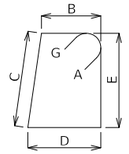
SHAPE 10 or 10S



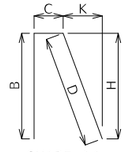
SHAPE 11 or 11S



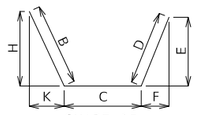
SHAPE 12



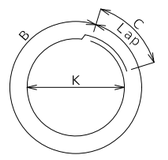
SHAPE 13S



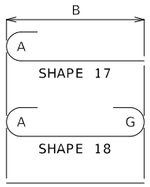
SHAPE 14 or 14S



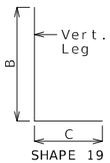
SHAPE 15 or 15S



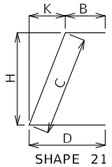
SHAPE 16



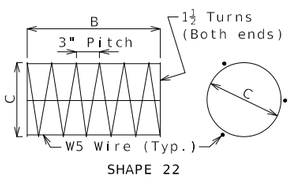
SHAPE 17
SHAPE 18
SHAPE 20



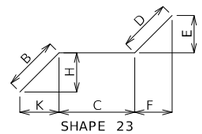
SHAPE 19 or 19S



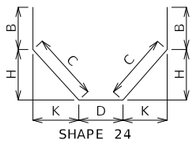
SHAPE 21 or 21S



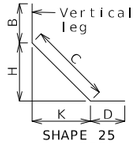
SHAPE 22



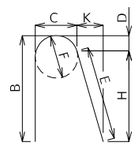
SHAPE 23 or 23S



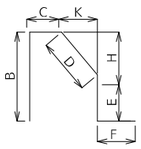
SHAPE 24 or 24S



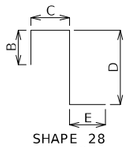
SHAPE 25 or 25S



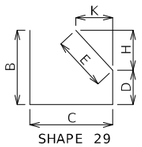
SHAPE 26



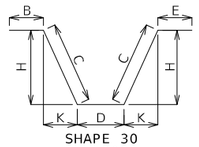
SHAPE 27S



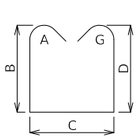
SHAPE 28 or 28S



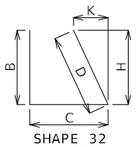
SHAPE 29 or 29S



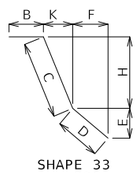
SHAPE 30 or 30S



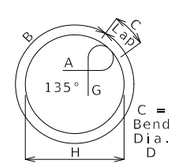
SHAPE 31S



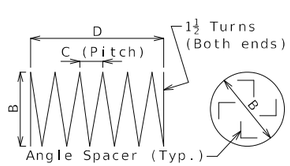
SHAPE 32 or 32S



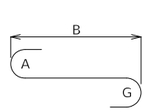
SHAPE 33 or 33S



SHAPE 34S



SHAPE 35 (1)

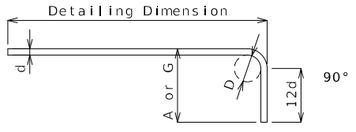


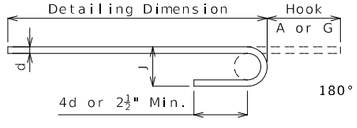
SHAPE 36

Finished Bend Diameters D and Hook Dimensions

Standard Pin Bend Shapes

Size	Case	D	A or G		J
			90°	180°	180°
#4	1	3"	8"	6"	4"
#5	1	3¾"	10"	7"	5"
#6	1	4½"	12"	8¼"	6"
#7	2	5¼"	14"	9⅜"	7"
	3	7"	15"	11½"	8¾"
#8	2	6"	16"	11"	8"
	3	8"	17"	13¼"	10"
#9	1	9½"	19½"	15½"	11¾"
#10	1	10¾"	22"	17½"	13¼"
#11	1	12"	24½"	19½"	14⅞"
#14	1	18¼"	31¼"	27½"	21⅝"
#18	1	24"	41½"	36¾"	28½"



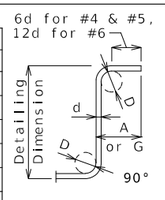


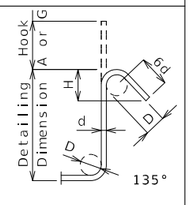
Stirrup Pin Bend Shapes (S)

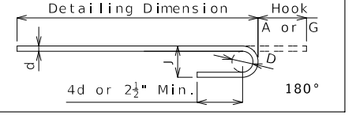
Size	Case	D	A or G			H	J
			90°	135°	180°	135°	180°
#4	2	2"	4½"	4½"	5"	2⅝"	3"
	3	3"	5"	5¼"	6"	3"	4"
#5	2	2½"	5¾"	5¾"	5¾"	3⅝"	3¾"
	3	3¾"	6¼"	6½"	7"	3⅞"	5"
#6	1	4½"	12"	7¾"	8¼"	4⅝"	6"

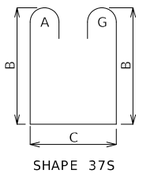
Applicable for all grades of steel.

Case 1 applies to all reinforcement. Case 2 applies to all reinforcement except for galvanized bars. Case 3 applies to galvanized bars only.

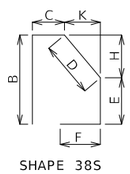








SHAPE 37S



SHAPE 38S

BENDING DIAGRAMS

All dimensions are out to out.

Shapes ending with an S shall be bent in accordance with stirrup pin bend shapes.

Unless otherwise noted, finished bending diameter D is the same for all bends of a shape.

(1) Shall be a deformed or plain spiral bar or wire.

Four angle or channel spacers are required for each column spiral. Spacers are to be placed on inside of spirals. Length and weight of column spirals do not include splices or spacers.

Reinforcing Steel Totals (Pounds)

	Size	Substructure		Superstructure				Entire Bridge	
				Slab					
		Plain	Epoxy	Plain	Epoxy	Barrier	Slip Form	Plain	Epoxy
By Size	W5	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	12,217	5,989	141	0	18,347
	6	0	0	0	27,085	0	0	0	27,085
	7	0	0	0	0	0	0	0	0
	8	0	0	0	3,808	0	0	0	3,808
	9	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0
	11	0	0	0	0	0	0	0	0
	14	0	0	0	0	0	0	0	0
	18	0	0	0	0	0	0	0	0
By Type		0	0	0	43,110	5,989	141	0	49,240

All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	25

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9414

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B	C	D	E	F	H	K	Nom. Length	Actual Length	Weight lb
		END BENT 1													
9	6 F100	Wing	E	23S		2 3.000	4 5.000	14.000	9.750	10.000	18.750	19.375	7 10	7 9	105
3	6 F101	Diaphragm	E	6S		5 5.000	2 7.000						8 0	7 10	35
4	6 H100	Beam	E	20		28 3.000							28 3	28 3	170
8	8 H101	Beam	E	20		28 3.000							28 3	28 3	603
4	6 H102	Beam	E	20		51 3.000							51 3	51 3	308
4	6 H103	Beam	E	20		47 0.000							47 0	47 0	282
8	8 H104	Beam	E	20		48 5.000							48 5	48 5	1034
4	6 H106	Beam	E	20		21 10.00							21 10	21 10	131
8	6 H107	Diaphragm	E	20		28 3.000							28 3	28 3	339
8	6 H108	Diaphragm	E	20		47 0.000							47 0	47 0	565
21	6 H109	Diaphragm	E	20		7 11.000							7 11	7 11	250
7	6 H110	Diaphragm	E	20		5 6.000							5 6	5 6	58
3	6 H111	Diaphragm	E	20		3 2.000							3 2	3 2	14
1	6 H112	Diaphragm	E	20		23.000							0 23	0 23	3
3	6 H113	Diaphragm	E	20		3 9.000							3 9	3 9	17
1	6 H114	Diaphragm	E	20		2 6.000							2 6	2 6	4
8	5 H115	Strand Tie	E	20		5 0.000							5 0	5 0	42
20	6 H116	Wing	E	20		11 8.000							11 8	11 8	350
8	8 H117	Wing	E	20		12 6.000							12 6	12 6	267
42	5 U100	Beam	E	31S		5 8.000	2 9.000	5 8.000					15 1	14 10	650
15	5 U101	Beam	E	13S		2 9.000	2 8.000	2 9.000	2 8.000				11 10	11 6	180
24	5 U102	Beam	E	13S		2 9.000	3 0.000	2 9.000	3 0.000				12 6	12 2	305
24	5 U103	Beam	E	13S		2 9.000	3 4.000	2 9.000	3 4.000				13 2	12 10	321
57	5 U104	Diaphragm	E	31S		3 4.000	2 3.000	3 4.000					9 11	9 8	575
57	6 U105	Diaphragm	E	19S		2 7.000	2 8.000						5 3	5 1	435
70	5 U106	Diaphragm	E	19S		2 0.000	15.000						3 3	3 2	231
94	6 U107	Diaphragm	E	19S		3 3.000	4 7.000						7 10	7 8	1082
30	5 V100	Beam	E	17		5 8.000							6 3	6 3	196
40	6 V101	Diaphragm	E	20		2 7.000							2 7	2 7	155
22	6 V102	Wing	E	20		6 7.000							6 7	6 7	218
		END BENT 2													
9	6 F200	Wing	E	23S		2 3.000	4 5.000	14.000	9.750	10.000	18.750	19.375	7 10	7 9	105
3	6 F201	Diaphragm	E	6S		5 5.000	2 7.000						8 0	7 10	35
4	6 H200	Beam	E	20		28 3.000							28 3	28 3	170
8	8 H201	Beam	E	20		28 3.000							28 3	28 3	603
4	6 H202	Beam	E	20		51 3.000							51 3	51 3	308
4	6 H203	Beam	E	20		47 0.000							47 0	47 0	282
8	8 H204	Beam	E	20		48 5.000							48 5	48 5	1034
4	6 H206	Beam	E	20		21 10.00							21 10	21 10	131
8	6 H207	Diaphragm	E	20		28 3.000							28 3	28 3	339
8	6 H208	Diaphragm	E	20		47 0.000							47 0	47 0	565
21	6 H209	Diaphragm	E	20		7 11.000							7 11	7 11	250
7	6 H210	Diaphragm	E	20		5 6.000							5 6	5 6	58
3	6 H211	Diaphragm	E	20		3 2.000							3 2	3 2	14
1	6 H212	Diaphragm	E	20		23.000							0 23	0 23	3
3	6 H213	Diaphragm	E	20		3 9.000							3 9	3 9	17
1	6 H214	Diaphragm	E	20		2 6.000							2 6	2 6	4
8	5 H215	Strand Tie	E	20		5 0.000							5 0	5 0	42
20	6 H216	Wing	E	20		11 8.000							11 8	11 8	350
8	8 H217	Wing	E	20		12 6.000							12 6	12 6	267
42	5 U200	Beam	E	31S		5 8.000	2 9.000	5 8.000					15 1	14 10	650
15	5 U201	Beam	E	13S		2 9.000	2 8.000	2 9.000	2 8.000				11 10	11 6	180
24	5 U202	Beam	E	13S		2 9.000	3 0.000	2 9.000	3 0.000				12 6	12 2	305
24	5 U203	Beam	E	13S		2 9.000	3 4.000	2 9.000	3 4.000				13 2	12 10	321
57	5 U204	Diaphragm	E	31S		3 4.000	2 3.000	3 4.000					9 11	9 8	575
57	6 U205	Diaphragm	E	19S		2 7.000	2 8.000						5 3	5 1	435
70	5 U206	Diaphragm	E	19S		2 0.000	15.000						3 3	3 2	231
94	6 U207	Diaphragm	E	19S		3 3.000	4 7.000						7 10	7 8	1082
30	5 V200	Beam	E	17		5 8.000							6 3	6 3	196
40	6 V201	Diaphragm	E	20		2 7.000							2 7	2 7	155
22	6 V202	Wing	E	20		6 7.000							6 7	6 7	218

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B	C	D	E	F	H	K	Nom. Length	Actual Length	Weight lb
		SLAB													
320	6 S1	Slab	E	20		36 8.000							36 8	36 8	17623
114	5 S2	Slab	E	20		42 4.000							42 4	42 4	5034
282	5 S3	Slab	E	20		5 0.000							5 0	5 0	1471
16	5 S4	Slab	E	20		42 8.000							42 8	42 8	712
8	6 S5	Slab	E	20	2	11 7.000							11 7	11 7	
		Inc. = 15'-7"				58 4.000							58 4	58 4	420
		BARRIER													
10	5 K1	Barrier	E	27S		3 8.000	9.250	5.375	3 2.750		5.250	1.000	8 1	7 11	83
36	5 K2	Barrier	E	27S		3 8.000	9.250	14.500	2 5.750		14.250	2.750	8 2	7 11	297
10	5 K4	Barrier	E	19S	2	2 4.250	10.000						3 2	3 1	
		Inc. = 0.500"				2 6.250	10.000						3 4	3 3	33
10	5 K5	Barrier	E	38S	2			18.500	9.500	8.250	18.000	4.000	3 0	2 11	
		Inc. = 0.500"						20.500	9.500	8.250	20.000	4.500	3 2	3 1	31
6	5 K6	Barrier	E	19S		2 6.750	10.000						3 5	3 4	21
6	5 K7	Barrier	E	21S			2 6.625	10.000			2 6.000	6.250	3 5	3 3	20
18	5 K8	Barrier	E	19S	2	2 8.500	10.000						3 7	3 5	
		Inc. = 0.750"				3 2.500	10.000						4 1	3 11	70
18	5 K9	Barrier	E	21S	2		2 8.500	10.000			2 7.750	6.750	3 6	3 5	
		Inc. = 0.750"					3 2.500	10.000			3 1.750	7.750	4 1	3 11	68
12	5 K10	Barrier	E	19S		3 3.000	10.000						4 1	4 0	50
12	5 K11	Barrier	E	21S			3 3.000	10.000			3 2.250	7.750	4 1	3 11	49
12	5 K12	Barrier	E	20		12 9.000							12 9	12 9	160
6	5 K13	Barrier	E	20	2	6 0.000							6 0	6 0	
		Inc. = 3'-0"				12 0.000							12 0	12 0	56
12	5 K14	Barrier	E	20		12 9.000							12 9	12 9	160
6	5 K15	Barrier	E	20	2	6 0.000							6 0	6 0	
		Inc. = 3'-0"				12 0.000							12 0	12 0	56
205	5 R1	Barrier	E	26		3 3.000	5.500	2.250	3 1.375	5.500	3 0.750	6.750	6 11	6 10	1461
205	5 R2	Barrier	E	19S		20.500	9.500						2 6	2 5	517
205	5 R3	Barrier	E	27S			9.500	15.250	5.000	12.000	15.000	3.000	3 6	3 4	713
20	5 R4	Barrier	E	20		40 3.000							40 3	40 3	840
20	5 R5	Barrier	E	20		42 9.000							42 9	42 9	892
20	5 R6	Barrier	E	20		19 9.000							19 9	19 9	412
		SLIP FORM													
8	5 C1	Slip Form	E	20		12 0.000							12 0	12 0	100
4	5 C2	Slip Form	E	20		9 9.000							9 9	9 9	41

Nominal lengths are based on out to out dimensions shown in bending diagrams and are listed to the nearest inch for fabricator's use. Actual lengths are measured along centerline bar to the nearest inch. Weights are based on actual lengths.

For bending diagrams and steel reinforcing totals, see Sheet No. 25.

Detailed: May 2024
Checked: Jun. 2024

Codes:
C = Required coatings, where E = Epoxy Coated and G = Galvanized.
SH = Required shape, see bending diagrams.
V = Sets of varied bars and number of bars of each length. Bar dimensions vary in equal increments between dimensions shown on this line and the following line and the actual length dimension shown on this line and the following line vary by the specified increment.

All bars shall be Grade 60.

Note: This drawing is not to scale. Follow dimensions.

BILL OF REINFORCING STEEL

Sheet No. 26 of 30

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	26

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9414

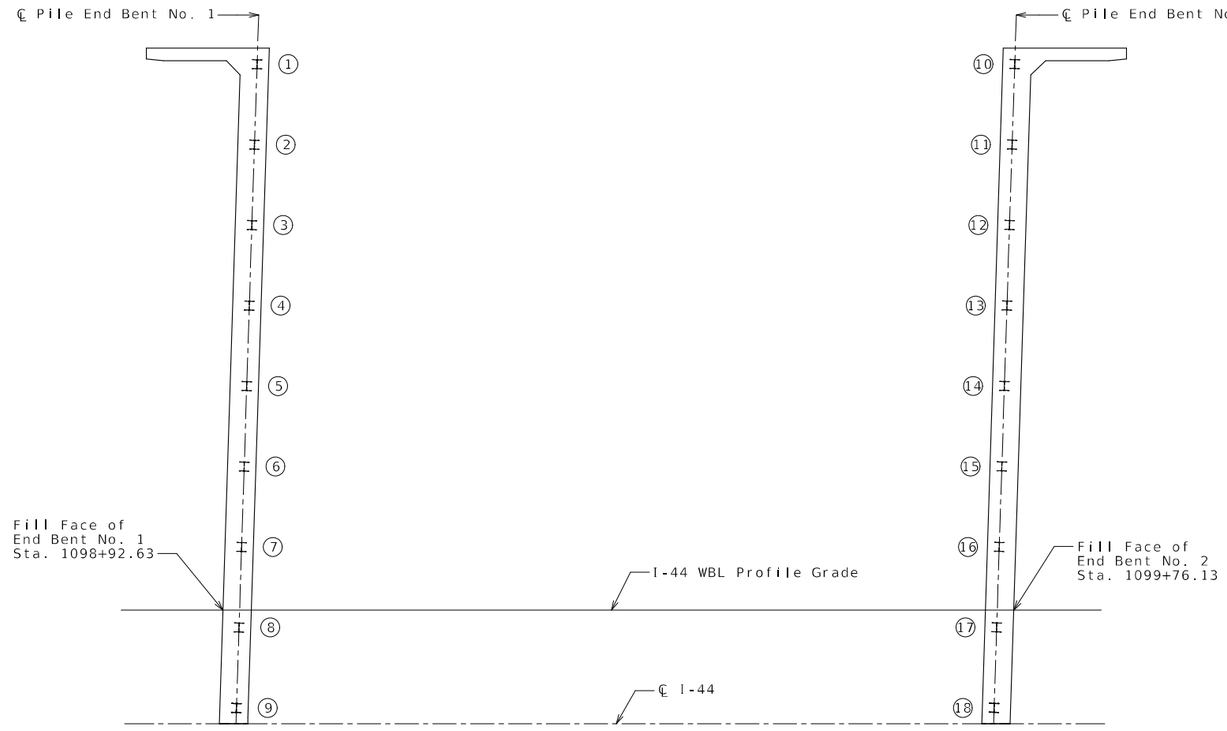
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

c:\bmcd_lib\pw_connect\trn\d0171052\B_A9414_026_JSU0076.dgn 4:50:43 PM 9/5/2024



SPAN (1-2)

PART PLAN SHOWING PILE NUMBERING FOR RECORDING AS-BUILT PILE DATA

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
End Bent No. 1 (HP 12x53)			
1			
2			
3			
4			
5			
6			
7			
8			
9			

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
End Bent No. 2 (HP 12x53)			
10			
11			
12			
13			
14			
15			
16			
17			
18			

Note:
Indicate in remarks column:
A. Pile type and grade
B. Batter
C. Driven to practical refusal

This sheet to be completed by MoDOT construction personnel.

AS-BUILT PILE DATA

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	27

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9414

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-1
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516928.6479 **Date of Work:** 07/17/23-07/17/23
Offset: 6' E **Easting:** 1407161.9967 **Depth to Water:**
Elevation: 1242.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-16.5' (CH) Red and brown, fat CLAY, with gravel	1240		33	7-7-8 (23)		PP = 3.50 tsf	MC = 18.5%
5					72	17-4-3 (11)		PP = 1.00 tsf	MC = 45.8%
			1235		54		Qu Test Results UCS = 0.800 ksf MC = 44.9% γ_{moist} = 110.6 pcf		
10		12.0' - trace gravel below 12.0 ft.			61	2-3-2 (8)		PP = 0.50 tsf	LL = 76 PL = 20 MC = 23.0%
			1230						
15					100	3-5-6 (17)		PP = 2.50 tsf	MC = 53.7%
		16.5-20.5' LIMESTONE, gray, slightly weathred, fine to coarse crsytalline, medium bedded, dense to pitted	1225		94 (81)		Qu Test Results UCS = 1290 ksf		
20		20.5-21.5' CHERT and weathered LIMESTONE							
		21.5-31.8' LIMESTONE, gray, moderately hard to hard, fresh to slightly weathered, aphanitic to medium crystalline, dense	1220		80 (59)				
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-1
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516928.6479 **Date of Work:** 07/17/23-07/17/23
Offset: 6' E **Easting:** 1407161.9967 **Depth to Water:**
Elevation: 1242.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		21.5-31.8' LIMESTONE, gray, moderately hard to hard, fresh to slightly weathered, aphanitic to medium crystalline, dense *(continued)* 25.5' -medium to thick bedded below 25.5 ft.	1215		98 (92)		Qu Test Results UCS = 1380 ksf		
30					100 (100)				
		Refusal at 16.5 feet. Bottom of borehole at 31.8 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 28
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9414

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 28 of 30

BORING DATA

c:\bmcd_lib\pw_connect\trn\d0171052\B_A9414_028_JSU0076.dgn 4:51:09 PM 9/5/2024

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-2
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516860.6864 **Date of Work:** 07/13/23-07/13/23
Offset: 4.5' S, 2' E **Easting:** 1407163.8597 **Depth to Water:**
Elevation: 1241.3 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-8.0' (CH) FILL: Red and brown, fat CLAY, trace sand, gravel and organics	1240						
					56	4-4-4 (12)		PP = 3.50 tsf	MC = 39.2%
5		3.0' -trace chert below 3.0 ft.			38		Qu Test Results MC = 35.8% γ_{moist} = 94.9 pcf	PP >4.50 tsf	
			1235						
					11	4-3-6 (14)			MC = 34.1%
		8.0-16.0' (CH) Brown, fat CLAY, trace sand and gravel							
10					83	2-2-3 (8)		PP = 2.00 tsf	LL = 56 PL = 20 MC = 24.4%
		11.0' -trace chert below 11.0 ft.	1230						
					67	9-11-5 (24)		PP >4.50 tsf	MC = 25.3%
		13.5' -with chert below 13.5 ft.							
15					44	2-7-4 (17)		PP = 2.00 tsf	MC = 33.2%
		16.0-30.5' LIMESTONE, gray, hard, slightly weathered, very finely to finely crystalline, thin bedded	1225						
					100 (83)		Qu Test Results UCS = 900 ksf		
20			1220						
					100 (90)		Qu Test Results UCS = 1120 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-2
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516860.6864 **Date of Work:** 07/13/23-07/13/23
Offset: 4.5' S, 2' E **Easting:** 1407163.8597 **Depth to Water:**
Elevation: 1241.3 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		16.0-30.5' LIMESTONE, gray, hard, slightly weathered, very finely to finely crystalline, thin bedded *(continued)*	1215		100 (97)		Qu Test Results UCS = 1240 ksf		
30		Refusal at 16.0 feet. Bottom of borehole at 30.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY
STATE OF MISSOURI · TRAVIS M. RAPP · NUMBER PE-2011019033 · PROFESSIONAL ENGINEER

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 29
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9414

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No: 146617

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.
Sheet No. 29 of 30

BORING DATA

c:\bmcd_lib\pw_connect\trn\d0171052\B_A9414_029_JSU0076.dgn 4:51:28 PM 9/5/2024

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-4
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516927.8846 **Date of Work:** 07/18/23-07/18/23
Offset: **Easting:** 516927.8846 **Depth to Water:**
Elevation: 1243.2 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-5.5' (CH) Red and brown, gravelly fat CLAY			50	7-5-5 (15)		PP = 3.00 tsf	MC = 34.6%
			1240						
5					67	13-10-9 (29)		PP = 2.00 tsf	MC = 19.5% Sieve Analysis Sieve # % Passing #200 59.0
		5.5-9.5' weathered LIMESTONE			33	50/0.3'			MC = 2.5%
			1235		86 (0)				
10		9.5-21.5' LIMESTONE, gray, moderately hard to hard, slightly to moderately weathered, fine to coarse crystalline, thin to thick bedded, dense			99 (87)		Qu Test Results UCS = 1160 ksf		
			1230						
15					100 (88)		Qu Test Results UCS = 1370 ksf		
			1225						
20					100 (96)		Qu Test Results UCS = 1570 ksf		
		Refusal at 6.5 feet. Bottom of borehole at 21.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-5
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516869.9543 **Date of Work:** 07/13/23-07/13/23
Offset: 4' N, 2' E **Easting:** 1407220.5685 **Depth to Water:**
Elevation: 1242.5 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-8.0' (CH) Red and brown, fat CLAY, trace sand, gravel, and organics			67	4-4-8 (18)		PP = 2.50 tsf	MC = 23.3%
			1240						
5		3.5' -with gravel from 3.5 to 5.0 ft.			44	10-15-9 (36)		PP = 4.25 tsf	MC = 40.3%
		6.0' -brown from 6.0 to 7.5 ft.			22	10-13-5 (27)			MC = 19.1%
		8.0-9.0' weathered LIMESTONE	1235						
10		9.0-24.0' LIMESTONE, gray, hard, slightly weathered, very finely crystalline, thin bedded 9.6' -1" clay seam			100 (79)		Qu Test Results UCS = 1120 ksf		
			1230		100 (82)		Qu Test Results UCS = 1480 ksf		
15									
			1225		100 (88)		Qu Test Results UCS = 1810 ksf		
20		22.3' -chert nodules from 22.3 to 23.2 ft.	1220		100 (56)		Qu Test Results UCS = 1090 ksf		
		Refusal at 19.0 feet. Bottom of borehole at 24.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024
ROUTE I-44 STATE MO
DISTRICT BR SHEET NO. 30
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9414

DESCRIPTION
DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

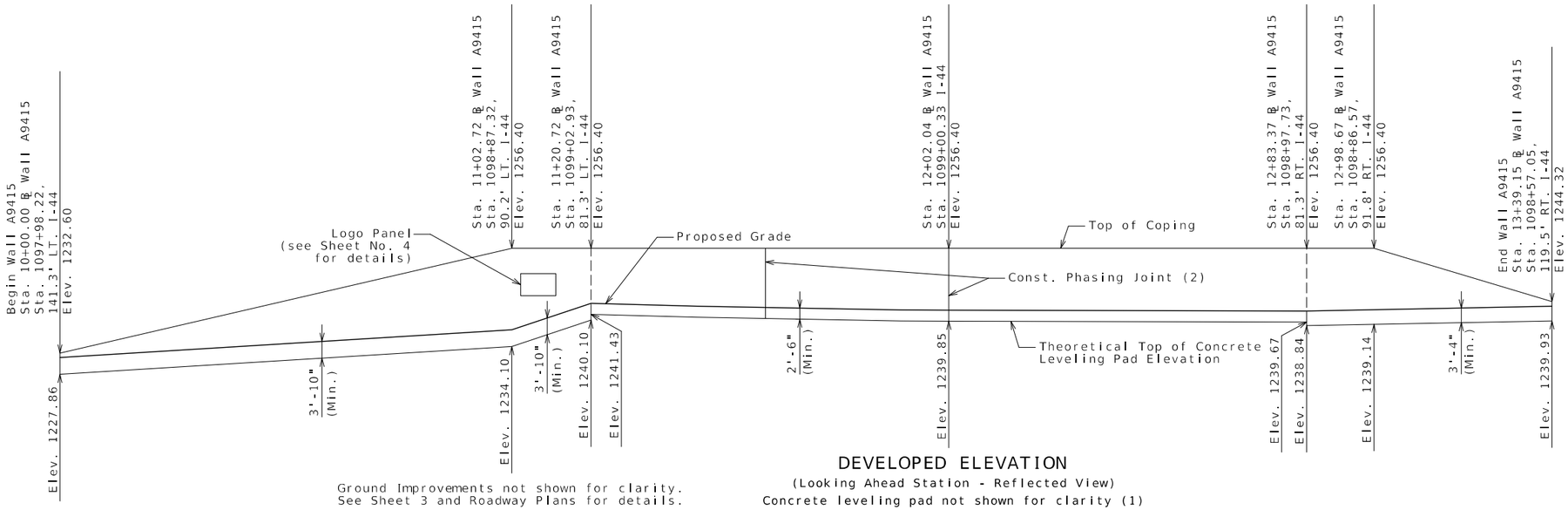
Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.
Sheet No. 30 of 30

BORING DATA

c:\bmcd_lib\pw_connect\trn\d0171052\B_A9414_030_JSU0076.dgn 4:51:49 PM 9/5/2024

339' MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL SYSTEM

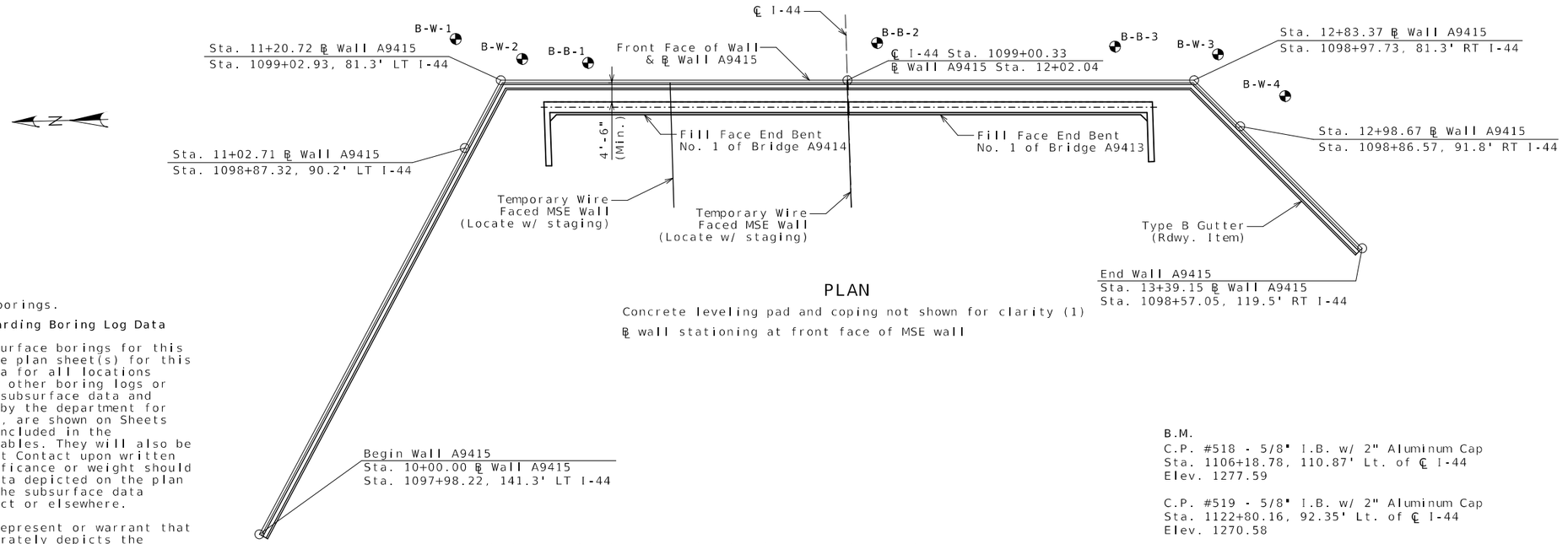
SEC/SUR 2 TWP 29N RGE 22W



DEVELOPED ELEVATION

(Looking Ahead Station - Reflected View)
Concrete leveling pad not shown for clarity (1)

Ground Improvements not shown for clarity.
See Sheet 3 and Roadway Plans for details.



PLAN

Concrete leveling pad and coping not shown for clarity (1)
℄ wall stationing at front face of MSE wall

◒ Indicates location of borings.

Notice and Disclaimer Regarding Boring Log Data

The locations of all subsurface borings for this structure are shown on the plan sheet(s) for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheets No. 5 thru 9 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.

(1) Wall contractor shall show the following items on the design drawings and/or on the fabricator shop drawings.

- Leveling pad horizontal.
- Leveling pad length and step elevations shall be based on wall manufacturer's recommendation.Top of leveling pad elevations shall not be higher than theoretical top of leveling pad elevations shown on these plans.

(2) Construction phasing joint location is approximate and is to be determined by Contractor and Wall Designer.

B.M.
C.P. #518 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1106+18.78, 110.87' Lt. of ℄ I-44
Elev. 1277.59

C.P. #519 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1122+80.16, 92.35' Lt. of ℄ I-44
Elev. 1270.58

RETAINING WALL ALONG BROADWAY AVE. NEAR END BENT NO. 1 OF BRIDGES A9413 AND A9414

I-44 OVER BROADWAY AVE.
ABOUT 0.5 MILES EAST OF ROUTE 13
TIE STATION 1099+00.33

Designed May 2024
Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

GENERAL PLAN & ELEVATION

JOSHUA D. JOLLIFF NUMBER PE-2006002824 PROFESSIONAL ENGINEER
10/24/2024 1:29:11 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9415

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications (Section 5 ASD Design)
Seismic Performance Category = A
Acceleration Coefficient = 0.09

Design Loading:

Φ_b = 22° and Unit weight, γ_b = 120 pcf for retained backfill material to be retained by the mechanically stabilized earth wall system.

Φ_f = 34° for improved foundation ground where wall is to bear. Unimproved foudation data is not applicable. Foundation Improvement is required full length of the wall.

For improved foundation ground, the allowable bearing pressure is 4.5 ksf.

The maximum applied bearing pressure for the controlling design case at the foundation level shall be shown on the shop drawings and shall be less than the allowable bearing pressure for foundation ground provided herein. For seismic design the maximum applied bearing pressure shall be less than two times the allowable bearing pressure.

Allowable bearing pressure and limits of improved foundation ground shall not be adjusted from that as shown on the plans.

Contractor shall include design Φ_r (actual $\Phi_r \geq 34°$) and the total unit weight, γ_r, for the select granular backfill (reinforced backfill and wedge area backfill) for structural systems on shop drawings. Contractor shall identify source of select granular backfill material, submit proctor in accordance with AASHTO T 99 (ASTM D698) and gradation with the shop drawings. When backfill material is too coarse to develop a proctor curve the contractor shall determine the maximum dry density (relative density) in accordance with ASTM D4253 and ASTM D4254 and assume percent passing the 200 sieve for optimum water content.

Total unit weight, γ_b = (95% compaction) x (maximum dry density) x (1 + optimum water content)

Design Φ_r = 34°for the select granular backfill (reinforced backfill) only for structural systems.

Factor of safety shall be 2.0 for overturning and 1.5 for sliding.

For seismic design the factor of safety shall be 1.5 for overturning and 1.1 for sliding.

Use default values for the pullout friction factor, F^*, in accordance with AASHTO figure 5.8.5.2A and default value for scale effect correction factor, α, in accordance with AASHTO table 5.8.5.2A. For approved steel strips not shown in AASHTO figure 5.8.5.2A, use $F^* \leq 2.0$ at zero depth and $F^* \leq \text{Tan } \Phi_r$ at 20 feet depth and Φ_r design = 34°. F^* and α values shall be shown on the shop drawings.

Design Unit Stresses:

All concrete for leveling pad and coping shall be Class B or B-1 with f'c = 4000 psi.

The minimum compressive strength of concrete for precast panel shall be 4,000 psi in accordance with Sec 1052.

Miscellaneous:

The MSE wall system shall be built vertical.

The MSE wall system shall be built in accordance with Sec 720.

The MSE wall system shall be a large block wall system.

Panel, concrete block and coping (or capstone) reinforcement shall be epoxy coated.

A filter cloth meeting the requirements for a Separation Geotextile material shall be placed between the select granular backfill for structural systems and the backfill being retained by the mechanically stabilized earth wall system.

Coping shall be required on this structure. When CIP coping sections extend beyond the limits of a single panel, bond breaker (roofing felt or other approved alternate) between wall panel and coping is required. Coping joints shall use 3/4-inch chamfers and shall be sealed with 3/4-inch joint filler. Coping reinforcement shall terminate 1 1/2-inch minimum from face of coping joint.

The contractor shall be solely responsible to coordinate construction of the wall with bridge and roadway construction and ensure that the bridge and roadway construction, resulting or existing obstructions, shall not impact the construction or performance of the wall. Soil reinforcement shall be designed and placed to avoid damage by pile driving, guardrail post installation, utility and sign foundations. (See Roadway and Bridge plans.)

General Notes Cont.:

Minimum 18" wide Geotextile strips shall be centered at vertical and horizontal joints of panel. Geotextile material shall be adhered to back face of panel using an adhesive compound supplied by the manufacturer. All edges of each fabric strip shall provide a positive seal. A minimum 18" overlap shall be provided between spliced filter fabric.

Aluminized soil reinforcement shall have edges coated with coating material per manufacturer.

Soil reinforcement shall be spaced to avoid roadway drop inlet behind wall.

All steel soil reinforcements shall be separated from other metallic elements by at least 3 inches.

The splay angle should be less than 15° and tensile capacity of splayed reinforcement shall be reduced by the cosine of the splay angle. Soil reinforcement shall clear the obstruction by at least 3 inches.

No reinforcement shall be left unconnected to the wall face or arbitrarily cut/bent in the field to avoid the obstruction.

Where interference between the vertical obstruction and the soil reinforcement is unavoidable, the design of the wall near the obstruction may be modified using one of the alternatives in FHWA-NHI-10-24, Section 5.4.2. Show detail layout on the drawings. For wall designs with horizontal obstructions in reinforced soil mass, see FHWA-NHI-10-024, Section 5.4.3.

Contractor shall be responsible for the internal stability, external stability, compound stability, and overall global stability of the temporary MSE wall structure. The soil parameters assumed for the temporary MSE wall design shall be those shown on the plan details for the MSE Wall and shown in the foundation report. The contractor shall submit the proposed method of temporary MSE wall construction to the engineer prior to beginning work.

Excavation:

Excavation quantities and pay items are given on the roadway plans. Excavation quantities are based on a soil reinforcement length of 0.8H. Where H is the wall height from top of leveling pad to top of wall. The soil reinforecement length may vary based upon the wall design selected by the contractor. Plan excavation quantities will be paid regardless of any actual quantities removed based on the soil reinforcement length and design selected.

Material Properties Used in Design				
Reinf. Fill/Select Granular Backfill		Active Force Computations		Foundation
Φ°	γ (pcf)	Φ°	γ (pcf)	Φ°

Note: MSE Wall designer shall include table on shop drawings and provide values used in the design computations. Effects of cohesion shall be ignored unless approved by the engineer.

Show range of acceptable theta (Θ) angle on shop drawings which must be consistent with design computations and proposed construction of wall. Show active force computation properties on shop drawings and in design computations. Coordination between wall designer (manufacturer) and contractor is required before shop drawing submittal.

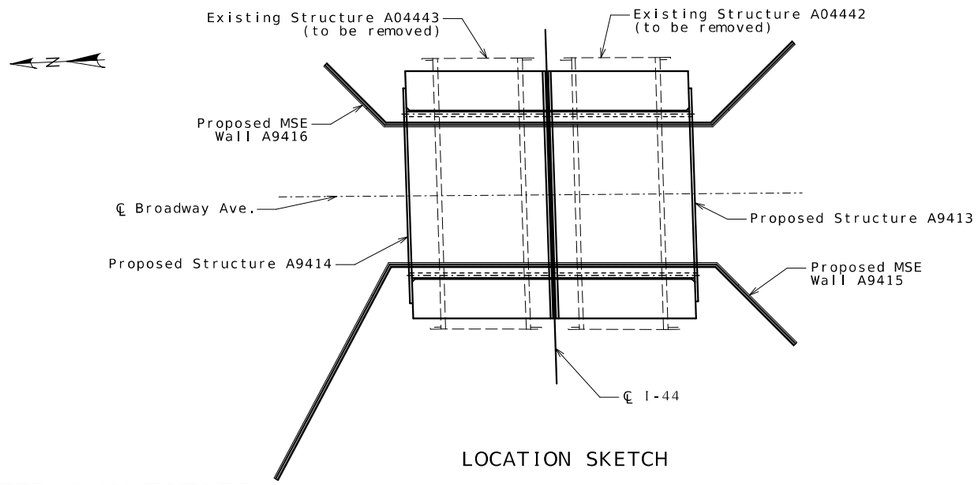
Estimated Quantities

Item		Total
Aesthetic Concrete Stain	lump sum	1
Concrete and Masonry Protection System	lump sum	1
Sacrificial Graffiti Protection System	lump sum	1
Mechanically Stabilized Earth Wall Systems	sq. foot	5092
Form Liners for MSE Wall Systems	sq. yard	4
Temporary MSE Wall System	lump sum	1

MSE Wall Systems Data Table

Proprietary Wall Systems		Combination Wall Systems			
Manufacturer	System	Facing Unit Manufacturer	Facing Unit	Geogrid Manufacturer	Geogrid

MSE Wall Systems Data Table is to be completed by MoDOT construction personnel to record the manufacturer of the proprietary wall system or the manufacturers of the combination wall system that was used for constructing the MSE wall.



LOCATION SKETCH

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
NOT A CERTIFIED COPY
10/24/2024 1:29:26 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 2
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9415

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

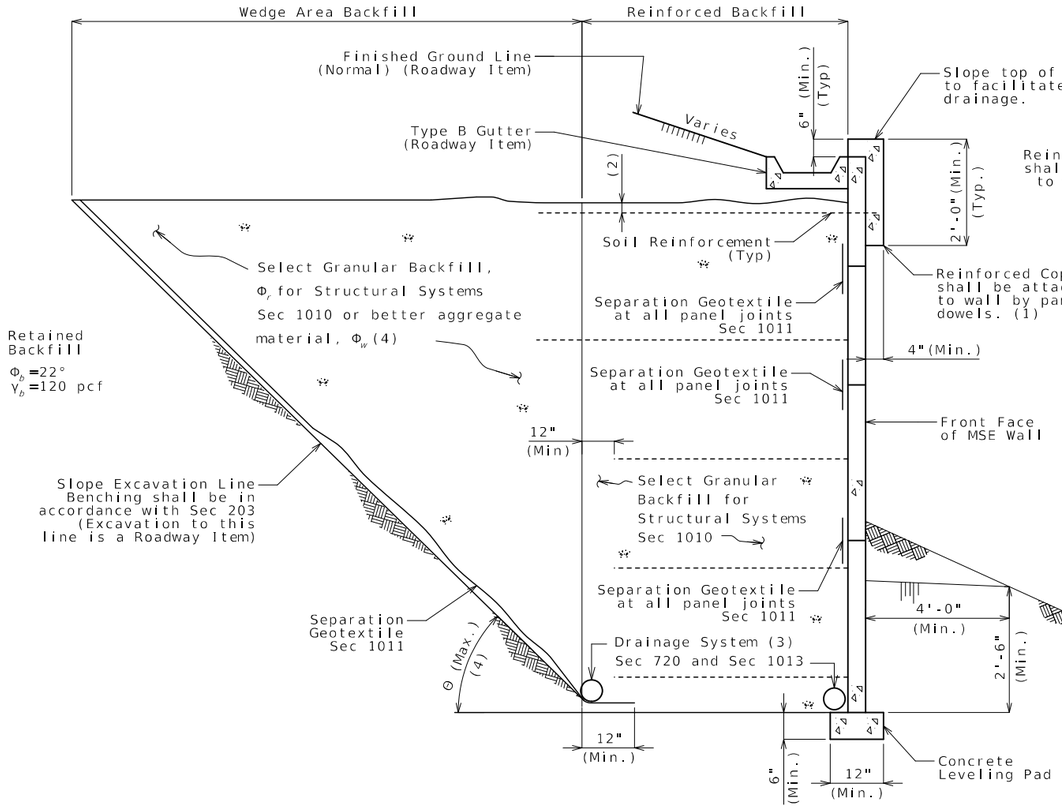
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

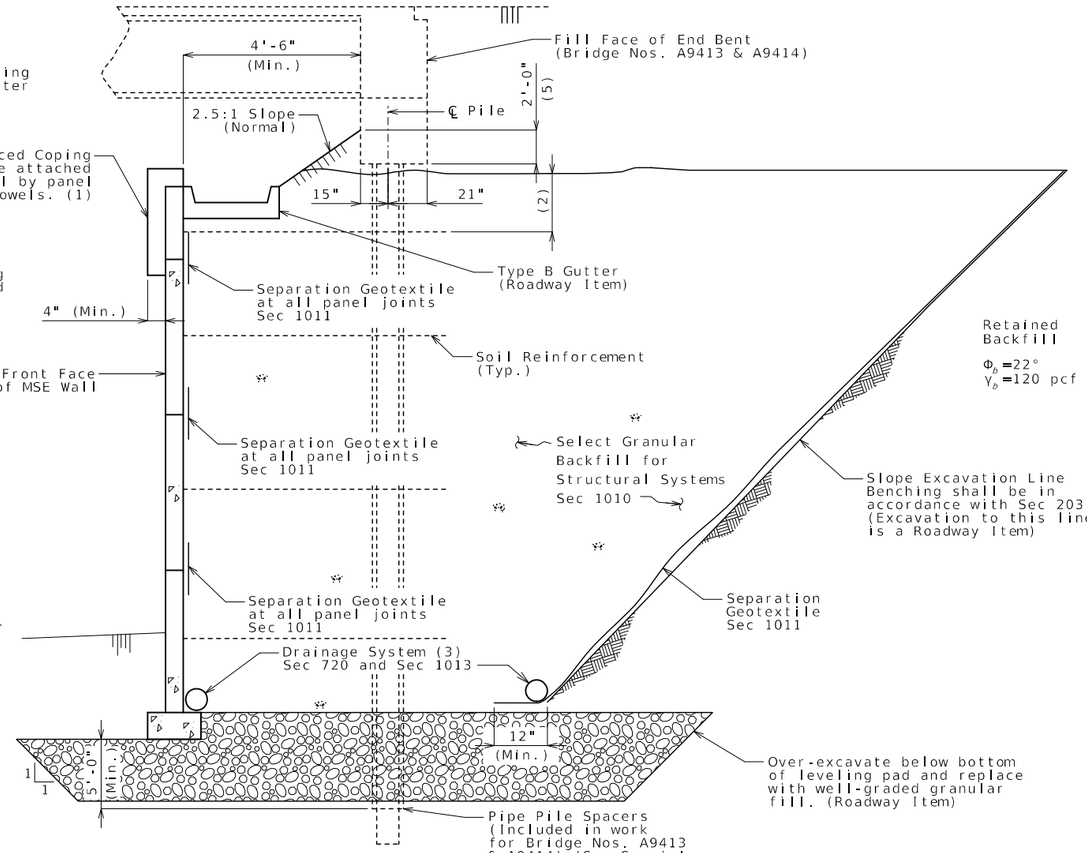
GENERAL NOTES AND ESTIMATED QUANTITIES

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.



TYPICAL SECTION THRU
LARGE BLOCK WALL SHOWING FILTER CLOTH



TYPICAL SECTION THRU
LARGE BLOCK WALL UNDER BRIDGE
SHOWING GROUND IMPROVEMENTS

(1) Inverted U-shape reinforced capstone may be used in lieu of coping. Panel dowels for level-up concrete shall be required and provided by manufacturer. The dowels shall be field trimmed to clear the capstone by a minimum of 1 1/2 inches and a maximum of 2 1/2 inches.

(2) Topmost layer of reinforcement shall be fully covered with select granular backfill for structural systems, as approved by the wall manufacturer, before placement of the Separation Geotextile.

(3) Minimum 6" diameter perforated PVC or PE pipe.

Manufacturer shall show drain details on design plans to be submitted as shown on MoDOT MSE wall plans and/or roadway plans.

Contractor shall modify the drain details as shown if it will improve flow as may be the case for stepped leveling pad, and for an uneven ground line (approval of the engineer required).

(4) Select granular backfill shall extend a minimum of 12" beyond the end of all soil reinforcement. Where the angle, Θ, between the retained backfill excavation/fill line and the horizontal is less than 90°, the wedge area backfill between Θ and 90° shall be filled with select granular backfill for structural systems meeting the requirements of Section 1010.

- For $(45° + \Phi_b/3) < \Theta \leq 90°$, properties for retained backfill shall be used for active force computations.

- For $\Theta \leq (45° + \Phi_b/3)$, contractor shall have the option to use select granular backfill, Φ_f, or better aggregate material, Φ_w for active force computations in the wedge area backfill. For active force computations, the angle of internal friction for wedge area backfill material, Φ_f or Φ_w, shall be limited to 34° unless determined otherwise in accordance with Section 1010. If Φ_f or Φ_w > 34° is desired for wedge area backfill then test report shall be submitted with shop drawings. Φ_f or Φ_w shall not be greater than 40° for computations. Final configuration of this option shall be sent to Geotechnical Section for a new overall global stability analysis. Design Φ_w shall be shown on the shop drawings if used.

The slope excavation line shall be benched and separation geotextile shall be placed between the retained backfill and either select granular backfill or better aggregate material, and between the select granular backfill and better aggregate material.

(5) See Bridge Plans.

DETAILS FOR MSE WALL

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
NOT VALID UNLESS SIGNED AND SEALED
10/24/2024 1:29:31 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	3

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9415

DESCRIPTION	DATE	REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

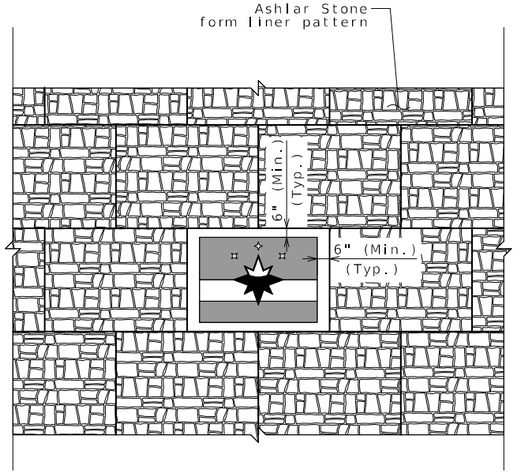
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.

Form Liner Relief	
Color	Relief
White	0"
Gray	1"
Black	2"

Note: Relief to extend out from face of panel.



MSE WALL PANEL WITH INSET LOGO DETAIL

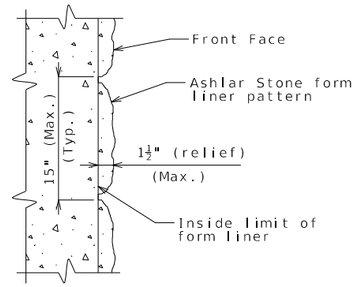
Notes:

Logo to be placed as a bas-relief form liner.

Logo to be centered on the panel. Panel to be placed in the wall as shown on the wall elevation (see Sheet No. 1).

Electronic image of logo available from City of Springfield upon request.

The cost of the logo will be considered completely covered by the contract unit price for Form Liners for MSE Wall Systems per square yard.



FORM LINER DETAIL (Large Block Wall)

Notes:

The cost of ashlar stone form liners for MSE wall systems, complete in place, will be considered completely covered by the contract unit price for Mechanically Stabilized Earth Wall System.

Form liner shall be constructed in accordance with Special Provisions.

The following is a list of form liner manufacturers and types which may be used. Depth of relief for all form liner pattern's shall vary up to 1 1/2". The height of any single 'stone' shall be 15" maximum.

- Scott System, Inc.: Form liner pattern #167 "Ashlar Stone"
- Fitzgerald Formliners: Form liner pattern #16986 "Ashlar Stone"
- Greenstreak: Form liner pattern #330 "Ashlar Stone"
- Spec Formliners: Form liner pattern #1515 "Ashlar Stone"
- Customrock: Form liner pattern #12020 "Tollway Ashlar"
- An approved equal

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

10/24/2024 1:29:35 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	4

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9415

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

Detailed May 2024
Checked June 2024

DETAILS FOR MSE WALL

Note: This drawing is not to scale. Follow dimensions.

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9415 - I-44 over Broadway Ave_Wall 1\B_A9415_004_JSU0076_WALL_LOGO_DETAILS.dgn 10:41:06 AM 10/24/2024

Missouri Department of Transportation
Construction and Materials

BORING NO. B-W-1
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516959.4303 **Date of Work:** 07/17/23-07/17/23
Offset: **Easting:** 1407168.9064 **Depth to Water:**
Elevation: 1242.2 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-3.0' (CH) Brown and red, gravelly fat CLAY	1240		61	6-12-15 (41)		PP = 4.50 tsf	MC = 21.4%
5		3.0-11.1' (GC) Brown and red, clayey GRAVEL			22	3-5-8 (20)			MC = 13.7%
			1235		75		Qu Test Results MC = 14.7% γ_{moist} = 91.2 pcf	PP = 3.50 tsf	Sieve Analysis Sieve # % Passing #200 37.5
10		Refusal at 11.1 feet. Bottom of borehole at 11.1 feet.			0	50/0.1'			

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. B-W-2
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516944.0654 **Date of Work:** 07/17/23-07/17/23
Offset: 3.5' E **Easting:** 1407163.5602 **Depth to Water:**
Elevation: 1242.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Auger Cuttings
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-21.2' (CH) Red and brown, gravelly fat CLAY (description from cuttings)	1240						
5			1235						
10		9.0' -3" cobble 10.0' - with gravel below 10.0 ft.	1230						
15			1225						
20		Refusal at 21.5 feet. Bottom of borehole at 21.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
NATIONAL COUNCIL OF EXAMINERS FOR ENGINEERING AND SURVEYING
10/24/2024 1:29:39 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 5
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9415

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

©Copyright CMT, Inc.

REV.

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-1
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516928.6479 **Date of Work:** 07/17/23-07/17/23
Offset: 6' E **Easting:** 1407161.9967 **Depth to Water:**
Elevation: 1242.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-16.5' (CH) Red and brown, fat CLAY, with gravel							
			1240		33	7-7-8 (23)		PP = 3.50 tsf	MC = 18.5%
5					72	17-4-3 (11)		PP = 1.00 tsf	MC = 45.8%
			1235		54		Qu Test Results UCS = 0.800 ksf MC = 44.9% γ_{moist} = 110.8 pcf		
10					61	2-3-2 (8)		PP = 0.50 tsf	LL = 76 PL = 20 MC = 23.0%
		12.0' - trace gravel below 12.0 ft.	1230						
					100	3-5-6 (17)		PP = 2.50 tsf	MC = 53.7%
15									
		16.5-20.5' LIMESTONE, gray, slightly weathred, fine to coarse crsytalline, medium bedded, dense to pitted	1225		94 (81)		Qu Test Results UCS = 1290 ksf		
20		20.5-21.5' CHERT and weathered LIMESTONE							
		21.5-31.8' LIMESTONE, gray, moderately hard to hard, fresh to slightly weathered, aphanitic to medium crystalline, dense	1220		80 (59)				
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-1
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516928.6479 **Date of Work:** 07/17/23-07/17/23
Offset: 6' E **Easting:** 1407161.9967 **Depth to Water:**
Elevation: 1242.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		21.5-31.8' LIMESTONE, gray, moderately hard to hard, fresh to slightly weathered, aphanitic to medium crystalline, dense *(continued)* 25.5' -medium to thick bedded below 25.5 ft.	1215		98 (92)		Qu Test Results UCS = 1380 ksf		
30					100 (100)				
		Refusal at 16.5 feet. Bottom of borehole at 31.8 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

STATE OF MISSOURI
JOSHUA D. JOLLIFF NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 1:29:42 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 6
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9415

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-2
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516860.6864 **Date of Work:** 07/13/23-07/13/23
Offset: 4.5' S, 2' E **Easting:** 1407163.8597 **Depth to Water:**
Elevation: 1241.3 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-8.0' (CH) FILL: Red and brown, fat CLAY, trace sand, gravel and organics	1240						
					56	4-4-4 (12)		PP = 3.50 tsf	MC = 39.2%
		3.0' -trace chert below 3.0 ft.							
5					38		Qu Test Results MC = 35.8% γ_{moist} = 94.9 pcf	PP >4.50 tsf	
			1235						
					11	4-3-6 (14)			MC = 34.1%
		8.0-16.0' (CH) Brown, fat CLAY, trace sand and gravel							
10					83	2-2-3 (8)		PP = 2.00 tsf	LL = 56 PL = 20 MC = 24.4%
		11.0' -trace chert below 11.0 ft.	1230						
					67	9-11-5 (24)		PP >4.50 tsf	MC = 25.3%
		13.5' -with chert below 13.5 ft.							
15					44	2-7-4 (17)		PP = 2.00 tsf	MC = 33.2%
		16.0-30.5' LIMESTONE, gray, hard, slightly weathered, very finely to finely crystalline, thin bedded	1225						
					100 (83)		Qu Test Results UCS = 900 ksf		
20			1220						
					100 (90)		Qu Test Results UCS = 1120 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-2
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516860.6864 **Date of Work:** 07/13/23-07/13/23
Offset: 4.5' S, 2' E **Easting:** 1407163.8597 **Depth to Water:**
Elevation: 1241.3 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		16.0-30.5' LIMESTONE, gray, hard, slightly weathered, very finely to finely crystalline, thin bedded *(continued)*	1215		100 (97)		Qu Test Results UCS = 1240 ksf		
30		Refusal at 16.0 feet. Bottom of borehole at 30.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 7 of 9

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9415 - I-44 over Broadway Ave_Wall 1\B_A9415_007_JSU0076_BORING_DATA3.dgn 10:41:30 AM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

10/24/2024 1:29:46 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 7
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9415

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

©Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

TSI geotechnical, inc.

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-3
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516804.9433 **Date of Work:** 07/13/23-07/13/23
Offset: **Easting:** 1407160.7242 **Depth to Water:**
Elevation: 1241.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-10.0' (CH) Red and brown, fat CLAY, trace sand and gravel	1240						
					83	4-9-6 (23)		PP >4.50 tsf	LL = 159 PL = 34 MC = 24.4%
					56	12-9-10 (29)		PP >4.50 tsf	MC = 12.2%
5			1235						
					50		Qu Test Results UCS = 2.26 ksf MC = 22.6% γ_{moist} = 126.6 pcf	PP = 3.50 tsf	
		8.5' -dark brown below 8.5 ft.							
					78	6-3-28 (47)		PP = 3.00 tsf	MC = 20.1%
10		10.0-12.7' weathered LIMESTONE	1230						
		12.7-28.0' LIMESTONE, gray, hard, slightly weathered, very finely crystalline, thin bedded			72 (43)		Qu Test Results UCS = 1250 ksf		
15			1225						
					100 (88)		Qu Test Results UCS = 1220 ksf		
20									
		20.7' -chert nodules from 20.7 to 21.0 ft.	1220						
					100 (80)		Qu Test Results UCS = 1330 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

TSI geotechnical, inc.

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-3
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516804.9433 **Date of Work:** 07/13/23-07/13/23
Offset: **Easting:** 1407160.7242 **Depth to Water:**
Elevation: 1241.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		12.7-28.0' LIMESTONE, gray, hard, slightly weathered, very finely crystalline, thin bedded *(continued)* 26.5' -chert nodules below 26.5 ft.	1215		100 (72)		Qu Test Results UCS = 1680 ksf		
		Refusal at 12.7 feet. Bottom of borehole at 28.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9415 - I-44 over Broadway Ave_Wall 1\B_A9415_008_JSU0076_BORING_DATA4.dgn 10:41:40 AM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

10/24/2024 1:29:51 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED: 10/24/2024
ROUTE: I-44 STATE: MO
DISTRICT: BR SHEET NO.: 8
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9415

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

©Copyright CMT, Inc.

Missouri Department of Transportation
Construction and Materials

BORING NO. B-W-3
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516780.8919 **Date of Work:** 07/14/23-07/14/23
Offset: 4' E, 2.5' N **Easting:** 1407157.9048 **Depth to Water:**
Elevation: 1241.3 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Auger Cuttings
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-8.7' (CH) Red and brown, fat CLAY, trace chert (description from cuttinngs)	1240						
5		4.0' -with gravel below 4.0 ft.	1235						
10		8.7-10.0' Highly weathered LIMESTONE							
		Refusal at 10.0 feet. Bottom of borehole at 10.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. B-W-4
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516765.5533 **Date of Work:** 07/14/23-07/14/23
Offset: 3' N, 1' E **Easting:** 1407147.4593 **Depth to Water:**
Elevation: 1242.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-9.8' (CH) Brown and red, fat CLAY, trace sand, gravel, and cobbles	1240		56	7-13-29 (63)		PP >4.50 tsf	MC = 10.5%
					100			PP >4.50 tsf	MC = 8.8%
5		3.0' -brown from 3.0 to 5.0 ft. 3.5' -with chert and gravel from 3.5 to 5.0 ft.			33	15-21-23 (66)			MC = 13.0%
		6.0' -gravelly from 6.0 to 7.5 ft.	1235		56	14-13-9 (33)		PP >4.50 tsf	MC = 14.3%
10		9.8-12.5' Weathered LIMESTONE			39	4-5-7 (18)		PP = 3.50 tsf	MC = 34.7%
			1230		100	50/0.1'			MC = 7.1%
		Refusal at 12.5 feet. Bottom of borehole at 12.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9 of 9

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9415 - I-44 over Broadway Ave_Wall 1\B_A9415_009_JSU0076_BORING_DATA5.dgn 10:41:50 AM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 1:29:56 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 9
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9415

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

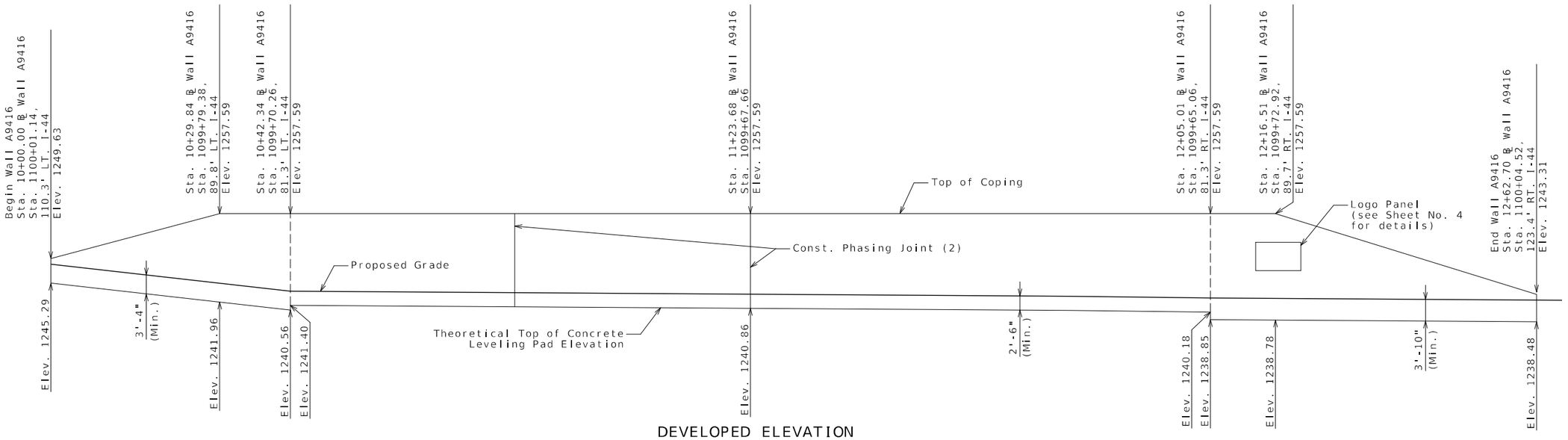
DESCRIPTION | DATE | REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

263' MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL SYSTEM

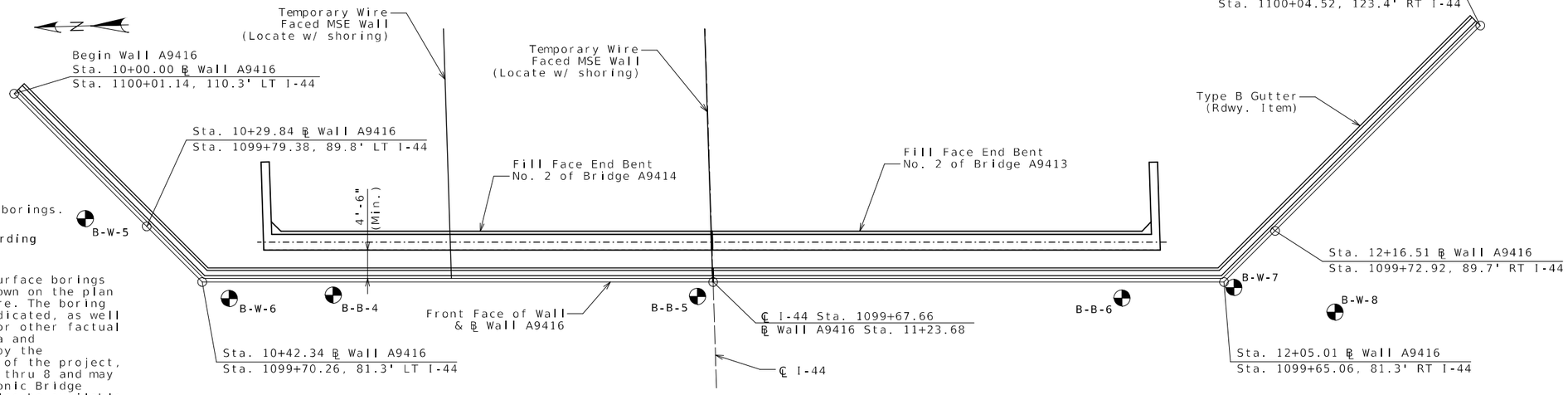
SEC/SUR 2 TWP 29N RGE 22W



Ground Improvements not shown for clarity.
See Sheet 3 and Roadway Plans for details.

DEVELOPED ELEVATION

(Looking Ahead Station)
Concrete leveling pad not shown for clarity (1)



Indicates location of borings.

PLAN

Concrete leveling pad and coping not shown for clarity (1)
℄ wall stationing at front face of MSE wall

Notice and Disclaimer Regarding Boring Log Data

The locations of all subsurface borings for this structure are shown on the plan sheet(s) for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheets No. 5 thru 8 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.

(1) Wall contractor shall show the following items on the design drawings and/or on the fabricator shop drawings.

- Leveling pad horizontal.
- Leveling pad length and step elevations shall be based on wall manufacturer's recommendation.Top of leveling pad elevations shall not be higher than theoretical top of leveling pad elevations shown on these plans.

(2) Construction phasing joint location is approximate and is to be determined by Contractor and Wall Designer.

B.M.

C.P. #518 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1106+18.78, 110.87' Lt. of ℄ I-44
Elev. 1277.59

C.P. #519 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1122+80.16, 92.35' Lt. of ℄ I-44
Elev. 1270.58

RETAINING WALL ALONG BROADWAY AVE. NEAR END BENT NO. 2 OF BRIDGES A9413 AND A9414

I-44 OVER BROADWAY AVE.
ABOUT 0.5 MILES EAST OF ROUTE 13
TIE STATION 1099+67.66

Designed May 2024
Detailed May 2024
Checked June 2024

GENERAL PLAN & ELEVATION

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 1:33:30 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	1

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9416

REV.	DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications (Section 5 ASD Design)
Seismic Performance Category = A
Acceleration Coefficient = 0.09

Design Loading:

Φ_b = 22° and Unit weight, γ_b = 120 pcf for retained backfill material to be retained by the mechanically stabilized earth wall system.

Φ_f = 34° for improved foundation ground where wall is to bear. Unimproved foudation data is not applicable. Foundation Improvement is required full length of the wall.

For improved foundation ground, the allowable bearing pressure is 4.5 ksf.

The maximum applied bearing pressure for the controlling design case at the foundation level shall be shown on the shop drawings and shall be less than the allowable bearing pressure for foundation ground provided herein. For seismic design the maximum applied bearing pressure shall be less than two times the allowable bearing pressure.

Allowable bearing pressure and limits of improved foundation ground shall not be adjusted from that as shown on the plans.

Contractor shall include design Φ_r (actual $\Phi_r \geq 34°$) and the total unit weight, γ_r, for the select granular backfill (reinforced backfill and wedge area backfill) for structural systems on shop drawings. Contractor shall identify source of select granular backfill material, submit proctor in accordance with AASHTO T 99 (ASTM D698) and gradation with the shop drawings. When backfill material is too coarse to develop a proctor curve the contractor shall determine the maximum dry density (relative density) in accordance with ASTM D4253 and ASTM D4254 and assume percent passing the 200 sieve for optimum water content.

Total unit weight, γ_b = (95% compaction) x (maximum dry density) x (1 + optimum water content)

Design Φ_r = 34°for the select granular backfill (reinforced backfill) only for structural systems.

Factor of safety shall be 2.0 for overturning and 1.5 for sliding.

For seismic design the factor of safety shall be 1.5 for overturning and 1.1 for sliding.

Use default values for the pullout friction factor, F^*, in accordance with AASHTO figure 5.8.5.2A and default value for scale effect correction factor, α, in accordance with AASHTO table 5.8.5.2A. For approved steel strips not shown in AASHTO figure 5.8.5.2A, use $F^* \leq 2.0$ at zero depth and $F^* \leq \text{Tan } \Phi_r$ at 20 feet depth and Φ_r design = 34°. F^* and α values shall be shown on the shop drawings.

Design Unit Stresses:

All concrete for leveling pad and coping shall be Class B or B-1 with f'c = 4000 psi.

The minimum compressive strength of concrete for precast panel shall be 4,000 psi in accordance with Sec 1052.

Miscellaneous:

The MSE wall system shall be built vertical.

The MSE wall system shall be built in accordance with Sec 720.

The MSE wall system shall be a large block wall system.

Panel, concrete block and coping (or capstone) reinforcement shall be epoxy coated.

A filter cloth meeting the requirements for a Separation Geotextile material shall be placed between the select granular backfill for structural systems and the backfill being retained by the mechanically stabilized earth wall system.

Coping shall be required on this structure. When CIP coping sections extend beyond the limits of a single panel, bond breaker (roofing felt or other approved alternate) between wall panel and coping is required. Coping joints shall use 3/4-inch chamfers and shall be sealed with 3/4-inch joint filler. Coping reinforcement shall terminate 1 1/2-inch minimum from face of coping joint.

The contractor shall be solely responsible to coordinate construction of the wall with bridge and roadway construction and ensure that the bridge and roadway construction, resulting or existing obstructions, shall not impact the construction or performance of the wall. Soil reinforcement shall be designed and placed to avoid damage by pile driving, guardrail post installation, utility and sign foundations. (See Roadway and Bridge plans.)

General Notes Cont.:

Minimum 18" wide Geotextile strips shall be centered at vertical and horizontal joints of panel. Geotextile material shall be adhered to back face of panel using an adhesive compound supplied by the manufacturer. All edges of each fabric strip shall provide a positive seal. A minimum 18" overlap shall be provided between spliced filter fabric.

Aluminized soil reinforcement shall have edges coated with coating material per manufacturer.

Soil reinforcement shall be spaced to avoid roadway drop inlet behind wall.

All steel soil reinforcements shall be separated from other metallic elements by at least 3 inches.

The splay angle should be less than 15° and tensile capacity of splayed reinforcement shall be reduced by the cosine of the splay angle. Soil reinforcement shall clear the obstruction by at least 3 inches.

No reinforcement shall be left unconnected to the wall face or arbitrarily cut/bent in the field to avoid the obstruction.

Where interference between the vertical obstruction and the soil reinforcement is unavoidable, the design of the wall near the obstruction may be modified using one of the alternatives in FHWA-NHI-10-24, Section 5.4.2. Show detail layout on the drawings. For wall designs with horizontal obstructions in reinforced soil mass, see FHWA-NHI-10-024, Section 5.4.3.

Contractor shall be responsible for the internal stability, external stability, compound stability, and overall global stability of the temporary MSE wall structure. The soil parameters assumed for the temporary MSE wall design shall be those shown on the plan details for the MSE Wall and shown in the foundation report. The contractor shall submit the proposed method of temporary MSE wall construction to the engineer prior to beginning work.

Excavation:

Excavation quantities and pay items are given on the roadway plans. Excavation quantities are based on a soil reinforcement length of 0.8H. Where H is the wall height from top of leveling pad to top of wall. The soil reinforecement length may vary based upon the wall design selected by the contractor. Plan excavation quantities will be paid regardless of any actual quantities removed based on the soil reinforcement length and design selected.

Material Properties Used in Design				
Reinf. Fill/Select Granular Backfill		Active Force Computations		Foundation
Φ°	γ (pcf)	Φ°	γ (pcf)	Φ°

Note: MSE Wall designer shall include table on shop drawings and provide values used in the design computations. Effects of cohesion shall be ignored unless approved by the engineer.

Show range of acceptable theta (Θ) angle on shop drawings which must be consistent with design computations and proposed construction of wall. Show active force computation properties on shop drawings and in design computations. Coordination between wall designer (manufacturer) and contractor is required before shop drawing submittal.

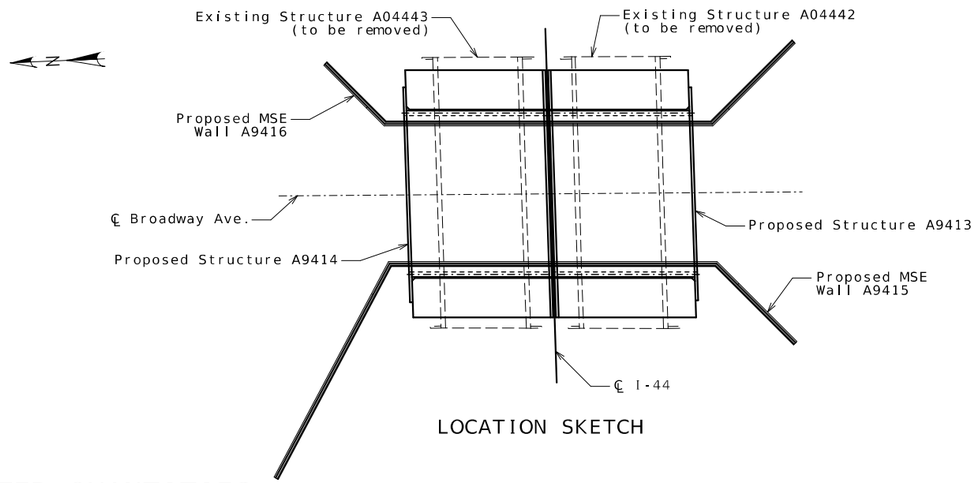
Estimated Quantities

Item		Total
Aesthetic Concrete Stain	lump sum	1
Concrete and Masonry Protection System	lump sum	1
Sacrificial Graffiti Protection System	lump sum	1
Mechanically Stabilized Earth Wall Systems	sq. foot	4002
Form Liners for MSE Wall Systems	sq. yard	4
Temporary MSE Wall System	lump sum	1

MSE Wall Systems Data Table

Proprietary Wall Systems		Combination Wall Systems			
Manufacturer	System	Facing Unit Manufacturer	Facing Unit	Geogrid Manufacturer	Geogrid

MSE Wall Systems Data Table is to be completed by MoDOT construction personnel to record the manufacturer of the proprietary wall system or the manufacturers of the combination wall system that was used for constructing the MSE wall.



LOCATION SKETCH

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 1:33:40 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 2
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9416

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE | REV.

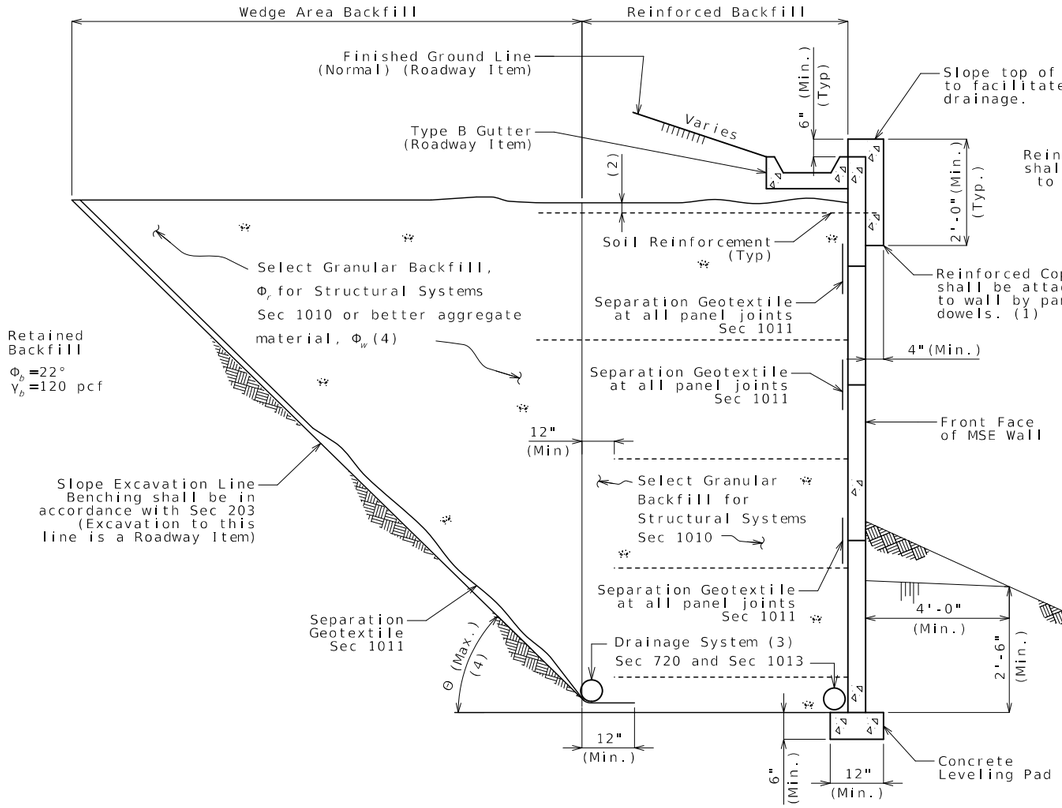
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

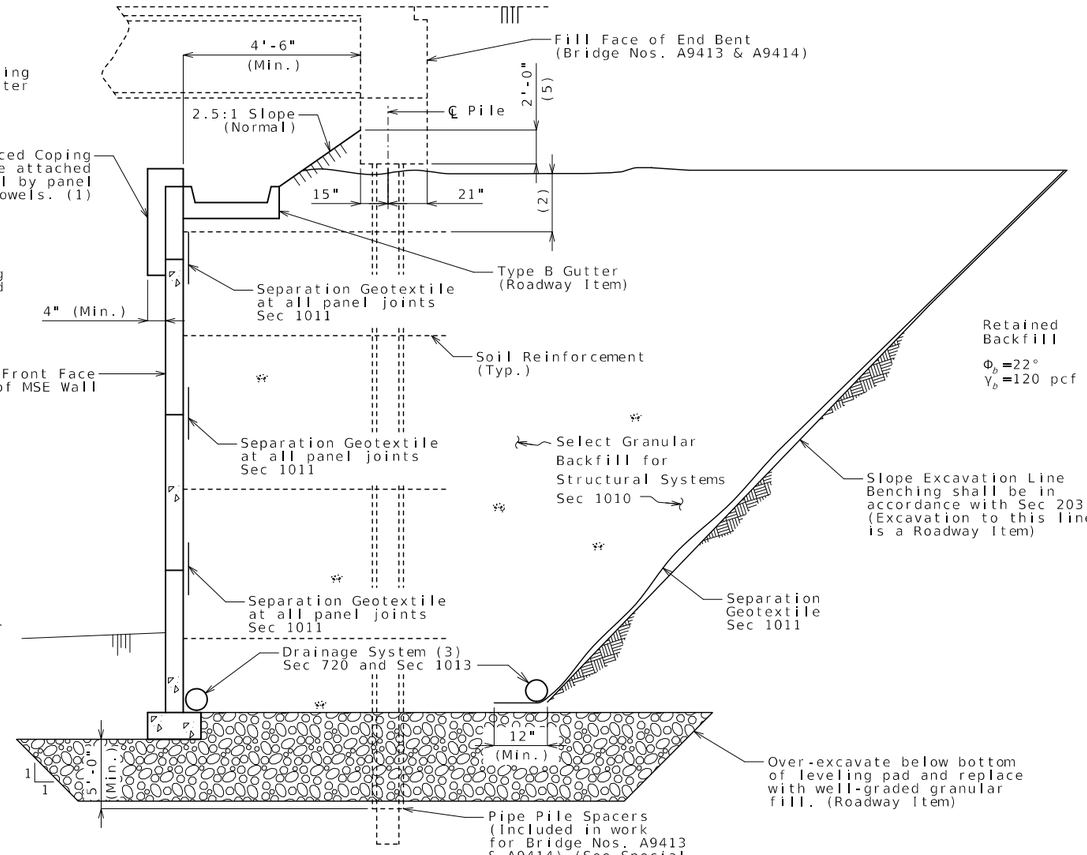
GENERAL NOTES AND ESTIMATED QUANTITIES

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.



TYPICAL SECTION THRU
LARGE BLOCK WALL SHOWING FILTER CLOTH



TYPICAL SECTION THRU
LARGE BLOCK WALL UNDER BRIDGE
SHOWING GROUND IMPROVEMENTS

(1) Inverted U-shape reinforced capstone may be used in lieu of coping. Panel dowels for level-up concrete shall be required and provided by manufacturer. The dowels shall be field trimmed to clear the capstone by a minimum of 1 1/2 inches and a maximum of 2 1/2 inches.

(2) Topmost layer of reinforcement shall be fully covered with select granular backfill for structural systems, as approved by the wall manufacturer, before placement of the Separation Geotextile.

(3) Minimum 6" diameter perforated PVC or PE pipe.

Manufacturer shall show drain details on design plans to be submitted as shown on MoDOT MSE wall plans and/or roadway plans.

Contractor shall modify the drain details as shown if it will improve flow as may be the case for stepped leveling pad, and for an uneven ground line (approval of the engineer required).

(4) Select granular backfill shall extend a minimum of 12" beyond the end of all soil reinforcement. Where the angle, Θ, between the retained backfill excavation/fill line and the horizontal is less than 90°, the wedge area backfill between Θ and 90° shall be filled with select granular backfill for structural systems meeting the requirements of Section 1010.

- For $(45°+ \Phi_b/3) < \Theta \leq 90°$, properties for retained backfill shall be used for active force computations.

- For $\Theta \leq (45°+ \Phi_b/3)$, contractor shall have the option to use select granular backfill, Φ_f, or better aggregate material, Φ_w for active force computations in the wedge area backfill. For active force computations, the angle of internal friction for wedge area backfill material, Φ_f or Φ_w, shall be limited to 34° unless determined otherwise in accordance with Section 1010. If Φ_f or Φ_w > 34°is desired for wedge area backfill then test report shall be submitted with shop drawings. Φ_f or Φ_w shall not be greater than 40° for computations. Final configuration of this option shall be sent to Geotechnical Section for a new overall global stability analysis. Design Φ_w shall be shown on the shop drawings if used.

The slope excavation line shall be benched and separation geotextile shall be placed between the retained backfill and either select granular backfill or better aggregate material, and between the select granular backfill and better aggregate material.

(5) See Bridge Plans.

DETAILS FOR MSE WALL

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 1:33:44 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	3

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9416

DESCRIPTION	DATE	REV.

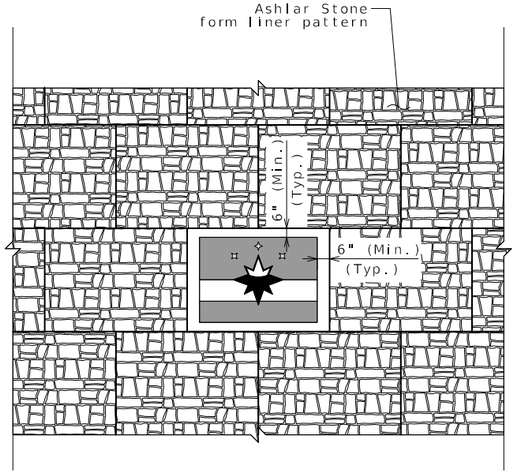
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Form Liner Relief	
Color	Relief
White	0"
Gray	1"
Black	2"

Note: Relief to extend out from face of panel.



MSE WALL PANEL WITH INSET LOGO DETAIL

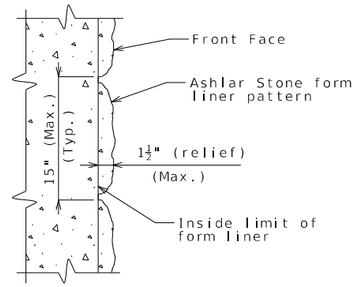
Notes:

Logo to be placed as a bas-relief form liner.

Logo to be centered on the panel. Panel to be placed in the wall as shown on the wall elevation (see Sheet No. 1).

Electronic image of logo available from City of Springfield upon request.

The cost of the logo will be considered completely covered by the contract unit price for Form Liners for MSE Wall Systems per square yard.



FORM LINER DETAIL (Large Block Wall)

Notes:

The cost of aslar stone form liners for MSE wall systems, complete in place, will be considered completely covered by the contract unit price for Mechanically Stabilized Earth Wall System.

Form liner shall be constructed in accordance with Special Provisions.

The following is a list of form liner manufacturers and types which may be used. Depth of relief for all form liner pattern's shall vary up to 1 1/2". The height of any single 'stone' shall be 15" maximum.

- Scott System, Inc.: Form liner pattern #167 "Ashlar Stone"
- Fitzgerald Formliners: Form liner pattern #16986 "Ashlar Stone"
- Greenstreak: Form liner pattern #330 "Ashlar Stone"
- Spec Formliners: Form liner pattern #1515 "Ashlar Stone"
- Customrock: Form liner pattern #12020 "Tollway Ashlar"
- An approved equal

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

10/24/2024 1:33:48 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	4

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9416

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

Detailed May 2024
Checked June 2024

DETAILS FOR MSE WALL

Note: This drawing is not to scale. Follow dimensions.

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9416 - I-44 over Broadway Ave_Wall 2\B_A9416_004_JSU0076_WALL_LOGO_DETAILS.dgn 10:51:23 AM 10/24/2024

Missouri Department of Transportation
Construction and Materials

BORING NO. B-W-5
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516966.8168 **Date of Work:** 07/18/23-07/18/23
Offset: **Easting:** 1407236.9502 **Depth to Water:**
Elevation: 1246.8 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-5.0' (CH) Red and brown, gravelly fat CLAY	1245		67	10-20-11 (47)	Qu Test Results UCS = 2.68 ksf MC = 47.2% γ_{moist} = 125.7 pcf	PP = 4.50 tsf	MC = 13.2%
5		5.0-8.0' (CH) Red, fat CLAY, trace gravel	1240		100	3-4-7 (17)		PP = 2.50 tsf PP = 3.00 tsf	Sieve Analysis Sieve # % Passing #200 50.6 LL = 159 PL = 36 MC = 48.0%
10		8.0-10.5' (GC) Red, clayedy GRAVEL 10.5-15.0' (CH) Red, fat CLAY, trace sand and gravel	1235		100	3-4-7 (17) 6-3-3 (9)		PP = 2.50 tsf PP = 1.50 tsf	MC = 51.6% Sieve Analysis Sieve # % Passing #200 35.4 MC = 30.1%
15		13.5' - gravelly below 13.5 ft. Refusal at 15.0 feet. Bottom of borehole at 15.0 feet.			67	3-50		PP = 0.50 tsf	MC = 26.2%

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. B-W-6
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516944.4492 **Date of Work:** 07/18/23-07/18/23
Offset: **Easting:** 1407223.3102 **Depth to Water:**
Elevation: 1243.8 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Auger Cuttings
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-11.5' (CH) Red and brown, gravelly fat CLAY							
5		4.0' (description from cuttings)	1240						
10			1235						
		Refusa at 11.5 feet. Bottom of borehole at 11.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9416 - I-44 over Broadway Ave_Wall 2\B_A9416_005_JSU0076_BORING_DATA1.dgn 10:51:27 AM 10/24/2024

JOSHUA D. JOLLIFF NUMBER PE-2006002824 STATE OF MISSOURI PROFESSIONAL ENGINEER
10/24/2024 1:33:52 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 5
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9416

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-4
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516927.8846 **Date of Work:** 07/18/23-07/18/23
Offset: **Easting:** 516927.8846 **Depth to Water:**
Elevation: 1243.2 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-5.5' (CH) Red and brown, gravelly fat CLAY							
					50	7-5-5 (15)		PP = 3.00 tsf	MC = 34.6%
			1240						
					67	13-10-9 (29)		PP = 2.00 tsf	MC = 19.5% Sieve Analysis Sieve # % Passing #200 59.0
5		5.5-9.5' weathered LIMESTONE			33	50/0.3'			MC = 2.5%
			1235		86 (0)				
10		9.5-21.5' LIMESTONE, gray, moderately hard to hard, slightly to moderately weathered, fine to coarse crystalline, thin to thick bedded, dense			99 (87)		Qu Test Results UCS = 1160 ksf		
			1230						
15					100 (88)		Qu Test Results UCS = 1370 ksf		
			1225						
20					100 (96)		Qu Test Results UCS = 1570 ksf		
		Refusal at 6.5 feet. Bottom of borehole at 21.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BORHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-5
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516869.9543 **Date of Work:** 07/13/23-07/13/23
Offset: 4' N, 2' E **Easting:** 1407220.5685 **Depth to Water:**
Elevation: 1242.5 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-8.0' (CH) Red and brown, fat CLAY, trace sand, gravel, and organics							
			1240		67	4-4-8 (18)		PP = 2.50 tsf	MC = 23.3%
		3.5' -with gravel from 3.5 to 5.0 ft.			44	10-15-9 (36)		PP = 4.25 tsf	MC = 40.3%
5		6.0' -brown from 6.0 to 7.5 ft.	1235		22	10-13-5 (27)			MC = 19.1%
		8.0-9.0' weathered LIMESTONE							
10		9.0-24.0' LIMESTONE, gray, hard, slightly weathered, very finely crystalline, thin bedded 9.6' -1" clay seam			100 (79)		Qu Test Results UCS = 1120 ksf		
			1230		100 (82)		Qu Test Results UCS = 1480 ksf		
15			1225		100 (88)		Qu Test Results UCS = 1810 ksf		
20		22.3' -chert nodules from 22.3 to 23.2 ft.	1220		100 (56)		Qu Test Results UCS = 1090 ksf		
		Refusa at 19.0 feet. Bottom of borehole at 24.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BORHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6 of 8

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9416 - I-44 over Broadway Ave_Wall 2\B_A9416_006_JSU0076_BORING_DATA2.dgn 10:51:54 AM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 1:33:56 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	6

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9416

DESCRIPTION

DATE

REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-6
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516802.4399 **Date of Work:** 07/12/23-07/12/23
Offset: **Easting:** 1407217.508 **Depth to Water:**
Elevation: 1241.7 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-5.5' (CH) Brown, fat CLAY, with gravel	1240						
					44	12-9-13 (33)		PP >4.50 tsf	MC = 20.7%
		3.5' -red and brown from 3.5 to 5.0 ft.			33	4-7-6 (20)		PP = 1.50 tsf	MC = 14.9%
5									
		5.5-7.7' (CL) Brown, lean CLAY, trace sand and gravel	1235						
		6.0' -trace sand and gravel below 6.0 ft.			44	2-2-3 (8)		PP = 1.50 tsf	LL = 42 PL = 20 MC = 21.6%
		7.7-12.0' (GC) Brown, clayey GRAVEL							
					33	13-12-11 (35)			MC = 16.7% Sieve Analysis Sieve # % Passing #200 6.3
10			1230						
		12.0-13.5' LIMESTONE, gray and light gray, hard, slightly weathered, very finely to finely crystalline, thin bedded							
		13.5-14.3' LIMESTONE, gray, highly weathered			81 (60)		Qu Test Results UCS = 1410 ksf		
		14.3-27.1' LIMESTONE, gray and light gray, hard, slightly weathered, very finely to finely crystalline, thin bedded							
15									
			1225						
					98 (88)		Qu Test Results UCS = 1340 ksf		
20									
			1220						
					100 (88)		Qu Test Results UCS = 1270 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. B-B-6
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516802.4399 **Date of Work:** 07/12/23-07/12/23
Offset: **Easting:** 1407217.508 **Depth to Water:**
Elevation: 1241.7 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		14.3-27.1' LIMESTONE, gray and light gray, hard, slightly weathered, very finely to finely crystalline, thin bedded *(continued)*	1215		100 (100)				
		Refusa at 12.0 feet. Bottom of borehole at 27.1 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 7 of 8

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9416 - I-44 over Broadway Ave_Wall 2\B_A9416_007_JSU0076_BORING_DATA3.dgn 10:52:20 AM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 1:34:00 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 7
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9416

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

©Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Missouri Department of Transportation
Construction and Materials

BORING NO. B-W-7
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516784.5716 **Date of Work:** 07/12/23-07/12/23
Offset: **Easting:** 1407218.4495 **Depth to Water:**
Elevation: 1241.8 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Auger Cuttings
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-5.0' (CH) FILL: Brown, fat CLAY, with limestone fragments	1240						
		2.0' (description from cuttings)							
5		5.0-13.1' (CH) Brown, fat CLAY, trace sand	1235						
10		12.2' -gravelly below 12.2 ft.	1230						
		13.1-13.5' weathered LIMESTONE							
		Refusal at 13.5 feet. Bottom of borehole at 13.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. B-W-8
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516768.6459 **Date of Work:** 07/12/23-07/12/23
Offset: 5' N **Easting:** 1407213.8654 **Depth to Water:**
Elevation: 1240.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-2.7' (CH) Gravelly fat CLAY	1240		44	11-23-15 (57)		PP >4.50 tsf	MC = 9.4%
5		2.7-5.5' (CL) Brown, lean CLAY, trace sand and gravel	1235		46		Qu Test Results MC = 9.5% γ_{moist} = 121.6 pcf	PP >4.50 tsf	LL = 33 PL = 14
		5.5-12.5' (CH) Brown, fat CLAY, trace sand and gravel			100	2-3-4 (11)		PP = 2.00 tsf	MC = 22.4%
10		8.5' -gray and brown from 8.5 to 10.0 ft.	1230		100	4-6-13 (29)		PP = 3.50 tsf	MC = 21.4%
					44	3-4-3 (11)		PP = 1.50 tsf	MC = 45.5%
		Refusa at 13.2 feet. Bottom of borehole at 13.2 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 8

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9416 - I-44 over Broadway Ave_Wall 2\B_A9416_008_JSU0076_BORING_DATA4.dgn 10:52:47 AM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 1:34:04 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 8
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9416

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

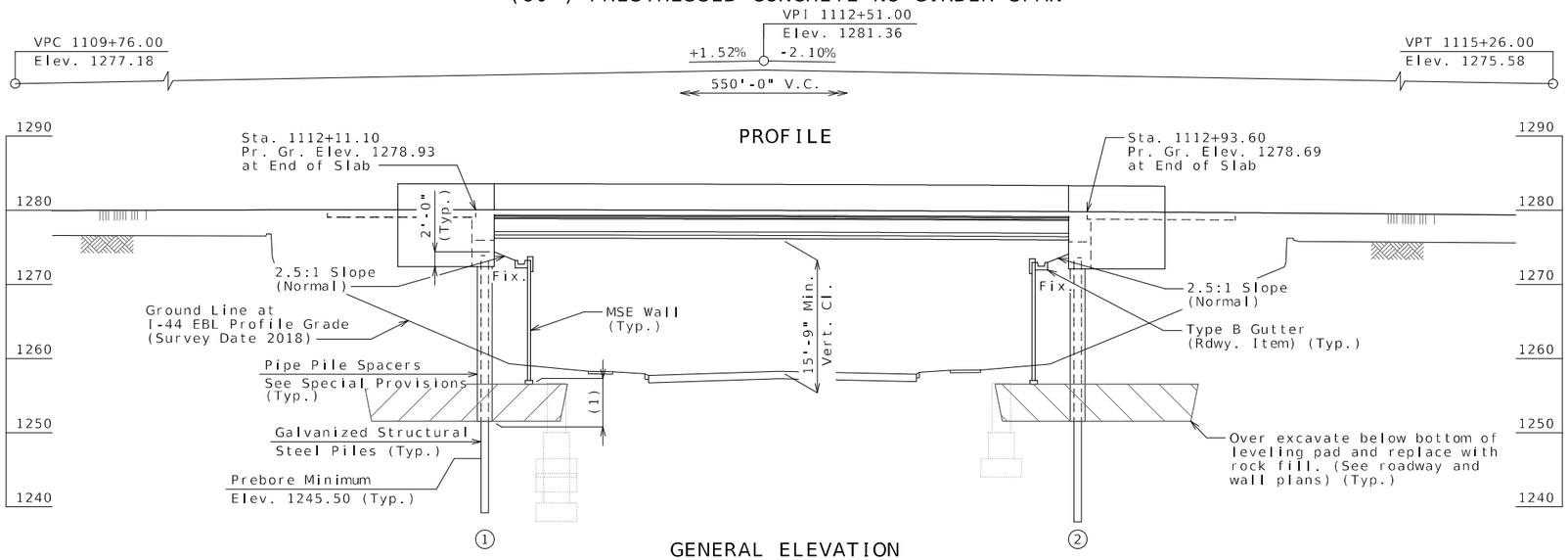
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

(80') PRESTRESSED CONCRETE NU-GIRDER SPAN

SEC/SUR 2 TWP 29N RGE 22W

PROFILE



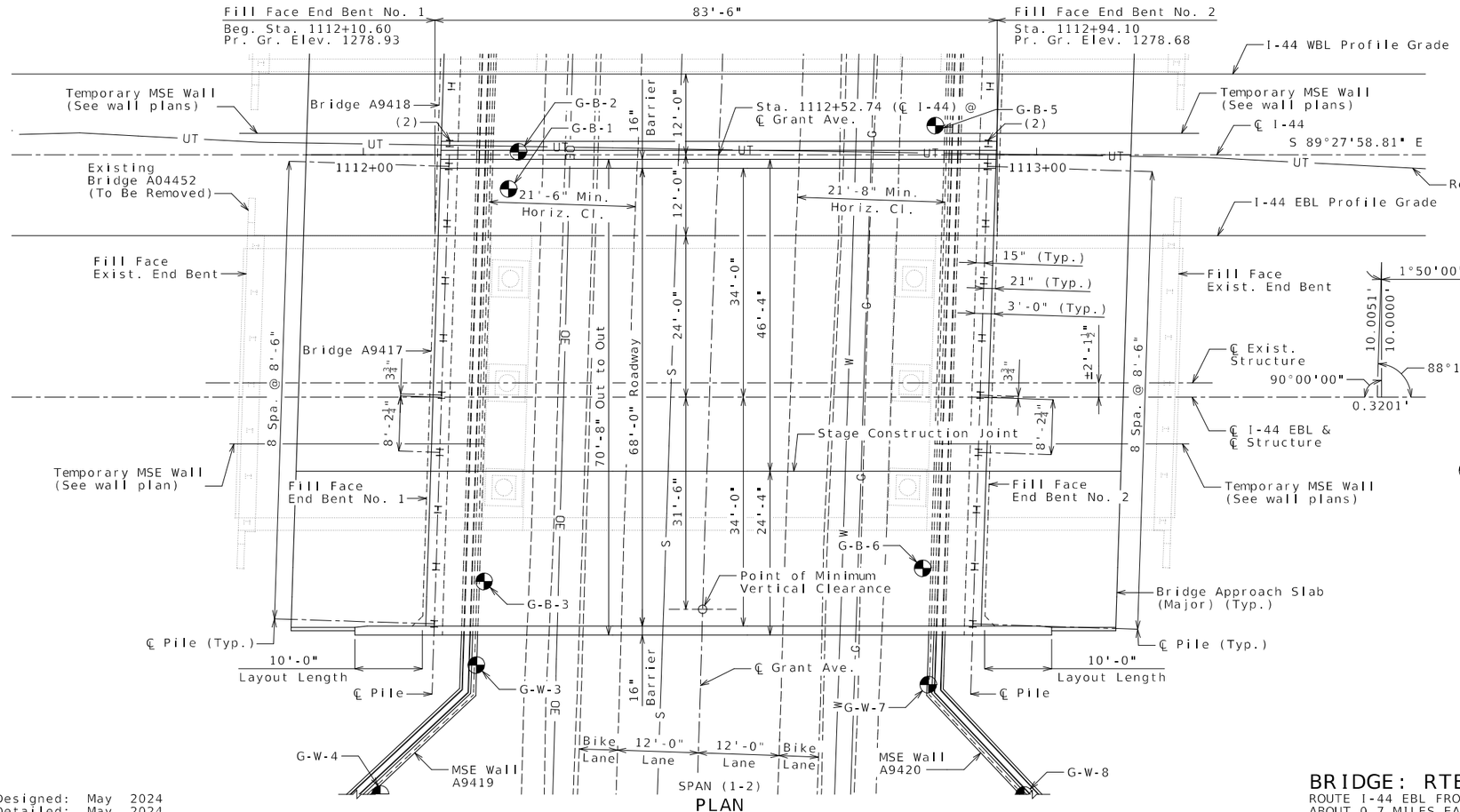
Pile Encasement	Option Used (✓)
Pipe Pile Spacer	
Pile Jacket	

MoDot Construction personnel will indicate the pile encasement used.

(1) Bottom of pipe pile spacer shall be 5'-0" minimum below bottom of leveling pad.

(2) Pile in Bridge A9418 shall be driven during Stage 2 Construction of Bridge A9417.

GENERAL ELEVATION



PLAN

NOTES:

◓ Indicates location of borings.

For notice and disclaimer regarding boring log data, see Sheet No. 2.

Roadway fill, exclusive of Select Granular Backfill for Structural Systems, shall be completed to the final roadway section and up to the elevation of the bottom of the concrete beam within the limits of the structure and for not less than 25 feet in back of the fill face of the end bents before any piles are driven for any bents falling within the embankment section.

C.P. #518 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1106+18.78, 110.87' Lt. of ℄ I-44
Elev. 1277.59

C.P. #519 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1122+80.16, 92.35' Lt. of ℄ I-44
Elev. 1270.58

BRIDGE: RTE. I-44 EBL OVER GRANT AVE.

ROUTE I-44 EBL FROM ROUTE 13 TO ROUTE H
ABOUT 0.7 MILES EAST OF ROUTE 13
BEGINNING STATION 1112+10.60

Designed: May 2024
Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 31

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	1

COUNTY GREENE

JOB NO. JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9417

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165

BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171012\B_A9417_001_JSU0076.dgn 4:11:23 PM 9/5/2024

GENERAL NOTES:

DESIGN SPECIFICATIONS:

2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)
Operational Importance = Essential
2011 AASHTO Guide Specifications for LRFD Seismic Bridge Design (2nd Ed.)
and 2014 Interim Revisions (Seismic)
Seismic Design Category = A
Design earthquake response spectral acceleration coefficient at 1.0 second period, S_{D1} = 0.104g
Acceleration Coefficient (effective peak ground acceleration coefficient), A_S = 0.089g

DESIGN LOADING:

Vehicular = HL-93
Future Wearing Surface = 35 lb/sf
Earth = 120 lb/cf
Equivalent Fluid Pressure = 45 lb/cf (Min.)
Superstructure: Non-composite for dead load.
Composite for live load.

DESIGN UNIT STRESSES:

Class B Concrete (Substructure)	f'c = 3,000 psi
Class B-1 Concrete (Type D Barrier)	f'c = 4,000 psi
Class B-2 Concrete (Superstructure, except Prestressed Girders and Type D Barrier)	f'c = 4,000 psi
Reinforcing Steel (Grade 60)	fy = 60,000 psi
Structural Steel HP Pile (ASTM A709 Grade 50S)	fy = 50,000 psi

For precast prestressed panel stresses, see Sheet No. 18.
For prestressed girder stresses, see Sheets No. 16 thru 17.

NEOPRENE PADS:

Neoprene bearing pads shall be 60 durometer and shall be in accordance with Sec 716.

JOINT FILLER:

All joint filler shall be in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

REINFORCING STEEL:

Minimum clearance to reinforcing steel shall be 1½", unless otherwise shown.

MBS refers to mechanical bar splices. Mechanical bar splices shall be in accordance with Sec 706 or 710 except that no measurement will be made for mechanical bar splices and they will be considered conpletely covered by the contract unit price for other items.

TRAFFIC HANDLING:

Vertical clearance for Grant Avenue traffic during construction shall be 14'-6" minimum over a 12'-0" wide horizontal opening of the roadway in each direction.

Traffic to be maintained on structures during construction. See roadway plans for traffic control and Sheets No. 3 thru 4 for staged construction details.

MISCELLANEOUS:

MoDOT Construction personnel will indicate the type of joint filler option used under the precast panels for this structure:

☐ Constant Joint Filler
☐ Variable Joint Filler

NOTICE AND DISCLAIMER REGARDING BORING LOG DATA:

The locations of all subsurface borings for this structure are shown on the plan sheets for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheets No. 28 thru 31 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.

Estimated Quantities

Item		Substr.	Superstr.	Total
Removal of Miscellaneous ACM (Non-Friable)	sq. foot			12
Removal of Bridges (A04452)	lump sum			1
Bridge Approach Slab (Major)	sq. yard		314	314
Galvanized Structural Steel Piles (12 in.)	linear foot	595		595
Pre-Bore for Piling	linear foot	198		198
Pile Point Reinforcement	each	18		18
Class B Concrete (Substructure)	cu. yard	58.2		58.2
Type D Barrier	linear foot		226	226
Slab on Concrete NU-Girder	sq. yard		648	648
NU 35, Prestressed Concrete NU-Girder	linear foot		647	647
Vertical Drain at End Bents	each	2		2
Plain Neoprene Bearing Pad	each		8	8
Laminated Neoprene Bearing Pad (Tapered)	each		8	8
Pile Spacers	each	18		18

All concrete above the construction joint in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

All reinforcement in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Estimated Quantities for Slab on Concrete NU-Girder

Item		Total
Class B-2 Concrete	cu. yard	205
Reinforcing Steel (Epoxy Coated)	pound	46,160

The table of Estimated Quantities for Slab on Concrete NU-Girder represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab (or with the horizontal dimensions as shown on the plan of slab). Payment for prestressed panels, conventional forms, all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slab shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type I, II or III.

PRECAST PRESTRESSED PANELS:

The Estimated Quantities for Slab on Concrete NU-Girder are based on skewed precast prestressed end panels.

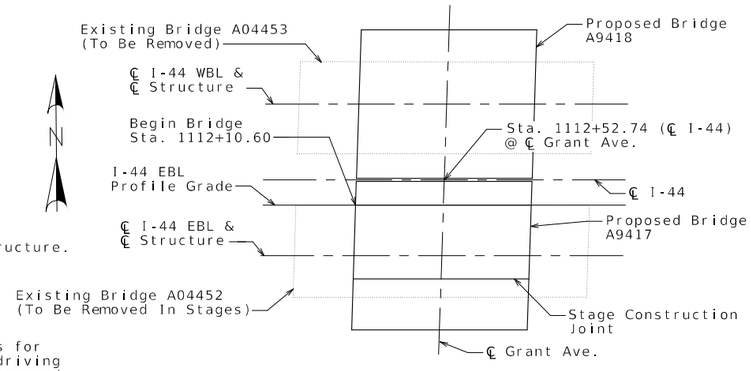
Class B-2 Concrete quantity is based on minimum top flange and minimum joint material thickness.

The prestressed panel quantities are not included in the table of Estimated Quantities for Slab on Concrete NU-Girder.

STAGED CONSTRUCTION:

The Contractor shall verify that the existing bridge is sufficient to carry traffic during Stage 1 Construction. the design, installation and monitoring of any temporary supports will be considered completely covered by the contract unit price for the Removal of Bridges (A04452).

The Contractor shall remove the existing end bents as necessary for Stage 1 Construction as shown on Sheet No. 3.



LOCATION SKETCH

Foundation Data

Type	Design Data		Bent Number 1	Bent Number 2
Load Bearing Pile	Pile Type and Size		HP 12x53	HP 12x53
	Number	ea	9	9
	Approximate Length Per Each	ft	32	35
	Pile Point Reinforcement	ea	All	All
	Min. Galvanized Penetration (Elev.)	ft	Full Length	Full Length
	Pile Driving Verification Method		DF	DF
	Resistance Factor		0.40	0.40
	Minimum Nominal Axial Compressive Resistance	kip	590	590

DF = FHWA - modified Gates Dynamic Pile Formula.

Minimum Nominal Axial Compressive Resistance = $\frac{\text{Maximum Factored Loads}}{\text{Resistance Factor}}$

Manufactured pile point reinforcement shall be used on all piles in this structure.

Pile point reinforcement need not be galvanized. Shop drawings will not be required for pile point reinforcement.

Prebore for piles at Bents No. 1 and 2 to elevation 1245.5.

HP piles are anticipated to be driven to refusal on rock. Review all borings for depth of rock and restrict driving as appropriate to comply with hard rock driving criteria in accordance with Sec 702. When pile refusal on rock occurs, as approved by the engineer, the minimum nominal axial compressive resistance is verified and no additional pile driving verification method is required.

The contractor shall make every effort to achieve the minimum galvanized penetration (elevation) shown on the plans for all piles.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

GENERAL NOTES & QUANTITIES

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

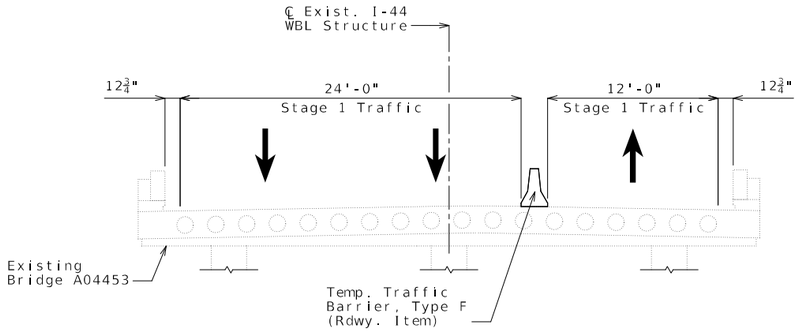
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

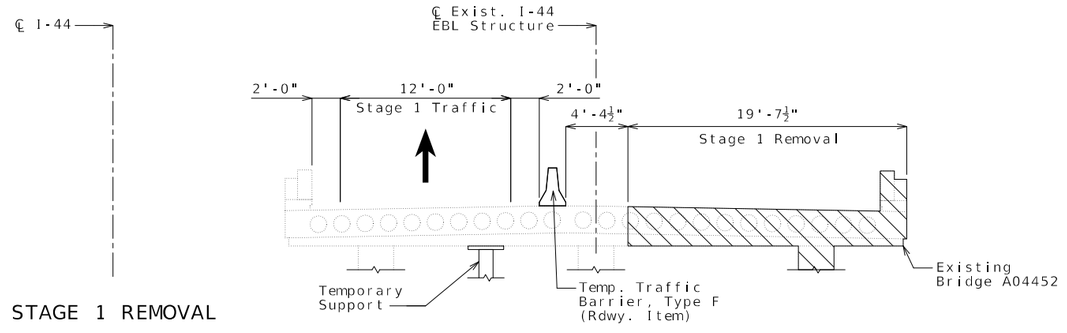
DATE PREPARED: 11/7/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 2
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9417

DESCRIPTION | DATE

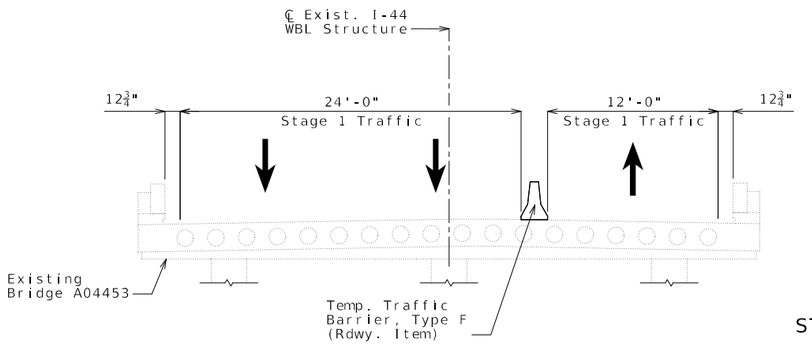
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

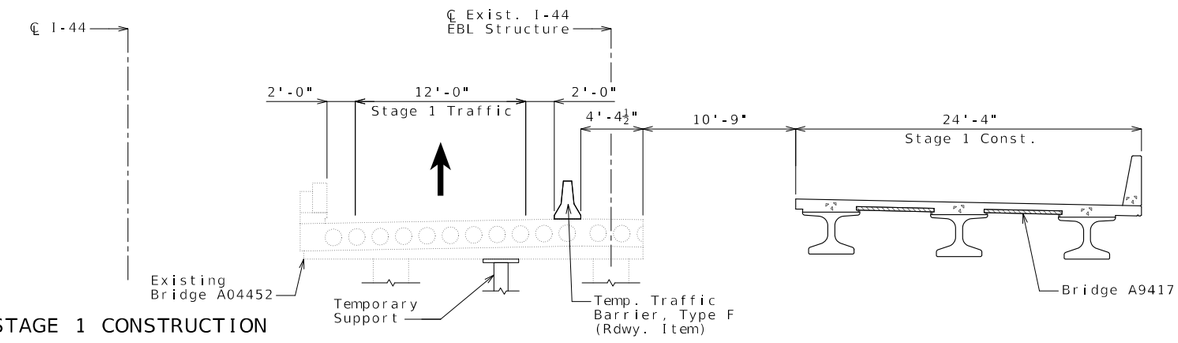
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



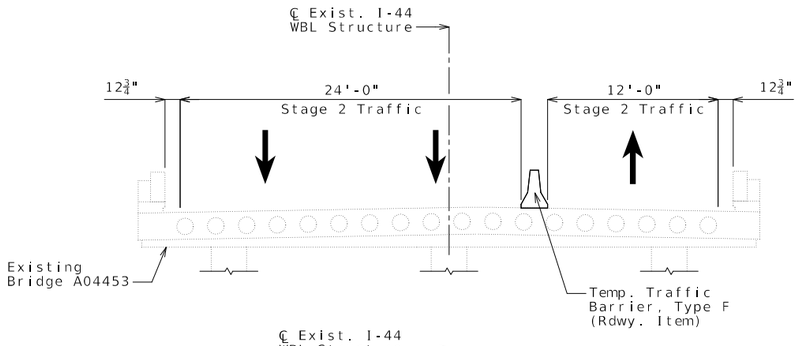


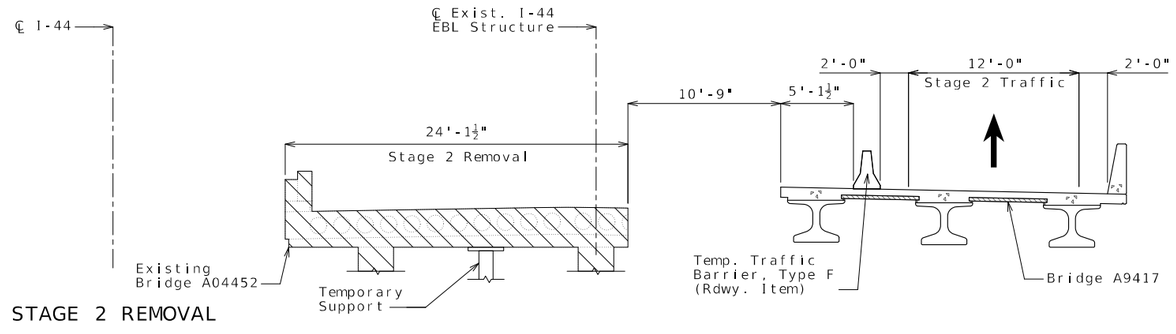
STAGE 1 REMOVAL



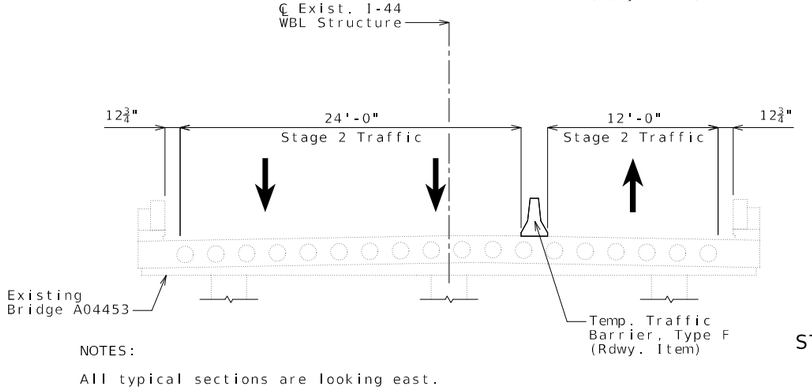


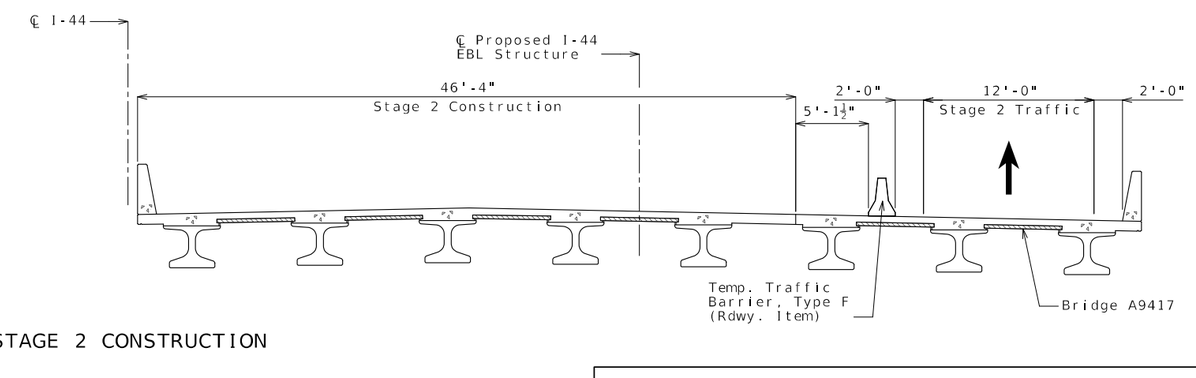
STAGE 1 CONSTRUCTION





STAGE 2 REMOVAL





STAGE 2 CONSTRUCTION

NOTES:

All typical sections are looking east.

Hatched area indicates removal of existing structures.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 31

STAGED CONSTRUCTION

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	3

COUNTY: GREENE

JOB NO.: JSU0076

CONTRACT ID.:

PROJECT NO.:

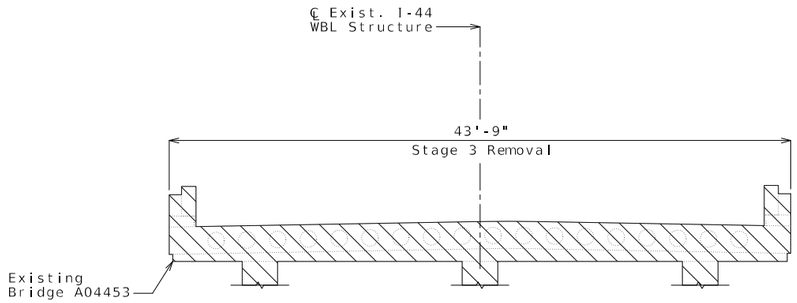
BRIDGE NO.: A9417

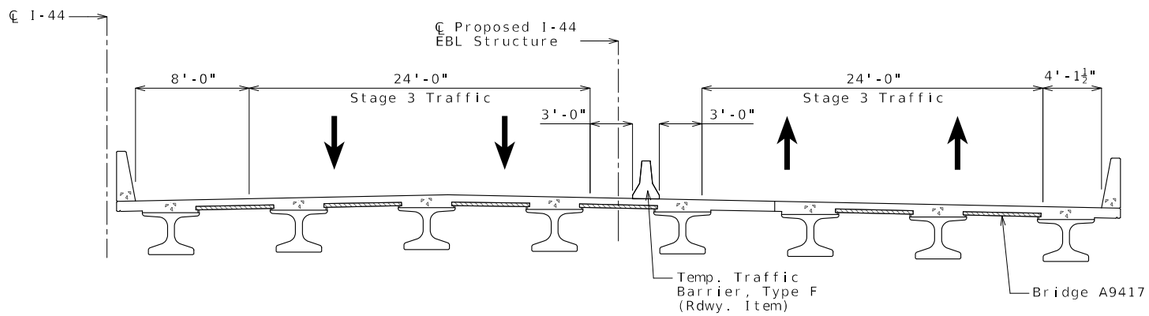
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

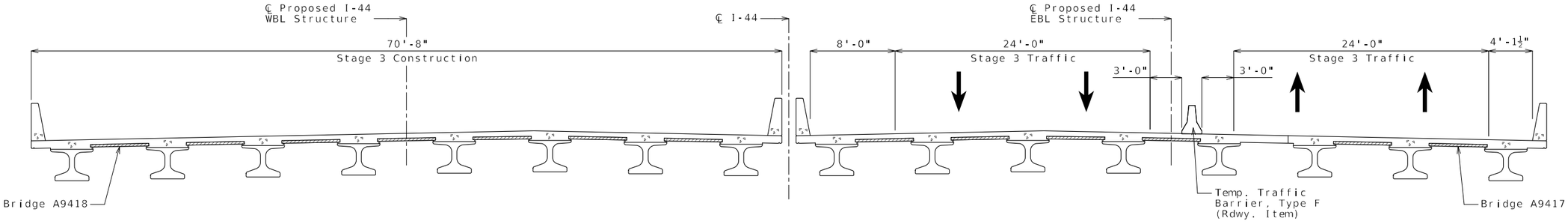
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

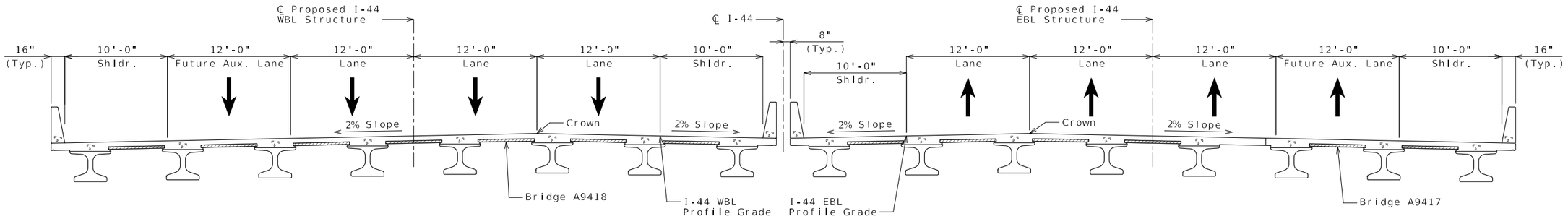




STAGE 3 REMOVAL



STAGE 3 CONSTRUCTION



FINAL SECTION THRU SLAB

NOTES:

All typical sections are looking east.

Hatched area indicates removal of existing structures.

STAGED CONSTRUCTION

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/5/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	4

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

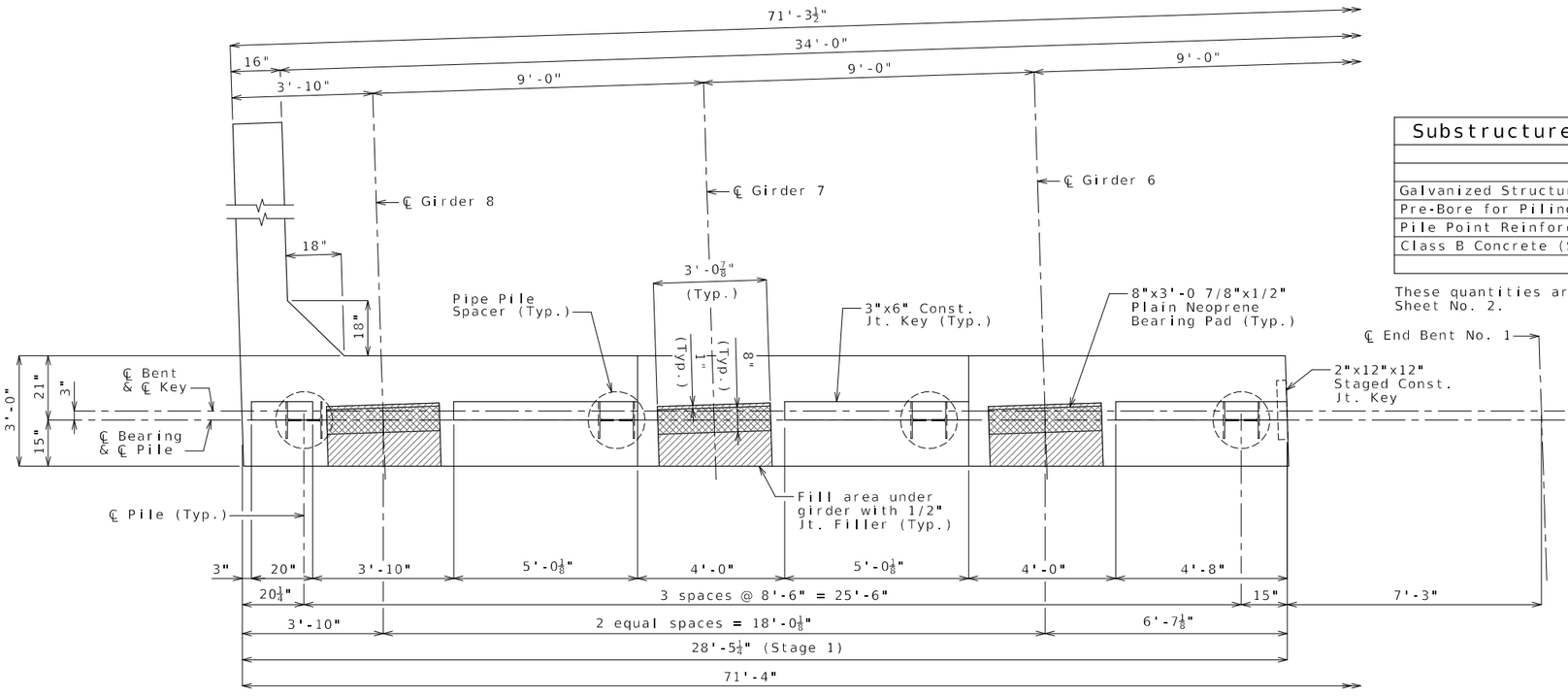
BRIDGE NO.
A9417

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

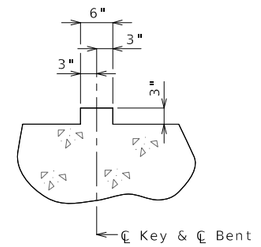
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617



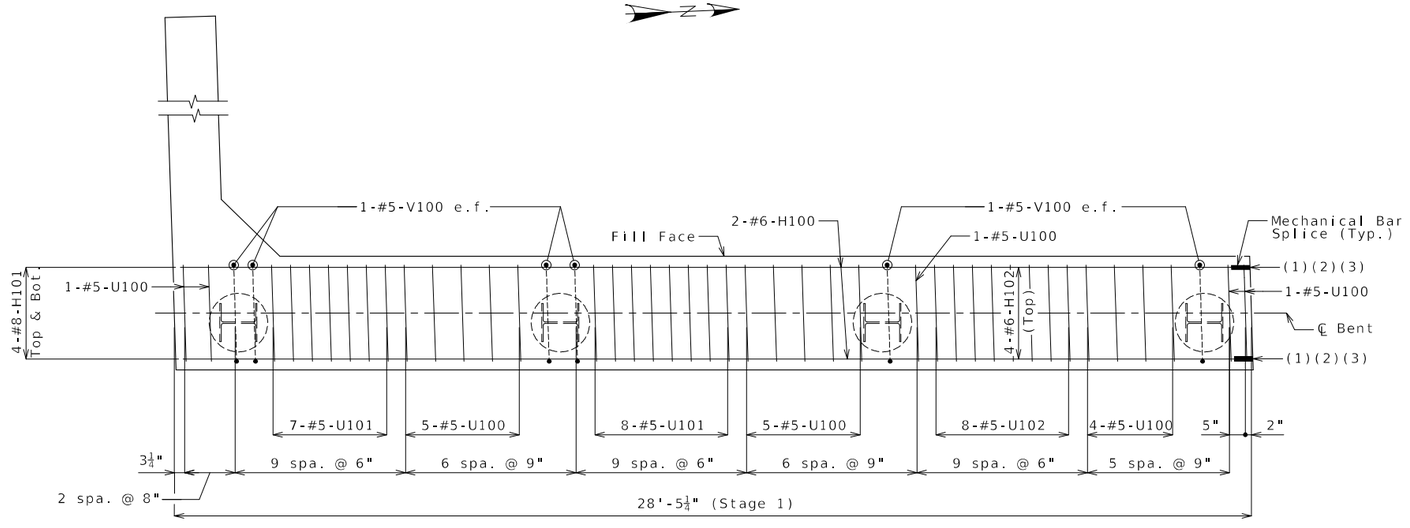
PART PLAN OF BEAM

Substructure Quantity Table for End Bent No. 1		
Item		Quantity
Galvanized Structural Steel Piles (12 in.)	linear foot	284
Pre-Bore for Piling	linear foot	99
Pile Point Reinforcement	each	9
Class B Concrete (Substructure)	cu. yard	29.0

These quantities are included in the Estimated Quantities table on Sheet No. 2.



SECTION THRU KEY



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 6 thru 9.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) 4-MBS H101-H104 Top & Bot.
(2) 2-MBS H100-H103 Each Face
(3) 4-MBS H102-H105 Top

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 5 of 31

END BENT NO. 1
BEAM DETAILS 1 OF 2

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

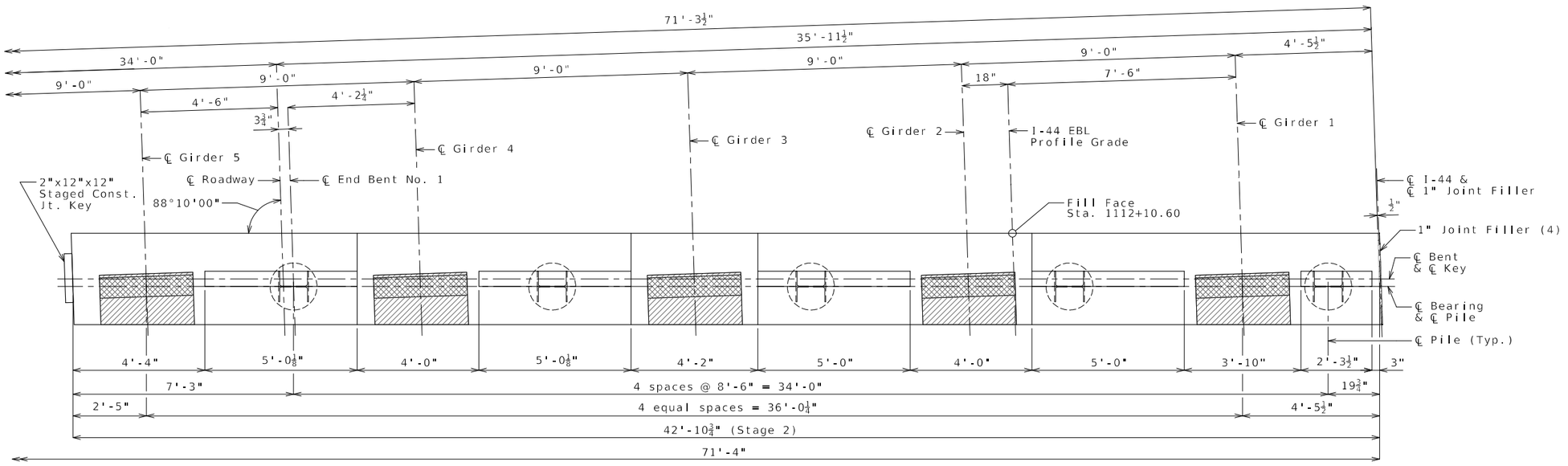
DATE PREPARED: 9/5/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 5
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9417

DESCRIPTION | DATE | REV.

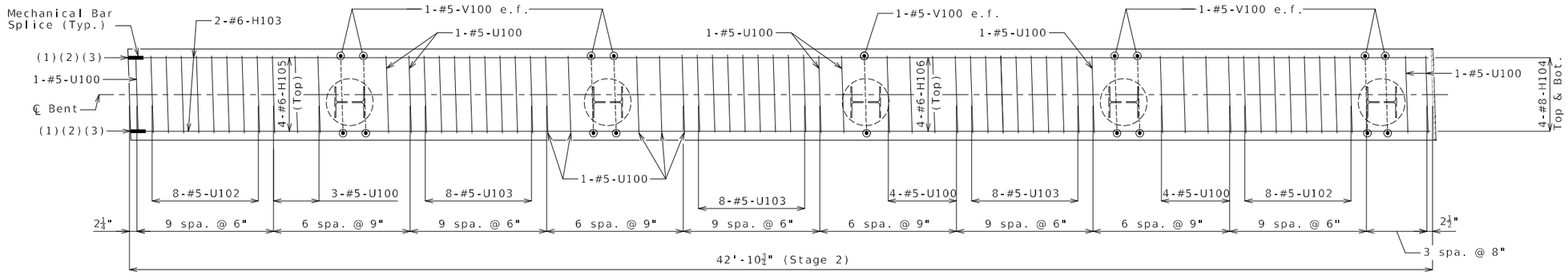
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171012\B_A9417_005_JSU0076.dgn 4:12:15 PM 9/5/2024



PART PLAN OF BEAM



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5 and 7 thru 9.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) 4-MBS H101-H104 Top & Bot.
(2) 2-MBS H100-H103 Each Face
(3) 4-MBS H102-H105 Top
(4) Seal joint between vertical face of EB and WB bearing beams with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6 of 31

END BENT NO. 1
BEAM DETAILS 2 OF 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	6

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9417

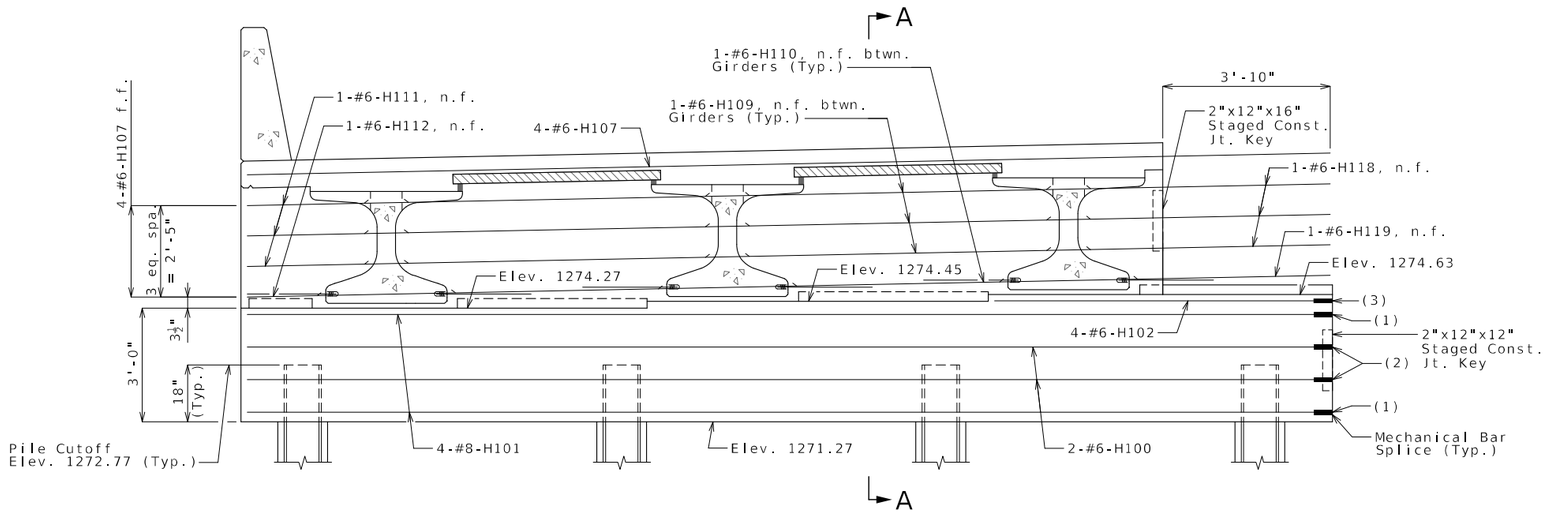
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

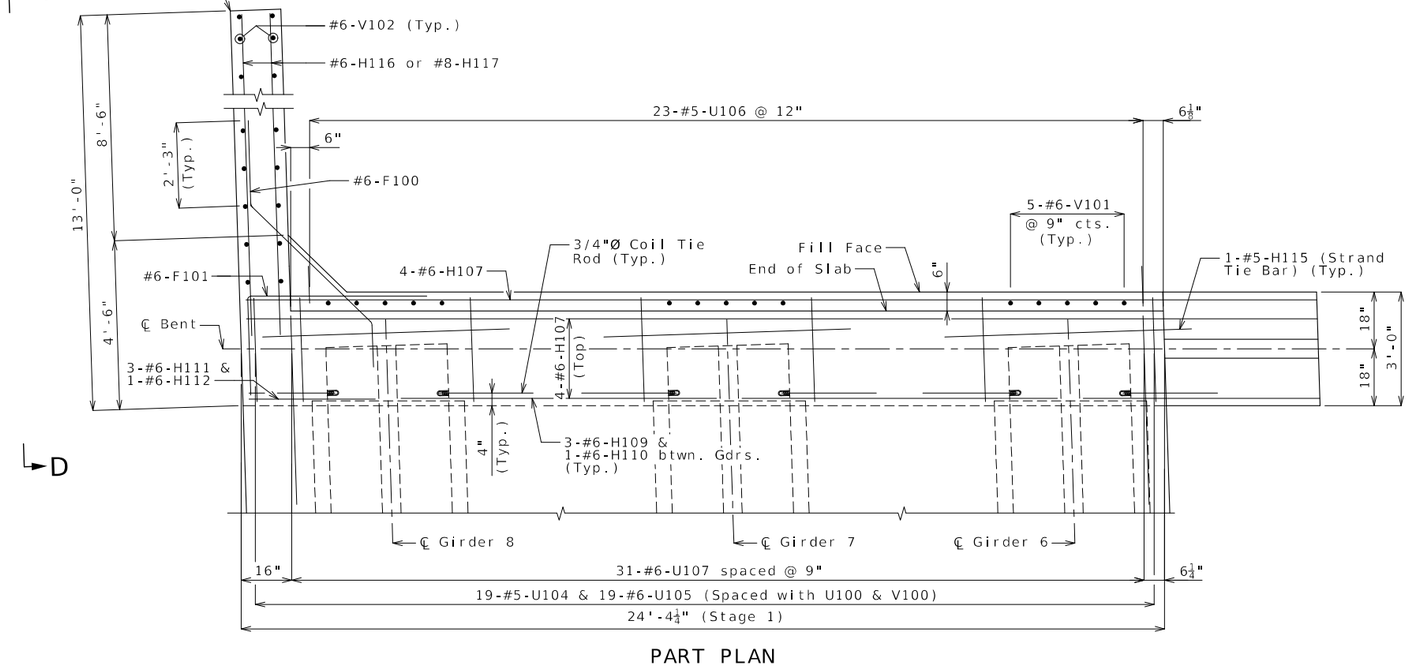
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171012\B_A9417_006_JSU0076.dgn 4:12:27 PM 9/5/2024



SECTION NEAR END BENT
(Looking Back Station)



PART PLAN
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5, 6, 8 & 9.

For Section A-A see Sheet No.9.

The #6-F100 shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H115, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No.10.

For details of bridge approach slab, see Sheet No.24.

f.f. denotes far face
n.f. denotes near face

(1) 4-MBS H101-H104 Top & Bot.
(2) 2-MBS H100-H103 Each Face
(3) 4-MBS H102-H105 Top

END BENT NO. 1
DIAPHRAGM DETAILS 1 of 2

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 7 of 31

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	7

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9417

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

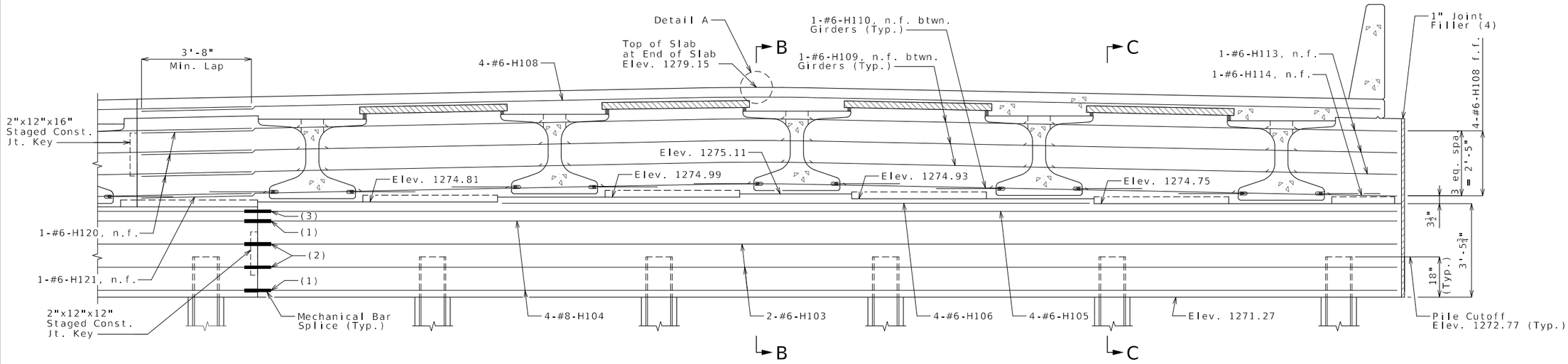
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

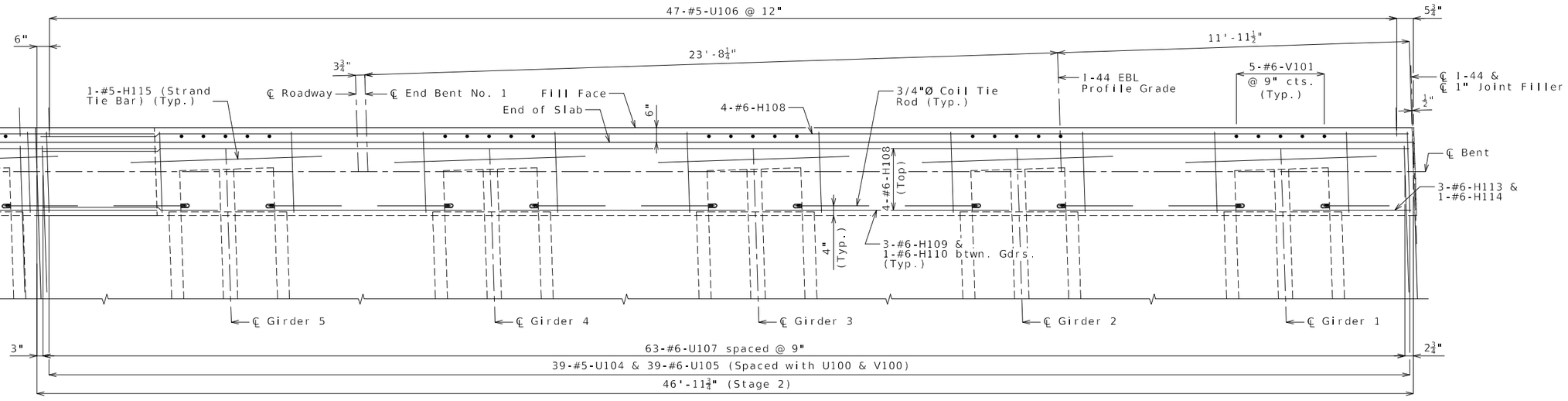
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165

BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171012\B_A9417_007_JSU0076.dgn 4:12:40 PM 9/5/2024



SECTION NEAR END BENT
(Looking Back Station)



PART PLAN
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5 thru 7 & 9.

For Section A-A see Sheet No. 9.

For Detail A see Sheet No. 21.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H115, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) 4-MBS H101-H104 Top & Bot.
(2) 2-MBS H100-H103 Each Face
(3) 4-MBS H102-H105 Top
(4) Seal joint between vertical face of EB and WB bearing beams and diaphragms with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 31

END BENT NO. 1
DIAPHRAGM DETAILS 2 of 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	8

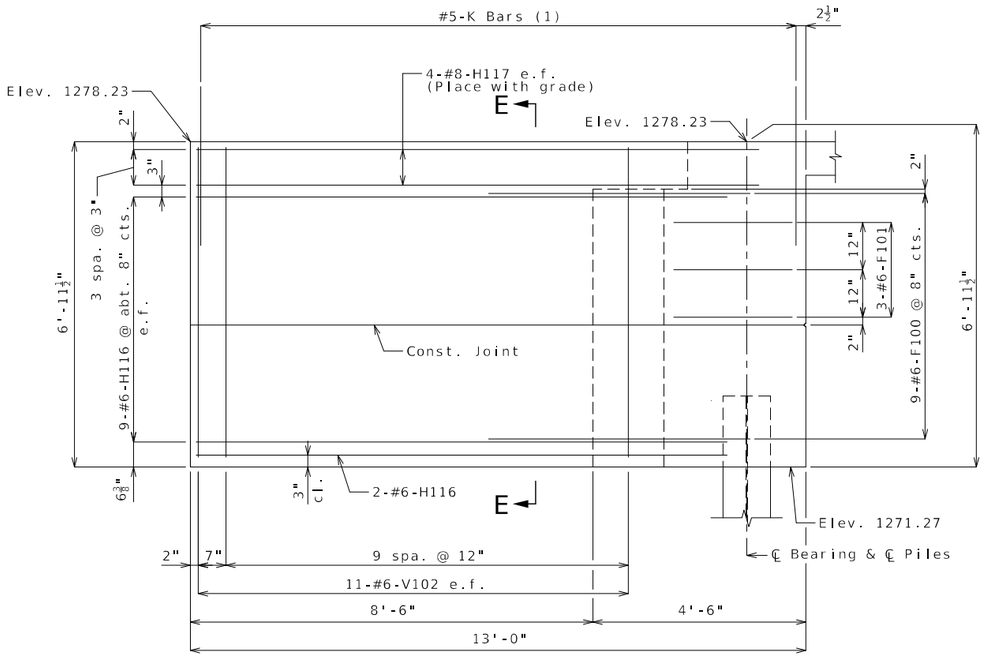
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9417

DESCRIPTION | DATE | REV.

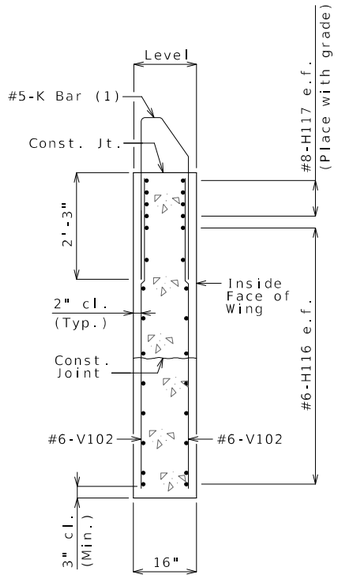
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

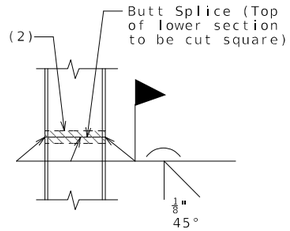
c:\bmcd_lib\pw_connect\trn\d0171012\B_A9417_008_JSU0076.dgn 4:12:52 PM 9/5/2024



ELEVATION D-D



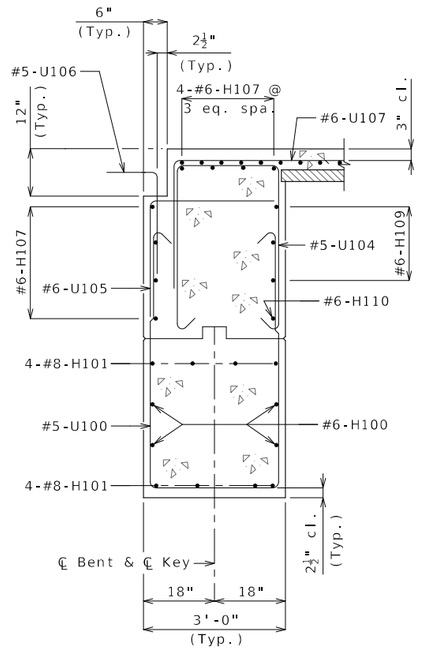
SECTION E-E



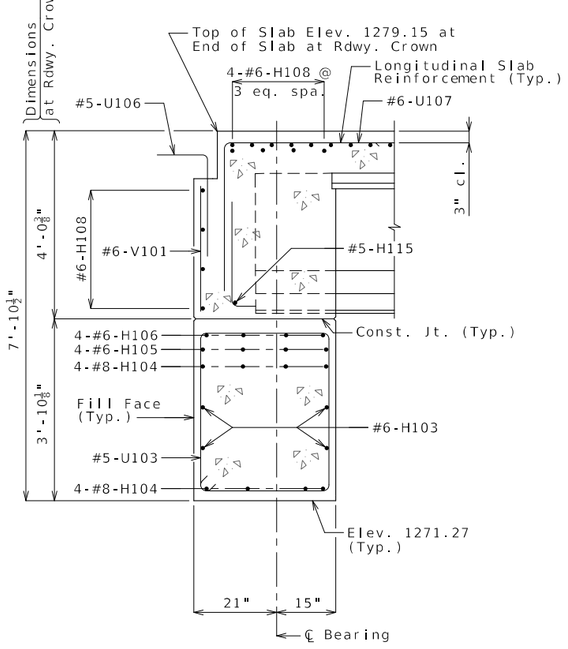
STEEL PILE SPLICE

(If required)

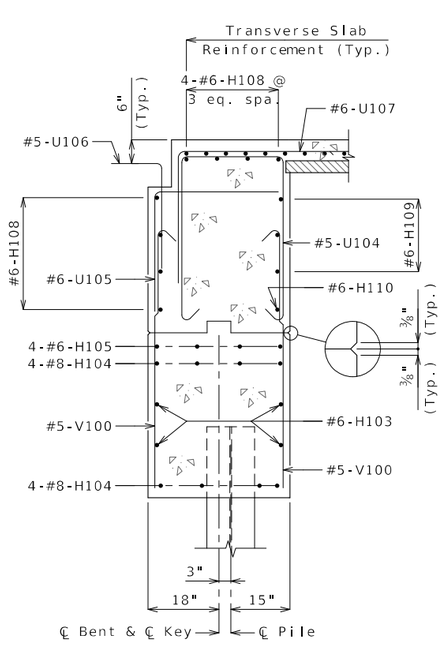
(2) Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

(1) For reinforcement of the Type D Barrier at End Bents, see Sheet No. 23.

e.f. denotes each face.

For details of bridge approach slab, see Sheet No. 24.

Work this sheet with Sheets No. 5 thru 8.

END BENT NO. 1
WING DETAILS & SECTIONS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9 of 31

4:13:04 PM 9/5/2024

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

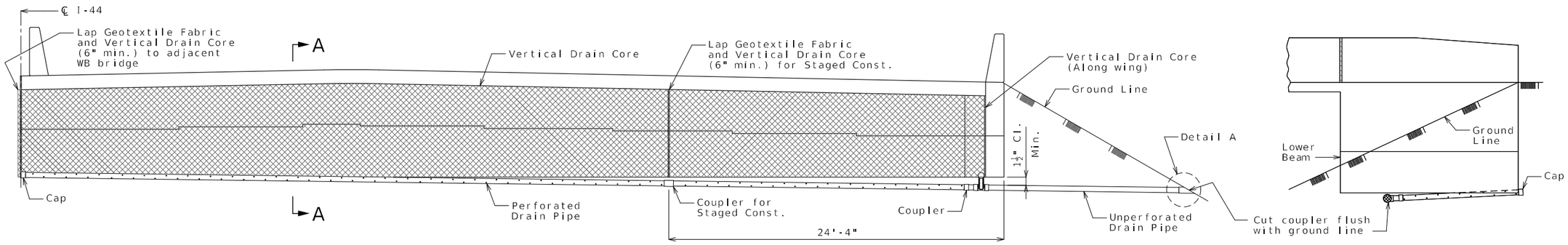
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/5/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 9
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9417

REV.	DESCRIPTION	DATE

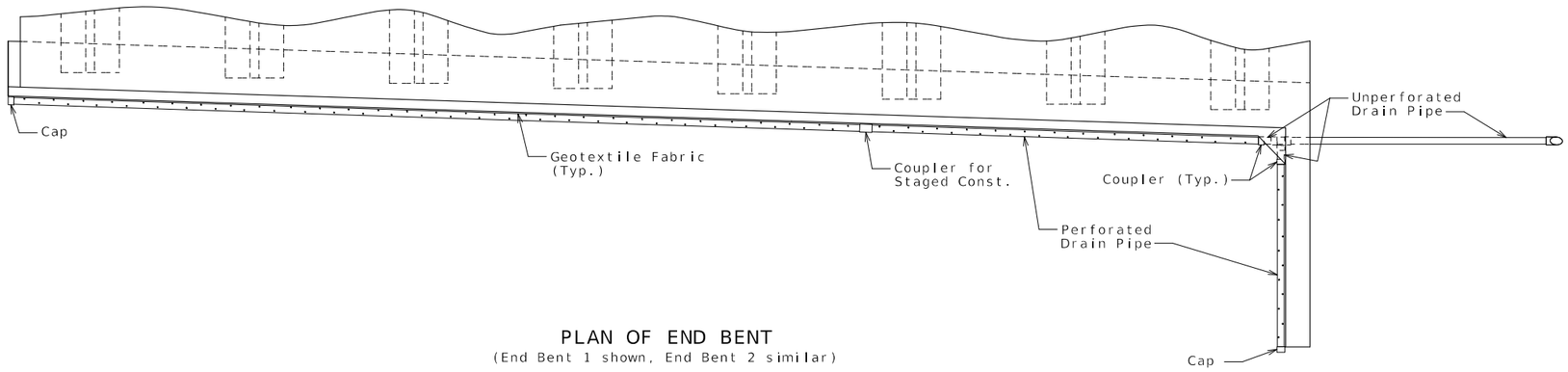
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

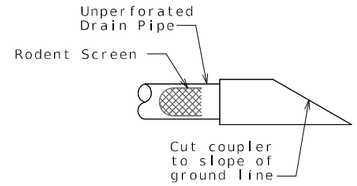


ELEVATION OF END BENT

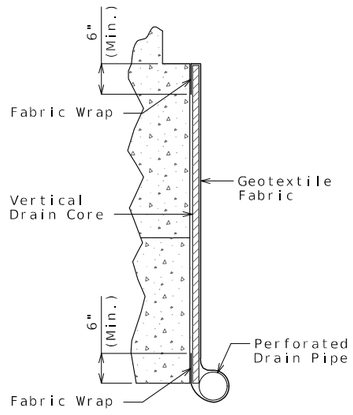
ELEVATION OF WING



PLAN OF END BENT
(End Bent 1 shown, End Bent 2 similar)



DETAIL A



PART SECTION A-A
(Section thru wing similar)

General Notes:

All drain pipe shall be sloped 1 to 2 percent.

Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.

Drain pipe shall be placed at fill face of end bent and inside face of wings. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.

Perforated pipe shall be placed at fill face side and inside face of wings at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.

VERTICAL DRAIN AT END BENTS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

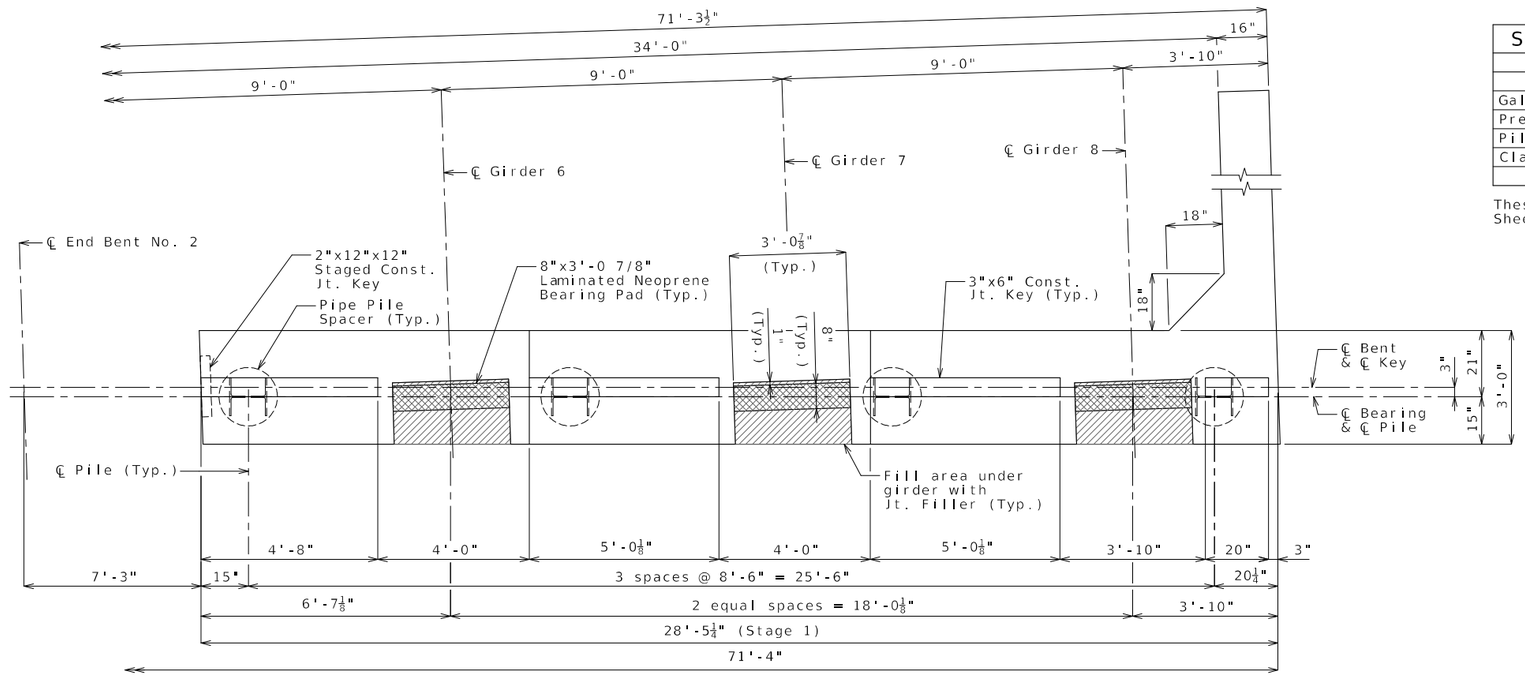
DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 10
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9417

DESCRIPTION | DATE

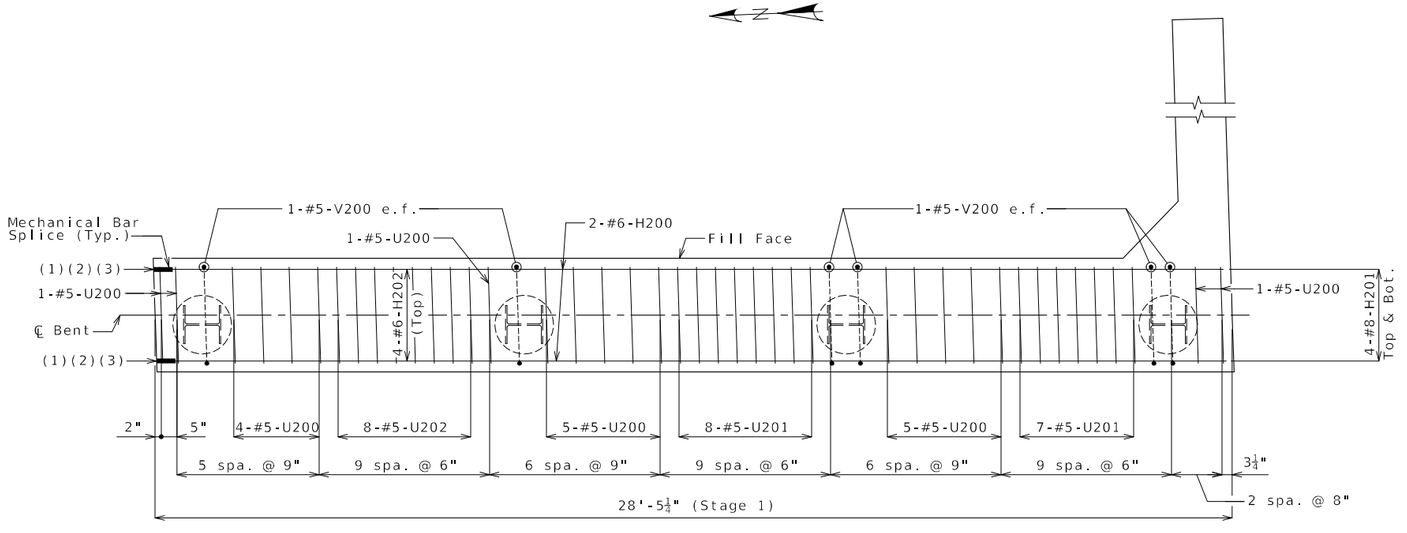
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



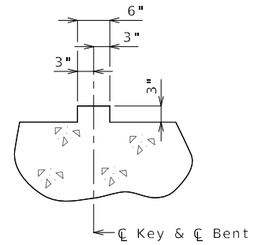
PART PLAN OF BEAM



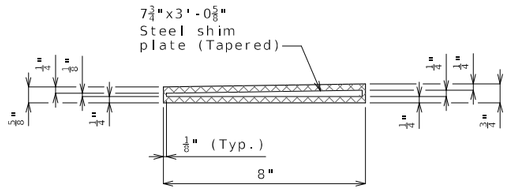
PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

Substructure Quantity Table for End Bent No. 2		
Item		Quantity
Galvanized Structural Steel Piles (12 in.)	linear foot	311
Pre-Bore for Piling	linear foot	99
Pile Point Reinforcement	each	9
Class B Concrete (Substructure)	cu. yard	29.2

These quantities are included in the Estimated Quantities table on Sheet No. 2.



SECTION THRU KEY



TYPICAL SECTION THRU
8"X3'-0 7/8"X11/16"
LAMINATED NEOPRENE BEARING PAD
(8 Required)

NOTES:

Work this sheet with Sheets No. 12 thru 15.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) 4-MBS H201-H204 Top & Bot.
(2) 2-MBS H200-H203 Each Face
(3) 4-MBS H202-H205 Top

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 11 of 31

END BENT NO. 2
BEAM DETAILS 1 OF 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 9/5/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 11
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9417

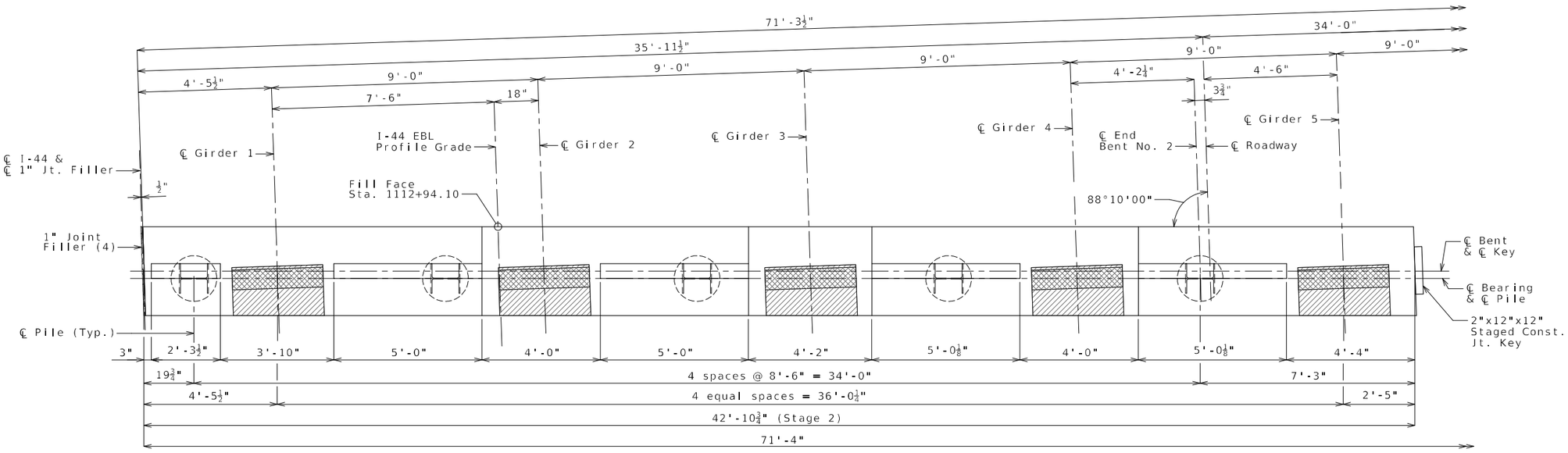
DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

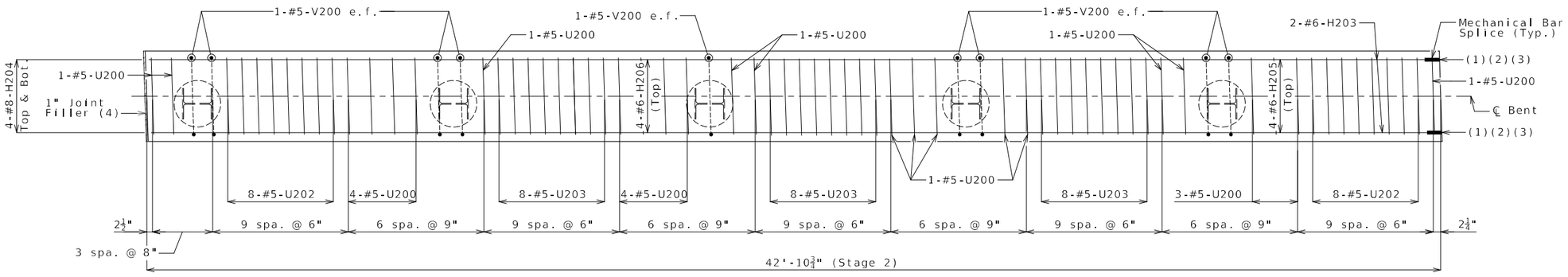
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171012\B_A9417_011_JSU0076.dgn 4:13:29 PM 9/5/2024



PART PLAN OF BEAM



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 11 & 13 thru 15.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) 4-MBS H201-H204 Top & Bot.
(2) 2-MBS H200-H203 Each Face
(3) 4-MBS H202-H205 Top
(4) Seal joint between vertical face of EB and WB bearing beams with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 12 of 31

END BENT NO. 2
BEAM DETAILS 2 OF 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	12

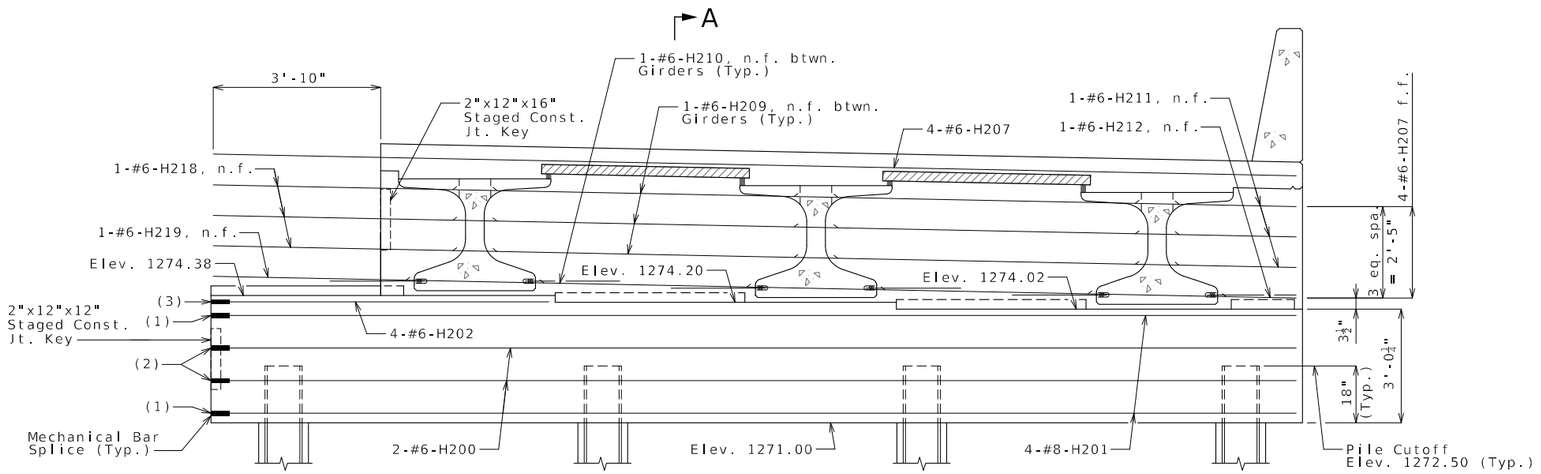
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9417

REV.	DESCRIPTION	DATE

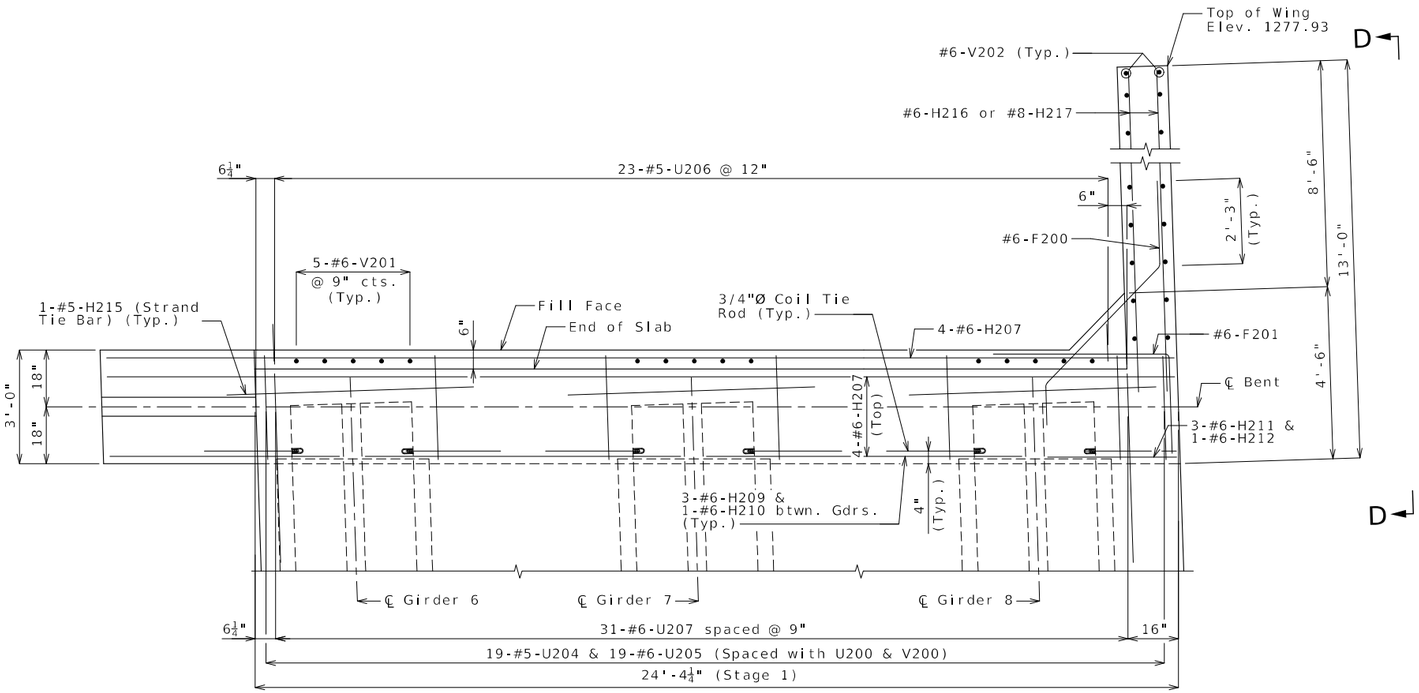
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171012\B_A9417_012_JSU0076.dgn 4:13:42 PM 9/5/2024



SECTION NEAR END BENT
(Looking Ahead Station)



PART PLAN
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 11, 12, 14 & 15.

For Section A-A see Sheet No. 15.

The #6-F200 shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H215, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) 4-MBS H201-H204 Top & Bot.
(2) 2-MBS H200-H203 Each Face
(3) 4-MBS H202-H205 Top

END BENT NO. 2
DIAPHRAGM DETAILS 1 of 2

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

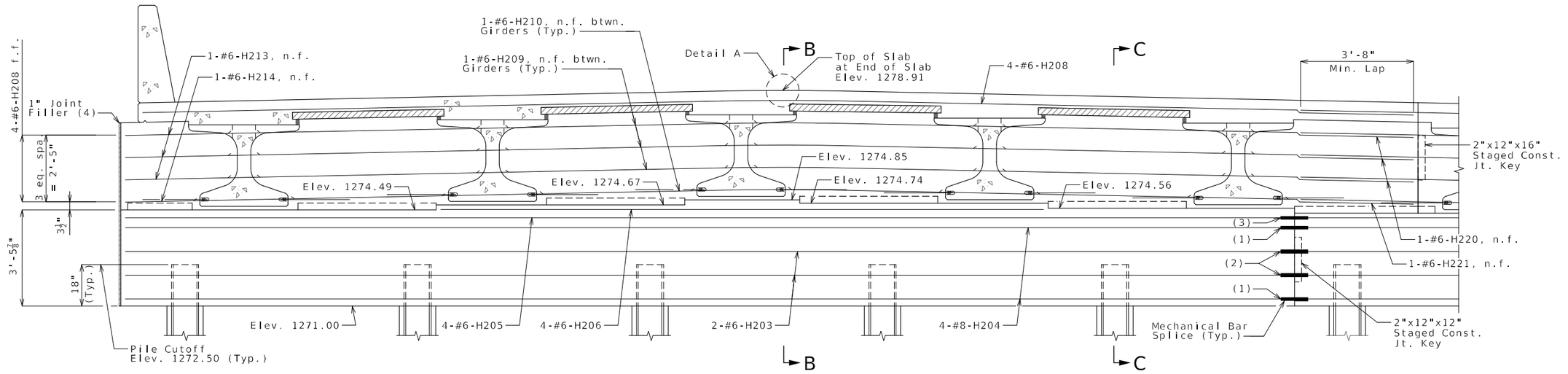
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 13
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9417

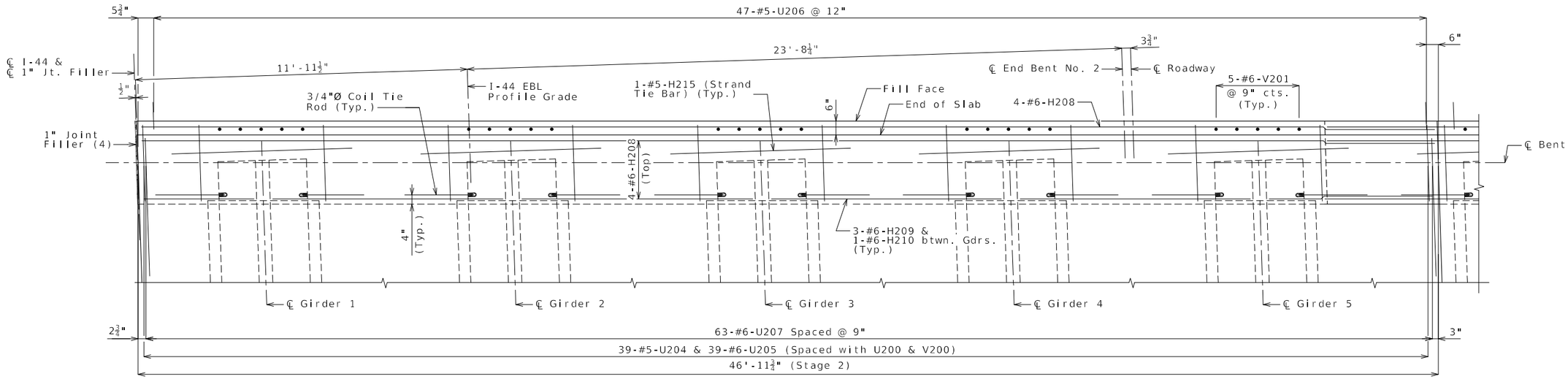
DESCRIPTION | DATE | REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



SECTION NEAR END BENT
(Looking Ahead Station)



PART PLAN
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 11 thru 13 & 15.

For Section A-A see Sheet No. 15.

For Detail A see Sheet No. 21.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H215, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) 4-MBS H201-H204 Top & Bot.
(2) 2-MBS H200-H203 Each Face
(3) 4-MBS H202-H205 Top
(4) Seal joint between vertical face of EB and WB bearing beams and diaphragms with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 14 of 31

END BENT NO. 2
DIAPHRAGM DETAILS 2 of 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 9/5/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 14
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9417

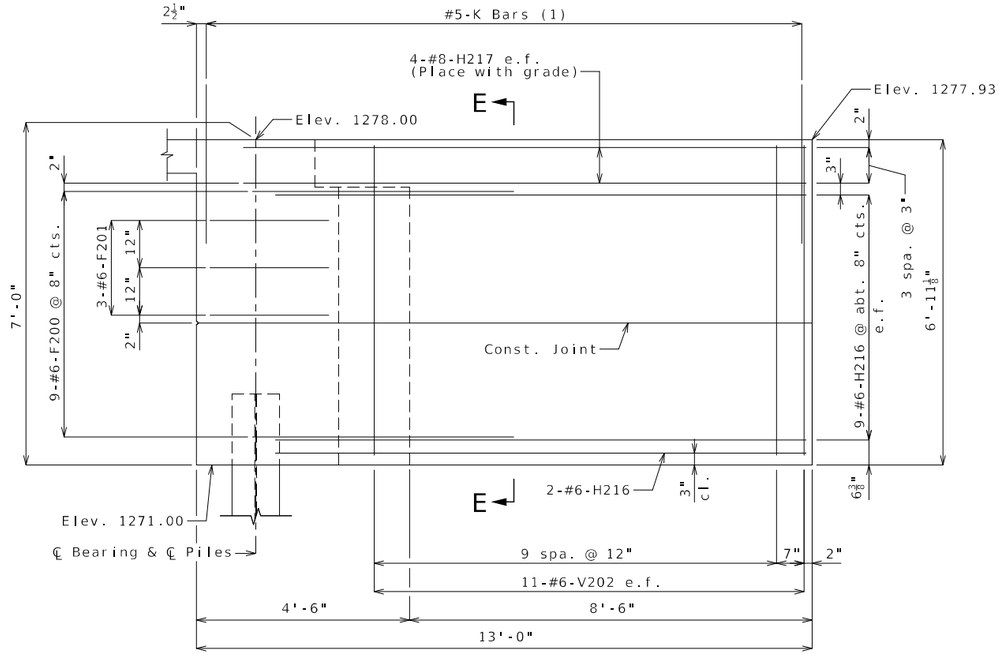
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV. | DESCRIPTION | DATE

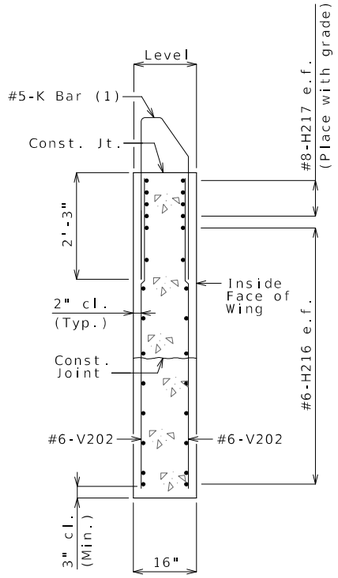
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

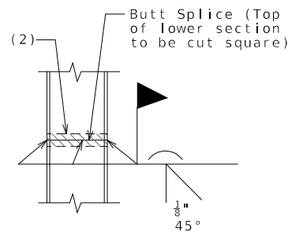
c:\bmcd_lib\pw_connect\trn\d0171012\B_A9417_014_JSU0076.dgn 4:14:07 PM 9/5/2024



ELEVATION D-D



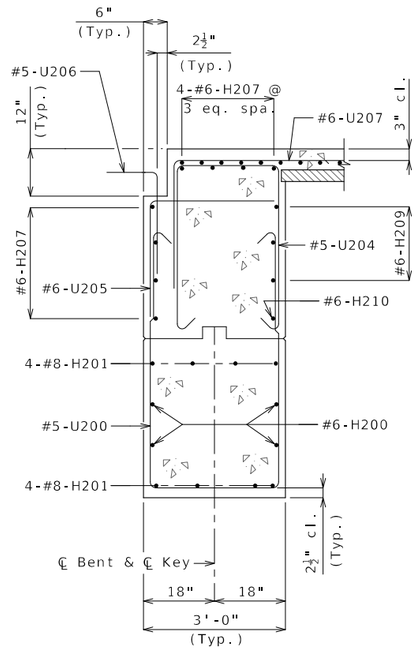
SECTION E-E



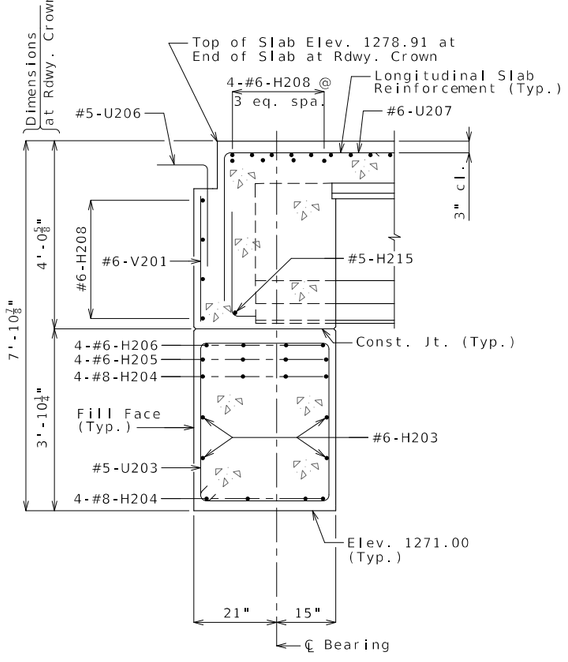
STEEL PILE SPLICE

(If required)

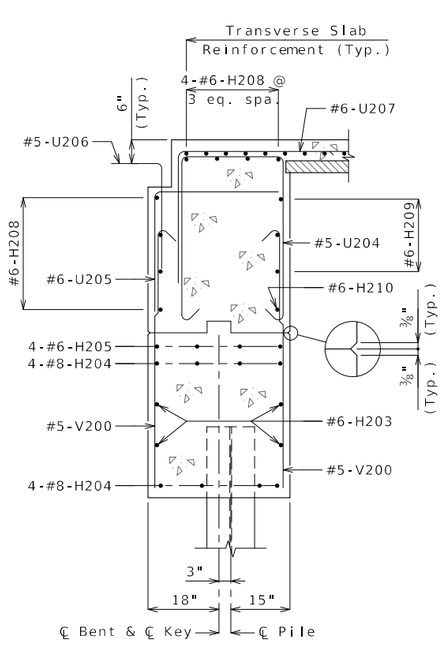
(2) Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

(1) For reinforcement of the Type D Barrier at End Bents, see Sheet No. 23.

e.f. denotes each face.

For details of bridge approach slab, see Sheet No. 24.

Work this sheet with Sheets No. 11 thru 14.

END BENT NO. 2
WING DETAILS & SECTIONS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 15 of 31

4:14:19 PM 9/5/2024

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

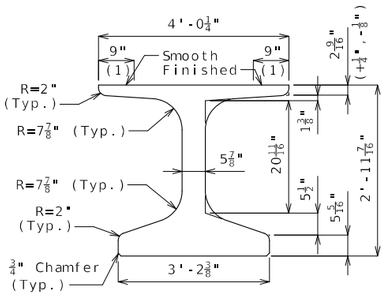
DATE PREPARED: 9/5/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 15
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9417

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

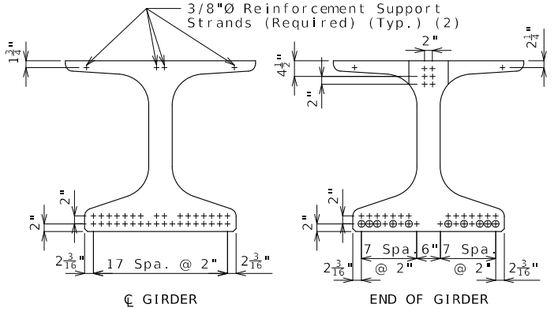
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.



DIMENSIONS
AT MID SPAN

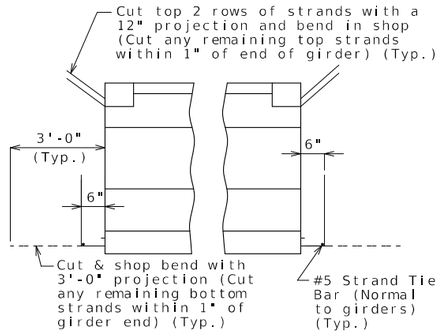
(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.



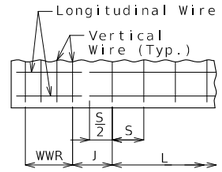
STRAND ARRANGEMENT

\+ Indicates prestressing strand.

o Indicates cut & shop bend with 3'-0" projection.



STRANDS AT GIRDER ENDS



WELDED WIRE PLACEMENT

S = Vertical wire spacing

L = Length of WWR mats

J = Distance between WWR mats

Bill of Reinforcing Steel

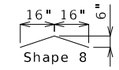
Bars Each Girder

No.	Size/Mark		Length	Shape
102	3	G1	2'-10"	8
2	4	G3	3'-10¼"	20

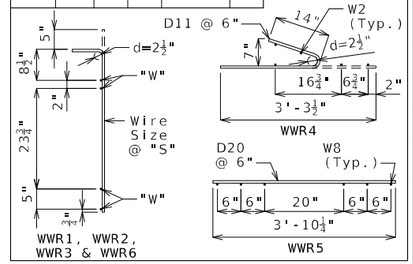
Welded Wire Each Girder

Mark	Size	S	W	L	J
WWR1	D31	4"	W12	6'-4"	4"
WWR2	D31	12"	W12	24'-0"	12"
WWR3	D31	2'-0"	W12	6'-0"	12"
WWR6	D31	2"	W12	16"	3½"

Bending Diagrams



Shape 20



All dimensions are out to out.

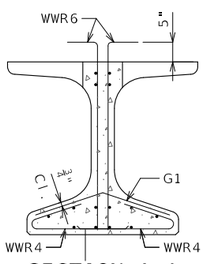
Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Actual bar lengths are measured along centerline of bar to the nearest inch.

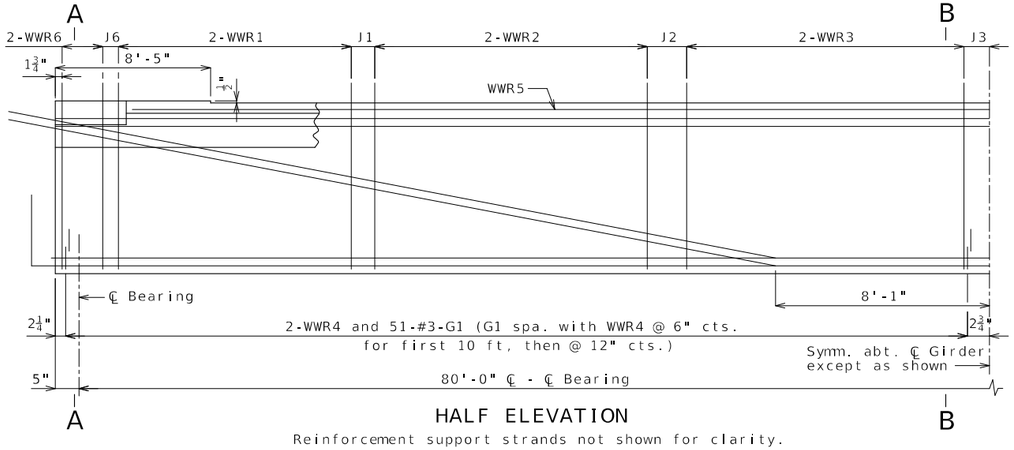
Minimum clearance to reinforcing shall be 1", unless otherwise shown.

All bar reinforcement shall be Grade 60.

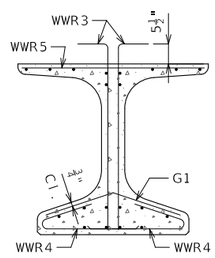
WWR shall not be epoxy coated.



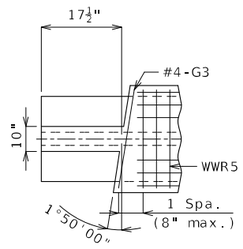
SECTION A-A
Strands not shown for clarity.



HALF ELEVATION
Reinforcement support strands not shown for clarity.



SECTION B-B
Strands not shown for clarity.



TOP FLANGE BLOCKOUT

General Notes:

Concrete for prestressed beams shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 34 strands, 0.6"Ø Grade 270, with an initial prestress force of 1494 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

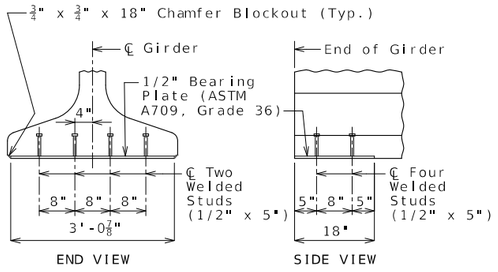
Exterior and interior girders are the same except for coil ties and application of bond breaker.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

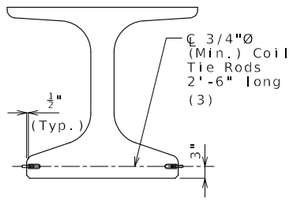
For Girder Camber Diagram, see Sheet No. 19.

For location of coil ties at integral bents, see Sheets No. 7, 8, 13 and 14.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.



BEARING PLATE



COIL TIES

(3) 2'-3" at exterior face of Girder 8 at end bents

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
STATE OF MISSOURI

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 16
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9417

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

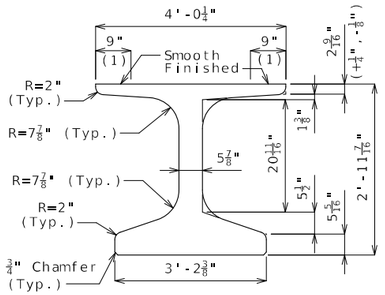
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

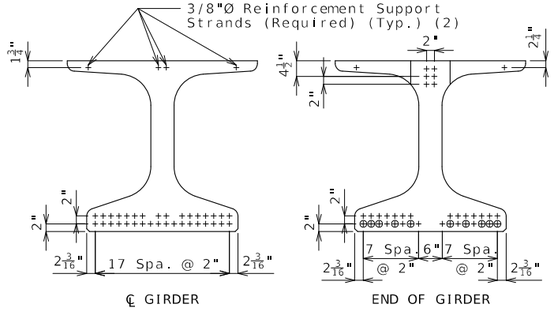
NU-GIRDERS - SPAN (1-2)

(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.



DIMENSIONS
AT MID-SPAN

(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.

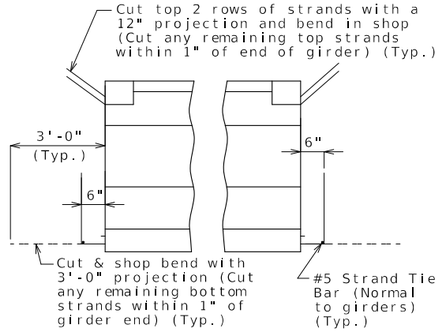


℄ GIRDER END OF GIRDER

STRAND ARRANGEMENT

\+ Indicates prestressing strand.

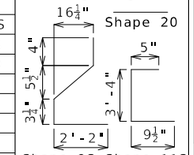
o Indicates cut & shop bend with 3'-0" projection.



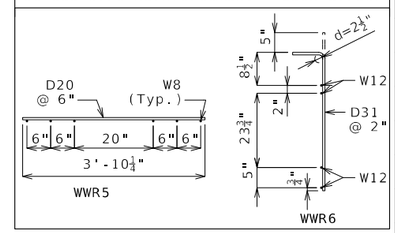
STRANDS AT GIRDER ENDS

Bill of Reinforcing Steel - Each Girder			
No.	Size/ Mark	Length	Shape
180	5 B1	4'-4"	11S
200	4 D1	4'-0"	9S
2	4 G3	3'-10¼"	20

Bending Diagrams



Welded Wire Reinforcement - Each Girder



All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

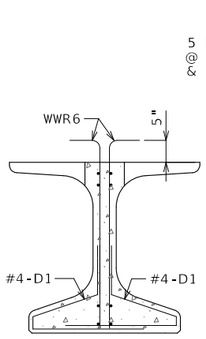
Actual bar lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be one inch.

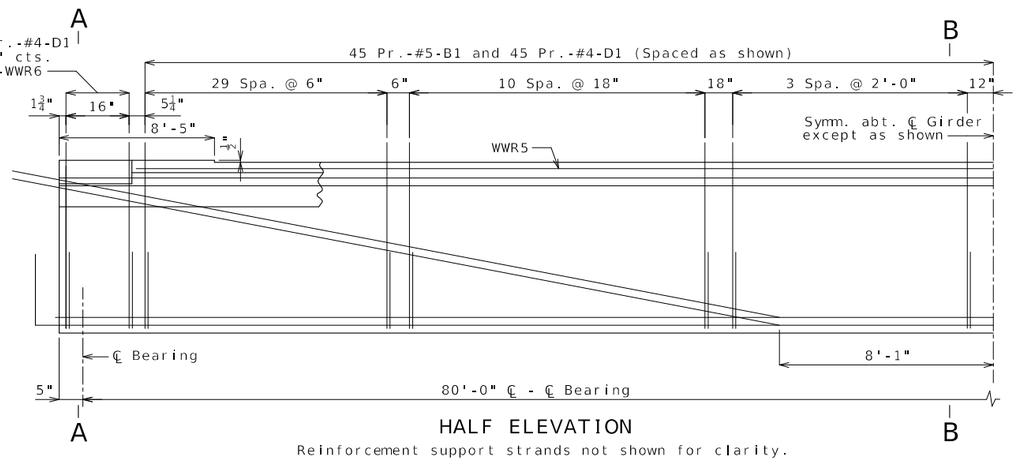
All bar reinforcement shall be Grade 60.

The two D1 bars may be furnished as one bar at the fabricator's option.

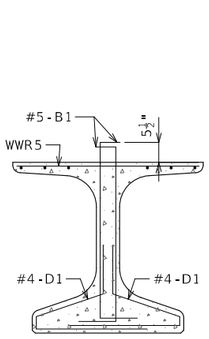
All B1 bars shall be epoxy coated.



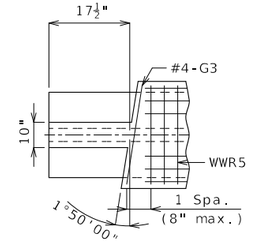
SECTION A-A
Strands not shown for clarity.



HALF ELEVATION
Reinforcement support strands not shown for clarity.



SECTION B-B
Strands not shown for clarity.



TOP FLANGE BLOCKOUT

General Notes:

Concrete for prestressed girders shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 34 strands, 0.6"Ø Grade 270, with an initial prestress force of 1494 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

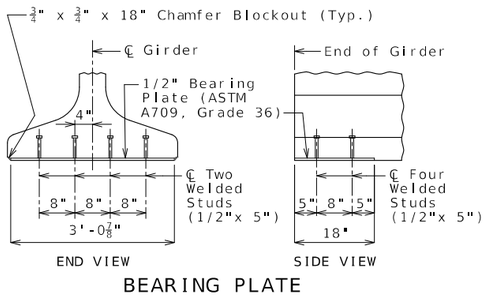
Exterior and interior girders are the same except for coil ties and application of bond breaker.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No.19.

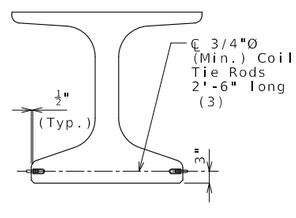
For location of coil ties at integral bents, see Sheets No. 7, 8, 13 and 14.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.



END VIEW SIDE VIEW

BEARING PLATE



COIL TIES

(3) 2'-3" at exterior face of Girder 8 at end bents

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	17

COUNTY GREENE

JOB NO. JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9417

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

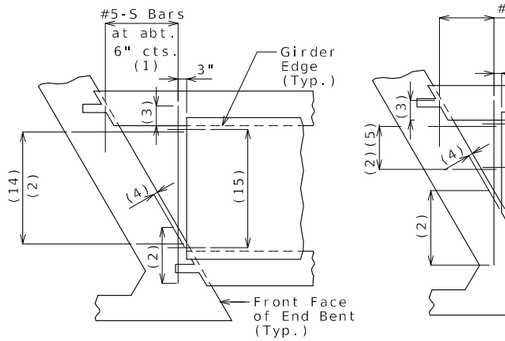
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165

BMcD Project No. 146617

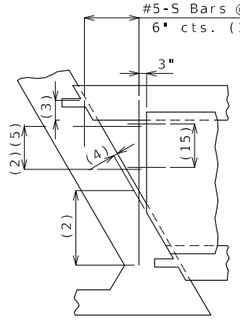
Detailed: May 2024
Checked: Jun. 2024

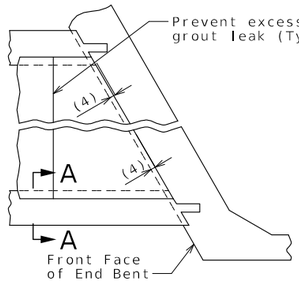
Note: This drawing is not to scale. Follow dimensions.

NU-GIRDERS (ALTERNATE REINFORCEMENT) - SPAN (1-2)



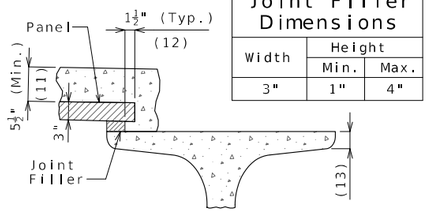
SQUARED END PANELS OR TRUNCATED END PANELS





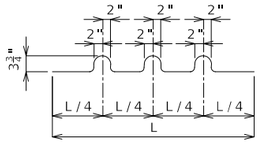
SKEWED END PANELS

PLAN SHOWING PANEL PLACEMENT



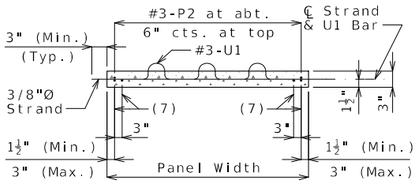
SECTION A-A

Joint Filler Dimensions		
Width	Height	
	Min.	Max.
3"	1"	4"



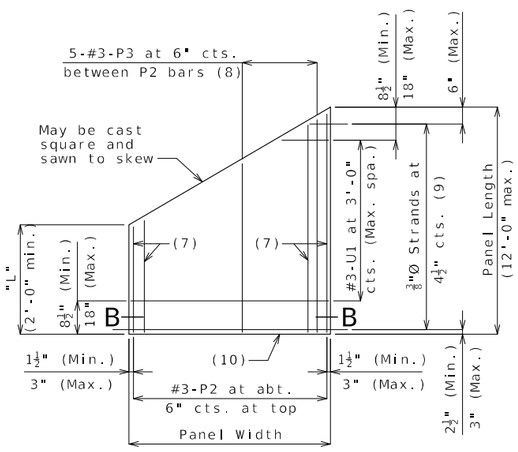
BENDING DIAGRAM FOR U1 BAR

U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars.

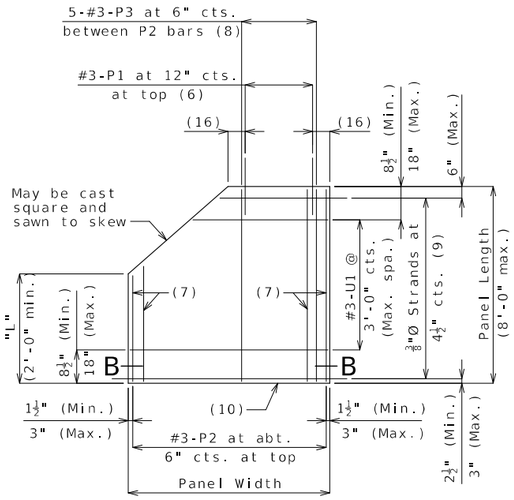


SECTION B-B

(14) #5-S Bars at abt. 9" cts. (1)
(15) #3-P1 at 12" cts. (End panels only)

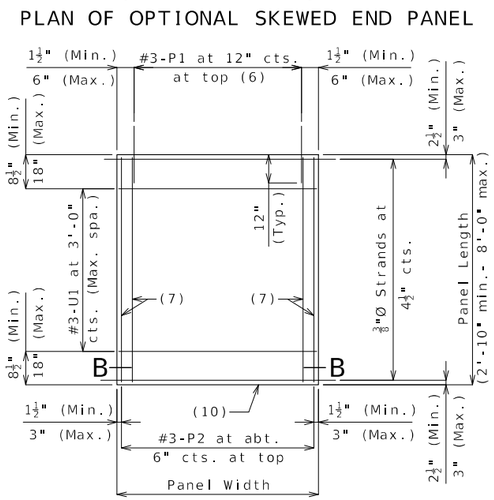


PLAN OF OPTIONAL SKEWED END PANEL



PLAN OF OPTIONAL TRUNCATED END PANEL

(16) 3" (Min.), 6" (Max.)



PLAN OF SQUARED PANEL

Reference Notes:

Plan of Panel Placement:
(1) S-bars shown are bottom steel in slab between panels and used with squared and truncated end panels only.

(2) Extend S-bars 18 inches beyond the front face of end bents for squared and truncated end panels only.

(3) Extend S-bars 9 inches beyond edge of girder (Typ.).

(4) End panels shall be dimensioned 1/2" min. to 1 1/2" max. from the inside face of diaphragm.

(5) For truncated end panels, use a min. of #5-S bars at 6" crossings in openings, or min. 4x4-W7xW7.

Plans of Panels:
(6) For end panels only, P1 bars shall be 2'-0" in length and embedded 12". P1 bars will not be required for panels at squared integral end bents.

(7) #3-P2 bars near edge of panel at bottom (under strands).

(8) Use #3-P3 bars if panel is skewed 45° or greater.

(9) Any strand 2'-0" or shorter shall have a #4 reinforcing bar on each side of it, centered between strands. Strands 2'-0" or shorter may then be debonded at the fabricator's option.

(10) Optional 1/2" x 45° Chamfer one or both sides at bottom.

Section A-A:
(11) Slab thickness over prestressed panels varies due to girder camber. In order to maintain minimum slab thickness, it may be necessary to raise the grade uniformly throughout the structure. No payment will be made for additional labor or materials required for necessary grade adjustment.

(12) Contractor shall ensure proper consolidation under and between panels.

(13) At the contractor's option, the variation in slab thickness over prestressed panels may be eliminated or reduced by increasing and varying the girder top flange thickness. Dimensions shall be shown on the shop drawings.

General Notes:

Prestressed Panels:
Concrete for prestressed panels shall be Class A-1 with f'c = 6,000 psi, f'ci = 4,000 psi.

The top surface of all panels shall receive a scored finish with a depth of scoring of 1/8" perpendicular to the prestressing strands in the panels.

Prestressing tendons shall be high-tensile strength, uncoated, seven-wire, low-relaxation strands for prestressed concrete in accordance with AASHTO M 203 Grade 270, with nominal diameter of strand = 3/8" and nominal area = 0.085 sq.in. and minimum ultimate strength = 22.95 kips (270 ksi). Larger strands may be used with the same spacing and initial tension.

Initial prestressing force = 17.2 kips/strand.

The method and sequence of releasing the strands shall be shown on the shop drawings.

Suitable anchorage devices for lifting panels may be cast in panels, provided the devices are shown on the shop drawings and approved by the engineer. Panel lengths shall be determined by the contractor and shown on the shop drawings.

When squared end panels are used at skewed bents, the skewed portion shall be cast full depth. No separate payment will be made for additional concrete and reinforcing required.

Support from diaphragm forms is required under the optional skewed end until cast-in-place concrete has reached 3,000 psi compressive strength.

Prestressed panels shall be brought to saturated surface-dry (SSD) condition just prior to the deck pour. There shall be no free standing water on the panels or in the area to be cast.

The prestressed panel quantities are not included in the table of estimated quantities for the slab.

Reinforcing Steel:
All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

If U1 bars interfere with placement of slab steel, U1 loops may be bent over, as necessary, to clear slab steel.

Deformed welded wire reinforcement (WWR) providing a minimum area of reinforcing perpendicular to strands of 0.22 sq in./ft, with spacing parallel to strands sufficient to ensure proper handling, may be used in lieu of the #3-P2 bars shown. Wire diameter shall not be larger than 0.375 inch. The above alternative reinforcement criteria may be used in lieu of the #3-P3 bars, when required, and placed over a width not less than 2 feet.

The following reinforcing steel shall be tied securely to the strands with the following maximum spacing in each direction:
#3-P2 bars at 16 inches.
WWR at 24 inches.

The #3-U1 bars shall be tied securely to #3-P2 bars, to WWR or to strands (when placed between P1 bars) at about 3-foot centers.

Minimum reinforcement steel length shall be 2'-0".

All reinforcement other than prestressing strands shall be epoxy coated.

Precast panels may be in contact with stirrup reinforcing in diaphragms.

S-bars are not listed in the bill of reinforcing.

Cost of S-bars will be considered completely covered by the contract unit price for the slab.

Joint Filler:
Joint filler shall be preformed fiber expansion joint material in accordance with Sec 1057 or expanded or extruded polystyrene bedding material in accordance with Sec 1073.

Use Slab Haunching Diagram on Sheet No. 19 for determining thickness of joint filler within the limits noted in the table of Joint Filler Dimensions.

Thicker material may be used on one or both sides of the girder to reduce cast-in-place concrete thickness to within tolerances.

The same thickness of preformed fiber expansion joint material shall be used under any one edge of any panel except at locations where top flange thickness may be stepped. The maximum change in thickness between adjacent panels shall be 1/2 inch. The polystyrene bedding material may be cut with a transition to match haunch height above top of flange.

Joint filler shall be glued to the girder. When thickness exceeds 1 1/2 inches, the joint filler shall be glued top and bottom. The glue used shall be the type recommended by the joint filler manufacturer.

Edges of panels shall be uniformly seated on the joint filler before slab reinforcement is placed.

PRESTRESSED PANELS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

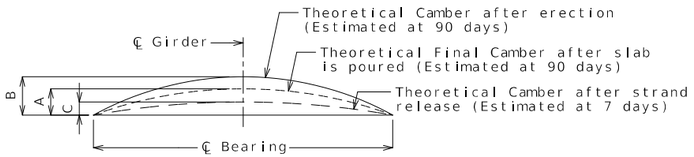
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 18
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9417

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



Girder	Span (1-2)		
	A	B	C
Exterior	3"	4⅝"	2⅝"
Interior	2⅞"		

GIRDER CAMBER DIAGRAM

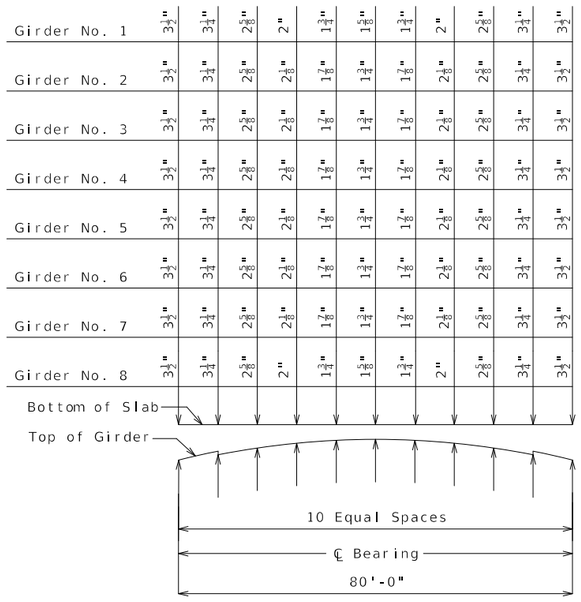
Conversion Factors for Girder Camber (Estimated at 90 days):

0.1 pt. = 0.314 x 0.5 pt.
0.2 pt. = 0.593 x 0.5 pt.
0.3 pt. = 0.813 x 0.5 pt.
0.4 pt. = 0.952 x 0.5 pt.

Theoretical Bottom of Slab Elevations at Centerline of Girder (Prior to forming for slab) (Estimated at 90 days)

Girder Number	Span (1-2) (80'-0" ℄ Brg. - ℄ Brg.)										
	℄ Brg.	.10	.20	.30	.40	.50	.60	.70	.80	.90	℄ Brg.
1	1278.08	1278.11	1278.14	1278.15	1278.15	1278.14	1278.10	1278.06	1277.99	1277.92	1277.83
2	1278.26	1278.29	1278.32	1278.34	1278.34	1278.33	1278.29	1278.24	1278.18	1278.10	1278.02
3	1278.44	1278.47	1278.50	1278.52	1278.52	1278.51	1278.47	1278.43	1278.36	1278.28	1278.20
4	1278.32	1278.35	1278.38	1278.40	1278.40	1278.39	1278.36	1278.31	1278.24	1278.16	1278.08
5	1278.14	1278.17	1278.20	1278.22	1278.22	1278.21	1278.18	1278.13	1278.06	1277.99	1277.90
6	1277.96	1277.99	1278.02	1278.04	1278.04	1278.03	1278.00	1277.95	1277.88	1277.81	1277.72
7	1277.78	1277.81	1277.84	1277.86	1277.86	1277.85	1277.82	1277.77	1277.71	1277.63	1277.54
8	1277.60	1277.63	1277.66	1277.68	1277.68	1277.66	1277.63	1277.58	1277.52	1277.45	1277.37

Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoretical dead load deflections due to weight of slab (including precast panel) and barrier.

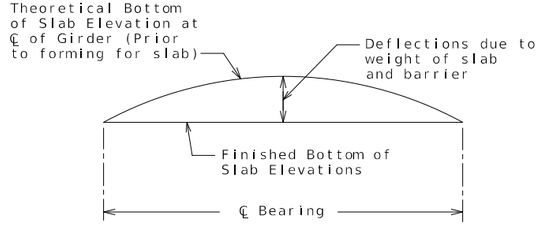


THEORETICAL SLAB HAUNCHING DIAGRAM (ESTIMATED AT 90 DAYS)

If girder camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an adjustment of the slab haunches, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Concrete in the slab haunches is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Theoretical slab haunches are measured at ℄ Girder.



TYPICAL SLAB ELEVATIONS DIAGRAM

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

GIRDER CAMBER AND SLAB HAUNCHING

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

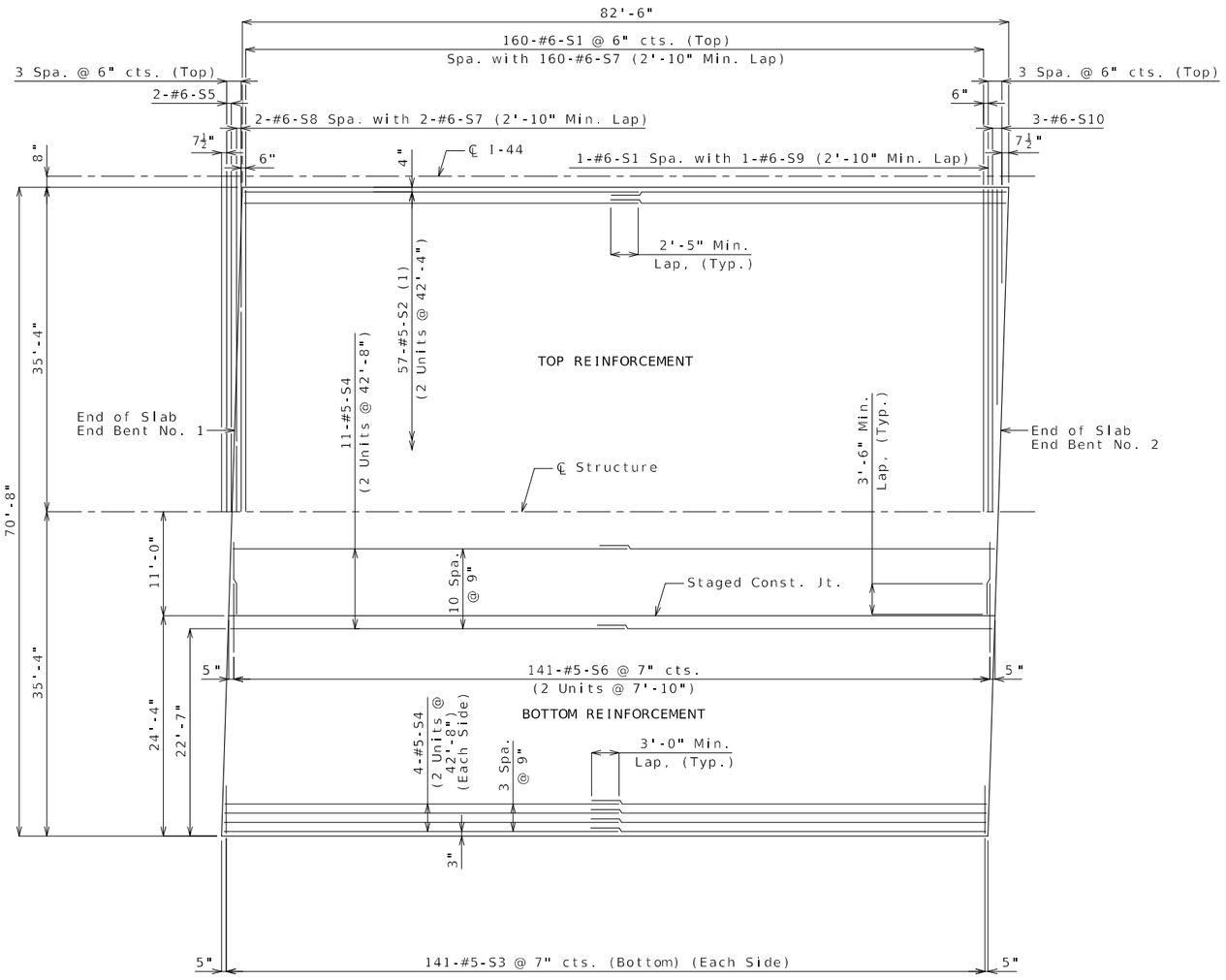
DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 19
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9417

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE

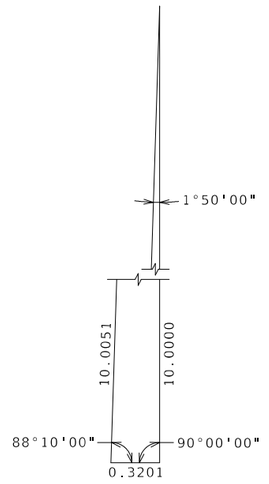
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



SPAN (1-2)

PLAN OF SLAB REINFORCEMENT



NOTES:

Longitudinal slab dimensions shown are horizontal.

For Theoretical Slab Haunching Diagram and Theoretical Bottom of Slab Elevations, see Sheet No. 19.

For Details of Precast Prestressed Panels, see Sheet No. 18.

For Details and Reinforcement of Safety Barrier Curb not shown, see Sheets No. 22 & 23.

(1) For spacing of longitudinal bars not shown, see Slab Section & Details on Sheet No. 21.

SLAB PLAN

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024

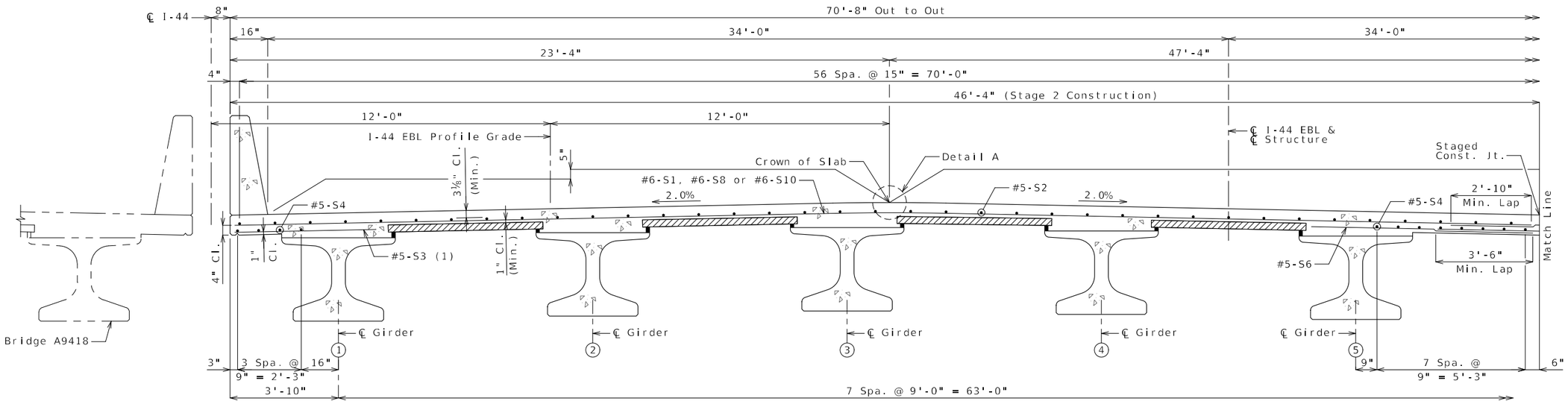
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	20

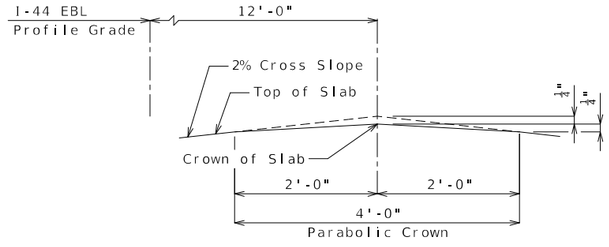
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9417

DATE	DESCRIPTION	REV.

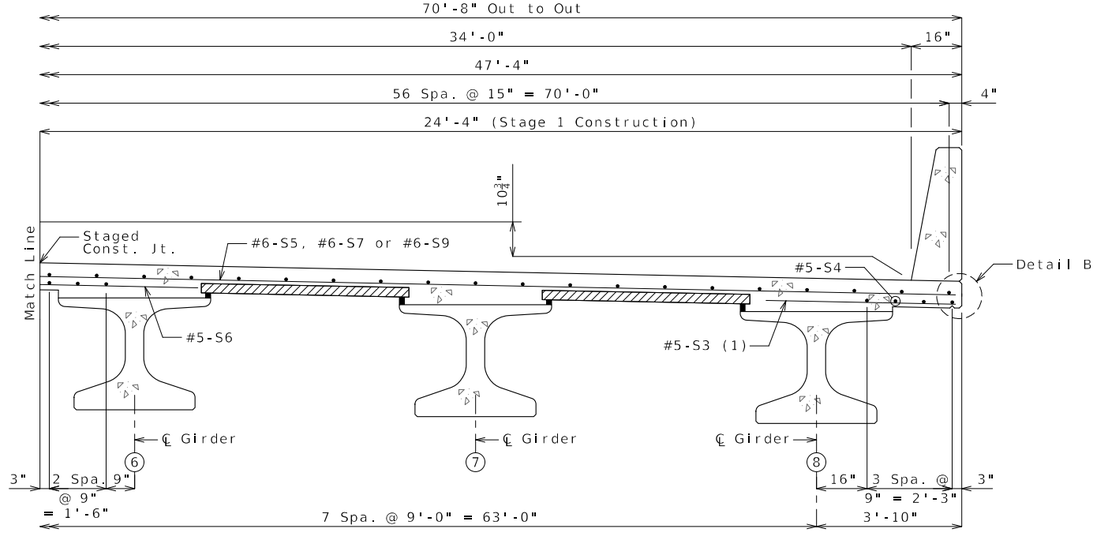
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



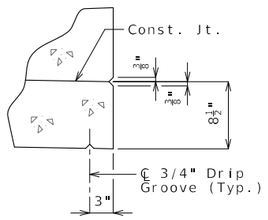


DETAIL A

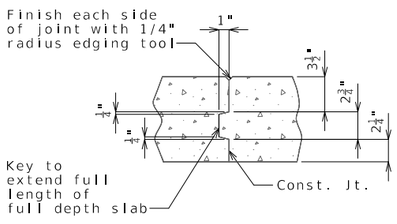


SECTION THRU SLAB

(1) Alternate bar shape available, see Sheet No. 22.



DETAIL B



FULL DEPTH SLAB

SLAB CONSTRUCTION JOINT

NOTES:

For details of precast prestressed panels, see Sheet No. 18.

For reinforcement of barrier not shown, see Sheet No. 22.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram and Theoretical Slab Haunching Diagram, see Sheet No. 19.

For Plan of Slab Showing Reinforcement, see Sheet No. 20.

Bridge will be cast in a single pour.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 21 of 31

TYPICAL SLAB SECTION

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	21

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9417

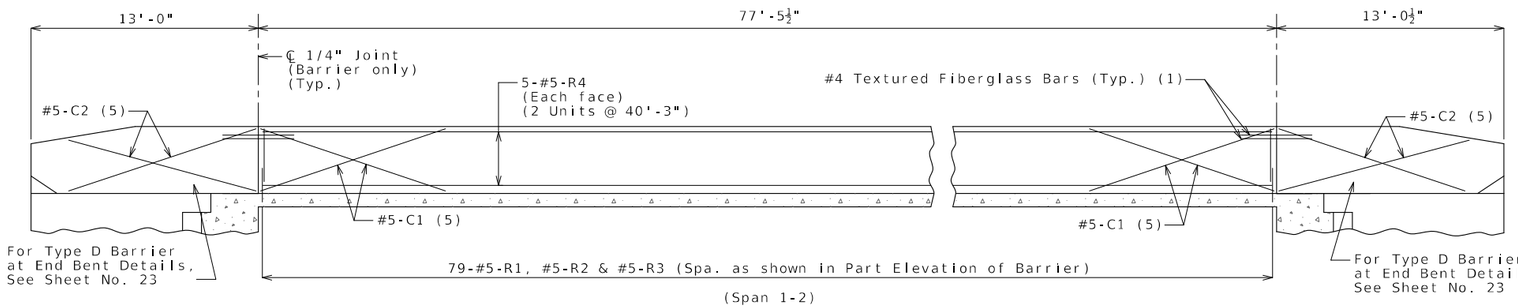
DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

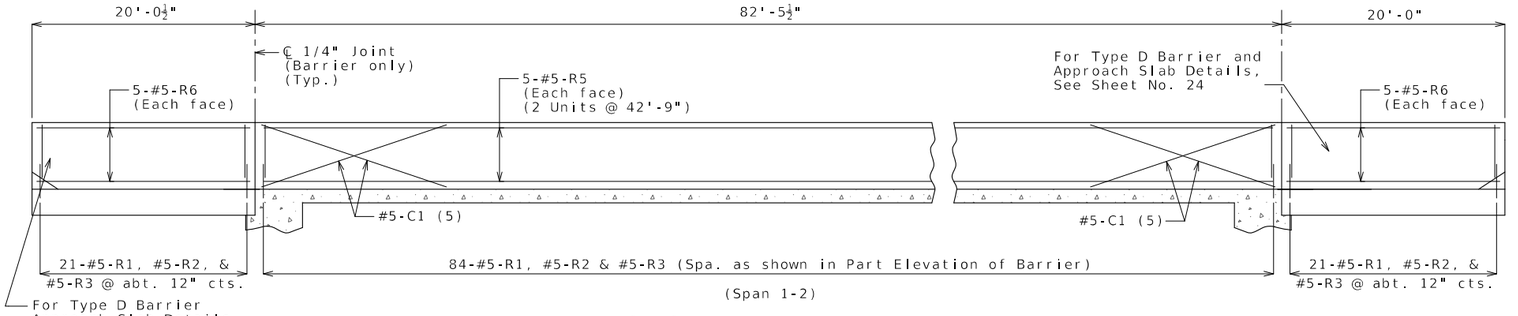
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

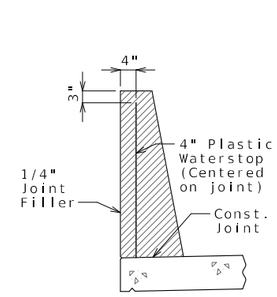
c:\bmcd_lib\pw_connect\trn\d0171012\B_A9417_021_JSU0076.dgn 4:15:37 PM 9/5/2024



ELEVATION OF BARRIER - RIGHT BARRIER



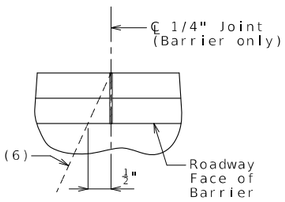
ELEVATION OF BARRIER - LEFT BARRIER



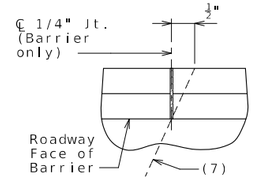
WATERSTOP DETAIL

Plastic waterstop shall be placed in all formed joints, except structures with superelevation, use on lower joints only.

Cost of plastic waterstop, complete in place, will be considered completely covered by the contract unit price for Type D Barrier.



(6) Front Face of End Bent No. 2 for Right Barrier
End of Slab at End Bent No. 1 for Left Barrier



(7) Front Face of End Bent No. 1 for Right Barrier
End of Slab at End Bent No. 2 for Left Barrier

PART PLAN SHOWING JOINT LOCATION

General Notes:

Longitudinal dimensions are horizontal.

Conventional forming or slip forming may be used. Saw cut joints may be used with conventional forming.

Top of barrier shall be built parallel to grade and barrier joints (except at end bents) normal to grade.

All exposed edges of barrier shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type D Barrier per linear foot.

Concrete in barrier shall be Class B-1.

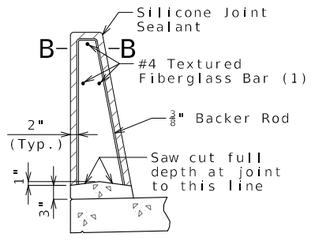
Measurement of barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of wing to end of wing for Right Barrier and from end of approach slab to end of approach slab for Left Barrier.

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

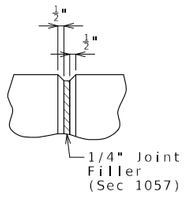
Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

For slip-formed option, both sides of barrier shall have a vertically broomed finish and the top shall have a transversely broomed finish.

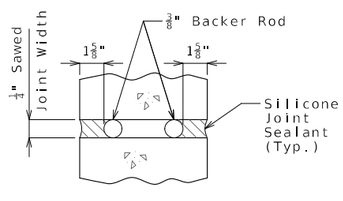
Plastic waterstop shall not be used with saw cut joints.



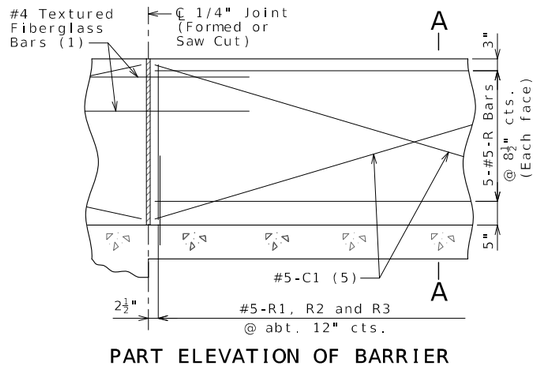
SECTION THRU SAW CUT JOINT



PART ELEVATION AT FORMED JOINT

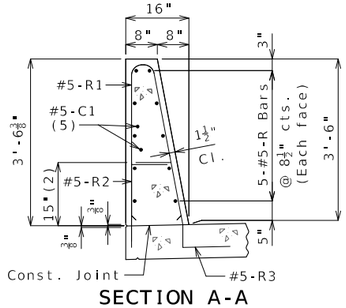


SECTION B-B



PART ELEVATION OF BARRIER

(1) Four feet long, centered on joint, slip-formed option only

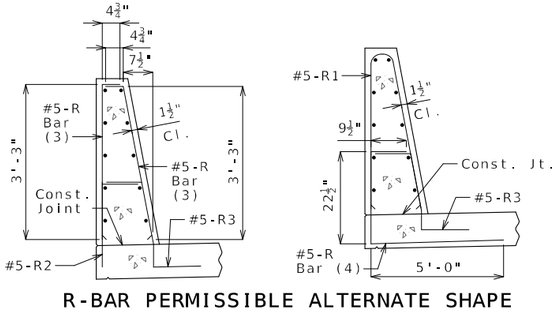


SECTION A-A

Use a minimum lap of 3'-1" for #5 horizontal barrier bars.

The cross-sectional area above the slab is 3.52 square feet.

(2) To top of bar



R-BAR PERMISSIBLE ALTERNATE SHAPE

(3) The R1 bar may be separated into two bars as shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)

(4) The R2 bar and #5 bottom transverse slab bar in cantilever (prestressed panels only) combination may be furnished as one bar as shown, at the contractor's option.

(5) Slip-formed option only.

TYPE D BARRIER

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

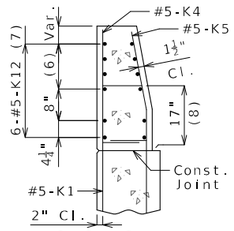
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	22

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9417

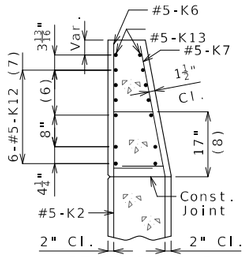
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

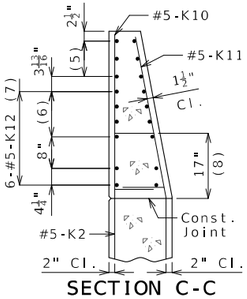
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



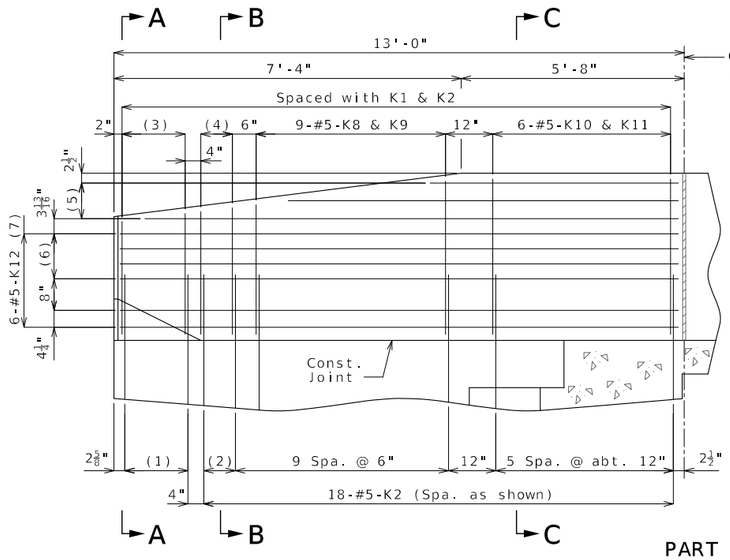
SECTION A-A

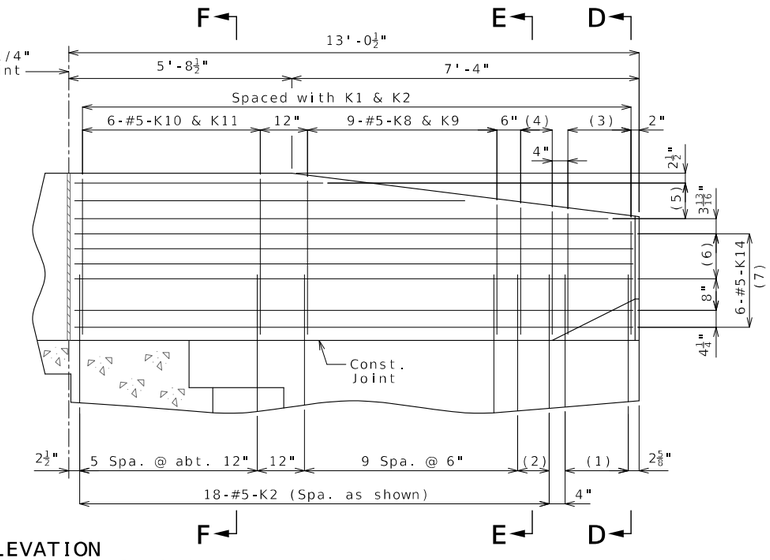


SECTION B-B

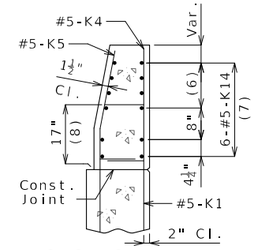


SECTION C-C

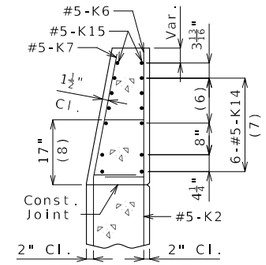




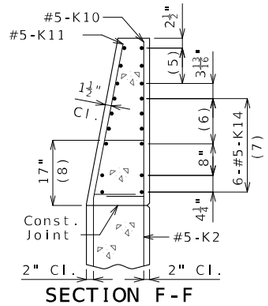
PART ELEVATION
(Looking at Front Face of Right Barrier)



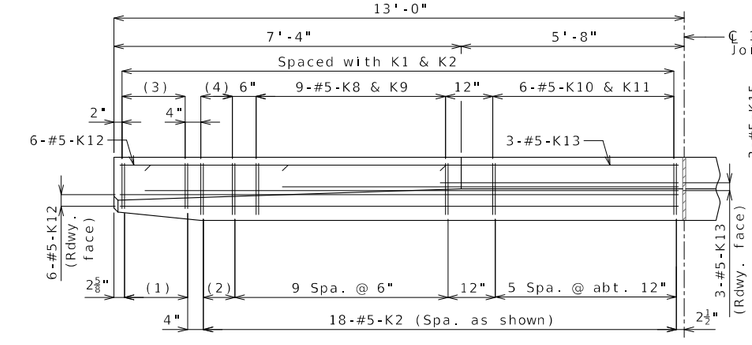
SECTION D-D

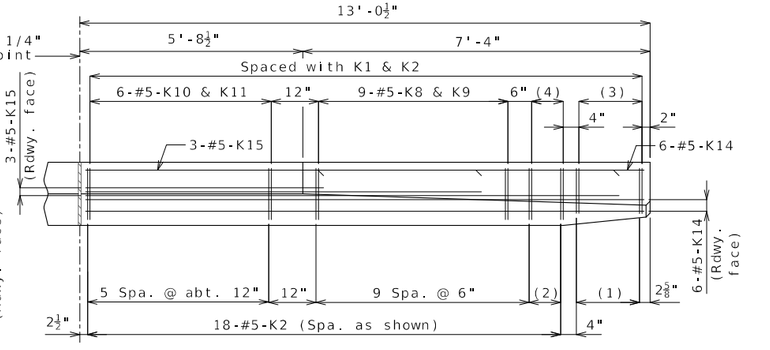


SECTION E-E

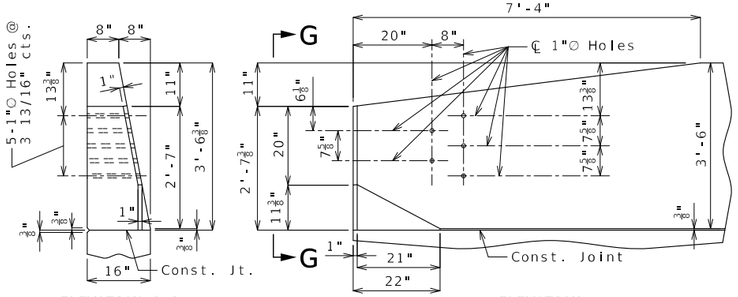


SECTION F-F



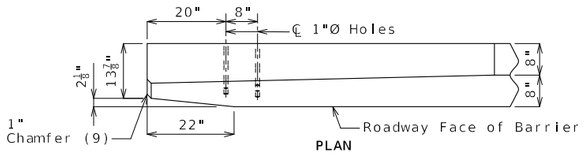


PART PLAN
(Right barrier shown)



ELEVATION G-G

ELEVATION



PLAN

DETAILS OF GUARD RAIL ATTACHMENT

(1) 5-#5-K1 @ 4" cts.

(2) 2 spaces @ 4"

(3) 5-#5-K4 & K5

(4) 3-#5-K6 & K7

(5) 3-#5-K13 or K15 @ 4½" cts., each face

(6) 3 spaces @ 3 13/16"

(7) Spaced as shown, each face

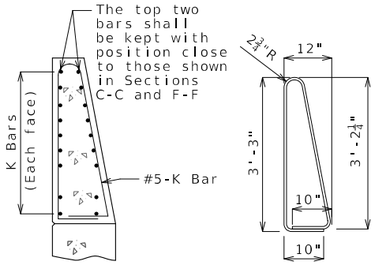
(8) To top of bar

(9) Transition to zero at Type A curb for gutter lines to match.

General Notes:

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

Reinforcing Steel:
Minimum clearance to reinforcing steel shall be 1 1/2" except as shown for bars embedded into end bent.



K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE
(Other K bars not shown for clarity)

The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

TYPE D BARRIER AT END BENTS

TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
STATE OF MISSOURI

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	23

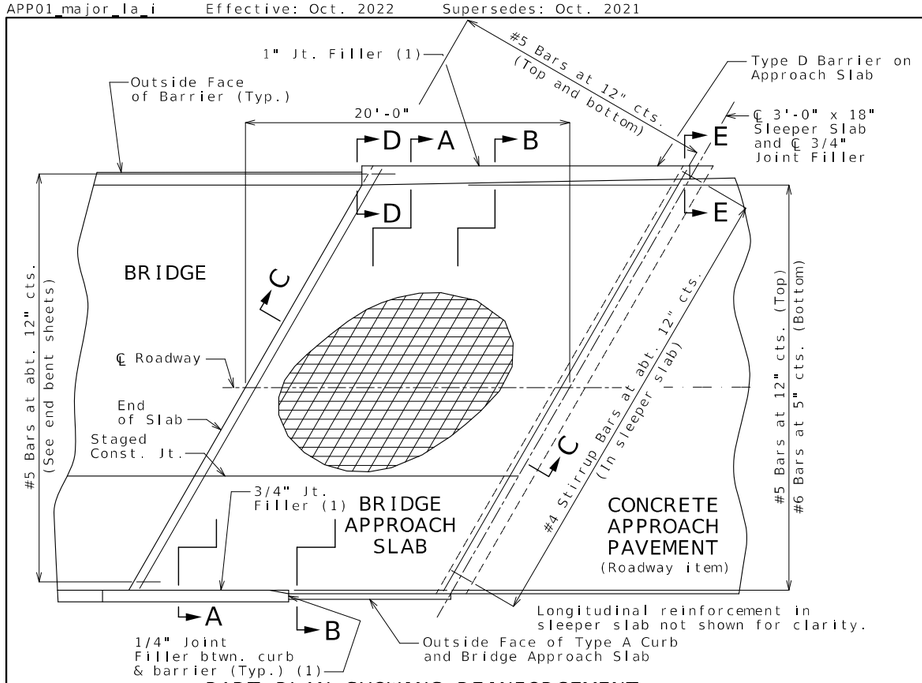
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9417

DESCRIPTION | DATE

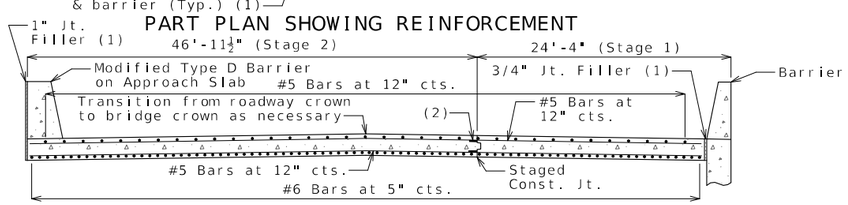
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

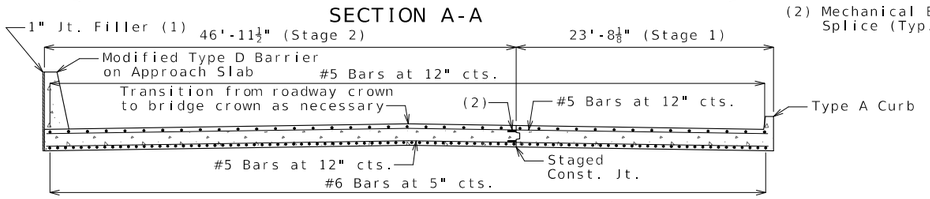
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



PART PLAN SHOWING REINFORCEMENT

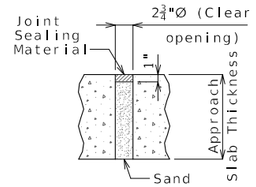


SECTION A-A



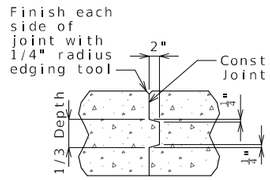
SECTION B-B

With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.

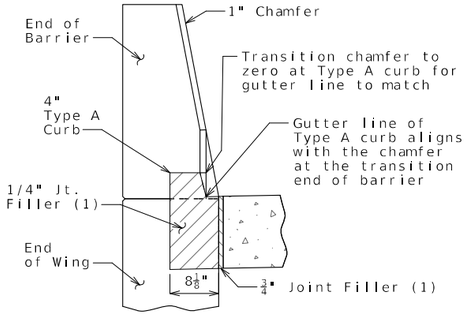


UNDERSEAL ACCESS HOLE DETAIL

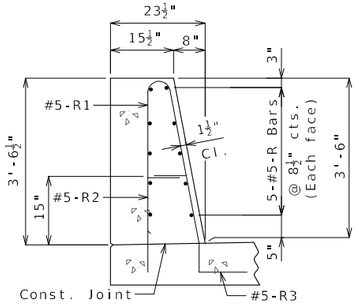
(If required)



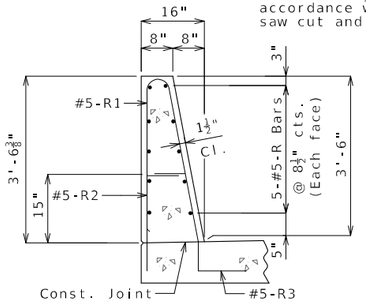
CONSTRUCTION JOINT DETAIL



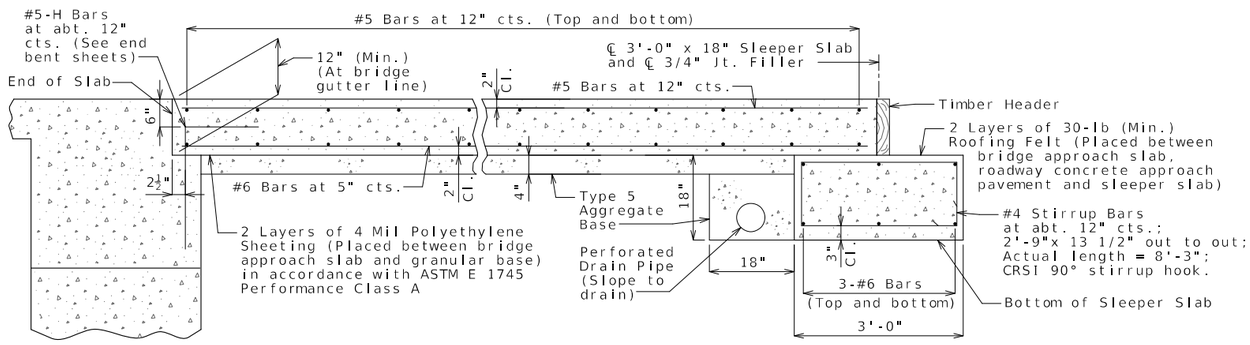
SECTION BETWEEN CURB AND BARRIER



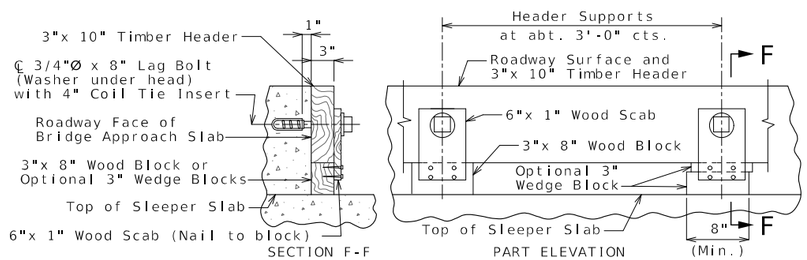
SECTION D-D



SECTION E-E



SECTION C-C



DETAILS OF TIMBER HEADER

Remove timber header when concrete pavement is placed.

General Notes:

All concrete for the bridge approach slab and sleeper slab shall be in accordance with Sec 503 (f'c = 4,000 psi).

The reinforcing steel in the bridge approach slab and the sleeper slab shall be epoxy coated Grade 60 with fy = 60,000 psi.

Drain pipe may be either 6" diameter corrugated metallic-coated pipe underdrain, 4" diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4" diameter corrugated polyethylene (PE) drain pipe.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

The reinforcing steel in the bridge approach slab and the sleeper slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 29 inches for #5 bars and 44 inches for #6 bars, or by mechanical bar splice.

Mechanical bar splices shall be in accordance with Sec. 710. (Estimated 48 splices per slab)

All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler except as noted.

The contractor shall pour and satisfactorily finish the bridge slab before placing the bridge approach slab.

Longitudinal construction joints in approach slab and sleeper slab shall be aligned with longitudinal construction joints in bridge slab.

For concrete approach pavement details, see roadway plans.

See Missouri Standard Plan 609.00 for details of Type A curb.

Payment for furnishing all materials, labor and excavation necessary to construct the approach slab, including the timber header, sleeper slab, underdrain, Type 5 aggregate base, joint filler and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Major) per square yard.

For details of Type D Barrier on Approach Slab, See Sheet No. 22.

(1) Seal joint between vertical face of approach slab and wing and joint between vertical face of the approach slabs and Type D barriers along ℄ I-44 with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

BRIDGE APPROACH SLAB (MAJOR)

TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
STATE OF MISSOURI
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

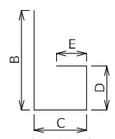
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	24

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9417

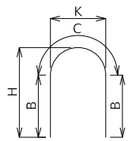
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

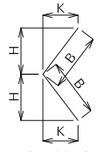
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



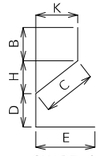
SHAPE 6 or 6S



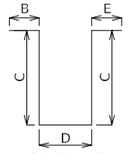
SHAPE 7



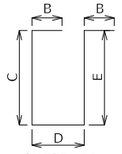
SHAPE 8 or 8S



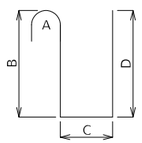
SHAPE 9 or 9S



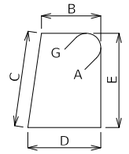
SHAPE 10 or 10S



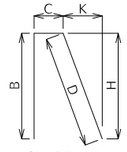
SHAPE 11 or 11S



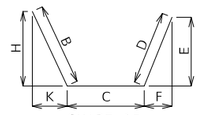
SHAPE 12



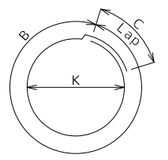
SHAPE 13S



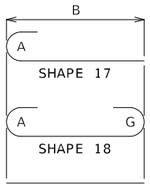
SHAPE 14 or 14S



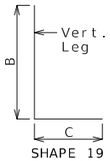
SHAPE 15 or 15S



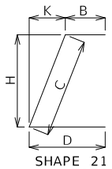
SHAPE 16



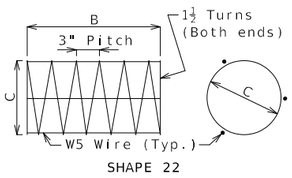
SHAPE 17
SHAPE 18
SHAPE 20



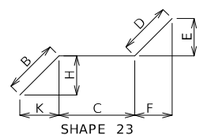
SHAPE 19 or 19S



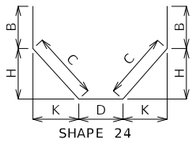
SHAPE 21 or 21S



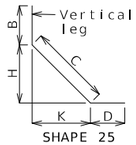
SHAPE 22



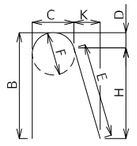
SHAPE 23 or 23S



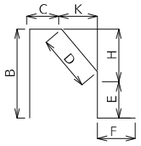
SHAPE 24 or 24S



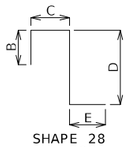
SHAPE 25 or 25S



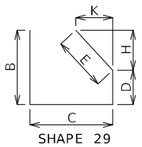
SHAPE 26



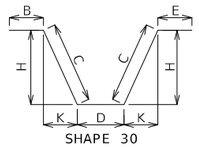
SHAPE 27S



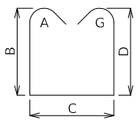
SHAPE 28 or 28S



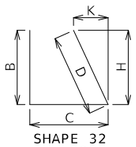
SHAPE 29 or 29S



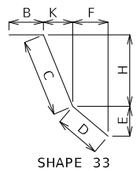
SHAPE 30 or 30S



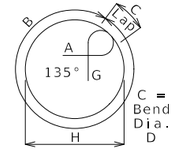
SHAPE 31S



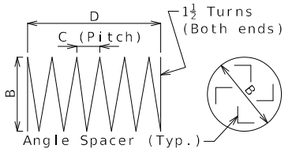
SHAPE 32 or 32S



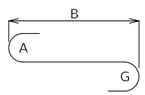
SHAPE 33 or 33S



SHAPE 34S



SHAPE 35 (1)

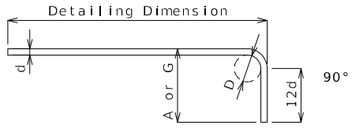


SHAPE 36

Finished Bend Diameters D and Hook Dimensions

Standard Pin Bend Shapes

Size	Case	D	A or G		J
			90°	180°	180°
#4	1	3"	8"	6"	4"
#5	1	3¾"	10"	7"	5"
#6	1	4½"	12"	8¼"	6"
#7	2	5¼"	14"	9⅜"	7"
	3	7"	15"	11½"	8¾"
#8	2	6"	16"	11"	8"
	3	8"	17"	13¼"	10"
#9	1	9½"	19½"	15½"	11¾"
#10	1	10¾"	22"	17½"	13¼"
#11	1	12"	24½"	19½"	14⅞"
#14	1	18¼"	31¼"	27½"	21⅝"
#18	1	24"	41½"	36¾"	28½"

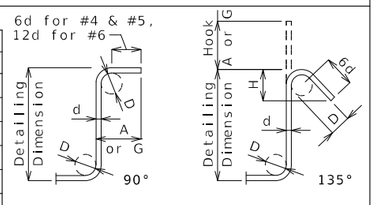


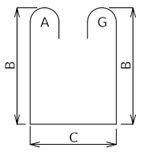
Stirrup Pin Bend Shapes (S)

Size	Case	D	A or G			H	J
			90°	135°	180°	135°	180°
#4	2	2"	4½"	4½"	5"	2⅝"	3"
	3	3"	5"	5¼"	6"	3"	4"
#5	2	2½"	5¾"	5¾"	5¾"	3⅝"	3¾"
	3	3¾"	6¼"	6½"	7"	3⅞"	5"
#6	1	4½"	12"	7¾"	8¼"	4⅝"	6"

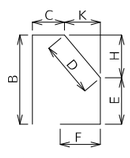
Applicable for all grades of steel.

Case 1 applies to all reinforcement. Case 2 applies to all reinforcement except for galvanized bars. Case 3 applies to galvanized bars only.





SHAPE 37S



SHAPE 38S

BENDING DIAGRAMS

All dimensions are out to out.

Shapes ending with an S shall be bent in accordance with stirrup pin bend shapes.

Unless otherwise noted, finished bending diameter D is the same for all bends of a shape.

(1) Shall be a deformed or plain spiral bar or wire.

Four angle or channel spacers are required for each column spiral. Spacers are to be placed on inside of spirals. Length and weight of column spirals do not include splices or spacers.

Reinforcing Steel Totals (Pounds)

		Substructure		Superstructure				Entire Bridge	
				Slab					
	Size	Plain	Epoxy	Plain	Epoxy	Barrier	Slip Form	Plain	Epoxy
By Size	W5	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	15,550	5,989	141	0	21,680
	6	0	0	0	27,052	0	0	0	27,052
	7	0	0	0	0	0	0	0	0
	8	0	0	0	3,562	0	0	0	3,562
	9	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0
	11	0	0	0	0	0	0	0	0
	14	0	0	0	0	0	0	0	0
	18	0	0	0	0	0	0	0	0
By Type		0	0	0	46,164	5,989	141	0	52,294

All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
STATE OF MISSOURI

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/5/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 25
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9417

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B	C	D	E	F	H	K	Nom. Length	Actual Length	Weight
		END BENT 1													
9	6 F100	Wing	E	23S		2 3.000	4 5.000	14.000	9.750	10.000	18.750	19.375	7 10	7 9	105
3	6 F101	Diaphragm	E	6S		5 5.000	2 7.000						8 0	7 10	35
4	6 H100	Beam	E	20		28 3.000							28 3	28 3	170
8	8 H101	Beam	E	20		28 3.000							28 3	28 3	603
4	6 H102	Beam	E	20		8 6.000							8 6	8 6	51
4	6 H103	Beam	E	20		42 8.000							42 8	42 8	256
8	8 H104	Beam	E	20		42 8.000							42 8	42 8	911
4	6 H105	Beam	E	20		42 8.000							42 8	42 8	256
4	6 H106	Beam	E	20		21 10.00							21 10	21 10	131
8	6 H107	Diaphragm	E	20		28 0.000							28 0	28 0	336
8	6 H108	Diaphragm	E	20		46 8.000							46 8	46 8	561
18	6 H109	Diaphragm	E	20		7 11.000							7 11	7 11	214
6	6 H110	Diaphragm	E	20		5 6.000							5 6	5 6	50
3	6 H111	Diaphragm	E	20		3 2.000							3 2	3 2	14
1	6 H112	Diaphragm	E	20		23.000							0 23	0 23	3
3	6 H113	Diaphragm	E	20		3 9.000							3 9	3 9	17
1	6 H114	Diaphragm	E	20		2 6.000							2 6	2 6	4
8	5 H115	Strand Tie	E	20		5 0.000							5 0	5 0	42
20	6 H116	Wing	E	20		11 8.000							11 8	11 8	350
8	8 H117	Wing	E	20		12 6.000							12 6	12 6	267
3	6 H118	Diaphragm	E	20		5 11.000							5 11	5 11	27
1	6 H119	Diaphragm	E	20		4 7.000							4 7	4 7	7
3	6 H120	Diaphragm	E	20		5 10.000							5 10	5 10	26
1	6 H121	Diaphragm	E	20		4 7.000							4 7	4 7	7
43	5 U100	Beam	E	31S		5 8.000	2 9.000	5 8.000					15 1	14 10	665
15	5 U101	Beam	E	13S		2 9.000	2 8.000	2 9.000	2 8.000				11 10	11 6	180
24	5 U102	Beam	E	13S		2 9.000	3 0.000	2 9.000	3 0.000				12 6	12 2	305
24	5 U103	Beam	E	13S		2 9.000	3 4.000	2 9.000	3 4.000				13 2	12 10	321
58	5 U104	Diaphragm	E	31S		3 4.000	2 3.000	3 4.000					9 11	9 8	585
58	6 U105	Diaphragm	E	19S		2 7.000	2 8.000						5 3	5 1	443
70	5 U106	Diaphragm	E	19S		2 0.000	15.000						3 3	3 2	231
94	6 U107	Diaphragm	E	19S		3 3.000	4 7.000						7 10	7 8	1082
30	5 V100	Beam	E	17		5 8.000							6 3	6 3	196
40	6 V101	Diaphragm	E	20		2 7.000							2 7	2 7	155
22	6 V102	Wing	E	20		6 7.000							6 7	6 7	218
		END BENT 2													
9	6 F200	Wing	E	23S		2 3.000	4 5.000	14.000	9.750	10.000	18.750	19.375	7 10	7 9	105
3	6 F201	Diaphragm	E	6S		5 5.000	2 7.000						8 0	7 10	35
4	6 H200	Beam	E	20		28 3.000							28 3	28 3	170
8	8 H201	Beam	E	20		28 3.000							28 3	28 3	603
4	6 H202	Beam	E	20		8 6.000							8 6	8 6	51
4	6 H203	Beam	E	20		42 8.000							42 8	42 8	256
8	8 H204	Beam	E	20		42 8.000							42 8	42 8	911
4	6 H205	Beam	E	20		42 8.000							42 8	42 8	256
4	6 H206	Beam	E	20		21 10.00							21 10	21 10	131
8	6 H207	Diaphragm	E	20		28 0.000							28 0	28 0	336
8	6 H208	Diaphragm	E	20		46 8.000							46 8	46 8	561
18	6 H209	Diaphragm	E	20		7 11.000							7 11	7 11	214
6	6 H210	Diaphragm	E	20		5 6.000							5 6	5 6	50
3	6 H211	Diaphragm	E	20		3 2.000							3 2	3 2	14
1	6 H212	Diaphragm	E	20		23.000							0 23	0 23	3
3	6 H213	Diaphragm	E	20		3 9.000							3 9	3 9	17
1	6 H214	Diaphragm	E	20		2 6.000							2 6	2 6	4
8	5 H215	Strand Tie	E	20		5 0.000							5 0	5 0	42
20	6 H216	Wing	E	20		11 8.000							11 8	11 8	350
8	8 H217	Wing	E	20		12 6.000							12 6	12 6	267
3	6 H218	Diaphragm	E	20		5 11.000							5 11	5 11	27
1	6 H219	Diaphragm	E	20		4 7.000							4 7	4 7	7
3	6 H220	Diaphragm	E	20		5 10.000							5 10	5 10	26
1	6 H221	Diaphragm	E	20		4 7.000							4 7	4 7	7
43	5 U200	Beam	E	31S		5 8.000	2 9.000	5 8.000					15 1	14 10	665
15	5 U201	Beam	E	13S		2 9.000	2 8.000	2 9.000	2 8.000				11 10	11 6	180
24	5 U202	Beam	E	13S		2 9.000	3 0.000	2 9.000	3 0.000				12 6	12 2	305
24	5 U203	Beam	E	13S		2 9.000	3 4.000	2 9.000	3 4.000				13 2	12 10	321

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B	C	D	E	F	H	K	Nom. Length	Actual Length	Weight
		END BENT 2 Cont.													
58	5 U204	Diaphragm	E	31S		3 4.000	2 3.000	3 4.000					9 11	9 8	585
58	6 U205	Diaphragm	E	19S		2 7.000	2 8.000						5 3	5 1	443
70	5 U206	Diaphragm	E	19S		2 0.000	15.000						3 3	3 2	231
94	6 U207	Diaphragm	E	19S		3 3.000	4 7.000						7 10	7 8	1082
30	5 V200	Beam	E	17		5 8.000							6 3	6 3	196
40	6 V201	Diaphragm	E	20		2 7.000							2 7	2 7	155
22	6 V202	Wing	E	20		6 7.000							6 7	6 7	218
		SLAB													
161	6 S1	Slab	E	20		46 0.000							46 0	46 0	11124
114	5 S2	Slab	E	20		42 4.000							42 4	42 4	5034
282	5 S3	Slab	E	20		5 0.000							5 0	5 0	1471
38	5 S4	Slab	E	20		42 8.000							42 8	42 8	1691
2	6 S5	Slab	E	20	1	11 7.000							11 7	11 7	
		Inc. = 15'-7"				27 2.000							27 2	27 2	58
282	5 S6	Slab	E	20		7 10.000							7 10	7 10	2304
162	6 S7	Slab	E	20		27 2.000							27 2	27 2	6610
2	6 S8	Slab	E	20	1	18 6.000							18 6	18 6	
		Inc. = 15'-7"				34 1.000							34 1	34 1	79
1	6 S9	Slab	E	20		15 3.000							15 3	15 3	23
3	6 S10	Slab	E	20	1	42 9.000							42 9	42 9	
		Inc. = 15'-7"				11 7.000							11 7	11 7	122
		BARRIER													
10	5 K1	Barrier	E	27S		3 8.000	9.250	5.375	3 2.750		5.250	1.000	8 1	7 11	83
36	5 K2	Barrier	E	27S		3 8.000	9.250	14.500	2 5.750		14.250	2.750	8 2	7 11	297
10	5 K4	Barrier	E	19S	2	2 4.250	10.000						3 2	3 1	
		Inc. = 0.500"				2 6.250	10.000						3 4	3 3	33
10	5 K5	Barrier	E	38S	2			18.500	9.500	8.250	18.000	4.000	3 0	2 11	
		Inc. = 0.500"						20.500	9.500	8.250	20.000	4.500	3 2	3 1	31
6	5 K6	Barrier	E	19S		2 6.750	10.000						3 5	3 4	21
6	5 K7	Barrier	E	21S			2 6.625	10.000			2 6.000	6.250	3 5	3 3	20
18	5 K8	Barrier	E	19S	2	2 8.500	10.000						3 7	3 5	
		Inc. = 0.750"				3 2.500	10.000						4 1	3 11	70
18	5 K9	Barrier	E	21S	2		2 8.500	10.000			2 7.750	6.750	3 6	3 5	
		Inc. = 0.750"					3 2.500	10.000			3 1.750	7.750	4 1	3 11	68
12	5 K10	Barrier	E	19S		3 3.000	10.000						4 1	4 0	50
12	5 K11	Barrier	E	21S			3 3.000	10.000			3 2.250	7.750	4 1	3 11	49
12	5 K12	Barrier	E	20		12 9.000							12 9	12 9	160
6	5 K13	Barrier	E	20	2	6 0.000							6 0	6 0	
		Inc. = 3'-0"				12 0.000							12 0	12 0	56
12	5 K14	Barrier	E	20		12 9.000							12 9	12 9	160
6	5 K15	Barrier	E	20	2	6 0.000							6 0	6 0	
		Inc. = 3'-0"				12 0.000							12 0	12 0	56
205	5 R1	Barrier	E	26		3 3.000	5.500	2.250	3 1.375	5.500	3 0.750	6.750	6 11	6 10	1461
205	5 R2	Barrier	E	19S		20.500	9.500						2 6	2 5	517
205	5 R3	Barrier	E	27S			9.500	15.250	5.000	12.000	15.000	3.000	3 6	3 4	713
20	5 R4	Barrier	E	20		40 3.000							40 3	40 3	840
20	5 R5	Barrier	E	20		42 9.000							42 9	42 9	892
20	5 R6	Barrier	E	20		19 9.000							19 9	19 9	412
		SLIP FORM													
8	5 C1	Slip Form	E	20		12 0.000							12 0	12 0	100
4	5 C2	Slip Form	E	20		9 9.000							9 9	9 9	41

Nominal lengths are based on out to out dimensions shown in bending diagrams and are listed to the nearest inch for fabricator's use. Actual lengths are measured along centerline bar to the nearest inch. Weights are based on actual lengths.

For bending diagrams and steel reinforcing totals, see Sheet No. 25.

Detailed: May 2024
Checked: Jun. 2024

Codes:
C = Required coatings, where E = Epoxy Coated and G = Galvanized.
SH = Required shape, see bending diagrams.
V = Sets of varied bars and number of bars of each length. Bar dimensions vary in equal increments between dimensions shown on this line and the following line and the actual length dimension shown on this line and the following line vary by the specified increment.

All bars shall be Grade 60.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 26 of 31

BILL OF REINFORCING STEEL

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

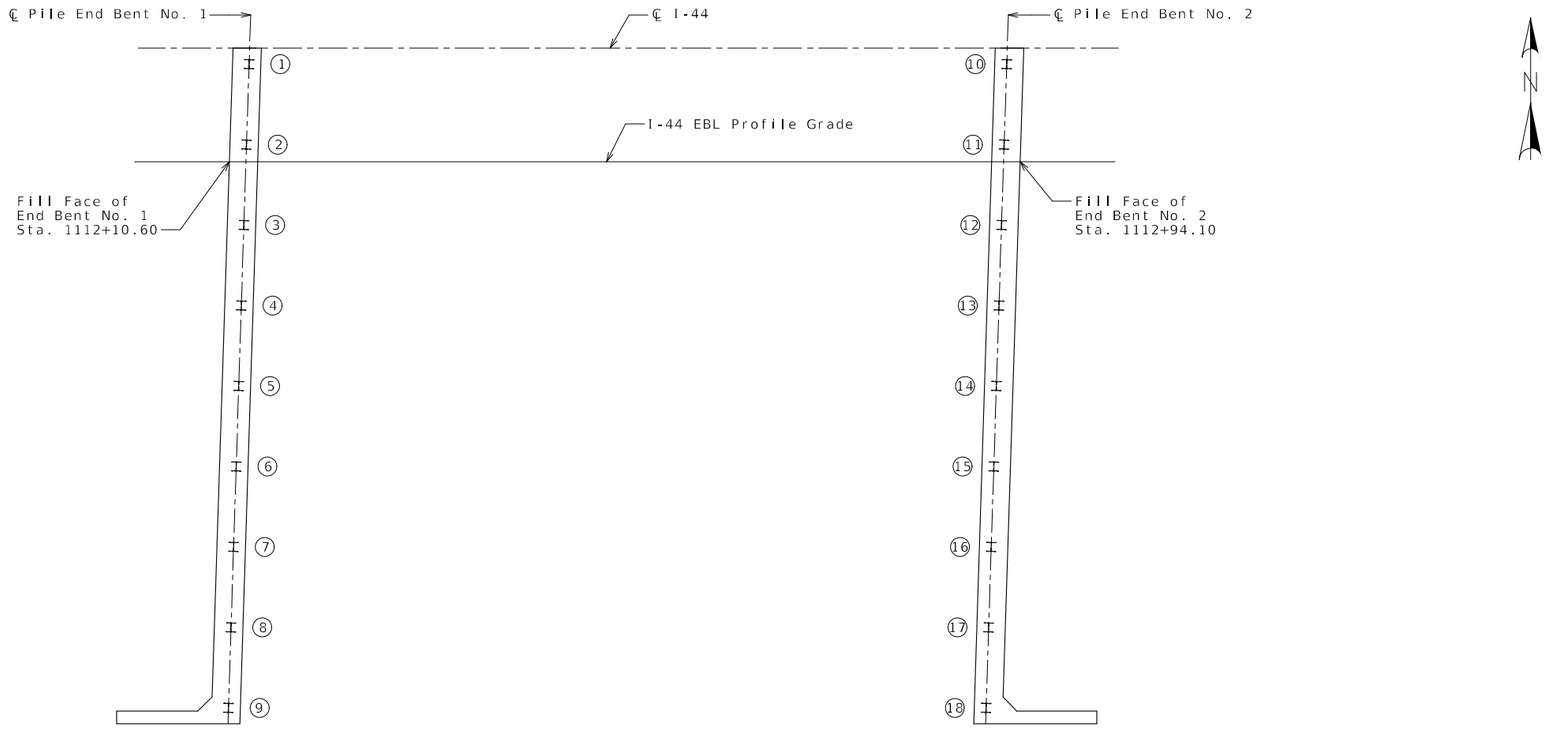
DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 26
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9417

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171012\B_A9417_026_JSU0076.dgn 4:16:44 PM 9/5/2024



SPAN (1-2)

PART PLAN SHOWING PILE NUMBERING FOR RECORDING AS-BUILT PILE DATA

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
End Bent No. 1 (HP 12x53)			
1			
2			
3			
4			
5			
6			
7			
8			
9			

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
End Bent No. 2 (HP 12x53)			
10			
11			
12			
13			
14			
15			
16			
17			
18			

Note:
Indicate in remarks column:
A. Pile type and grade
B. Batter
C. Driven to practical refusal

This sheet to be completed by MoDOT construction personnel.

AS-BUILT PILE DATA

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 27
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9417

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171012\B_A9417_027_JSU0076.dgn 4:16:58 PM 9/5/2024

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-2
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516854.8221 **Date of Work:** 07/20/23-07/20/23
Offset: 6' S **Easting:** 1408478.5498 **Depth to Water:**
Elevation: 1258.8 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-13.0' (CH) Red and brown, fat CLAY							
		1.0' -with gravel from 1.0 to 5.0 ft.			56	4-7-8 (23)		PP = 2.25 tsf	MC = 26.0%
			1255		39	2-1-2 (5)		PP = 1.00 tsf	MC = 27.8%
5									
		6.0' -trace sand and gravel from 6.0 to 10.0 ft.			67	6-12-13 (38)		PP = 2.25 tsf	MC = 31.9%
			1250		0			PP = 1.50 tsf	
10									
					100	2-3-4 (11)		PP = 1.50 tsf	MC = 52.0%
		13.0-15.2' Weathered LIMESTONE	1245		33	50/0.3"			MC = 12.9%
15		15.2-30.5' LIMESTONE, gray, moderately hard to hard, slightly weathered to fresh, fine to coarse crystalline, thin to thick bedded, dense			92 (76)		Qu Test Results UCS = 1390 ksf		
		16.2' -5" core loss	1240						
20									
		21.5' -cherty from 21.5 to 23.0 ft.			100 (82)		Qu Test Results UCS = 1110 ksf		
25			1235						

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-2
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516854.8221 **Date of Work:** 07/20/23-07/20/23
Offset: 6' S **Easting:** 1408478.5498 **Depth to Water:**
Elevation: 1258.8 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		15.2-30.5' LIMESTONE, gray, moderately hard to hard, slightly weathered to fresh, fine to coarse crystalline, thin to thick bedded, dense *(continued)*	1230		100 (100)		Qu Test Results UCS = 1530 ksf		
30		Refusal at 15.2 feet. Bottom of borehole at 30.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 28
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9417

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 28 of 31

BORING DATA

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-3
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516791.0587 **Date of Work:** 07/24/23-07/24/23
Offset: **Easting:** 1408472.847 **Depth to Water:**
Elevation: 1259.2 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-18.8' (CH) Red and brown, fat CLAY, with gravel			83	50		PP >4.50 tsf	MC = 18.1%
			1255		100		Qu Test Results MC = 38.0% γ_{moist} = 105.7 pcf	PP = 2.50 tsf	LL = 92 PL = 28
5									
		6.0' -red below 6.0 ft.			100	3-4-6 (15)		PP = 3.25 tsf	MC = 46.4%
			1250		100	4-5-10 (23)		PP = 2.50 tsf	MC = 48.0%
10									
			1245		100	5-23-6 (44)		PP = 2.00 tsf	MC = 44.2%
15									
		18.8-20.0' Weathered LIMESTONE	1240		100	50/0.3'		PP = 1.50 tsf	MC = 47.9%
20		20.0-30.0' LIMESTONE, gray, moderately hard to hard, slightly weathered, fine to coarse crystalline, thin to thick bedded, dense							
		22.0' -cherty from 22.0 to 23.0 ft.	1235		100 (84)		Qu Test Results UCS = 944 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-3
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516791.0587 **Date of Work:** 07/24/23-07/24/23
Offset: **Easting:** 1408472.847 **Depth to Water:**
Elevation: 1259.2 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		20.0-30.0' LIMESTONE, gray, moderately hard to hard, slightly weathered, fine to coarse crystalline, thin to thick bedded, dense *(continued)*	1230		100 (95)		Qu Test Results UCS = 1340 ksf		
30		30.0-35.0' LIMESTONE, gray, moderately hard to hard, slightly weathered, aphanitic to finely crystalline, thin to thick bedded, dense to pitted	1225		100 (96)		Qu Test Results UCS = 1660 ksf		
35		Refusal at 20.0 feet. Bottom of borehole at 35.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED
9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	29

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9417

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 29 of 31

BORING DATA

c:\bmcd_lib\pw_connect\trn\d0171012\B_A9417_029_JSU0076.dgn 4:17:30 PM 9/5/2024

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-5
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516858.1379 **Date of Work:** 07/20/23-07/20/23
Offset: 6' N **Easting:** 1408540.4977 **Depth to Water:**
Elevation: 1258.6 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-10.5' (CH) Red and brown, fat CLAY, with gravel							
					83	7-10-6 (24)		PP = 4.50 tsf	MC = 26.5%
			1255						
					39	7-10-15 (38)		PP = 1.50 tsf	MC = 16.9%
5									
					100		Qu Test Results MC = 34.8% γ_{moist} = 88.6 pcf	PP = 2.50 tsf	
			1250						
					94	4-10-50 (90)		PP = 2.50 tsf	MC = 42.4%
10		10.5-16.0' LIMESTONE, gray, moderately hard to hard, slightly weathered to fresh, fine to coarse crystalline, thin to thick bedded, dense to pitted							
					83 (75)		Qu Test Results UCS = 1270 ksf		
			1245						
15									
		16.0-20.0' Core loss							
			1240		18 (7)				
20									
		20.0-30.5' LIMESTONE, gray, moderately hard to hard, slightly weathered to fresh, fine to coarse crystalline, thin to thick bedded, dense to pitted							
			1235		100 (90)		Qu Test Results UCS = 1290 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-5
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516858.1379 **Date of Work:** 07/20/23-07/20/23
Offset: 6' N **Easting:** 1408540.4977 **Depth to Water:**
Elevation: 1258.6 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		20.0-30.5' LIMESTONE, gray, moderately hard to hard, slightly weathered to fresh, fine to coarse crystalline, thin to thick bedded, dense to pitted *(continued)*							
			1230		100 (97)		Qu Test Results UCS = 1210 ksf		
30		Refusal at 10.5 feet. Bottom of borehole at 30.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024
ROUTE I-44 STATE MO
DISTRICT BR SHEET NO. 30
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9417

DESCRIPTION
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 30 of 31

BORING DATA

c:\bmcd_lib\pw_connect\trn\d0171012\B_A9417_030_JSU0076.dgn 4:17:50 PM 9/5/2024

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-6
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516792.3959 **Date of Work:** 07/25/23-07/25/23
Offset: **Easting:** 1408538.0076 **Depth to Water:**
Elevation: 1258.5 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-5.5' (CH) Red and brown, fat CLAY, with gravel							
					44	11-8-8 (24)		PP = 2.25 tsf	MC = 23.5%
			1255						
					44	7-8-11 (29)		PP = 2.25 tsf	MC = 28.0%
5									
		5.5-12.0' (CL) Red and gray, lean CLAY, trace gravel			78	2-2-2 (6)		PP <0.50 tsf	MC = 21.8%
			1250						
					50			PP <0.50 tsf	MC = 32.1%
10									
		12.0-20.5' (CH) Red, fat CLAY							
			1245						
					100	3-3-4 (11)		PP = 1.50 tsf	MC = 53.4%
15									
			1240						
		18.5' -trace gravel below 18.5 ft.			50	4-3-3 (9)		PP = 1.00 tsf	MC = 54.2%
20									
		20.5-30.0' LIMESTONE, gray, moderately hard to hard, fresh to slightly weathered, thin to thick bedded, aphanitic to finely crystalline, dense							
			1235		100 (91)		Qu Test Results UCS = 1120 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-6
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516792.3959 **Date of Work:** 07/25/23-07/25/23
Offset: **Easting:** 1408538.0076 **Depth to Water:**
Elevation: 1258.5 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		20.5-30.0' LIMESTONE, gray, moderately hard to hard, fresh to slightly weathered, thin to thick bedded, aphanitic to finely crystalline, dense *(continued)*							
		25.0' -aphanitic to coarsely crystalline below 25.0 ft.	1230		100 (95)		Qu Test Results UCS = 1290 ksf		
30		30.0-35.0' LIMESTONE, gray, moderately hard to hard, fresh to slightly weathered, medium to thick bedded, aphanitic to finely crystalline, dense							
			1225		100 (95)		Qu Test Results UCS = 1140 ksf		
35		Refusal at 20.5 feet. Bottom of borehole at 35.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	31

COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9417

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No. : 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 31 of 31

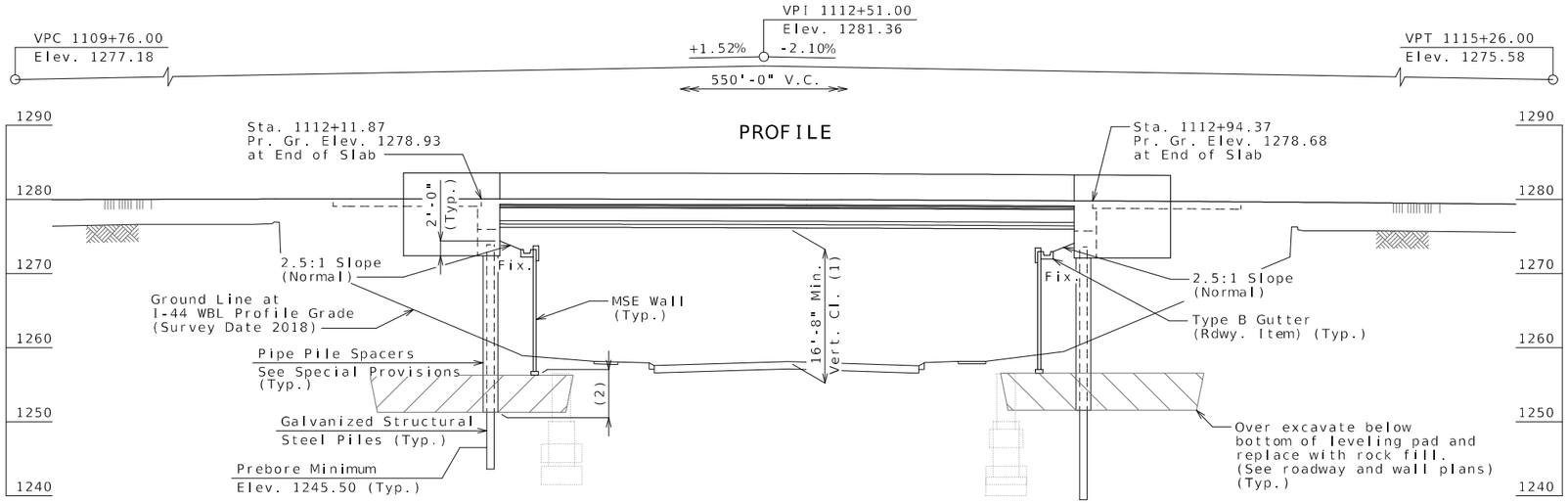
BORING DATA

c:\bmcd_lib\pw_connect\trn\d0171012\B_A9417_031_JSU0076.dgn 4:18:09 PM 9/5/2024

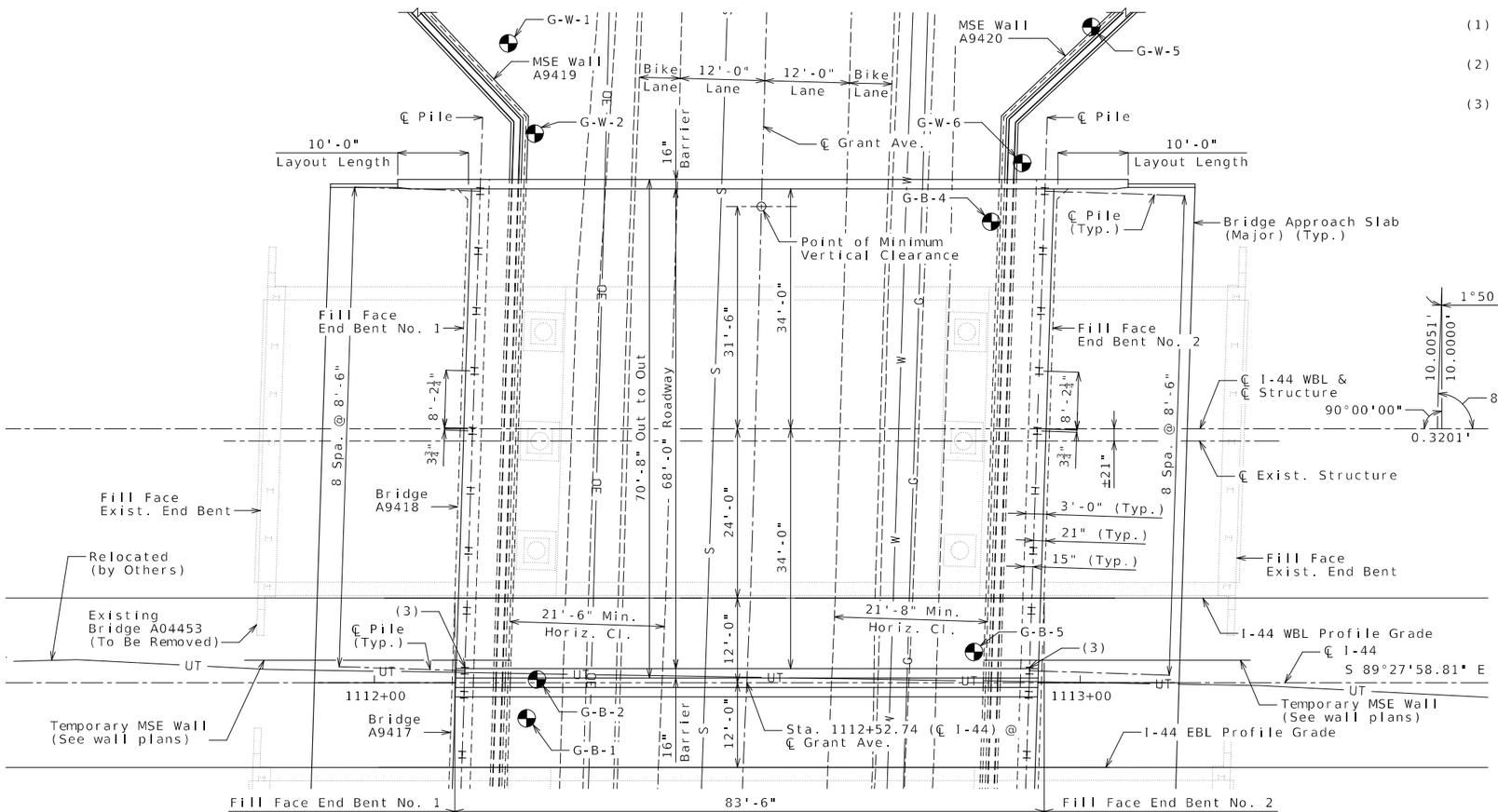
(80') PRESTRESSED CONCRETE NU-GIRDER SPAN

SEC/SUR 2 TWP 29N RGE 22W

PROFILE



GENERAL ELEVATION



PLAN

Pile Encasement	Option Used (√)
Pipe Pile Spacer	
Pile Jacket	

MoDot Construction personnel will indicate the pile encasement used.

(1) Minimum vertical clearance is controlled by adjacent Bridge A9417 at 15'-9".

(2) Bottom of pipe pile spacer shall be 5'-0" minimum below bottom of leveling pad.

(3) Pile in Bridge A9418 shall be driven during Stage 2 Construction of Bridge A9417.

NOTES:

Indicates location of borings.

For notice and disclaimer regarding boring log data, see Sheet No. 2.

Roadway fill, exclusive of Select Granular Backfill for Structural Systems, shall be completed to the final roadway section and up to the elevation of the bottom of the concrete beam within the limits of the structure and for not less than 25 feet in back of the fill face of the end bents before any piles are driven for any bents falling within the embankment section.

C.P. #518 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1106+18.78, 110.87' Lt. of ℄ I-44
Elev. 1277.59

C.P. #519 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1122+80.16, 92.35' Lt. of ℄ I-44
Elev. 1270.58

BRIDGE: RTE. I-44 WBL OVER GRANT AVE.

ROUTE I-44 WBL FROM ROUTE H TO ROUTE 13
ABOUT 1.9 MILES WEST OF ROUTE H
BEGINNING STATION 1112+11.37

Designed: May 2024
Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 32

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	1

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

REV.

c:\bmcd_lib\pw_connect\trn\d0171017\B_A9418_001_JSU0076.dgn 4:56:50 PM 9/5/2024

GENERAL NOTES:

DESIGN SPECIFICATIONS:

2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)
Operational Importance = Essential
2011 AASHTO Guide Specifications for LRFD Seismic Bridge Design (2nd Ed.)
and 2014 Interim Revisions (Seismic)
Seismic Design Category = A
Design earthquake response spectral acceleration coefficient at 1.0 second period, S_{D1} = 0.104g
Acceleration Coefficient (effective peak ground acceleration coefficient), A_S = 0.089g

DESIGN LOADING:

Vehicular = HL-93
Future Wearing Surface = 35 lb/sf
Earth = 120 lb/cf
Equivalent Fluid Pressure = 45 lb/cf (Min.)
Superstructure: Non-composite for dead load.
Composite for live load.

DESIGN UNIT STRESSES:

Class B Concrete (Substructure)	f'c = 3,000 psi
Class B-1 Concrete (Type D Barrier)	f'c = 4,000 psi
Class B-2 Concrete (Superstructure, except Prestressed Girders and Type D Barrier)	f'c = 4,000 psi
Reinforcing Steel (Grade 60)	fy = 60,000 psi
Structural Steel HP Pile (ASTM A709 Grade 50S)	fy = 50,000 psi

For precast prestressed panel stresses, see Sheet No. 18.
For prestressed girder stresses, see Sheets No. 16 thru 17.

NEOPRENE PADS:

Neoprene bearing pads shall be 60 durometer and shall be in accordance with Sec 716.

JOINT FILLER:

All joint filler shall be in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

REINFORCING STEEL:

Minimum clearance to reinforcing steel shall be 1½", unless otherwise shown.

TRAFFIC HANDLING:

Vertical clearance for Grant Avenue traffic during construction shall be 14'-6" minimum over a 12'-0" wide horizontal opening of the roadway in each direction.

Traffic to be maintained on structures during construction. See roadway plans for traffic control and Sheets No. 3 thru 4 for staged construction details.

MISCELLANEOUS:

MoDOT Construction personnel will indicate the type of joint filler option used under the precast panels for this structure:

☐ Constant Joint Filler
☐ Variable Joint Filler

NOTICE AND DISCLAIMER REGARDING BORING LOG DATA:

The locations of all subsurface borings for this structure are shown on the plan sheets for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheets No. 28 thru 32 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.

Foundation Data

Type	Design Data		Bent Number 1	Bent Number 2
Load Bearing Pile	Pile Type and Size		HP 12x53	HP 12x53
	Number	ea	9	9
	Approximate Length Per Each	ft	30	34
	Pile Point Reinforcement	ea	All	All
	Min. Galvanized Penetration (Elev.)	ft	Full Length	Full Length
	Pile Driving Verification Method		DF	DF
	Resistance Factor		0.40	0.40
	Minimum Nominal Axial Compressive Resistance	kip	590	590

DF = FHWA - modified Gates Dynamic Pile Formula.

Minimum Nominal Axial Compressive Resistance = $\frac{\text{Maximum Factored Loads}}{\text{Resistance Factor}}$

Manufactured pile point reinforcement shall be used on all piles in this structure.

Pile point reinforcement need not be galvanized. Shop drawings will not be required for pile point reinforcement.

Prebore for piles at Bents No. 1 and 2 to elevation 1245.5.

HP piles are anticipated to be driven to refusal on rock. Review all borings for depth of rock and restrict driving as appropriate to comply with hard rock driving criteria in accordance with Sec 702. When pile refusal on rock occurs, as approved by the engineer, the minimum nominal axial compressive resistance is verified and no additional pile driving verification method is required.

The contractor shall make every effort to achieve the minimum galvanized penetration (elevation) shown on the plans for all piles.

Estimated Quantities

Item		Substr.	Superstr.	Total
Removal of Miscellaneous ACM (Non-Friable)	sq. foot			12
Removal of Bridges (A04453)	lump sum			1
Bridge Approach Slab (Major)	sq. yard		314	314
Galvanized Structural Steel Piles (12 in.)	linear foot	566		566
Pre-Bore for Piling	linear foot	198		198
Pile Point Reinforcement	each	18		18
Class B Concrete (Substructure)	cu. yard	58.0		58.0
Type D Barrier	linear foot		226	226
Slab on Concrete NU-Girder	sq. yard		648	648
NU 35, Prestressed Concrete NU-Girder	linear foot		647	647
Vertical Drain at End Bents	each	2		2
Plain Neoprene Bearing Pad	each		8	8
Laminated Neoprene Bearing Pad (Tapered)	each		8	8
Pile Spacers	each	18		18

All concrete above the construction joint in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

All reinforcement in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Estimated Quantities for Slab on Concrete NU-Girder

Item		Total
Class B-2 Concrete	cu. yard	201
Reinforcing Steel (Epoxy Coated)	pound	43,110

The table of Estimated Quantities for Slab on Concrete NU-Girder represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab (or with the horizontal dimensions as shown on the plan of slab). Payment for prestressed panels, conventional forms, all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slab shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type I, II or III.

PRECAST PRESTRESSED PANELS:

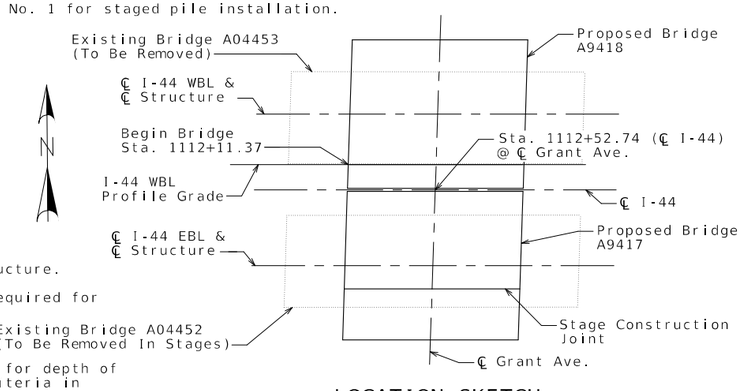
The Estimated Quantities for Slab on Concrete NU-Girder are based on skewed precast prestressed end panels.

Class B-2 Concrete quantity is based on minimum top flange and minimum joint material thickness.

The prestressed panel quantities are not included in the table of Estimated Quantities for Slab on Concrete NU-Girder.

STAGED CONSTRUCTION:

See General Plan and Elevation Sheet No. 1 for staged pile installation.



LOCATION SKETCH

GENERAL NOTES & QUANTITIES

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

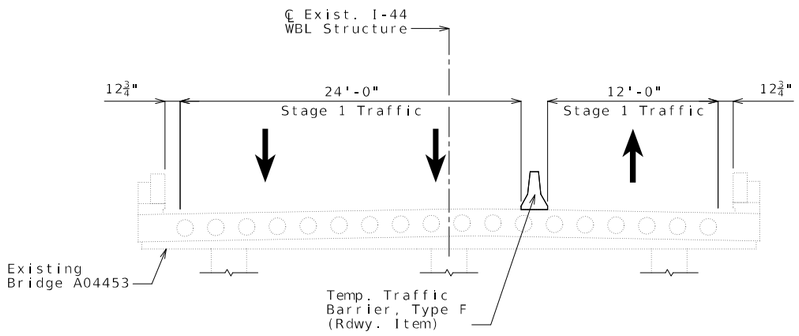
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

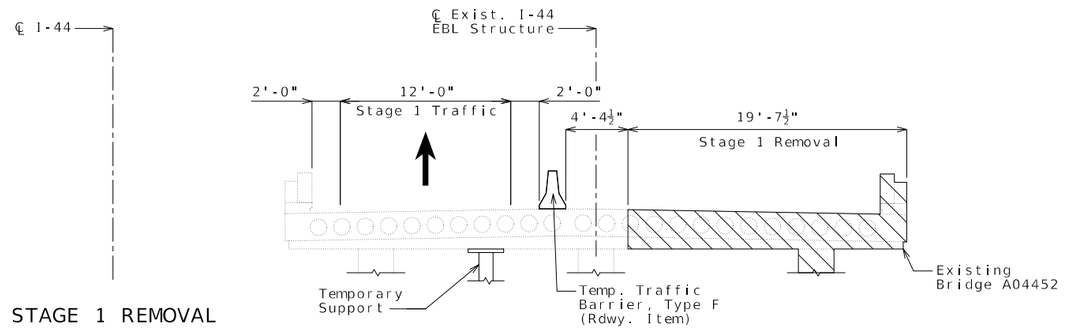
DATE PREPARED: 11/7/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 2
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

DESCRIPTION	DATE

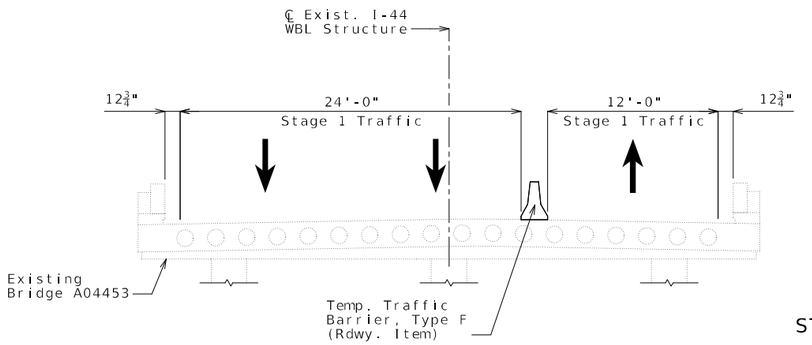
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

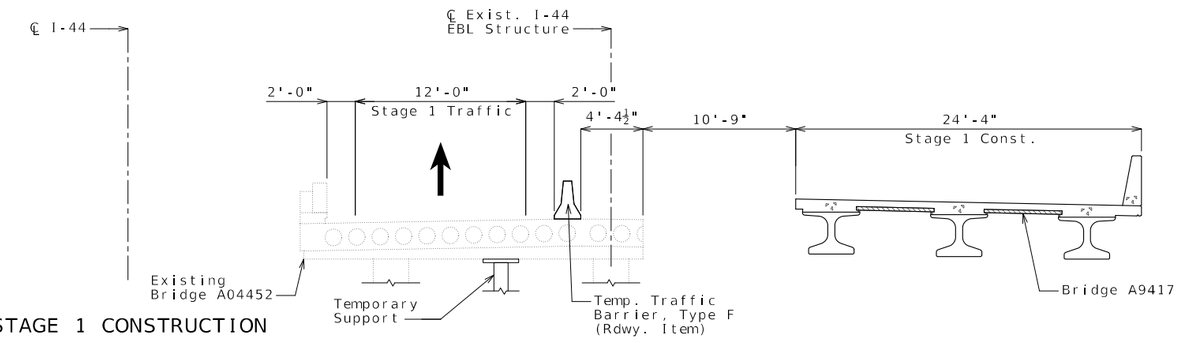
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



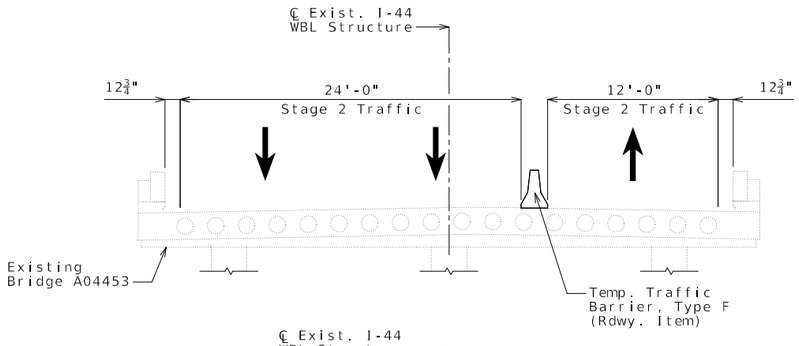


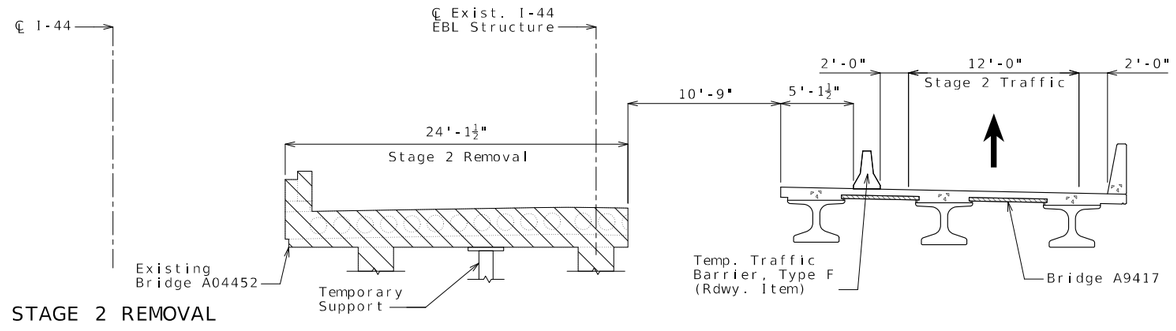
STAGE 1 REMOVAL



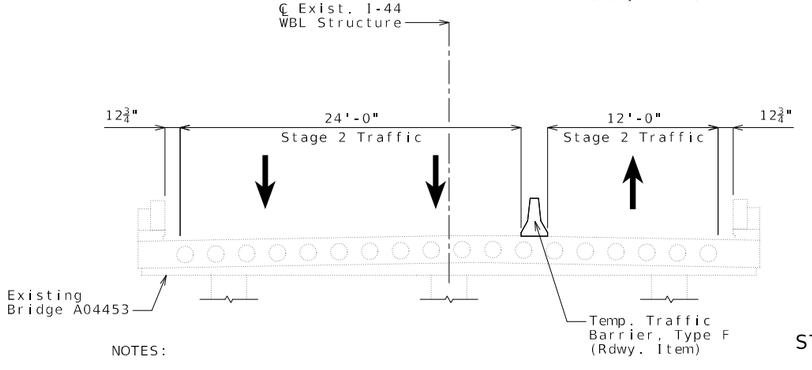


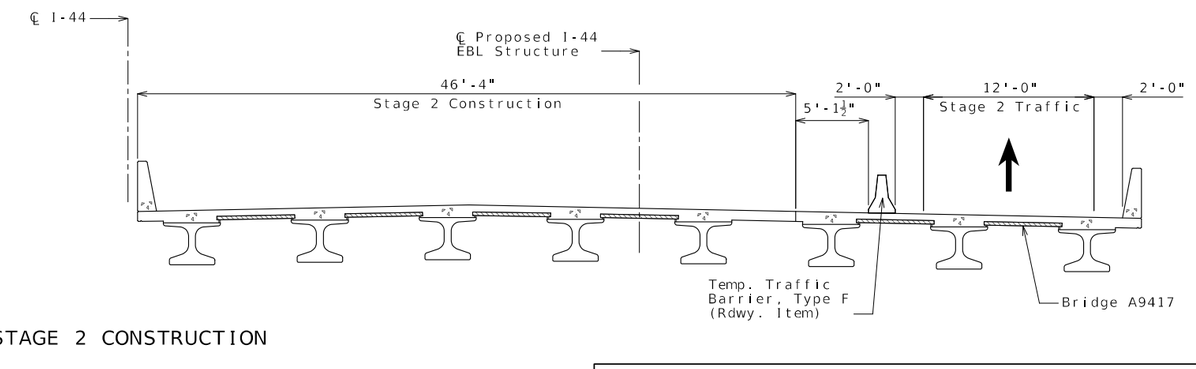
STAGE 1 CONSTRUCTION





STAGE 2 REMOVAL





STAGE 2 CONSTRUCTION

NOTES:

All typical sections are looking east.

Hatched area indicates removal of existing structures.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 32

STAGED CONSTRUCTION

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	3

COUNTY: GREENE

JOB NO.: JSU0076

CONTRACT ID.:

PROJECT NO.:

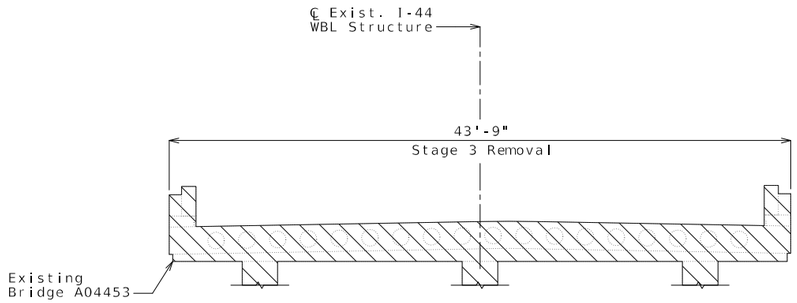
BRIDGE NO.: A9418

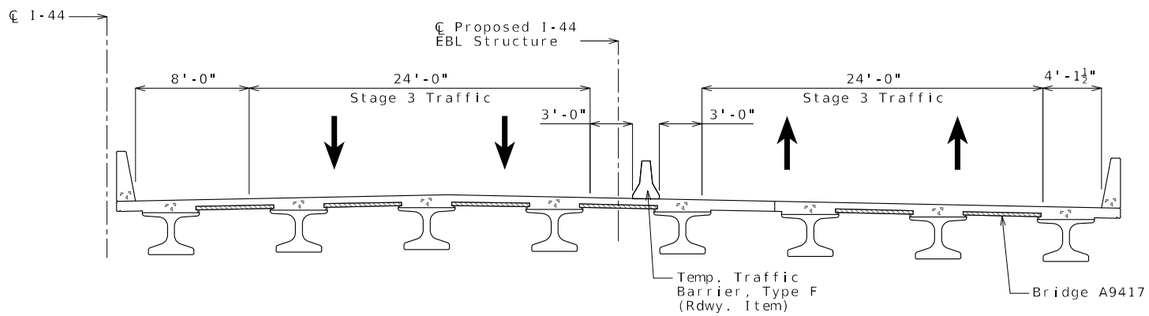
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

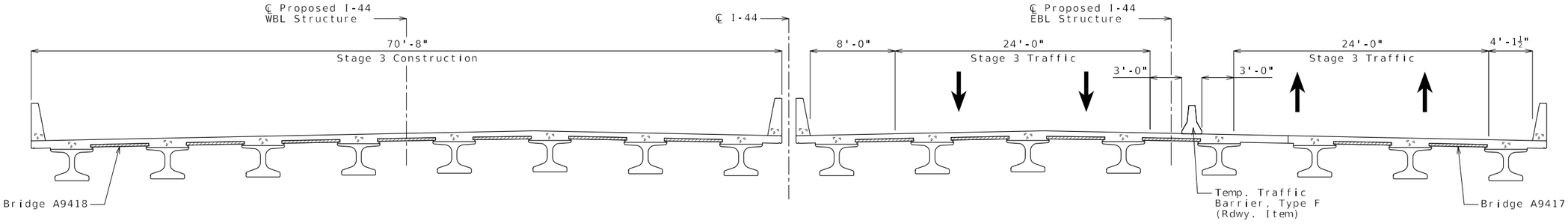
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

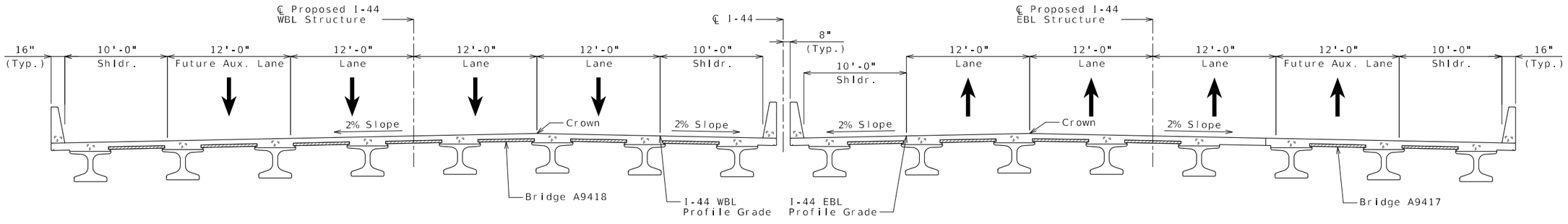




STAGE 3 REMOVAL



STAGE 3 CONSTRUCTION



FINAL SECTION THRU SLAB

NOTES:

All typical sections are looking east.

Hatched area indicates removal of existing structures.

STAGED CONSTRUCTION

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/5/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	4

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

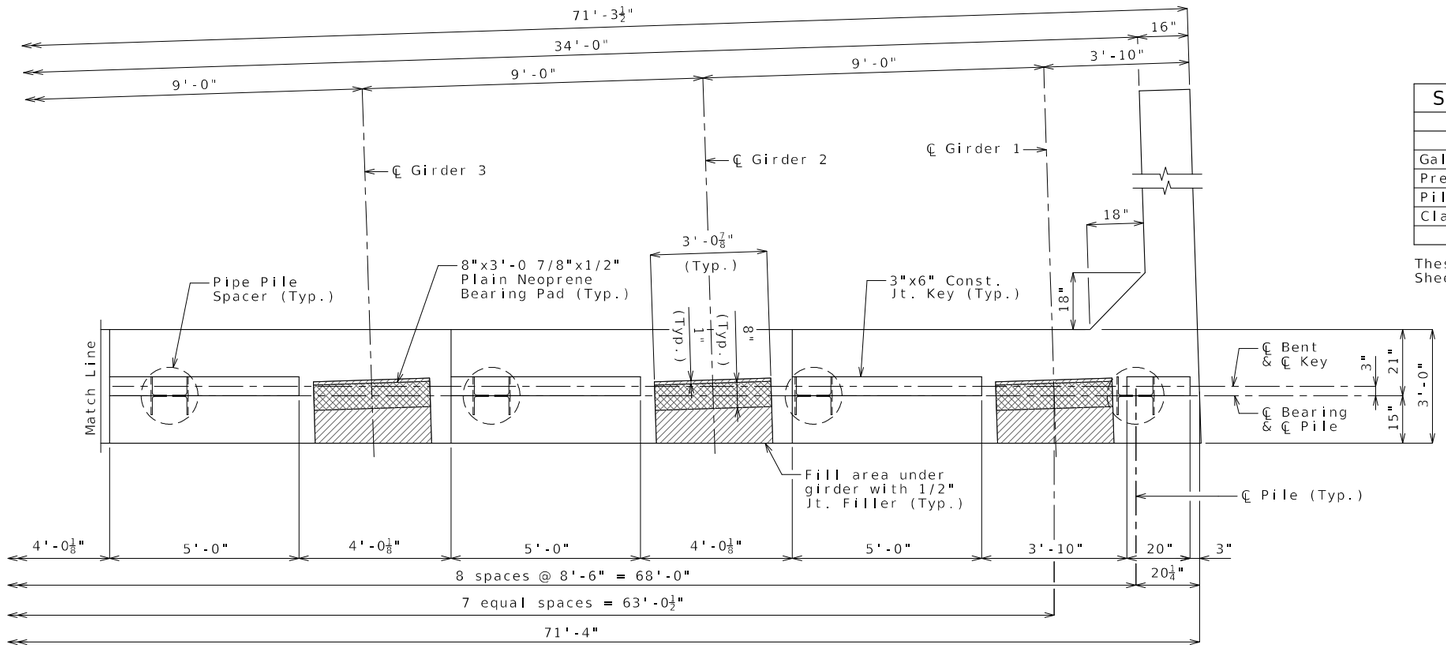
BRIDGE NO.
A9418

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

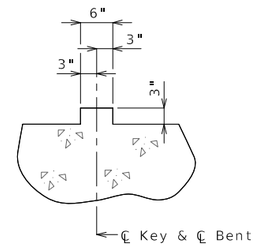
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617



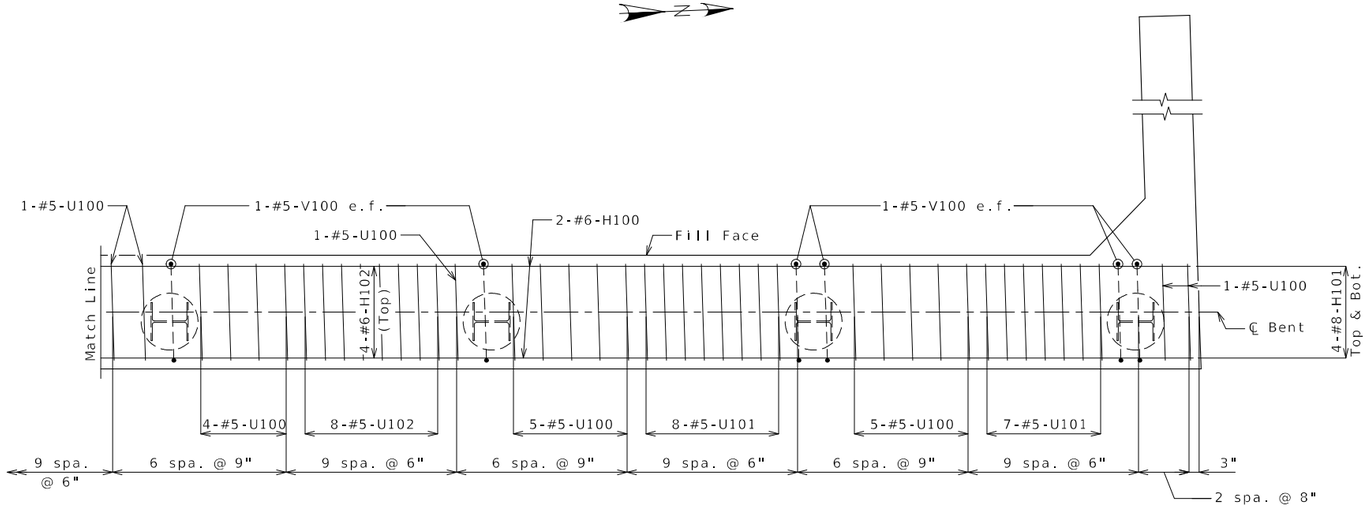
PART PLAN OF BEAM

Substructure Quantity Table for End Bent No. 1		
Item		Quantity
Galvanized Structural Steel Piles (12 in.)	linear foot	264
Pre-Bore for Piling	linear foot	99
Pile Point Reinforcement	each	9
Class B Concrete (Substructure)	cu. yard	29.0

These quantities are included in the Estimated Quantities table on Sheet No. 2.



SECTION THRU KEY



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 6 thru 9.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 5 of 32

END BENT NO. 1
BEAM DETAILS 1 OF 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/11/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 5
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

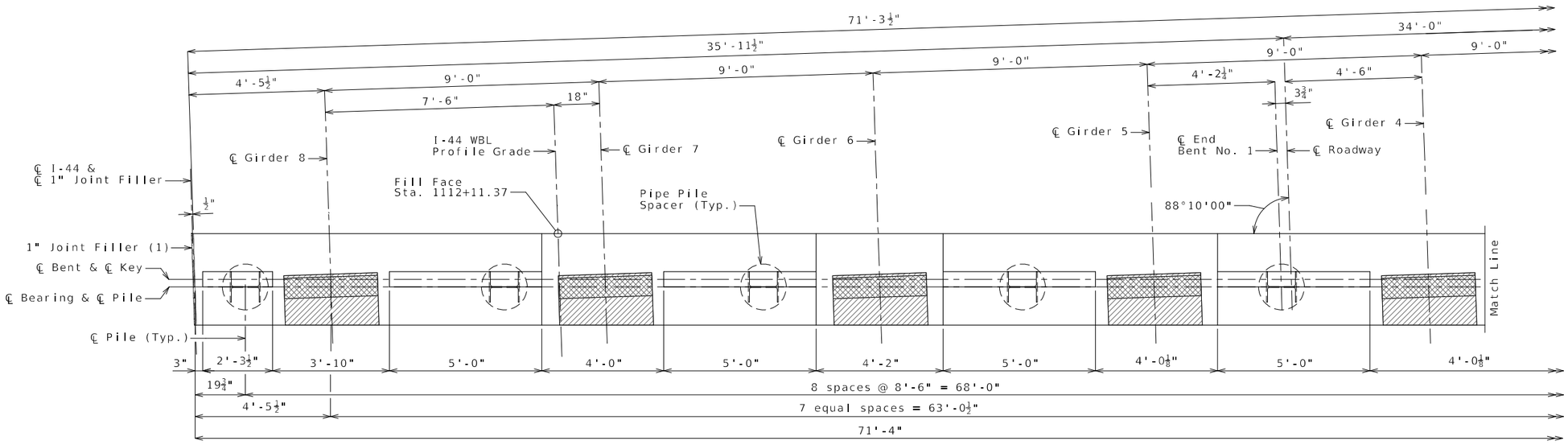
DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

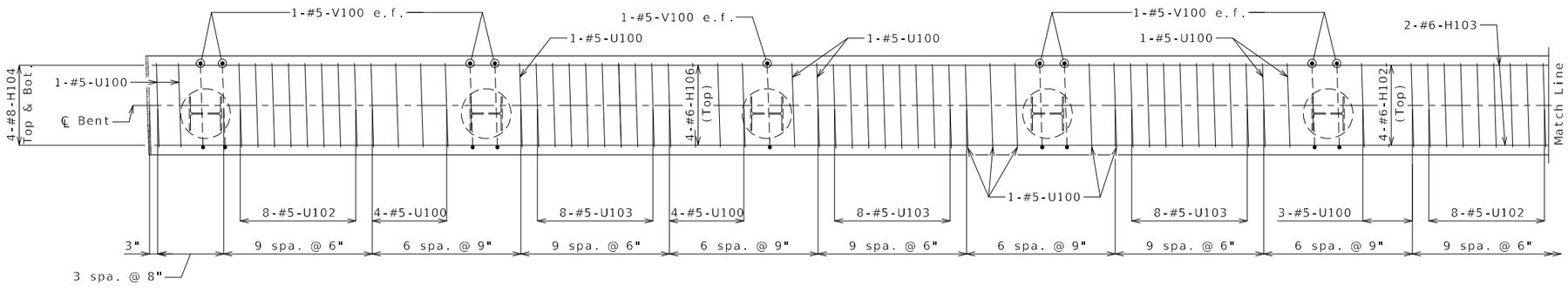
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

REV.

c:\bmcd_lib\pw_connect\trn\d0171017\B_A9418_005_JSU0076.dgn 6:31:18 AM 9/11/2024



PART PLAN OF BEAM



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5 & 7 thru 9.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) Seal joint between vertical face of EB and WB bearing beams with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

END BENT NO. 1
BEAM DETAILS 2 OF 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO

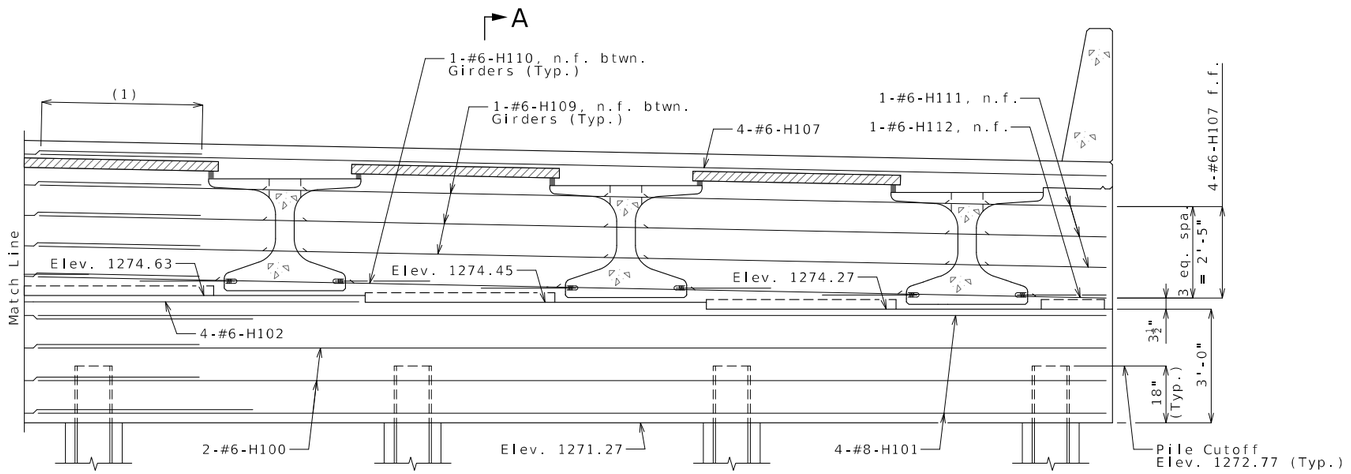
DISTRICT	SHEET NO.
BR	6

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

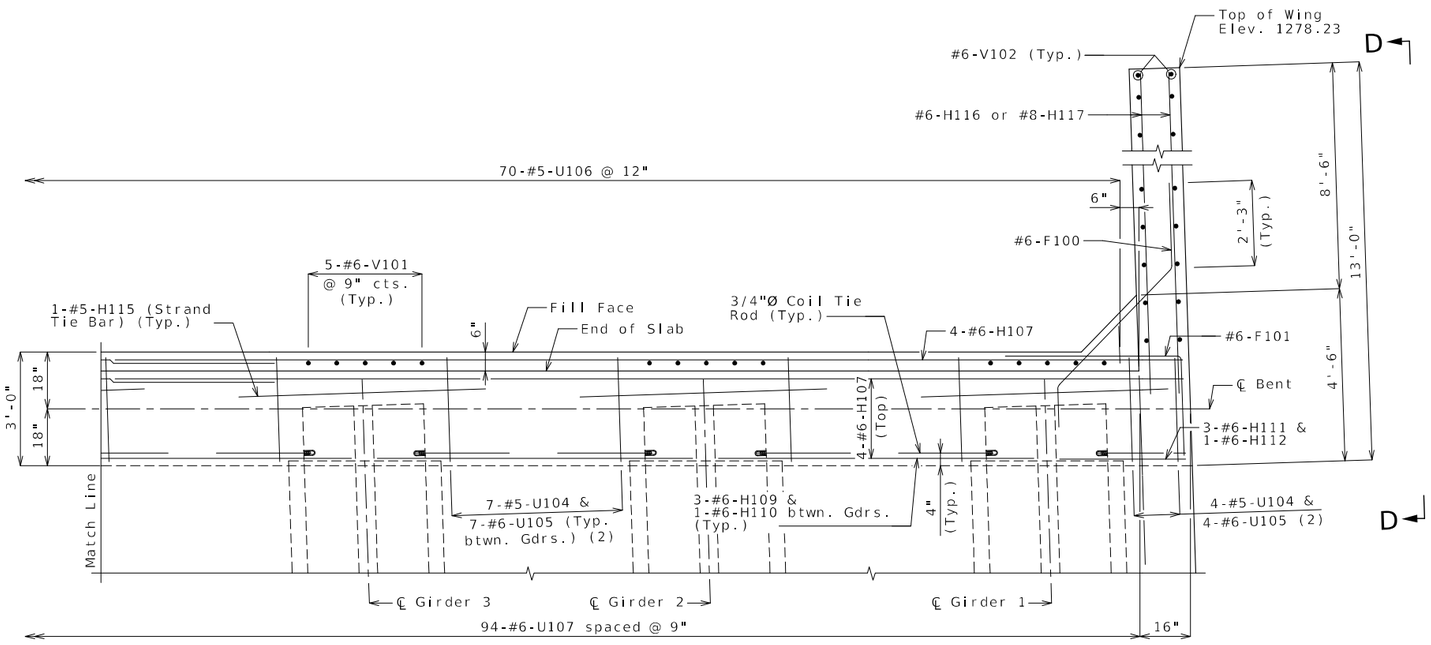
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



SECTION NEAR END BENT
(Looking Back Station)



PART PLAN
(2) Space bars to match #5-V100 & #5-U100 bars.
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5, 6, 8 and 9.

For Section A-A see Sheet No. 9.

The #6-F100 shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H115, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) Minimum Lap #6 Bars = 4'-3"
Minimum Lap #8 Bars = 5'-8"

END BENT NO. 1
DIAPHRAGM DETAILS 1 of 2

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	7

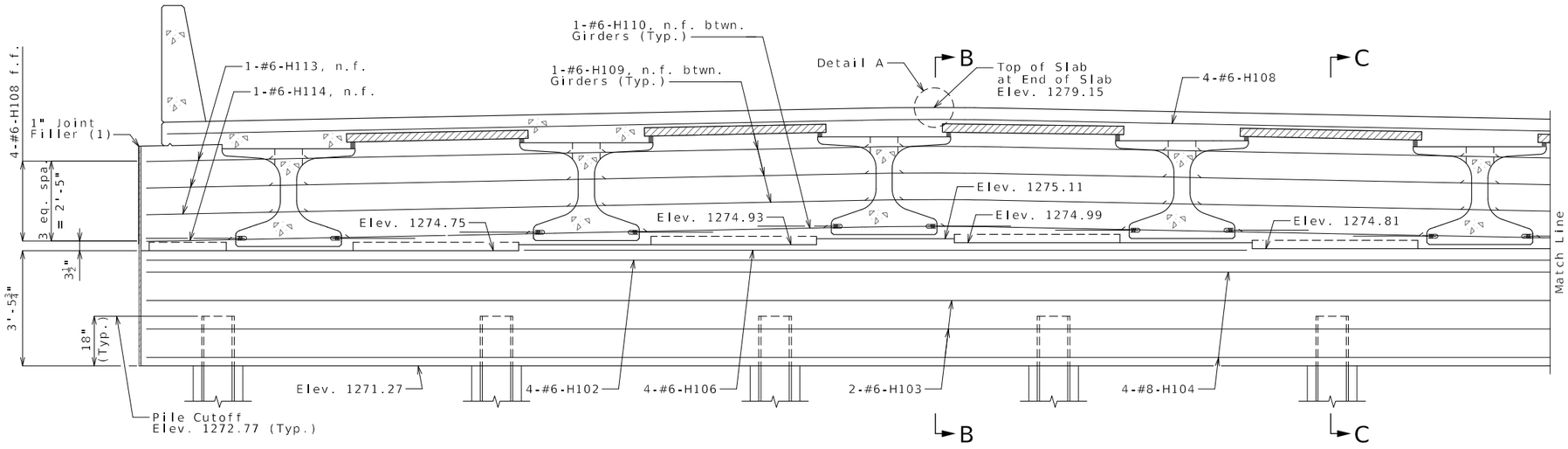
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

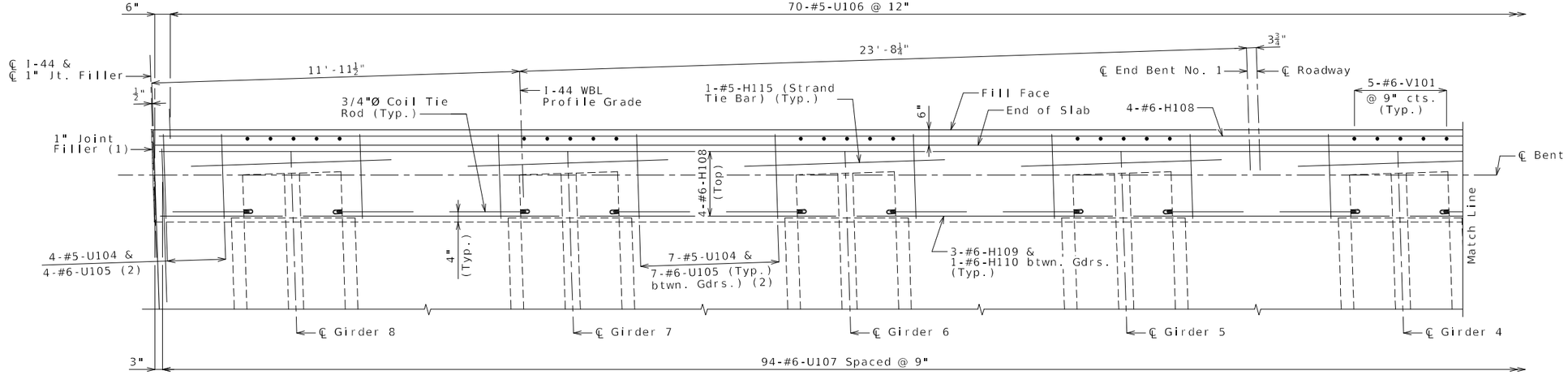
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



SECTION NEAR END BENT

(Looking Back Station)



PART PLAN

(2) Space bars to match #5-V100 & #5-U100 bars.
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5 thru 7 and 9.

For Section A-A see Sheet No. 9.

For Detail A see Sheet No. 21.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H115, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) Seal joint between vertical face of EB and WB bearing beams and diaphragms with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 32

END BENT NO. 1
DIAPHRAGM DETAILS 2 of 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	8

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9418

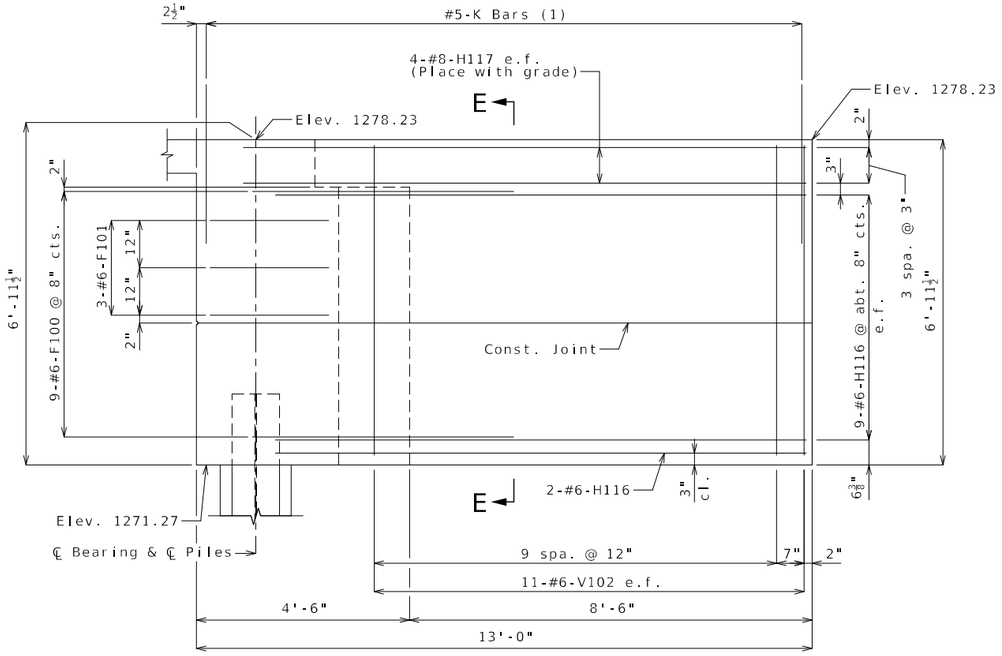
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

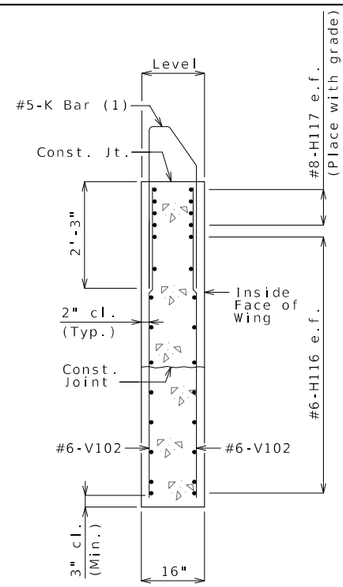
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

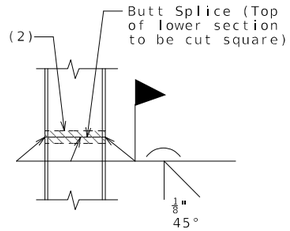
c:\bmcd_lib\pw_connect\trn\d0171017\B_A9418_008_JSU0076.dgn 4:58:22 PM 9/5/2024



ELEVATION D-D



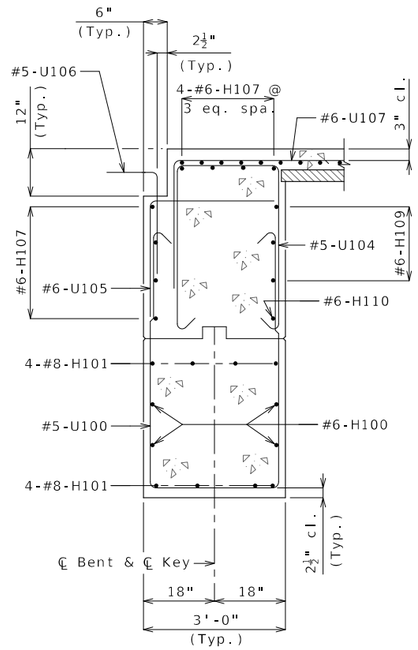
SECTION E-E



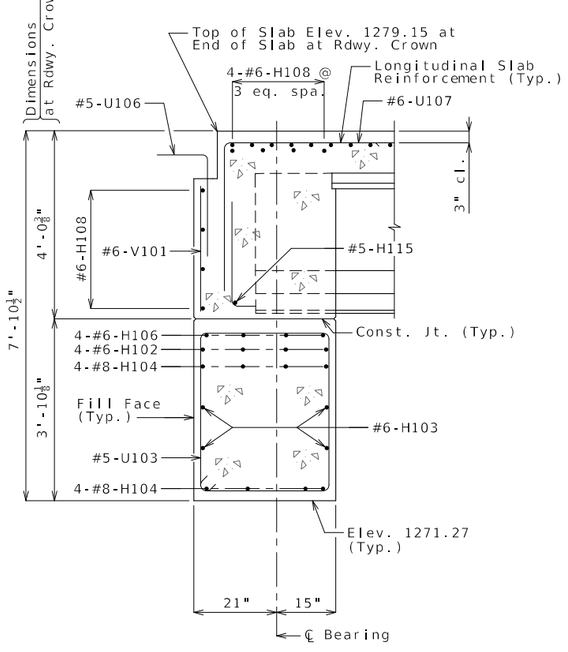
STEEL PILE SPLICE

(If required)

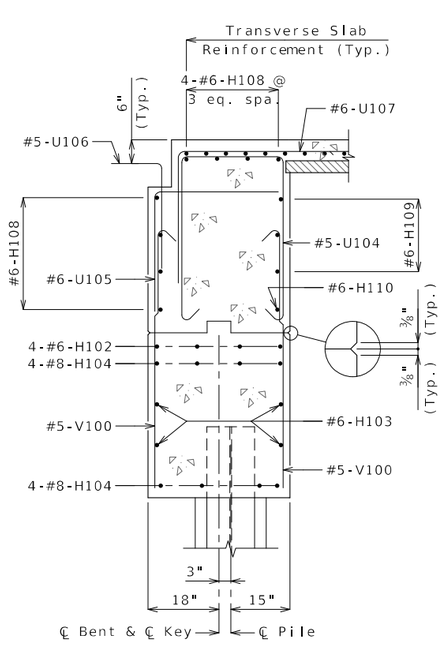
(2) Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

(1) For reinforcement of the Type D Barrier at End Bent, see Sheet No. 23.

e.f. denotes each face.

For details of bridge approach slab, see Sheet No. 24.

Work this sheet with Sheets No. 5 thru 8.

END BENT NO. 1
WING DETAILS & SECTIONS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9 of 32

4:58:35 PM 9/5/2024

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

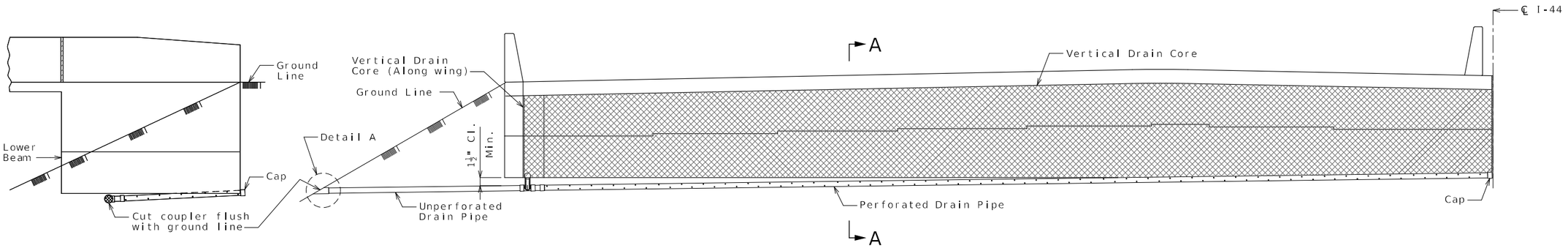
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/5/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 9
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

REV.	DESCRIPTION	DATE

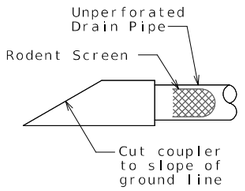
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

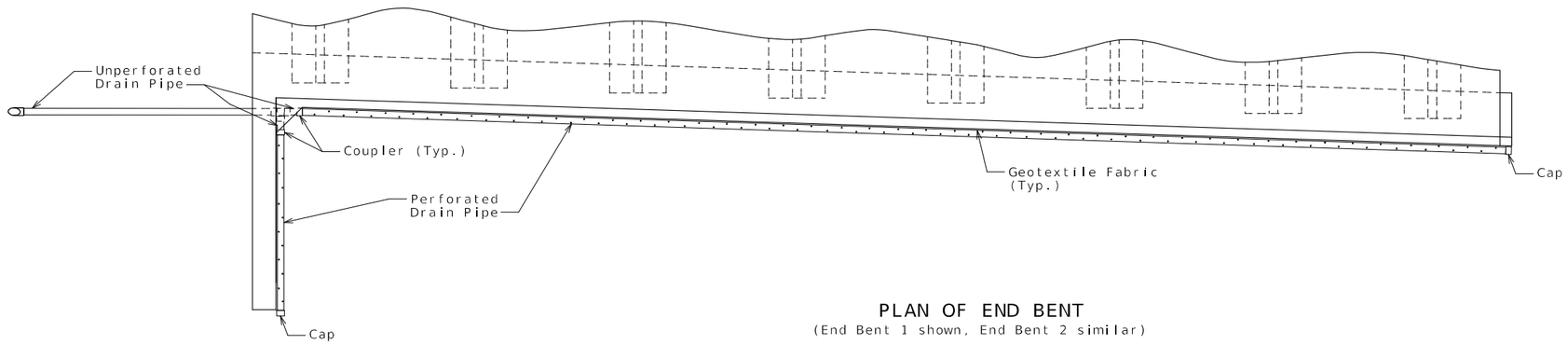


ELEVATION OF WING

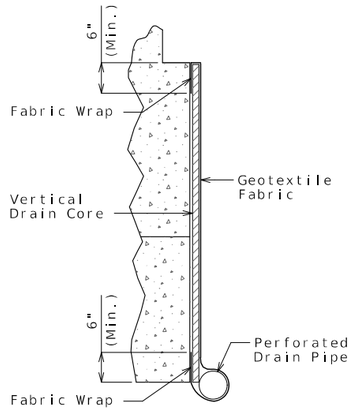
ELEVATION OF END BENT



DETAIL A



PLAN OF END BENT
(End Bent 1 shown, End Bent 2 similar)



PART SECTION A-A
(Section thru wing similar)

General Notes:

All drain pipe shall be sloped 1 to 2 percent.

Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.

Drain pipe shall be placed at fill face of end bent and inside face of wings. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.

Perforated pipe shall be placed at fill face side and inside face of wings at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.

VERTICAL DRAIN AT END BENTS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

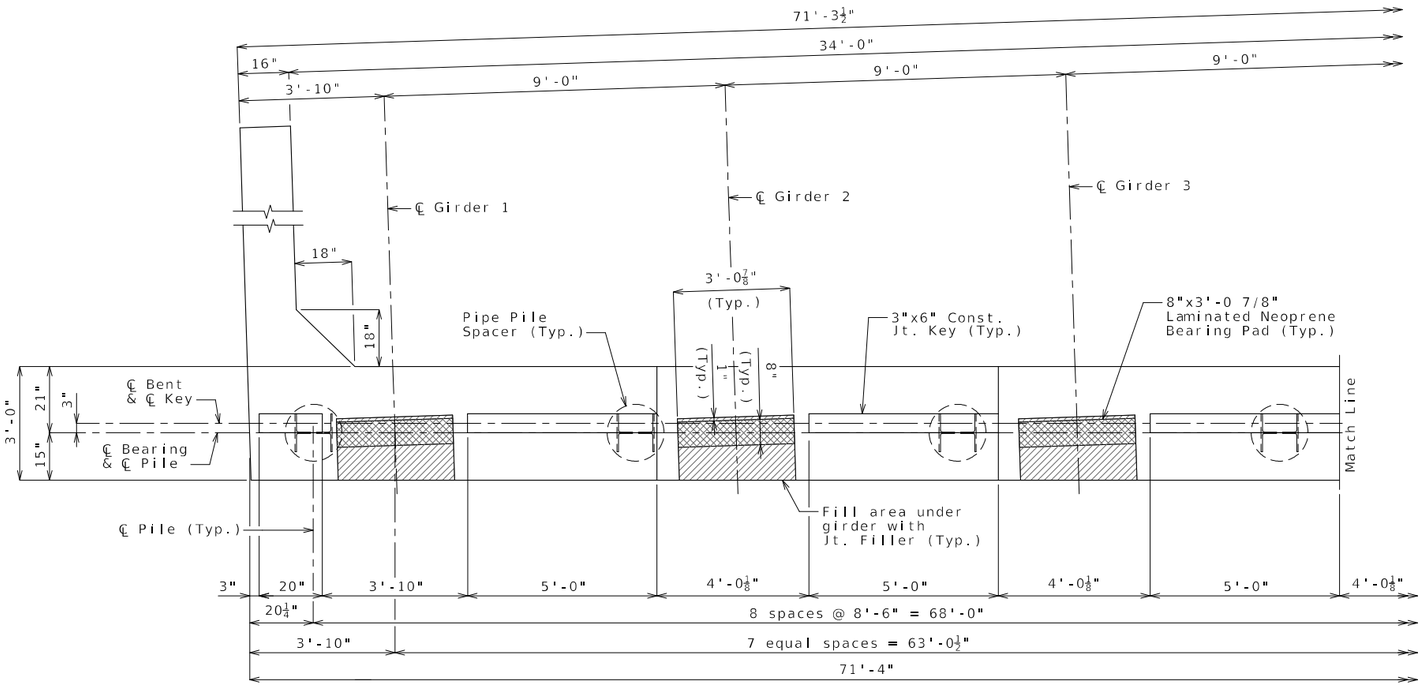
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 10
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9418

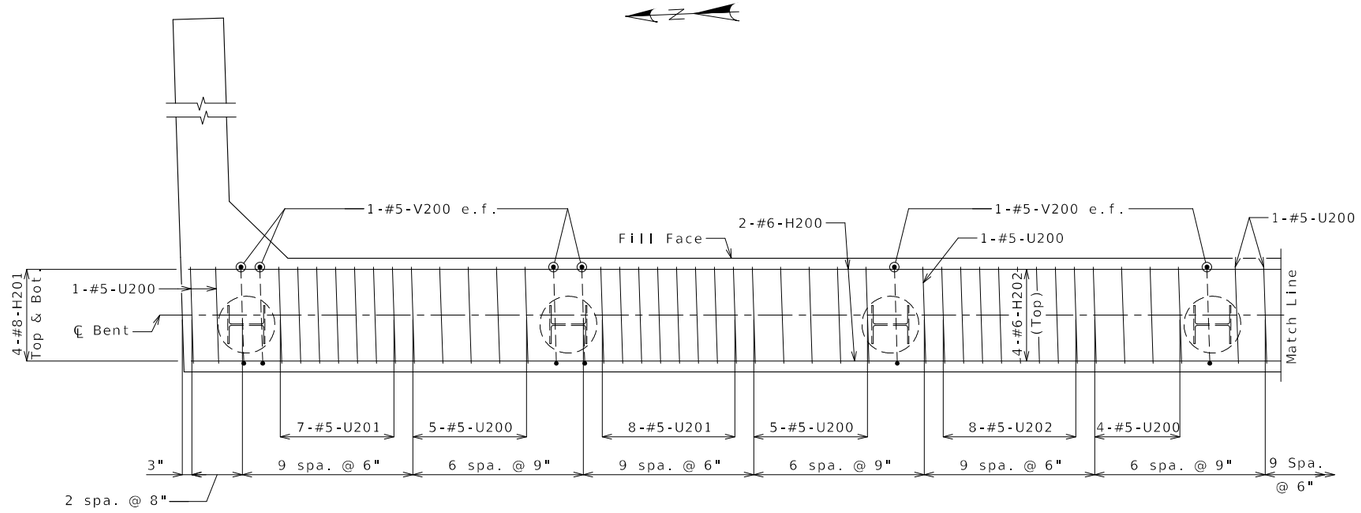
DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



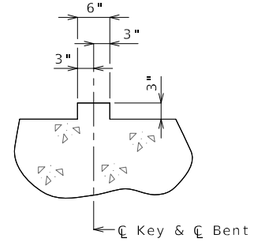
PART PLAN OF BEAM



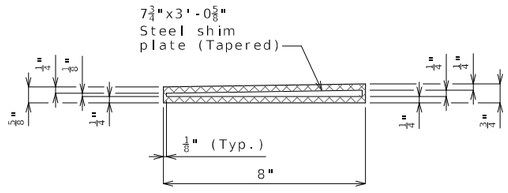
PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

Substructure Quantity Table for End Bent No. 2		
Item		Quantity
Galvanized Structural Steel Piles (12 in.)	linear foot	302
Pre-Bore for Piling	linear foot	99
Pile Point Reinforcement	each	9
Class B Concrete (Substructure)	cu. yard	29.0

These quantities are included in the Estimated Quantities table on Sheet No. 2.



SECTION THRU KEY



TYPICAL SECTION THRU
8"X3'-0 7/8"X11/16"
LAMINATED NEOPRENE BEARING PAD
(8 Required)

NOTES:

Work this sheet with Sheets No. 12 thru 15.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

END BENT NO. 2
BEAM DETAILS 1 OF 2

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
STATE OF MISSOURI
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024

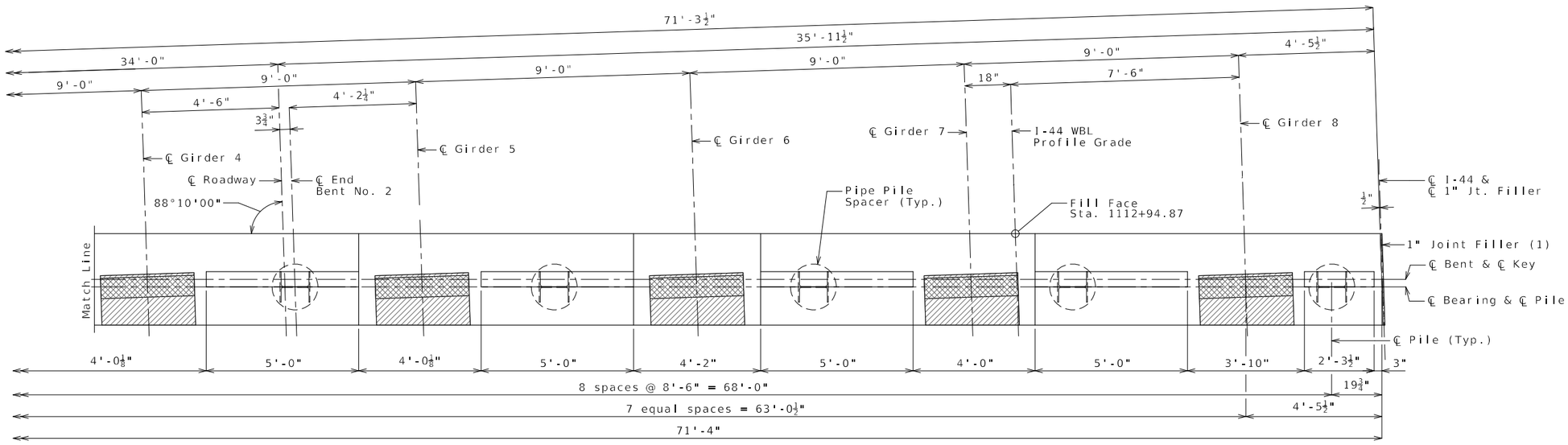
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	11

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

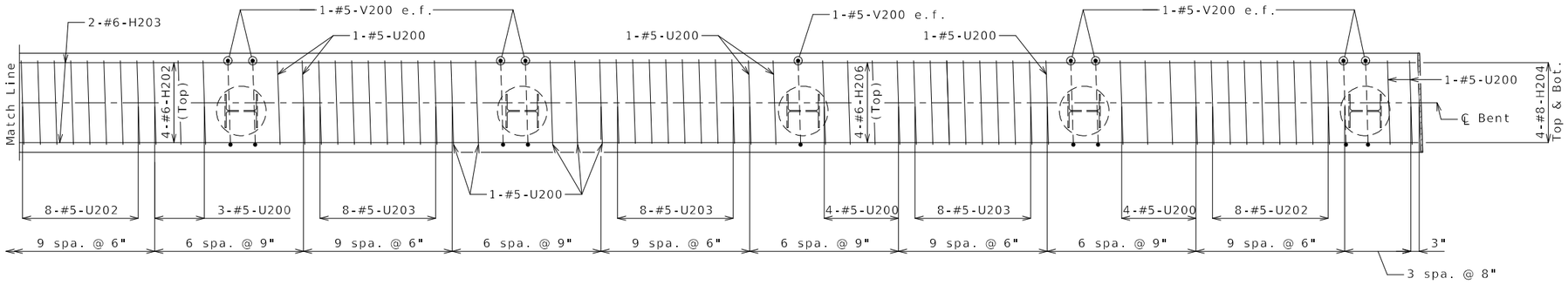
DESCRIPTION | DATE | REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617



PART PLAN OF BEAM



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 11 & 13 thru 15.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) Seal joint between vertical face of EB and WB bearing beams with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

END BENT NO. 2
BEAM DETAILS 2 OF 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/11/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	12

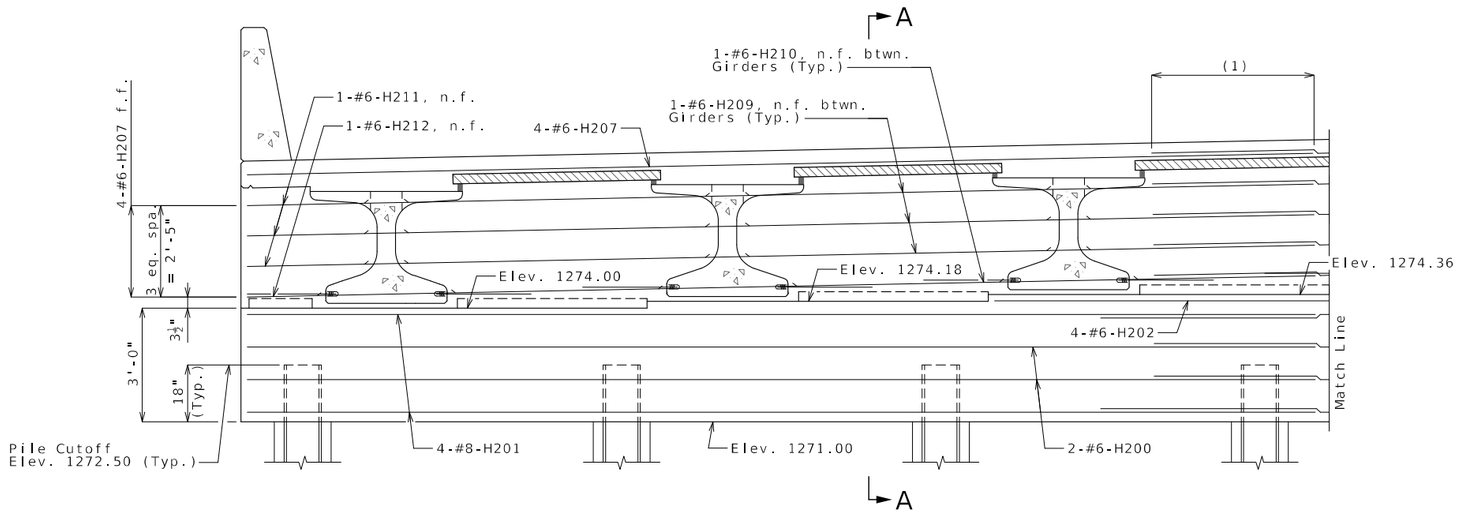
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

DESCRIPTION	DATE

REV.

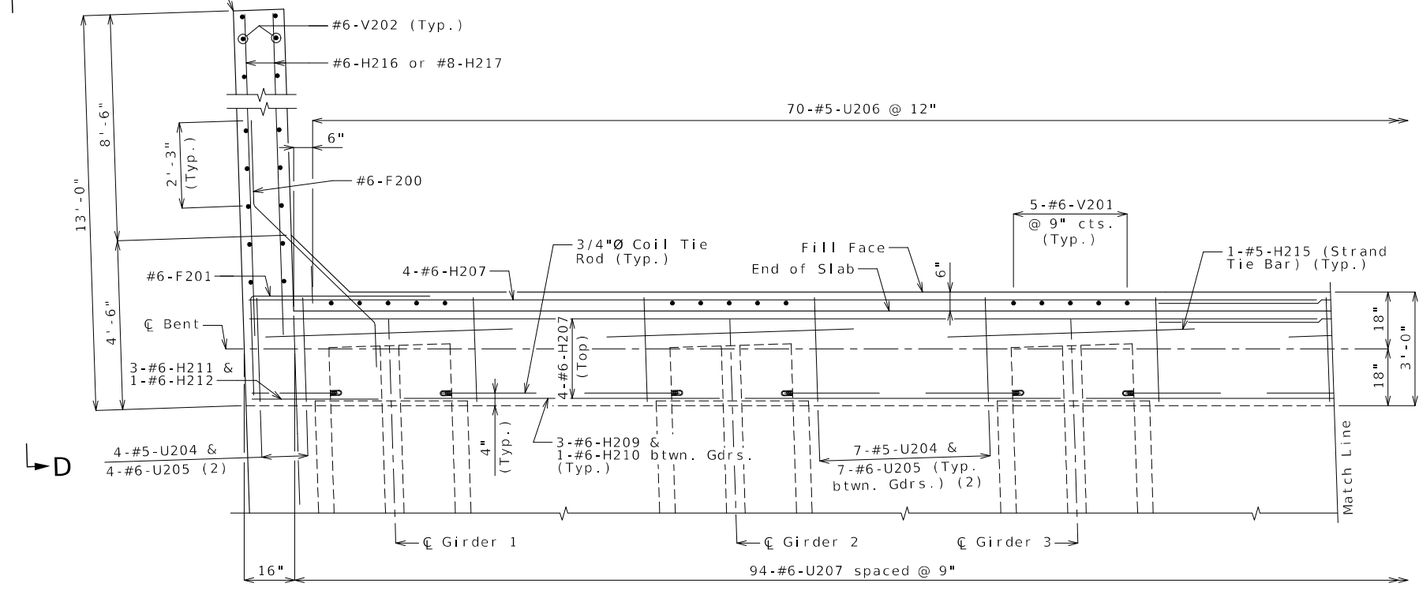
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



SECTION NEAR END BENT

(Looking Ahead Station)



PART PLAN

(2) Space bars to match #5-V200 & #5-U200 bars.
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 11, 12, 14 and 15.

For Section A-A see Sheet No. 15.

The #6-F200 shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H215, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) Minimum Lap #6 Bars = 4'-3"
Minimum Lap #8 Bars = 5'-8"

END BENT NO. 2
DIAPHRAGM DETAILS 1 of 2

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/11/2024

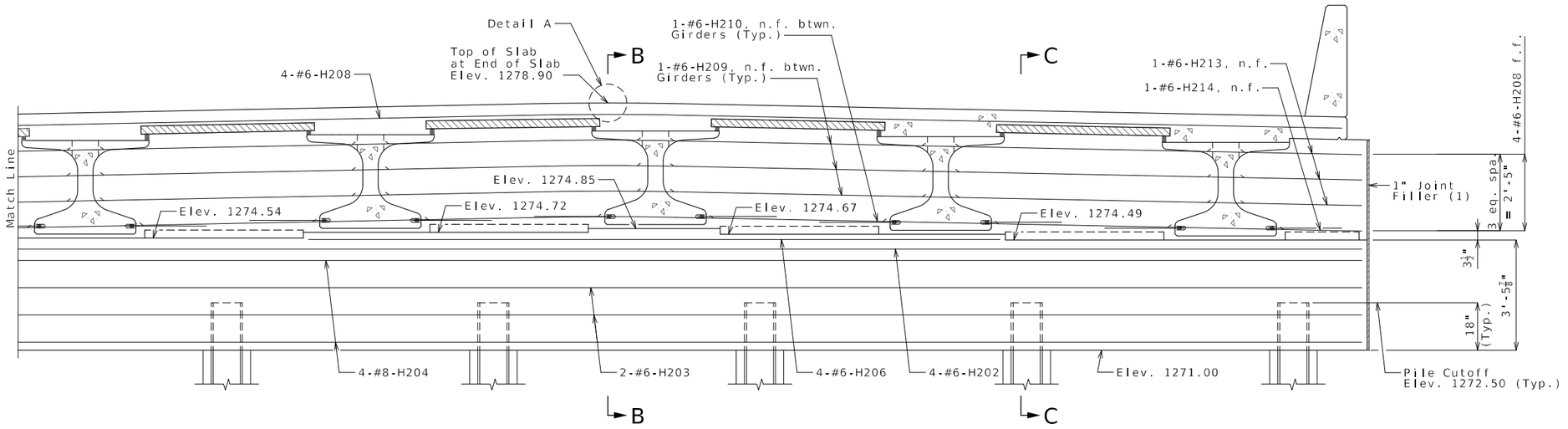
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	13

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

REV.	DESCRIPTION	DATE

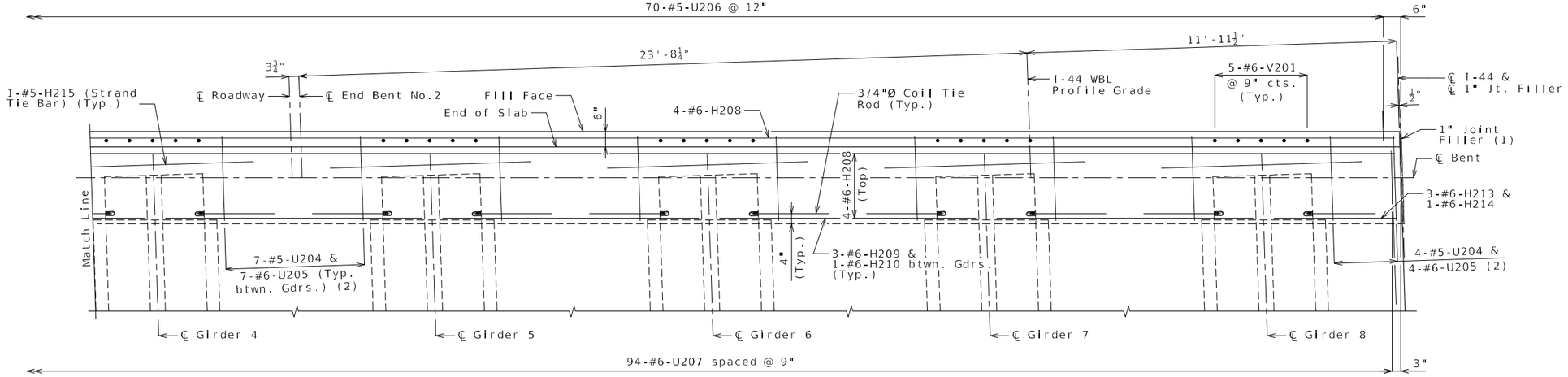
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



SECTION NEAR END BENT

(Looking Ahead Station)



PART PLAN

(2) Space bars to match #5-V200 & #5-U200 bars.

NOTES:

Work this sheet with Sheets No. 11 thru 13 and 15.

For Section A-A see Sheet No. 15.

For Detail A see Sheet No. 21.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H215, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) Seal joint between vertical face of EB and WB bearing beam and diaphragms with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 14 of 32

END BENT NO. 2 DIAPHRAGM DETAILS 2 of 2

STATE OF MISSOURI — TRAVIS M. RAPP — NUMBER PE-2011019033 — PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	14

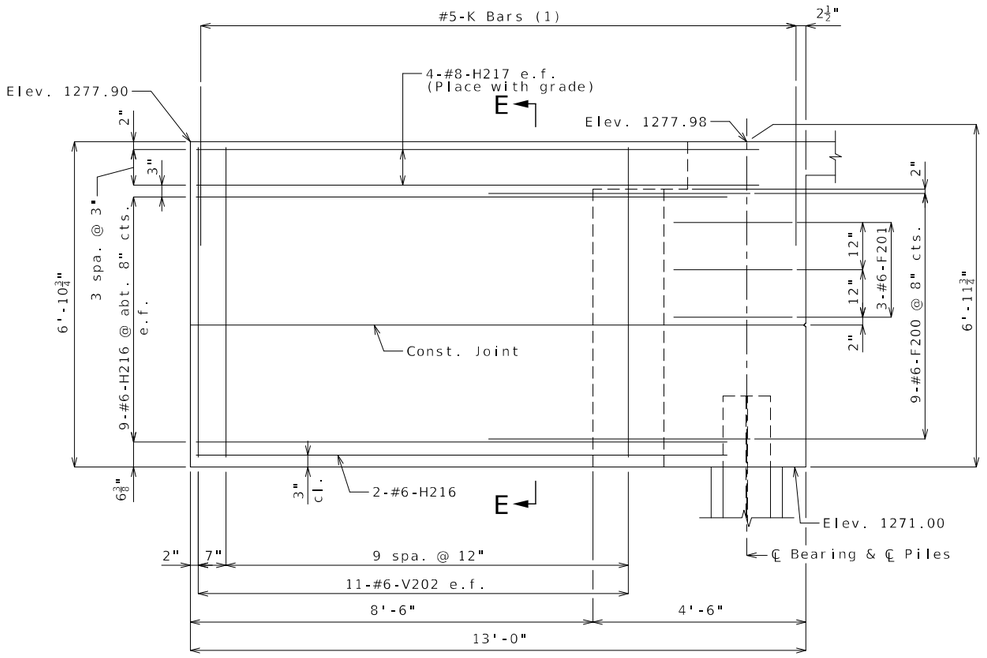
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

DESCRIPTION / DATE / REV.

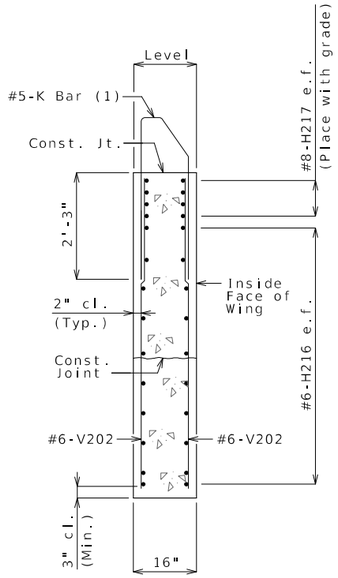
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

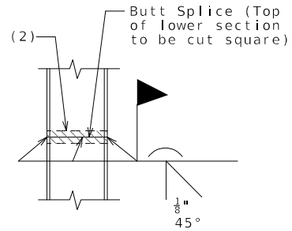
c:\bmcd_lib\pw_connect\trn\d0171017\B_A9418_014_JSU0076.dgn 4:59:40 PM 9/5/2024



ELEVATION D-D



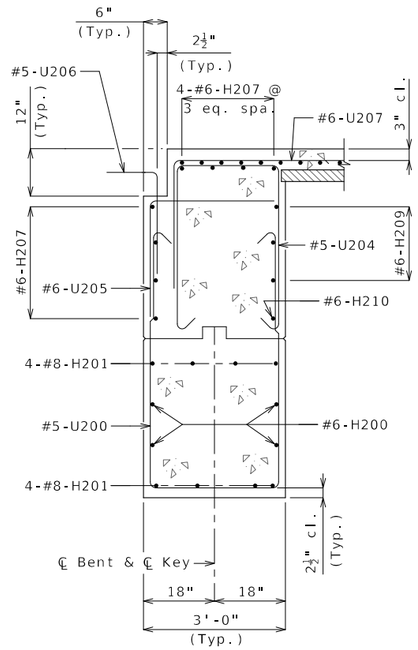
SECTION E-E



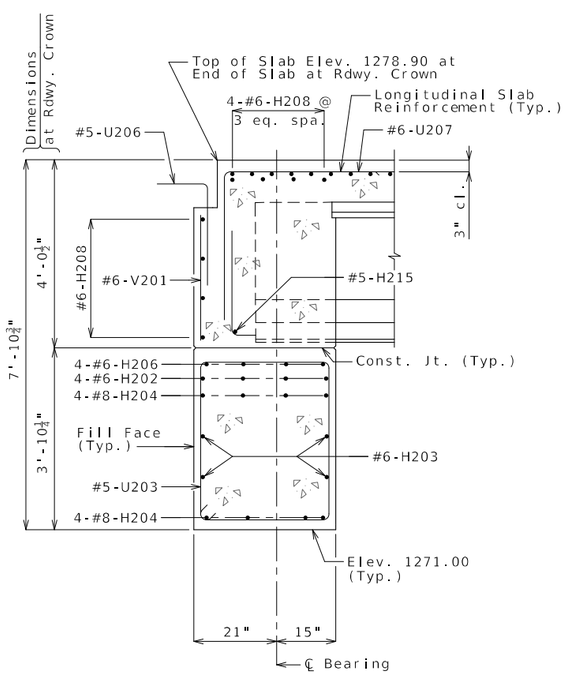
STEEL PILE SPLICE

(If required)

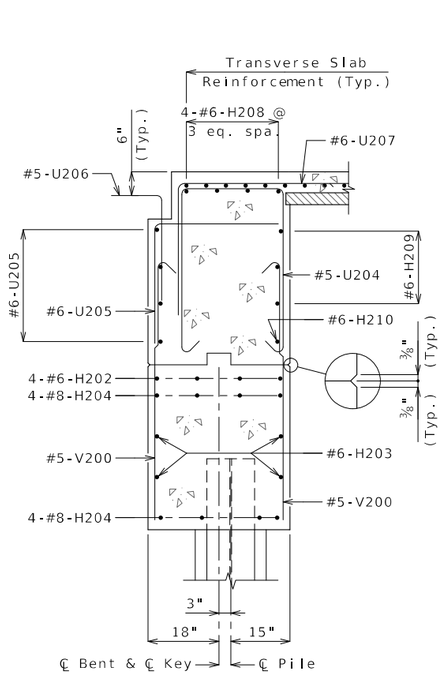
(2) Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

(1) For reinforcement of the Type D Barrier at End Bent, see Sheet No. 23.

e.f. denotes each face.

For details of bridge approach slab, see Sheet No. 24.

Work this sheet with Sheets No. 11 thru 14.

END BENT NO. 2
WING DETAILS & SECTIONS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 15 of 32

4:59:53 PM 9/5/2024

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	15

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

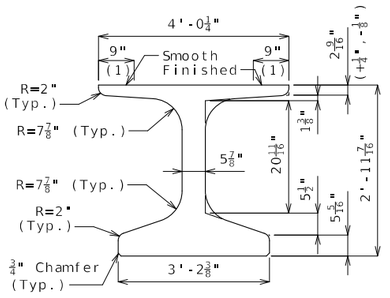
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

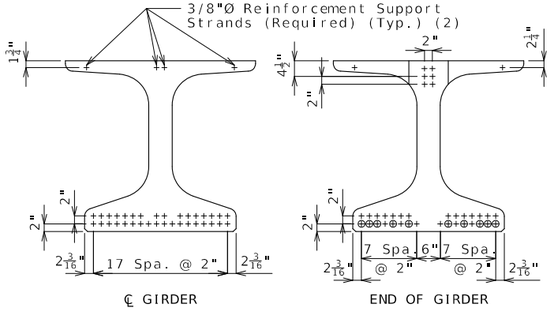
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.



DIMENSIONS
AT MID SPAN

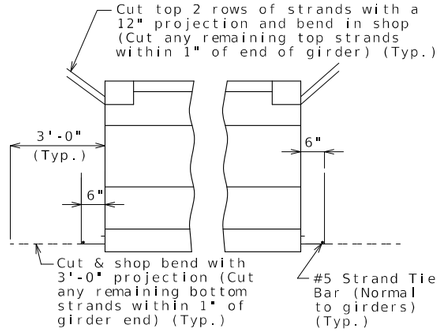
(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.



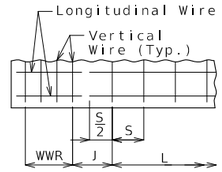
STRAND ARRANGEMENT

\+ Indicates prestressing strand.

o Indicates cut & shop bend with 3'-0" projection.



STRANDS AT GIRDER ENDS



WELDED WIRE PLACEMENT

S = Vertical wire spacing

L = Length of WWR mats

J = Distance between WWR mats

Bill of Reinforcing Steel

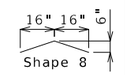
Bars Each Girder

No.	Size/Mark		Length	Shape
102	3	G1	2'-10"	8
2	4	G3	3'-10¼"	20

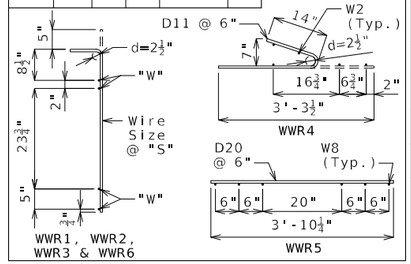
Welded Wire Each Girder

Mark	Size	S	W	L	J
WWR1	D31	4"	W12	6'-4"	4"
WWR2	D31	12"	W12	24'-0"	12"
WWR3	D31	12"	W12	6'-0"	12"
WWR6	D31	2"	W12	16"	3½"

Bending Diagrams



Shape 20



All dimensions are out to out.

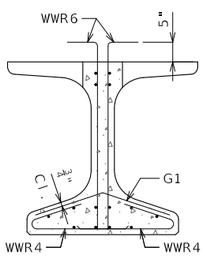
Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Actual bar lengths are measured along centerline of bar to the nearest inch.

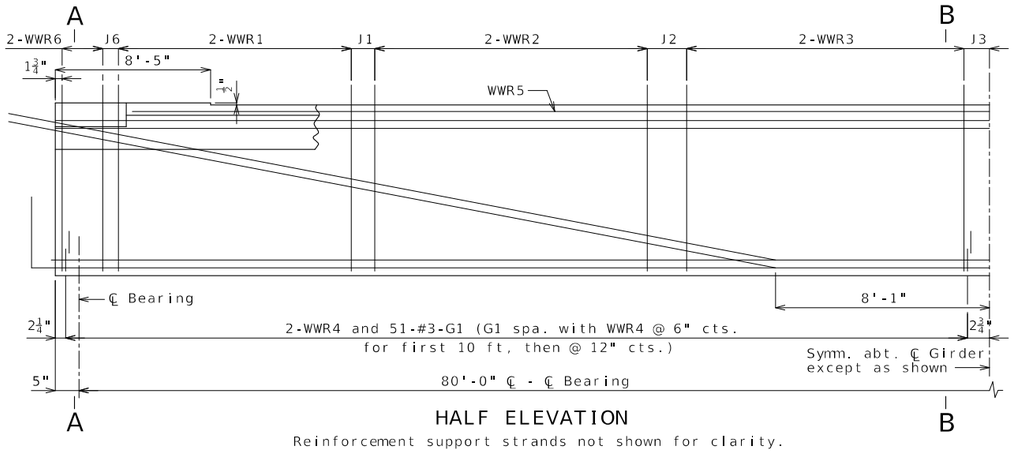
Minimum clearance to reinforcing shall be 1", unless otherwise shown.

All bar reinforcement shall be Grade 60.

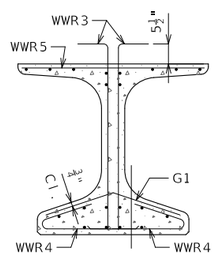
WWR shall not be epoxy coated.



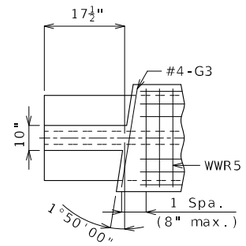
SECTION A-A
Strands not shown for clarity.



HALF ELEVATION
Reinforcement support strands not shown for clarity.



SECTION B-B
Strands not shown for clarity.



TOP FLANGE BLOCKOUT

General Notes:

Concrete for prestressed beams shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 34 strands, 0.6"Ø Grade 270, with an initial prestress force of 1494 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

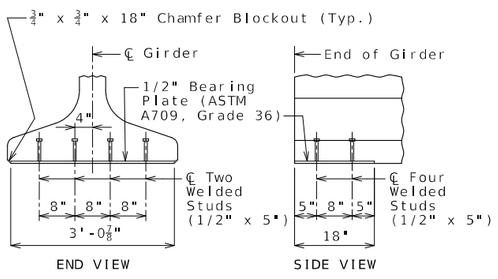
Exterior and interior girders are the same except for coil ties and application of bond breaker.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

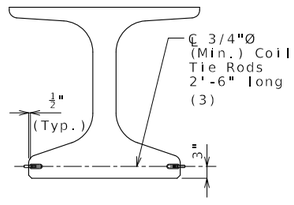
For Girder Camber Diagram, see Sheet No. 19.

For location of coil ties at integral bents, see Sheets No. 7, 8, 13 and 14.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.



BEARING PLATE



COIL TIES

(3) 2'-3" at exterior face of Girder 1 at end bents

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	16

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

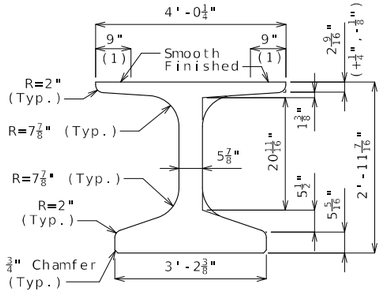
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

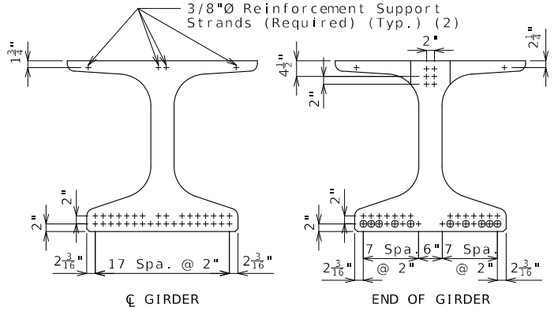
NU-GIRDERS - SPAN (1-2)

(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.



DIMENSIONS
AT MID-SPAN

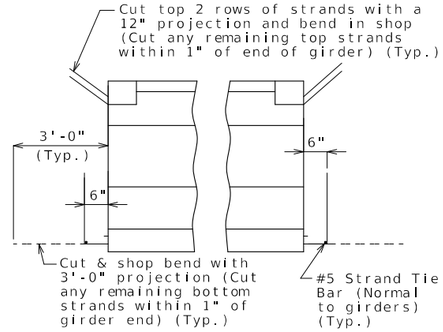
(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.



STRAND ARRANGEMENT

+ Indicates prestressing strand.

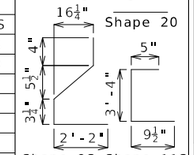
o Indicates cut & shop bend with 3'-0" projection.



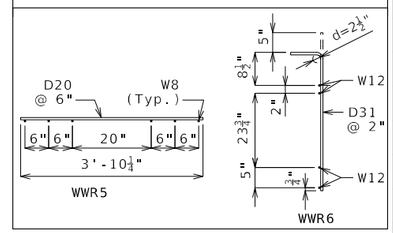
STRANDS AT GIRDER ENDS

Bill of Reinforcing Steel - Each Girder			
No.	Size/ Mark	Length	Shape
180	5 B1	4'-4"	11S
200	4 D1	4'-0"	9S
2	4 G3	3'-10¼"	20

Bending Diagrams



Welded Wire Reinforcement - Each Girder



All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

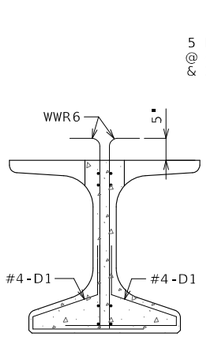
Actual bar lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be one inch.

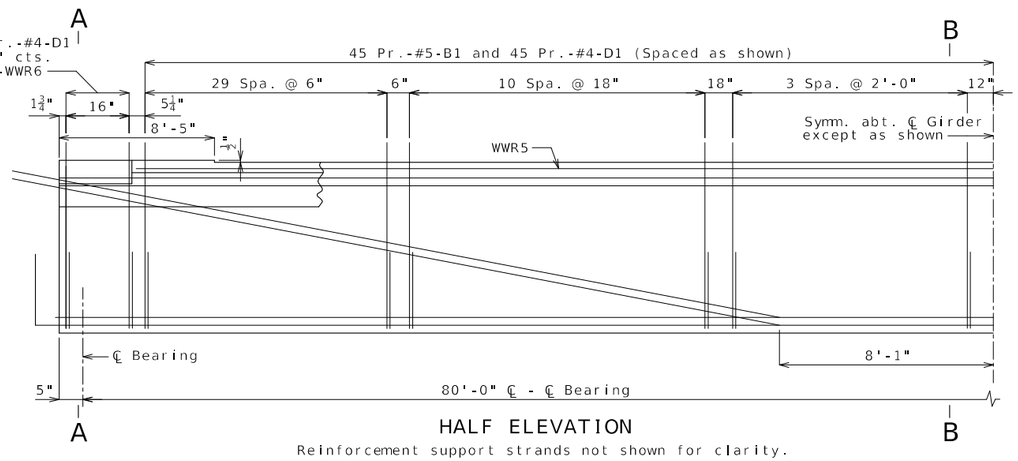
All bar reinforcement shall be Grade 60.

The two D1 bars may be furnished as one bar at the fabricator's option.

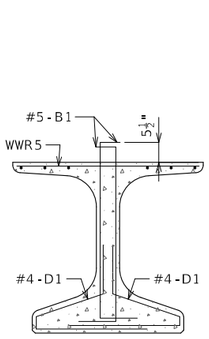
All B1 bars shall be epoxy coated.



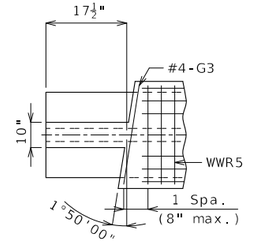
SECTION A-A
Strands not shown for clarity.



HALF ELEVATION
Reinforcement support strands not shown for clarity.



SECTION B-B
Strands not shown for clarity.



TOP FLANGE BLOCKOUT

General Notes:

Concrete for prestressed girders shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 34 strands, 0.6"Ø Grade 270, with an initial prestress force of 1494 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

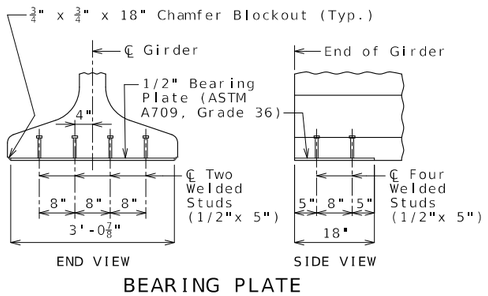
Exterior and interior girders are the same except for coil ties and application of bond breaker.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

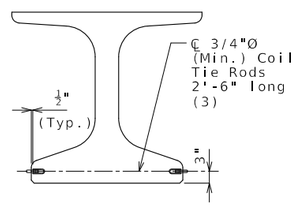
For Girder Camber Diagram, see Sheet No.19.

For location of coil ties at integral bents, see Sheets No. 7, 8, 13 and 14.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.



BEARING PLATE



COIL TIES

(3) 2'-3" at exterior face of Girder 1 at end bents

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	17

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

DESCRIPTION | DATE

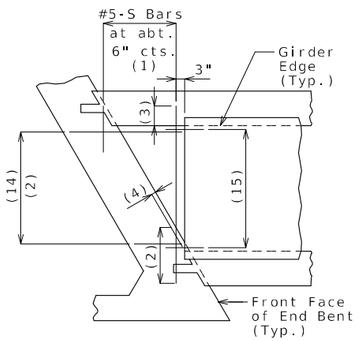
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

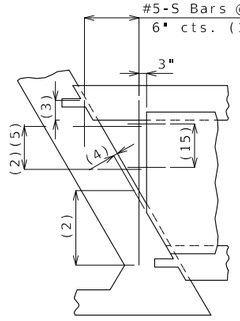
Detailed: May 2024
Checked: Jun. 2024

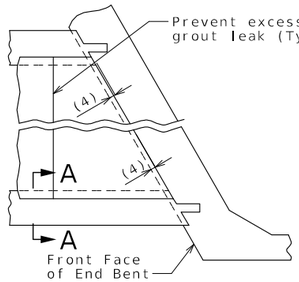
Note: This drawing is not to scale. Follow dimensions.

NU-GIRDERS (ALTERNATE REINFORCEMENT) - SPAN (1-2)



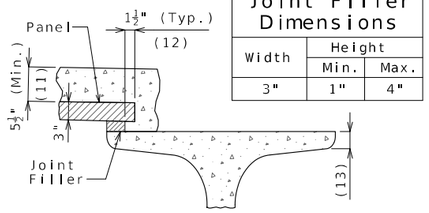
SQUARED END PANELS OR TRUNCATED END PANELS





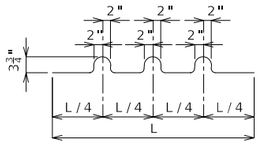
SKEWED END PANELS

PLAN SHOWING PANEL PLACEMENT



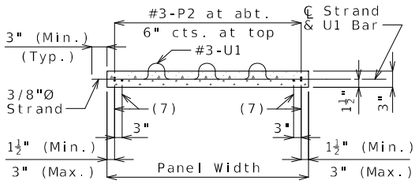
SECTION A-A

Joint Filler Dimensions		
Width	Height	
	Min.	Max.
3"	1"	4"



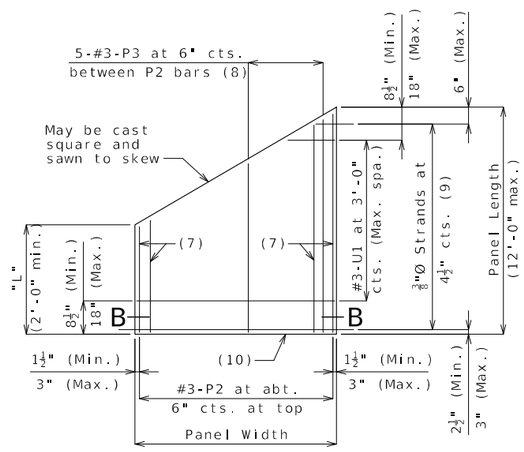
BENDING DIAGRAM FOR U1 BAR

U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars.

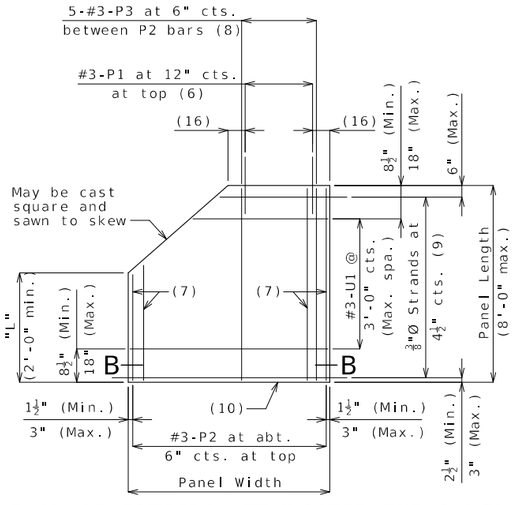


SECTION B-B

(14) #5-S Bars at abt. 9" cts. (1)
(15) #3-P1 at 12" cts. (End panels only)

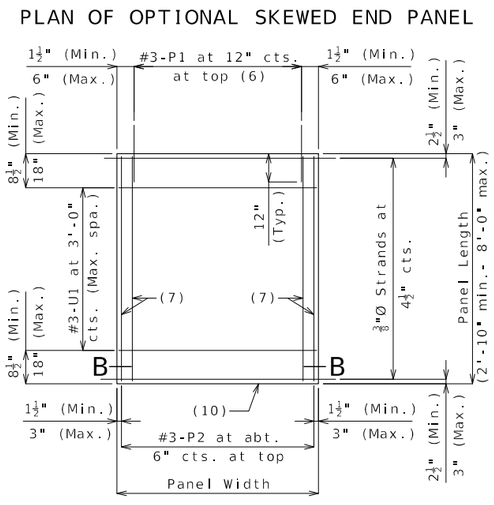


PLAN OF OPTIONAL SKEWED END PANEL



PLAN OF OPTIONAL TRUNCATED END PANEL

(16) 3" (Min.), 6" (Max.)



PLAN OF SQUARED PANEL

Reference Notes:

Plan of Panel Placement:
(1) S-bars shown are bottom steel in slab between panels and used with squared and truncated end panels only.

(2) Extend S-bars 18 inches beyond the front face of end bents for squared and truncated end panels only.

(3) Extend S-bars 9 inches beyond edge of girder (Typ.).

(4) End panels shall be dimensioned 1/2" min. to 1 1/2" max. from the inside face of diaphragm.

(5) For truncated end panels, use a min. of #5-S bars at 6" crossings in openings, or min. 4x4-W7xW7.

Plans of Panels:
(6) For end panels only, P1 bars shall be 2'-0" in length and embedded 12". P1 bars will not be required for panels at squared integral end bents.

(7) #3-P2 bars near edge of panel at bottom (under strands).

(8) Use #3-P3 bars if panel is skewed 45° or greater.

(9) Any strand 2'-0" or shorter shall have a #4 reinforcing bar on each side of it, centered between strands. Strands 2'-0" or shorter may then be debonded at the fabricator's option.

(10) Optional 1/2" x 45° Chamfer one or both sides at bottom.

Section A-A:
(11) Slab thickness over prestressed panels varies due to girder camber. In order to maintain minimum slab thickness, it may be necessary to raise the grade uniformly throughout the structure. No payment will be made for additional labor or materials required for necessary grade adjustment.

(12) Contractor shall ensure proper consolidation under and between panels.

(13) At the contractor's option, the variation in slab thickness over prestressed panels may be eliminated or reduced by increasing and varying the girder top flange thickness. Dimensions shall be shown on the shop drawings.

General Notes:

Prestressed Panels:
Concrete for prestressed panels shall be Class A-1 with f'c = 6,000 psi, f'ci = 4,000 psi.

The top surface of all panels shall receive a scored finish with a depth of scoring of 1/8" perpendicular to the prestressing strands in the panels.

Prestressing tendons shall be high-tensile strength, uncoated, seven-wire, low-relaxation strands for prestressed concrete in accordance with AASHTO M 203 Grade 270, with nominal diameter of strand = 3/8" and nominal area = 0.085 sq.in. and minimum ultimate strength = 22.95 kips (270 ksi). Larger strands may be used with the same spacing and initial tension.

Initial prestressing force = 17.2 kips/strand.

The method and sequence of releasing the strands shall be shown on the shop drawings.

Suitable anchorage devices for lifting panels may be cast in panels, provided the devices are shown on the shop drawings and approved by the engineer. Panel lengths shall be determined by the contractor and shown on the shop drawings.

When squared end panels are used at skewed bents, the skewed portion shall be cast full depth. No separate payment will be made for additional concrete and reinforcing required.

Support from diaphragm forms is required under the optional skewed end until cast-in-place concrete has reached 3,000 psi compressive strength.

Prestressed panels shall be brought to saturated surface-dry (SSD) condition just prior to the deck pour. There shall be no free standing water on the panels or in the area to be cast.

The prestressed panel quantities are not included in the table of estimated quantities for the slab.

Reinforcing Steel:
All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

If U1 bars interfere with placement of slab steel, U1 loops may be bent over, as necessary, to clear slab steel.

Deformed welded wire reinforcement (WWR) providing a minimum area of reinforcing perpendicular to strands of 0.22 sq in./ft, with spacing parallel to strands sufficient to ensure proper handling, may be used in lieu of the #3-P2 bars shown. Wire diameter shall not be larger than 0.375 inch. The above alternative reinforcement criteria may be used in lieu of the #3-P3 bars, when required, and placed over a width not less than 2 feet.

The following reinforcing steel shall be tied securely to the strands with the following maximum spacing in each direction:
#3-P2 bars at 16 inches.
WWR at 24 inches.

The #3-U1 bars shall be tied securely to #3-P2 bars, to WWR or to strands (when placed between P1 bars) at about 3-foot centers.

Minimum reinforcement steel length shall be 2'-0".

All reinforcement other than prestressing strands shall be epoxy coated.

Precast panels may be in contact with stirrup reinforcing in diaphragms.

S-bars are not listed in the bill of reinforcing.

Cost of S-bars will be considered completely covered by the contract unit price for the slab.

Joint Filler:
Joint filler shall be preformed fiber expansion joint material in accordance with Sec 1057 or expanded or extruded polystyrene bedding material in accordance with Sec 1073.

Use Slab Haunching Diagram on Sheet No. 19 for determining thickness of joint filler within the limits noted in the table of Joint Filler Dimensions.

Thicker material may be used on one or both sides of the girder to reduce cast-in-place concrete thickness to within tolerances.

The same thickness of preformed fiber expansion joint material shall be used under any one edge of any panel except at locations where top flange thickness may be stepped. The maximum change in thickness between adjacent panels shall be 1/2 inch. The polystyrene bedding material may be cut with a transition to match haunch height above top of flange.

Joint filler shall be glued to the girder. When thickness exceeds 1 1/2 inches, the joint filler shall be glued top and bottom. The glue used shall be the type recommended by the joint filler manufacturer.

Edges of panels shall be uniformly seated on the joint filler before slab reinforcement is placed.

PRESTRESSED PANELS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

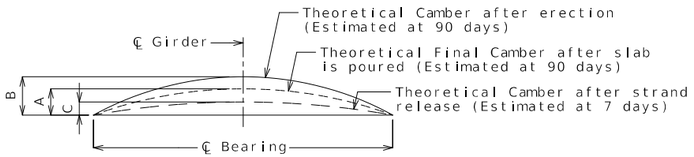
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 18
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9418

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



Girder	Span (1-2)		
	A	B	C
Exterior	3"	4⅝"	2⅝"
Interior	2⅞"		

GIRDER CAMBER DIAGRAM

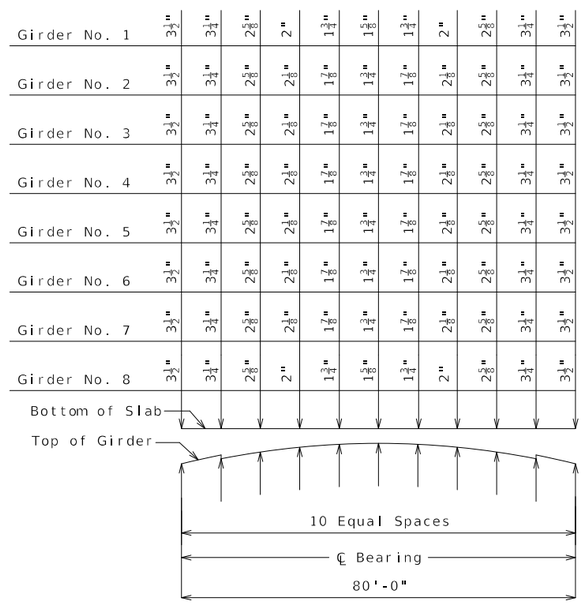
Conversion Factors for Girder Camber (Estimated at 90 days):

0.1 pt. = 0.314 x 0.5 pt.
0.2 pt. = 0.593 x 0.5 pt.
0.3 pt. = 0.813 x 0.5 pt.
0.4 pt. = 0.952 x 0.5 pt.

Theoretical Bottom of Slab Elevations at Centerline of Girder (Prior to forming for slab) (Estimated at 90 days)

Girder Number	Span (1-2) (80'-0" ℄ Brg. - ℄ Brg.)										
	℄ Brg.	.10	.20	.30	.40	.50	.60	.70	.80	.90	℄ Brg.
1	1277.59	1277.63	1277.65	1277.67	1277.67	1277.65	1277.62	1277.57	1277.50	1277.43	1277.34
2	1277.77	1277.81	1277.84	1277.86	1277.86	1277.84	1277.81	1277.75	1277.69	1277.61	1277.52
3	1277.95	1277.99	1278.02	1278.04	1278.04	1278.02	1277.99	1277.94	1277.87	1277.79	1277.70
4	1278.13	1278.17	1278.20	1278.22	1278.22	1278.20	1278.17	1278.12	1278.05	1277.97	1277.89
5	1278.31	1278.35	1278.38	1278.40	1278.40	1278.38	1278.35	1278.30	1278.23	1278.15	1278.07
6	1278.43	1278.47	1278.50	1278.52	1278.52	1278.50	1278.47	1278.42	1278.35	1278.28	1278.19
7	1278.25	1278.29	1278.32	1278.34	1278.34	1278.32	1278.29	1278.24	1278.18	1278.10	1278.01
8	1278.08	1278.11	1278.14	1278.15	1278.15	1278.14	1278.10	1278.05	1277.99	1277.92	1277.83

Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoretical dead load deflections due to weight of slab (including precast panel) and barrier.

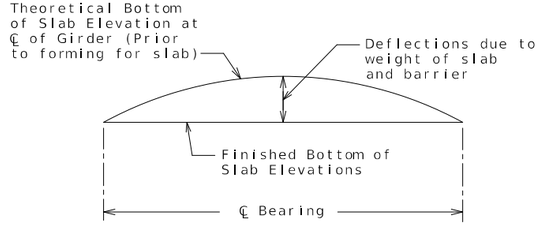


THEORETICAL SLAB HAUNCHING DIAGRAM (ESTIMATED AT 90 DAYS)

If girder camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an adjustment of the slab haunches, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Concrete in the slab haunches is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Theoretical slab haunches are measured at ℄ Girder.



TYPICAL SLAB ELEVATIONS DIAGRAM

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

GIRDER CAMBER AND SLAB HAUNCHING

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

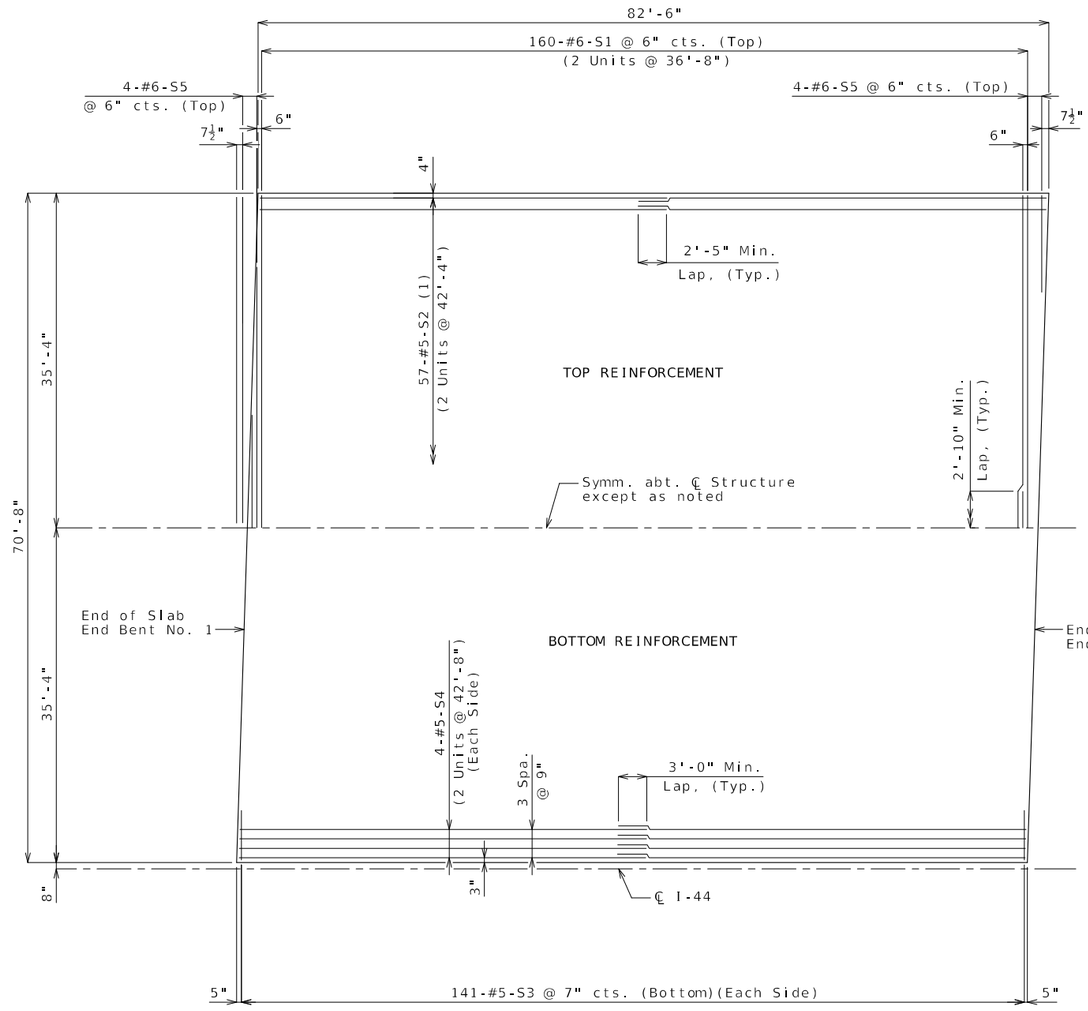
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

DESCRIPTION | DATE

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

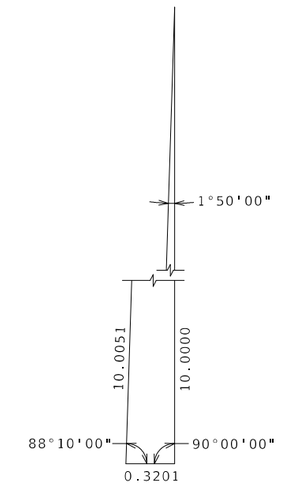
DATE PREPARED: 9/5/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 19
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



SPAN (1-2)

PLAN OF SLAB REINFORCEMENT



NOTES:

Longitudinal slab dimensions shown are horizontal.

For Theoretical Slab Haunching Diagram and Theoretical Bottom of Slab Elevations, see Sheet No. 19.

For Details of Precast Prestressed Panels, see Sheet No. 18.

For Details and Reinforcement of Safety Barrier Curb not shown, see Sheets No. 22 & 23.

(1) For spacing of longitudinal bars not shown, see Slab Section & Details on Sheet No. 21.

SLAB PLAN

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	20

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

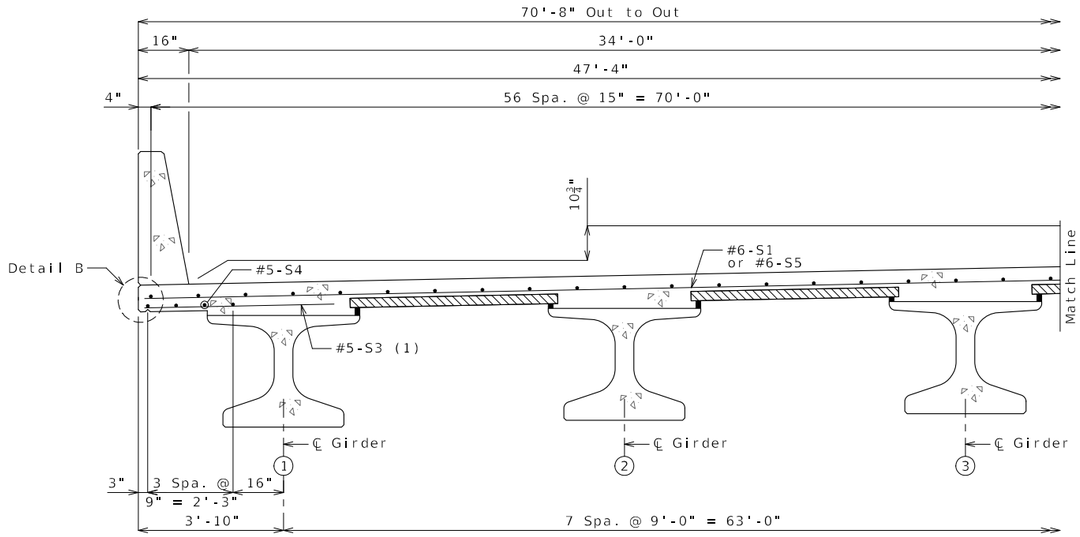
DESCRIPTION	DATE

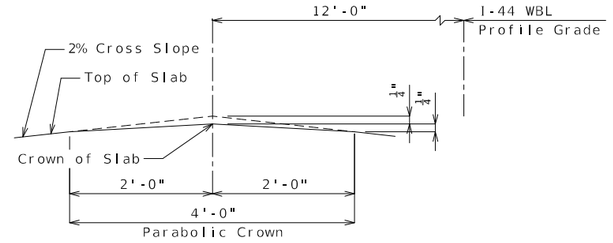
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

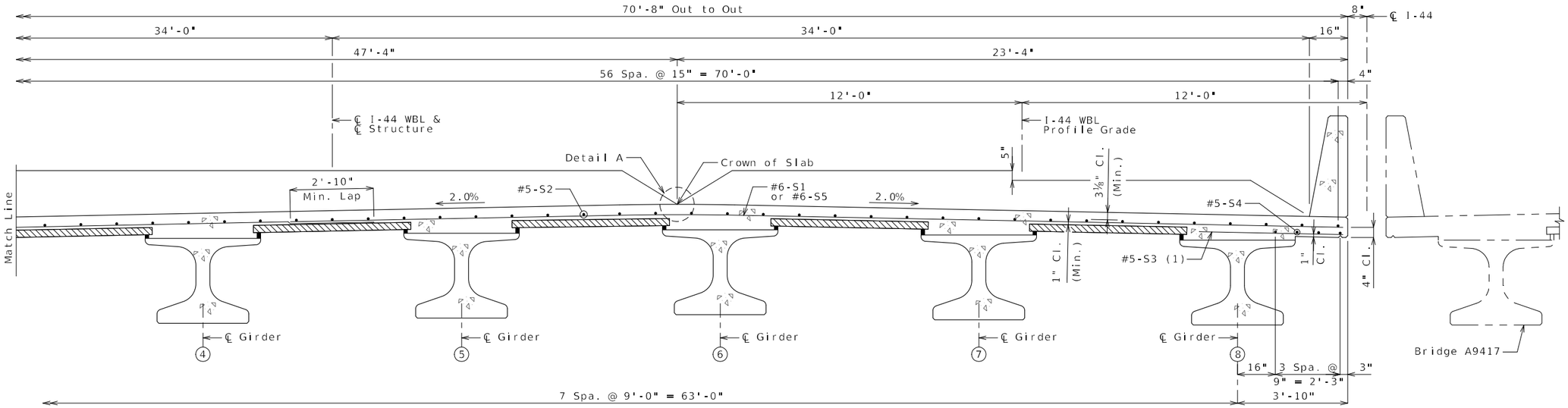
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

REV.



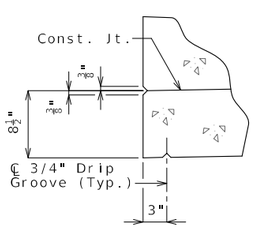


DETAIL A



SECTION THRU SLAB

(1) Alternate bar shape available, see Sheet No. 22.



DETAIL B

NOTES:

For details of precast prestressed panels, see Sheet No. 18.

For reinforcement of barrier not shown, see Sheet No. 22.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram and Theoretical Slab Haunching Diagram, see Sheet No. 19.

For Plan of Slab Showing Reinforcement, see Sheet No. 20.

Bridge will be cast in a single pour.

TYPICAL SLAB SECTION

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/11/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	21

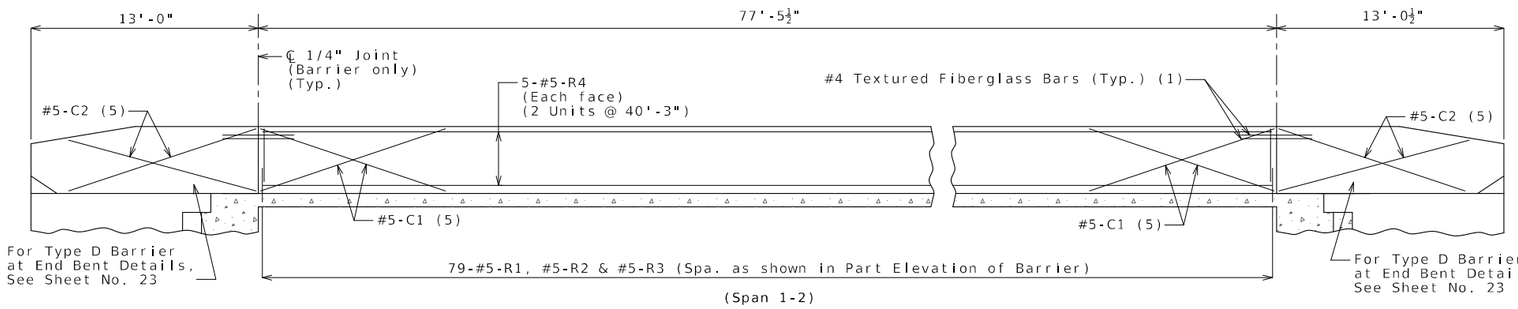
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

DESCRIPTION | DATE

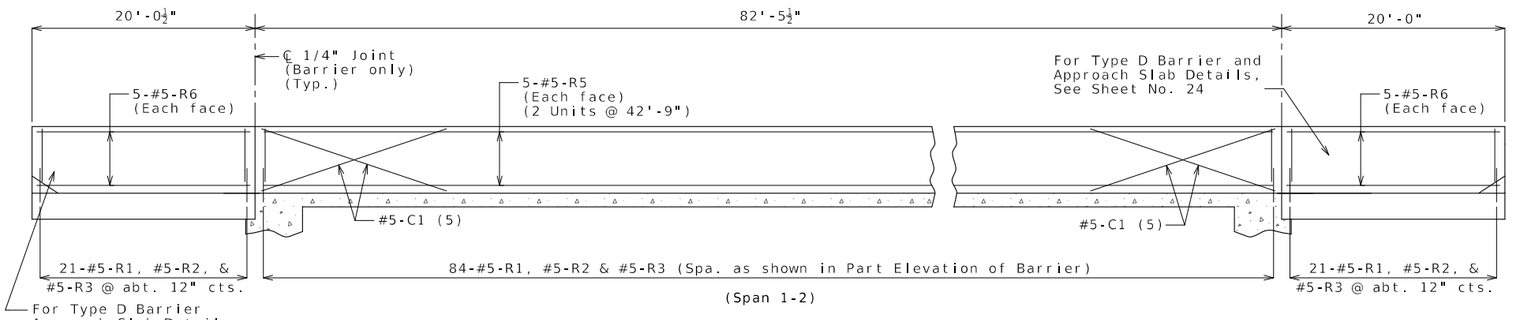
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

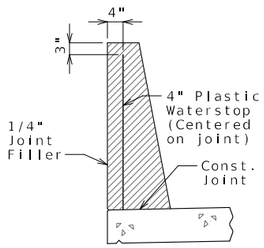
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



ELEVATION OF BARRIER - LEFT BARRIER



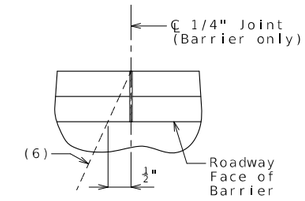
ELEVATION OF BARRIER - RIGHT BARRIER



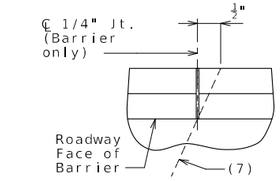
WATERSTOP DETAIL

Plastic waterstop shall be placed in all formed joints, except structures with superelevation, use on lower joints only.

Cost of plastic waterstop, complete in place, will be considered completely covered by the contract unit price for Type D Barrier.



(6) Front Face of End Bent No. 1 for Left Barrier
End of Slab at End Bent No. 2 for Right Barrier



(7) Front Face of End Bent No. 2 for Left Barrier
End of Slab at End Bent No. 1 for Right Barrier

PART PLAN SHOWING JOINT LOCATION

General Notes:

Longitudinal dimensions are horizontal.

Conventional forming or slip forming may be used. Saw cut joints may be used with conventional forming.

Top of barrier shall be built parallel to grade and barrier joints (except at end bents) normal to grade.

All exposed edges of barrier shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type D Barrier per linear foot.

Concrete in barrier shall be Class B-1.

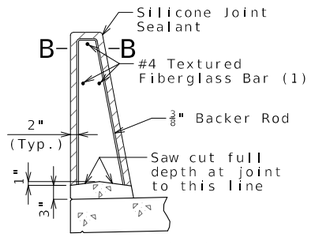
Measurement of barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of wing to end of wing for Right Barrier and from end of approach slab to end of approach slab for Left Barrier.

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

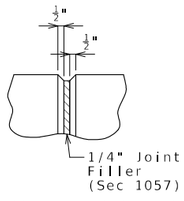
Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

For slip-formed option, both sides of barrier shall have a vertically broomed finish and the top shall have a transversely broomed finish.

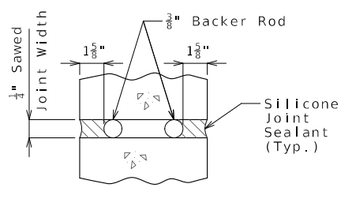
Plastic waterstop shall not be used with saw cut joints.



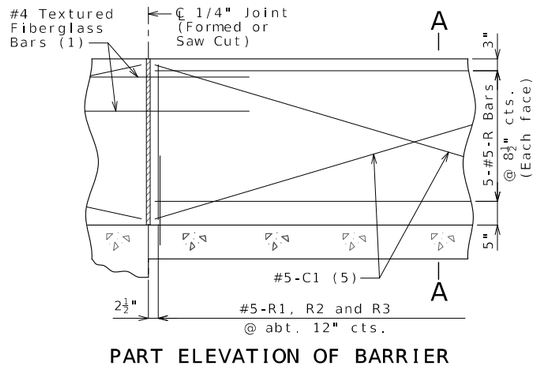
SECTION THRU SAW CUT JOINT



PART ELEVATION AT FORMED JOINT

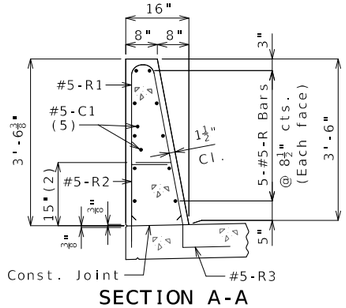


SECTION B-B



PART ELEVATION OF BARRIER

(1) Four feet long, centered on joint, slip-formed option only

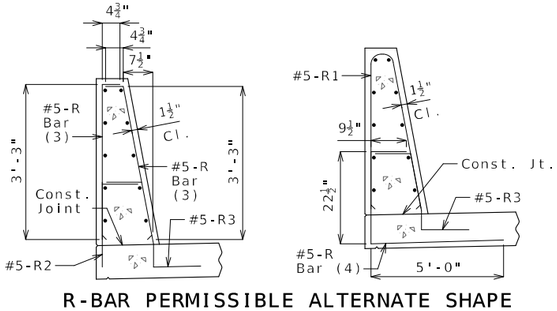


SECTION A-A

Use a minimum lap of 3'-1" for #5 horizontal barrier bars.

The cross-sectional area above the slab is 3.52 square feet.

(2) To top of bar



R-BAR PERMISSIBLE ALTERNATE SHAPE

(3) The R1 bar may be separated into two bars as shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)

(4) The R2 bar and #5 bottom transverse slab bar in cantilever (prestressed panels only) combination may be furnished as one bar as shown, at the contractor's option.

(5) Slip-formed option only.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

TYPE D BARRIER

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	22

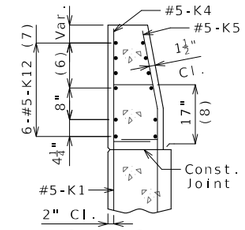
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

DESCRIPTION	DATE

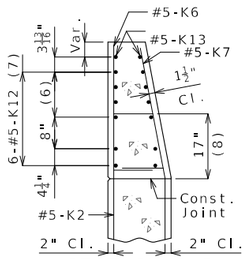
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

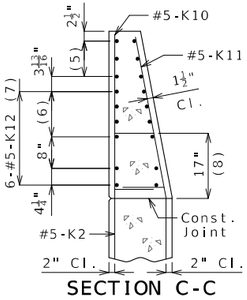
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



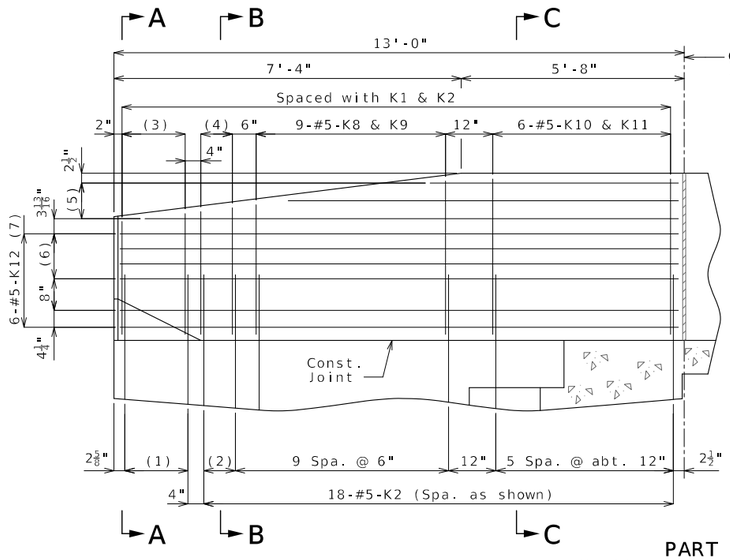
SECTION A-A

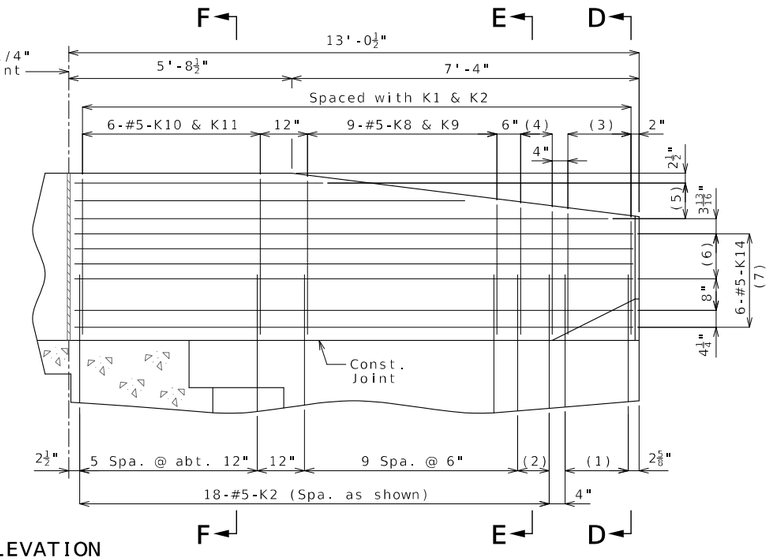


SECTION B-B

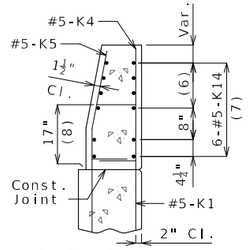


SECTION C-C

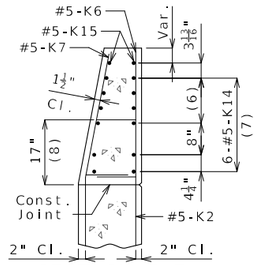




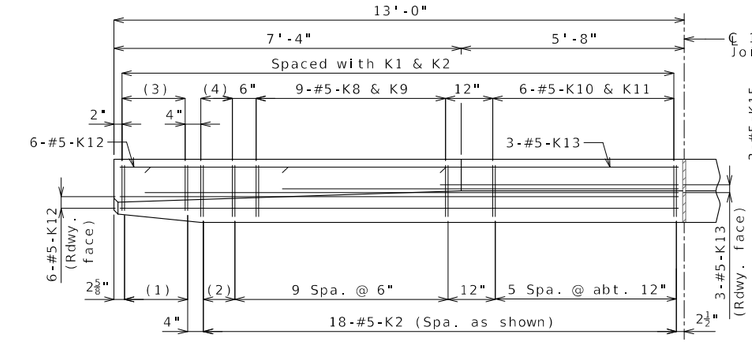
PART ELEVATION
(Looking at Front Face of Left Barrier)

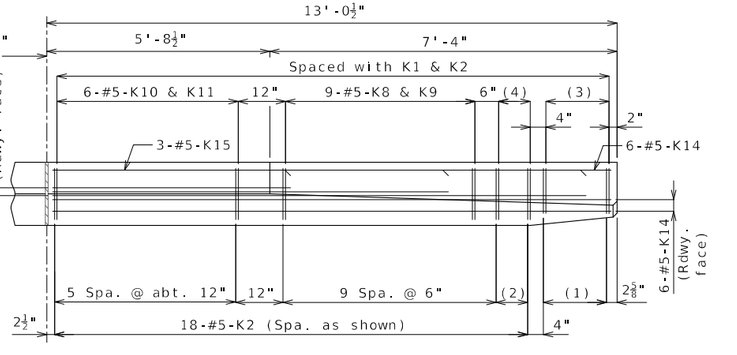


SECTION D-D

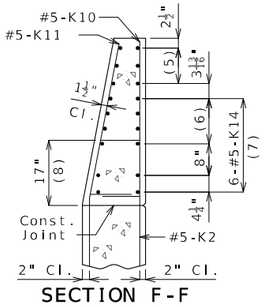


SECTION E-E

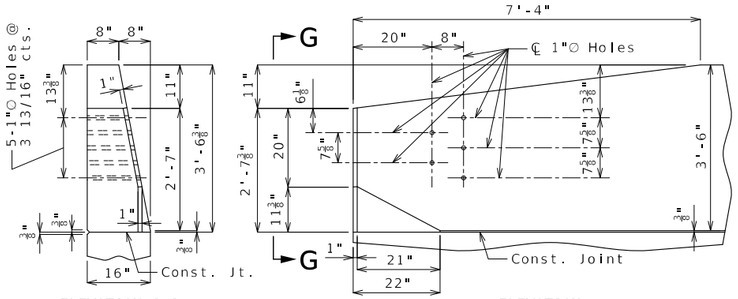




PART PLAN
(Left barrier shown)



SECTION F-F



ELEVATION G-G ELEVATION

(1) 5-#5-K1 @ 4" cts.

(2) 2 spaces @ 4"

(3) 5-#5-K4 & K5

(4) 3-#5-K6 & K7

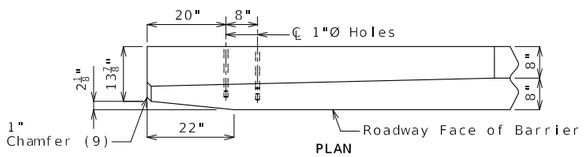
(5) 3-#5-K13 or K15 @ 4½" cts., each face

(6) 3 spaces @ 3 13/16"

(7) Spaced as shown, each face

(8) To top of bar

(9) Transition to zero at Type A curb for gutter lines to match.



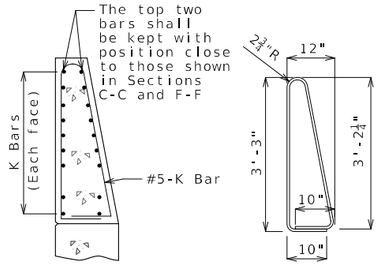
PLAN

DETAILS OF GUARD RAIL ATTACHMENT

General Notes:

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

Reinforcing Steel:
Minimum clearance to reinforcing steel shall be 1 1/2" except as shown for bars embedded into end bent.



K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE
(Other K bars not shown for clarity)

The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

TYPE D BARRIER AT END BENTS

TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
STATE OF MISSOURI
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	23

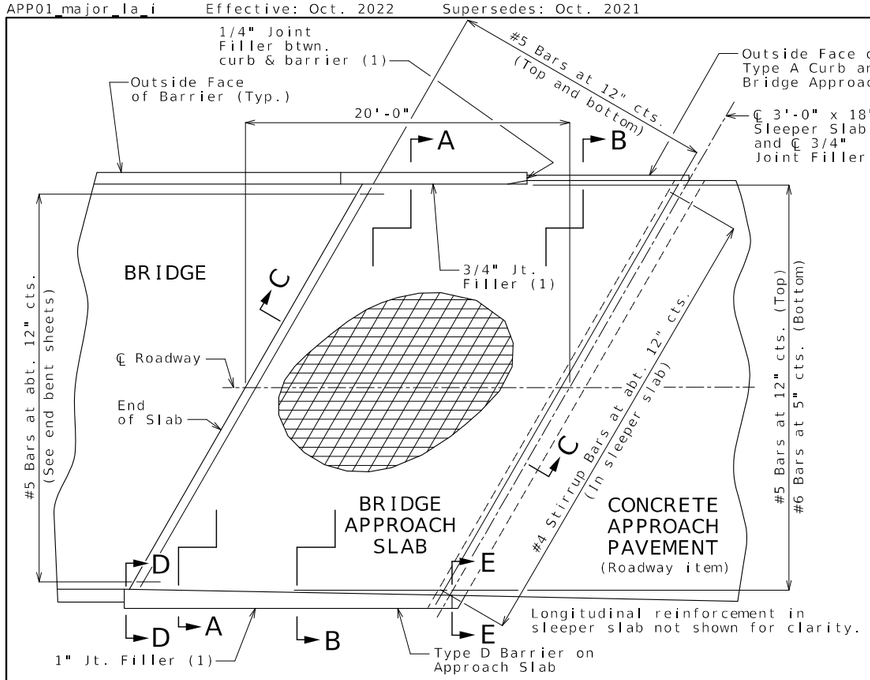
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

DESCRIPTION | DATE

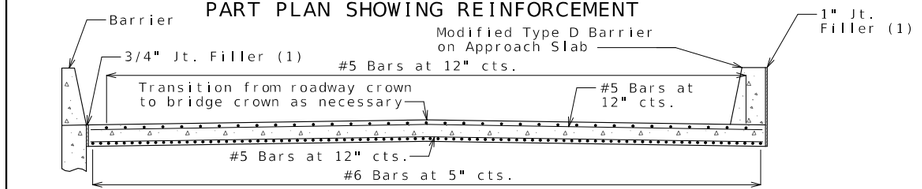
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

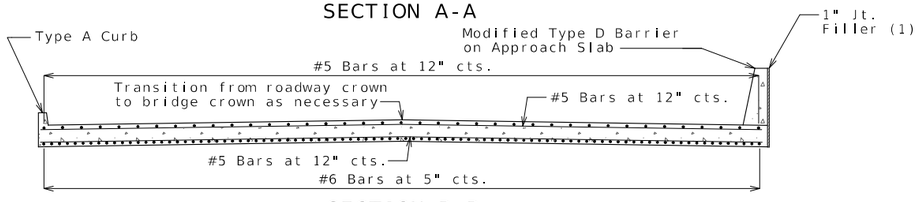
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



PART PLAN SHOWING REINFORCEMENT

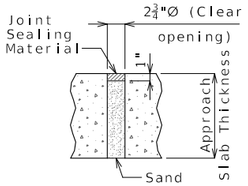


SECTION A-A



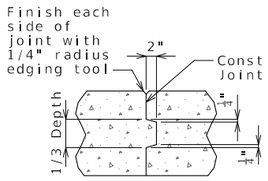
SECTION B-B

With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.

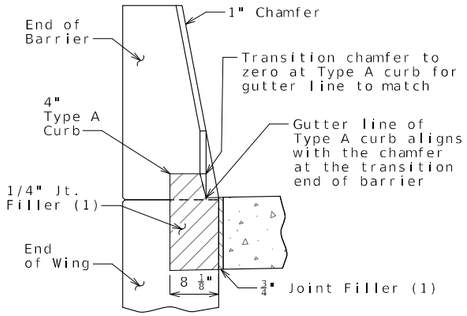


UNDERSEAL ACCESS HOLE DETAIL

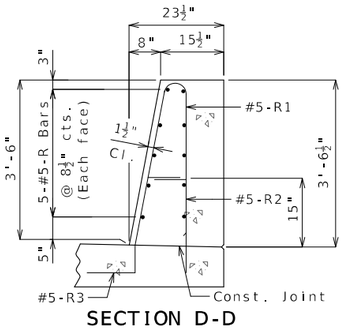
(If required)



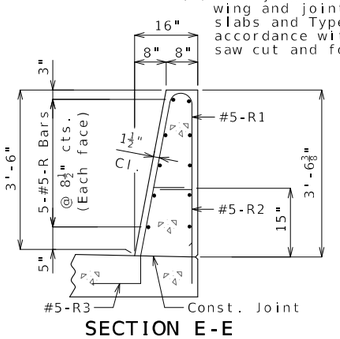
CONSTRUCTION JOINT DETAIL



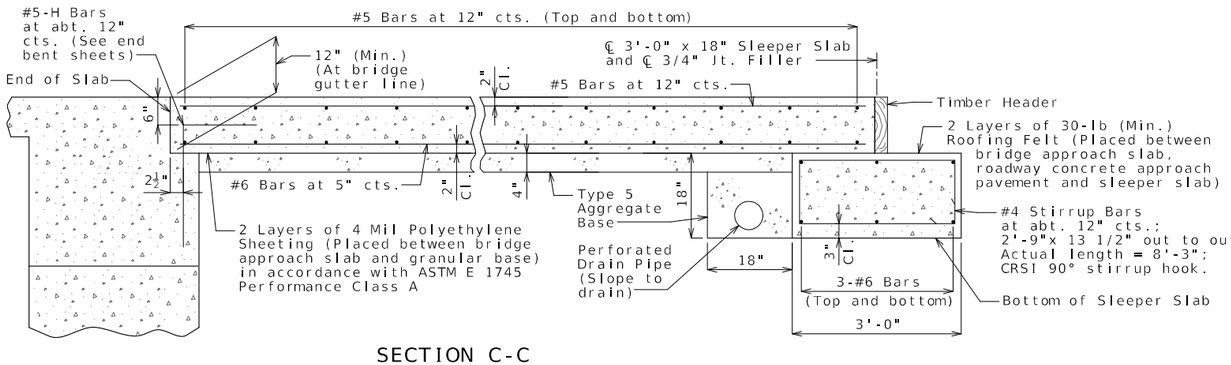
SECTION BETWEEN CURB AND BARRIER



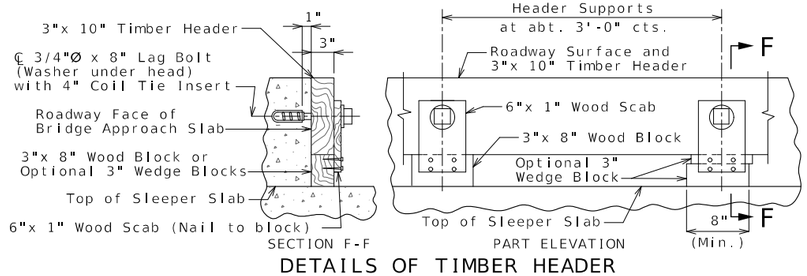
SECTION D-D



SECTION E-E



SECTION C-C



DETAILS OF TIMBER HEADER

Remove timber header when concrete pavement is placed.

General Notes:

All concrete for the bridge approach slab and sleeper slab shall be in accordance with Sec 503 (f'c = 4,000 psi).

The reinforcing steel in the bridge approach slab and the sleeper slab shall be epoxy coated Grade 60 with fy = 60,000 psi.

Drain pipe may be either 6" diameter corrugated metallic-coated pipe underdrain, 4" diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4" diameter corrugated polyethylene (PE) drain pipe.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

The reinforcing steel in the bridge approach slab and the sleeper slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 29 inches for #5 bars and 44 inches for #6 bars, or by mechanical bar splice.

Mechanical bar splices shall be in accordance with Sec. 710.

All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler except as noted.

The contractor shall pour and satisfactorily finish the bridge slab before placing the bridge approach slab.

Longitudinal construction joints in approach slab and sleeper slab shall be aligned with longitudinal construction joints in bridge slab.

For concrete approach pavement details, see roadway plans.

See Missouri Standard Plan 609.00 for details of Type A curb.

Payment for furnishing all materials, labor and excavation necessary to construct the approach slab, including the timber header, sleeper slab, underdrain, Type 5 aggregate base, joint filler and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Major) per square yard.

For details of Type D Barrier on Approach Slab, see Sheet No. 22.

(1) Seal joint between vertical face of approach slab and wing and joint between vertical face of the approach slabs and Type D barriers along ℄ I-44 with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
STATE OF MISSOURI
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	24

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

DESCRIPTION	DATE

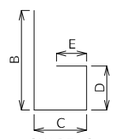
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

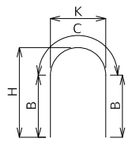
BRIDGE APPROACH SLAB (MAJOR)

Detailed: May 2024
Checked: Jun. 2024

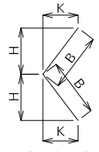
Note: This drawing is not to scale. Follow dimensions.



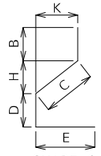
SHAPE 6 or 6S



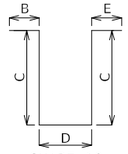
SHAPE 7



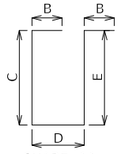
SHAPE 8 or 8S



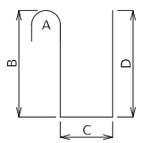
SHAPE 9 or 9S



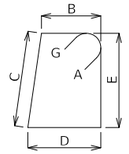
SHAPE 10 or 10S



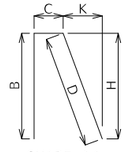
SHAPE 11 or 11S



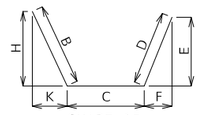
SHAPE 12



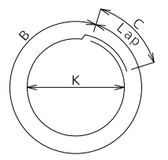
SHAPE 13S



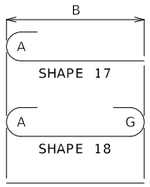
SHAPE 14 or 14S



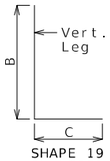
SHAPE 15 or 15S



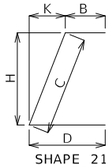
SHAPE 16



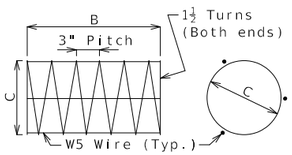
SHAPE 17
SHAPE 18
SHAPE 20



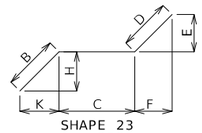
SHAPE 19 or 19S



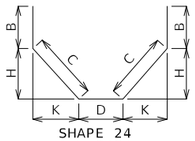
SHAPE 21 or 21S



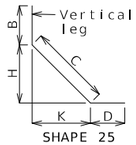
SHAPE 22



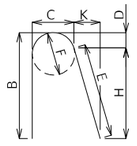
SHAPE 23 or 23S



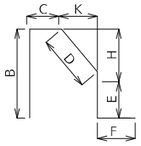
SHAPE 24 or 24S



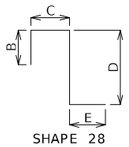
SHAPE 25 or 25S



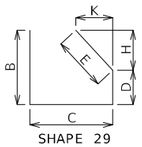
SHAPE 26



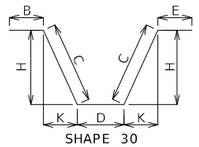
SHAPE 27S



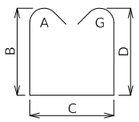
SHAPE 28 or 28S



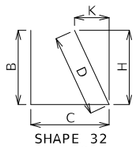
SHAPE 29 or 29S



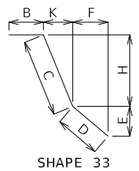
SHAPE 30 or 30S



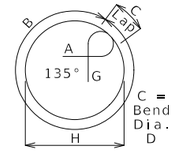
SHAPE 31S



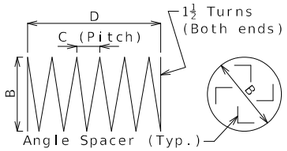
SHAPE 32 or 32S



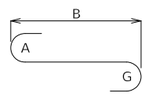
SHAPE 33 or 33S



SHAPE 34S



SHAPE 35 (1)

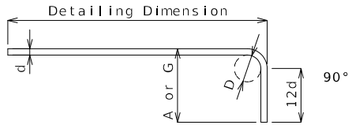


SHAPE 36

Finished Bend Diameters D and Hook Dimensions

Standard Pin Bend Shapes

Size	Case	D	A or G		J
			90°	180°	180°
#4	1	3"	8"	6"	4"
#5	1	3¾"	10"	7"	5"
#6	1	4½"	12"	8¼"	6"
#7	2	5¼"	14"	9⅜"	7"
	3	7"	15"	11½"	8¾"
#8	2	6"	16"	11"	8"
	3	8"	17"	13¼"	10"
#9	1	9½"	19½"	15½"	11¾"
#10	1	10¾"	22"	17½"	13¼"
#11	1	12"	24½"	19½"	14⅞"
#14	1	18¼"	31¼"	27½"	21⅝"
#18	1	24"	41½"	36¾"	28½"

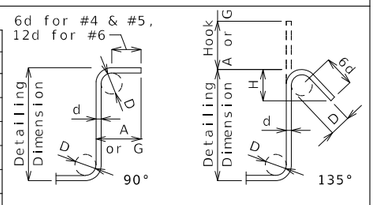


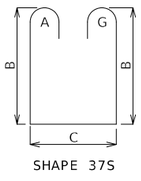
Stirrup Pin Bend Shapes (S)

Size	Case	D	A or G			H	J
			90°	135°	180°	135°	180°
#4	2	2"	4½"	4½"	5"	2⅝"	3"
	3	3"	5"	5¼"	6"	3"	4"
#5	2	2½"	5¾"	5¾"	5¾"	3⅝"	3¾"
	3	3¾"	6¼"	6½"	7"	3⅞"	5"
#6	1	4½"	12"	7¾"	8¼"	4⅝"	6"

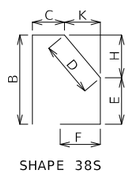
Applicable for all grades of steel.

Case 1 applies to all reinforcement. Case 2 applies to all reinforcement except for galvanized bars. Case 3 applies to galvanized bars only.





SHAPE 37S



SHAPE 38S

BENDING DIAGRAMS

All dimensions are out to out.

Shapes ending with an S shall be bent in accordance with stirrup pin bend shapes.

Unless otherwise noted, finished bending diameter D is the same for all bends of a shape.

(1) Shall be a deformed or plain spiral bar or wire.

Four angle or channel spacers are required for each column spiral. Spacers are to be placed on inside of spirals. Length and weight of column spirals do not include splices or spacers.

Reinforcing Steel Totals (Pounds)

		Substructure		Superstructure				Entire Bridge	
				Slab					
	Size	Plain	Epoxy	Plain	Epoxy	Barrier	Slip Form	Plain	Epoxy
By Size	W5	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	12,217	5,989	141	0	18,347
	6	0	0	0	27,085	0	0	0	27,085
	7	0	0	0	0	0	0	0	0
	8	0	0	0	3,808	0	0	0	3,808
	9	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0
	11	0	0	0	0	0	0	0	0
	14	0	0	0	0	0	0	0	0
	18	0	0	0	0	0	0	0	0
By Type		0	0	0	43,110	5,989	141	0	49,240

All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	25

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165

BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B	C	D	E	F	H	K	Nom. Length	Actual Length	Weight lb
		END BENT 1													
9	6 F100	Wing	E	23S		2 3.000	4 5.000	14.000	9.750	10.000	18.750	19.375	7 10	7 9	105
3	6 F101	Diaphragm	E	6S		5 5.000	2 7.000						8 0	7 10	35
4	6 H100	Beam	E	20		28 3.000							28 3	28 3	170
8	8 H101	Beam	E	20		28 3.000							28 3	28 3	603
4	6 H102	Beam	E	20		51 3.000							51 3	51 3	308
4	6 H103	Beam	E	20		47 0.000							47 0	47 0	282
8	8 H104	Beam	E	20		48 5.000							48 5	48 5	1034
4	6 H106	Beam	E	20		21 10.00							21 10	21 10	131
8	6 H107	Diaphragm	E	20		28 3.000							28 3	28 3	339
8	6 H108	Diaphragm	E	20		47 0.000							47 0	47 0	565
21	6 H109	Diaphragm	E	20		7 11.000							7 11	7 11	250
7	6 H110	Diaphragm	E	20		5 6.000							5 6	5 6	58
3	6 H111	Diaphragm	E	20		3 2.000							3 2	3 2	14
1	6 H112	Diaphragm	E	20		23.000							0 23	0 23	3
3	6 H113	Diaphragm	E	20		3 9.000							3 9	3 9	17
1	6 H114	Diaphragm	E	20		2 6.000							2 6	2 6	4
8	5 H115	Strand Tie	E	20		5 0.000							5 0	5 0	42
20	6 H116	Wing	E	20		11 8.000							11 8	11 8	350
8	8 H117	Wing	E	20		12 6.000							12 6	12 6	267
42	5 U100	Beam	E	31S		5 8.000	2 9.000	5 8.000					15 1	14 10	650
15	5 U101	Beam	E	13S		2 9.000	2 8.000	2 9.000	2 8.000				11 10	11 6	180
24	5 U102	Beam	E	13S		2 9.000	3 0.000	2 9.000	3 0.000				12 6	12 2	305
24	5 U103	Beam	E	13S		2 9.000	3 4.000	2 9.000	3 4.000				13 2	12 10	321
57	5 U104	Diaphragm	E	31S		3 4.000	2 3.000	3 4.000					9 11	9 8	575
57	6 U105	Diaphragm	E	19S		2 7.000	2 8.000						5 3	5 1	435
70	5 U106	Diaphragm	E	19S		2 0.000	15.000						3 3	3 2	231
94	6 U107	Diaphragm	E	19S		3 3.000	4 7.000						7 10	7 8	1082
30	5 V100	Beam	E	17		5 8.000							6 3	6 3	196
40	6 V101	Diaphragm	E	20		2 7.000							2 7	2 7	155
22	6 V102	Wing	E	20		6 7.000							6 7	6 7	218
		END BENT 2													
9	6 F200	Wing	E	23S		2 3.000	4 5.000	14.000	9.750	10.000	18.750	19.375	7 10	7 9	105
3	6 F201	Diaphragm	E	6S		5 5.000	2 7.000						8 0	7 10	35
4	6 H200	Beam	E	20		28 3.000							28 3	28 3	170
8	8 H201	Beam	E	20		28 3.000							28 3	28 3	603
4	6 H202	Beam	E	20		51 3.000							51 3	51 3	308
4	6 H203	Beam	E	20		47 0.000							47 0	47 0	282
8	8 H204	Beam	E	20		48 5.000							48 5	48 5	1034
4	6 H206	Beam	E	20		21 10.00							21 10	21 10	131
8	6 H207	Diaphragm	E	20		28 3.000							28 3	28 3	339
8	6 H208	Diaphragm	E	20		47 0.000							47 0	47 0	565
21	6 H209	Diaphragm	E	20		7 11.000							7 11	7 11	250
7	6 H210	Diaphragm	E	20		5 6.000							5 6	5 6	58
3	6 H211	Diaphragm	E	20		3 2.000							3 2	3 2	14
1	6 H212	Diaphragm	E	20		23.000							0 23	0 23	3
3	6 H213	Diaphragm	E	20		3 9.000							3 9	3 9	17
1	6 H214	Diaphragm	E	20		2 6.000							2 6	2 6	4
8	5 H215	Strand Tie	E	20		5 0.000							5 0	5 0	42
20	6 H216	Wing	E	20		11 8.000							11 8	11 8	350
8	8 H217	Wing	E	20		12 6.000							12 6	12 6	267
42	5 U200	Beam	E	31S		5 8.000	2 9.000	5 8.000					15 1	14 10	650
15	5 U201	Beam	E	13S		2 9.000	2 8.000	2 9.000	2 8.000				11 10	11 6	180
24	5 U202	Beam	E	13S		2 9.000	3 0.000	2 9.000	3 0.000				12 6	12 2	305
24	5 U203	Beam	E	13S		2 9.000	3 4.000	2 9.000	3 4.000				13 2	12 10	321
57	5 U204	Diaphragm	E	31S		3 4.000	2 3.000	3 4.000					9 11	9 8	575
57	6 U205	Diaphragm	E	19S		2 7.000	2 8.000						5 3	5 1	435
70	5 U206	Diaphragm	E	19S		2 0.000	15.000						3 3	3 2	231
94	6 U207	Diaphragm	E	19S		3 3.000	4 7.000						7 10	7 8	1082
30	5 V200	Beam	E	17		5 8.000							6 3	6 3	196
40	6 V201	Diaphragm	E	20		2 7.000							2 7	2 7	155
22	6 V202	Wing	E	20		6 7.000							6 7	6 7	218

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B	C	D	E	F	H	K	Nom. Length	Actual Length	Weight lb
		SLAB													
320	6 S1	Slab	E	20		36 8.000							36 8	36 8	17623
114	5 S2	Slab	E	20		42 4.000							42 4	42 4	5034
282	5 S3	Slab	E	20		5 0.000							5 0	5 0	1471
16	5 S4	Slab	E	20		42 8.000							42 8	42 8	712
8	6 S5	Slab	E	20	2	11 7.000							11 7	11 7	
		Inc. = 15'-7"				58 4.000							58 4	58 4	420
		BARRIER													
10	5 K1	Barrier	E	27S		3 8.000	9.250	5.375	3 2.750		5.250	1.000	8 1	7 11	83
36	5 K2	Barrier	E	27S		3 8.000	9.250	14.500	2 5.750		14.250	2.750	8 2	7 11	297
10	5 K4	Barrier	E	19S	2	2 4.250	10.000						3 2	3 1	
		Inc. = 0.500"				2 6.250	10.000						3 4	3 3	33
10	5 K5	Barrier	E	38S	2			18.500	9.500	8.250	18.000	4.000	3 0	2 11	
		Inc. = 0.500"						20.500	9.500	8.250	20.000	4.500	3 2	3 1	31
6	5 K6	Barrier	E	19S		2 6.750	10.000						3 5	3 4	21
6	5 K7	Barrier	E	21S			2 6.625	10.000			2 6.000	6.250	3 5	3 3	20
18	5 K8	Barrier	E	19S	2	2 8.500	10.000						3 7	3 5	
		Inc. = 0.750"				3 2.500	10.000						4 1	3 11	70
18	5 K9	Barrier	E	21S	2		2 8.500	10.000			2 7.750	6.750	3 6	3 5	
		Inc. = 0.750"					3 2.500	10.000			3 1.750	7.750	4 1	3 11	68
12	5 K10	Barrier	E	19S		3 3.000	10.000						4 1	4 0	50
12	5 K11	Barrier	E	21S			3 3.000	10.000			3 2.250	7.750	4 1	3 11	49
12	5 K12	Barrier	E	20		12 9.000							12 9	12 9	160
6	5 K13	Barrier	E	20	2	6 0.000							6 0	6 0	
		Inc. = 3'-0"				12 0.000							12 0	12 0	56
12	5 K14	Barrier	E	20		12 9.000							12 9	12 9	160
6	5 K15	Barrier	E	20	2	6 0.000							6 0	6 0	
		Inc. = 3'-0"				12 0.000							12 0	12 0	56
205	5 R1	Barrier	E	26		3 3.000	5.500	2.250	3 1.375	5.500	3 0.750	6.750	6 11	6 10	1461
205	5 R2	Barrier	E	19S		20.500	9.500						2 6	2 5	517
205	5 R3	Barrier	E	27S			9.500	15.250	5.000	12.000	15.000	3.000	3 6	3 4	713
20	5 R4	Barrier	E	20		40 3.000							40 3	40 3	840
20	5 R5	Barrier	E	20		42 9.000							42 9	42 9	892
20	5 R6	Barrier	E	20		19 9.000							19 9	19 9	412
		SLIP FORM													
8	5 C1	Slip Form	E	20		12 0.000							12 0	12 0	100
4	5 C2	Slip Form	E	20		9 9.000							9 9	9 9	41

Nominal lengths are based on out to out dimensions shown in bending diagrams and are listed to the nearest inch for fabricator's use. Actual lengths are measured along centerline bar to the nearest inch. Weights are based on actual lengths.

For bending diagrams and steel reinforcing totals, see Sheet No. 25.

Detailed: May 2024
Checked: Jun. 2024

Codes:
C = Required coatings, where E = Epoxy Coated and G = Galvanized.
SH = Required shape, see bending diagrams.
V = Sets of varied bars and number of bars of each length. Bar dimensions vary in equal increments between dimensions shown on this line and the following line and the actual length dimension shown on this line and the following line vary by the specified increment.

All bars shall be Grade 60.

Note: This drawing is not to scale. Follow dimensions.

BILL OF REINFORCING STEEL

Sheet No. 26 of 32

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	26

COUNTY GREENE

JOB NO. JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9418

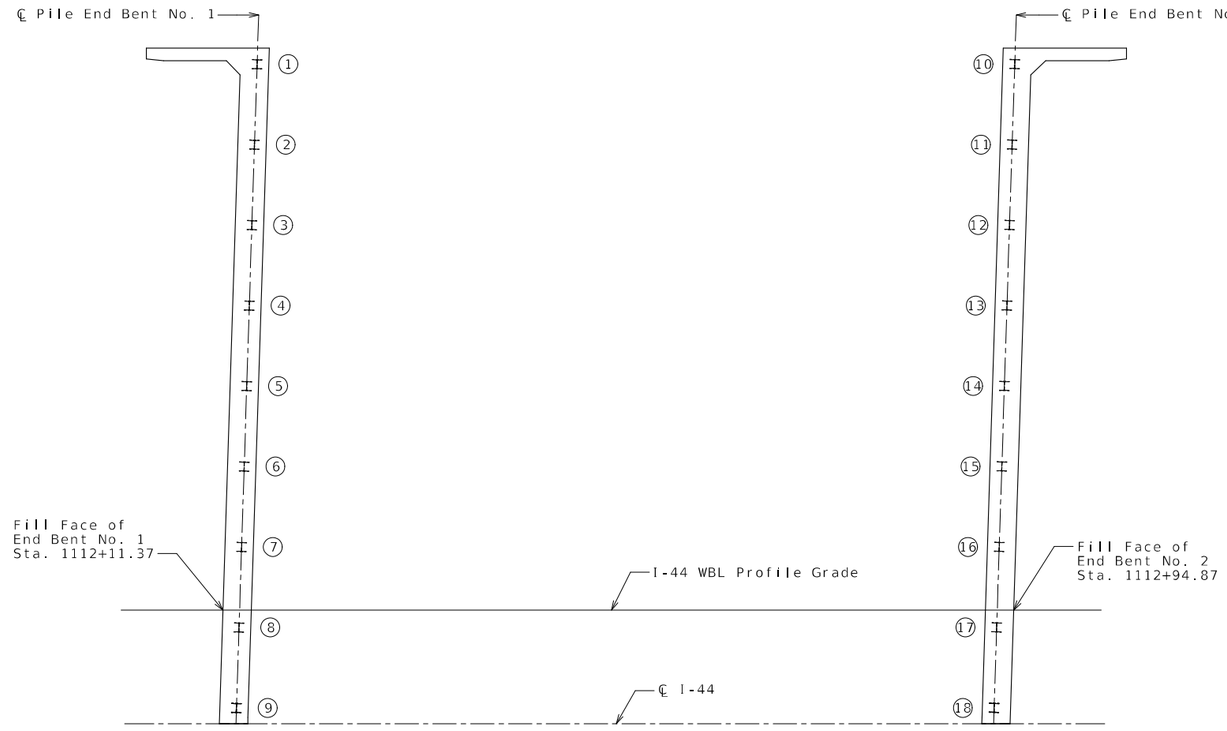
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165

BMcD Project No. 146617

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



SPAN (1-2)

PART PLAN SHOWING PILE NUMBERING FOR RECORDING AS-BUILT PILE DATA

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
End Bent No. 1 (HP 12x53)			
1			
2			
3			
4			
5			
6			
7			
8			
9			

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
End Bent No. 2 (HP 12x53)			
10			
11			
12			
13			
14			
15			
16			
17			
18			

Note:
Indicate in remarks column:
A. Pile type and grade
B. Batter
C. Driven to practical refusal

This sheet to be completed by MoDOT construction personnel.

AS-BUILT PILE DATA

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	27

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9418

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-1
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516849.3279 **Date of Work:** 07/20/23-07/21/23
Offset: **Easting:** 1408477.028 **Depth to Water:**
Elevation: 1258.5 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-9.0' (CH) Red and brown, fat CLAY, with gravel							
					56	4-6-5 (17)		PP = 1.50 tsf	MC = 19.7%
			1255						
					28	2-3-4 (11)		PP = 0.50 tsf	MC = 30.0%
5									
					67			PP = 1.00 tsf	
			1250						
					70	50/0.4'		PP = 2.25 tsf	MC = 53.2%
10		9.0-25.1' LIMESTONE, gray, moderately hard to hard, slightly weathered, fine to coarse crystalline, thin to thick bedded, dense to pitted			100 (100)		Qu Test Results UCS = 1160 ksf		
		11.6' -5" CHERT	1245		97 (78)		Qu Test Results UCS = 1050 ksf		
15		16.1' Core loss from 16.1 to 17.9 ft.			47 (35)				
		18.1' -highly weathered from 18.1 to 20.1 ft. -pitted to vuggy from 18.1 to 23.0 ft.	1240		83 (0)				
20		20.1' -moderately weathered from 20.1 to 23.1 ft.							
			1235		100 (50)		Qu Test Results UCS = 1150 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-1
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516849.3279 **Date of Work:** 07/20/23-07/21/23
Offset: **Easting:** 1408477.028 **Depth to Water:**
Elevation: 1258.5 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		Refusal at 9.0 feet. Bottom of borehole at 25.1 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED
9/5/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	28

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9418

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 28 of 32

BORING DATA

c:\bmcd_lib\pw_connect\trn\d0171017\B_A9418_028_JSU0076.dgn 5:02:50 PM 9/5/2024

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-2
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516854.8221 **Date of Work:** 07/20/23-07/20/23
Offset: 6' S **Easting:** 1408478.5498 **Depth to Water:**
Elevation: 1258.8 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-13.0' (CH) Red and brown, fat CLAY							
		1.0' -with gravel from 1.0 to 5.0 ft.			56	4-7-8 (23)		PP = 2.25 tsf	MC = 26.0%
			1255		39	2-1-2 (5)		PP = 1.00 tsf	MC = 27.8%
5									
		6.0' -trace sand and gravel from 6.0 to 10.0 ft.			67	6-12-13 (38)		PP = 2.25 tsf	MC = 31.9%
			1250		0			PP = 1.50 tsf	
10									
					100	2-3-4 (11)		PP = 1.50 tsf	MC = 52.0%
		13.0-15.2' Weathered LIMESTONE	1245		33	50/0.3"			MC = 12.9%
15		15.2-30.5' LIMESTONE, gray, moderately hard to hard, slightly weathered to fresh, fine to coarse crystalline, thin to thick bedded, dense							
		16.2' -5" core loss			92 (76)		Qu Test Results UCS = 1390 ksf		
			1240						
20									
		21.5' -cherty from 21.5 to 23.0 ft.			100 (82)		Qu Test Results UCS = 1110 ksf		
			1235						
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-2
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516854.8221 **Date of Work:** 07/20/23-07/20/23
Offset: 6' S **Easting:** 1408478.5498 **Depth to Water:**
Elevation: 1258.8 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		15.2-30.5' LIMESTONE, gray, moderately hard to hard, slightly weathered to fresh, fine to coarse crystalline, thin to thick bedded, dense *(continued)*							
			1230		100 (100)		Qu Test Results UCS = 1530 ksf		
30		Refusal at 15.2 feet. Bottom of borehole at 30.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 29
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9418

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No. : 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.
Sheet No. 29 of 32

BORING DATA

c:\bmcd_lib\pw_connect\trn\d0171017\B_A9418_029_JSU0076.dgn 5:03:12 PM 9/5/2024

TSI geotechnical, inc.

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-4
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516919.0926 **Date of Work:** 07/18/23-07/19/23
Offset: **Easting:** 1408543.4992 **Depth to Water:**
Elevation: 1258.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-8.0' (CH) Red and brown, gravely fat CLAY							
				X	17	11-18-19 (56)		PP = 2.00 tsf	MC = 23.5%
			1255				Qu Test Results UCS = 1.29 ksf MC = 29.7% γ_{moist} = 113.6 pcf		Sieve Analysis Sieve # % Passing #200 75.1
5					58				
				X	72	2-10-11 (32)		PP = 3.50 tsf	MC = 30.4%
		8.0-17.0' (CH) Red and brown, fat CLAY, trace gravel, sand, and organics	1250						
				X	100	2-4-4 (12)		PP = 2.50 tsf	MC = 49.9%
10									
			1245						
		13.5' -red, with chert below 13.5 ft.		X	50	8-5-50 (83)		PP = 1.50 tsf	MC = 47.6%
15									
		17.0-18.5' Weathered LIMESTONE	1240						
		18.5-30.0' LIMESTONE, gray, hard, slightly weathered, finely crystalline, thin bedded, dense to pitted			75 (75)				
20		19.5' - boring offset 5.0 ft. NW							
			1235		97 (74)		Qu Test Results UCS = 920 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

TSI geotechnical, inc.

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-4
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516919.0926 **Date of Work:** 07/18/23-07/19/23
Offset: **Easting:** 1408543.4992 **Depth to Water:**
Elevation: 1258.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		18.5-30.0' LIMESTONE, gray, hard, slightly weathered, finely crystalline, thin bedded, dense to pitted *(continued)*	1230		100 (92)		Qu Test Results UCS = 1020 ksf		
30		30.0-35.0' LIMESTONE, gray, hard, slightly weathered, finely crystalline, thin bedded, dense to pitted	1225		93 (82)		Qu Test Results UCS = 1410 ksf		
35		Refusal at 18.5 feet. Bottom of borehole at 35.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 30
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9418

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 30 of 32

BORING DATA

c:\bmcd_lib\pw_connect\trn\d0171017\B_A9418_030_JSU0076.dgn 5:03:31 PM 9/5/2024

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-4A
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516919.0926 **Date of Work:** 07/19/23-07/19/23
Offset: 4' N, 3" W **Easting:** 1408543.4992 **Depth to Water:**
Elevation: 1258.0 **Requested Northing:** 516882.8087 **Depth Hole Open:**
Requested Station: **Requested Easting:** 1408444.6298 **Time Change:**
Requested Offset: **Equipment:** CME 550X,
Requested Elevation: 1258.0 **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-19.5' See Log G-B-4							
			1255						
5									
			1250						
10									
			1245						
15									
			1240						
20		19.5-30.0' LIMESTONE, gray, hard, slightly weathered, finely crystalline, thin bedded, dense to pitted			97 (74)		Qu Test Results UCS = 920 ksf		
			1235						
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-4A
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516919.0926 **Date of Work:** 07/19/23-07/19/23
Offset: 4' N, 3" W **Easting:** 1408543.4992 **Depth to Water:**
Elevation: 1258.0 **Requested Northing:** 516882.8087 **Depth Hole Open:**
Requested Station: **Requested Easting:** 1408444.6298 **Time Change:**
Requested Offset: **Equipment:** CME 550X,
Requested Elevation: 1258.0 **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		19.5-30.0' LIMESTONE, gray, hard, slightly weathered, finely crystalline, thin bedded, dense to pitted *(continued)*	1230		100 (92)		Qu Test Results UCS = 1020 ksf		
30		30.0-35.0' LIMESTONE, gray, hard, slightly weathered, finely crystalline, thin bedded, dense to pitted	1225		93 (82)		Qu Test Results UCS = 1410 ksf		
35		Bottom of borehole at 35.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY
TRAVIS M. RAPP — NUMBER PE-2011019033 — STATE OF MISSOURI — PROFESSIONAL ENGINEER

DATE PREPARED 9/5/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 31
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9418

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 31 of 32

BORING DATA

c:\bmcd_lib\pw_connect\trn\d0171017\B_A9418_031_JSU0076.dgn 5:03:51 PM 9/5/2024

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-5
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516858.1379 **Date of Work:** 07/20/23-07/20/23
Offset: 6' N **Easting:** 1408540.4977 **Depth to Water:**
Elevation: 1258.6 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-10.5' (CH) Red and brown, fat CLAY, with gravel							
					83	7-10-6 (24)		PP = 4.50 tsf	MC = 26.5%
			1255						
					39	7-10-15 (38)		PP = 1.50 tsf	MC = 16.9%
5									
					100		Qu Test Results MC = 34.8% γ_{moist} = 88.6 pcf	PP = 2.50 tsf	
			1250						
					94	4-10-50 (90)		PP = 2.50 tsf	MC = 42.4%
10		10.5-16.0' LIMESTONE, gray, moderately hard to hard, slightly weathered to fresh, fine to coarse crystalline, thin to thick bedded, dense to pitted							
					83 (75)		Qu Test Results UCS = 1270 ksf		
			1245						
15									
		16.0-20.0' Core loss							
			1240		18 (7)				
20									
		20.0-30.5' LIMESTONE, gray, moderately hard to hard, slightly weathered to fresh, fine to coarse crystalline, thin to thick bedded, dense to pitted							
			1235		100 (90)		Qu Test Results UCS = 1290 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-5
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516858.1379 **Date of Work:** 07/20/23-07/20/23
Offset: 6' N **Easting:** 1408540.4977 **Depth to Water:**
Elevation: 1258.6 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		20.0-30.5' LIMESTONE, gray, moderately hard to hard, slightly weathered to fresh, fine to coarse crystalline, thin to thick bedded, dense to pitted *(continued)*							
			1230		100 (97)		Qu Test Results UCS = 1210 ksf		
30		Refusal at 10.5 feet. Bottom of borehole at 30.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/5/2024
ROUTE I-44 STATE MO
DISTRICT BR SHEET NO. 32
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9418

DESCRIPTION
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
MoDOT

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617
BURNS McDONNELL

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.

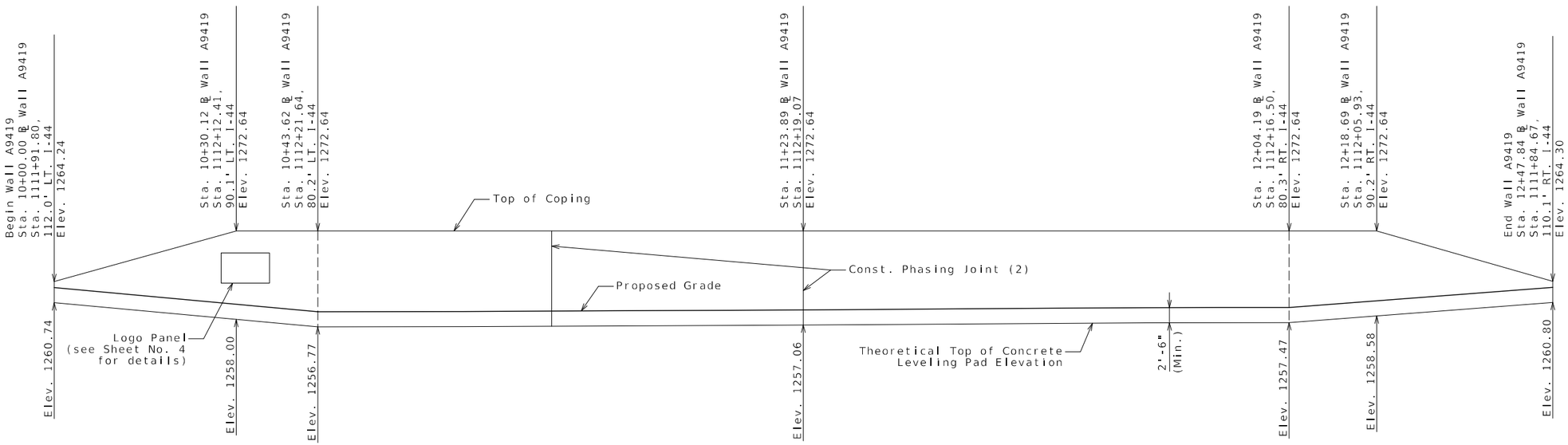
Sheet No. 32 of 32

BORING DATA

c:\bmcd_lib\pw_connect\trn\d0171017\B_A9418_032_JSU0076.dgn 5:04:10 PM 9/5/2024

248' MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL SYSTEM

SEC/SUR 2 TWP 29N RGE 22W



DEVELOPED ELEVATION

(Looking Ahead Station - Reflected View)

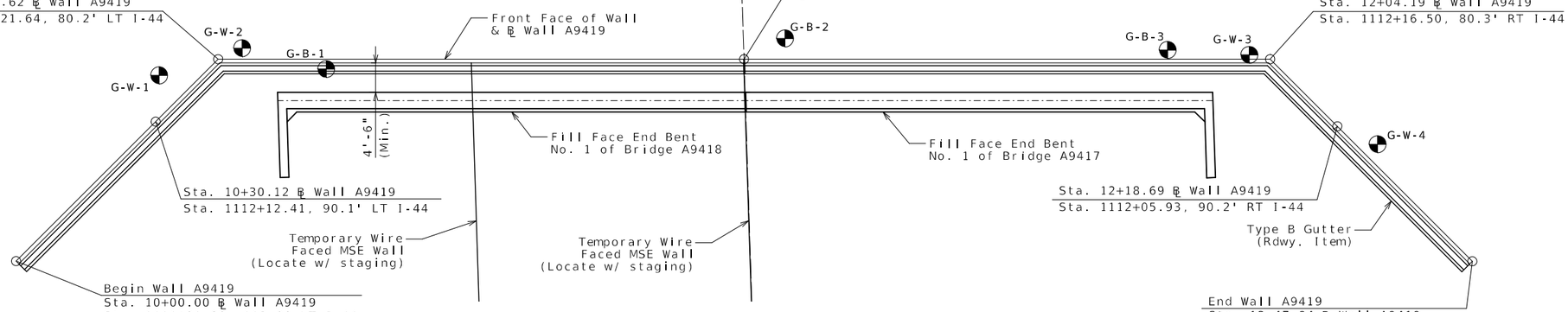
Concrete leveling pad not shown for clarity (1)

Ground Improvements not shown for clarity.
See Sheet 3 and Roadway Plans for details.

B.M.

C.P. #518 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1106+18.78, 110.87' Lt. of ℄ I-44
Elev. 1277.59

C.P. #519 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1122+80.16, 92.35' Lt. of ℄ I-44
Elev. 1270.58



PLAN

Concrete leveling pad and coping not shown for clarity (1)

℄ wall stationing at front face of MSE wall

Indicates location of borings.

Notice and Disclaimer Regarding Boring Log Data

The locations of all subsurface borings for this structure are shown on the plan sheet(s) for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheets No. 5 thru 9 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.

Designed May 2024
Detailed May 2024
Checked June 2024

(1) Wall contractor shall show the following items on the design drawings and/or on the fabricator shop drawings.

- Leveling pad horizontal.
- Leveling pad length and step elevations shall be based on wall manufacturer's recommendation.Top of leveling pad elevations shall not be higher than theoretical top of leveling pad elevations shown on these plans.

(2) Construction phasing joint location is approximate and is to be determined by Contractor and Wall Designer.

Note: This drawing is not to scale. Follow dimensions.

GENERAL PLAN & ELEVATION

Sheet No. 1 of 9

RETAINING WALL ALONG GRANT AVE. NEAR END BENT NO. 1 OF BRIDGES A9417 AND A9418

I-44 OVER GRANT AVE.
ABOUT 0.75 MILES EAST OF ROUTE 13
TIE STATION 1112+19.07

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

10/24/2024 1:55:26 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9419

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
©Copyright CMT, Inc.

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications (Section 5 ASD Design)
Seismic Performance Category = A
Acceleration Coefficient = 0.09

Design Loading:

Φ_b = 22° and Unit weight, γ_b = 120 pcf for retained backfill material to be retained by the mechanically stabilized earth wall system.

Φ_f = 34° for improved foundation ground where wall is to bear. Unimproved foudation data is not applicable. Foundation Improvement is required full length of the wall.

For improved foundation ground, the allowable bearing pressure is 4.5 ksf.

The maximum applied bearing pressure for the controlling design case at the foundation level shall be shown on the shop drawings and shall be less than the allowable bearing pressure for foundation ground provided herein. For seismic design the maximum applied bearing pressure shall be less than two times the allowable bearing pressure.

Allowable bearing pressure and limits of improved foundation ground shall not be adjusted from that as shown on the plans.

Contractor shall include design Φ_f (actual $\Phi_f \geq 34°$) and the total unit weight, γ_f, for the select granular backfill (reinforced backfill and wedge area backfill) for structural systems on shop drawings. Contractor shall identify source of select granular backfill material, submit proctor in accordance with AASHTO T 99 (ASTM D698) and gradation with the shop drawings. When backfill material is too coarse to develop a proctor curve the contractor shall determine the maximum dry density (relative density) in accordance with ASTM D4253 and ASTM D4254 and assume percent passing the 200 sieve for optimum water content.

Total unit weight, γ_b = (95% compaction) x (maximum dry density) x (1 + optimum water content)

Design Φ_f = 34°for the select granular backfill (reinforced backfill) only for structural systems.

Factor of safety shall be 2.0 for overturning and 1.5 for sliding.

For seismic design the factor of safety shall be 1.5 for overturning and 1.1 for sliding.

Use default values for the pullout friction factor, F^*, in accordance with AASHTO figure 5.8.5.2A and default value for scale effect correction factor, α, in accordance with AASHTO table 5.8.5.2A. For approved steel strips not shown in AASHTO figure 5.8.5.2A, use $F^* \leq 2.0$ at zero depth and $F^* \leq \text{Tan } \Phi_f$ at 20 feet depth and Φ_f design = 34°. F^* and α values shall be shown on the shop drawings.

Design Unit Stresses:

All concrete for leveling pad and coping shall be Class B or B-1 with f'c = 4000 psi.

The minimum compressive strength of concrete for precast panel shall be 4,000 psi in accordance with Sec 1052.

Miscellaneous:

The MSE wall system shall be built vertical.

The MSE wall system shall be built in accordance with Sec 720.

The MSE wall system shall be a large block wall system.

Panel, concrete block and coping (or capstone) reinforcement shall be epoxy coated.

A filter cloth meeting the requirements for a Separation Geotextile material shall be placed between the select granular backfill for structural systems and the backfill being retained by the mechanically stabilized earth wall system.

Coping shall be required on this structure. When CIP coping sections extend beyond the limits of a single panel, bond breaker (roofing felt or other approved alternate) between wall panel and coping is required. Coping joints shall use 3/4-inch chamfers and shall be sealed with 3/4-inch joint filler. Coping reinforcement shall terminate 1 1/2-inch minimum from face of coping joint.

The contractor shall be solely responsible to coordinate construction of the wall with bridge and roadway construction and ensure that the bridge and roadway construction, resulting or existing obstructions, shall not impact the construction or performance of the wall. Soil reinforcement shall be designed and placed to avoid damage by pile driving, guardrail post installation, utility and sign foundations. (See Roadway and Bridge plans.)

General Notes Cont.:

Minimum 18" wide Geotextile strips shall be centered at vertical and horizontal joints of panel. Geotextile material shall be adhered to back face of panel using an adhesive compound supplied by the manufacturer. All edges of each fabric strip shall provide a positive seal. A minimum 18" overlap shall be provided between spliced filter fabric.

Aluminized soil reinforcement shall have edges coated with coating material per manufacturer.

Soil reinforcement shall be spaced to avoid roadway drop inlet behind wall.

All steel soil reinforcements shall be separated from other metallic elements by at least 3 inches.

The splay angle should be less than 15° and tensile capacity of splayed reinforcement shall be reduced by the cosine of the splay angle. Soil reinforcement shall clear the obstruction by at least 3 inches.

No reinforcement shall be left unconnected to the wall face or arbitrarily cut/bent in the field to avoid the obstruction.

Where interference between the vertical obstruction and the soil reinforcement is unavoidable, the design of the wall near the obstruction may be modified using one of the alternatives in FHWA-NHI-10-24, Section 5.4.2. Show detail layout on the drawings. For wall designs with horizontal obstructions in reinforced soil mass, see FHWA-NHI-10-024, Section 5.4.3.

Contractor shall be responsible for the internal stability, external stability, compound stability, and overall global stability of the temporary MSE wall structure. The soil parameters assumed for the temporary MSE wall design shall be those shown on the plan details for the MSE Wall and shown in the foundation report. The contractor shall submit the proposed method of temporary MSE wall construction to the engineer prior to beginning work.

Excavation:

Excavation quantities and pay items are given on the roadway plans. Excavation quantities are based on a soil reinforcement length of 0.8H. Where H is the wall height from top of leveling pad to top of wall. The soil reinforecement length may vary based upon the wall design selected by the contractor. Plan excavation quantities will be paid regardless of any actual quantities removed based on the soil reinforcement length and design selected.

Material Properties Used in Design				
Reinf. Fill/Select Granular Backfill		Active Force Computations		Foundation
Φ°	γ (pcf)	Φ°	γ (pcf)	Φ°

Note: MSE Wall designer shall include table on shop drawings and provide values used in the design computations. Effects of cohesion shall be ignored unless approved by the engineer.

Show range of acceptable theta (Θ) angle on shop drawings which must be consistent with design computations and proposed construction of wall. Show active force computation properties on shop drawings and in design computations. Coordination between wall designer (manufacturer) and contractor is required before shop drawing submittal.

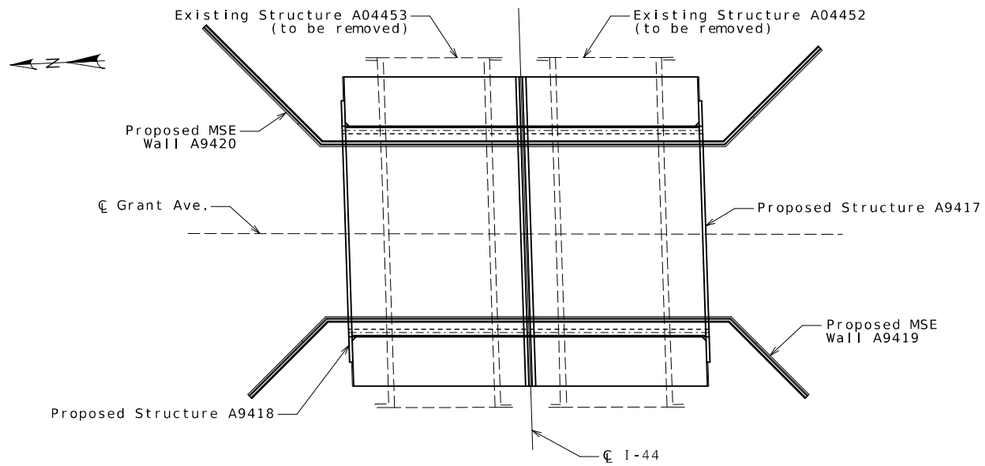
Estimated Quantities

Item		Total
Aesthetic Concrete Stain	lump sum	1
Concrete and Masonry Protection System	lump sum	1
Sacrificial Graffiti Protection System	lump sum	1
Mechanically Stabilized Earth Wall Systems	sq. foot	3447
Form Liners for MSE Wall Systems	sq. yard	4
Temporary MSE Wall System	lump sum	1

MSE Wall Systems Data Table

Proprietary Wall Systems		Combination Wall Systems			
Manufacturer	System	Facing Unit Manufacturer	Facing Unit	Geogrid Manufacturer	Geogrid

MSE Wall Systems Data Table is to be completed by MoDOT construction personnel to record the manufacturer of the proprietary wall system or the manufacturers of the combination wall system that was used for constructing the MSE wall.



LOCATION SKETCH

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 1:55:42 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	2

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9419

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

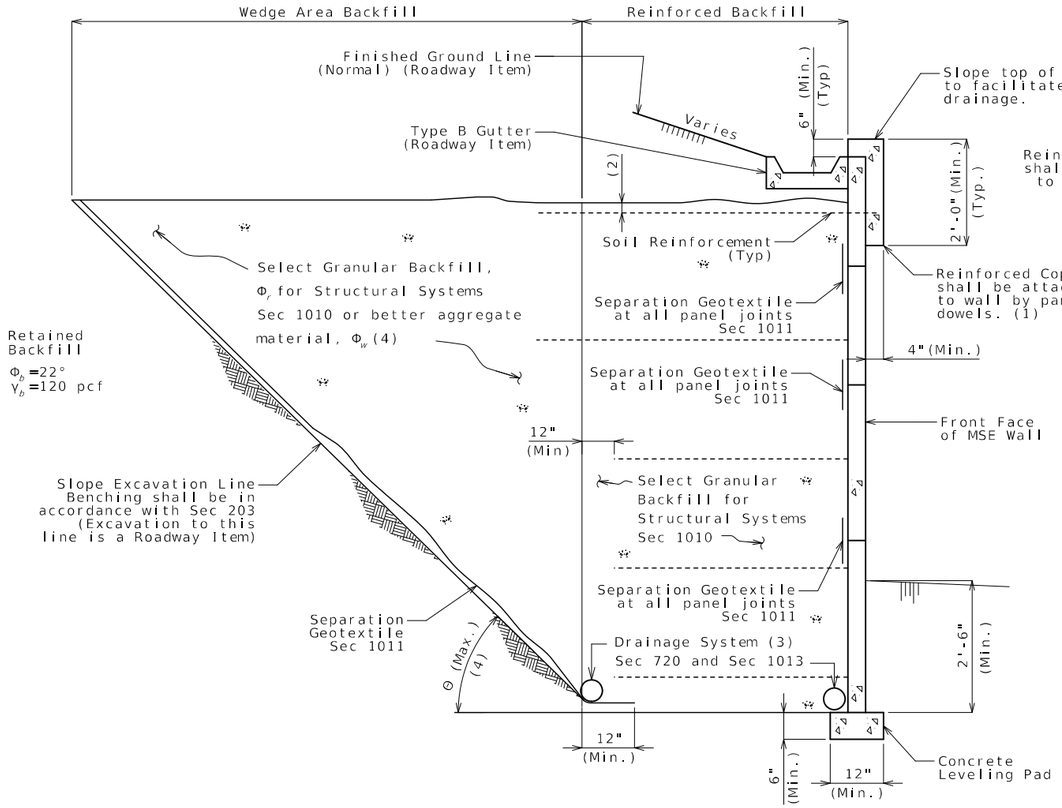
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Detailed May 2024
Checked June 2024

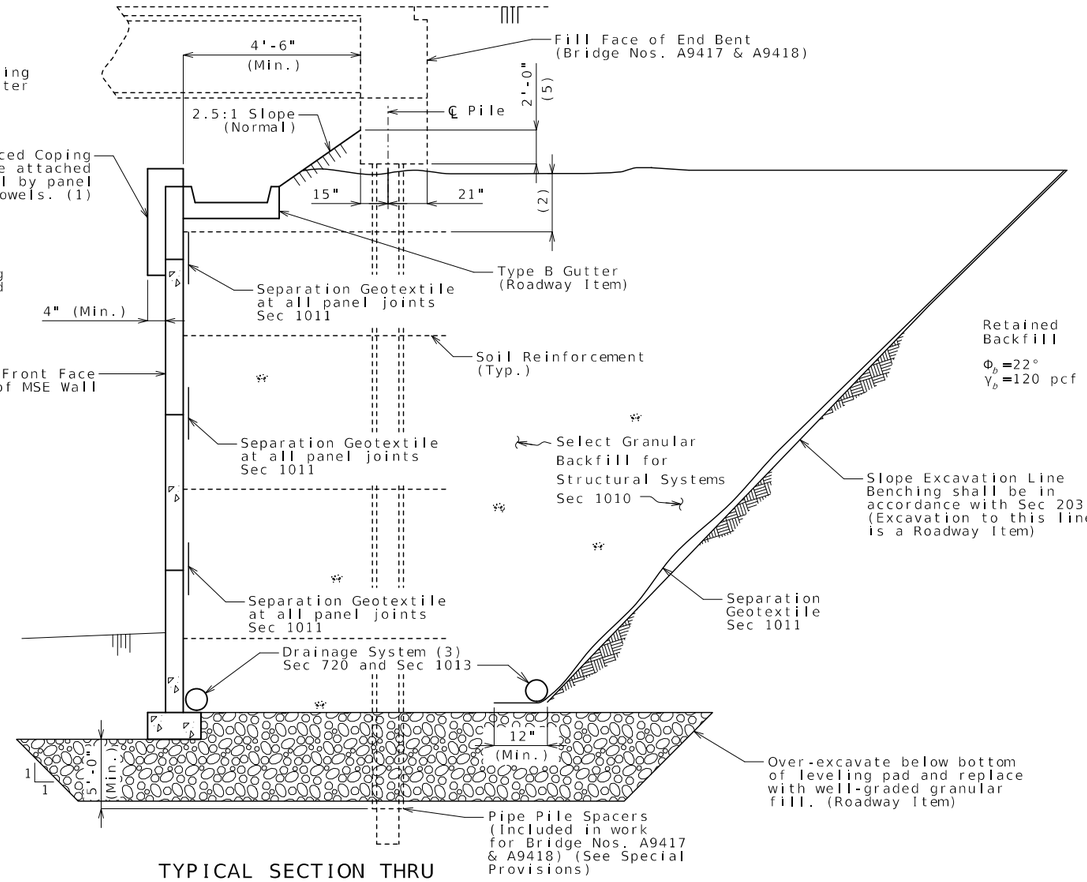
GENERAL NOTES AND ESTIMATED QUANTITIES

Note: This drawing is not to scale. Follow dimensions.

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9419 - I-44 over Grant Ave_Wall 1\B_A9419_002_JSU0076_WALL_DETAILS.dgn 10:57:22 AM 10/24/2024



TYPICAL SECTION THRU
LARGE BLOCK WALL SHOWING FILTER CLOTH



TYPICAL SECTION THRU
LARGE BLOCK WALL UNDER BRIDGE
SHOWING GROUND IMPROVEMENTS

(1) Inverted U-shape reinforced capstone may be used in lieu of coping. Panel dowels for level-up concrete shall be required and provided by manufacturer. The dowels shall be field trimmed to clear the capstone by a minimum of 1 1/2 inches and a maximum of 2 1/2 inches.

(2) Topmost layer of reinforcement shall be fully covered with select granular backfill for structural systems, as approved by the wall manufacturer, before placement of the Separation Geotextile.

(3) Minimum 6" diameter perforated PVC or PE pipe.

Manufacturer shall show drain details on design plans to be submitted as shown on MoDOT MSE wall plans and/or roadway plans.

Contractor shall modify the drain details as shown if it will improve flow as may be the case for stepped leveling pad, and for an uneven ground line (approval of the engineer required).

(4) Select granular backfill shall extend a minimum of 12" beyond the end of all soil reinforcement. Where the angle, Θ, between the retained backfill excavation/fill line and the horizontal is less than 90°, the wedge area backfill between Θ and 90° shall be filled with select granular backfill for structural systems meeting the requirements of Section 1010.

- For $(45° + \Phi_b/3) < \Theta \leq 90°$, properties for retained backfill shall be used for active force computations.

- For $\Theta \leq (45° + \Phi_b/3)$, contractor shall have the option to use select granular backfill, Φ_f, or better aggregate material, Φ_w for active force computations in the wedge area backfill. For active force computations, the angle of internal friction for wedge area backfill material, Φ_f or Φ_w, shall be limited to 34° unless determined otherwise in accordance with Section 1010. If Φ_f or $\Phi_w > 34°$ is desired for wedge area backfill then test report shall be submitted with shop drawings. Φ_f or Φ_w shall not be greater than 40° for computations. Final configuration of this option shall be sent to Geotechnical Section for a new overall global stability analysis. Design Φ_w shall be shown on the shop drawings if used.

The slope excavation line shall be benched and separation geotextile shall be placed between the retained backfill and either select granular backfill or better aggregate material, and between the select granular backfill and better aggregate material.

(5) See Bridge Plans.

DETAILS FOR MSE WALL

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 1:55:46 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	3

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9419

REV.	DESCRIPTION	DATE

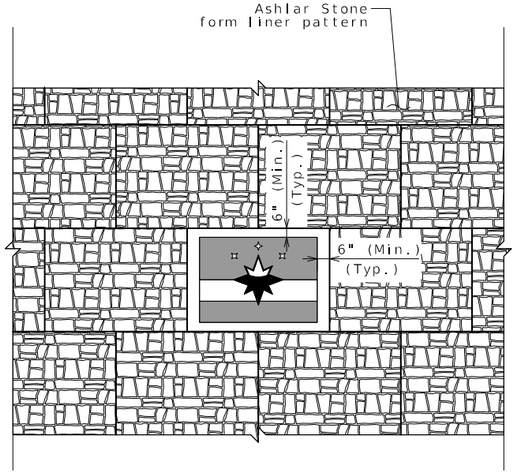
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Form Liner Relief	
Color	Relief
White	0"
Gray	1"
Black	2"

Note: Relief to extend out from face of panel.



MSE WALL PANEL WITH INSET LOGO DETAIL

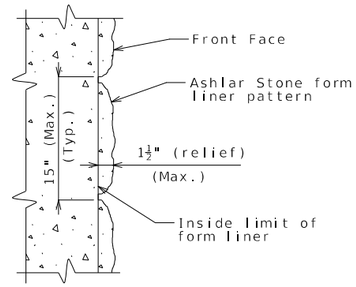
Notes:

Logo to be placed as a bas-relief form liner.

Logo to be centered on the panel. Panel to be placed in the wall as shown on the wall elevation (see Sheet No. 1).

Electronic image of logo available from City of Springfield upon request.

The cost of the logo will be considered completely covered by the contract unit price for Form Liners for MSE Wall Systems per square yard.



FORM LINER DETAIL (Large Block Wall)

Notes:

The cost of ashlar stone form liners for MSE wall systems, complete in place, will be considered completely covered by the contract unit price for Mechanically Stabilized Earth Wall System.

Form liner shall be constructed in accordance with Special Provisions.

The following is a list of form liner manufacturers and types which may be used. Depth of relief for all form liner pattern's shall vary up to 1 1/2". The height of any single 'stone' shall be 15" maximum.

- Scott System, Inc.: Form liner pattern #167 "Ashlar Stone"
- Fitzgerald Formliners: Form liner pattern #16986 "Ashlar Stone"
- Greenstreak: Form liner pattern #330 "Ashlar Stone"
- Spec Formliners: Form liner pattern #1515 "Ashlar Stone"
- Customrock: Form liner pattern #12020 "Tollway Ashlar"
- An approved equal

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

10/24/2024 1:55:49 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	4

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9419

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

Detailed May 2024
Checked June 2024

DETAILS FOR MSE WALL

Note: This drawing is not to scale. Follow dimensions.

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9419 - I-44 over Grant Ave_Wall 1\B_A9419_004_JSU0076_WALL_LOGO_DETAILS.dgn 10:57:33 AM 10/24/2024

Missouri Department of Transportation
Construction and Materials

BORING NO. G-W-1
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516945.0168 **Date of Work:** 07/21/23-07/21/23
Offset: **Easting:** 1408475.3219 **Depth to Water:**
Elevation: 1259.7 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-20.0' (CH) Red and brown, gravelly fat CLAY, trace cobbles or boulders							
					67	8-12-50 (93)		PP >4.50 tsf	MC = 32.9%
		3.0' - with gravel below 3.0 ft.			100			PP = 3.50 tsf	MC = 24.1%
5			1255						
					100		Qu Test Results UCS = 1.01 ksf MC = 48.0% γ_{moist} = 55.1 pcf	PP = 3.50 tsf	
10			1250		44	5-12-30 (63)			MC = 50.5%
		11.0' -trace gravel from 11.0 to 12.5 ft.			100	2-3-6 (14)		PP = 2.00 tsf	MC = 51.2%
15			1245		100	2-4-4 (12)		PP = 2.25 tsf	MC = 49.9%
20		20.0-21.0' Weathered LIMESTONE	1240		83	3-6-50 (84)		PP = 1.00 tsf	MC = 57.6%
		Refusal at 21.0 feet. Bottom of borehole at 21.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Missouri Department of Transportation
Construction and Materials

BORING NO. G-W-2
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516932.1899 **Date of Work:** 07/21/23-07/21/23
Offset: **Easting:** 1408478.9554 **Depth to Water:**
Elevation: 1258.7 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Auger Cuttings
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-12.0'							
5			1255						
10			1250						
		12.0-12.5' Rock							
		Refusal at 12.5 feet. Bottom of borehole at 12.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 5 of 9

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 1:55:54 PM
Joshua D. Jolliff
MO PE-2006002824

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 5
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9419

DESCRIPTION | DATE | REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

©Copyright CMT, Inc.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-1
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516849.3279 **Date of Work:** 07/20/23-07/21/23
Offset: **Easting:** 1408477.028 **Depth to Water:**
Elevation: 1258.5 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-9.0' (CH) Red and brown, fat CLAY, with gravel.							
					56	4-6-5 (17)		PP = 1.50 tsf	MC = 19.7%
			1255						
					28	2-3-4 (11)		PP = 0.50 tsf	MC = 30.0%
5									
					67			PP = 1.00 tsf	
			1250						
					70	50/0.4'		PP = 2.25 tsf	MC = 53.2%
10		9.0-25.1' LIMESTONE, gray, moderately hard to hard, slightly weathered, fine to coarse crystalline, thin to thick bedded, dense to pitted			100 (100)		Qu Test Results UCS = 1160 ksf		
		11.6' -5" CHERT	1245		97 (78)		Qu Test Results UCS = 1050 ksf		
15									
		16.1' Core loss from 16.1 to 17.9 ft.			47 (35)				
		18.1' -highly weathered from 18.1 to 20.1 ft. -pitted to vuggy from 18.1 to 23.0 ft.	1240		83 (0)				
20									
		20.1' -moderately weathered from 20.1 to 23.1 ft.							
			1235		100 (50)		Qu Test Results UCS = 1150 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-1
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516849.3279 **Date of Work:** 07/20/23-07/21/23
Offset: **Easting:** 1408477.028 **Depth to Water:**
Elevation: 1258.5 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		Refusal at 9.0 feet. Bottom of borehole at 25.1 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 1:55:57 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 6
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9419

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.

REV.

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9419 - I-44 over Grant Ave_Wall 1\B_A9419_006_JSU0076_BORING_DATA2.dgn 10:58:02 AM 10/24/2024

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-2
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516854.8221 **Date of Work:** 07/20/23-07/20/23
Offset: 6' S **Easting:** 1408478.5498 **Depth to Water:**
Elevation: 1258.8 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-13.0' (CH) Red and brown, fat CLAY							
		1.0' -with gravel from 1.0 to 5.0 ft.		X	56	4-7-8 (23)		PP = 2.25 tsf	MC = 26.0%
			1255	X	39	2-1-2 (5)		PP = 1.00 tsf	MC = 27.8%
5									
		6.0' -trace sand and gravel from 6.0 to 10.0 ft.		X	67	6-12-13 (38)		PP = 2.25 tsf	MC = 31.9%
			1250		0			PP = 1.50 tsf	
10									
				X	100	2-3-4 (11)		PP = 1.50 tsf	MC = 52.0%
		13.0-15.2' Weathered LIMESTONE	1245	X	33	50/0.3"			MC = 12.9%
15		15.2-30.5' LIMESTONE, gray, moderately hard to hard, slightly weathered to fresh, fine to coarse crystalline, thin to thick bedded, dense							
		16.2' -5" core loss			92 (76)		Qu Test Results UCS = 1390 ksf		
			1240						
20									
		21.5' -cherty from 21.5 to 23.0 ft.			100 (82)		Qu Test Results UCS = 1110 ksf		
			1235						
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-2
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516854.8221 **Date of Work:** 07/20/23-07/20/23
Offset: 6' S **Easting:** 1408478.5498 **Depth to Water:**
Elevation: 1258.8 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		15.2-30.5' LIMESTONE, gray, moderately hard to hard, slightly weathered to fresh, fine to coarse crystalline, thin to thick bedded, dense *(continued)*							
			1230		100 (100)		Qu Test Results UCS = 1530 ksf		
30		Refusa at 15.2 feet. Bottom of borehole at 30.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 7 of 9

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9419 - I-44 over Grant Ave_Wall 1\B_A9419_007_JSU0076_BORING_DATA3.dgn 10:58:28 AM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 1:58:01 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 7
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9419

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

©Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-3
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516791.0587 **Date of Work:** 07/24/23-07/24/23
Offset: **Easting:** 1408472.847 **Depth to Water:**
Elevation: 1259.2 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-18.8' (CH) Red and brown, fat CLAY, with gravel			83	50		PP >4.50 tsf	MC = 18.1%
			1255		100		Qu Test Results MC = 38.0% $\gamma_{m/s}$ = 105.7 pcf	PP = 2.50 tsf	LL = 92 PL = 28
5		6.0' -red below 6.0 ft.			100	3-4-6 (15)		PP = 3.25 tsf	MC = 46.4%
			1250		100	4-5-10 (23)		PP = 2.50 tsf	MC = 48.0%
10									
			1245		100	5-23-6 (44)		PP = 2.00 tsf	MC = 44.2%
15									
		18.8-20.0' Weathered LIMESTONE	1240		100	50/0.3"		PP = 1.50 tsf	MC = 47.9%
20		20.0-30.0' LIMESTONE, gray, moderately hard to hard, slightly weathered, fine to coarse crystalline, thin to thick bedded, dense 22.0' -cherty from 22.0 to 23.0 ft.			100 (84)		Qu Test Results UCS = 944 ksf		
			1235						
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-3
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516791.0587 **Date of Work:** 07/24/23-07/24/23
Offset: **Easting:** 1408472.847 **Depth to Water:**
Elevation: 1259.2 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		20.0-30.0' LIMESTONE, gray, moderately hard to hard, slightly weathered, fine to coarse crystalline, thin to thick bedded, dense *(continued)*			100 (95)		Qu Test Results UCS = 1340 ksf		
			1230						
30		30.0-35.0' LIMESTONE, gray, moderately hard to hard, slightly weathered, aphanitic to finely crystalline, thin to thick bedded, dense to pitted			100 (96)		Qu Test Results UCS = 1660 ksf		
			1225						
35		Refusa at 20.0 feet. Bottom of borehole at 35.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 1:58:05 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	8

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9419

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.

REV.

Missouri Department of Transportation
Construction and Materials

BORING NO. G-W-3
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516778.636 **Date of Work:** 07/24/23-07/24/23
Offset: **Easting:** 1408471.5857 **Depth to Water:**
Elevation: 1259.3 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Auger Cuttings
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-19.5'	1260						
5			1255						
10			1250						
15			1245						
20		19.5-24.5' Top of ROCK (description from cuttings)	1240						
		Refusal at 24.5 feet Bottom of borehole at 24.5 feet.	1235						

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. G-W-4
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516759.6335 **Date of Work:** 07/24/23-07/24/23
Offset: **Easting:** 1408457.1373 **Depth to Water:**
Elevation: 1261.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-3.0' White and gray, chert GRAVEL (highly weathered rock)	1260		33	27-27-22 (74)			MC = 10.0%
5		3.0-15.8' (CH) Red, fat CLAY, with gravel	1255		67	6-6-11 (26)		PP = 2.50 tsf	MC = 42.5%
					100		Qu Test Results UCS = 2.81 ksf MC = 48.2% γ_{moist} = 103.9 pcf	PP = 2.00 tsf	LL = 112 PL = 36
10			1250		100	30-16-8 (36)		PP = 2.00 tsf	MC = 45.5%
					67	6-8-12 (30)		PP = 1.50 tsf	MC = 50.0%
15		13.5' -trace gravel below 13.5 ft.			100	2-2-3 (8)		PP = 1.00 tsf	MC = 53.6%
		Refusal at 15.6 feet. Bottom of borehole at 15.8 feet.			0	50/0.1"			

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9 of 9

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9419 - I-44 over Grant Ave_Wall 1\B_A9419_009_JSU0076_BORING_DATA5.dgn 10:59:18 AM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 1:58:09 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	9

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9419

DESCRIPTION

DATE

REV.

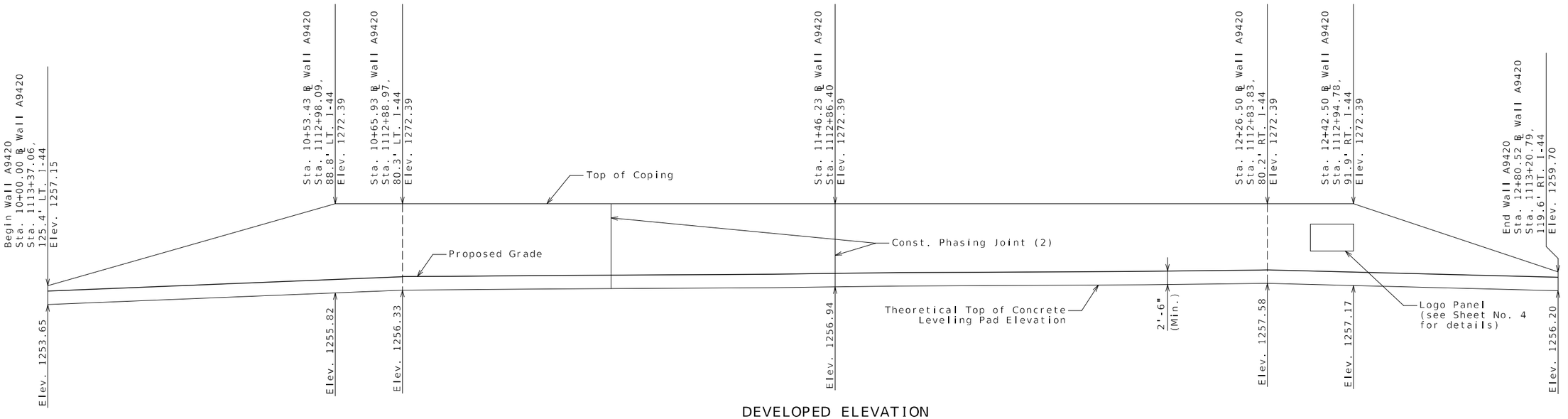
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

281' MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL SYSTEM

SEC/SUR 2 TWP 29N RGE 22W

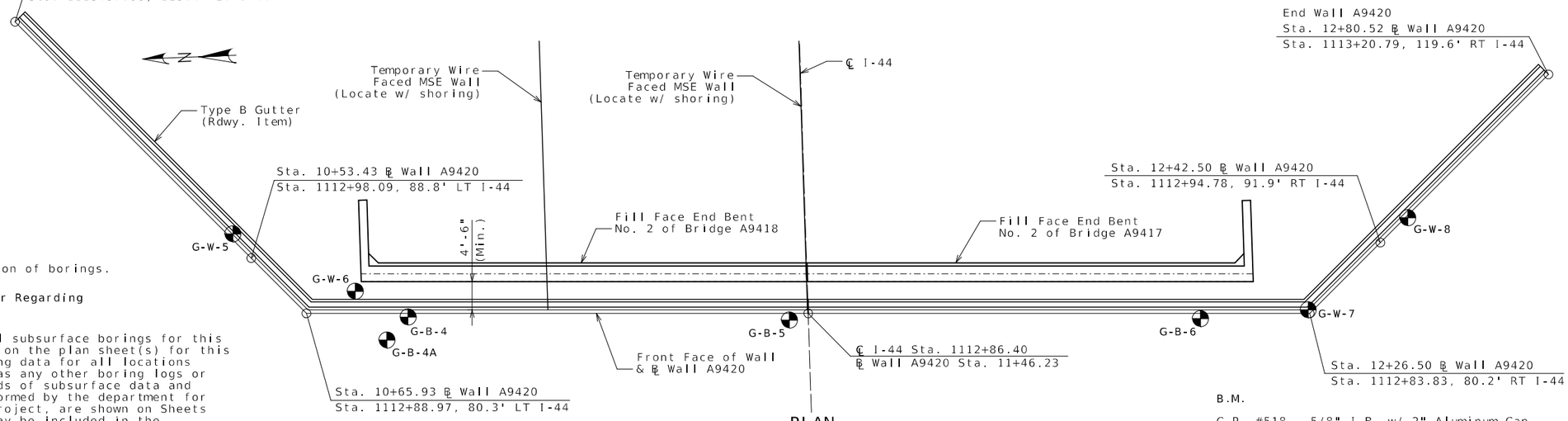


DEVELOPED ELEVATION

(Looking Ahead Station)

Concrete leveling pad not shown for clarity (1)

Ground Improvements not shown for clarity.
See Sheet 3 and Roadway Plans for details.



PLAN

Concrete leveling pad and coping not shown for clarity (1)

℄ wall stationing at front face of MSE wall

Indicates location of borings.

Notice and Disclaimer Regarding Boring Log Data

The locations of all subsurface borings for this structure are shown on the plan sheet(s) for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheets No. 5 thru 10 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.

(1) Wall contractor shall show the following items on the design drawings and/or on the fabricator shop drawings.

- Leveling pad horizontal.
- Leveling pad length and step elevations shall be based on wall manufacturer's recommendation.Top of leveling pad elevations shall not be higher than theoretical top of leveling pad elevations shown on these plans.

(2) Construction phasing joint location is approximate and is to be determined by Contractor and Wall Designer.

B.M.

C.P. #518 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1106+18.78, 110.87' Lt. of ℄ I-44
Elev. 1277.59

C.P. #519 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1122+80.16, 92.35' Lt. of ℄ I-44
Elev. 1270.58

RETAINING WALL ALONG GRANT AVE. NEAR END BENT NO. 2 OF BRIDGES A9417 AND A9418

I-44 OVER GRANT AVE.
ABOUT 0.75 MILES EAST OF ROUTE 13
TIE STATION 1112+86.40

GENERAL PLAN & ELEVATION

Designed May 2024
Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 10

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

10/24/2024 2:01:28 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	1

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9420

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

©Copyright CMT, Inc.

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications (Section 5 ASD Design)
Seismic Performance Category = A
Acceleration Coefficient = 0.09

Design Loading:

Φ_b = 22° and Unit weight, γ_b = 120 pcf for retained backfill material to be retained by the mechanically stabilized earth wall system.

Φ_f = 34° for improved foundation ground where wall is to bear. Unimproved foudation data is not applicable. Foundation Improvement is required full length of the wall.

For improved foundation ground, the allowable bearing pressure is 4.5 ksf.

The maximum applied bearing pressure for the controlling design case at the foundation level shall be shown on the shop drawings and shall be less than the allowable bearing pressure for foundation ground provided herein. For seismic design the maximum applied bearing pressure shall be less than two times the allowable bearing pressure.

Allowable bearing pressure and limits of improved foundation ground shall not be adjusted from that as shown on the plans.

Contractor shall include design Φ_f (actual $\Phi_f \geq 34°$) and the total unit weight, γ_f, for the select granular backfill (reinforced backfill and wedge area backfill) for structural systems on shop drawings. Contractor shall identify source of select granular backfill material, submit proctor in accordance with AASHTO T 99 (ASTM D698) and gradation with the shop drawings. When backfill material is too coarse to develop a proctor curve the contractor shall determine the maximum dry density (relative density) in accordance with ASTM D4253 and ASTM D4254 and assume percent passing the 200 sieve for optimum water content.

Total unit weight, γ_b = (95% compaction) x (maximum dry density) x (1 + optimum water content)

Design Φ_f = 34°for the select granular backfill (reinforced backfill) only for structural systems.

Factor of safety shall be 2.0 for overturning and 1.5 for sliding.

For seismic design the factor of safety shall be 1.5 for overturning and 1.1 for sliding.

Use default values for the pullout friction factor, F^*, in accordance with AASHTO figure 5.8.5.2A and default value for scale effect correction factor, α, in accordance with AASHTO table 5.8.5.2A. For approved steel strips not shown in AASHTO figure 5.8.5.2A, use $F^* \leq 2.0$ at zero depth and $F^* \leq \text{Tan } \Phi_f$ at 20 feet depth and Φ_f design = 34°. F^* and α values shall be shown on the shop drawings.

Design Unit Stresses:

All concrete for leveling pad and coping shall be Class B or B-1 with f'c = 4000 psi.

The minimum compressive strength of concrete for precast panel shall be 4,000 psi in accordance with Sec 1052.

Miscellaneous:

The MSE wall system shall be built vertical.

The MSE wall system shall be built in accordance with Sec 720.

The MSE wall system shall be a large block wall system.

Panel, concrete block and coping (or capstone) reinforcement shall be epoxy coated.

A filter cloth meeting the requirements for a Separation Geotextile material shall be placed between the select granular backfill for structural systems and the backfill being retained by the mechanically stabilized earth wall system.

Coping shall be required on this structure. When CIP coping sections extend beyond the limits of a single panel, bond breaker (roofing felt or other approved alternate) between wall panel and coping is required. Coping joints shall use 3/4-inch chamfers and shall be sealed with 3/4-inch joint filler. Coping reinforcement shall terminate 1 1/2-inch minimum from face of coping joint.

The contractor shall be solely responsible to coordinate construction of the wall with bridge and roadway construction and ensure that the bridge and roadway construction, resulting or existing obstructions, shall not impact the construction or performance of the wall. Soil reinforcement shall be designed and placed to avoid damage by pile driving, guardrail post installation, utility and sign foundations. (See Roadway and Bridge plans.)

General Notes Cont.:

Minimum 18" wide Geotextile strips shall be centered at vertical and horizontal joints of panel. Geotextile material shall be adhered to back face of panel using an adhesive compound supplied by the manufacturer. All edges of each fabric strip shall provide a positive seal. A minimum 18" overlap shall be provided between spliced filter fabric.

Aluminized soil reinforcement shall have edges coated with coating material per manufacturer.

Soil reinforcement shall be spaced to avoid roadway drop inlet behind wall.

All steel soil reinforcements shall be separated from other metallic elements by at least 3 inches.

The splay angle should be less than 15° and tensile capacity of splayed reinforcement shall be reduced by the cosine of the splay angle. Soil reinforcement shall clear the obstruction by at least 3 inches.

No reinforcement shall be left unconnected to the wall face or arbitrarily cut/bent in the field to avoid the obstruction.

Where interference between the vertical obstruction and the soil reinforcement is unavoidable, the design of the wall near the obstruction may be modified using one of the alternatives in FHWA-NHI-10-24, Section 5.4.2. Show detail layout on the drawings. For wall designs with horizontal obstructions in reinforced soil mass, see FHWA-NHI-10-024, Section 5.4.3.

Contractor shall be responsible for the internal stability, external stability, compound stability, and overall global stability of the temporary MSE wall structure. The soil parameters assumed for the temporary MSE wall design shall be those shown on the plan details for the MSE Wall and shown in the foundation report. The contractor shall submit the proposed method of temporary MSE wall construction to the engineer prior to beginning work.

Excavation:

Excavation quantities and pay items are given on the roadway plans. Excavation quantities are based on a soil reinforcement length of 0.8H. Where H is the wall height from top of leveling pad to top of wall. The soil reinforecement length may vary based upon the wall design selected by the contractor. Plan excavation quantities will be paid regardless of any actual quantities removed based on the soil reinforcement length and design selected.

Material Properties Used in Design				
Reinf. Fill/Select Granular Backfill		Active Force Computations		Foundation
Φ°	γ (pcf)	Φ°	γ (pcf)	Φ°

Note: MSE Wall designer shall include table on shop drawings and provide values used in the design computations. Effects of cohesion shall be ignored unless approved by the engineer.

Show range of acceptable theta (Θ) angle on shop drawings which must be consistent with design computations and proposed construction of wall. Show active force computation properties on shop drawings and in design computations. Coordination between wall designer (manufacturer) and contractor is required before shop drawing submittal.

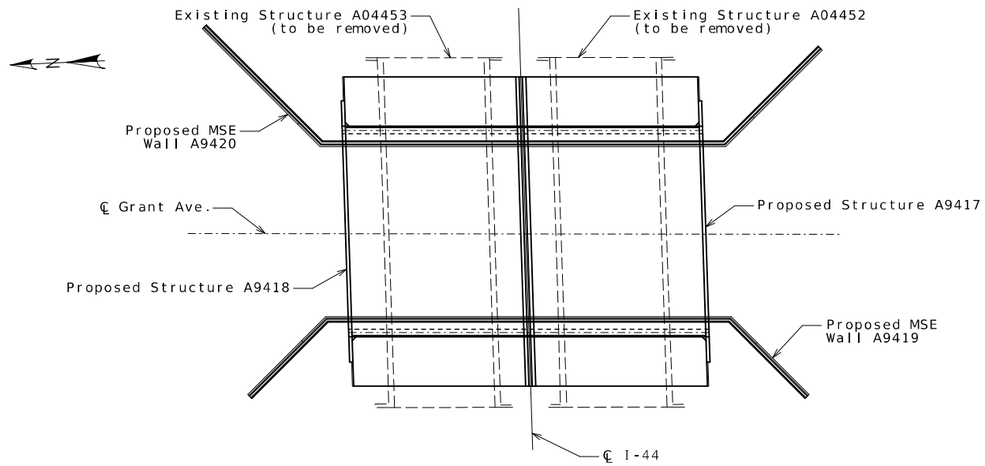
Estimated Quantities

Item		Total
Aesthetic Concrete Stain	lump sum	1
Concrete and Masonry Protection System	lump sum	1
Sacrificial Graffiti Protection System	lump sum	1
Mechanically Stabilized Earth Wall Systems	sq. foot	3822
Form Liners for MSE Wall Systems	sq. yard	4
Temporary MSE Wall System	lump sum	1

MSE Wall Systems Data Table

Proprietary Wall Systems		Combination Wall Systems			
Manufacturer	System	Facing Unit Manufacturer	Facing Unit	Geogrid Manufacturer	Geogrid

MSE Wall Systems Data Table is to be completed by MoDOT construction personnel to record the manufacturer of the proprietary wall system or the manufacturers of the combination wall system that was used for constructing the MSE wall.



LOCATION SKETCH

JOSHUA D. JOLLIFF NUMBER PE-2006002824 STATE OF MISSOURI PROFESSIONAL ENGINEER
10/24/2024 2:01:38 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 2
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9420

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE | REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

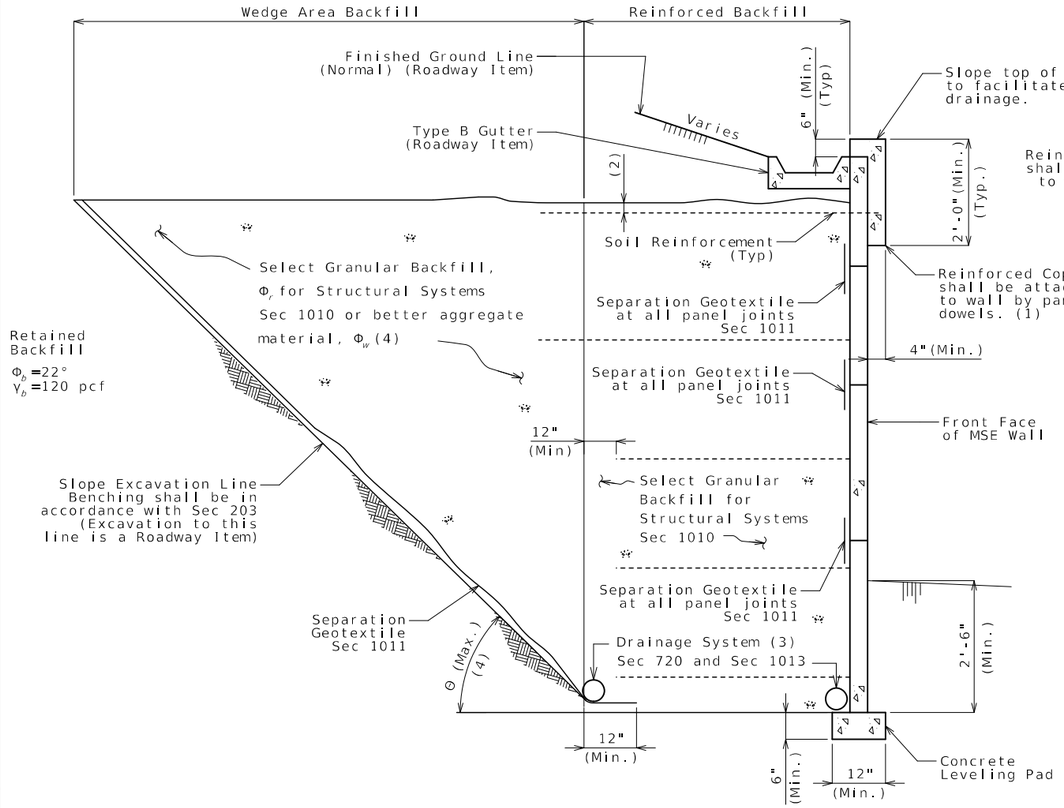
CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Detailed May 2024
Checked June 2024

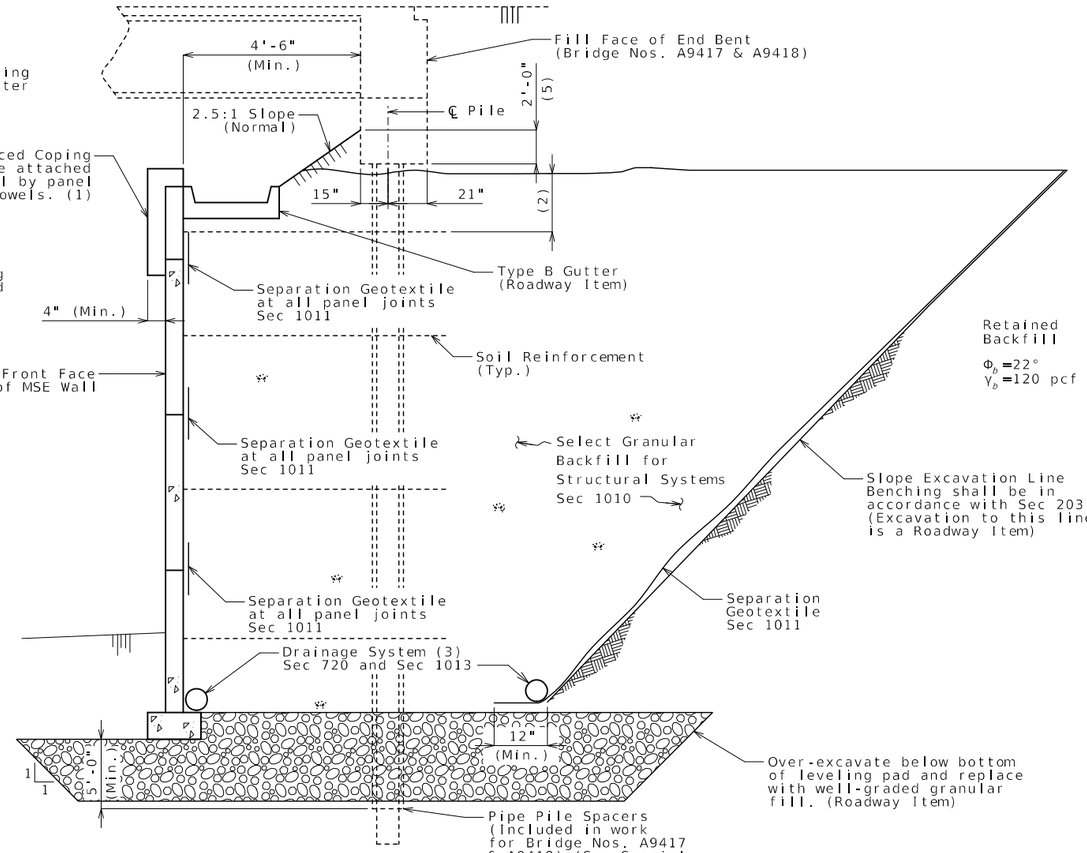
GENERAL NOTES AND ESTIMATED QUANTITIES

Note: This drawing is not to scale. Follow dimensions.

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9420 - I-44 over Grant Ave_Wall 2\B_A9420_002_JSU0076_WALL_DETAILS.dgn 12:02:40 PM 10/24/2024



TYPICAL SECTION THRU
LARGE BLOCK WALL SHOWING FILTER CLOTH



TYPICAL SECTION THRU
LARGE BLOCK WALL UNDER BRIDGE
SHOWING GROUND IMPROVEMENTS

(1) Inverted U-shape reinforced capstone may be used in lieu of coping. Panel dowels for level-up concrete shall be required and provided by manufacturer. The dowels shall be field trimmed to clear the capstone by a minimum of 1 1/2 inches and a maximum of 2 1/2 inches.

(2) Topmost layer of reinforcement shall be fully covered with select granular backfill for structural systems, as approved by the wall manufacturer, before placement of the Separation Geotextile.

(3) Minimum 6" diameter perforated PVC or PE pipe.

Manufacturer shall show drain details on design plans to be submitted as shown on MoDOT MSE wall plans and/or roadway plans.

Contractor shall modify the drain details as shown if it will improve flow as may be the case for stepped leveling pad, and for an uneven ground line (approval of the engineer required).

(4) Select granular backfill shall extend a minimum of 12" beyond the end of all soil reinforcement. Where the angle, Θ, between the retained backfill excavation/fill line and the horizontal is less than 90°, the wedge area backfill between Θ and 90° shall be filled with select granular backfill for structural systems meeting the requirements of Section 1010.

- For $(45° + \Phi_b/3) < \Theta \leq 90°$, properties for retained backfill shall be used for active force computations.

- For $\Theta \leq (45° + \Phi_b/3)$, contractor shall have the option to use select granular backfill, Φ_f, or better aggregate material, Φ_w for active force computations in the wedge area backfill. For active force computations, the angle of internal friction for wedge area backfill material, Φ_f or Φ_w, shall be limited to 34° unless determined otherwise in accordance with Section 1010. If Φ_f or Φ_w > 34° is desired for wedge area backfill then test report shall be submitted with shop drawings. Φ_f or Φ_w shall not be greater than 40° for computations. Final configuration of this option shall be sent to Geotechnical Section for a new overall global stability analysis. Design Φ_w shall be shown on the shop drawings if used.

The slope excavation line shall be benched and separation geotextile shall be placed between the retained backfill and either select granular backfill or better aggregate material, and between the select granular backfill and better aggregate material.

(5) See Bridge Plans.

DETAILS FOR MSE WALL

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 2:01:42 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	3

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9420

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

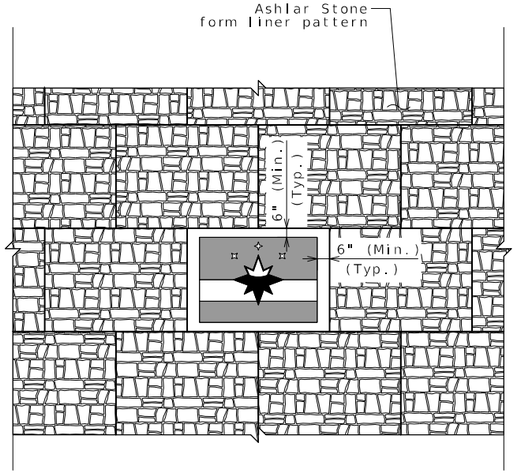
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.

Form Liner Relief	
Color	Relief
White	0"
Gray	1"
Black	2"

Note: Relief to extend out from face of panel.



MSE WALL PANEL WITH INSET LOGO DETAIL

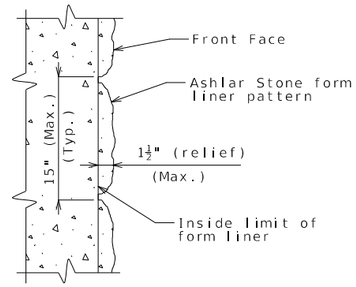
Notes:

Logo to be placed as a bas-relief form liner.

Logo to be centered on the panel. Panel to be placed in the wall as shown on the wall elevation (see Sheet No. 1).

Electronic image of logo available from City of Springfield upon request.

The cost of the logo will be considered completely covered by the contract unit price for Form Liners for MSE Wall Systems per square yard.



FORM LINER DETAIL (Large Block Wall)

Notes:

The cost of ashlar stone form liners for MSE wall systems, complete in place, will be considered completely covered by the contract unit price for Mechanically Stabilized Earth Wall System.

Form liner shall be constructed in accordance with Special Provisions.

The following is a list of form liner manufacturers and types which may be used. Depth of relief for all form liner pattern's shall vary up to 1 1/2". The height of any single 'stone' shall be 15" maximum.

- Scott System, Inc.: Form liner pattern #167 "Ashlar Stone"
- Fitzgerald Formliners: Form liner pattern #16986 "Ashlar Stone"
- Greenstreak: Form liner pattern #330 "Ashlar Stone"
- Spec Formliners: Form liner pattern #1515 "Ashlar Stone"
- Customrock: Form liner pattern #12020 "Tollway Ashlar"
- An approved equal

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

10/24/2024 2:01:45 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	4

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9420

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
© Copyright CMT, Inc.

REV.

Detailed May 2024
Checked June 2024

DETAILS FOR MSE WALL

Note: This drawing is not to scale. Follow dimensions.

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9420 - I-44 over Grant Ave_Wall 2\B_A9420_004_JSU0076_WALL_LOGO_DETAILS.dgn 12:02:50 PM 10/24/2024

Missouri Department of Transportation
Construction and Materials

BORING NO. G-W-5
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516946.5643 **Date of Work:** 07/19/23-07/19/23
Offset: **Easting:** 1408557.9415 **Depth to Water:**
Elevation: 1257.5 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-3.0' (CH) Red and brown, fat CLAY, trace sand, gravel, and cobbles	1255		61	9-15-11 (39)		PP >4.50 tsf	MC = 12.6%
5		3.0-7.7' (GC) Red and brown, clayey GRAVEL	1250		72	7-9-15 (36)		PP >4.50 tsf	MC = 16.0% Sieve Analysis Sieve # % Passing #200 24.9
					83	8-11-9 (30)		PP = 3.00 tsf	MC = 30.9%
10		7.7-10.5' (CH) Red and brown, fat CLAY			71		Qu Test Results UCS = 1.77 ksf MC = 49.7% $\gamma_{m/st}$ = 125.0 pcf	PP = 3.00 tsf	
		10.5-11.0' LIMESTONE Refusal at 11.0 feet. Bottom of borehole at 11.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. G-W-6
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516927.3766 **Date of Work:** 07/19/23-07/19/23
Offset: **Easting:** 1408547.9644 **Depth to Water:**
Elevation: 1258.2 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Auger Cuttings
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-5.0' (CH) Red and brown, gravelly fat CLAY (description from cuttings)	1255						
5		5.0-20.0' (CH) Red and brown, fat CLAY, with sand (description from cuttings)	1250						
10			1245						
15			1240						
20		20.0-20.5' LIMESTONE (description from cuttings) Refusal at 20.0 feet. Bottom of borehole at 20.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 5 of 10

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9420 - I-44 over Grant Ave_Wall 2\B_A9420_005_JSU0076_BORING_DATA1.dgn 12:02:54 PM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 2:01:49 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 5
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9420

DATE	DESCRIPTION	REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631
©Copyright CMT, Inc.

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-4
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516919.0926 **Date of Work:** 07/18/23-07/19/23
Offset: **Easting:** 1408543.4992 **Depth to Water:**
Elevation: 1258.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-8.0' (CH) Red and brown, gravelly fat CLAY							
					17	11-18-19 (56)		PP = 2.00 tsf	MC = 23.5%
			1255						
5					58		Qu Test Results UCS = 1.29 ksf MC = 29.7% γ_{moist} = 113.6 pcf		Sieve Analysis Sieve # % Passing #200 75.1
					72	2-10-11 (32)		PP = 3.50 tsf	MC = 30.4%
			1250						
		8.0-17.0' (CH) Red and brown, fat CLAY, trace gravel, sand, and organics							
10					100	2-4-4 (12)		PP = 2.50 tsf	MC = 49.9%
			1245						
		13.5' -red, with chert below 13.5 ft.			50	8-5-50 (83)		PP = 1.50 tsf	MC = 47.6%
15									
		17.0-18.5' Weathered LIMESTONE	1240						
		18.5-30.0' LIMESTONE, gray, hard, slightly weathered, finely crystalline, thin bedded, dense to pitted			75 (75)				
20		19.5' - boring offset 5.0 ft. NW							
			1235		97 (74)		Qu Test Results UCS = 920 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-4
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516919.0926 **Date of Work:** 07/18/23-07/19/23
Offset: **Easting:** 1408543.4992 **Depth to Water:**
Elevation: 1258.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		18.5-30.0' LIMESTONE, gray, hard, slightly weathered, finely crystalline, thin bedded, dense to pitted *(continued)*	1230		100 (92)		Qu Test Results UCS = 1020 ksf		
30		30.0-35.0' LIMESTONE, gray, hard, slightly weathered, finely crystalline, thin bedded, dense to pitted	1225		93 (82)		Qu Test Results UCS = 1410 ksf		
35		Refusa at 18.5 feet. Bottom of borehole at 35.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6 of 10

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9420 - I-44 over Grant Ave_Wall 2\B_A9420_006_JSU0076_BORING_DATA2.dgn 12:03:20 PM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 2:01:53 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 6
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9420

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-4A
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516919.0926 **Date of Work:** 07/19/23-07/19/23
Offset: 4' N, 3" W **Easting:** 1408543.4992 **Depth to Water:**
Elevation: 1258.0 **Requested Northing:** 516882.8087 **Depth Hole Open:**
Requested Station: **Requested Easting:** 1408444.6298 **Time Change:**
Requested Offset: **Equipment:** CME 550X,
Requested Elevation: 1258.0 **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-19.5' See Log G-B-4							
5			1255						
10			1250						
15			1245						
20			1240						
		19.5-30.0' LIMESTONE, gray, hard, slightly weathered, finely crystalline, thin bedded, dense to pitted	1235		97 (74)		Qu Test Results UCS = 920 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-4A
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516919.0926 **Date of Work:** 07/19/23-07/19/23
Offset: 4' N, 3" W **Easting:** 1408543.4992 **Depth to Water:**
Elevation: 1258.0 **Requested Northing:** 516882.8087 **Depth Hole Open:**
Requested Station: **Requested Easting:** 1408444.6298 **Time Change:**
Requested Offset: **Equipment:** CME 550X,
Requested Elevation: 1258.0 **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		19.5-30.0' LIMESTONE, gray, hard, slightly weathered, finely crystalline, thin bedded, dense to pitted *(continued)*	1230		100 (92)		Qu Test Results UCS = 1020 ksf		
30		30.0-35.0' LIMESTONE, gray, hard, slightly weathered, finely crystalline, thin bedded, dense to pitted	1225		93 (82)		Qu Test Results UCS = 1410 ksf		
35		Bottom of borehole at 35.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 7 of 10

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9420 - I-44 over Grant Ave_Wall 2\B_A9420_007_JSU0076_BORING_DATA3.dgn 12:03:45 PM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 2:02:09 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 7
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9420

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

TSi geotechnical, inc.

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-5
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516858.1379 **Date of Work:** 07/20/23-07/20/23
Offset: 6' N **Easting:** 1408540.4977 **Depth to Water:**
Elevation: 1258.6 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-10.5' (CH) Red and brown, fat CLAY, with gravel							
					83	7-10-6 (24)		PP = 4.50 tsf	MC = 26.5%
			1255						
					39	7-10-15 (38)		PP = 1.50 tsf	MC = 16.9%
5									
					100		Qu Test Results MC = 34.8% γ_{moist} = 88.6 pcf	PP = 2.50 tsf	
			1250						
					94	4-10-50 (90)		PP = 2.50 tsf	MC = 42.4%
10									
		10.5-16.0' LIMESTONE, gray, moderately hard to hard, slightly weathered to fresh, fine to coarse crystalline, thin to thick bedded, dense to pitted							
			1245		83 (75)		Qu Test Results UCS = 1270 ksf		
15									
		16.0-20.0' Core loss							
			1240		18 (7)				
20									
		20.0-30.5' LIMESTONE, gray, moderately hard to hard, slightly weathered to fresh, fine to coarse crystalline, thin to thick bedded, dense to pitted							
			1235		100 (90)		Qu Test Results UCS = 1290 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

TSi geotechnical, inc.

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-5
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516858.1379 **Date of Work:** 07/20/23-07/20/23
Offset: 6' N **Easting:** 1408540.4977 **Depth to Water:**
Elevation: 1258.6 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		20.0-30.5' LIMESTONE, gray, moderately hard to hard, slightly weathered to fresh, fine to coarse crystalline, thin to thick bedded, dense to pitted *(continued)*							
			1230		100 (97)		Qu Test Results UCS = 1210 ksf		
30		Refusa at 10.5 feet. Bottom of borehole at 30.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 10

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9420 - I-44 over Grant Ave_Wall 2\B_A9420_008_JSU0076_BORING_DATA4.dgn 12:04:10 PM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 2:02:14 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 8
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9420

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-6
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516792.3959 **Date of Work:** 07/25/23-07/25/23
Offset: **Easting:** 1408538.0076 **Depth to Water:**
Elevation: 1258.5 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-5.5' (CH) Red and brown, fat CLAY, with gravel							
				X	44	11-8-8 (24)		PP = 2.25 tsf	MC = 23.5%
			1255						
				X	44	7-8-11 (29)		PP = 2.25 tsf	MC = 28.0%
5									
		5.5-12.0' (CL) Red and gray, lean CLAY, trace gravel		X	78	2-2-2 (6)		PP <0.50 tsf	MC = 21.8%
			1250						
				■	50			PP <0.50 tsf	MC = 32.1%
10									
		12.0-20.5' (CH) Red, fat CLAY							
			1245	X	100	3-3-4 (11)		PP = 1.50 tsf	MC = 53.4%
15									
			1240						
		18.5' -trace gravel below 18.5 ft.		X	50	4-3-3 (9)		PP = 1.00 tsf	MC = 54.2%
20									
		20.5-30.0' LIMESTONE, gray, moderately hard to hard, fresh to slightly weathered, thin to thick bedded, aphanitic to finely crystalline, dense							
			1235	■	100 (91)		Qu Test Results UCS = 1120 ksf		
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\2023075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. G-B-6
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516792.3959 **Date of Work:** 07/25/23-07/25/23
Offset: **Easting:** 1408538.0076 **Depth to Water:**
Elevation: 1258.5 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		20.5-30.0' LIMESTONE, gray, moderately hard to hard, fresh to slightly weathered, thin to thick bedded, aphanitic to finely crystalline, dense *(continued)* 25.0' -aphanitic to coarsely crystalline below 25.0 ft.	1230	■	100 (95)		Qu Test Results UCS = 1290 ksf		
30		30.0-35.0' LIMESTONE, gray, moderately hard to hard, fresh to slightly weathered, medium to thick bedded, aphanitic to finely crystalline, dense	1225	■	100 (95)		Qu Test Results UCS = 1140 ksf		
35		Refusa at 20.5 feet. Bottom of borehole at 35.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\2023075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9 of 10

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9420 - I-44 over Grant Ave_Wall 2\B_A9420_009_JSU0076_BORING_DATA5.dgn 12:04:35 PM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 2:02:17 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 9
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9420

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

Missouri Department of Transportation
Construction and Materials

BORING NO. G-W-7
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516775.115 **Date of Work:** 07/25/23-07/25/23
Offset: **Easting:** 1408538.6896 **Depth to Water:**
Elevation: 1258.7 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Auger Cuttings
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-18.7'	1255						
5			1250						
10			1245						
15			1240						
20		18.7-20.0' Top of Rock (description from cuttings) Refusal at 20.0 feet. Bottom of borehole at 20.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. G-W-8
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** SO **Operator:** LRK
Station: **Northing:** 516758.5893 **Date of Work:** 07/25/23-07/25/23
Offset: **Easting:** 1408552.7538 **Depth to Water:**
Elevation: 1258.9 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-2.8' (CL) Brown, gravelly lean CLAY			17	22-15-12 (41)		PP = 3.50 tsf	MC = 20.8%
5		2.8-8.0' (CL) Brown, lean CLAY, with gravel	1255		100		Qu Test Results UCS = 2.11 ksf MC = 16.7% γ_{moist} = 124.7 pcf	PP = 3.50 tsf	
					100		Qu Test Results MC = 23.6% γ_{moist} = 127.6 pcf	PP = 4.50 tsf	
10		8.0-10.5' (CL) Red anc brown, gravelly lean CLAY	1250		72	17-21-9 (45)		PP = 3.00 tsf	MC = 20.3%
		10.5-12.3' (CH) Red, fat CLAY, trace gravel			100	3-4-50/0.3'		PP = 2.75 tsf	MC = 52.5%
		12.3-15.0' Weathered LIMESTONE	1245		44	17-16-8 (36)		PP = 1.50 tsf	MC = 49.5%
15		Refusa at 15.0 feet. Bottom of borehole at 15.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 10 of 10

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9420 - I-44 over Grant Ave_Wall 2\B_A9420_010_JSU0076_BORING_DATA6.dgn 12:05:00 PM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

10/24/2024 2:02:20 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	10

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9420

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

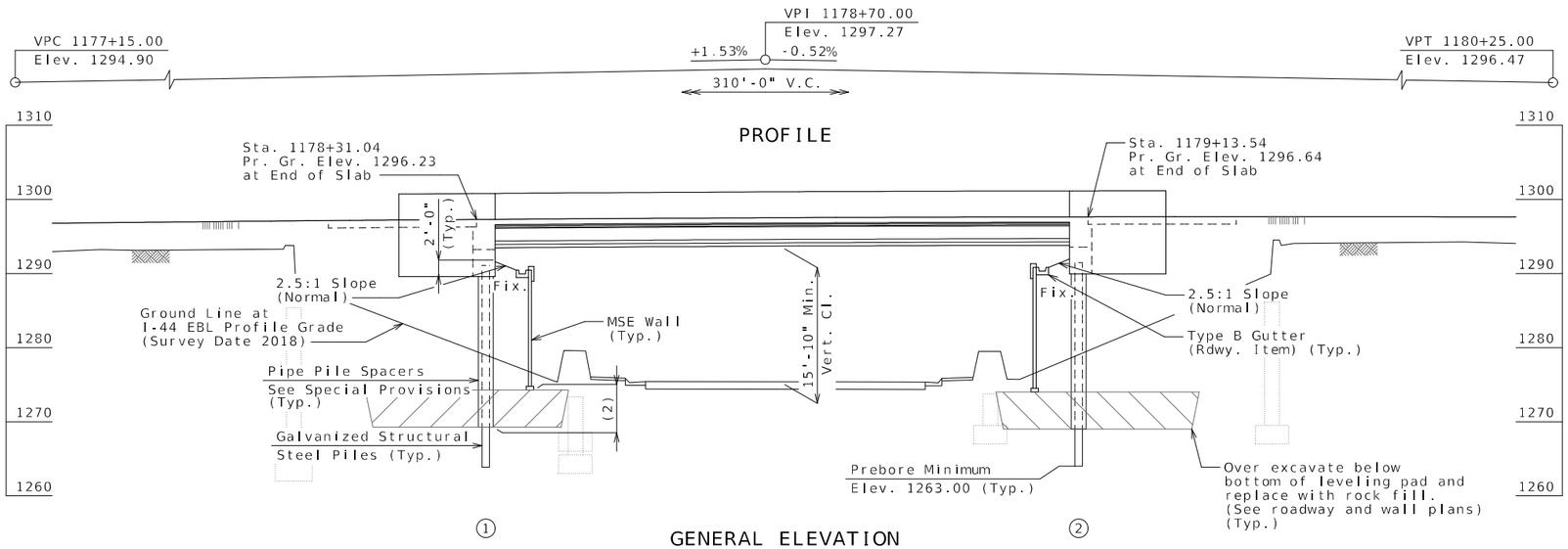
©Copyright CMT, Inc.

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

(80') PRESTRESSED CONCRETE NU-GIRDER SPAN

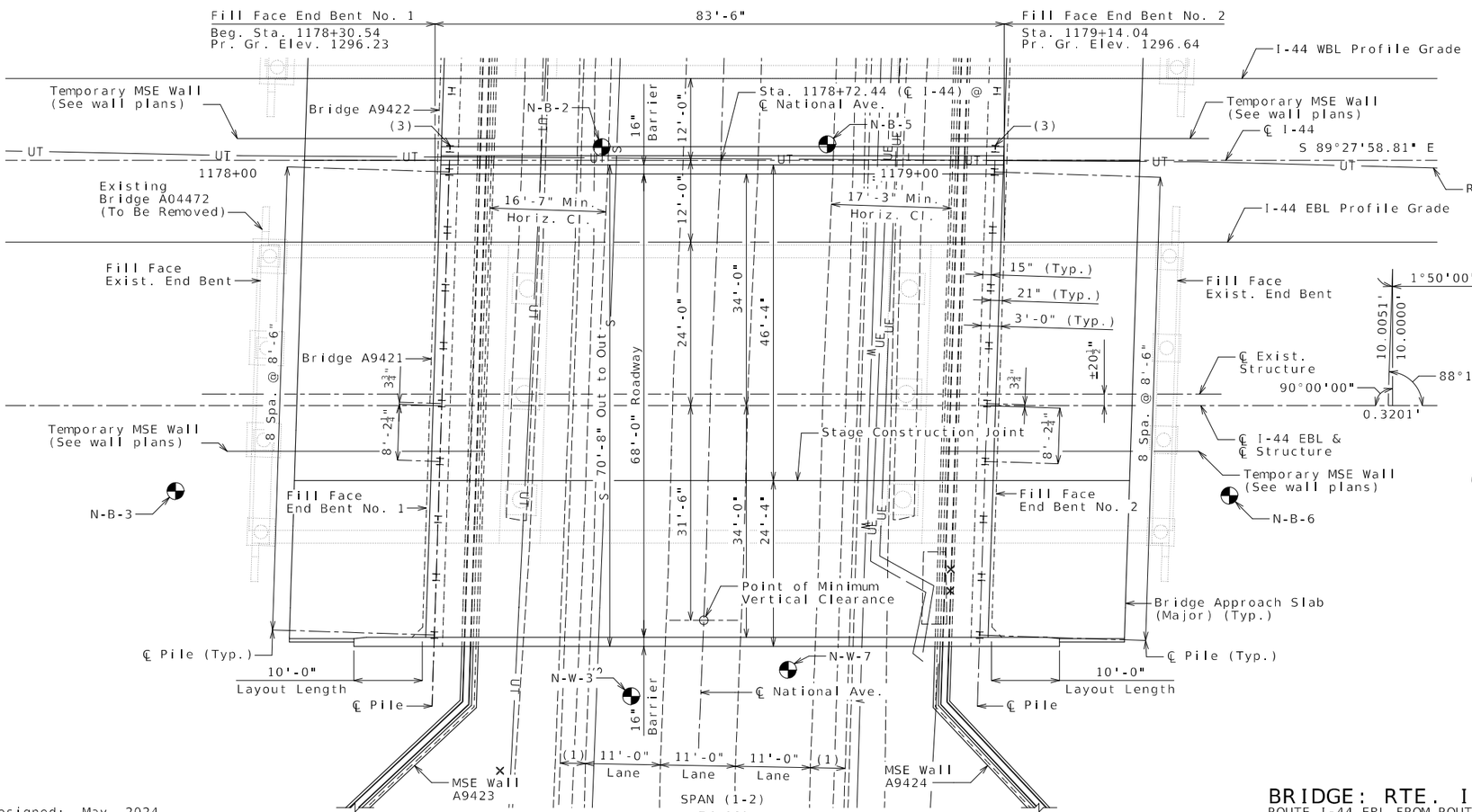
SEC/SUR 1 TWP 29N RGE 22W



Pile Encasement	Option Used (✓)
Pipe Pile Spacer	
Pile Jacket	

MoDot Construction personnel will indicate the pile encasement used.

GENERAL ELEVATION



PLAN

(1) Bike Lane

(2) Bottom of pipe pile spacer shall be 5'-0" minimum below bottom of leveling pad.

(3) Pile in Bridge A9422 shall be driven during Stage 2 Construction of Bridge A9421.

NOTES:

Indicates location of borings.

For notice and disclaimer regarding boring log data, see Sheet No. 2.

Roadway fill, exclusive of Select Granular Backfill for Structural Systems, shall be completed to the final roadway section and up to the elevation of the bottom of the concrete beam within the limits of the structure and for not less than 25 feet in back of the fill face of the end bents before any piles are driven for any bents falling within the embankment section.

C.P. #520 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1157+31.28, 94.70' Rt. of ℄ I-44
Elev. 1278.57

C.P. #521 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1184+76.50, 114.67' Lt. of ℄ I-44
Elev. 1294.63

BRIDGE: RTE. I-44 EBL OVER NATIONAL AVE.

ROUTE I-44 EBL FROM ROUTE 13 TO ROUTE H
ABOUT 2.0 MILES EAST OF ROUTE 13
BEGINNING STATION 1178+30.54

Designed: May 2024
Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 30

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	1

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9421

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165

BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171022\B_A9421_001_JSU0076.dgn 8:35:47 AM 9/6/2024

GENERAL NOTES:

DESIGN SPECIFICATIONS:

2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)
Operational Importance = Essential
2011 AASHTO Guide Specifications for LRFD Seismic Bridge Design (2nd Ed.)
and 2014 Interim Revisions (Seismic)
Seismic Design Category = A
Design earthquake response spectral acceleration coefficient at 1.0 second period, S_{D1} = 0.104g
Acceleration Coefficient (effective peak ground acceleration coefficient), A_S = 0.089g

DESIGN LOADING:

Vehicular = HL-93
Future Wearing Surface = 35 lb/sf
Earth = 120 lb/cf
Equivalent Fluid Pressure = 45 lb/cf (Min.)
Superstructure: Non-composite for dead load.
Composite for live load.

DESIGN UNIT STRESSES:

Class B Concrete (Substructure)	f'c = 3,000 psi
Class B-1 Concrete (Type D Barrier)	f'c = 4,000 psi
Class B-2 Concrete (Superstructure, except Prestressed Girders and Type D Barrier)	f'c = 4,000 psi
Reinforcing Steel (Grade 60)	fy = 60,000 psi
Structural Steel HP Pile (ASTM A709 Grade 50S)	fy = 50,000 psi

For precast prestressed panel stresses, see Sheet No. 18.
For prestressed girder stresses, see Sheets No. 16 thru 17.

NEOPRENE PADS:

Neoprene bearing pads shall be 60 durometer and shall be in accordance with Sec 716.

JOINT FILLER:

All joint filler shall be in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

REINFORCING STEEL:

Minimum clearance to reinforcing steel shall be 1½", unless otherwise shown.

MBS refers to mechanical bar splices. Mechanical bar splices shall be in accordance with Sec 706 or 710 except that no measurement will be made for mechanical bar splices and they will be considered conpletely covered by the contract unit price for other items.

TRAFFIC HANDLING:

Vertical clearance for National Avenue traffic during construction shall be 14'-6" minimum over a 11'-0" wide horizontal opening of the roadway in each direction.

Traffic to be maintained on structures during construction. See roadway plans for traffic control and Sheets No. 3 thru 4 for staged construction details.

MISCELLANEOUS:

MoDOT Construction personnel will indicate the type of joint filler option used under the precast panels for this structure:

☐ Constant Joint Filler
☐ Variable Joint Filler

NOTICE AND DISCLAIMER REGARDING BORING LOG DATA:

The locations of all subsurface borings for this structure are shown on the plan sheets for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheets No. 28 thru 30 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.

Estimated Quantities

Item		Substr.	Superstr.	Total
Removal of Miscellaneous ACM (Non-Friable)	sq. foot			12
Removal of Bridges (A04472)	lump sum			1
Bridge Approach Slab (Major)	sq. yard		314	314
Galvanized Structural Steel Piles (12 in.)	linear foot	492		492
Pre-Bore for Piling	linear foot	216		216
Pile Point Reinforcement	each	18		18
Class B Concrete (Substructure)	cu. yard	58.2		58.2
Type D Barrier	linear foot		226	226
Slab on Concrete NU-Girder	sq. yard		648	648
NU 35, Prestressed Concrete NU-Girder	linear foot		647	647
Vertical Drain at End Bents	each	2		2
Plain Neoprene Bearing Pad	each		8	8
Laminated Neoprene Bearing Pad (Tapered)	each		8	8
Pile Spacers	each	18		18

All concrete above the construction joint in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

All reinforcement in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Estimated Quantities for Slab on Concrete NU-Girder

Item		Total
Class B-2 Concrete	cu. yard	205
Reinforcing Steel (Epoxy Coated)	pound	46,160

The table of Estimated Quantities for Slab on Concrete NU-Girder represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab (or with the horizontal dimensions as shown on the plan of slab). Payment for prestressed panels, conventional forms, all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slab shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type I, II or III.

PRECAST PRESTRESSED PANELS:

The Estimated Quantities for Slab on Concrete NU-Girder are based on skewed precast prestressed end panels.

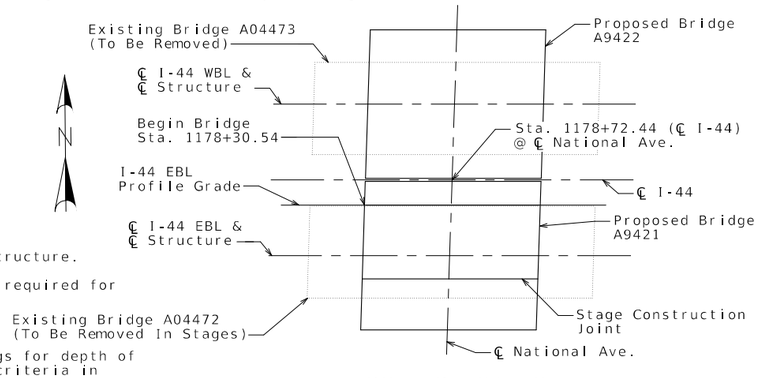
Class B-2 Concrete quantity is based on minimum top flange and minimum joint material thickness.

The prestressed panel quantities are not included in the table of Estimated Quantities for Slab on Concrete NU-Girder.

STAGED CONSTRUCTION:

The Contractor shall verify that the existing bridge is sufficient to carry traffic during Stage 1 Construction. The design, installation and monitoring of any temporary supports will be considered completely covered by the contract unit price for the Removal of Bridges (A04472).

The Contractor shall remove the existing end bents as necessary for Stage 1 Construction as shown on Sheet No. 3.



LOCATION SKETCH

Foundation Data

Type	Design Data		Bent Number 1	Bent Number 2
Load Bearing Pile	Pile Type and Size		HP 12x53	HP 12x53
	Number	ea	9	9
	Approximate Length Per Each	ft	27	28
	Pile Point Reinforcement	ea	All	All
	Min. Galvanized Penetration (Elev.)	ft	Full Length	Full Length
	Pile Driving Verification Method		DF	DF
	Resistance Factor		0.4	0.4
	Minimum Nominal Axial Compressive Resistance	kip	590	590

DF = FHWA - modified Gates Dynamic Pile Formula.

Minimum Nominal Axial Compressive Resistance = $\frac{\text{Maximum Factored Loads}}{\text{Resistance Factor}}$

Manufactured pile point reinforcement shall be used on all piles in this structure.

Pile point reinforcement need not be galvanized. Shop drawings will not be required for pile point reinforcement.

Prebore for piles at Bents No. 1 and 2 to elevation 1263.0.

HP piles are anticipated to be driven to refusal on rock. Review all borings for depth of rock and restrict driving as appropriate to comply with hard rock driving criteria in accordance with Sec 702. When pile refusal on rock occurs, as approved by the engineer, the minimum nominal axial compressive resistance is verified and no additional pile driving verification method is required.

The contractor shall make every effort to achieve the minimum galvanized penetration (elevation) shown on the plans for all piles.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

GENERAL NOTES & QUANTITIES

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
11/7/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	2

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

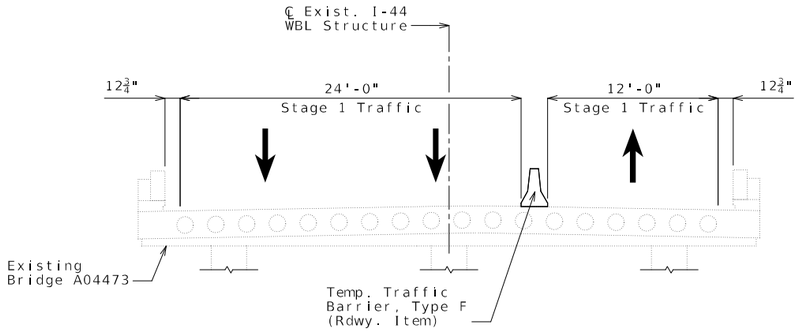
BRIDGE NO.
A9421

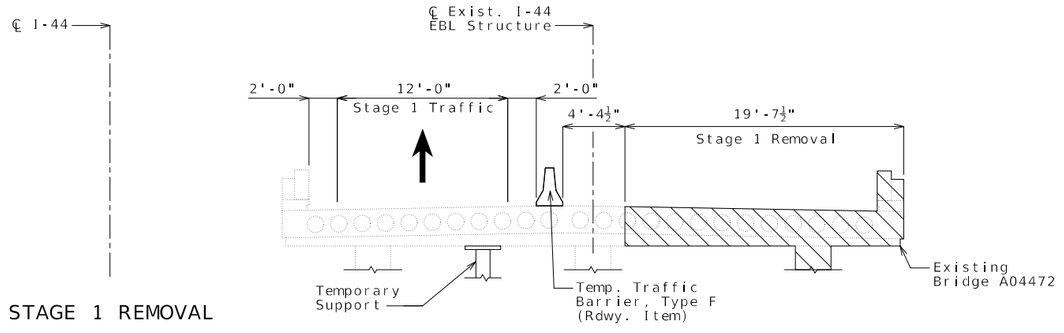
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

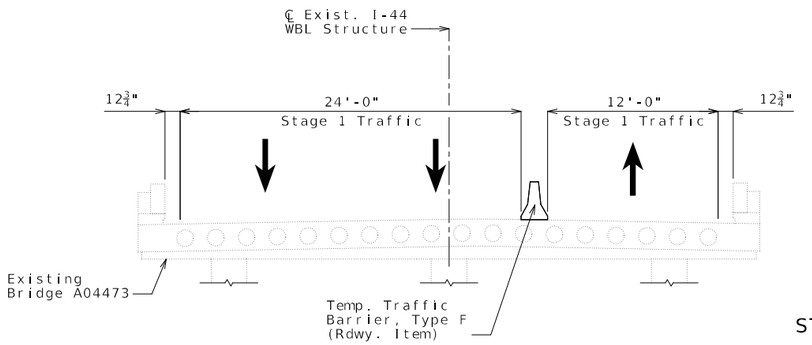
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

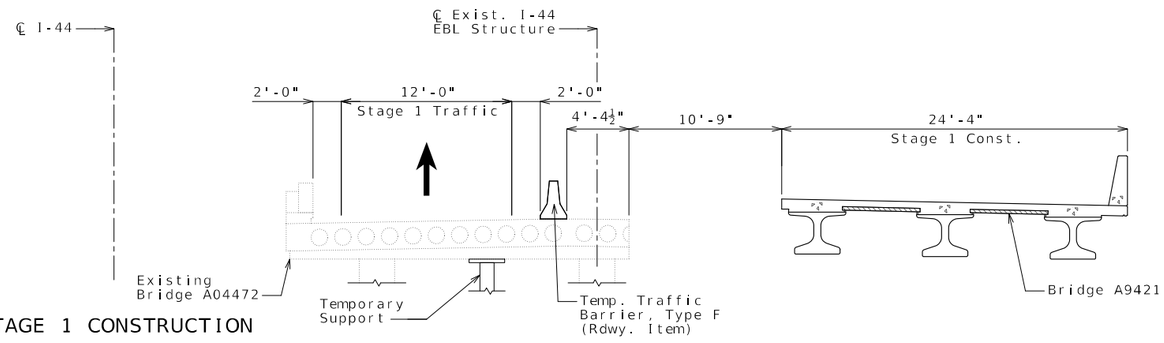
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



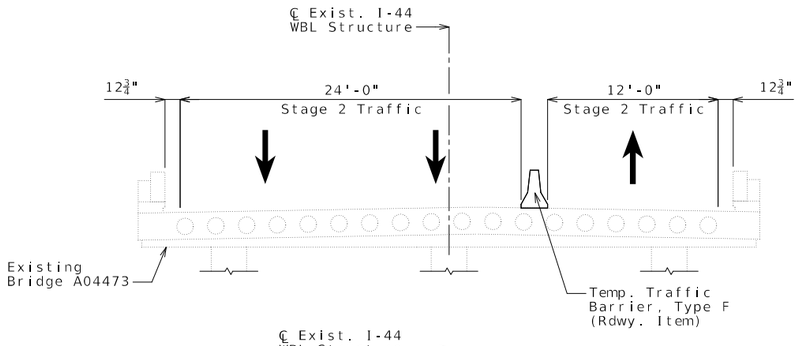


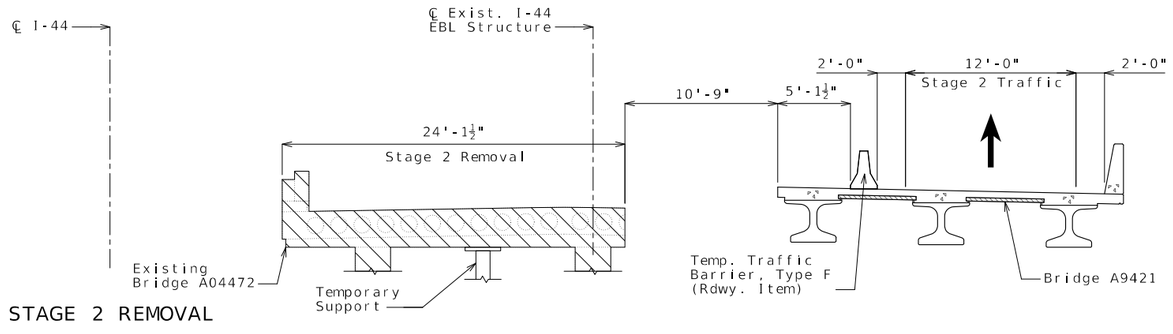
STAGE 1 REMOVAL



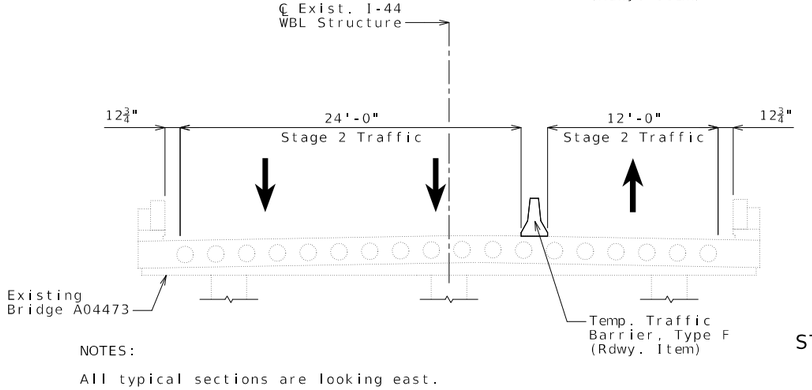


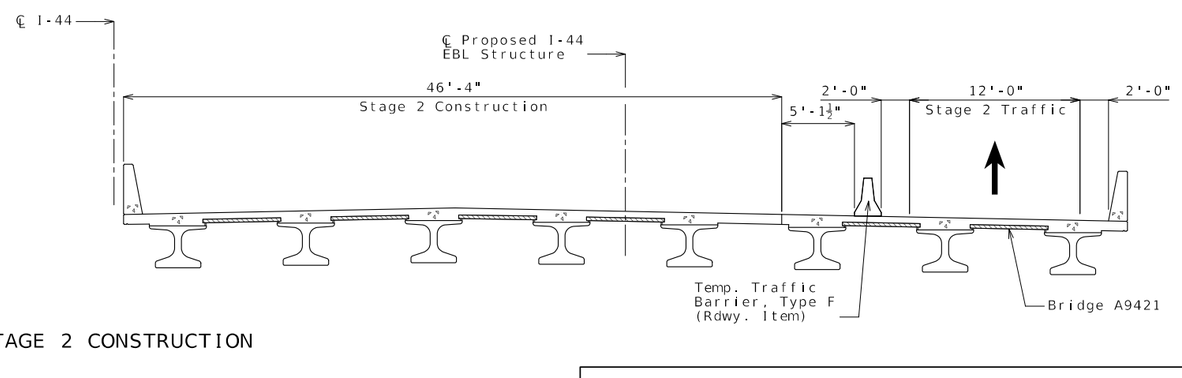
STAGE 1 CONSTRUCTION





STAGE 2 REMOVAL





STAGE 2 CONSTRUCTION

NOTES:

All typical sections are looking east.

Hatched area indicates removal of existing structures.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 30

STAGED CONSTRUCTION

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 9/6/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	3

COUNTY: GREENE

JOB NO.: JSU0076

CONTRACT ID.:

PROJECT NO.:

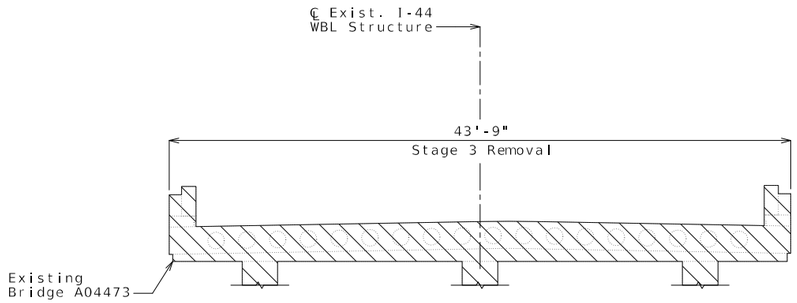
BRIDGE NO.: A9421

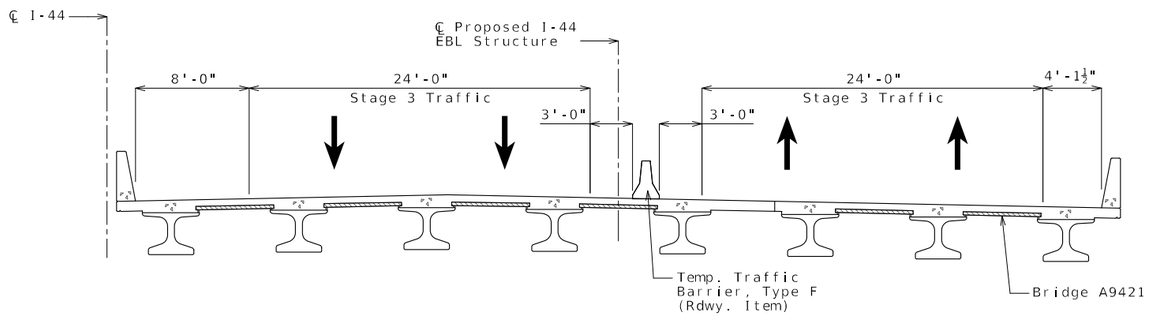
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

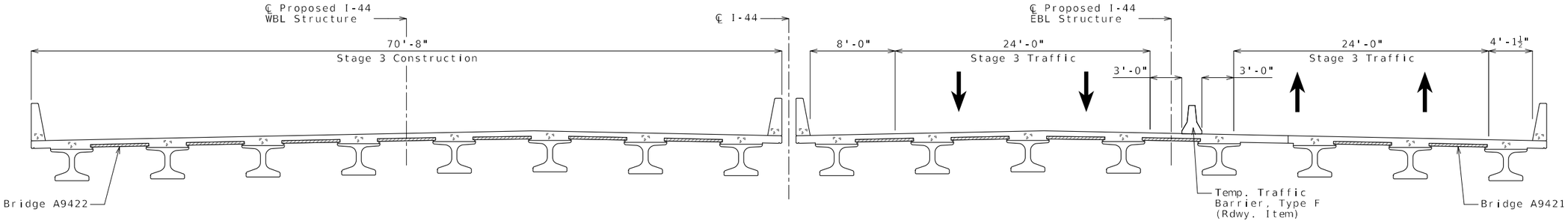
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

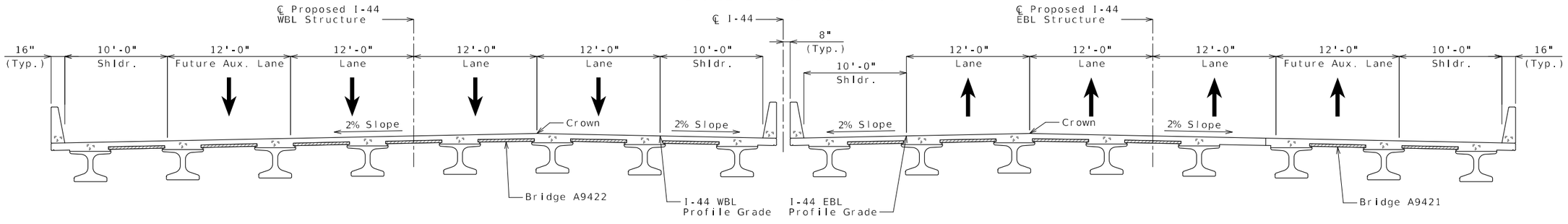




STAGE 3 REMOVAL



STAGE 3 CONSTRUCTION



FINAL SECTION THRU SLAB

NOTES:

All typical sections are looking east.

Hatched area indicates removal of existing structures.

STAGED CONSTRUCTION

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/6/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	4

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

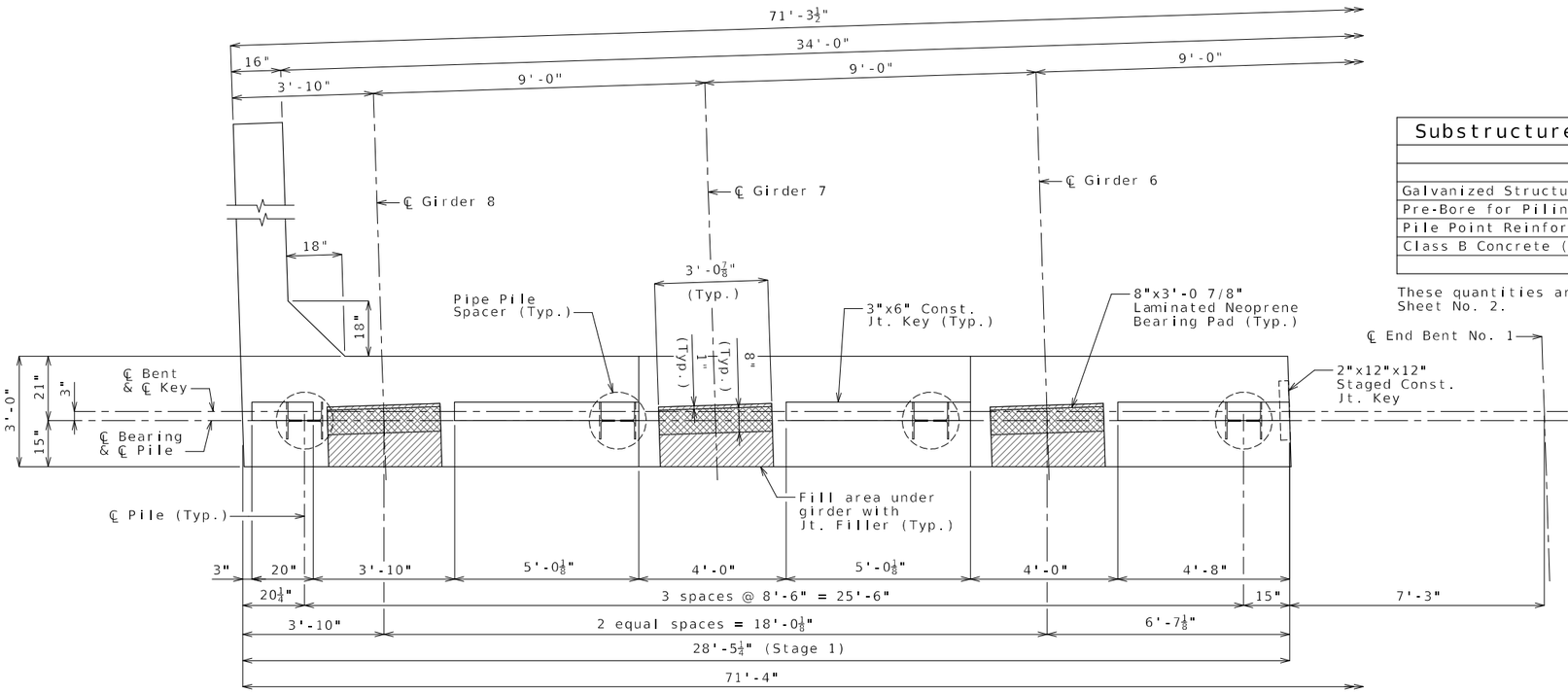
BRIDGE NO.
A9421

DESCRIPTION	DATE

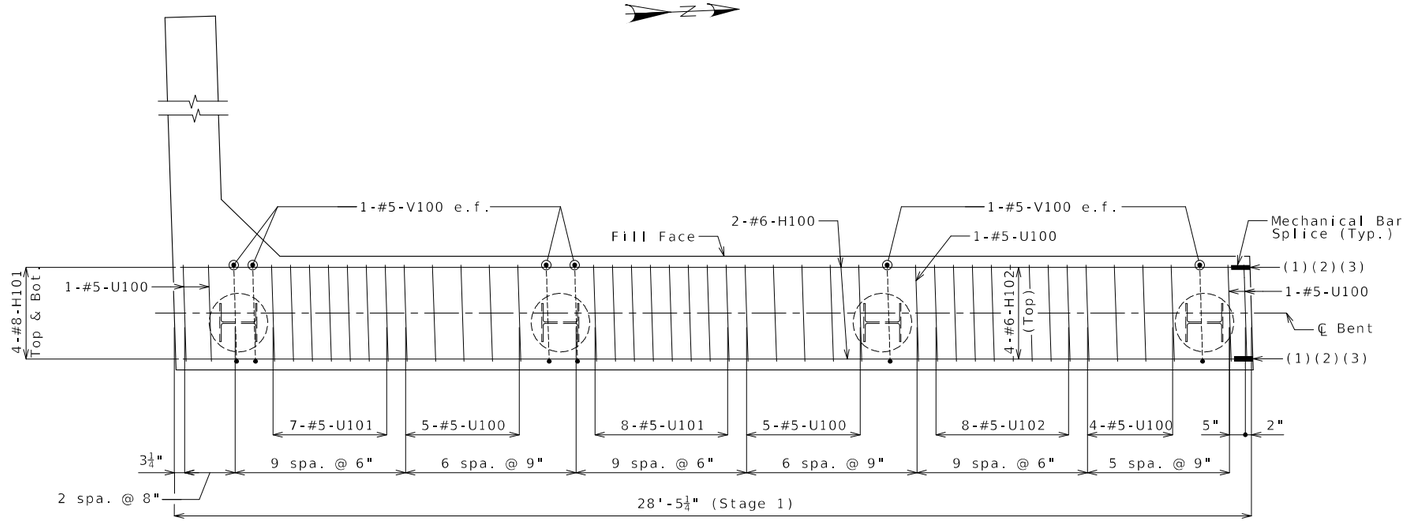
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617



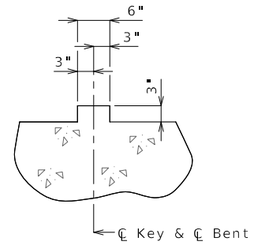
PART PLAN OF BEAM



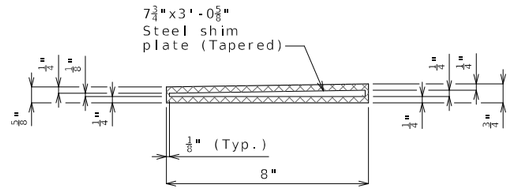
PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

Substructure Quantity Table for End Bent No. 1		
Item		Quantity
Galvanized Structural Steel Piles (12 in.)	linear foot	244
Pre-Bore for Piling	linear foot	108
Pile Point Reinforcement	each	9
Class B Concrete (Substructure)	cu. yard	29.1

These quantities are included in the Estimated Quantities table on Sheet No. 2.



SECTION THRU KEY



TYPICAL SECTION THRU
8"X3'-0 7/8"X11/16"
LAMINATED NEOPRENE BEARING PAD
(8 Required)

NOTES:

Work this sheet with Sheets No. 6 thru 9.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) 4-MBS H101-H104 Top & Bot.
(2) 2-MBS H100-H103 Each Face
(3) 4-MBS H102-H105 Top

END BENT NO. 1
BEAM DETAILS 1 OF 2

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

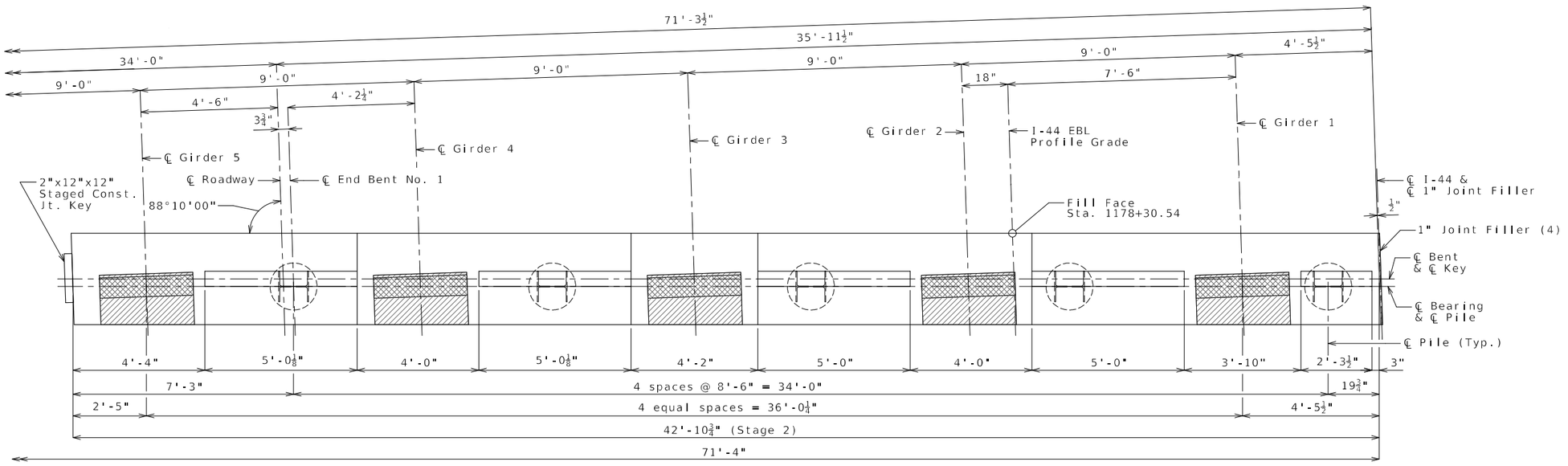
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/6/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 5
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9421

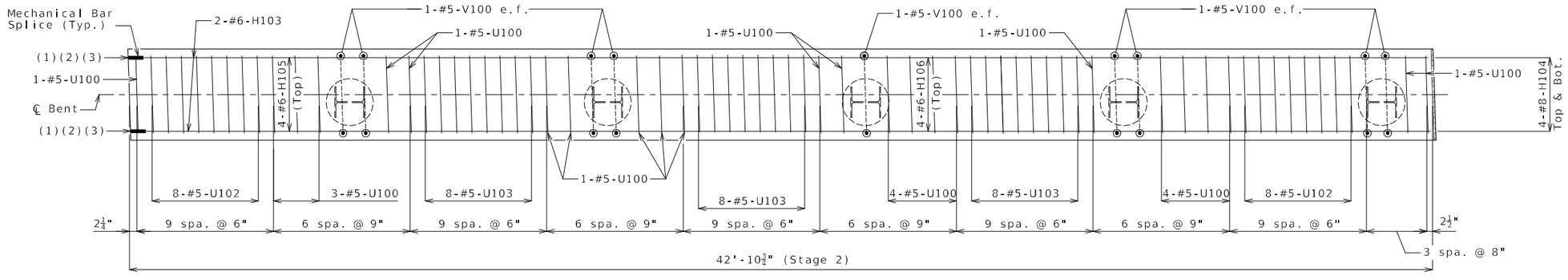
DESCRIPTION | DATE | REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617



PART PLAN OF BEAM



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5 and 7 thru 9.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) 4-MBS H101-H104 Top & Bot.
(2) 2-MBS H100-H103 Each Face
(3) 4-MBS H102-H105 Top
(4) Seal joint between vertical face of EB and WB bearing beams with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6 of 30

END BENT NO. 1
BEAM DETAILS 2 OF 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	6

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9421

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

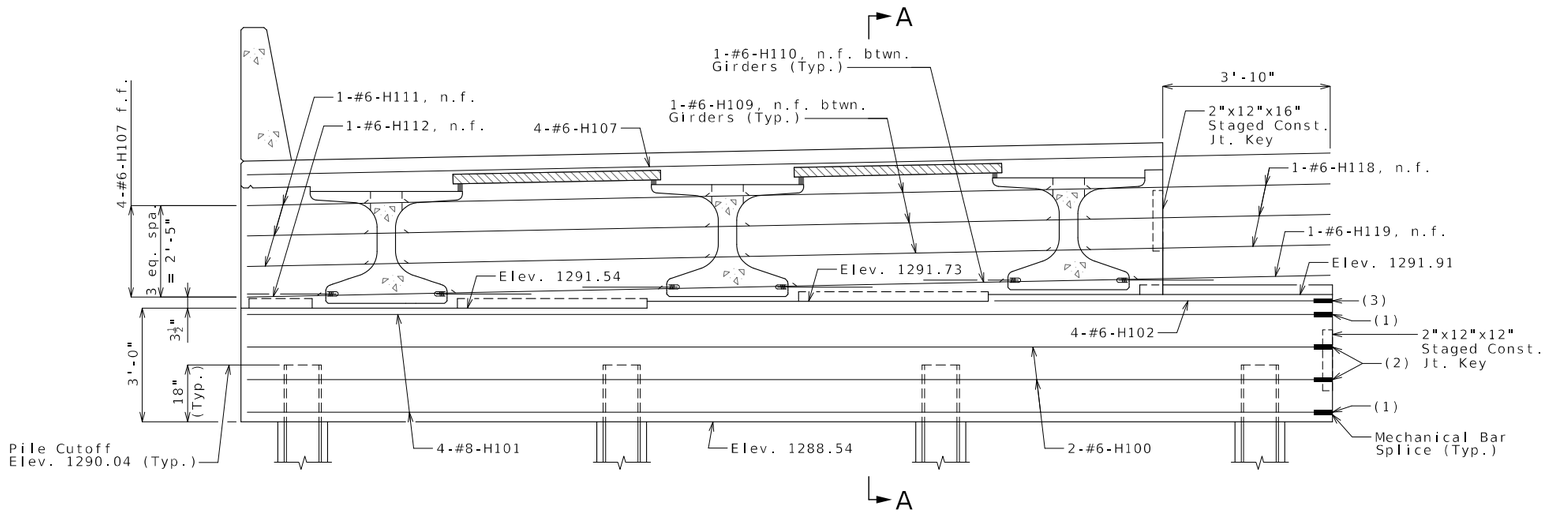
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165

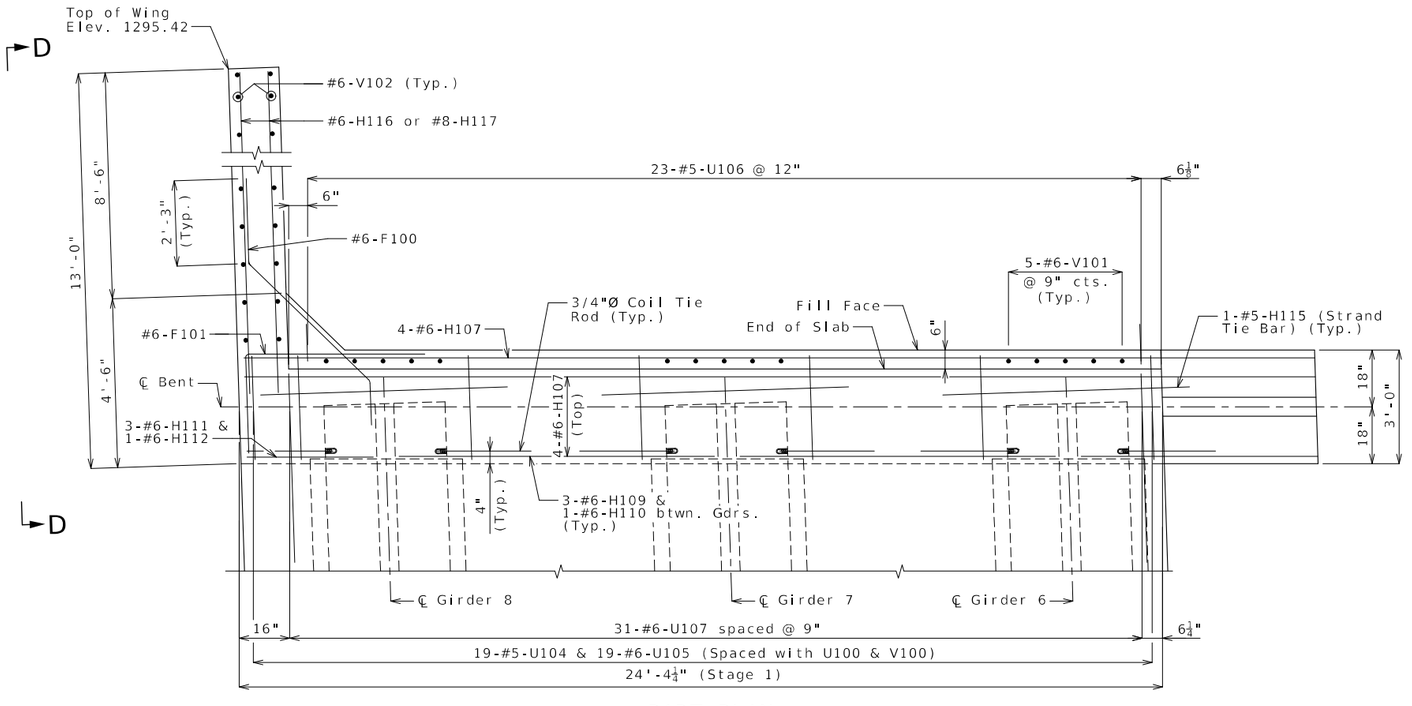
BMcD Project No. 146617

REV.

c:\bmcd_lib\pw_connect\trn\d0171022\B_A9421_006_JSU0076.dgn 8:36:48 AM 9/6/2024



SECTION NEAR END BENT
(Looking Back Station)



PART PLAN
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5, 6, 8 & 9.

For Section A-A see Sheet No. 9.

The #6-F100 shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H115, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) 4-MBS H101-H104 Top & Bot.
(2) 2-MBS H100-H103 Each Face
(3) 4-MBS H102-H105 Top

END BENT NO. 1
DIAPHRAGM DETAILS 1 of 2

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 9/6/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 7
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9421

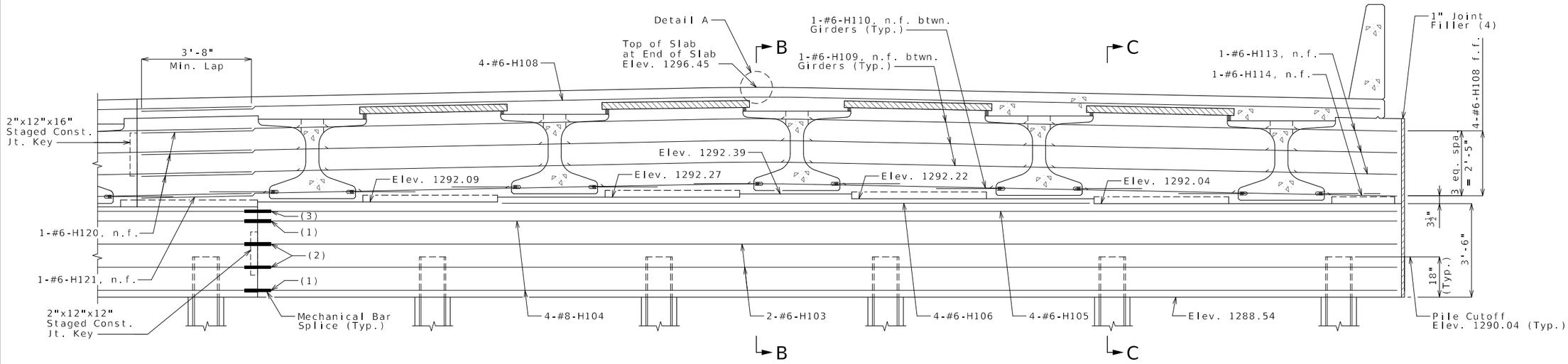
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

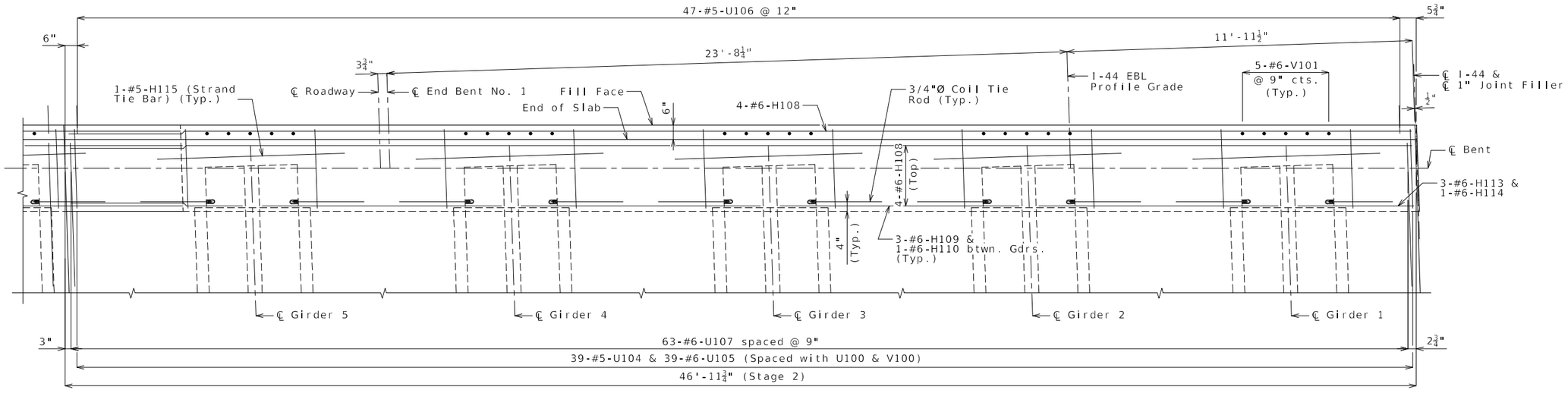
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171022\B_A9421_007_JSU0076.dgn 8:37:00 AM 9/6/2024



SECTION NEAR END BENT
(Looking Back Station)



PART PLAN
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5 thru 7 & 9.

For Section A-A see Sheet No. 9.

For Detail A see Sheet No. 21.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H115, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) 4-MBS H101-H104 Top & Bot.
(2) 2-MBS H100-H103 Each Face
(3) 4-MBS H102-H105 Top
(4) Seal joint between vertical face of EB and WB bearing beams and diaphragms with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 30

END BENT NO. 1
DIAPHRAGM DETAILS 2 of 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

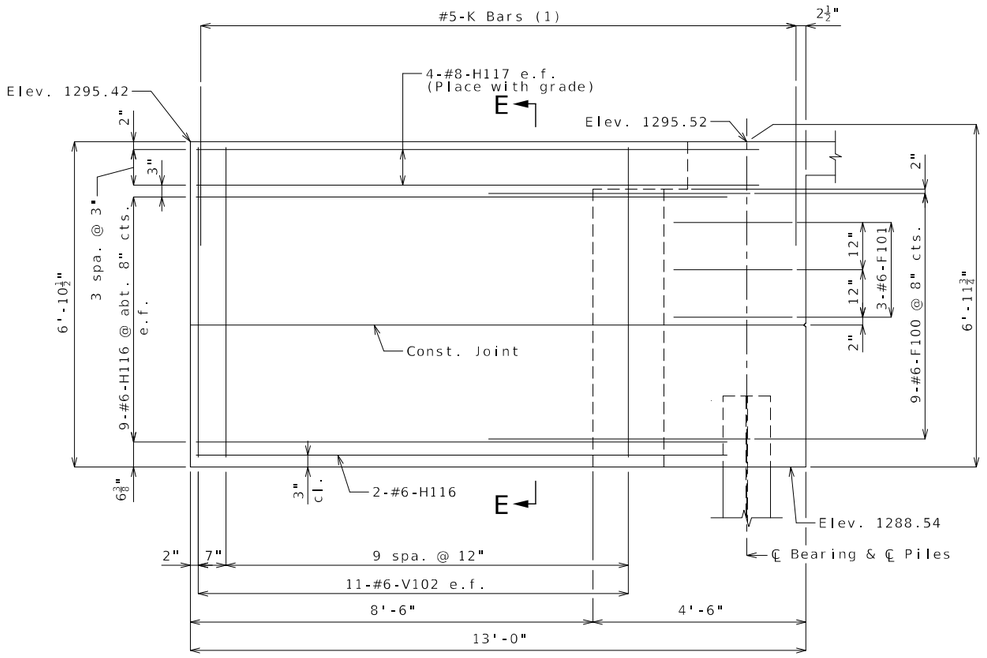
DATE PREPARED	
9/6/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	8
COUNTY	
GREENE	
JOB NO.	
JSU0076	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
A9421	

DESCRIPTION	DATE

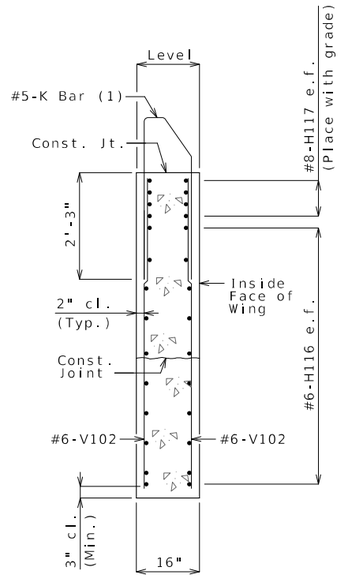
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

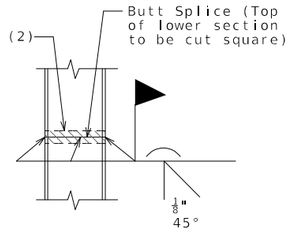
REV.



ELEVATION D-D



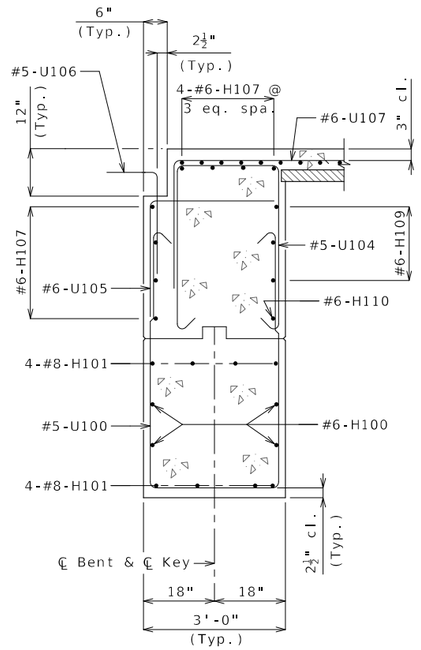
SECTION E-E



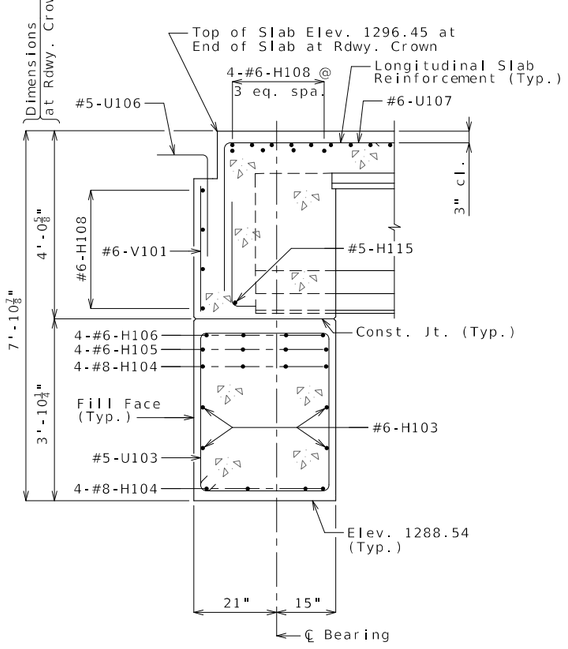
STEEL PILE SPLICE

(If required)

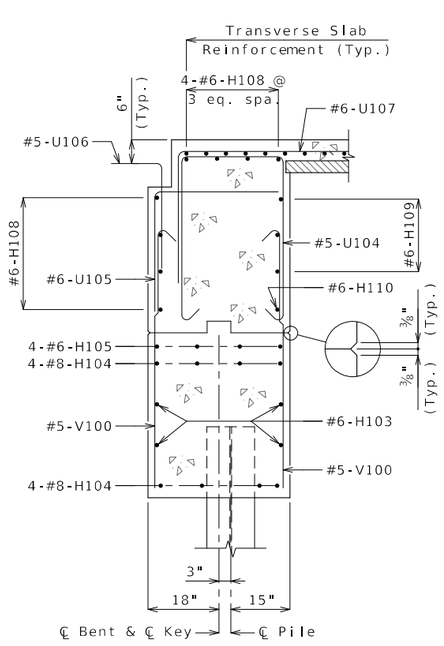
(2) Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

(1) For reinforcement of the Type D Barrier at End Bents, see Sheet No. 23.

e.f. denotes each face.

For details of bridge approach slab, see Sheet No. 24.

Work this sheet with Sheets No. 5 thru 8.

END BENT NO. 1
WING DETAILS & SECTIONS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9 of 30

8:37:24 AM 9/6/2024

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	9

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

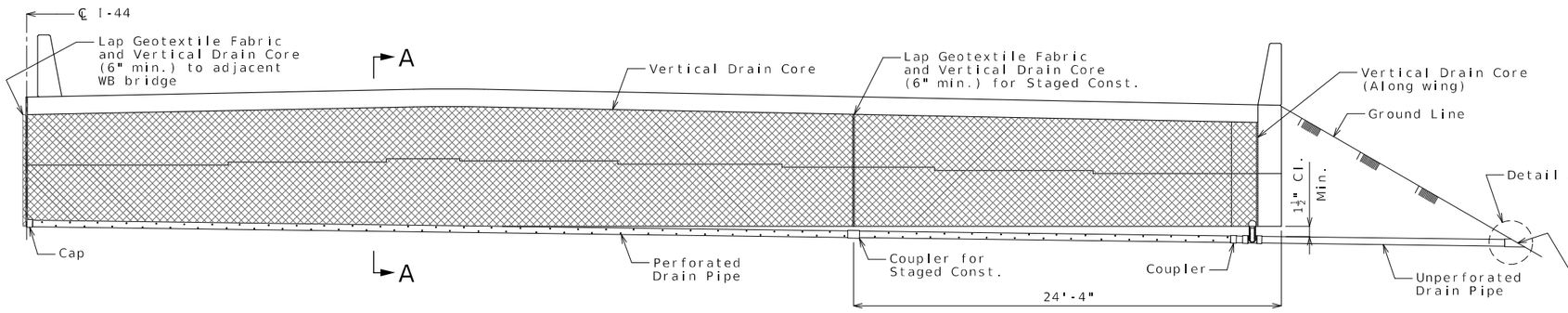
BRIDGE NO.
A9421

REV.	DESCRIPTION	DATE

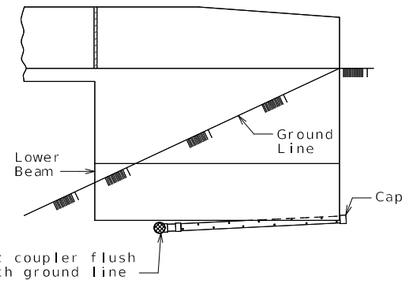
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

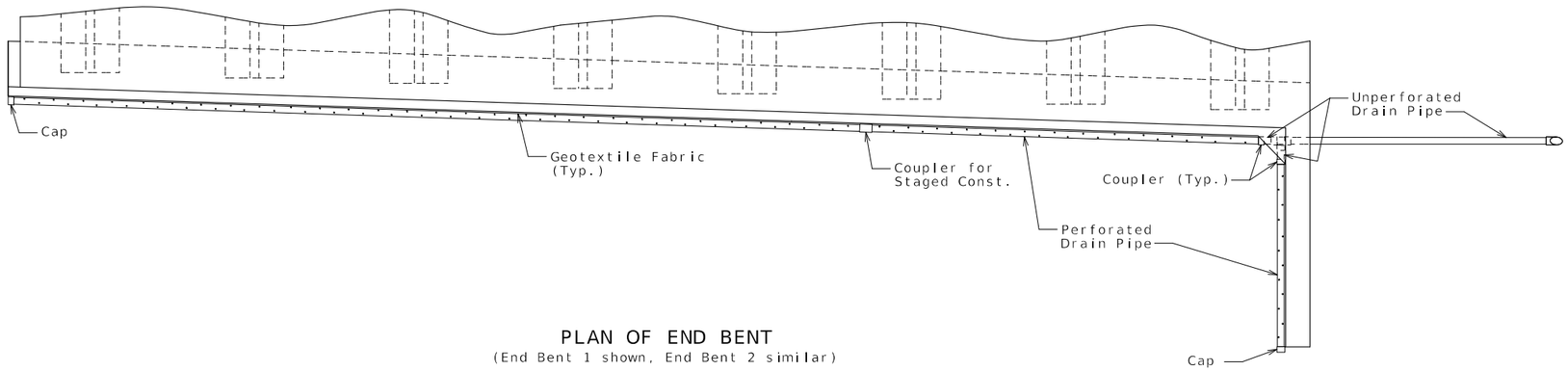
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617



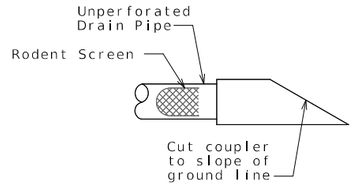
ELEVATION OF END BENT



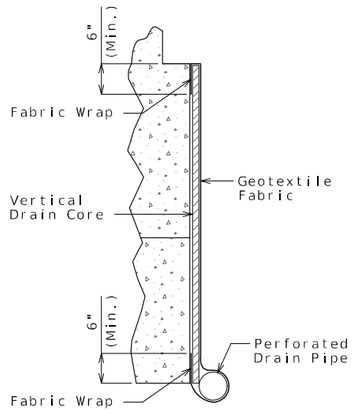
ELEVATION OF WING



PLAN OF END BENT
(End Bent 1 shown, End Bent 2 similar)



DETAIL A



PART SECTION A-A
(Section thru wing similar)

General Notes:

All drain pipe shall be sloped 1 to 2 percent.

Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.

Drain pipe shall be placed at fill face of end bent and inside face of wings. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.

Perforated pipe shall be placed at fill face side and inside face of wings at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.

VERTICAL DRAIN AT END BENTS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

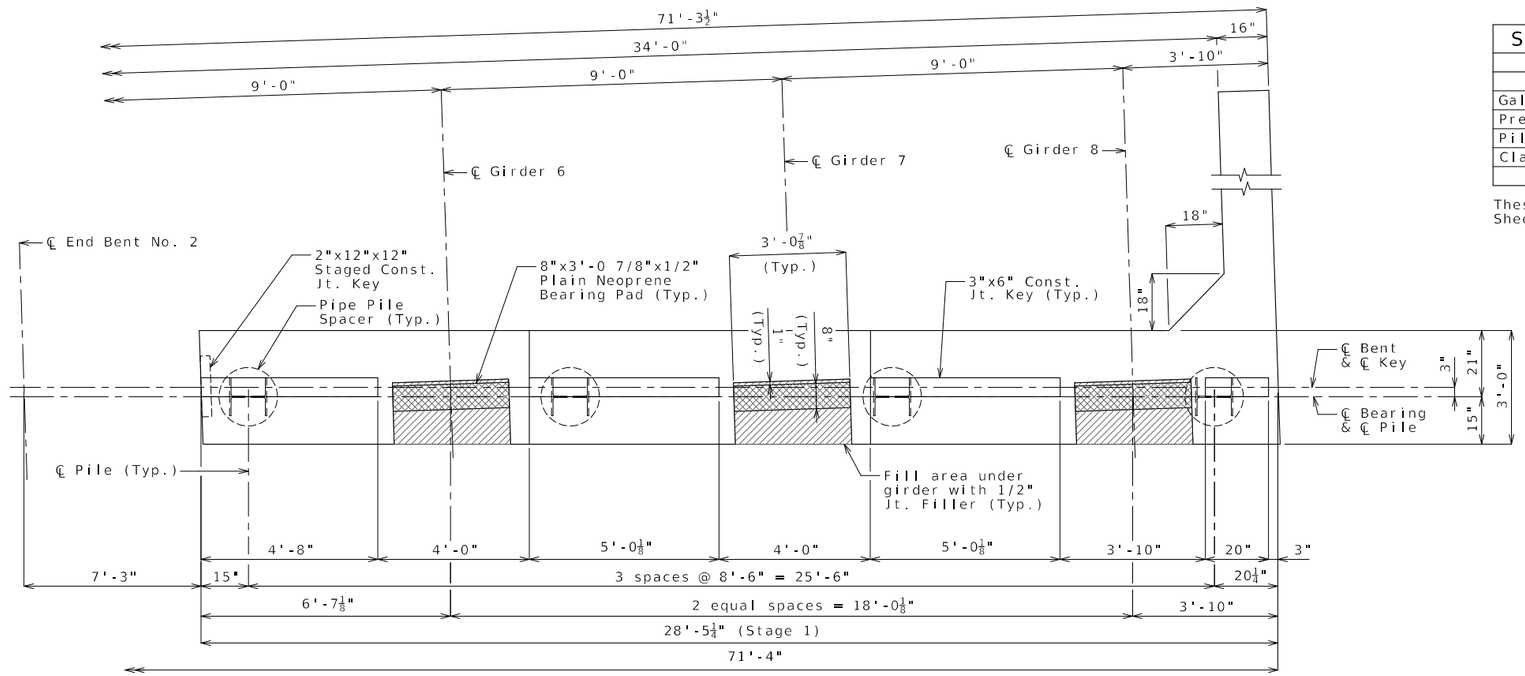
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/6/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 10
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9421

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

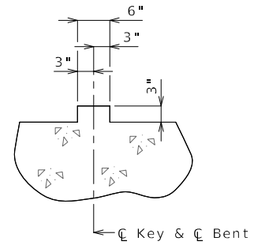
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



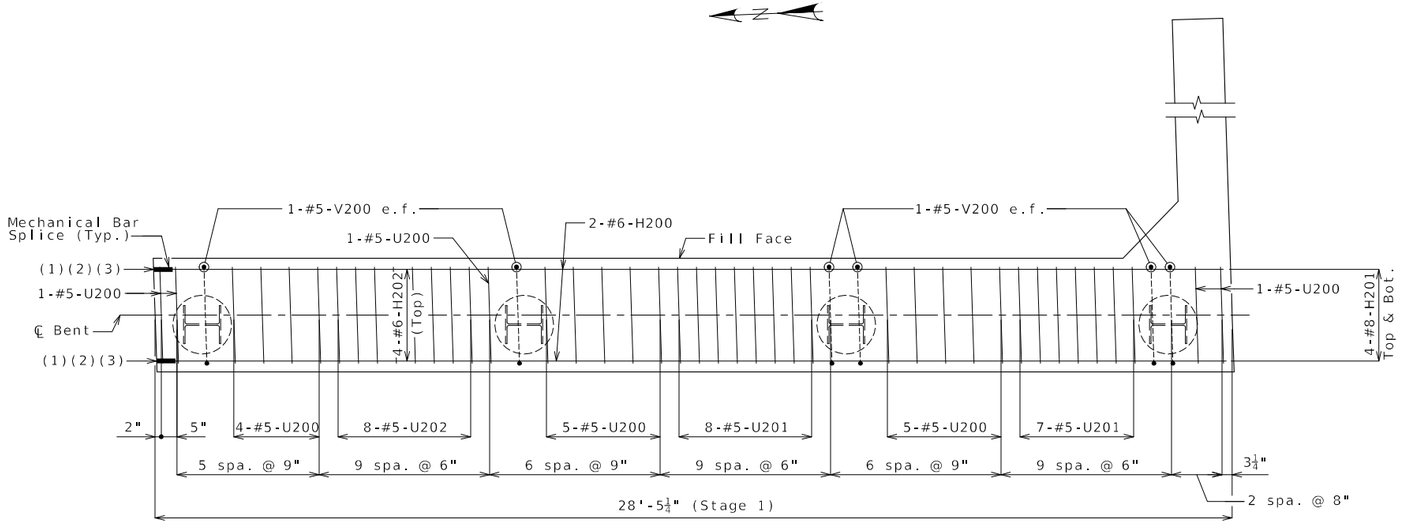
PART PLAN OF BEAM

Substructure Quantity Table for End Bent No. 2		
Item		Quantity
Galvanized Structural Steel Piles (12 in.)	linear foot	248
Pre-Bore for Piling	linear foot	108
Pile Point Reinforcement	each	9
Class B Concrete (Substructure)	cu. yard	29.1

These quantities are included in the Estimated Quantities table on Sheet No. 2.



SECTION THRU KEY



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 12 thru 15.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) 4-MBS H201-H204 Top & Bot.
(2) 2-MBS H200-H203 Each Face
(3) 4-MBS H202-H205 Top

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 11 of 30

END BENT NO. 2
BEAM DETAILS 1 OF 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	11

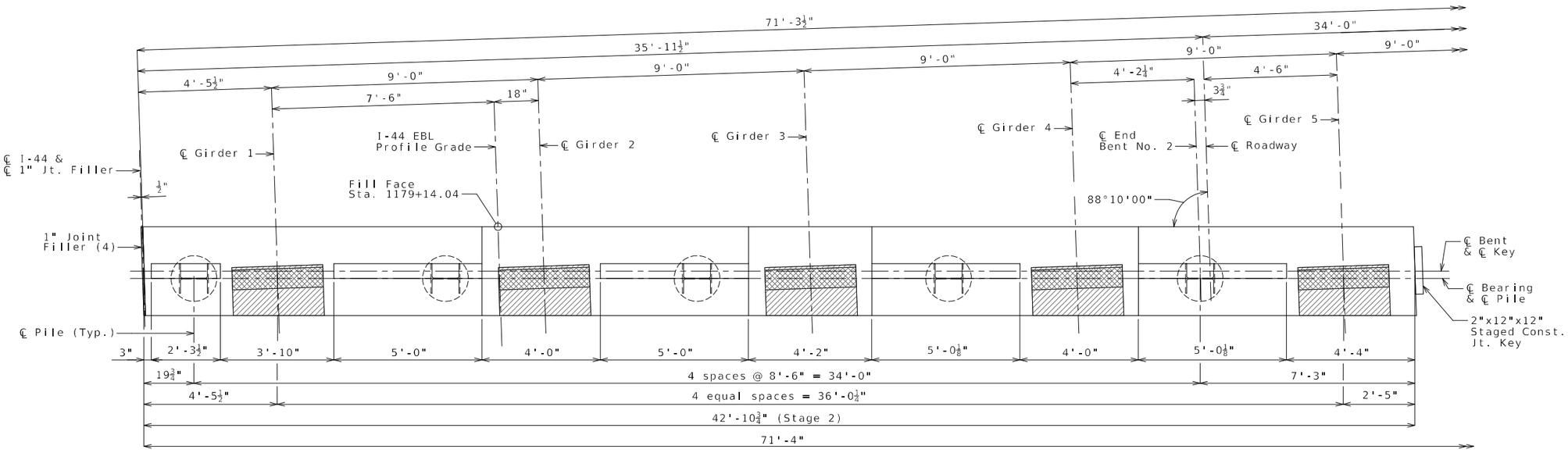
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9421

REV.	DESCRIPTION	DATE

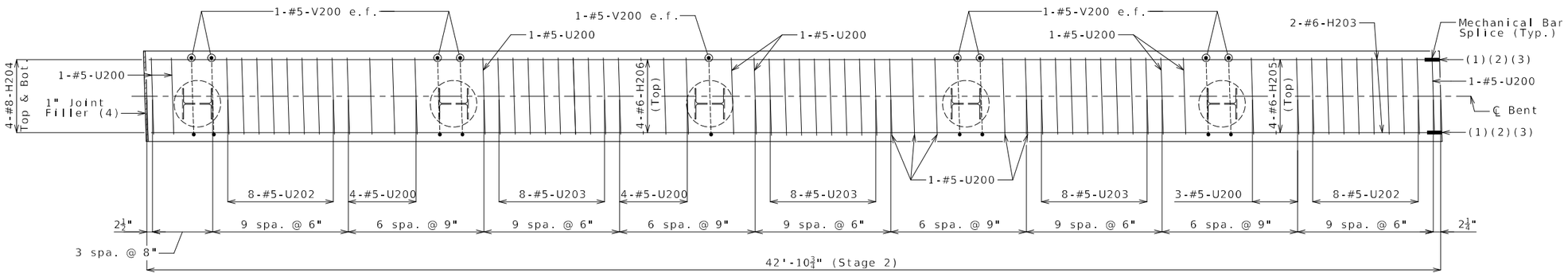
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171022\B_A9421_011_JSU0076.dgn 8:37:48 AM 9/6/2024



PART PLAN OF BEAM



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 11 & 13 thru 15.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) 4-MBS H201-H204 Top & Bot.
(2) 2-MBS H200-H203 Each Face
(3) 4-MBS H202-H205 Top
(4) Seal joint between vertical face of EB and WB bearing beams with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

END BENT NO. 2
BEAM DETAILS 2 OF 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/6/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	12

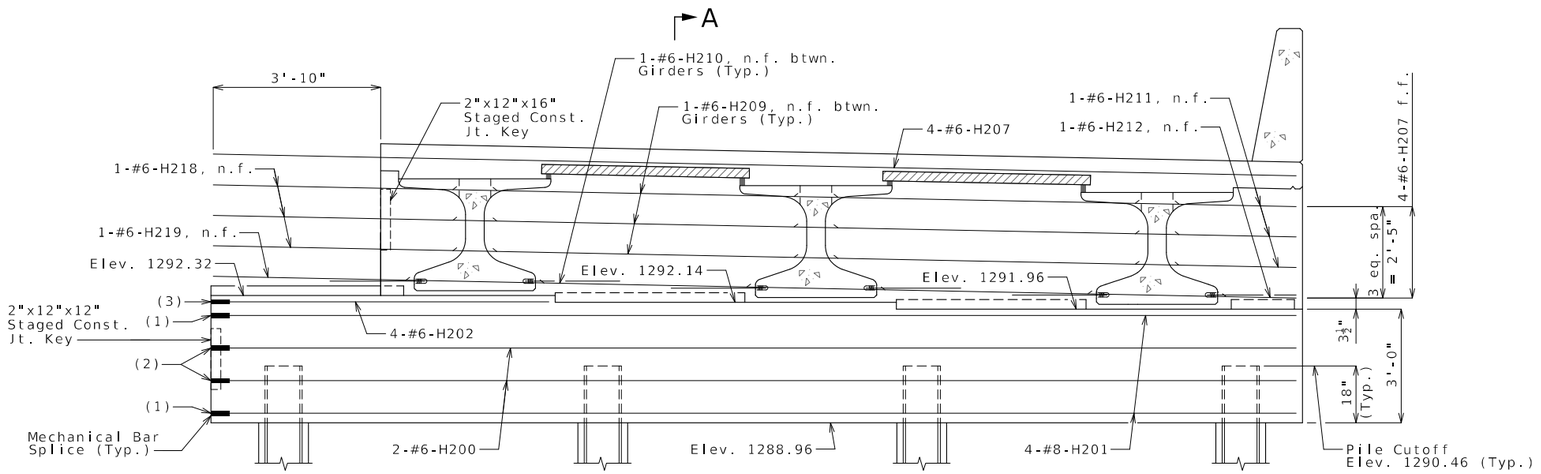
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9421

REV.	DESCRIPTION	DATE

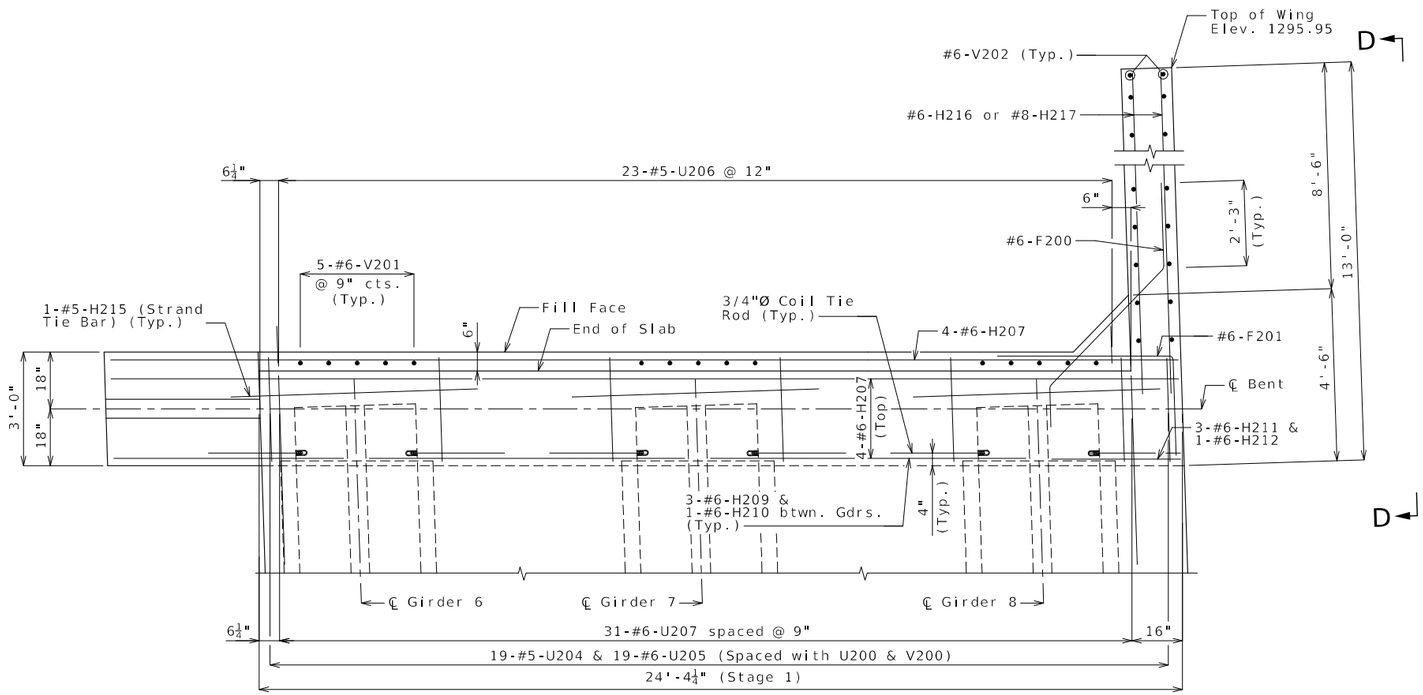
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171022\B_A9421_012_JSU0076.dgn 8:38:00 AM 9/6/2024



SECTION NEAR END BENT
(Looking Ahead Station)



PART PLAN
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 11, 12, 14 & 15.

For Section A-A see Sheet No. 15.

The #6-F200 shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H215, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) 4-MBS H201-H204 Top & Bot.
(2) 2-MBS H200-H203 Each Face
(3) 4-MBS H202-H205 Top

END BENT NO. 2
DIAPHRAGM DETAILS 1 of 2

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	13

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9421

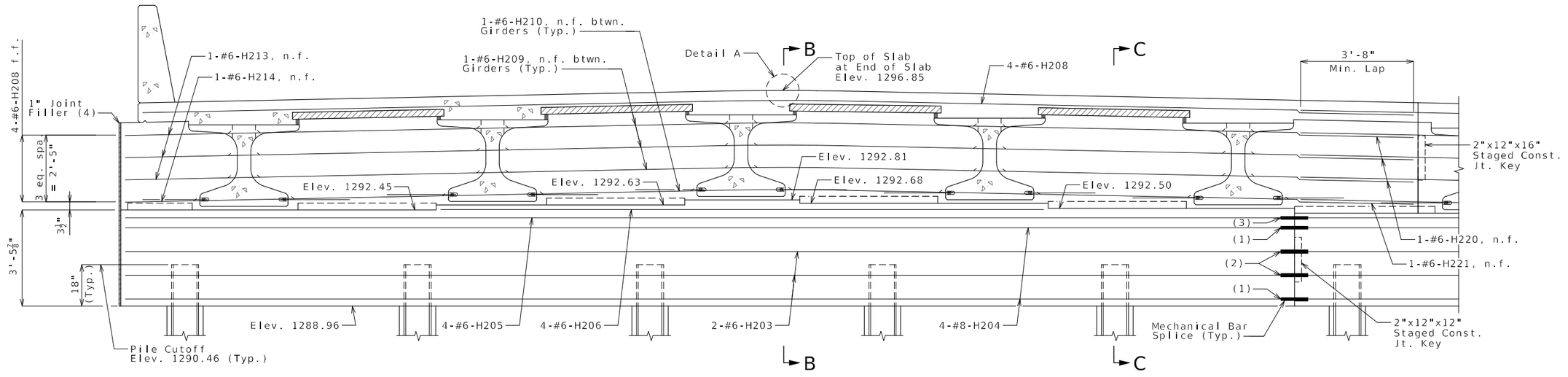
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

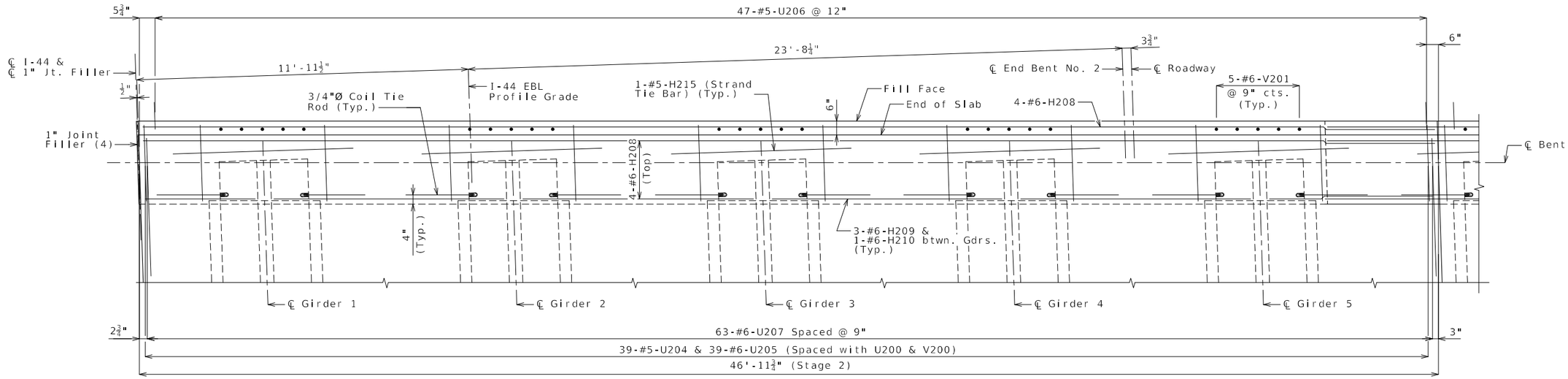
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171022\B_A9421_013_JSU0076.dgn 8:38:11 AM 9/6/2024



SECTION NEAR END BENT
(Looking Ahead Station)



PART PLAN
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No.11 thru 13 & 15.

For Section A-A see Sheet No.15.

For Detail A see Sheet No. 21.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H215, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No.10.

For details of bridge approach slab, see Sheet No.24.

f.f. denotes far face
n.f. denotes near face

(1) 4-MBS H201-H204 Top & Bot.
(2) 2-MBS H200-H203 Each Face
(3) 4-MBS H202-H205 Top
(4) Seal joint between vertical face of EB and W8 bearing beams and diaphragms with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 14 of 30

END BENT NO. 2
DIAPHRAGM DETAILS 2 of 2

c:\bmcd_lib\pw_connect\trn\d0171022\B_A9421_014_JSU0076.dgn 8:38:23 AM 9/6/2024

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	14

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

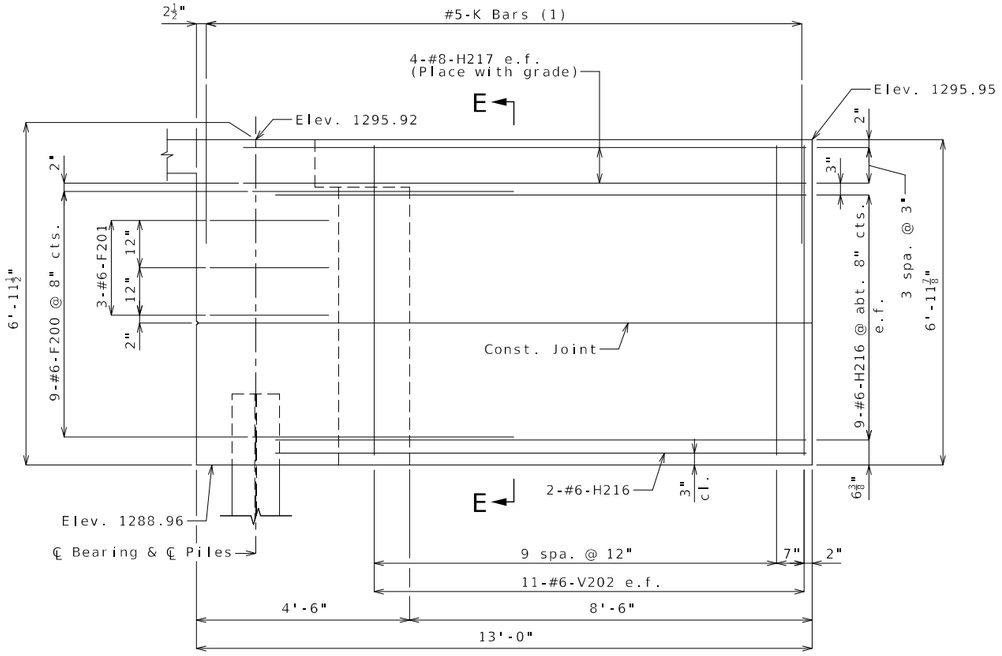
BRIDGE NO.
A9421

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

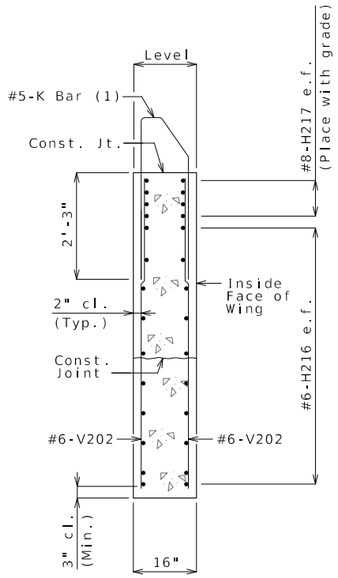
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

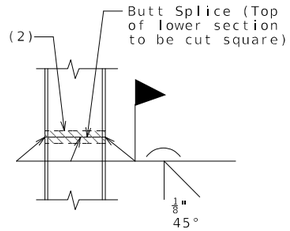
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



ELEVATION D-D



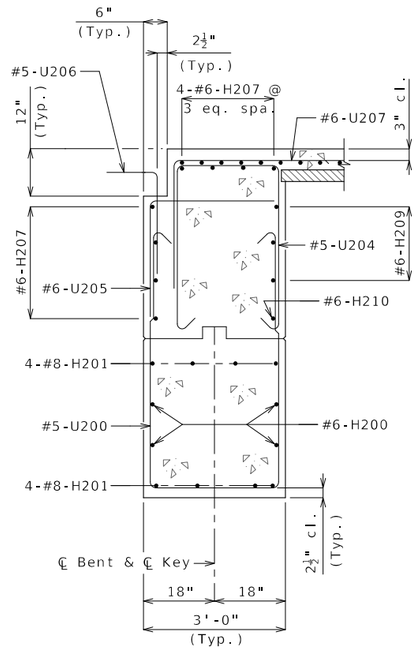
SECTION E-E



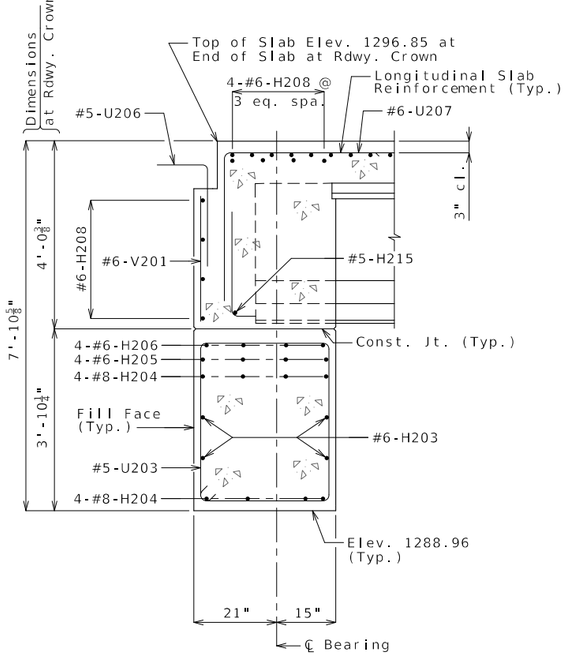
STEEL PILE SPLICE

(If required)

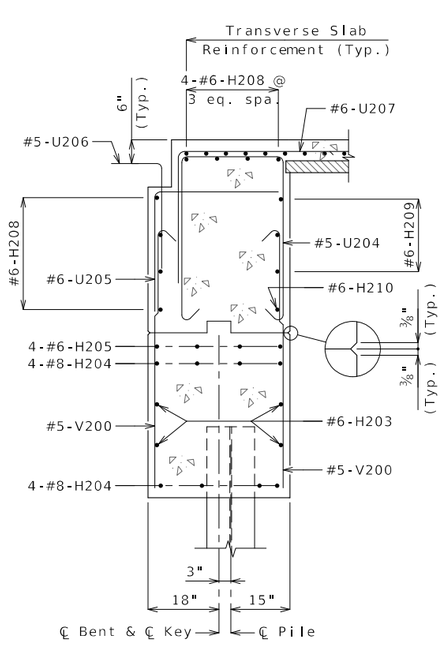
(2) Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

(1) For reinforcement of the Type D Barrier at End Bent, see Sheet No. 23.

e.f. denotes each face.

For details of bridge approach slab, see Sheet No. 24.

Work this sheet with Sheets No. 11 thru 14.

END BENT NO. 2
WING DETAILS & SECTIONS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 15 of 30

8:38:34 AM 9/6/2024

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	15

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9421

DESCRIPTION	DATE

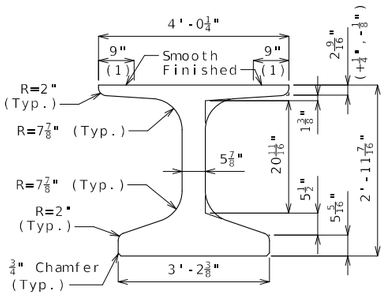
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

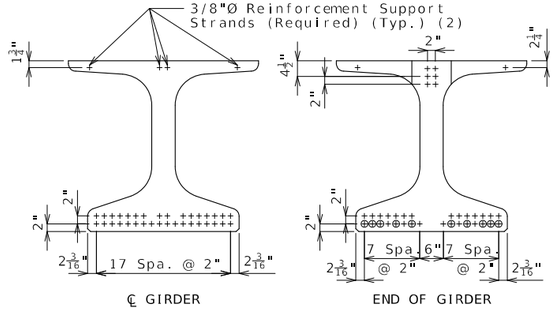
REV.

(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.



DIMENSIONS
AT MID SPAN

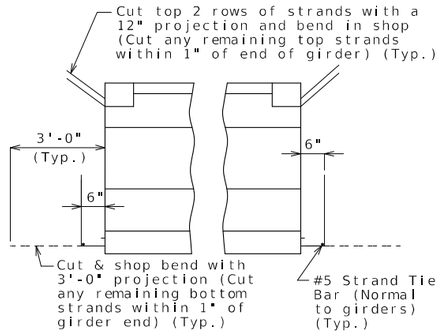
(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.



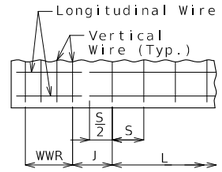
STRAND ARRANGEMENT

+ Indicates prestressing strand.

o Indicates cut & shop bend with 3'-0" projection.



STRANDS AT GIRDER ENDS



WELDED WIRE PLACEMENT

S = Vertical wire spacing

L = Length of WWR mats

J = Distance between WWR mats

Bill of Reinforcing Steel

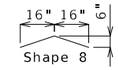
Bars Each Girder

No.	Size/Mark		Length	Shape
102	3	G1	2'-10"	8
2	4	G3	3'-10¼"	20

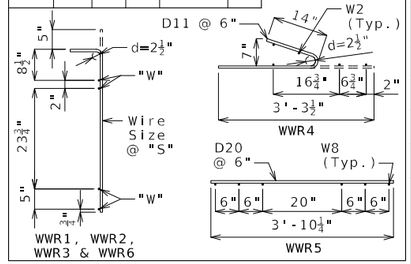
Welded Wire Each Girder

Mark	Size	S	W	L	J
WWR1	D31	4"	W12	6'-4"	4"
WWR2	D31	12"	W12	24'-0"	12"
WWR3	D31	2'-0"	W12	6'-0"	12"
WWR6	D31	2"	W12	16"	3½"

Bending Diagrams



Shape 20



All dimensions are out to out.

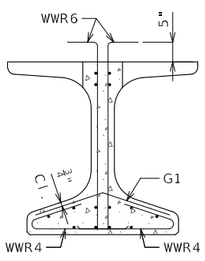
Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Actual bar lengths are measured along centerline of bar to the nearest inch.

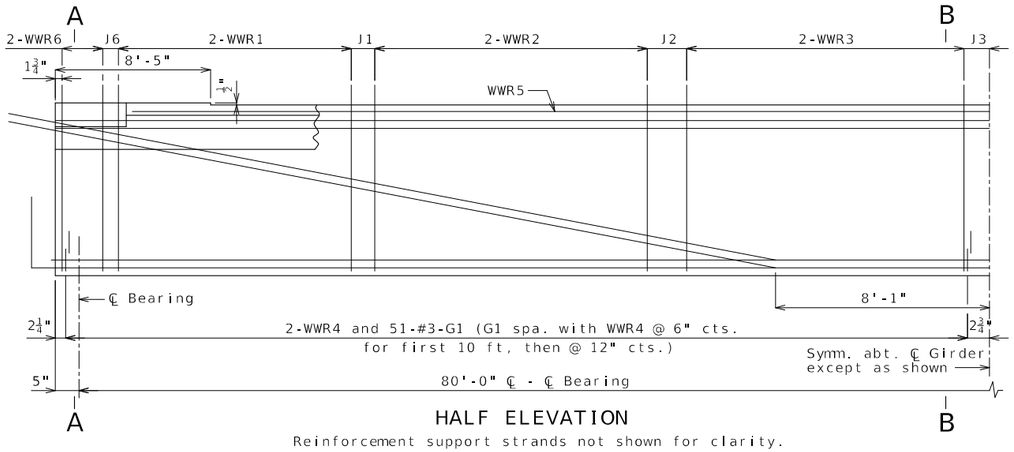
Minimum clearance to reinforcing shall be 1", unless otherwise shown.

All bar reinforcement shall be Grade 60.

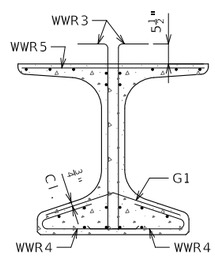
WWR shall not be epoxy coated.



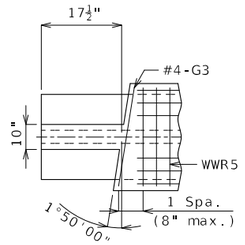
SECTION A-A
Strands not shown for clarity.



HALF ELEVATION
Reinforcement support strands not shown for clarity.



SECTION B-B
Strands not shown for clarity.



TOP FLANGE BLOCKOUT

General Notes:

Concrete for prestressed beams shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 34 strands, 0.6"Ø Grade 270, with an initial prestress force of 1494 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

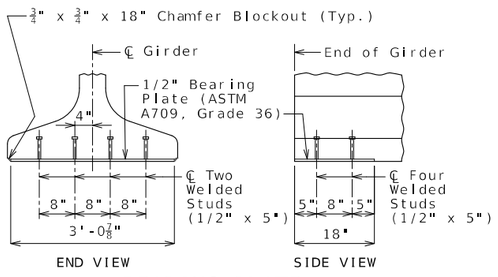
Exterior and interior girders are the same except for coil ties and application of bond breaker.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. 19.

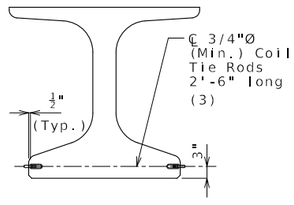
For location of coil ties at integral bents, see Sheets No. 7, 8, 13 and 14.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.



END VIEW SIDE VIEW

BEARING PLATE



COIL TIES

(3) 2'-3" at exterior face of Girder 8 at end bents

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	16

COUNTY GREENE

JOB NO. JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9421

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

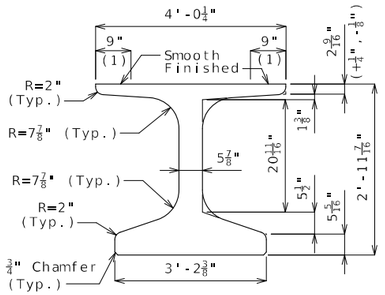
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

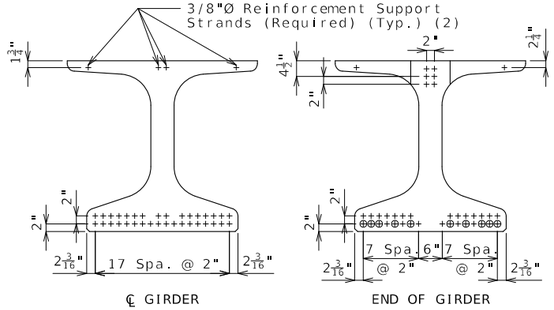
NU-GIRDERS - SPAN (1-2)

(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.



DIMENSIONS
AT MID-SPAN

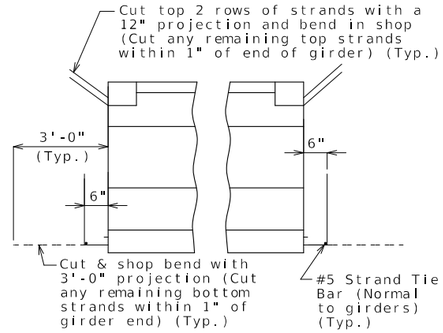
(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.



STRAND ARRANGEMENT

+ Indicates prestressing strand.

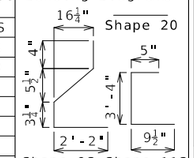
o Indicates cut & shop bend with 3'-0" projection.



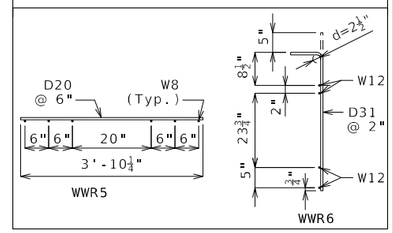
STRANDS AT GIRDER ENDS

Bill of Reinforcing Steel - Each Girder			
No.	Size/ Mark	Length	Shape
180	5 B1	4'-4"	11S
200	4 D1	4'-0"	9S
2	4 G3	3'-10¼"	20

Bending Diagrams



Welded Wire Reinforcement - Each Girder



All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

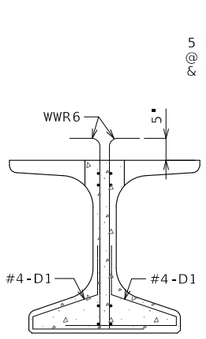
Actual bar lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be one inch.

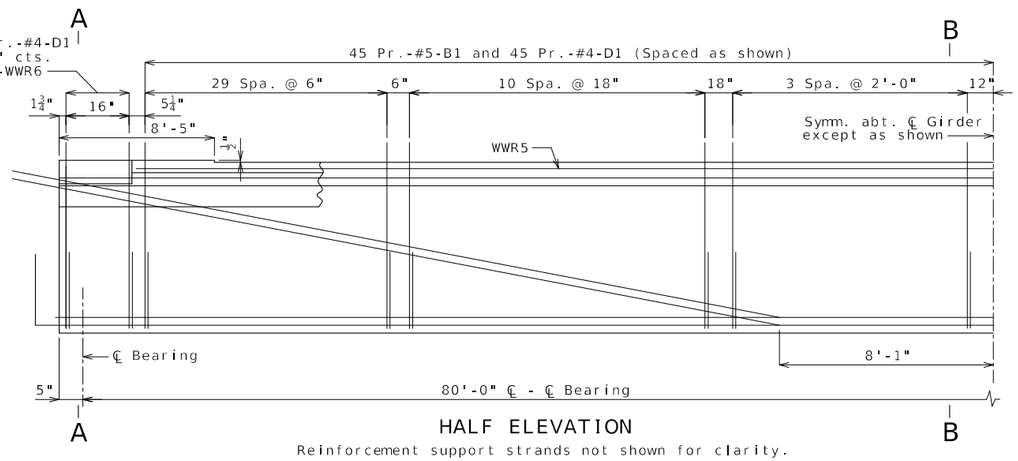
All bar reinforcement shall be Grade 60.

The two D1 bars may be furnished as one bar at the fabricator's option.

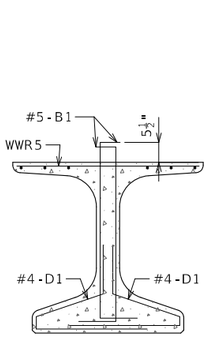
All B1 bars shall be epoxy coated.



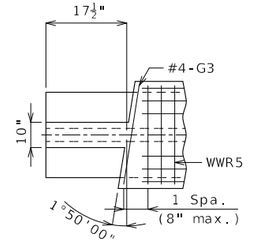
SECTION A-A
Strands not shown for clarity.



HALF ELEVATION
Reinforcement support strands not shown for clarity.



SECTION B-B
Strands not shown for clarity.



TOP FLANGE BLOCKOUT

General Notes:

Concrete for prestressed girders shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 34 strands, 0.6"Ø Grade 270, with an initial prestress force of 1494 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

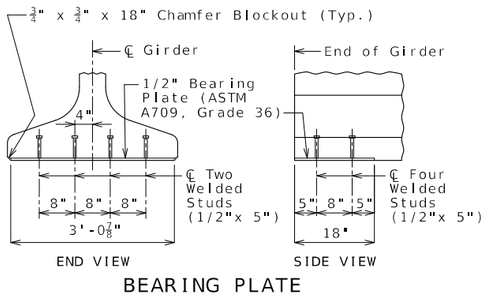
Exterior and interior girders are the same except for coil ties and application of bond breaker.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

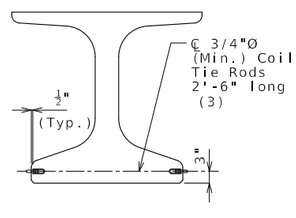
For Girder Camber Diagram, see Sheet No.19.

For location of coil ties at integral bents, see Sheets No. 7, 8, 13 and 14.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.



BEARING PLATE



COIL TIES

(3) 2'-3" at exterior face of Girder 8 at end bents

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	17

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9421

DESCRIPTION
DATE

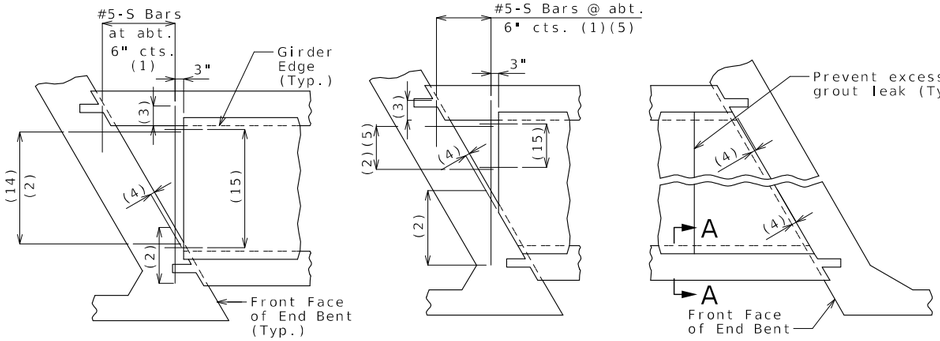
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

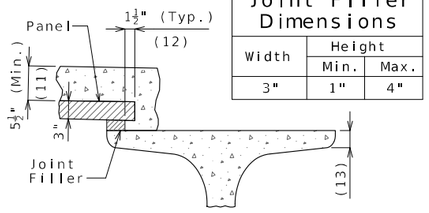
NU-GIRDERS (ALTERNATE REINFORCEMENT) - SPAN (1-2)



SQUARED END PANELS OR TRUNCATED END PANELS

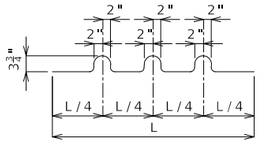
SKEWED END PANELS

PLAN SHOWING PANEL PLACEMENT



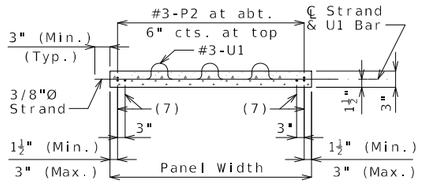
SECTION A-A

Joint Filler Dimensions		
Width	Height	
	Min.	Max.
3"	1"	4"



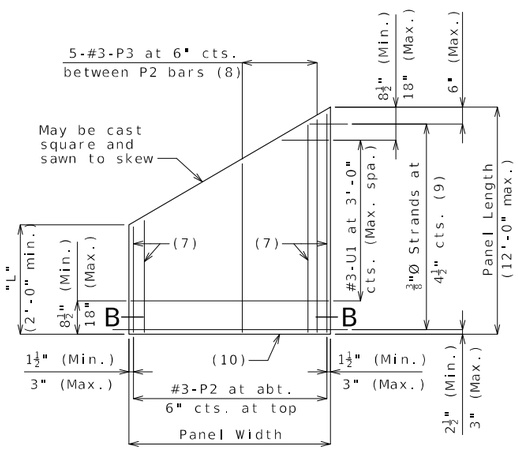
BENDING DIAGRAM FOR U1 BAR

U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars.

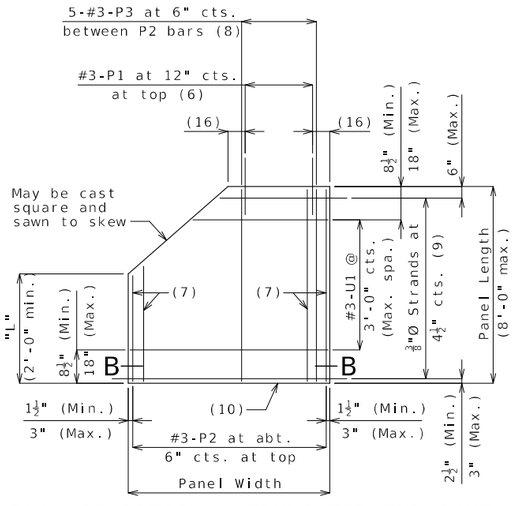


SECTION B-B

(14) #5-S Bars at abt. 9" cts. (1)
(15) #3-P1 at 12" cts. (End panels only)

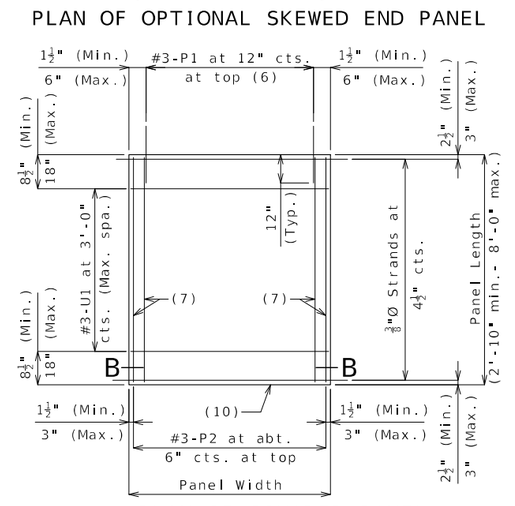


PLAN OF OPTIONAL SKEWED END PANEL



PLAN OF OPTIONAL TRUNCATED END PANEL

(16) 3" (Min.), 6" (Max.)



PLAN OF SQUARED PANEL

Reference Notes:

Plan of Panel Placement:
(1) S-bars shown are bottom steel in slab between panels and used with squared and truncated end panels only.

(2) Extend S-bars 18 inches beyond the front face of end bents for squared and truncated end panels only.

(3) Extend S-bars 9 inches beyond edge of girder (Typ.).

(4) End panels shall be dimensioned 1/2" min. to 1 1/2" max. from the inside face of diaphragm.

(5) For truncated end panels, use a min. of #5-S bars at 6" crossings in openings, or min. 4x4-W7xW7.

Plans of Panels:
(6) For end panels only, P1 bars shall be 2'-0" in length and embedded 12". P1 bars will not be required for panels at squared integral end bents.

(7) #3-P2 bars near edge of panel at bottom (under strands).

(8) Use #3-P3 bars if panel is skewed 45° or greater.

(9) Any strand 2'-0" or shorter shall have a #4 reinforcing bar on each side of it, centered between strands. Strands 2'-0" or shorter may then be debonded at the fabricator's option.

(10) Optional 1/2" x 45° Chamfer one or both sides at bottom.

Section A-A:
(11) Slab thickness over prestressed panels varies due to girder camber. In order to maintain minimum slab thickness, it may be necessary to raise the grade uniformly throughout the structure. No payment will be made for additional labor or materials required for necessary grade adjustment.

(12) Contractor shall ensure proper consolidation under and between panels.

(13) At the contractor's option, the variation in slab thickness over prestressed panels may be eliminated or reduced by increasing and varying the girder top flange thickness. Dimensions shall be shown on the shop drawings.

General Notes:

Prestressed Panels:
Concrete for prestressed panels shall be Class A-1 with f'c = 6,000 psi, f'ci = 4,000 psi.

The top surface of all panels shall receive a scored finish with a depth of scoring of 1/8" perpendicular to the prestressing strands in the panels.

Prestressing tendons shall be high-tensile strength, uncoated, seven-wire, low-relaxation strands for prestressed concrete in accordance with AASHTO M 203 Grade 270, with nominal diameter of strand = 3/8" and nominal area = 0.085 sq.in. and minimum ultimate strength = 22.95 kips (270 ksi). Larger strands may be used with the same spacing and initial tension.

Initial prestressing force = 17.2 kips/strand.

The method and sequence of releasing the strands shall be shown on the shop drawings.

Suitable anchorage devices for lifting panels may be cast in panels, provided the devices are shown on the shop drawings and approved by the engineer. Panel lengths shall be determined by the contractor and shown on the shop drawings.

When squared end panels are used at skewed bents, the skewed portion shall be cast full depth. No separate payment will be made for additional concrete and reinforcing required.

Support from diaphragm forms is required under the optional skewed end until cast-in-place concrete has reached 3,000 psi compressive strength.

Prestressed panels shall be brought to saturated surface-dry (SSD) condition just prior to the deck pour. There shall be no free standing water on the panels or in the area to be cast.

The prestressed panel quantities are not included in the table of estimated quantities for the slab.

Reinforcing Steel:
All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

If U1 bars interfere with placement of slab steel, U1 loops may be bent over, as necessary, to clear slab steel.

Deformed welded wire reinforcement (WWR) providing a minimum area of reinforcing perpendicular to strands of 0.22 sq in./ft, with spacing parallel to strands sufficient to ensure proper handling, may be used in lieu of the #3-P2 bars shown. Wire diameter shall not be larger than 0.375 inch. The above alternative reinforcement criteria may be used in lieu of the #3-P3 bars, when required, and placed over a width not less than 2 feet.

The following reinforcing steel shall be tied securely to the strands with the following maximum spacing in each direction:
#3-P2 bars at 16 inches.
WWR at 24 inches.

The #3-U1 bars shall be tied securely to #3-P2 bars, to WWR or to strands (when placed between P1 bars) at about 3-foot centers.

Minimum reinforcement steel length shall be 2'-0".

All reinforcement other than prestressing strands shall be epoxy coated.

Precast panels may be in contact with stirrup reinforcing in diaphragms.

S-bars are not listed in the bill of reinforcing.

Cost of S-bars will be considered completely covered by the contract unit price for the slab.

Joint Filler:
Joint filler shall be preformed fiber expansion joint material in accordance with Sec 1057 or expanded or extruded polystyrene bedding material in accordance with Sec 1073.

Use Slab Haunching Diagram on Sheet No. 19 for determining thickness of joint filler within the limits noted in the table of Joint Filler Dimensions.

Thicker material may be used on one or both sides of the girder to reduce cast-in-place concrete thickness to within tolerances.

The same thickness of preformed fiber expansion joint material shall be used under any one edge of any panel except at locations where top flange thickness may be stepped. The maximum change in thickness between adjacent panels shall be 1/2 inch. The polystyrene bedding material may be cut with a transition to match haunch height above top of flange.

Joint filler shall be glued to the girder. When thickness exceeds 1 1/2 inches, the joint filler shall be glued top and bottom. The glue used shall be the type recommended by the joint filler manufacturer.

Edges of panels shall be uniformly seated on the joint filler before slab reinforcement is placed.

PRESTRESSED PANELS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

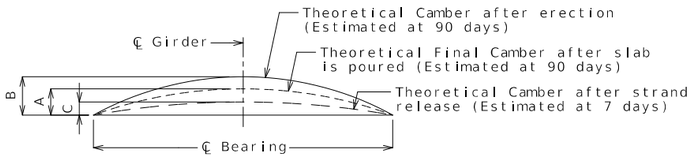
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/6/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 18
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9421

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



Girder	Span (1-2)		
	A	B	C
Exterior	3"	4⅝"	2⅝"
Interior	2⅞"		

GIRDER CAMBER DIAGRAM

Conversion Factors for Girder Camber (Estimated at 90 days):

0.1 pt. = 0.314 x 0.5 pt.
0.2 pt. = 0.593 x 0.5 pt.
0.3 pt. = 0.813 x 0.5 pt.
0.4 pt. = 0.952 x 0.5 pt.

Theoretical Bottom of Slab Elevations at Centerline of Girder (Prior to forming for slab) (Estimated at 90 days)

Girder Number	Span (1-2) (80'-0" ℄ Brg. - ℄ Brg.)										
	℄ Brg.	.10	.20	.30	.40	.50	.60	.70	.80	.90	℄ Brg.
1	1295.38	1295.48	1295.57	1295.65	1295.71	1295.76	1295.79	1295.81	1295.81	1295.80	1295.77
2	1295.56	1295.66	1295.76	1295.84	1295.90	1295.95	1295.98	1295.99	1295.99	1295.98	1295.95
3	1295.74	1295.84	1295.93	1296.01	1296.08	1296.13	1296.16	1296.17	1296.17	1296.16	1296.13
4	1295.62	1295.72	1295.81	1295.89	1295.96	1296.01	1296.04	1296.05	1296.05	1296.04	1296.01
5	1295.43	1295.54	1295.63	1295.71	1295.78	1295.82	1295.86	1295.87	1295.87	1295.85	1295.83
6	1295.25	1295.35	1295.45	1295.53	1295.59	1295.64	1295.67	1295.69	1295.69	1295.67	1295.65
7	1295.07	1295.17	1295.27	1295.35	1295.41	1295.46	1295.49	1295.51	1295.51	1295.49	1295.47
8	1294.89	1294.99	1295.08	1295.16	1295.22	1295.27	1295.30	1295.32	1295.32	1295.31	1295.29

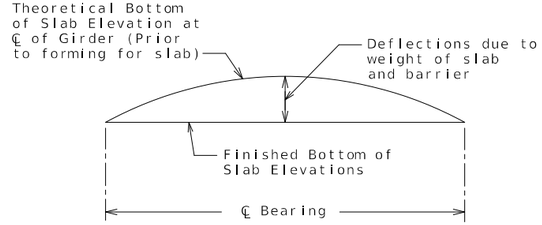
Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoretical dead load deflections due to weight of slab (including precast panel) and barrier.

THEORETICAL SLAB HAUNCHING DIAGRAM (ESTIMATED AT 90 DAYS)

If girder camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an adjustment of the slab haunches, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Concrete in the slab haunches is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Theoretical slab haunches are measured at ℄ Girder.



TYPICAL SLAB ELEVATIONS DIAGRAM

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 19 of 30

GIRDER CAMBER AND SLAB HAUNCHING

c:\bmcd_lib\pw_connect\trn\d0171022\B_A9421_019_JSU0076.dgn 8:39:24 AM 9/6/2024

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	19

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

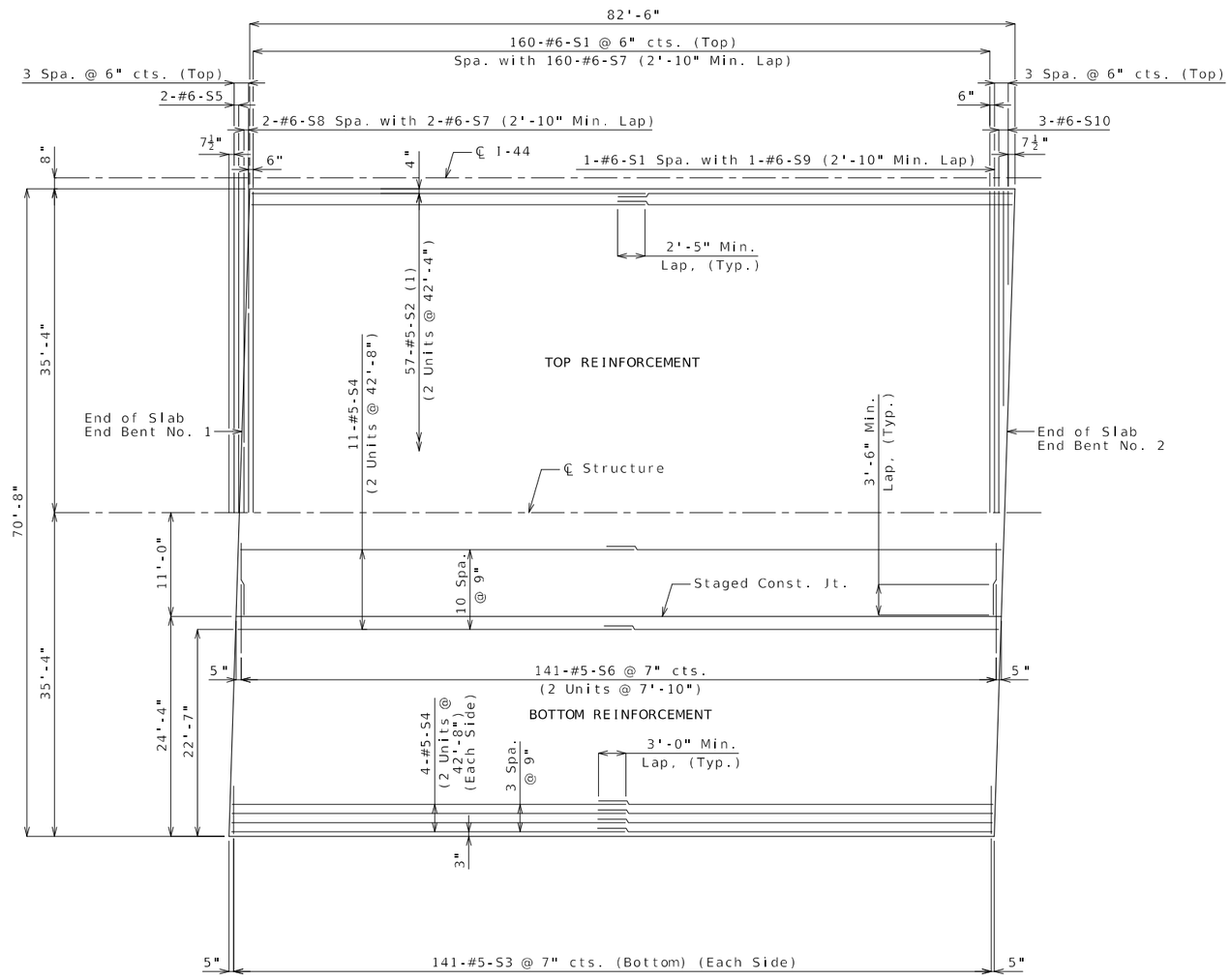
BRIDGE NO.
A9421

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

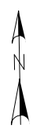
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

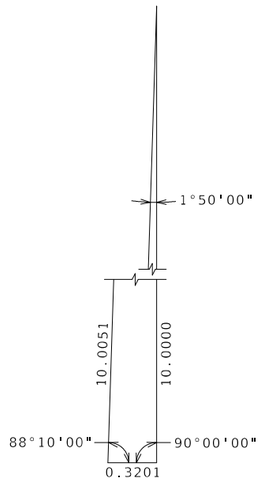
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



SPAN (1-2)

PLAN OF SLAB REINFORCEMENT





NOTES:

Longitudinal slab dimensions shown are horizontal.

For Theoretical Slab Haunching Diagram and Theoretical Bottom of Slab Elevations, see Sheet No. 19.

For Details of Precast Prestressed Panels, see Sheet No. 18.

For Details and Reinforcement of Safety Barrier Curb not shown, see Sheets No. 22 & 23.

(1) For spacing of longitudinal bars not shown, see Slab Section & Details on Sheet No. 21.

SLAB PLAN

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/6/2024

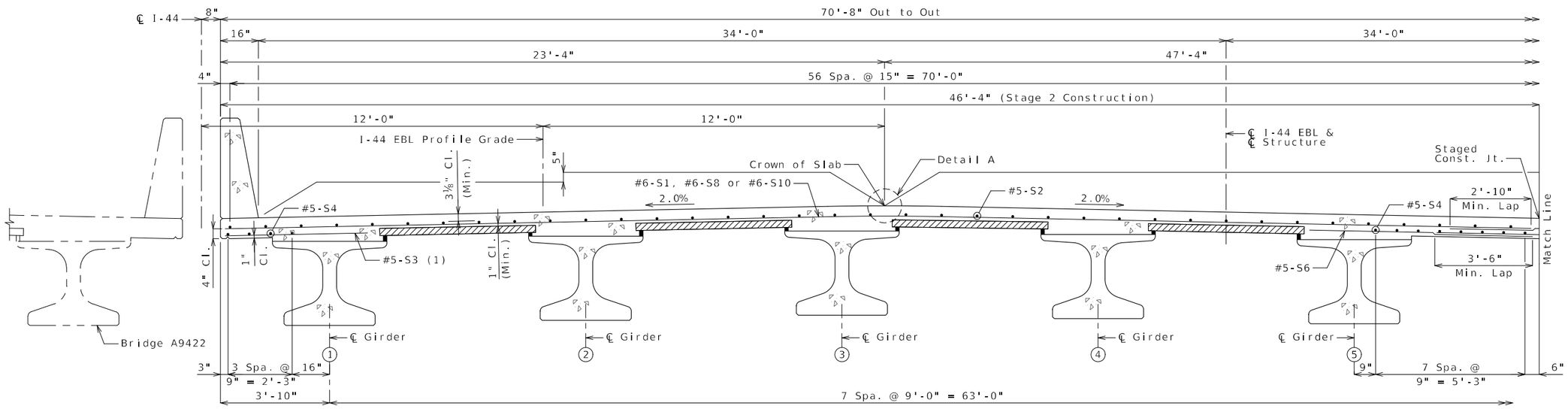
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	20

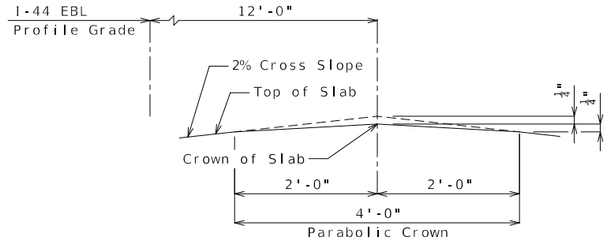
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9421

REV.	DESCRIPTION	DATE

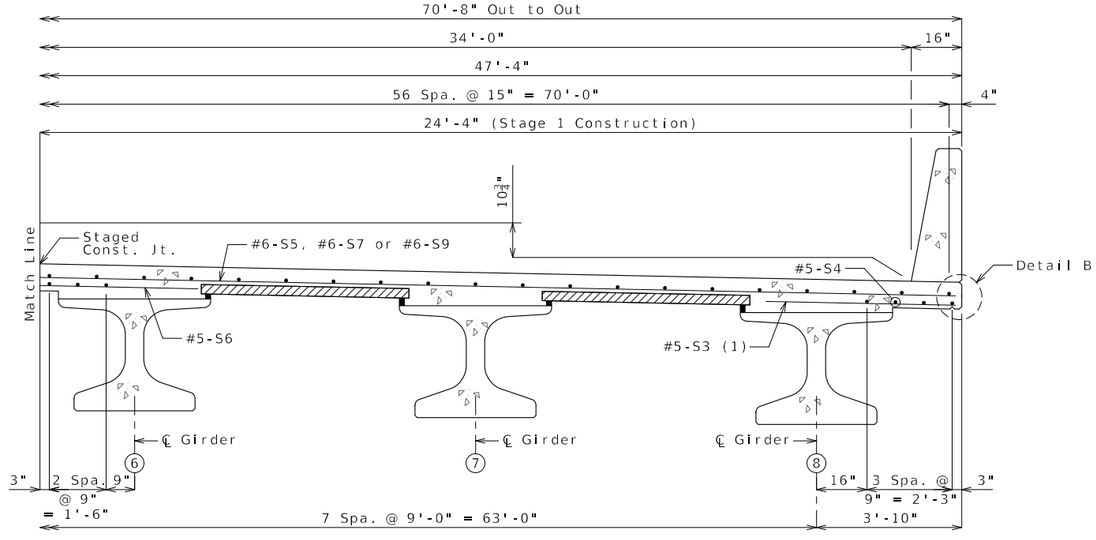
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



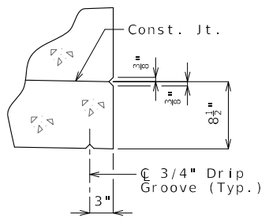


DETAIL A

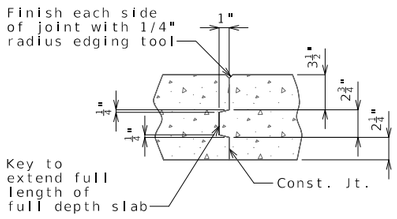


SECTION THRU SLAB

(1) Alternate bar shape available, see Sheet No. 22.



DETAIL B



FULL DEPTH SLAB

SLAB CONSTRUCTION JOINT

NOTES:

For details of precast prestressed panels, see Sheet No. 18.

For reinforcement of barrier not shown, see Sheet No. 22.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram and Theoretical Slab Haunching Diagram, see Sheet No. 19.

For Plan of Slab Showing Reinforcement, see Sheet No. 20.

Bridge will be cast in a single pour.

TYPICAL SLAB SECTION

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	21

COUNTY GREENE

JOB NO. JSU0076

CONTRACT ID.

PROJECT NO.

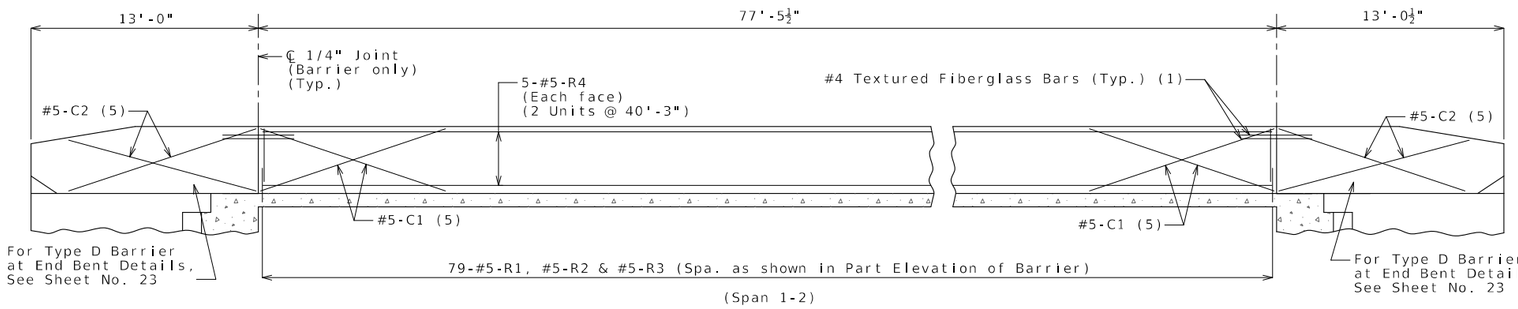
BRIDGE NO. A9421

DESCRIPTION	DATE

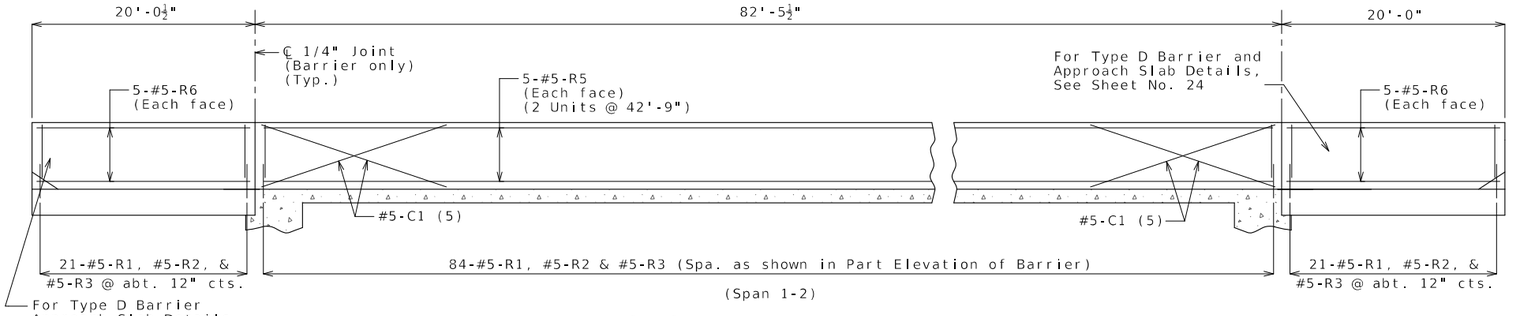
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

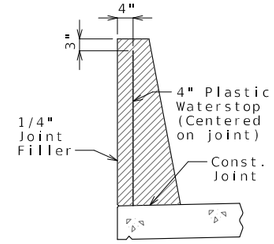
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



ELEVATION OF BARRIER - RIGHT BARRIER



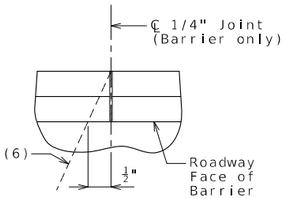
ELEVATION OF BARRIER - LEFT BARRIER



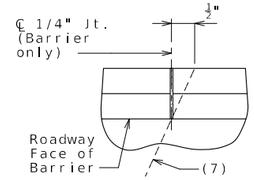
WATERSTOP DETAIL

Plastic waterstop shall be placed in all formed joints, except structures with superelevation, use on lower joints only.

Cost of plastic waterstop, complete in place, will be considered completely covered by the contract unit price for Type D Barrier.

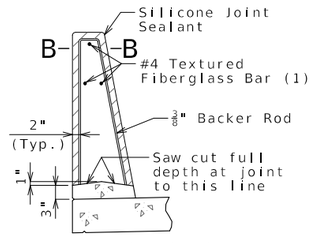


(6) Front Face of End Bent No. 2 for Right Barrier
End of Slab at End Bent No. 1 for Left Barrier

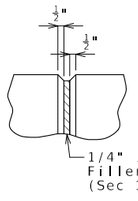


(7) Front Face of End Bent No. 1 for Right Barrier
End of Slab at End Bent No. 2 for Left Barrier

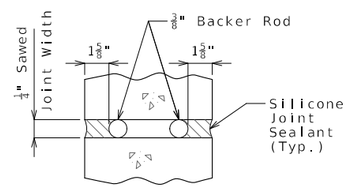
PART PLAN SHOWING JOINT LOCATION



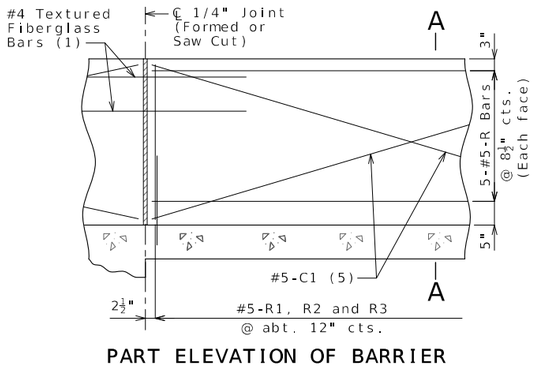
SECTION THRU SAW CUT JOINT



PART ELEVATION AT FORMED JOINT

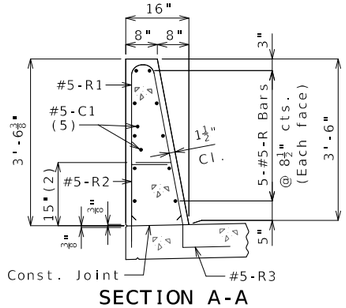


SECTION B-B



PART ELEVATION OF BARRIER

(1) Four feet long, centered on joint, slip-formed option only

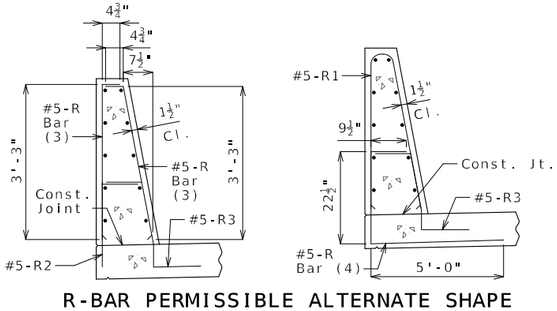


SECTION A-A

Use a minimum lap of 3'-1" for #5 horizontal barrier bars.

The cross-sectional area above the slab is 3.52 square feet.

(2) To top of bar



R-BAR PERMISSIBLE ALTERNATE SHAPE

(3) The R1 bar may be separated into two bars as shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)

(4) The R2 bar and #5 bottom transverse slab bar in cantilever (prestressed panels only) combination may be furnished as one bar as shown, at the contractor's option.

(5) Slip-formed option only.

General Notes:

Longitudinal dimensions are horizontal.

Conventional forming or slip forming may be used. Saw cut joints may be used with conventional forming.

Top of barrier shall be built parallel to grade and barrier joints (except at end bents) normal to grade.

All exposed edges of barrier shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type D Barrier per linear foot.

Concrete in barrier shall be Class B-1.

Measurement of barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of wing to end of wing for Right Barrier and from end of approach slab to end of approach slab for Left Barrier.

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

For slip-formed option, both sides of barrier shall have a vertically broomed finish and the top shall have a transversely broomed finish.

Plastic waterstop shall not be used with saw cut joints.

TYPE D BARRIER

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	22

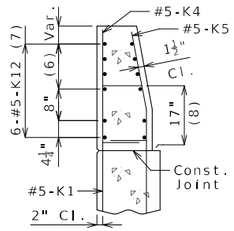
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9421

DESCRIPTION
DATE

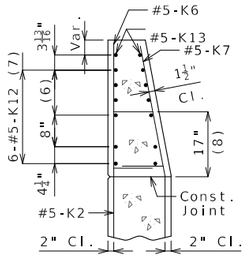
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

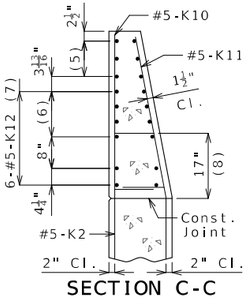
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



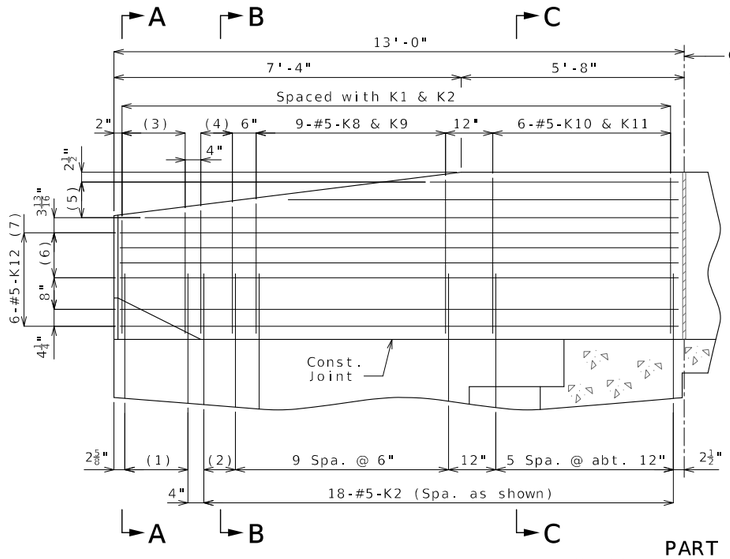
SECTION A-A

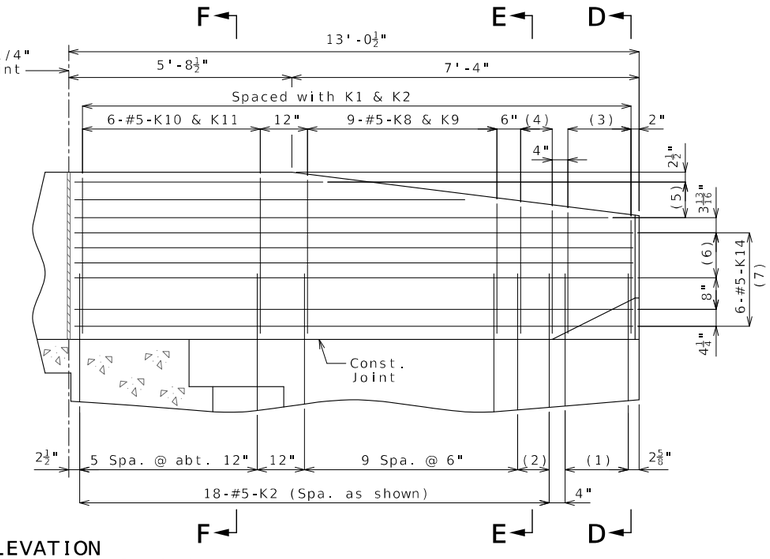


SECTION B-B

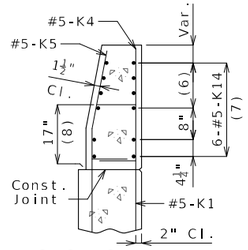


SECTION C-C

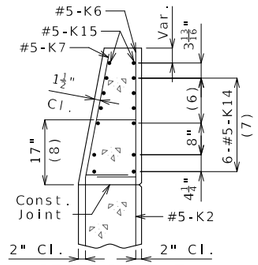




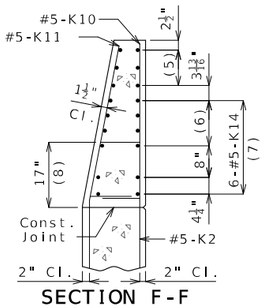
PART ELEVATION
(Looking at Front Face of Right Barrier)



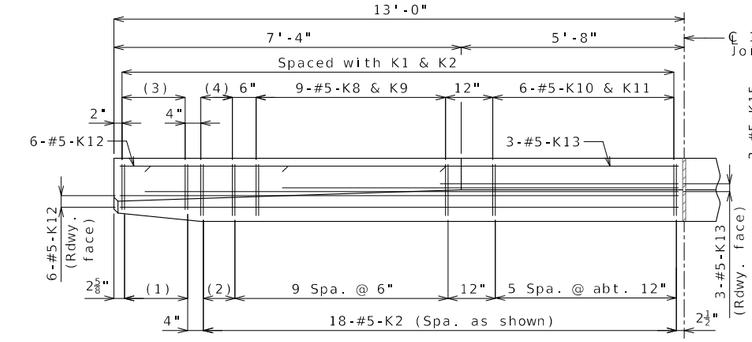
SECTION D-D

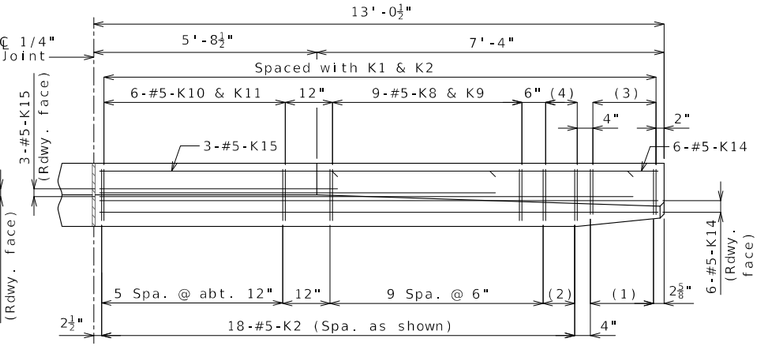


SECTION E-E

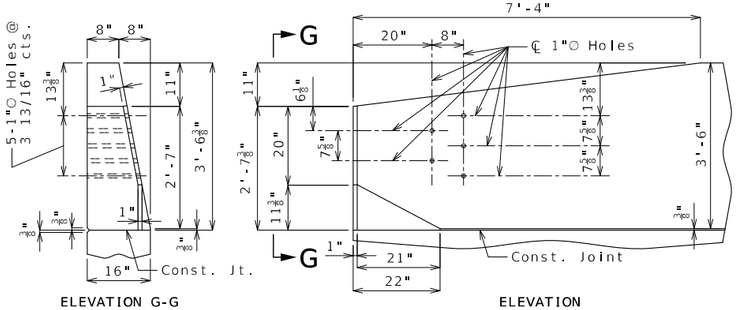


SECTION F-F



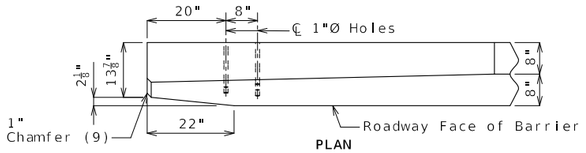


PART PLAN
(Right barrier shown)



ELEVATION G-G

ELEVATION



PLAN

DETAILS OF GUARD RAIL ATTACHMENT

(1) 5-#5-K1 @ 4" cts.

(2) 2 spaces @ 4"

(3) 5-#5-K4 & K5

(4) 3-#5-K6 & K7

(5) 3-#5-K13 or K15 @ 4½" cts., each face

(6) 3 spaces @ 3 13/16"

(7) Spaced as shown, each face

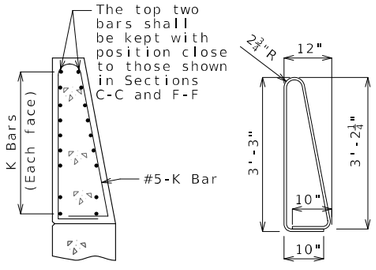
(8) To top of bar

(9) Transition to zero at Type A curb for gutter lines to match.

General Notes:

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

Reinforcing Steel:
Minimum clearance to reinforcing steel shall be 1 1/2" except as shown for bars embedded into end bent.



K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE
(Other K bars not shown for clarity)

The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

TYPE D BARRIER AT END BENTS

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/6/2024

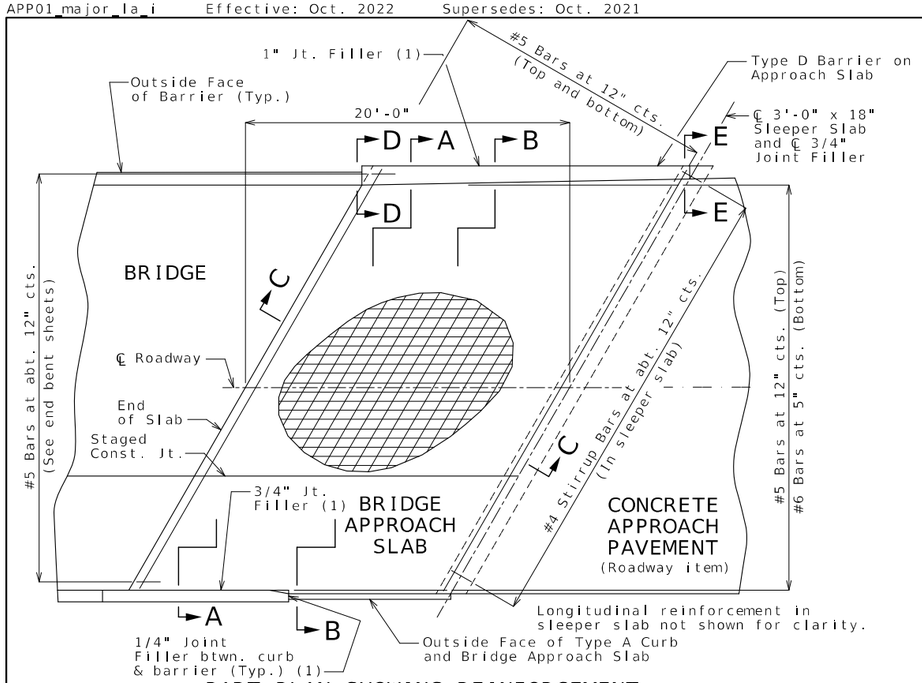
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	23

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9421

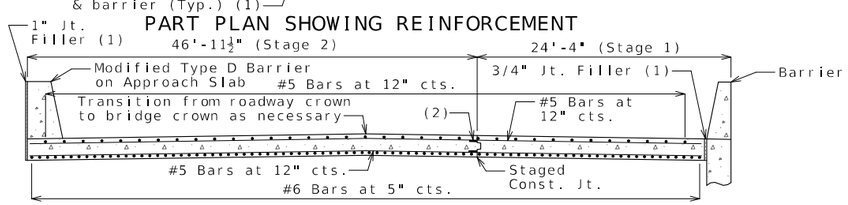
DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

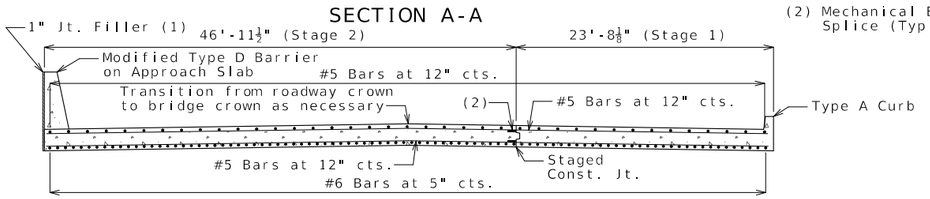
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
MoDOT
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617
BURNS McDONNELL



PART PLAN SHOWING REINFORCEMENT

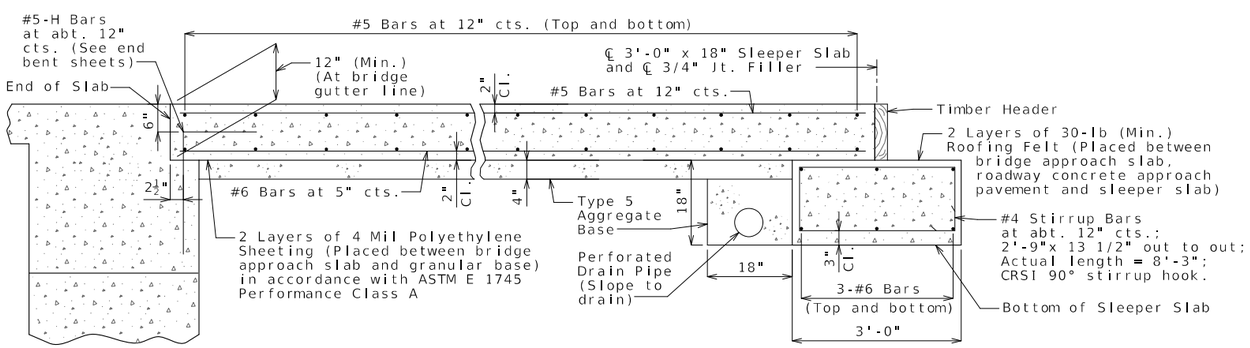


SECTION A-A

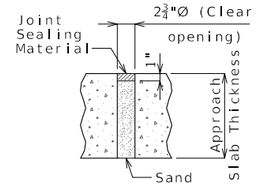


SECTION B-B

With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.

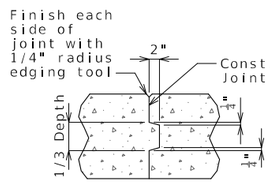


SECTION C-C

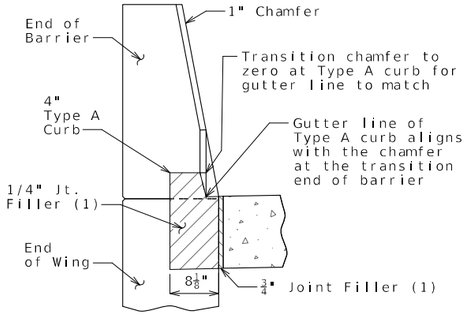


UNDERSEAL ACCESS HOLE DETAIL

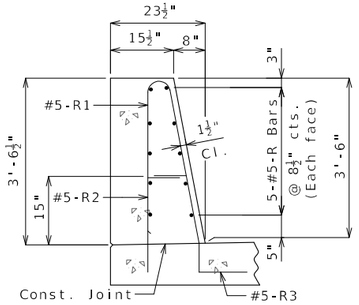
(If required)



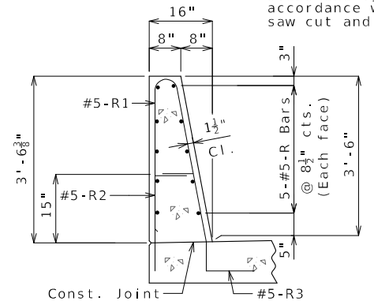
CONSTRUCTION JOINT DETAIL



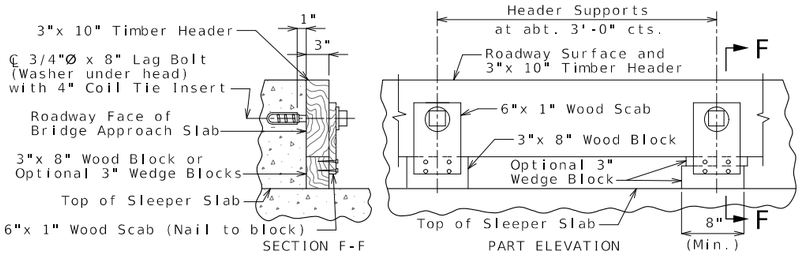
SECTION BETWEEN CURB AND BARRIER



SECTION D-D



SECTION E-E



DETAILS OF TIMBER HEADER

Remove timber header when concrete pavement is placed.

General Notes:

All concrete for the bridge approach slab and sleeper slab shall be in accordance with Sec 503 (f'c = 4,000 psi).

The reinforcing steel in the bridge approach slab and the sleeper slab shall be epoxy coated Grade 60 with fy = 60,000 psi.

Drain pipe may be either 6" diameter corrugated metallic-coated pipe underdrain, 4" diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4" diameter corrugated polyethylene (PE) drain pipe.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

The reinforcing steel in the bridge approach slab and the sleeper slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 29 inches for #5 bars and 44 inches for #6 bars, or by mechanical bar splice.

Mechanical bar splices shall be in accordance with Sec. 710. (Estimated 48 splices per slab)

All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler except as noted.

The contractor shall pour and satisfactorily finish the bridge slab before placing the bridge approach slab.

Longitudinal construction joints in approach slab and sleeper slab shall be aligned with longitudinal construction joints in bridge slab.

For concrete approach pavement details, see roadway plans.

See Missouri Standard Plan 609.00 for details of Type A curb.

Payment for furnishing all materials, labor and excavation necessary to construct the approach slab, including the timber header, sleeper slab, underdrain, Type 5 aggregate base, joint filler and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Major) per square yard.

For details of Type D Barrier on Approach Slab, See Sheet No. 22.

(1) Seal joint between vertical face of approach slab and wing and joint between vertical face of the approach slabs and Type D barriers along ℄ I-44 with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

BRIDGE APPROACH SLAB (MAJOR)

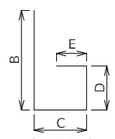
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
STATE OF MISSOURI
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/6/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 24
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9421

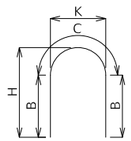
DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

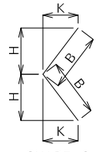
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



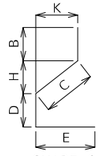
SHAPE 6 or 6S



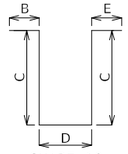
SHAPE 7



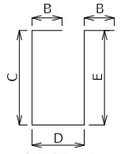
SHAPE 8 or 8S



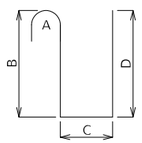
SHAPE 9 or 9S



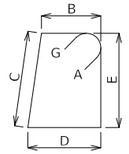
SHAPE 10 or 10S



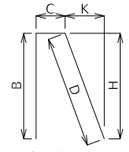
SHAPE 11 or 11S



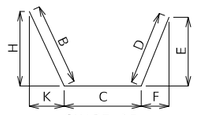
SHAPE 12



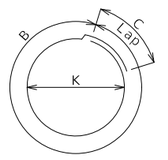
SHAPE 13S



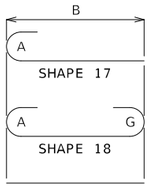
SHAPE 14 or 14S



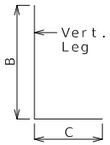
SHAPE 15 or 15S



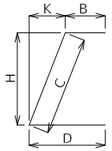
SHAPE 16



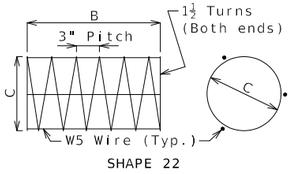
SHAPE 17
SHAPE 18
SHAPE 20



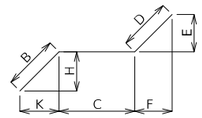
SHAPE 19 or 19S



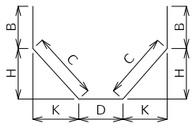
SHAPE 21 or 21S



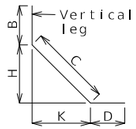
SHAPE 22



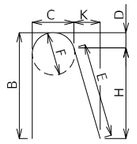
SHAPE 23 or 23S



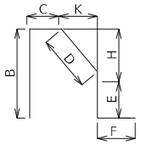
SHAPE 24 or 24S



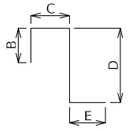
SHAPE 25 or 25S



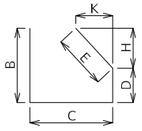
SHAPE 26



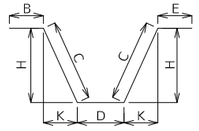
SHAPE 27S



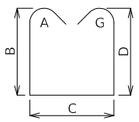
SHAPE 28 or 28S



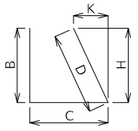
SHAPE 29 or 29S



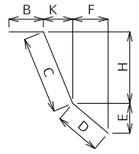
SHAPE 30 or 30S



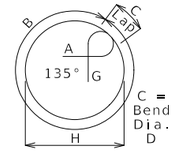
SHAPE 31S



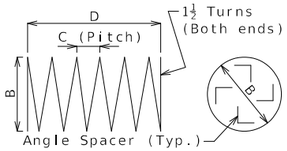
SHAPE 32 or 32S



SHAPE 33 or 33S



SHAPE 34S



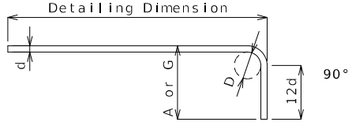
SHAPE 35 (1)

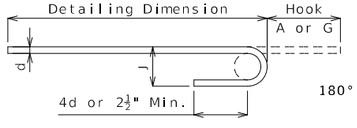
SHAPE 36

Finished Bend Diameters D and Hook Dimensions

Standard Pin Bend Shapes

Size	Case	D	A or G		J
			90°	180°	180°
#4	1	3"	8"	6"	4"
#5	1	3¾"	10"	7"	5"
#6	1	4½"	12"	8¼"	6"
#7	2	5¼"	14"	9⅜"	7"
	3	7"	15"	11½"	8¾"
#8	2	6"	16"	11"	8"
	3	8"	17"	13¼"	10"
#9	1	9½"	19½"	15½"	11¾"
#10	1	10¾"	22"	17½"	13¼"
#11	1	12"	24½"	19½"	14⅞"
#14	1	18¼"	31¼"	27½"	21⅝"
#18	1	24"	41½"	36¾"	28½"



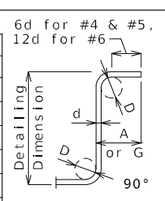


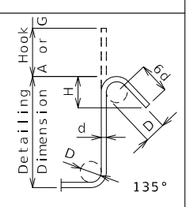
Stirrup Pin Bend Shapes (S)

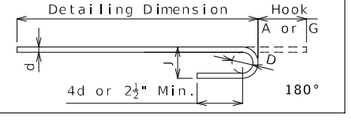
Size	Case	D	A or G			H	J
			90°	135°	180°	135°	180°
#4	2	2"	4½"	4½"	5"	2⅝"	3"
	3	3"	5"	5¼"	6"	3"	4"
#5	2	2½"	5¾"	5¾"	5¾"	3⅝"	3¾"
	3	3¾"	6¼"	6½"	7"	3⅞"	5"
#6	1	4½"	12"	7¾"	8¼"	4⅝"	6"

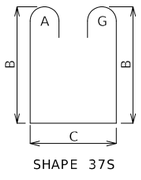
Applicable for all grades of steel.

Case 1 applies to all reinforcement. Case 2 applies to all reinforcement except for galvanized bars. Case 3 applies to galvanized bars only.

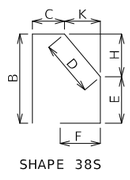








SHAPE 37S



SHAPE 38S

BENDING DIAGRAMS

All dimensions are out to out.

Shapes ending with an S shall be bent in accordance with stirrup pin bend shapes.

Unless otherwise noted, finished bending diameter D is the same for all bends of a shape.

(1) Shall be a deformed or plain spiral bar or wire.

Four angle or channel spacers are required for each column spiral. Spacers are to be placed on inside of spirals. Length and weight of column spirals do not include splices or spacers.

Reinforcing Steel Totals (Pounds)

		Substructure		Superstructure				Entire Bridge	
				Slab					
	Size	Plain	Epoxy	Plain	Epoxy	Barrier	Slip Form	Plain	Epoxy
By Size	W5	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	15,550	5,989	141	0	21,680
	6	0	0	0	27,052	0	0	0	27,052
	7	0	0	0	0	0	0	0	0
	8	0	0	0	3,562	0	0	0	3,562
	9	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0
	11	0	0	0	0	0	0	0	0
	14	0	0	0	0	0	0	0	0
	18	0	0	0	0	0	0	0	0
By Type		0	0	0	46,164	5,989	141	0	52,294

All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
STATE OF MISSOURI
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	25

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9421

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165

BMcD Project No. 146617

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B	C	D	E	F	H	K	Nom. Length	Actual Length	Weight
		END BENT 1													
9	6 F100	Wing	E	23S		2 3.000	4 5.000	14.000	9.750	10.000	18.750	19.375	7 10	7 9	105
3	6 F101	Diaphragm	E	6S		5 5.000	2 7.000						8 0	7 10	35
4	6 H100	Beam	E	20		28 3.000							28 3	28 3	170
8	8 H101	Beam	E	20		28 3.000							28 3	28 3	603
4	6 H102	Beam	E	20		8 6.000							8 6	8 6	51
4	6 H103	Beam	E	20		42 8.000							42 8	42 8	256
8	8 H104	Beam	E	20		42 8.000							42 8	42 8	911
4	6 H105	Beam	E	20		42 8.000							42 8	42 8	256
4	6 H106	Beam	E	20		21 10.00							21 10	21 10	131
8	6 H107	Diaphragm	E	20		28 0.000							28 0	28 0	336
8	6 H108	Diaphragm	E	20		46 8.000							46 8	46 8	561
18	6 H109	Diaphragm	E	20		7 11.000							7 11	7 11	214
6	6 H110	Diaphragm	E	20		5 6.000							5 6	5 6	50
3	6 H111	Diaphragm	E	20		3 2.000							3 2	3 2	14
1	6 H112	Diaphragm	E	20		23.000							0 23	0 23	3
3	6 H113	Diaphragm	E	20		3 9.000							3 9	3 9	17
1	6 H114	Diaphragm	E	20		2 6.000							2 6	2 6	4
8	5 H115	Strand Tie	E	20		5 0.000							5 0	5 0	42
20	6 H116	Wing	E	20		11 8.000							11 8	11 8	350
8	8 H117	Wing	E	20		12 6.000							12 6	12 6	267
3	6 H118	Diaphragm	E	20		5 11.000							5 11	5 11	27
1	6 H119	Diaphragm	E	20		4 7.000							4 7	4 7	7
3	6 H120	Diaphragm	E	20		5 10.000							5 10	5 10	26
1	6 H121	Diaphragm	E	20		4 7.000							4 7	4 7	7
43	5 U100	Beam	E	31S		5 8.000	2 9.000	5 8.000					15 1	14 10	665
15	5 U101	Beam	E	13S		2 9.000	2 8.000	2 9.000	2 8.000				11 10	11 6	180
24	5 U102	Beam	E	13S		2 9.000	3 0.000	2 9.000	3 0.000				12 6	12 2	305
24	5 U103	Beam	E	13S		2 9.000	3 4.000	2 9.000	3 4.000				13 2	12 10	321
58	5 U104	Diaphragm	E	31S		3 4.000	2 3.000	3 4.000					9 11	9 8	585
58	6 U105	Diaphragm	E	19S		2 7.000	2 8.000						5 3	5 1	443
70	5 U106	Diaphragm	E	19S		2 0.000	15.000						3 3	3 2	231
94	6 U107	Diaphragm	E	19S		3 3.000	4 7.000						7 10	7 8	1082
30	5 V100	Beam	E	17		5 8.000							6 3	6 3	196
40	6 V101	Diaphragm	E	20		2 7.000							2 7	2 7	155
22	6 V102	Wing	E	20		6 7.000							6 7	6 7	218
		END BENT 2													
9	6 F200	Wing	E	23S		2 3.000	4 5.000	14.000	9.750	10.000	18.750	19.375	7 10	7 9	105
3	6 F201	Diaphragm	E	6S		5 5.000	2 7.000						8 0	7 10	35
4	6 H200	Beam	E	20		28 3.000							28 3	28 3	170
8	8 H201	Beam	E	20		28 3.000							28 3	28 3	603
4	6 H202	Beam	E	20		8 6.000							8 6	8 6	51
4	6 H203	Beam	E	20		42 8.000							42 8	42 8	256
8	8 H204	Beam	E	20		42 8.000							42 8	42 8	911
4	6 H205	Beam	E	20		42 8.000							42 8	42 8	256
4	6 H206	Beam	E	20		21 10.00							21 10	21 10	131
8	6 H207	Diaphragm	E	20		28 0.000							28 0	28 0	336
8	6 H208	Diaphragm	E	20		46 8.000							46 8	46 8	561
18	6 H209	Diaphragm	E	20		7 11.000							7 11	7 11	214
6	6 H210	Diaphragm	E	20		5 6.000							5 6	5 6	50
3	6 H211	Diaphragm	E	20		3 2.000							3 2	3 2	14
1	6 H212	Diaphragm	E	20		23.000							0 23	0 23	3
3	6 H213	Diaphragm	E	20		3 9.000							3 9	3 9	17
1	6 H214	Diaphragm	E	20		2 6.000							2 6	2 6	4
8	5 H215	Strand Tie	E	20		5 0.000							5 0	5 0	42
20	6 H216	Wing	E	20		11 8.000							11 8	11 8	350
8	8 H217	Wing	E	20		12 6.000							12 6	12 6	267
3	6 H218	Diaphragm	E	20		5 11.000							5 11	5 11	27
1	6 H219	Diaphragm	E	20		4 7.000							4 7	4 7	7
3	6 H220	Diaphragm	E	20		5 10.000							5 10	5 10	26
1	6 H221	Diaphragm	E	20		4 7.000							4 7	4 7	7
43	5 U200	Beam	E	31S		5 8.000	2 9.000	5 8.000					15 1	14 10	665
15	5 U201	Beam	E	13S		2 9.000	2 8.000	2 9.000	2 8.000				11 10	11 6	180
24	5 U202	Beam	E	13S		2 9.000	3 0.000	2 9.000	3 0.000				12 6	12 2	305
24	5 U203	Beam	E	13S		2 9.000	3 4.000	2 9.000	3 4.000				13 2	12 10	321

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B	C	D	E	F	H	K	Nom. Length	Actual Length	Weight
		END BENT 2 Cont.													
58	5 U204	Diaphragm	E	31S		3 4.000	2 3.000	3 4.000					9 11	9 8	585
58	6 U205	Diaphragm	E	19S		2 7.000	2 8.000						5 3	5 1	443
70	5 U206	Diaphragm	E	19S		2 0.000	15.000						3 3	3 2	231
94	6 U207	Diaphragm	E	19S		3 3.000	4 7.000						7 10	7 8	1082
30	5 V200	Beam	E	17		5 8.000							6 3	6 3	196
40	6 V201	Diaphragm	E	20		2 7.000							2 7	2 7	155
22	6 V202	Wing	E	20		6 7.000							6 7	6 7	218
		SLAB													
161	6 S1	Slab	E	20		46 0.000							46 0	46 0	11124
114	5 S2	Slab	E	20		42 4.000							42 4	42 4	5034
282	5 S3	Slab	E	20		5 0.000							5 0	5 0	1471
38	5 S4	Slab	E	20		42 8.000							42 8	42 8	1691
2	6 S5	Slab	E	20	1	11 7.000							11 7	11 7	
		Inc. = 15'-7"				27 2.000							27 2	27 2	58
282	5 S6	Slab	E	20		7 10.000							7 10	7 10	2304
162	6 S7	Slab	E	20		27 2.000							27 2	27 2	6610
2	6 S8	Slab	E	20	1	18 6.000							18 6	18 6	
		Inc. = 15'-7"				34 1.000							34 1	34 1	79
1	6 S9	Slab	E	20		15 3.000							15 3	15 3	23
3	6 S10	Slab	E	20	1	42 9.000							42 9	42 9	
		Inc. = 15'-7"				11 7.000							11 7	11 7	122
		BARRIER													
10	5 K1	Barrier	E	27S		3 8.000	9.250	5.375	3 2.750		5.250	1.000	8 1	7 11	83
36	5 K2	Barrier	E	27S		3 8.000	9.250	14.500	2 5.750		14.250	2.750	8 2	7 11	297
10	5 K4	Barrier	E	19S	2	2 4.250	10.000						3 2	3 1	
		Inc. = 0.500"				2 6.250	10.000						3 4	3 3	33
10	5 K5	Barrier	E	38S	2			18.500	9.500	8.250	18.000	4.000	3 0	2 11	
		Inc. = 0.500"						20.500	9.500	8.250	20.000	4.500	3 2	3 1	31
6	5 K6	Barrier	E	19S		2 6.750	10.000						3 5	3 4	21
6	5 K7	Barrier	E	21S			2 6.625	10.000			2 6.000	6.250	3 5	3 3	20
18	5 K8	Barrier	E	19S	2	2 8.500	10.000						3 7	3 5	
		Inc. = 0.750"				3 2.500	10.000						4 1	3 11	70
18	5 K9	Barrier	E	21S	2		2 8.500	10.000			2 7.750	6.750	3 6	3 5	
		Inc. = 0.750"					3 2.500	10.000			3 1.750	7.750	4 1	3 11	68
12	5 K10	Barrier	E	19S		3 3.000	10.000						4 1	4 0	50
12	5 K11	Barrier	E	21S			3 3.000	10.000			3 2.250	7.750	4 1	3 11	49
12	5 K12	Barrier	E	20		12 9.000							12 9	12 9	160
6	5 K13	Barrier	E	20	2	6 0.000							6 0	6 0	
		Inc. = 3'-0"				12 0.000							12 0	12 0	56
12	5 K14	Barrier	E	20		12 9.000							12 9	12 9	160
6	5 K15	Barrier	E	20	2	6 0.000							6 0	6 0	
		Inc. = 3'-0"				12 0.000							12 0	12 0	56
205	5 R1	Barrier	E	26		3 3.000	5.500	2.250	3 1.375	5.500	3 0.750	6.750	6 11	6 10	1461
205	5 R2	Barrier	E	19S		20.500	9.500						2 6	2 5	517
205	5 R3	Barrier	E	27S			9.500	15.250	5.000	12.000	15.000	3.000	3 6	3 4	713
20	5 R4	Barrier	E	20		40 3.000							40 3	40 3	840
20	5 R5	Barrier	E	20		42 9.000							42 9	42 9	892
20	5 R6	Barrier	E	20		19 9.000							19 9	19 9	412
		SLIP FORM													
8	5 C1	Slip Form	E	20		12 0.000							12 0	12 0	100
4	5 C2	Slip Form	E	20		9 9.000							9 9	9 9	41

Nominal lengths are based on out to out dimensions shown in bending diagrams and are listed to the nearest inch for fabricator's use. Actual lengths are measured along centerline bar to the nearest inch. Weights are based on actual lengths.

For bending diagrams and steel reinforcing totals, see Sheet No. 25.

Detailed: May 2024
Checked: Jun. 2024

Codes:
C = Required coatings, where E = Epoxy Coated and G = Galvanized.
SH = Required shape, see bending diagrams.
V = Sets of varied bars and number of bars of each length. Bar dimensions vary in equal increments between dimensions shown on this line and the following line and the actual length dimension shown on this line and the following line vary by the specified increment.

All bars shall be Grade 60.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 26 of 30

BILL OF REINFORCING STEEL

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

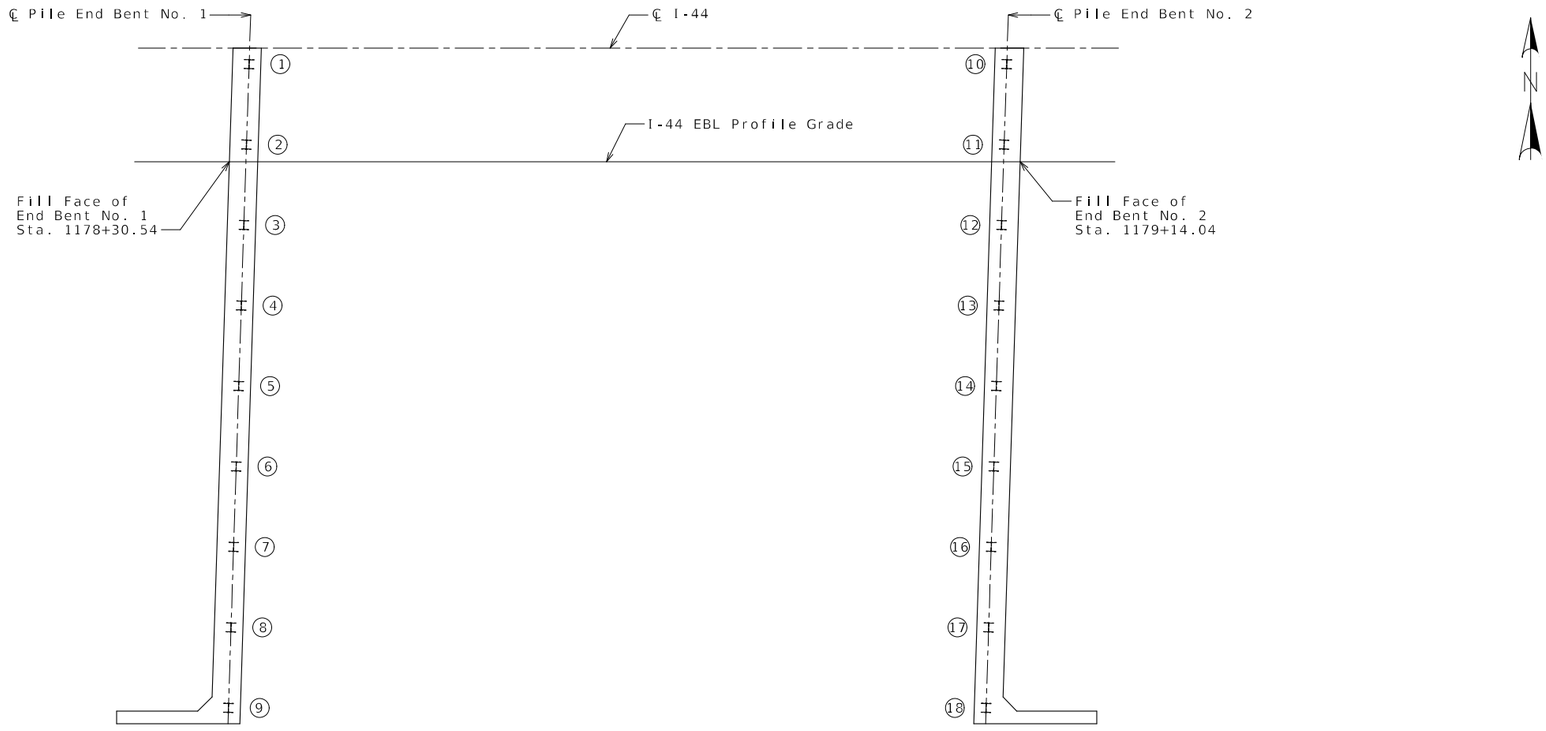
DATE PREPARED 9/6/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 26
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9421

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171022\B_A9421_026_JSU0076.dgn 8:40:49 AM 9/6/2024



SPAN (1-2)

PART PLAN SHOWING PILE NUMBERING FOR RECORDING AS-BUILT PILE DATA

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
End Bent No. 1 (HP 12x53)			
1			
2			
3			
4			
5			
6			
7			
8			
9			

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
End Bent No. 2 (HP 12x53)			
10			
11			
12			
13			
14			
15			
16			
17			
18			

Note:
Indicate in remarks column:
A. Pile type and grade
B. Batter
C. Driven to practical refusal

This sheet to be completed by MoDOT construction personnel.

AS-BUILT PILE DATA

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	27

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9421

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-2
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** TB **Operator:** LRK
Station: **Northing:** 516794.5256 **Date of Work:** 08/15/23-08/15/23
Offset: 5' W **Easting:** 1415110.2561 **Depth to Water:**
Elevation: 1275.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.5' Asphaltic concrete (5.0")	1275						
		0.5-6.0' (CH) FILL: Brown, fat CLAY, trace gravel and plastic sheet			56	3-4-6 (15)		PP = 2.50 tsf	MC = 20.2%
		3.0' - with gravel below 3.0 ft.			92			PP = 2.50 tsf	
5			1270						
		6.0-21.0' LIMESTONE, gray, very hard, slightly weathered, finely crystalline, thin bedded, dense			94 (60)		Qu Test Results UCS = 1230 ksf		
		8.0' -interbedded chert from 8.0 to 10.8 ft.							
10		9.3' - light gray- white below 9.3 ft.	1265		100 (93)		Qu Test Results UCS = 1180 ksf		
15			1260		97 (81)		Qu Test Results UCS = 1060 ksf		
20			1255						
		Refusal at 6.0 feet. Bottom of borehole at 21.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-3
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516744.648 **Date of Work:** 07/31/23-08/01/23
Offset: **Easting:** 1415047.2711 **Depth to Water:**
Elevation: 1293.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.3' Asphaltic concrete (3.5")							
		0.3-1.5' Portland cement concrete (13.5")							
		1.5-1.9' (GP) FILL: Red and brown, clayey GRAVEL			44	15-24-11 (53)			MC = 24.2%
		1.9-3.5' FILL: Gray, crushed LIMESTONE	1290						
		3.5-12.0' (CH) FILL: Red and brown, fat CLAY, with gravel			72	3-5-2 (11)		PP = 1.00 tsf	MC = 20.0%
5									
		6.0' -trace gravel below 6.0 ft.			100	1-1-3 (6)		PP = 1.75 tsf	MC = 40.1%
			1285		100		Qu Test Results UCS = 1.55 ksf MC = 30.3% γ_{moist} = 111.0 pcf	PP = 1.75 tsf	
10		12.0-15.0' (GC) FILL: Red and brown, clayey GRAVEL	1280		50	6-13-12 (38)		PP = 2.00 tsf	MC = 20.8%
15		14.8' -trace clay below 14.8 ft.							
		15.0-19.2' (CL) FILL: Gray, lean CLAY, with gravel	1275		56	28-33-9 (63)		PP = 2.75 tsf	MC = 18.9%
20		18.5' -dark brown and gray, trace sand below 18.5 ft.							
		19.2-22.0' (GP) Gray, GRAVEL fragments (highly weathered rock)							
		22.0-24.7' (CH) Red and brown, fat CLAY, trace sand and gravel	1270		100	3-24-12 (54)		PP = 3.75 tsf	MC = 44.3%
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/6/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 28
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9421

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.
Sheet No. 28 of 30

BORING DATA

c:\bmcd_lib\pw_connect\trn\d0171022\B_A9421_028_JSU0076.dgn 8:41:13 AM 9/6/2024

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-3
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516744.648 **Date of Work:** 07/31/23-08/01/23
Offset: **Easting:** 1415047.2711 **Depth to Water:**
Elevation: 1293.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		24.7-29.2' (GP) Gray, GRAVEL fragments, with clay (highly weathered rock) *(continued)*							
			1265		100	50/0.1'			MC = 39.5%
30		29.2-45.2' LIMESTONE, gray, hard to very hard, fresh to slightly weathered, aphanitic to coarsly crystalline, medium bedded, dense, cherty							
			1260		100 (72)		Qu Test Results UCS = 1650 ksf		
35									
			1255		100 (87)		Qu Test Results UCS = 1250 ksf		
40		39.2' -chert nodules present below 39.2 ft.							
			1250		100 (70)		Qu Test Results UCS = 1850 ksf		
45		Refusal at 29.2 feet. Bottom of borehole at 45.2 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-5
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516794.6417 **Date of Work:** 08/08/23-08/08/23
Offset: 5' E **Easting:** 1415143.3374 **Depth to Water:**
Elevation: 1275.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.3' Asphaltic concrete (4.0")	1275						
		0.3-1.4' (GP) FILL: Crushed limestone							
		1.4-3.8' (CL) FILL: Dark brown, lean CLAY (CL), trace sand			56	5-3-2 (8)		PP = 2.00 tsf	LL = 43 PL = 19 MC = 27.0%
		1.6' -silty from 1.4 to 1.8 ft.							
		3.5' -with gravel below 3.5 ft.							MC = 7.3%
5		3.8-6.1' (GP) White, gray, pink, GRAVEL, trace sand and fines	1270		22	17-13-14 (41)		PP = 1.50 tsf	
		6.0' -brown and gray, clayey below 6.0 ft.			100	50/0.3'		PP = 1.00 tsf	MC = 25.6%
		6.1-7.3' Gray, weathered LIMESTONE							
		7.3-25.0' LIMESTONE, gray, very hard, fresh, aphanitic to finely crystalline, medium to thick bedded, dense, occasional chert nodules present throughout			100 (94)		Qu Test Results UCS = 1250 ksf		
10			1265						
					105 (103)		Qu Test Results UCS = 1100 ksf		
15			1260						
					100 (95)		Qu Test Results UCS = 1300 ksf		
20			1255						
					100 (98)		Qu Test Results UCS = 2180 ksf		
25		Refusal at 7.3 feet Bottom of borehole at 25.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/6/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 29
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9421

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 29 of 30

BORING DATA

c:\bmcd_lib\pw_connect\trn\d0171022\B_A9421_029_JSU0076.dgn 8:41:31 AM 9/6/2024

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-6
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516742.5508 **Date of Work:** 08/01/23-08/02/23
Offset: **Easting:** 1415201.8537 **Depth to Water:**
Elevation: 1294.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.5' Asphaltic concrete (6.0")							
		0.5-1.3' Portland cement concrete (10.0")							
		1.3-5.5' (CH) FILL: Red and brown, fat CLAY, with gravel			17	5-3-2 (8)		PP = 2.00 tsf	MC = 24.8%
		3.5' -trace gravel below 3.5 ft.	1290		56	2-5-6 (17)		PP = 1.50 tsf	MC = 34.8%
5		4.0' -dark gray below 4.0 ft.							
		5.5-16.0' (GC) FILL: Gray and brown, clayey GRAVEL			22	14-4-3 (11)		PP = 2.00 tsf	MC = 26.4%
		8.5' -red and brown below 8.5 ft.	1285		50	6-10-10 (30)		PP = 1.50 tsf	MC = 29.3%
10									
			1280		33	29-11-11 (33)		PP = 1.50 tsf	MC = 20.0%
15		16.0-22.0' (CL) FILL: Dark gray, lean CLAY, trace gravel							
			1275		83	3-8-10 (27)		PP = 2.00 tsf	LL = 48 PL = 18 MC = 24.6%
20									
		22.0-26.2' (GC) Red, brown, and gray, clayey GRAVEL	1270		72	17-10-11 (32)		PP = 2.00 tsf	MC = 20.6%
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-6
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516742.5508 **Date of Work:** 08/01/23-08/02/23
Offset: **Easting:** 1415201.8537 **Depth to Water:**
Elevation: 1294.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		22.0-26.2' (GC) Red, brown, and gray, clayey GRAVEL *(continued)*							
		26.2-30.0' LIMESTONE, color, very hard, fresh to slightly weathered, aphanitc to coarsly crystalline, medium to thick bedded, dense, cherty	1265		98 (92)		Qu Test Results UCS = 1460 ksf		
30									
		30.0-36.2' LIMESTONE, color, very hard, fresh to slightly weathered, aphanitc to coarsly crystalline, medium to thick bedded, dense, cherty	1260		100 (100)		Qu Test Results UCS = 1230 ksf		
35		Refusal at 26.2 feet. Bottom of borehole at 36.2 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/6/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 30
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9421

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

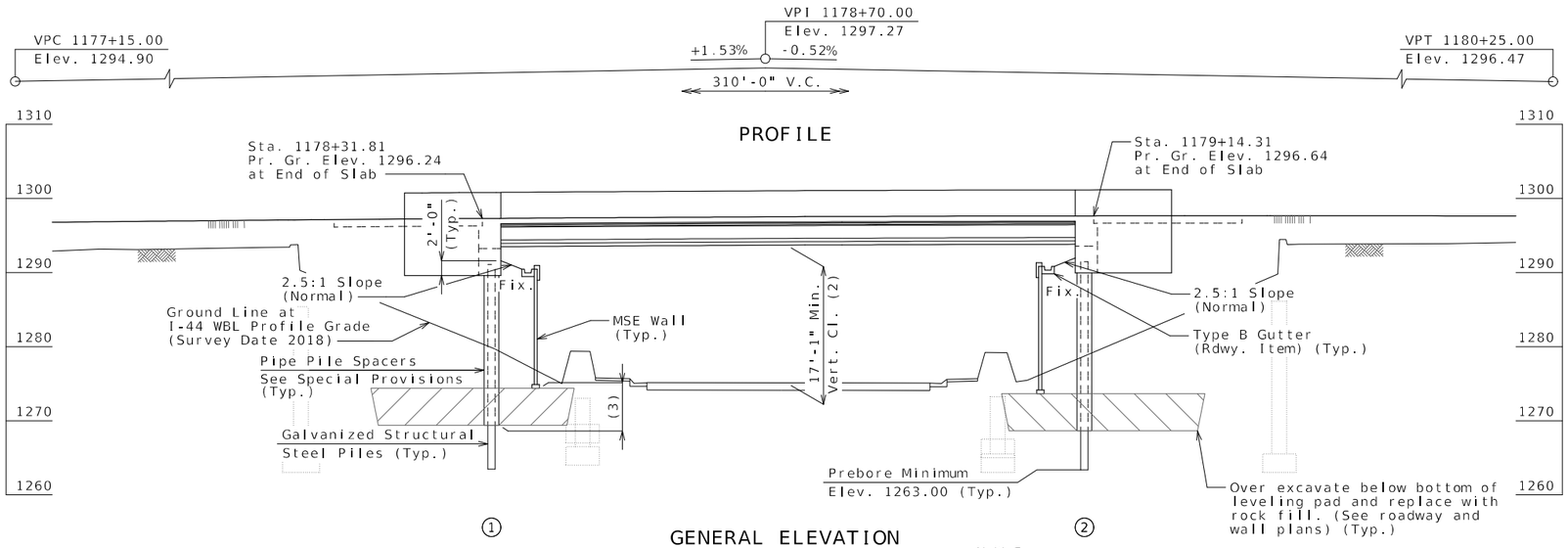
Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.
Sheet No. 30 of 30

BORING DATA

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELDWORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

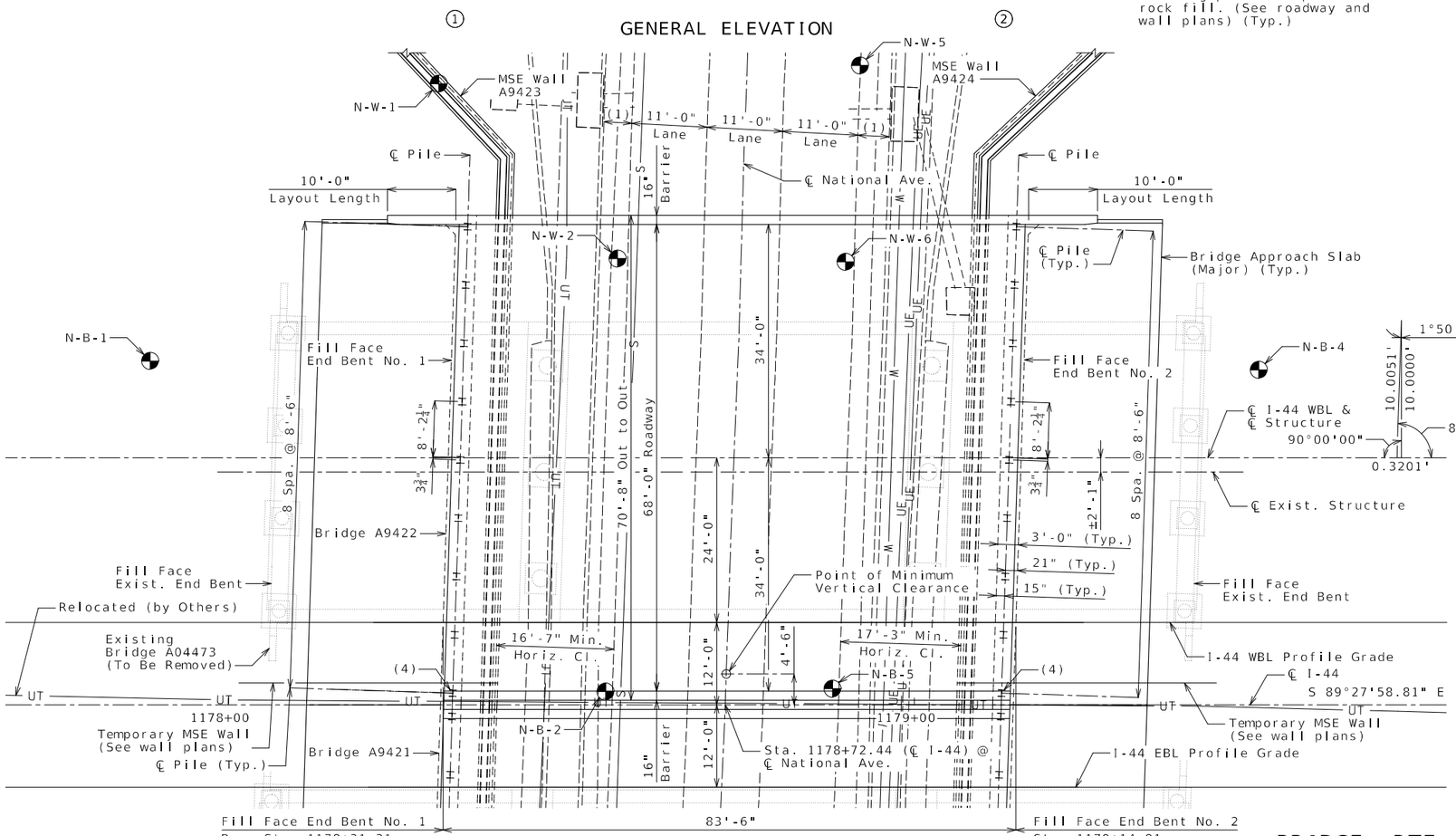
(80') PRESTRESSED CONCRETE NU-GIRDER SPAN

SEC/SUR 1 TWP 29N RGE 22W



Pile Encasement	Option Used (✓)
Pipe Pile Spacer	
Pile Jacket	

MoDot Construction personnel will indicate the pile encasement used.



PLAN

(1) Bike Lane

(2) Minimum vertical clearance is controlled by adjacent Bridge A9421 at 15'-10".

(3) Bottom of pipe pile spacer shall be 5'-0" minimum below bottom of leveling pad.

(4) Pile in Bridge A9422 shall be driven during Stage 2 Construction of Bridge A9421.

NOTES:

Indicates location of borings.

For notice and disclaimer regarding boring log data, see Sheet No. 2.

Roadway fill, exclusive of Select Granular Backfill for Structural Systems, shall be completed to the final roadway section and up to the elevation of the bottom of the concrete beam within the limits of the structure and for not less than 25 feet in back of the fill face of the end bents before any piles are driven for any bents falling within the embankment section.

C.P. #520 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1157+31.28, 94.70' Rt. of ℄ I-44
Elev. 1278.57

C.P. #521 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1184+76.50, 114.67' Lt. of ℄ I-44
Elev. 1294.63

Designed: May 2024
Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 30

BRIDGE: RTE. I-44 WBL OVER NATIONAL AVE.

ROUTE I-44 WBL FROM ROUTE H TO ROUTE 13
ABOUT 0.6 MILES WEST OF ROUTE H
BEGINNING STATION 1178+31.31

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/6/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	1

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9422

DESCRIPTION
DATE
REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171032\B_A9422_001_JSU0076.dgn 8:54:27 AM 9/6/2024

GENERAL NOTES:

DESIGN SPECIFICATIONS:

2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)
Operational Importance = Essential
2011 AASHTO Guide Specifications for LRFD Seismic Bridge Design (2nd Ed.)
and 2014 Interim Revisions (Seismic)
Seismic Design Category = A
Design earthquake response spectral acceleration coefficient at 1.0 second period, S_{D1} = 0.104g
Acceleration Coefficient (effective peak ground acceleration coefficient), A_S = 0.089g

DESIGN LOADING:

Vehicular = HL-93
Future Wearing Surface = 35 lb/sf
Earth = 120 lb/cf
Equivalent Fluid Pressure = 45 lb/cf (Min.)
Superstructure: Non-composite for dead load.
Composite for live load.

DESIGN UNIT STRESSES:

Class B Concrete (Substructure)	f'c = 3,000 psi
Class B-1 Concrete (Type D Barrier)	f'c = 4,000 psi
Class B-2 Concrete (Superstructure, except Prestressed Girders and Type D Barrier)	f'c = 4,000 psi
Reinforcing Steel (Grade 60)	fy = 60,000 psi
Structural Steel HP Pile (ASTM A709 Grade 50S)	fy = 50,000 psi

For precast prestressed panel stresses, see Sheet No. 18.
For prestressed girder stresses, see Sheets No. 16 thru 17.

NEOPRENE PADS:

Neoprene bearing pads shall be 60 durometer and shall be in accordance with Sec 716.

JOINT FILLER:

All joint filler shall be in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

REINFORCING STEEL:

Minimum clearance to reinforcing steel shall be 1½", unless otherwise shown.

TRAFFIC HANDLING:

Vertical clearance for National Avenue traffic during construction shall be 14'-6" minimum over a 11'-0" wide horizontal opening of the roadway in each direction.

Traffic to be maintained on structures during construction. See roadway plans for traffic control and Sheets No. 3 thru 4 for staged construction details.

MISCELLANEOUS:

MoDOT Construction personnel will indicate the type of joint filler option used under the precast panels for this structure:

☐ Constant Joint Filler
☐ Variable Joint Filler

NOTICE AND DISCLAIMER REGARDING BORING LOG DATA:

The locations of all subsurface borings for this structure are shown on the plan sheets for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheets No. 28 thru 30 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.

Foundation Data

Type	Design Data		Bent Number 1	Bent Number 2
Load Bearing Pile	Pile Type and Size		HP 12x53	HP 12x53
	Number	ea	9	9
	Approximate Length Per Each	ft	27	28
	Pile Point Reinforcement	ea	All	All
	Min. Galvanized Penetration (Elev.)	ft	Full Length	Full Length
	Pile Driving Verification Method		DF	DF
	Resistance Factor		0.40	0.40
	Minimum Nominal Axial Compressive Resistance	kip	590	590

DF = FHWA - modified Gates Dynamic Pile Formula.

Minimum Nominal Axial Compressive Resistance = $\frac{\text{Maximum Factored Loads}}{\text{Resistance Factor}}$

Manufactured pile point reinforcement shall be used on all piles in this structure.

Pile point reinforcement need not be galvanized. Shop drawings will not be required for pile point reinforcement.

Prebore for piles at Bents No. 1 and 2 to elevation 1263.0.

HP piles are anticipated to be driven to refusal on rock. Review all borings for depth of rock and restrict driving as appropriate to comply with hard rock driving criteria in accordance with Sec 702. When pile refusal on rock occurs, as approved by the engineer, the minimum nominal axial compressive resistance is verified and no additional pile driving verification method is required.

The contractor shall make every effort to achieve the minimum galvanized penetration (elevation) shown on the plans for all piles.

Estimated Quantities

Item		Substr.	Superstr.	Total
Removal of Miscellaneous ACM (Non-Friable)	sq. foot			12
Removal of Bridges (A04473)	lump sum			1
Bridge Approach Slab (Major)	sq. yard		314	314
Galvanized Structural Steel Piles (12 in.)	linear foot	492		492
Pre-Bore for Piling	linear foot	198		198
Pile Point Reinforcement	each	18		18
Class B Concrete (Substructure)	cu. yard	58.4		58.4
Type D Barrier	linear foot		226	226
Slab on Concrete NU-Girder	sq. yard		648	648
NU 35, Prestressed Concrete NU-Girder	linear foot		647	647
Vertical Drain at End Bents	each	2		2
Plain Neoprene Bearing Pad	each		8	8
Laminated Neoprene Bearing Pad (Tapered)	each		8	8
Pile Spacers	each	18		18

All concrete above the construction joint in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

All reinforcement in the end bents is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Estimated Quantities for Slab on Concrete NU-Girder

Item		Total
Class B-2 Concrete	cu. yard	201
Reinforcing Steel (Epoxy Coated)	pound	43,110

The table of Estimated Quantities for Slab on Concrete NU-Girder represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab (or with the horizontal dimensions as shown on the plan of slab). Payment for prestressed panels, conventional forms, all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slab shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type I, II or III.

PRECAST PRESTRESSED PANELS:

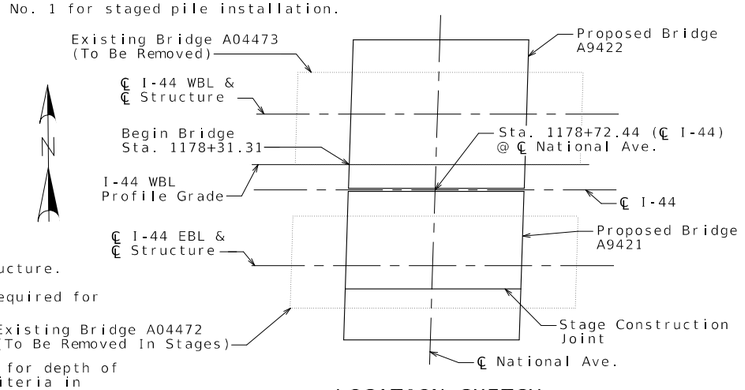
The Estimated Quantities for Slab on Concrete NU-Girder are based on skewed precast prestressed end panels.

Class B-2 Concrete quantity is based on minimum top flange and minimum joint material thickness.

The prestressed panel quantities are not included in the table of Estimated Quantities for Slab on Concrete NU-Girder.

STAGED CONSTRUCTION:

See General Plan and Elevation Sheet No. 1 for staged pile installation.



LOCATION SKETCH

GENERAL NOTES & QUANTITIES

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

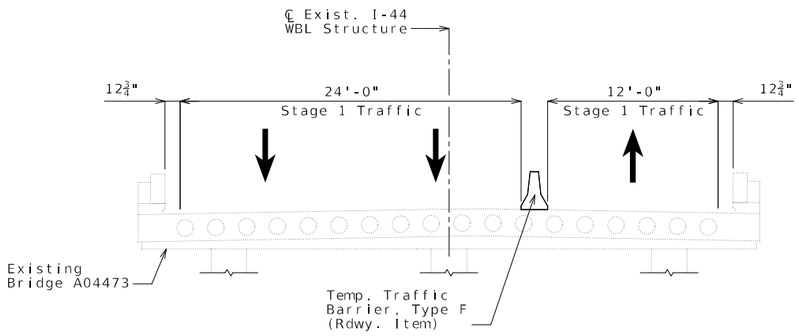
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

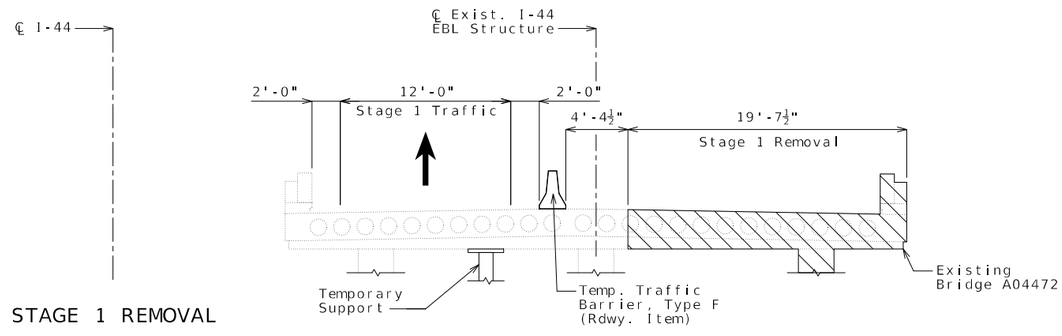
DATE PREPARED: 11/7/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 2
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9422

NO.	DESCRIPTION	DATE

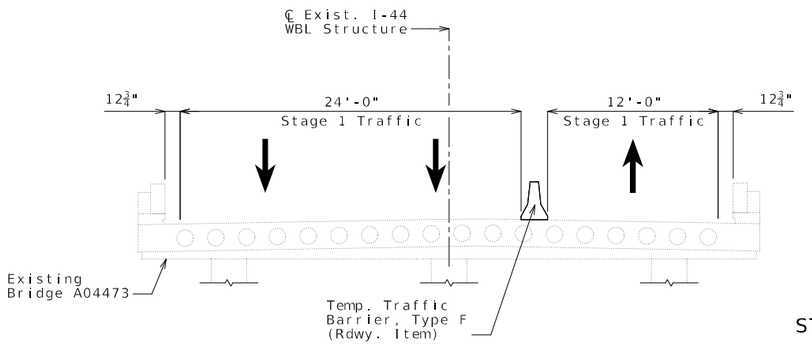
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

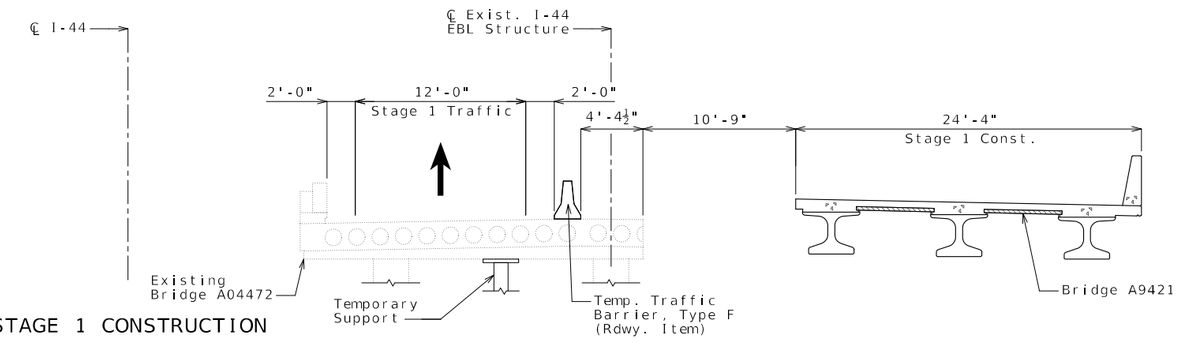
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



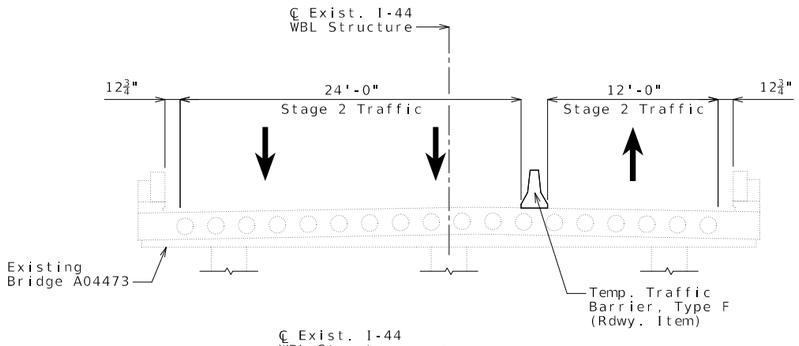


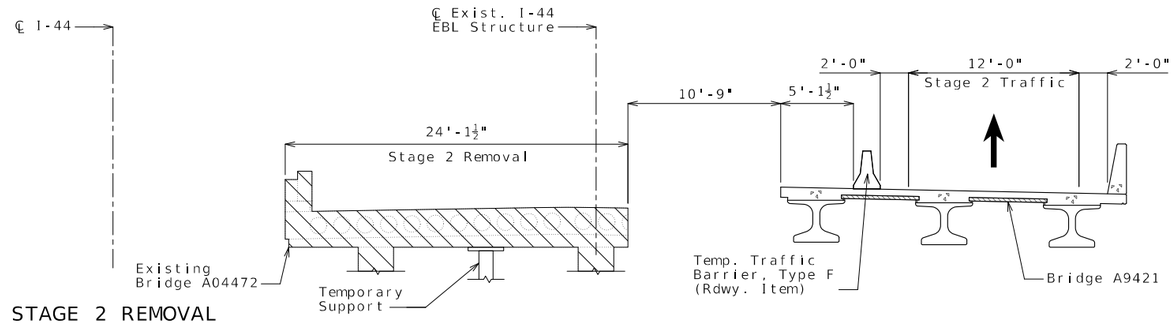
STAGE 1 REMOVAL



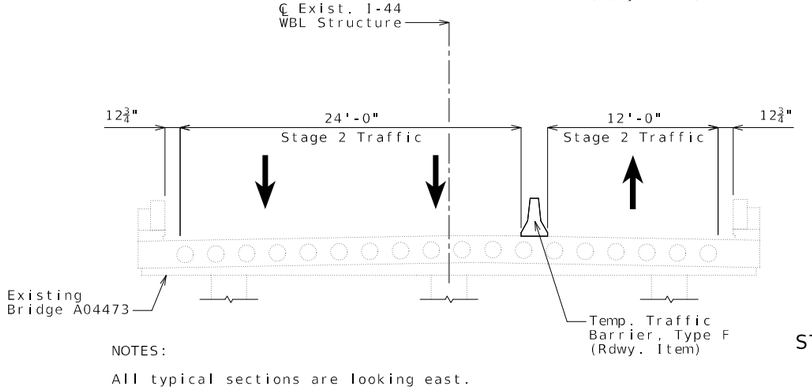


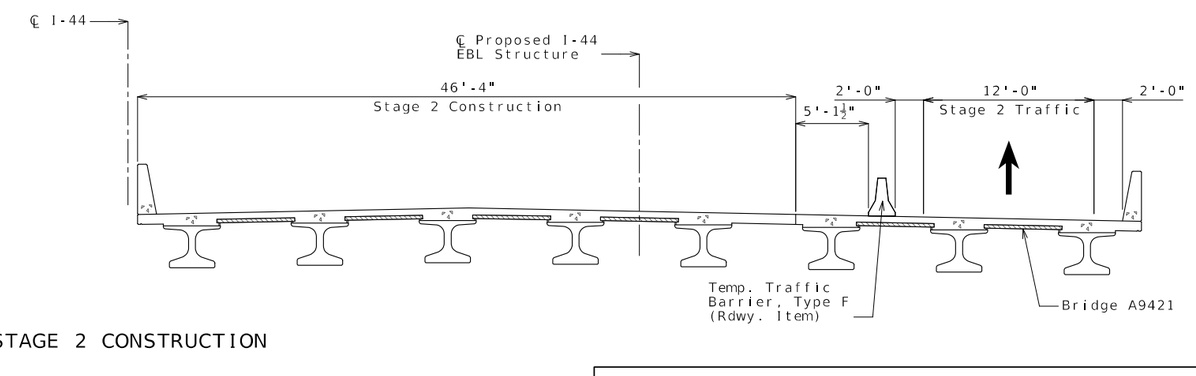
STAGE 1 CONSTRUCTION





STAGE 2 REMOVAL





STAGE 2 CONSTRUCTION

NOTES:

All typical sections are looking east.

Hatched area indicates removal of existing structures.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 30

STAGED CONSTRUCTION

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 9/6/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	3

COUNTY: GREENE

JOB NO.: JSU0076

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A9422

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

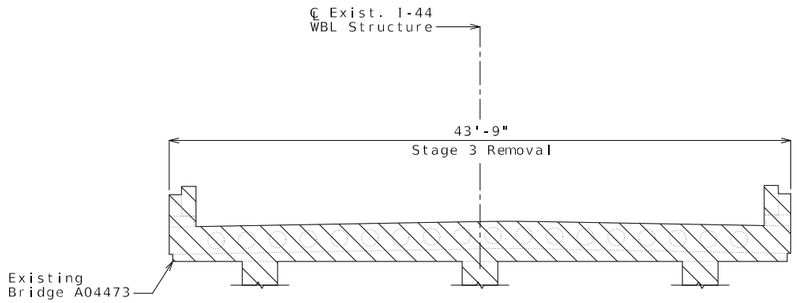
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

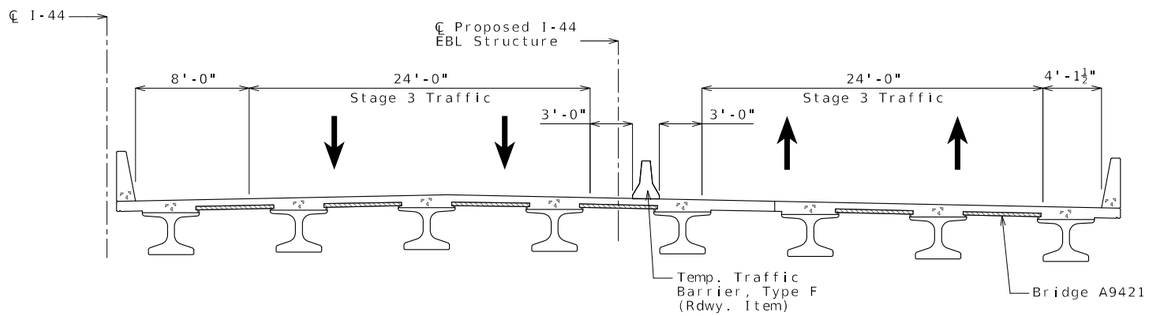
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165

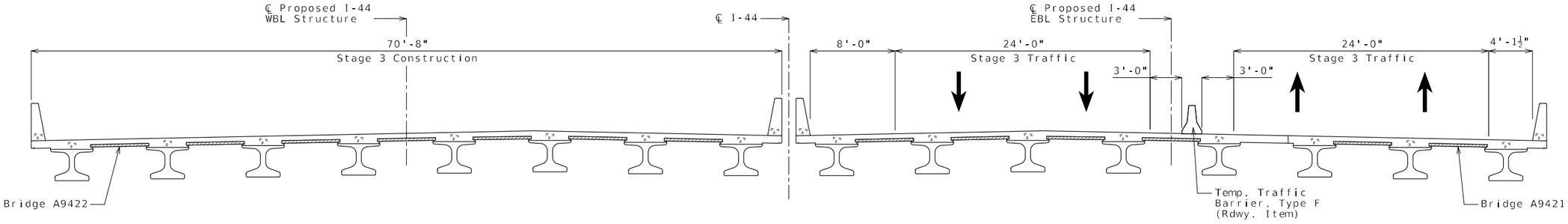
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171032\B_A9422_003_JSU0076.dgn 8:54:54 AM 9/6/2024

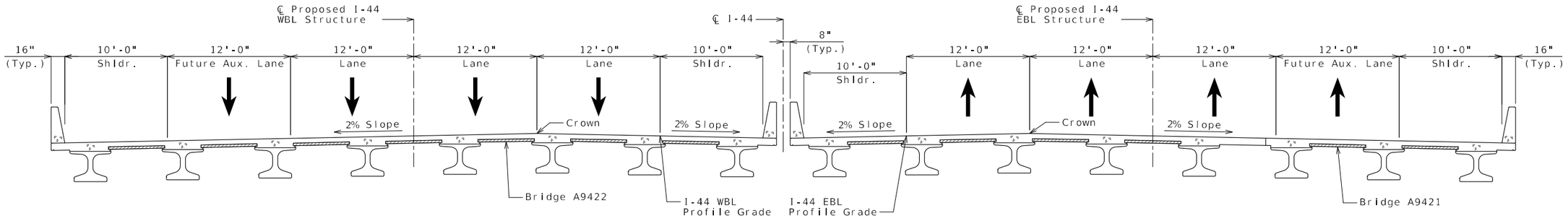




STAGE 3 REMOVAL



STAGE 3 CONSTRUCTION



FINAL SECTION THRU SLAB

NOTES:

All typical sections are looking east.

Hatched area indicates removal of existing structures.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 4 of 30

STAGED CONSTRUCTION

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/6/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	4

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9422

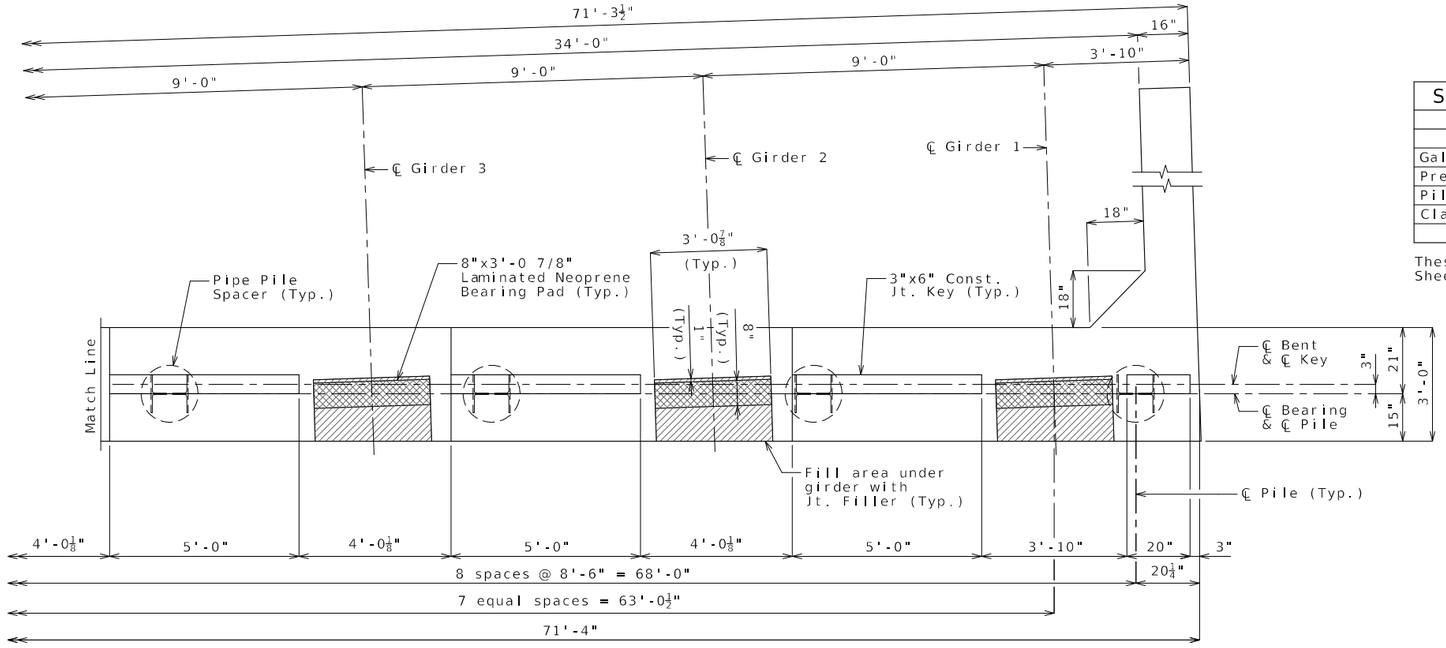
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

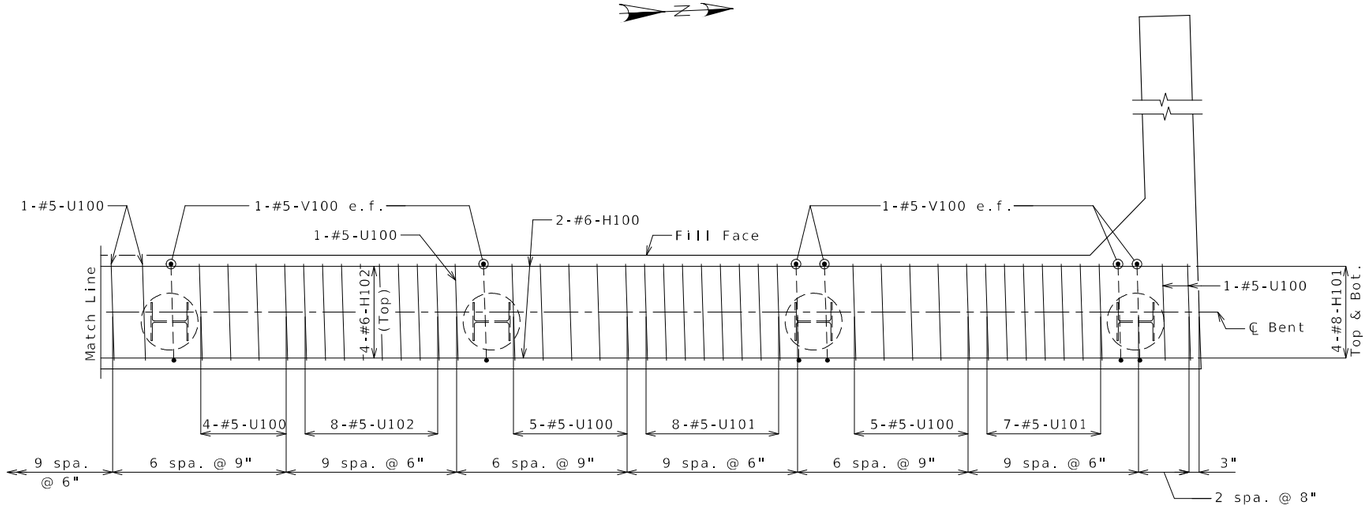
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171032\B_A9422_004_JSU0076.dgn 8:55:07 AM 9/6/2024



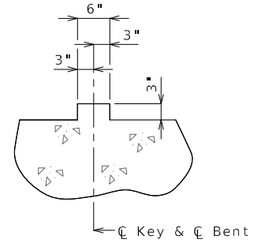
PART PLAN OF BEAM



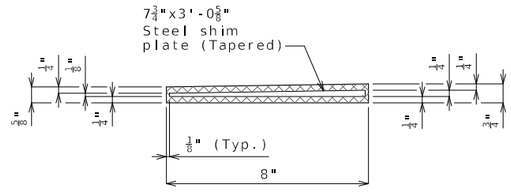
PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

Substructure Quantity Table for End Bent No. 1		
Item		Quantity
Galvanized Structural Steel Piles (12 in.)	linear foot	244
Pre-Bore for Piling	linear foot	99
Pile Point Reinforcement	each	9
Class B Concrete (Substructure)	cu. yard	29.3

These quantities are included in the Estimated Quantities table on Sheet No. 2.



SECTION THRU KEY



TYPICAL SECTION THRU
8"X3'-0 7/8"X11/16"
LAMINATED NEOPRENE BEARING PAD
(8 Required)

NOTES:

Work this sheet with Sheets No. 6 thru 9.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 5 of 30

END BENT NO. 1
BEAM DETAILS 1 OF 2

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

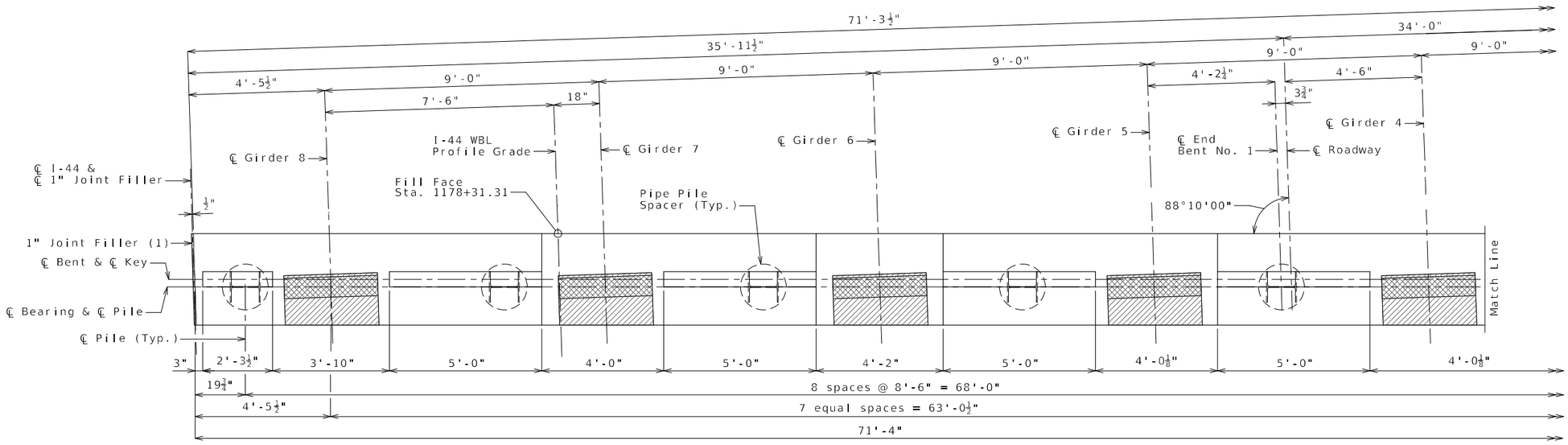
DATE PREPARED: 9/6/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 5
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9422

DESCRIPTION | DATE | REV.

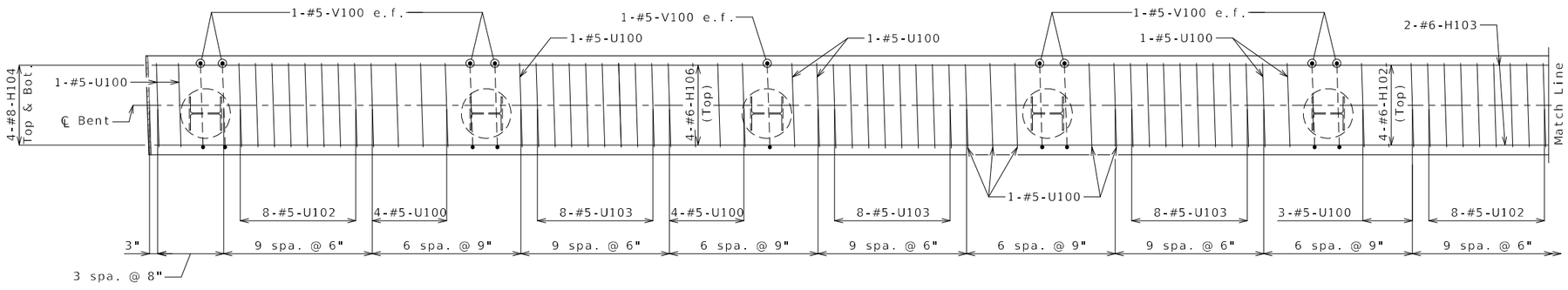
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171032\B_A9422_005_JSU0076.dgn 8:55:20 AM 9/6/2024



PART PLAN OF BEAM



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5 & 7 thru 9.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) Seal joint between vertical face of EB and WB bearing beams with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6 of 30

END BENT NO. 1
BEAM DETAILS 2 OF 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED
9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	6

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

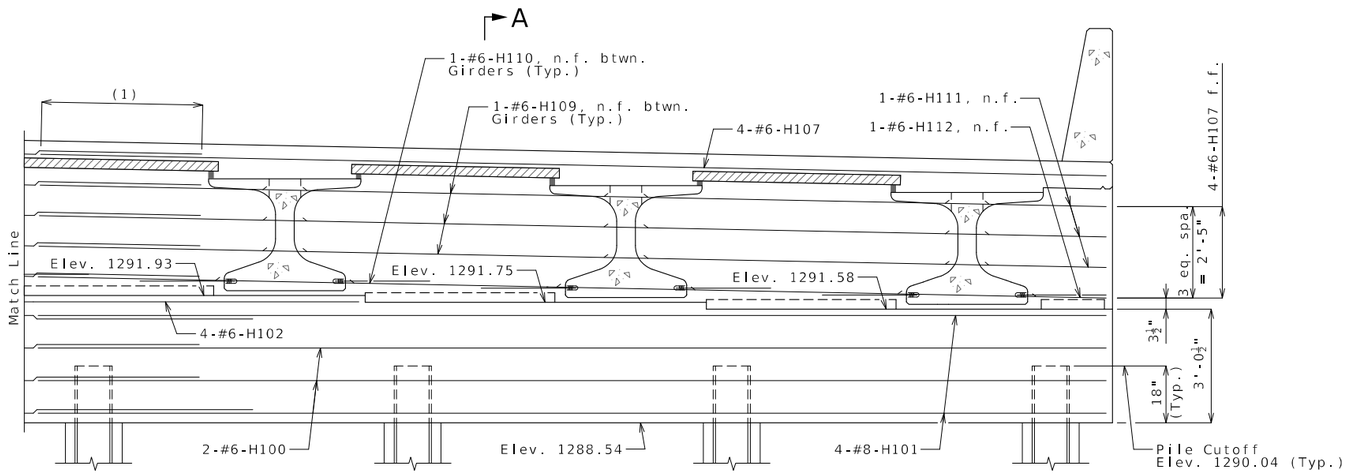
BRIDGE NO.
A9422

REV.	DESCRIPTION	DATE

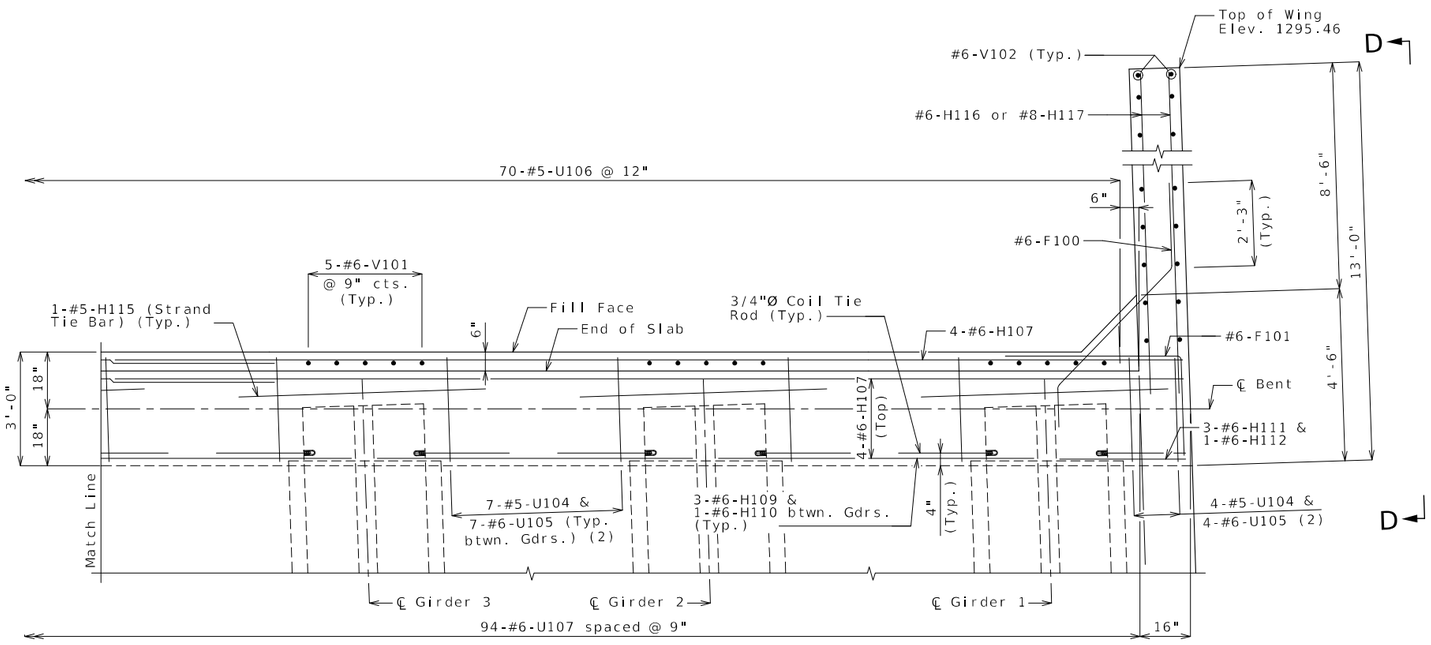
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171032\B_A9422_006_JSU0076.dgn 8:55:33 AM 9/6/2024



SECTION NEAR END BENT
(Looking Back Station)



PART PLAN
(2) Space bars to match #5-V100 & #5-U100 bars.
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5, 6, 8 and 9.

For Section A-A see Sheet No. 9.

The #6-F100 shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H115, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) Minimum Lap #6 Bars = 4'-3"
Minimum Lap #8 Bars = 5'-8"

END BENT NO. 1
DIAPHRAGM DETAILS 1 of 2

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 7 of 30

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	7

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9422

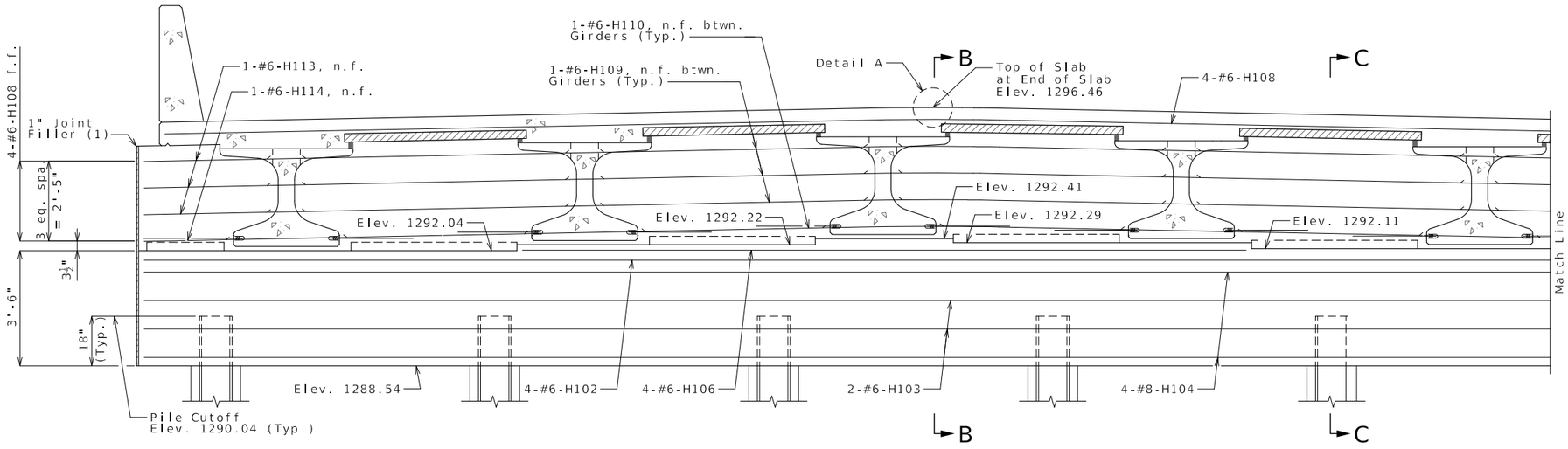
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

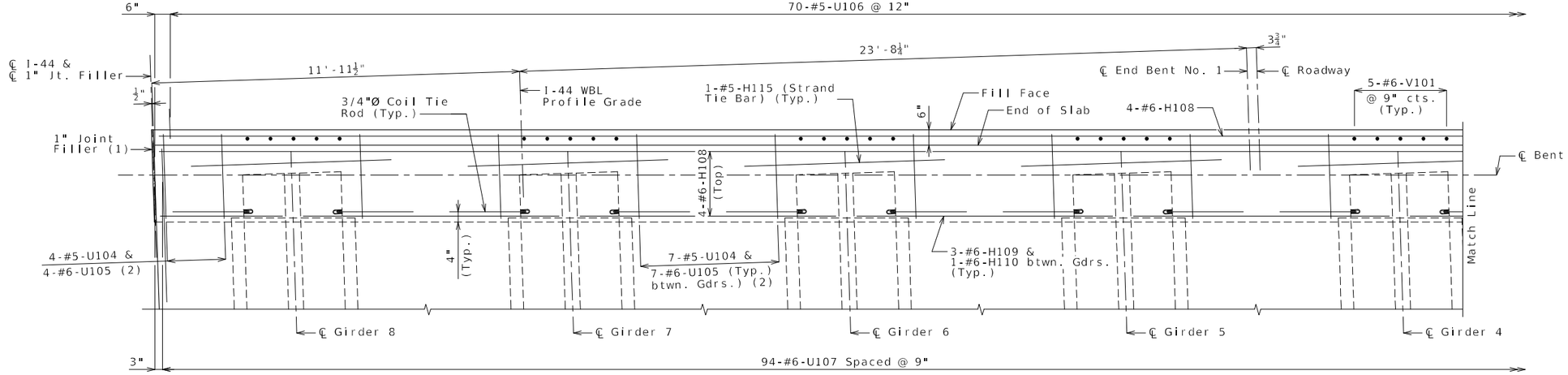
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171032\B_A9422_007_JSU0076.dgn 8:55:45 AM 9/6/2024



SECTION NEAR END BENT
(Looking Back Station)



PART PLAN
(2) Space bars to match #5-V100 & #5-U100 bars.
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 5 thru 7 and 9.

For Section A-A see Sheet No. 9.

For Detail A see Sheet No. 21.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H115, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) Seal joint between vertical face of EB and WB bearing beams and diaphragms with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 30

END BENT NO. 1
DIAPHRAGM DETAILS 2 of 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	8

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9422

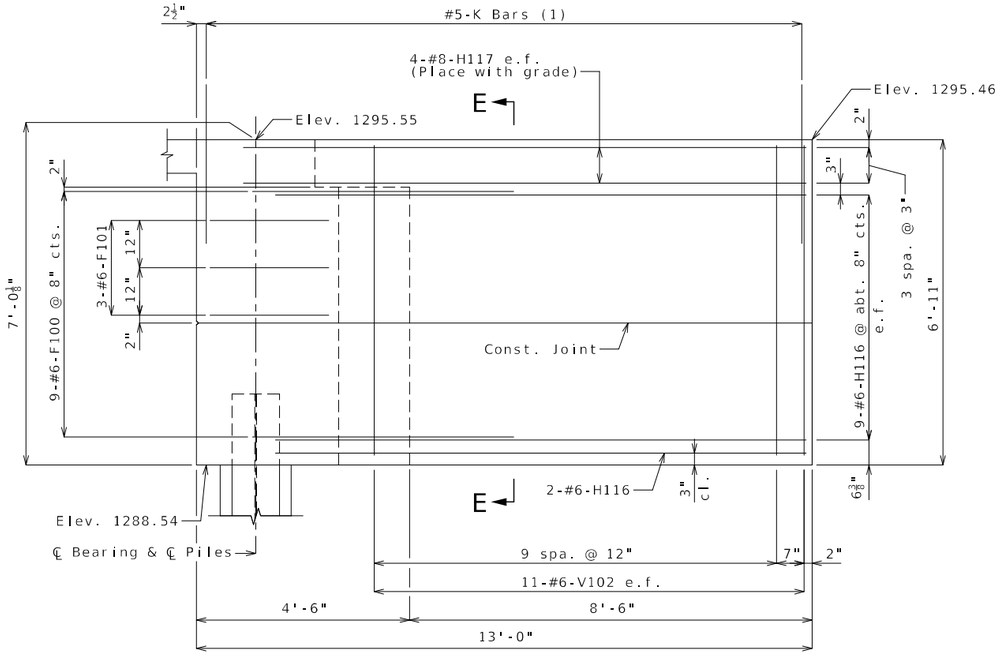
REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

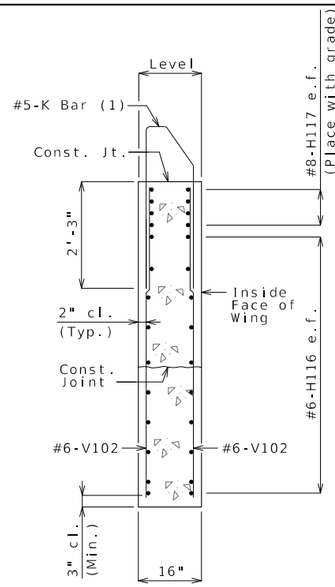
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

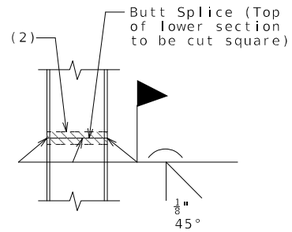
c:\bmcd_lib\pw_connect\trn\d0171032\B_A9422_008_JSU0076.dgn 8:55:57 AM 9/6/2024



ELEVATION D-D



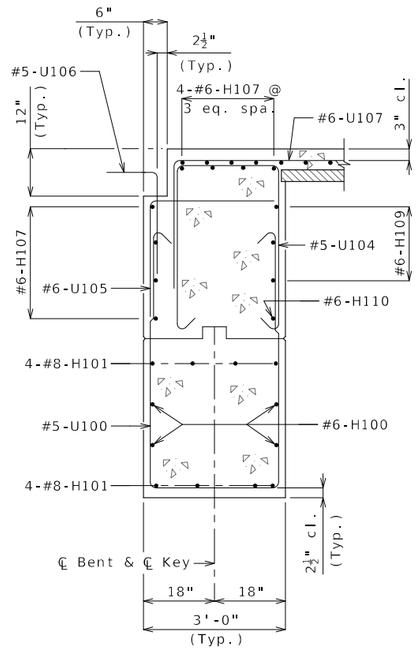
SECTION E-E



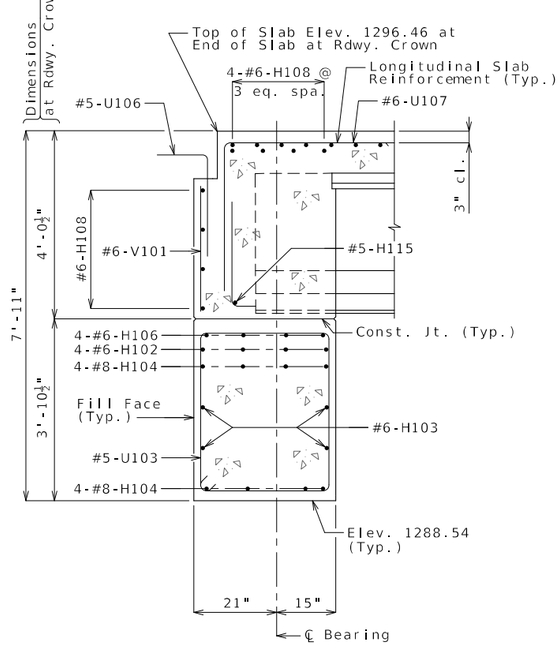
STEEL PILE SPLICE

(If required)

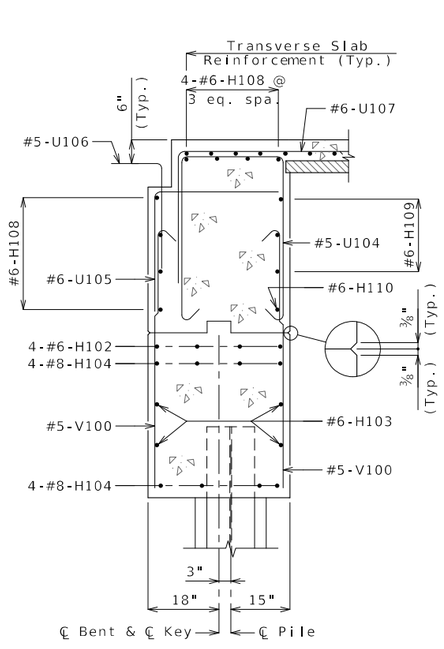
(2) Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

(1) For reinforcement of the Type D Barrier at End Bent, see Sheet No. 23.

e.f. denotes each face.

For details of bridge approach slab, see Sheet No. 24.

Work this sheet with Sheets No. 5 thru 8.

END BENT NO. 1
WING DETAILS & SECTIONS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9 of 30

8:56:09 AM 9/6/2024

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	9

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

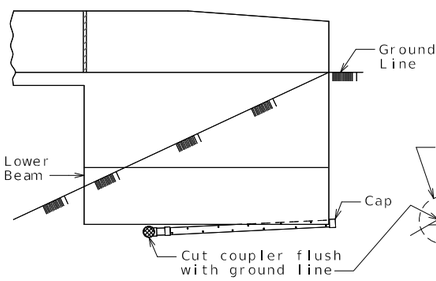
BRIDGE NO.
A9422

REV.	DESCRIPTION	DATE

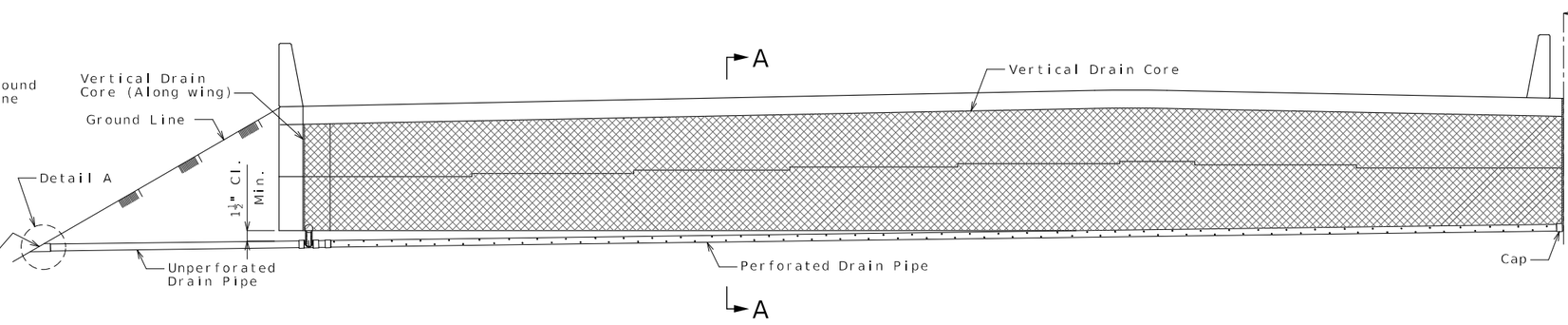
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

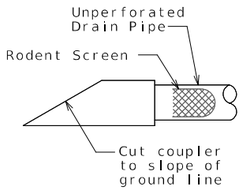
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



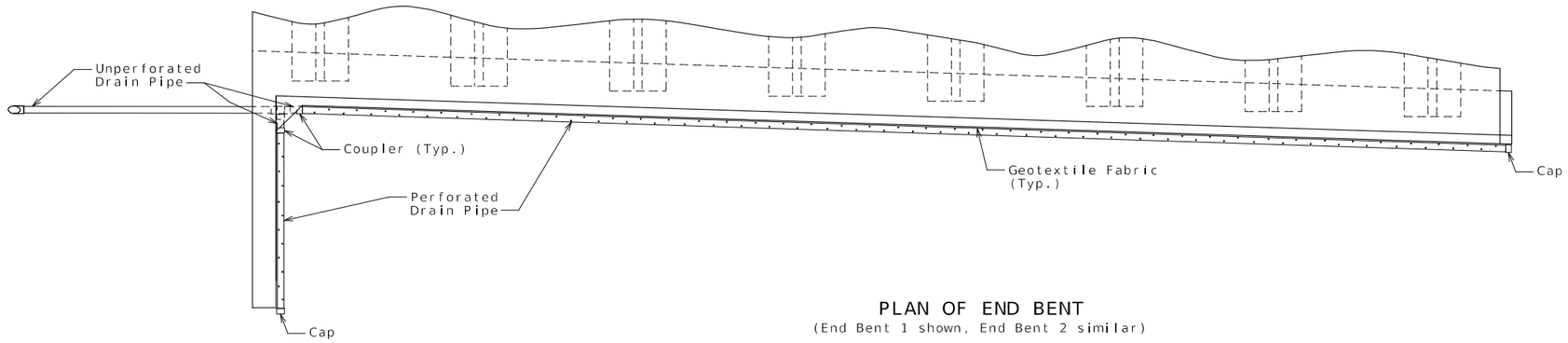
ELEVATION OF WING



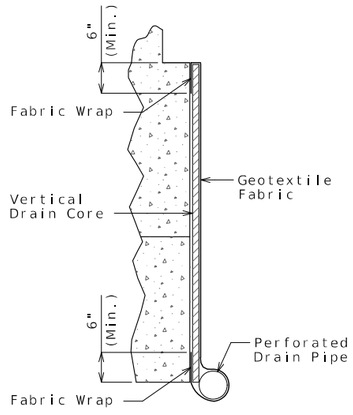
ELEVATION OF END BENT



DETAIL A



PLAN OF END BENT
(End Bent 1 shown, End Bent 2 similar)



PART SECTION A-A
(Section thru wing similar)

General Notes:

All drain pipe shall be sloped 1 to 2 percent.

Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.

Drain pipe shall be placed at fill face of end bent and inside face of wings. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.

Perforated pipe shall be placed at fill face side and inside face of wings at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.

VERTICAL DRAIN AT END BENTS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 9/6/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 10
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9422

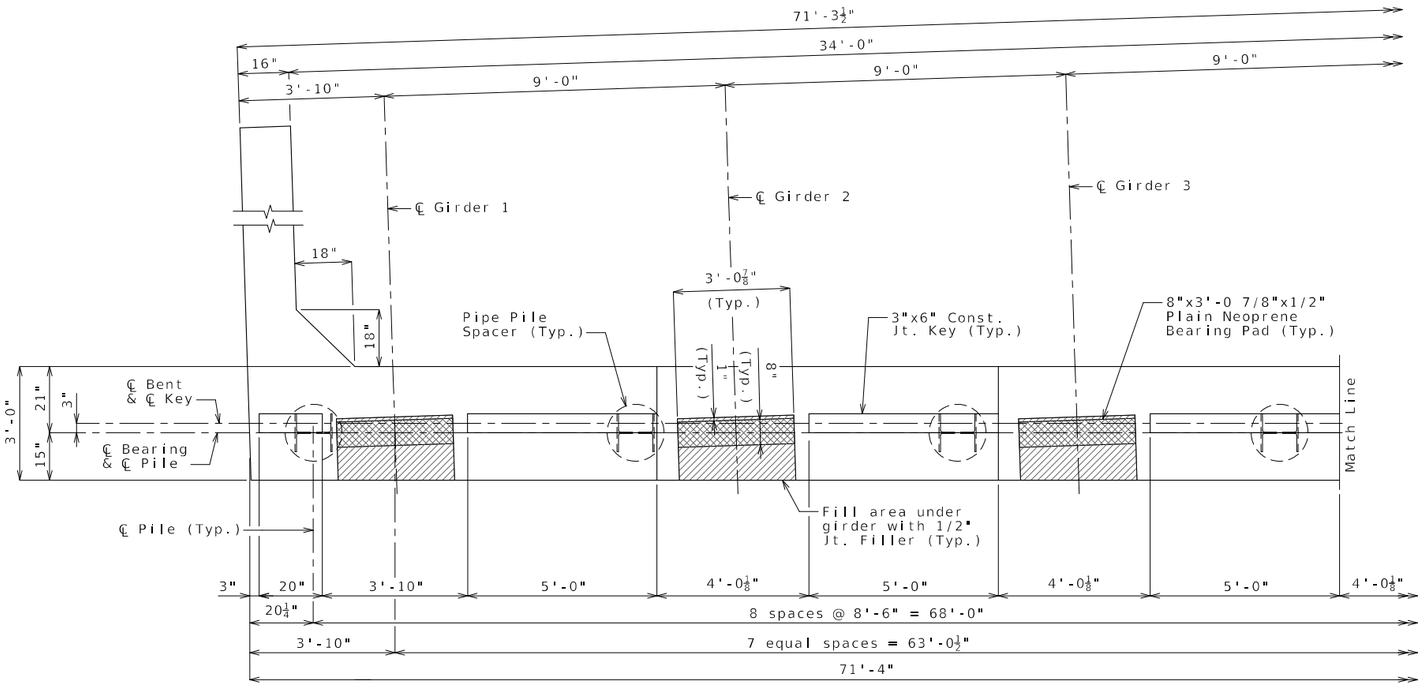
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

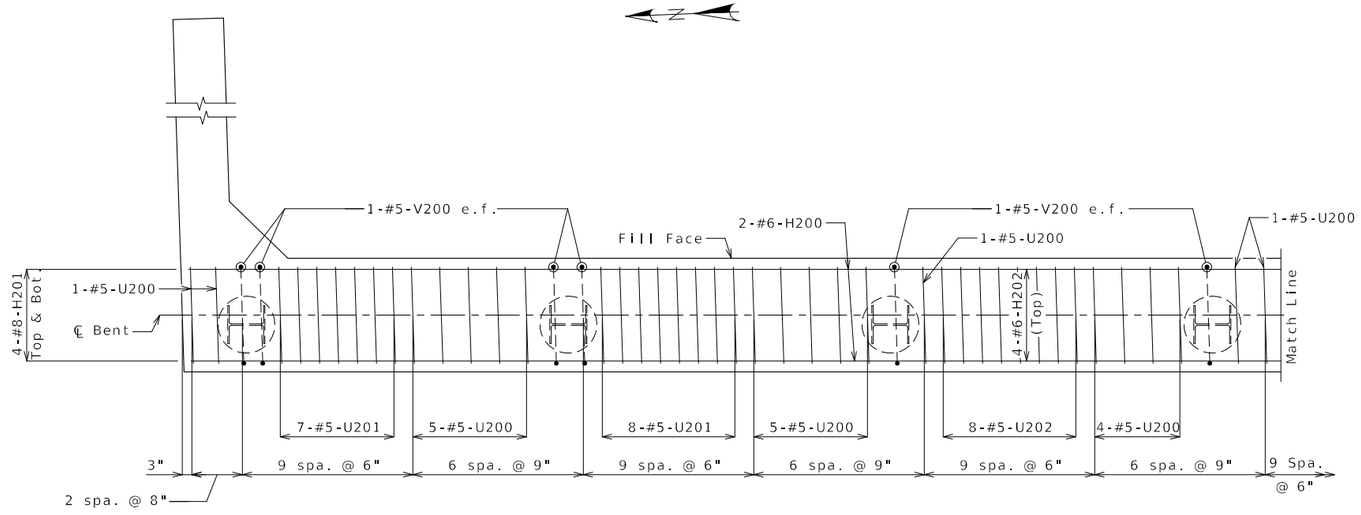
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171032\B_A9422_010_JSU0076.dgn 8:56:21 AM 9/6/2024



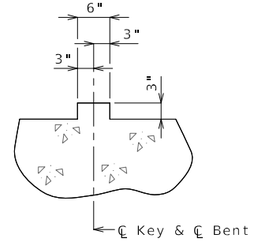
PART PLAN OF BEAM



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

Substructure Quantity Table for End Bent No. 2		
Item		Quantity
Galvanized Structural Steel Piles (12 in.)	linear foot	248
Pre-Bore for Piling	linear foot	99
Pile Point Reinforcement	each	9
Class B Concrete (Substructure)	cu. yard	29.1

These quantities are included in the Estimated Quantities table on Sheet No. 2.



SECTION THRU KEY

NOTES:

Work this sheet with Sheets No. 12 thru 15.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 11 of 30

END BENT NO. 2
BEAM DETAILS 1 OF 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/11/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	11

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9422

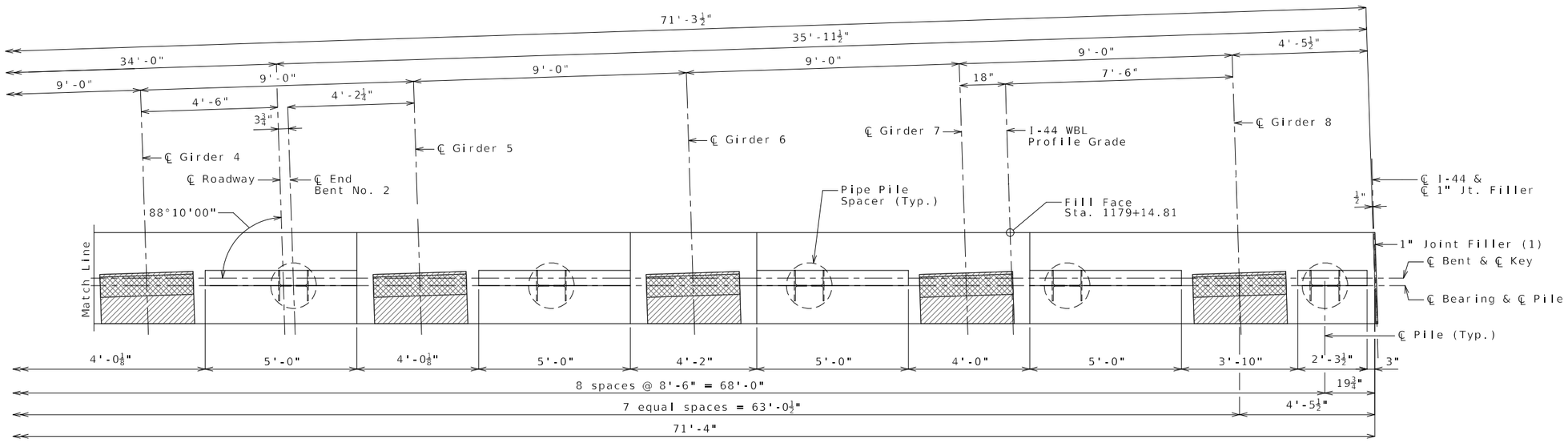
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

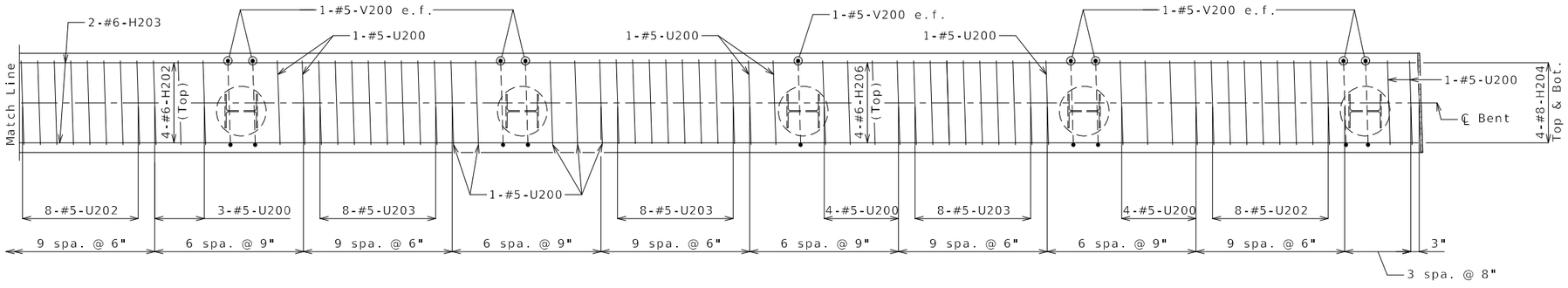
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

REV.

c:\bmcd_lib\pw_connect\trn\d0171032\B_A9422_011_JSU0076.dgn 2:27:24 PM 9/11/2024



PART PLAN OF BEAM



PART PLAN OF BEAM SHOWING REINFORCEMENT
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 11 & 13 thru 15.

All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

e.f. denotes each face.

(1) Seal joint between vertical face of EB and WB bearing beams with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

END BENT NO. 2
BEAM DETAILS 2 OF 2

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	12

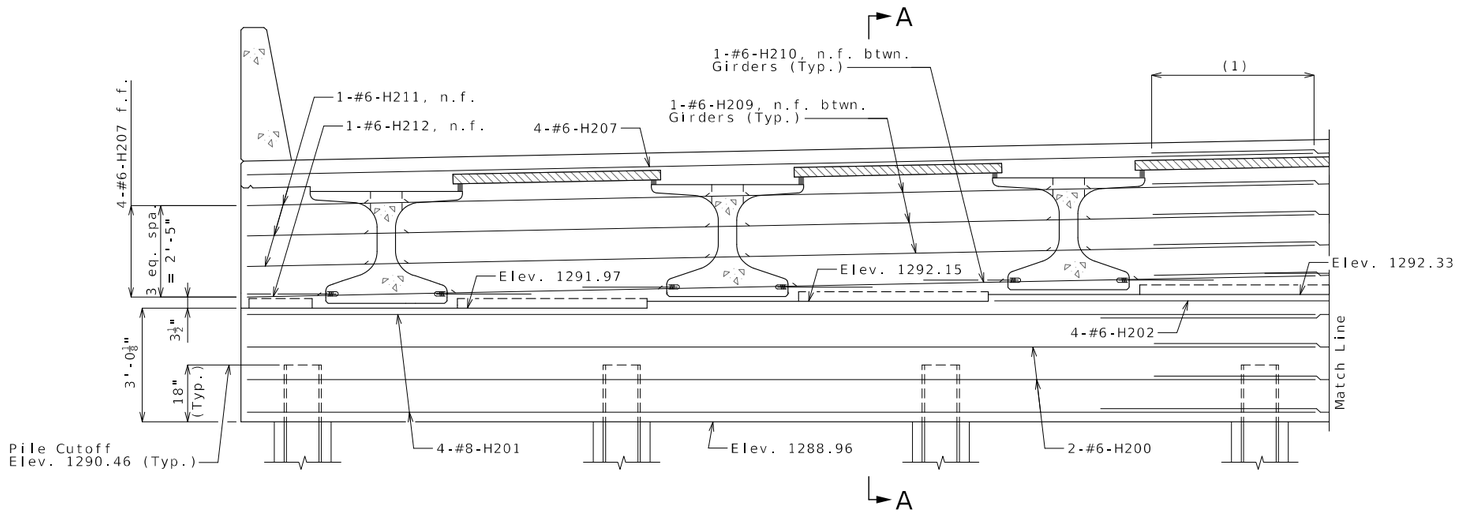
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9422

REV.	DESCRIPTION	DATE

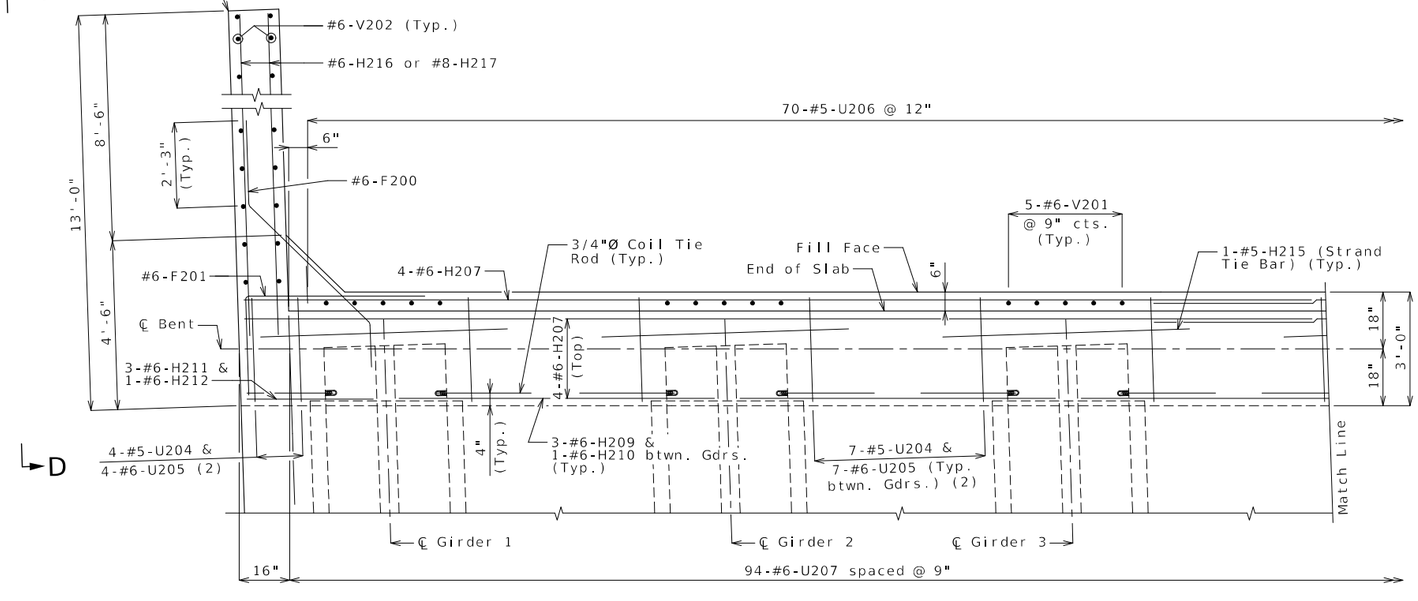
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

c:\bmcd_lib\pw_connect\trn\d0171032\B_A9422_012_JSU0076.dgn 8:56:45 AM 9/6/2024



SECTION NEAR END BENT
(Looking Ahead Station)



PART PLAN
(2) Space bars to match #5-V200 & #5-U200 bars.
(Keys and steps not shown for clarity)

NOTES:

Work this sheet with Sheets No. 11, 12, 14 and 15.

For Section A-A see Sheet No. 15.

The #6-F200 shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H215, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) Minimum Lap #6 Bars = 4'-3"
Minimum Lap #8 Bars = 5'-8"

END BENT NO. 2
DIAPHRAGM DETAILS 1 of 2

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

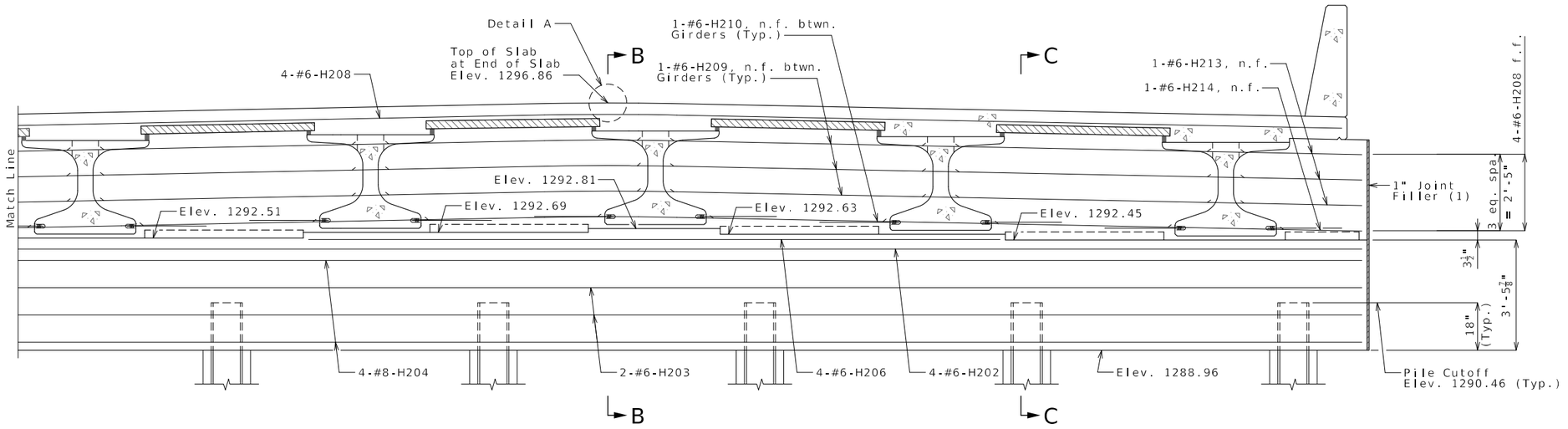
DATE PREPARED 9/6/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 13
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9422

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

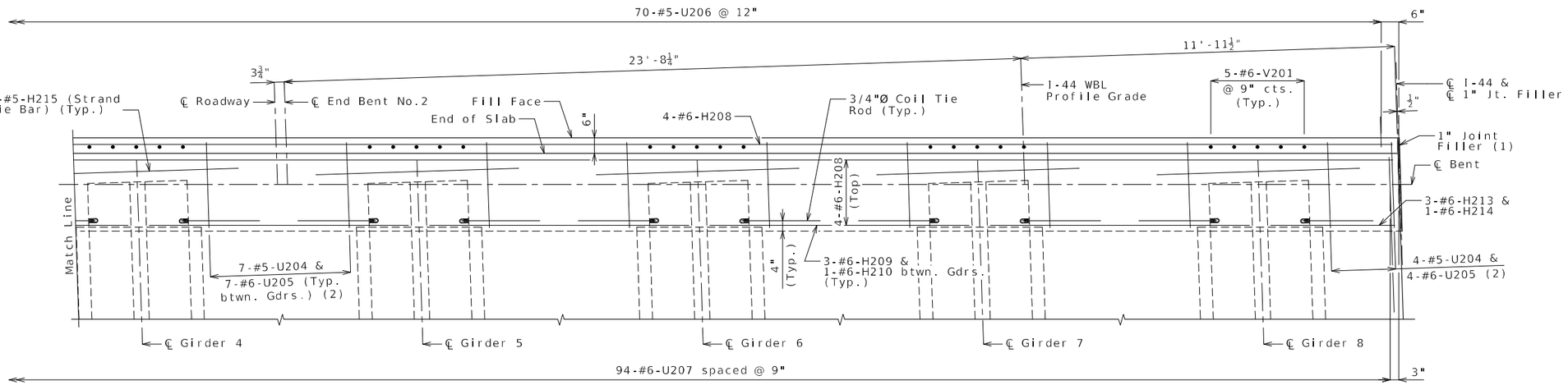
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.



SECTION NEAR END BENT

(Looking Ahead Station)



PART PLAN

(2) Space bars to match #5-V200 & #5-U200 bars.

NOTES:

Work this sheet with Sheets No. 11 thru 13 and 15.

For Section A-A see Sheet No. 15.

For Detail A see Sheet No. 21.

The U bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1 1/2 inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H215, see Sheets No. 16 and 17.

For details of vertical drain at end bents, see Sheet No. 10.

For details of bridge approach slab, see Sheet No. 24.

f.f. denotes far face
n.f. denotes near face

(1) Seal joint between vertical face of EB and WB bearing beam and diaphragms with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 14 of 30

END BENT NO. 2 DIAPHRAGM DETAILS 2 of 2

c:\bmcd_lib\pw_connect\trn\d0171032\B_A9422_014_JSU0076.dgn 8:57:10 AM 9/6/2024

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	14

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9422

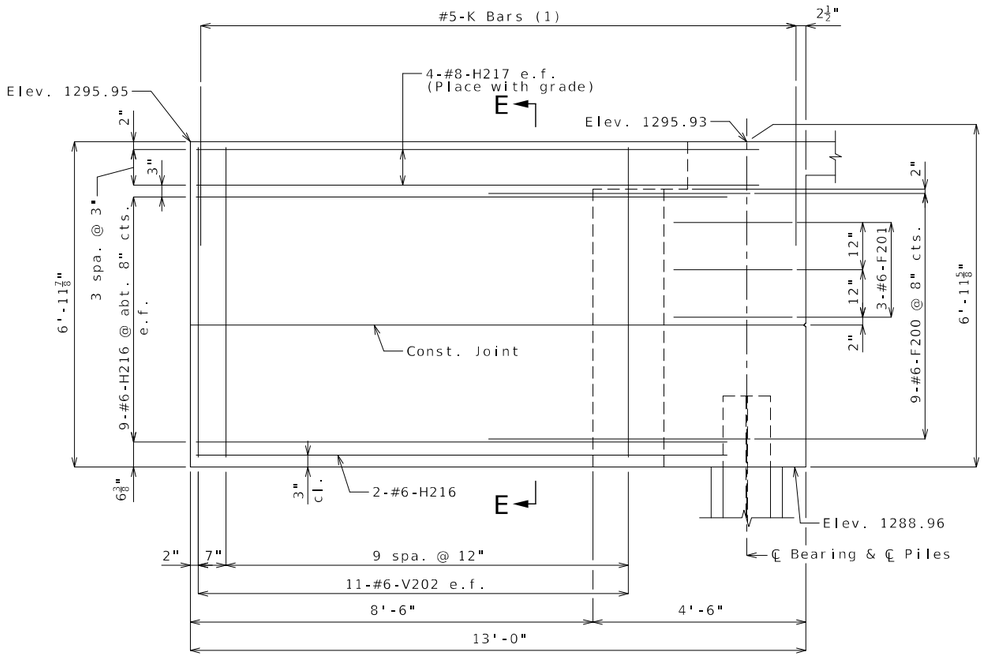
DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

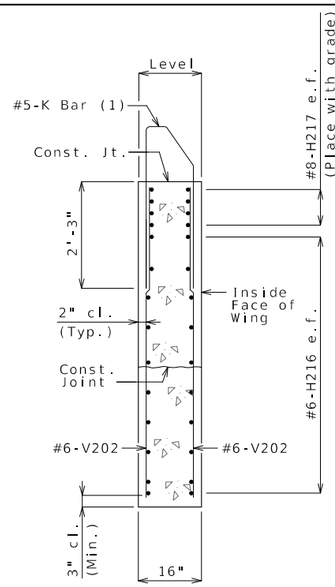
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

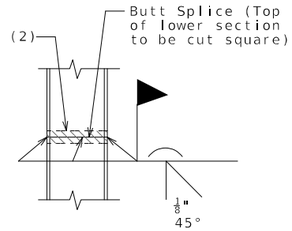
REV.



ELEVATION D-D



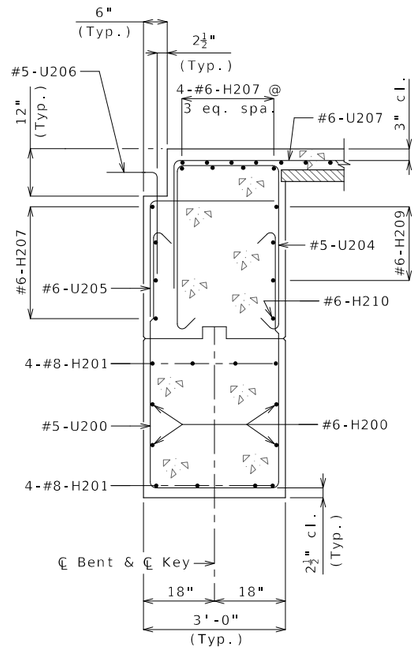
SECTION E-E



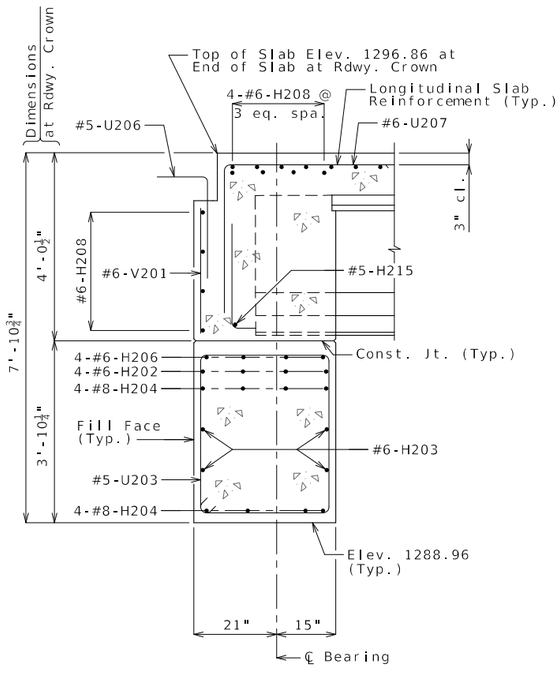
STEEL PILE SPLICE

(If required)

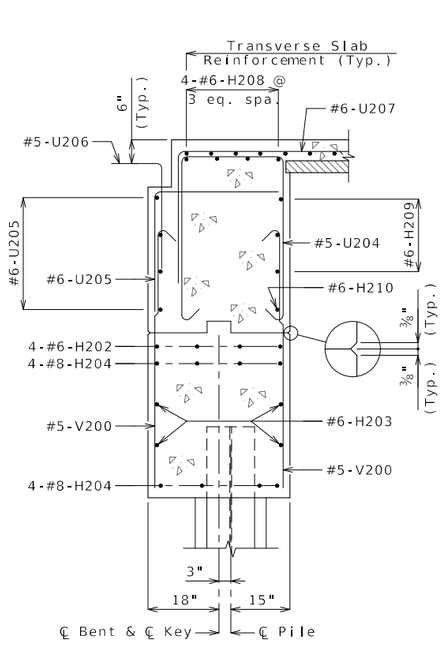
(2) Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

(1) For reinforcement of the Type D Barrier at End Bent, see Sheet No. 23.

e.f. denotes each face.

For details of bridge approach slab, see Sheet No. 24.

Work this sheet with Sheets No. 11 thru 14.

END BENT NO. 2
WING DETAILS & SECTIONS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 15 of 30

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	15

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9422

REV.	DESCRIPTION	DATE

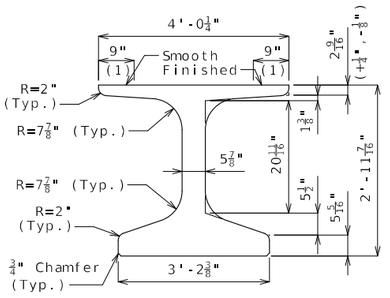
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

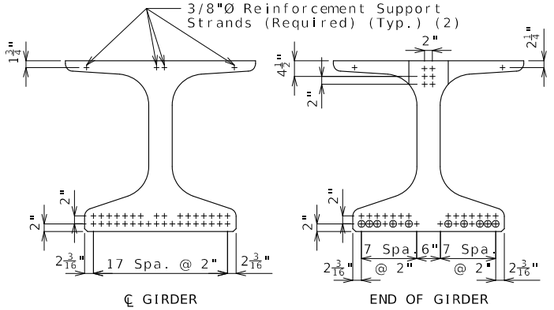
8:57:22 AM 9/6/2024

(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.



DIMENSIONS
AT MID SPAN

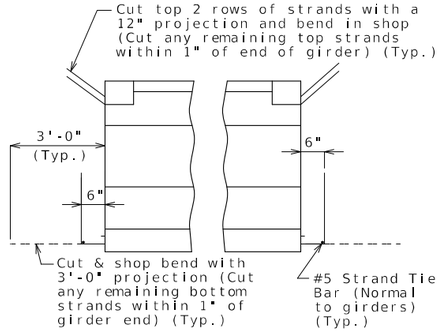
(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.



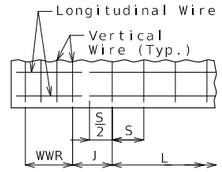
STRAND ARRANGEMENT

+ Indicates prestressing strand.

o Indicates cut & shop bend with 3'-0" projection.



STRANDS AT GIRDER ENDS



WELDED WIRE PLACEMENT

S = Vertical wire spacing

L = Length of WWR mats

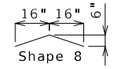
J = Distance between WWR mats

Bill of Reinforcing Steel

Bars Each Girder

No.	Size/Mark		Length	Shape
102	3	G1	2'-10"	8
2	4	G3	3'-10¼"	20

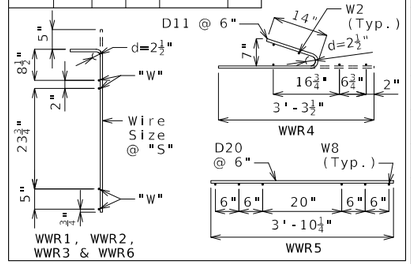
Bending Diagrams



Shape 20

Welded Wire Each Girder

Mark	Size	S	W	L	J
WWR1	D31	4"	W12	6'-4"	4"
WWR2	D31	12"	W12	24'-0"	12"
WWR3	D31	2'-0"	W12	6'-0"	12"
WWR6	D31	2"	W12	16"	3½"



All dimensions are out to out.

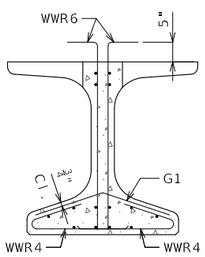
Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

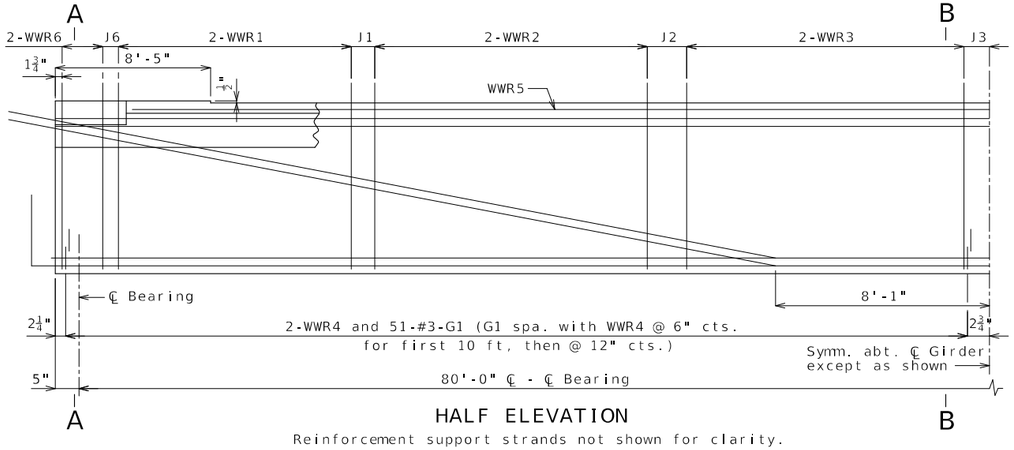
Actual bar lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be 1", unless otherwise shown.

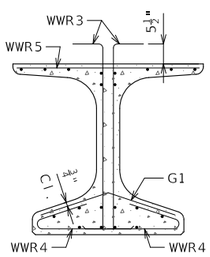
All bar reinforcement shall be Grade 60.

WWR shall not be epoxy coated.

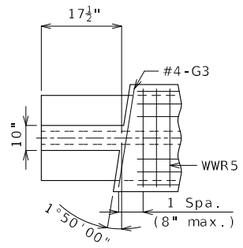




HALF ELEVATION
Reinforcement support strands not shown for clarity.



SECTION B-B
Strands not shown for clarity.



TOP FLANGE BLOCKOUT

General Notes:

Concrete for prestressed beams shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 34 strands, 0.6"Ø Grade 270, with an initial prestress force of 1494 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

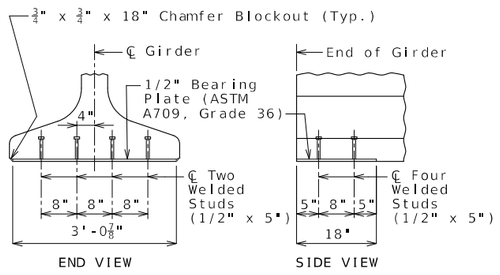
Exterior and interior girders are the same except for coil ties and application of bond breaker.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

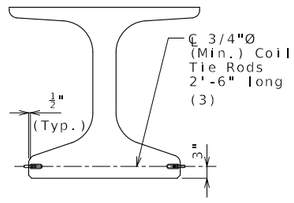
For Girder Camber Diagram, see Sheet No. 19.

For location of coil ties at integral bents, see Sheets No. 7, 8, 13 and 14.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.



BEARING PLATE



COIL TIES

(3) 2'-3" at exterior face of Girder 1 at end bents

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	16

COUNTY GREENE

JOB NO. JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9422

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

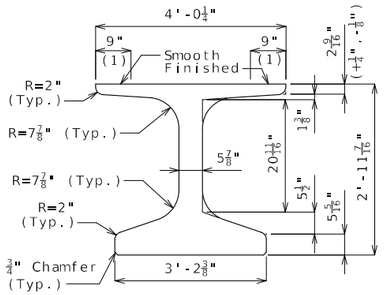
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

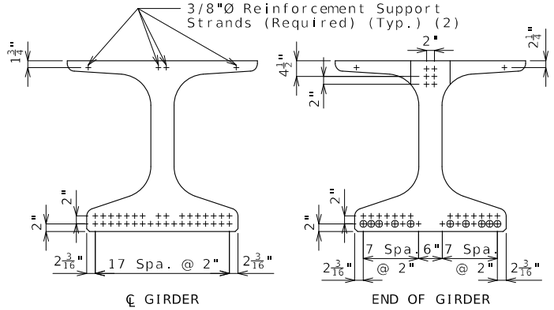
NU-GIRDERS - SPAN (1-2)

(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.



DIMENSIONS
AT MID-SPAN

(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.

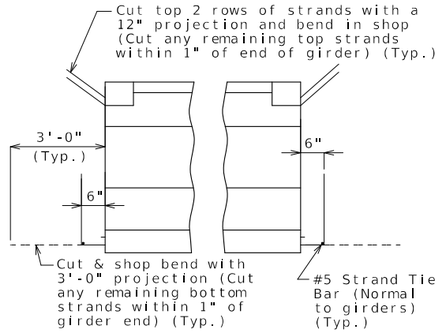


℄ GIRDER END OF GIRDER

STRAND ARRANGEMENT

+ Indicates prestressing strand.

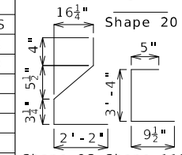
o Indicates cut & shop bend with 3'-0" projection.



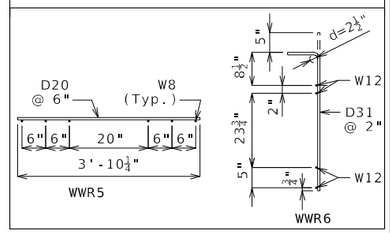
STRANDS AT GIRDER ENDS

Bill of Reinforcing Steel - Each Girder			
No.	Size/ Mark	Length	Shape
180	5 B1	4'-4"	11S
200	4 D1	4'-0"	9S
2	4 G3	3'-10¼"	20

Bending Diagrams



Welded Wire Reinforcement - Each Girder



All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

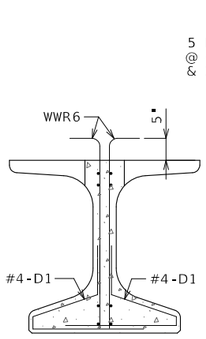
Actual bar lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be one inch.

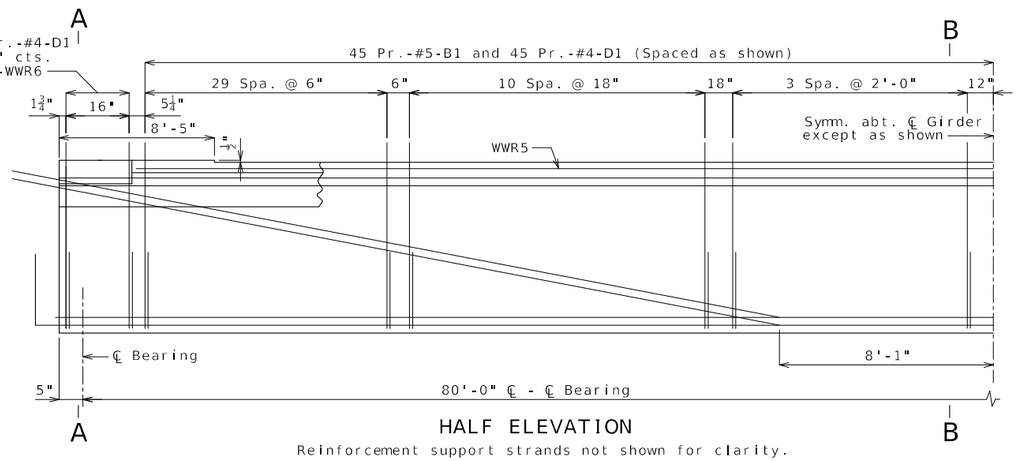
All bar reinforcement shall be Grade 60.

The two D1 bars may be furnished as one bar at the fabricator's option.

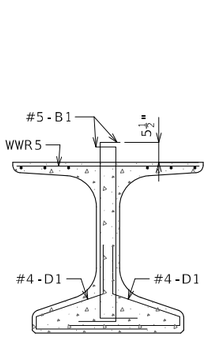
All B1 bars shall be epoxy coated.



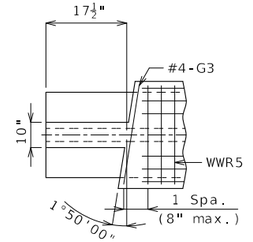
SECTION A-A
Strands not shown for clarity.



HALF ELEVATION
Reinforcement support strands not shown for clarity.



SECTION B-B
Strands not shown for clarity.



TOP FLANGE BLOCKOUT

General Notes:

Concrete for prestressed girders shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 34 strands, 0.6"Ø Grade 270, with an initial prestress force of 1494 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

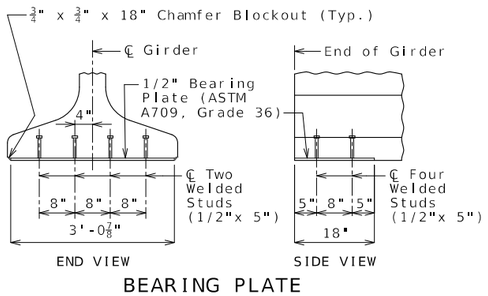
Exterior and interior girders are the same except for coil ties and application of bond breaker.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No.19.

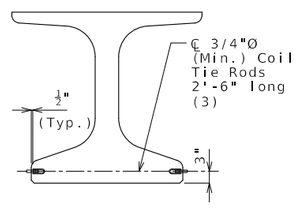
For location of coil ties at integral bents, see Sheets No. 7, 8, 13 and 14.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.



END VIEW SIDE VIEW

BEARING PLATE



COIL TIES

(3) 2'-3" at exterior face of Girder 1 at end bents

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

NU-GIRDERS (ALTERNATE REINFORCEMENT) - SPAN (1-2)

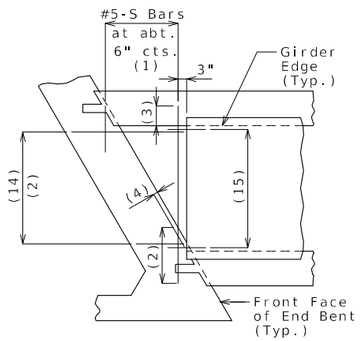
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
STATE OF MISSOURI
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/6/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 17
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9422

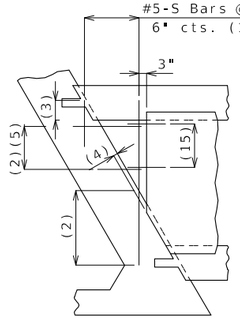
DESCRIPTION | DATE

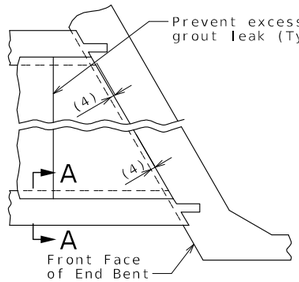
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



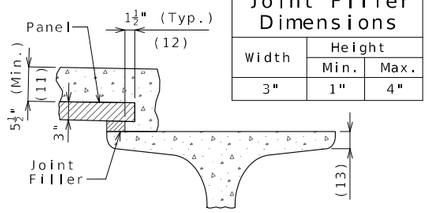
SQUARED END PANELS OR TRUNCATED END PANELS





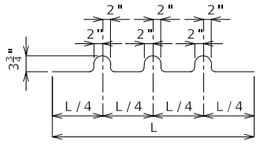
SKEWED END PANELS

PLAN SHOWING PANEL PLACEMENT



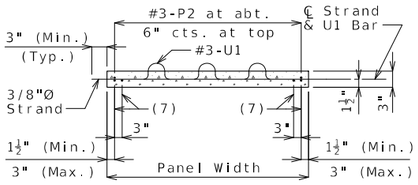
SECTION A-A

Joint Filler Dimensions		
Width	Height	
	Min.	Max.
3"	1"	4"



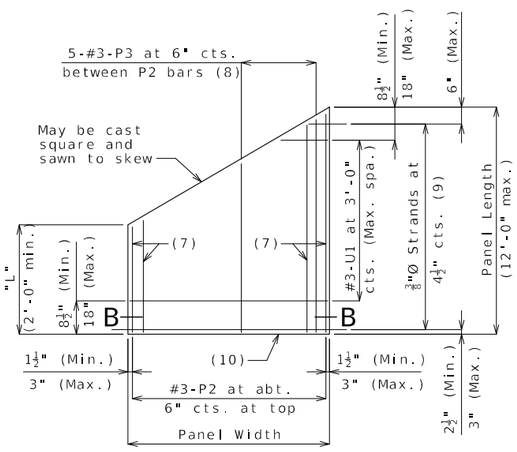
BENDING DIAGRAM FOR U1 BAR

U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars.

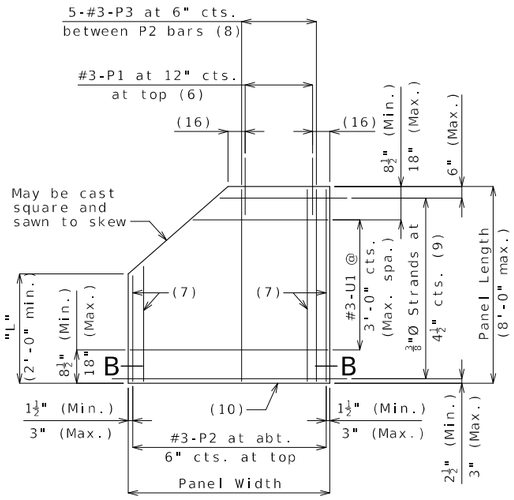


SECTION B-B

(14) #5-S Bars at abt. 9" cts. (1)
(15) #3-P1 at 12" cts. (End panels only)

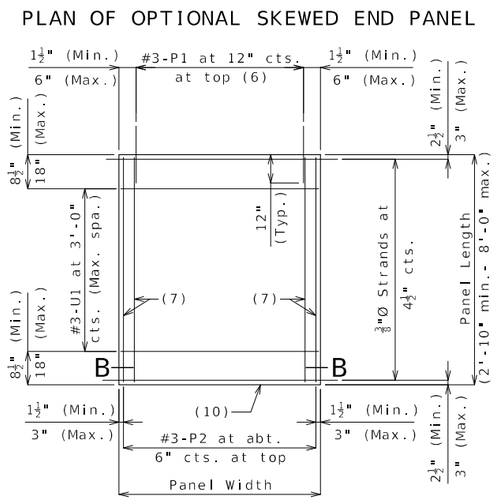


PLAN OF OPTIONAL SKEWED END PANEL



PLAN OF OPTIONAL TRUNCATED END PANEL

(16) 3" (Min.), 6" (Max.)



PLAN OF SQUARED PANEL

Reference Notes:

Plan of Panel Placement:
(1) S-bars shown are bottom steel in slab between panels and used with squared and truncated end panels only.

(2) Extend S-bars 18 inches beyond the front face of end bents for squared and truncated end panels only.

(3) Extend S-bars 9 inches beyond edge of girder (Typ.).

(4) End panels shall be dimensioned 1/2" min. to 1 1/2" max. from the inside face of diaphragm.

(5) For truncated end panels, use a min. of #5-S bars at 6" crossings in openings, or min. 4x4-W7xW7.

Plans of Panels:
(6) For end panels only, P1 bars shall be 2'-0" in length and embedded 12". P1 bars will not be required for panels at squared integral end bents.

(7) #3-P2 bars near edge of panel at bottom (under strands).

(8) Use #3-P3 bars if panel is skewed 45° or greater.

(9) Any strand 2'-0" or shorter shall have a #4 reinforcing bar on each side of it, centered between strands. Strands 2'-0" or shorter may then be debonded at the fabricator's option.

(10) Optional 1/2" x 45° Chamfer one or both sides at bottom.

Section A-A:
(11) Slab thickness over prestressed panels varies due to girder camber. In order to maintain minimum slab thickness, it may be necessary to raise the grade uniformly throughout the structure. No payment will be made for additional labor or materials required for necessary grade adjustment.

(12) Contractor shall ensure proper consolidation under and between panels.

(13) At the contractor's option, the variation in slab thickness over prestressed panels may be eliminated or reduced by increasing and varying the girder top flange thickness. Dimensions shall be shown on the shop drawings.

General Notes:

Prestressed Panels:
Concrete for prestressed panels shall be Class A-1 with f'c = 6,000 psi, f'ci = 4,000 psi.

The top surface of all panels shall receive a scored finish with a depth of scoring of 1/8" perpendicular to the prestressing strands in the panels.

Prestressing tendons shall be high-tensile strength, uncoated, seven-wire, low-relaxation strands for prestressed concrete in accordance with AASHTO M 203 Grade 270, with nominal diameter of strand = 3/8" and nominal area = 0.085 sq.in. and minimum ultimate strength = 22.95 kips (270 ksi). Larger strands may be used with the same spacing and initial tension.

Initial prestressing force = 17.2 kips/strand.

The method and sequence of releasing the strands shall be shown on the shop drawings.

Suitable anchorage devices for lifting panels may be cast in panels, provided the devices are shown on the shop drawings and approved by the engineer. Panel lengths shall be determined by the contractor and shown on the shop drawings.

When squared end panels are used at skewed bents, the skewed portion shall be cast full depth. No separate payment will be made for additional concrete and reinforcing required.

Support from diaphragm forms is required under the optional skewed end until cast-in-place concrete has reached 3,000 psi compressive strength.

Prestressed panels shall be brought to saturated surface-dry (SSD) condition just prior to the deck pour. There shall be no free standing water on the panels or in the area to be cast.

The prestressed panel quantities are not included in the table of estimated quantities for the slab.

Reinforcing Steel:
All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

If U1 bars interfere with placement of slab steel, U1 loops may be bent over, as necessary, to clear slab steel.

Deformed welded wire reinforcement (WWR) providing a minimum area of reinforcing perpendicular to strands of 0.22 sq in./ft, with spacing parallel to strands sufficient to ensure proper handling, may be used in lieu of the #3-P2 bars shown. Wire diameter shall not be larger than 0.375 inch. The above alternative reinforcement criteria may be used in lieu of the #3-P3 bars, when required, and placed over a width not less than 2 feet.

The following reinforcing steel shall be tied securely to the strands with the following maximum spacing in each direction:
#3-P2 bars at 16 inches.
WWR at 24 inches.

The #3-U1 bars shall be tied securely to #3-P2 bars, to WWR or to strands (when placed between P1 bars) at about 3-foot centers.

Minimum reinforcement steel length shall be 2'-0".

All reinforcement other than prestressing strands shall be epoxy coated.

Precast panels may be in contact with stirrup reinforcing in diaphragms.

S-bars are not listed in the bill of reinforcing.

Cost of S-bars will be considered completely covered by the contract unit price for the slab.

Joint Filler:
Joint filler shall be preformed fiber expansion joint material in accordance with Sec 1057 or expanded or extruded polystyrene bedding material in accordance with Sec 1073.

Use Slab Haunching Diagram on Sheet No. 19 for determining thickness of joint filler within the limits noted in the table of Joint Filler Dimensions.

Thicker material may be used on one or both sides of the girder to reduce cast-in-place concrete thickness to within tolerances.

The same thickness of preformed fiber expansion joint material shall be used under any one edge of any panel except at locations where top flange thickness may be stepped. The maximum change in thickness between adjacent panels shall be 1/2 inch. The polystyrene bedding material may be cut with a transition to match haunch height above top of flange.

Joint filler shall be glued to the girder. When thickness exceeds 1 1/2 inches, the joint filler shall be glued top and bottom. The glue used shall be the type recommended by the joint filler manufacturer.

Edges of panels shall be uniformly seated on the joint filler before slab reinforcement is placed.

PRESTRESSED PANELS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

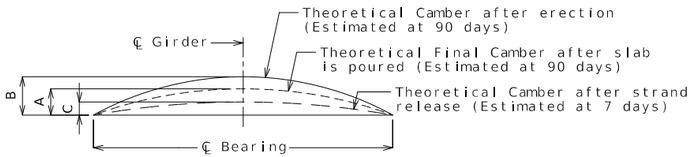
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED: 9/6/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 18
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9422

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



Girder	Span (1-2)		
	A	B	C
Exterior	3"	4⅝"	2⅝"
Interior	2⅞"		

GIRDER CAMBER DIAGRAM

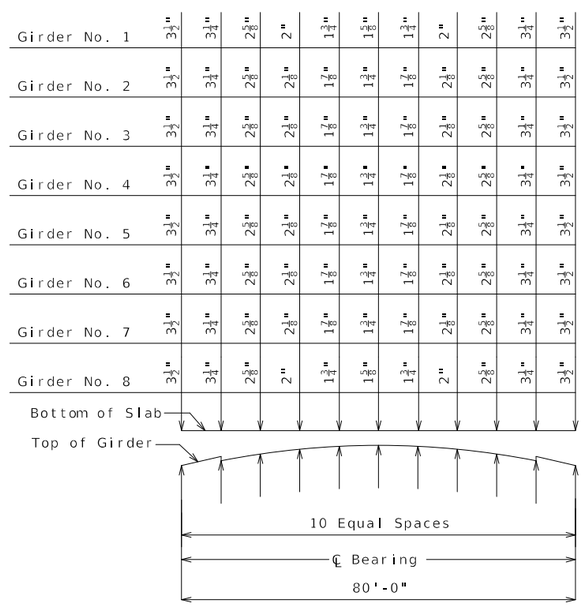
Conversion Factors for Girder Camber (Estimated at 90 days):

0.1 pt. = 0.314 x 0.5 pt.
0.2 pt. = 0.593 x 0.5 pt.
0.3 pt. = 0.813 x 0.5 pt.
0.4 pt. = 0.952 x 0.5 pt.

Theoretical Bottom of Slab Elevations at Centerline of Girder (Prior to forming for slab) (Estimated at 90 days)

Girder Number	Span (1-2) (80'-0" ℄ Brg. - ℄ Brg.)										
	℄ Brg.	.10	.20	.30	.40	.50	.60	.70	.80	.90	℄ Brg.
1	1294.92	1295.02	1295.11	1295.18	1295.25	1295.29	1295.32	1295.33	1295.33	1295.32	1295.30
2	1295.10	1295.20	1295.29	1295.37	1295.43	1295.48	1295.51	1295.52	1295.52	1295.50	1295.48
3	1295.28	1295.38	1295.47	1295.55	1295.61	1295.66	1295.69	1295.70	1295.70	1295.68	1295.66
4	1295.45	1295.55	1295.65	1295.73	1295.79	1295.84	1295.87	1295.88	1295.88	1295.86	1295.84
5	1295.63	1295.73	1295.82	1295.90	1295.97	1296.02	1296.05	1296.06	1296.06	1296.04	1296.02
6	1295.75	1295.85	1295.94	1296.02	1296.09	1296.13	1296.16	1296.18	1296.17	1296.16	1296.14
7	1295.57	1295.67	1295.76	1295.84	1295.90	1295.95	1295.98	1296.00	1295.99	1295.98	1295.96
8	1295.39	1295.48	1295.57	1295.65	1295.71	1295.76	1295.79	1295.81	1295.81	1295.80	1295.78

Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoretical dead load deflections due to weight of slab (including precast panel) and barrier.

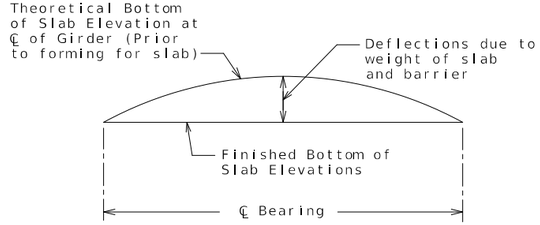


THEORETICAL SLAB HAUNCHING DIAGRAM (ESTIMATED AT 90 DAYS)

If girder camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an adjustment of the slab haunches, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Concrete in the slab haunches is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Theoretical slab haunches are measured at ℄ Girder.



TYPICAL SLAB ELEVATIONS DIAGRAM

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 19 of 30

GIRDER CAMBER AND SLAB HAUNCHING

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	19

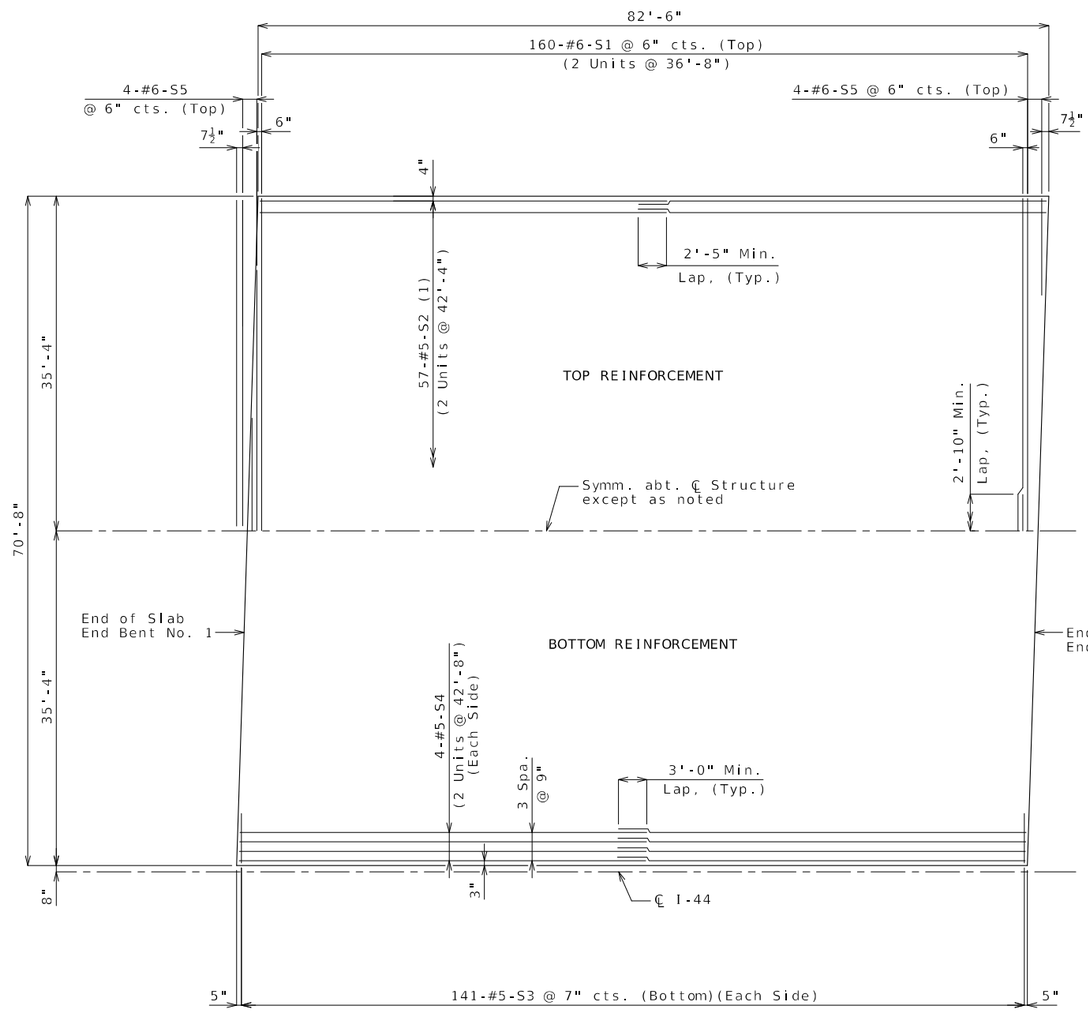
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9422

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

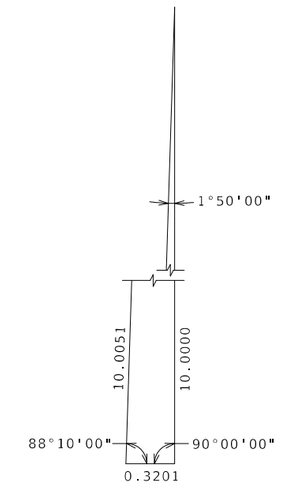
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



SPAN (1-2)

PLAN OF SLAB REINFORCEMENT



NOTES:

Longitudinal slab dimensions shown are horizontal.

For Theoretical Slab Haunching Diagram and Theoretical Bottom of Slab Elevations, see Sheet No. 19.

For Details of Precast Prestressed Panels, see Sheet No. 18.

For Details and Reinforcement of Safety Barrier Curb not shown, see Sheets No. 22 & 23.

(1) For spacing of longitudinal bars not shown, see Slab Section & Details on Sheet No. 21.

SLAB PLAN

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

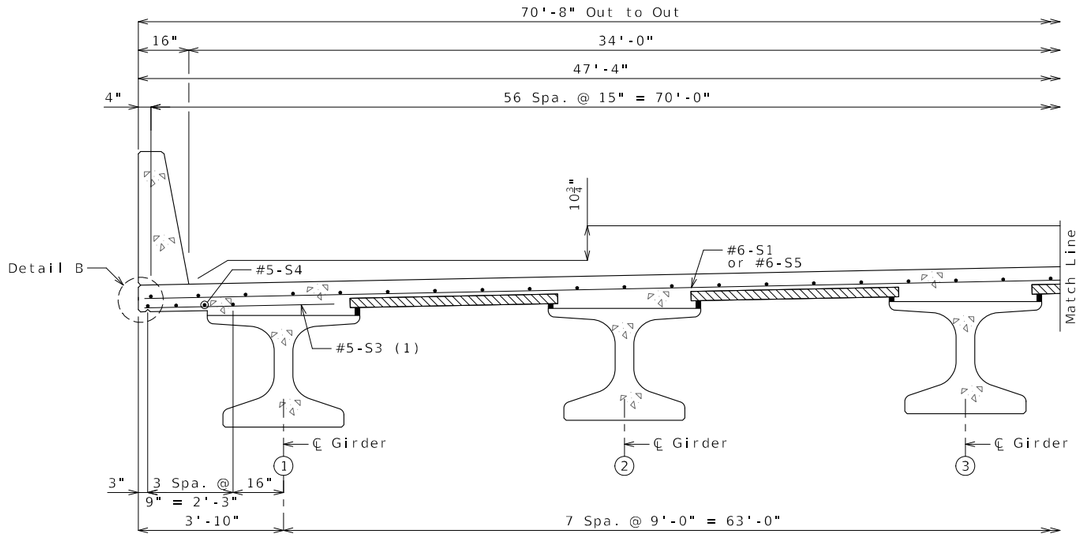
DATE PREPARED 9/6/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 20
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9422

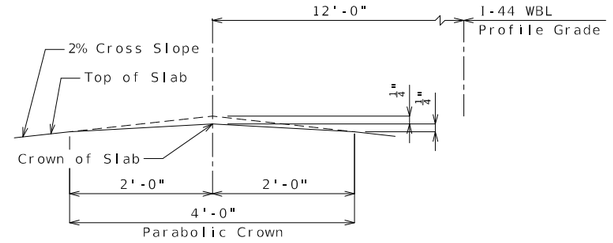
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

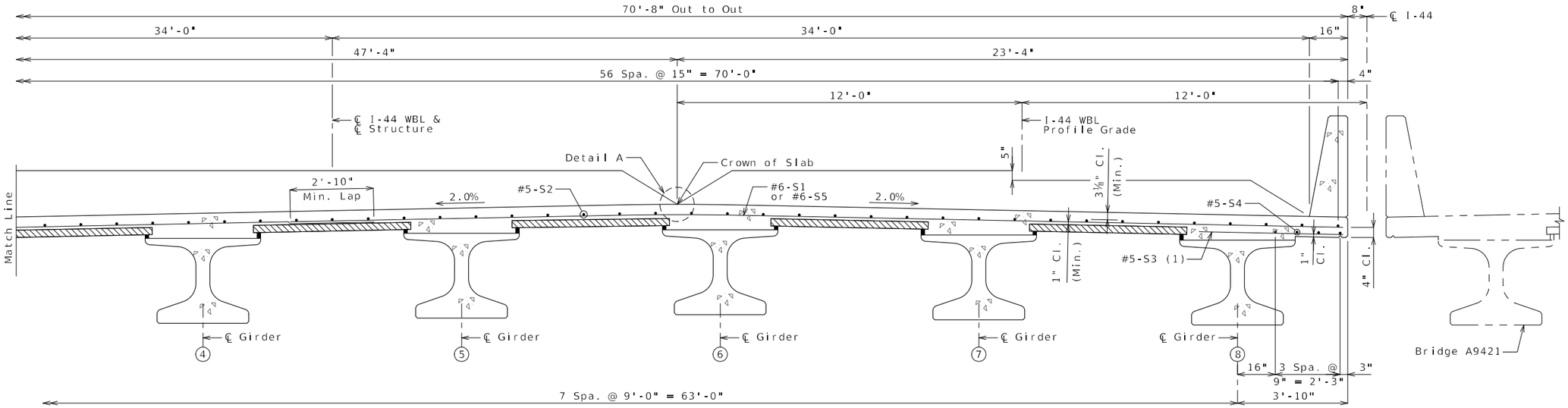
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

REV.



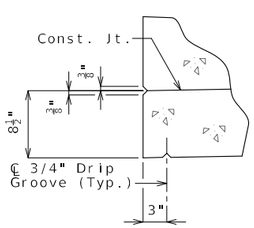


DETAIL A



SECTION THRU SLAB

(1) Alternate bar shape available, see Sheet No. 22 .



DETAIL B

NOTES:

For details of precast prestressed panels, see Sheet No. 18.

For reinforcement of barrier not shown, see Sheet No. 22.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram and Theoretical Slab Haunching Diagram, see Sheet No. 19.

For Plan of Slab Showing Reinforcement, see Sheet No. 20.

Bridge will be cast in a single pour.

TYPICAL SLAB SECTION

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/11/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	21

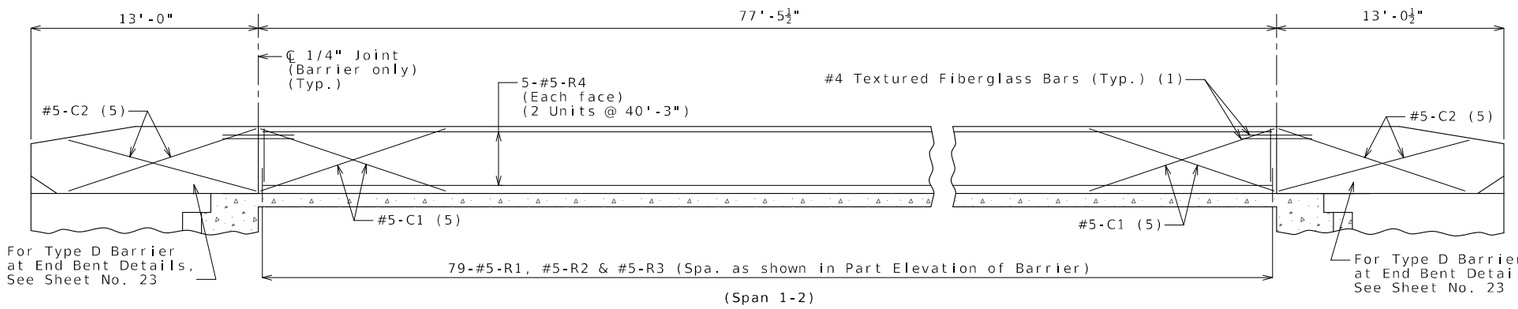
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9422

DESCRIPTION	DATE

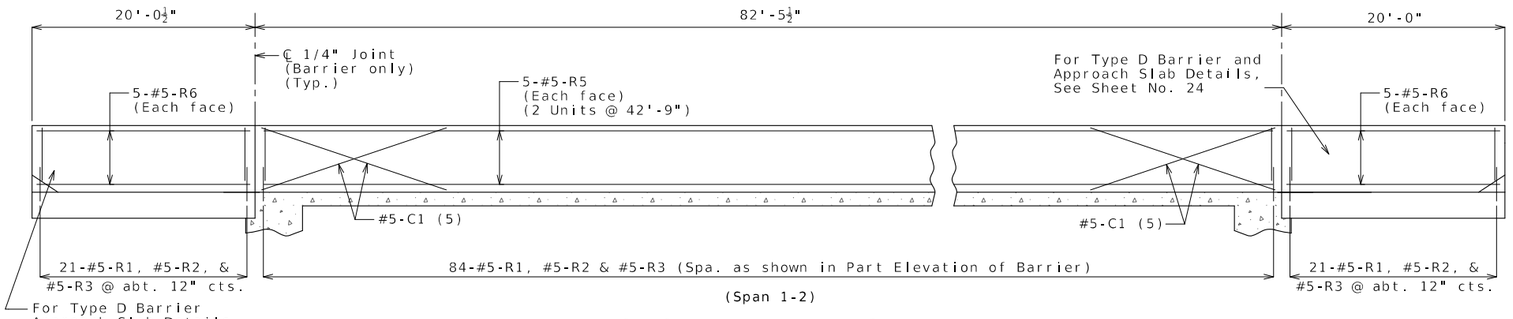
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

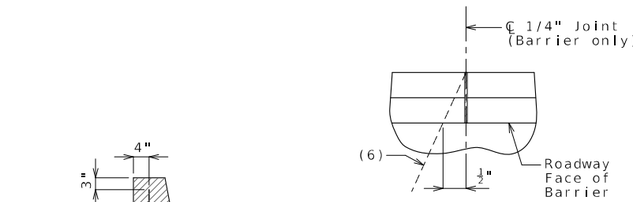
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617



ELEVATION OF BARRIER - LEFT BARRIER



ELEVATION OF BARRIER - RIGHT BARRIER



(6) Front Face of End Bent No. 1 for Left Barrier
End of Slab at End Bent No. 2 for Right Barrier

(7) Front Face of End Bent No. 2 for Left Barrier
End of Slab at End Bent No. 1 for Right Barrier

WATERSTOP DETAIL

Plastic waterstop shall be placed in all formed joints, except structures with superelevation, use on lower joints only.

Cost of plastic waterstop, complete in place, will be considered completely covered by the contract unit price for Type D Barrier.

PART PLAN SHOWING JOINT LOCATION

General Notes:

Longitudinal dimensions are horizontal.

Conventional forming or slip forming may be used. Saw cut joints may be used with conventional forming.

Top of barrier shall be built parallel to grade and barrier joints (except at end bents) normal to grade.

All exposed edges of barrier shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type D Barrier per linear foot.

Concrete in barrier shall be Class B-1.

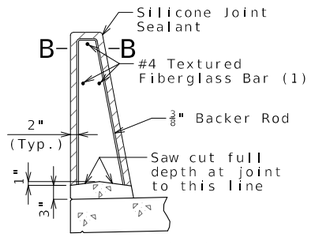
Measurement of barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of wing to end of wing for Right Barrier and from end of approach slab to end of approach slab for Left Barrier.

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

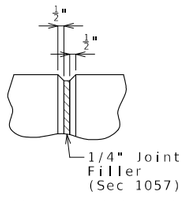
Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

For slip-formed option, both sides of barrier shall have a vertically broomed finish and the top shall have a transversely broomed finish.

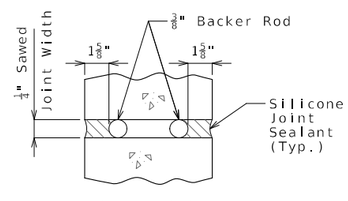
Plastic waterstop shall not be used with saw cut joints.



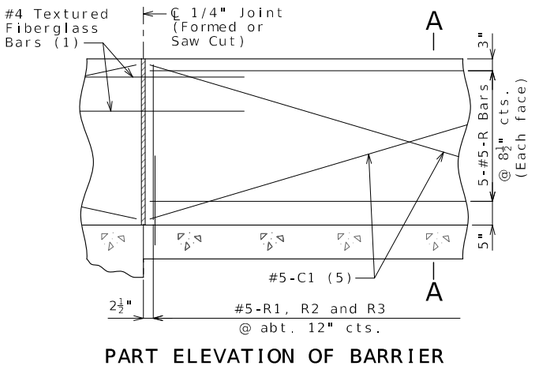
SECTION THRU SAW CUT JOINT



PART ELEVATION AT FORMED JOINT

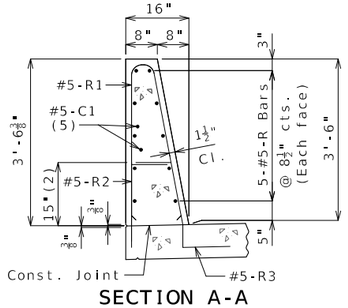


SECTION B-B



PART ELEVATION OF BARRIER

(1) Four feet long, centered on joint, slip-formed option only

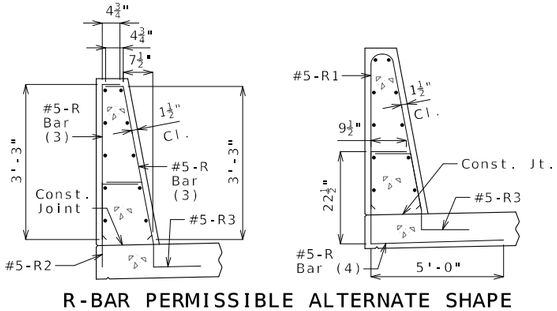


SECTION A-A

Use a minimum lap of 3'-1" for #5 horizontal barrier bars.

The cross-sectional area above the slab is 3.52 square feet.

(2) To top of bar



R-BAR PERMISSIBLE ALTERNATE SHAPE

(3) The R1 bar may be separated into two bars as shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)

(4) The R2 bar and #5 bottom transverse slab bar in cantilever (prestressed panels only) combination may be furnished as one bar as shown, at the contractor's option.

(5) Slip-formed option only.

TYPE D BARRIER

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED: 9/6/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 22
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9422

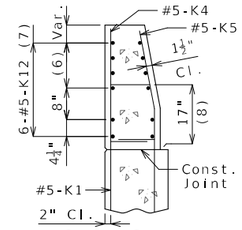
DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

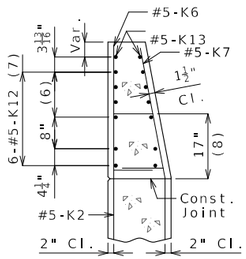
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

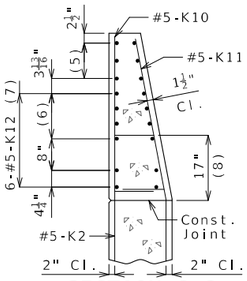
c:\bmcd_lib\pw_connect\trn\d0171032\B_A9422_022_JSU0076.dgn 8:58:51 AM 9/6/2024



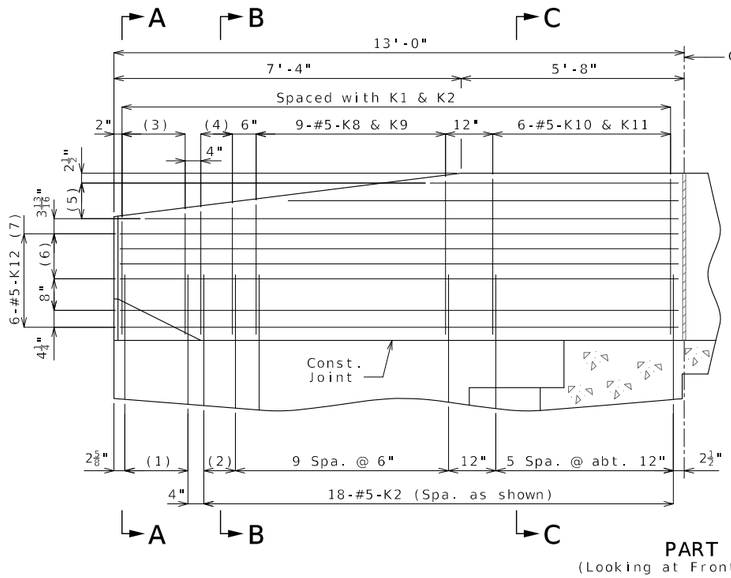
SECTION A-A

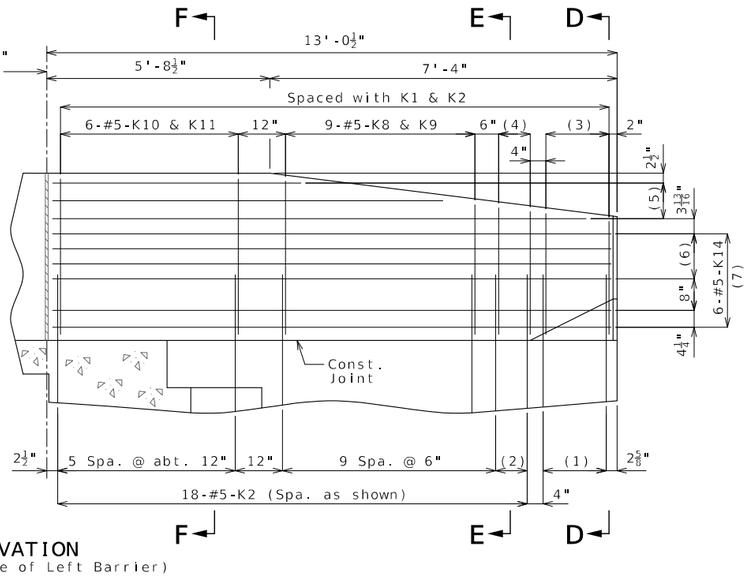


SECTION B-B

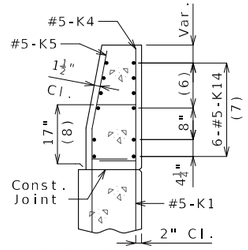


SECTION C-C

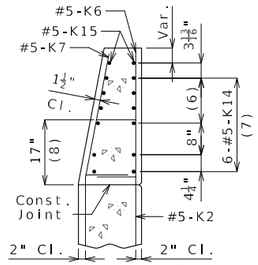




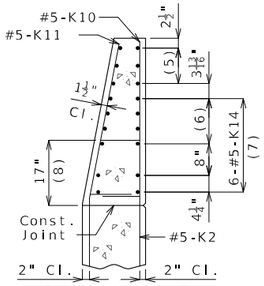
PART ELEVATION
(Looking at Front Face of Left Barrier)



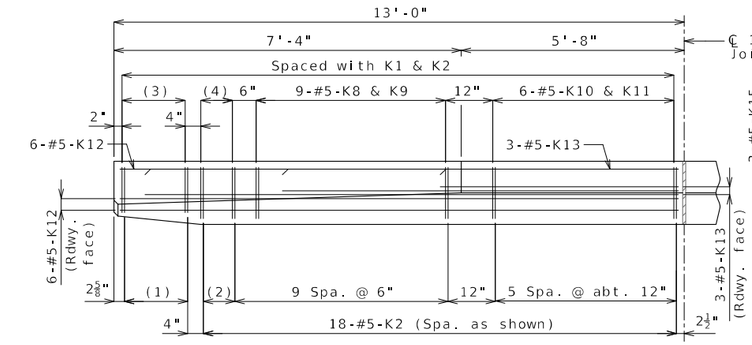
SECTION D-D

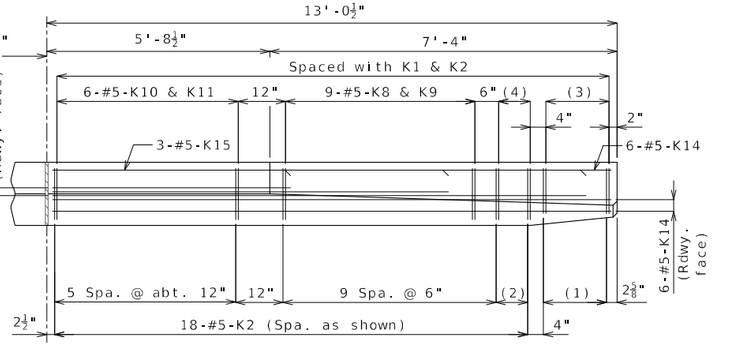


SECTION E-E

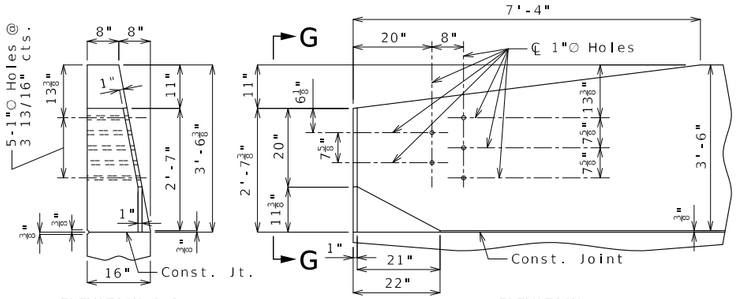


SECTION F-F

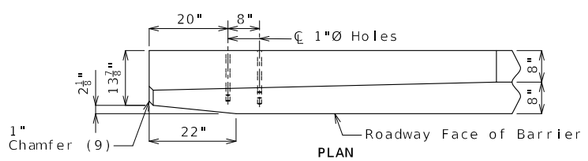




PART PLAN
(Left barrier shown)



ELEVATION G-G ELEVATION



PLAN

DETAILS OF GUARD RAIL ATTACHMENT

(1) 5-#5-K1 @ 4" cts.

(2) 2 spaces @ 4"

(3) 5-#5-K4 & K5

(4) 3-#5-K6 & K7

(5) 3-#5-K13 or K15 @ 4½" cts., each face

(6) 3 spaces @ 3 13/16"

(7) Spaced as shown, each face

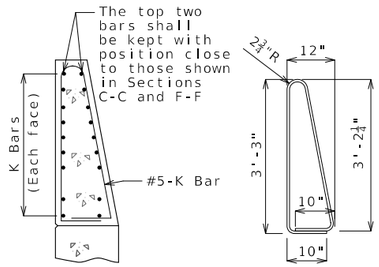
(8) To top of bar

(9) Transition to zero at Type A curb for gutter lines to match.

General Notes:

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

Reinforcing Steel:
Minimum clearance to reinforcing steel shall be 1 1/2" except as shown for bars embedded into end bent.



K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE
(Other K bars not shown for clarity)

The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

TYPE D BARRIER AT END BENTS

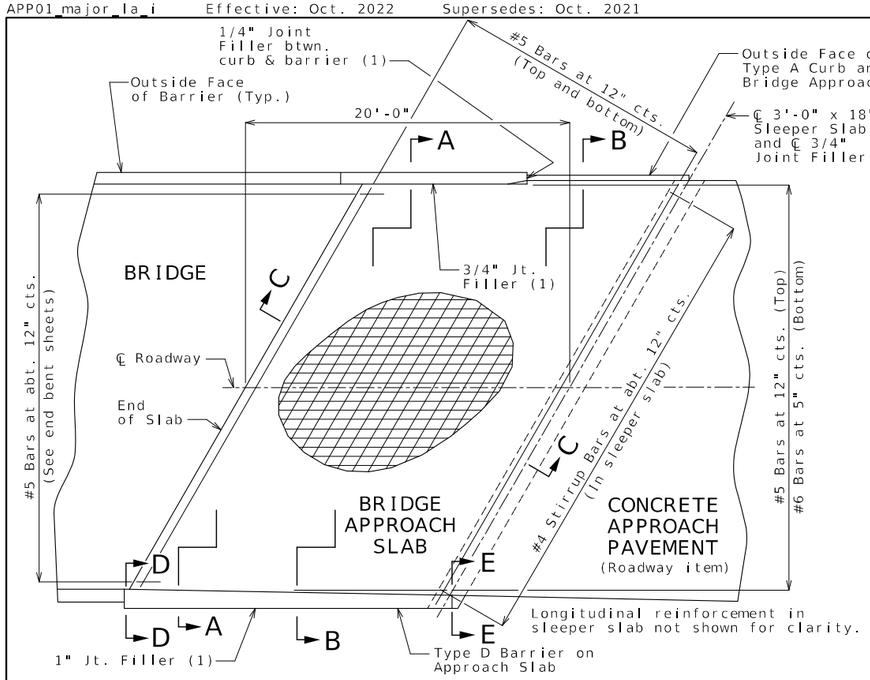
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
STATE OF MISSOURI
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/6/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 23
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9422

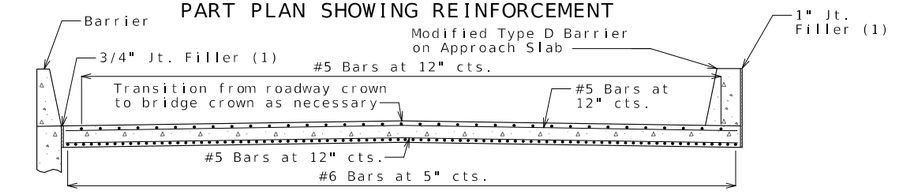
DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

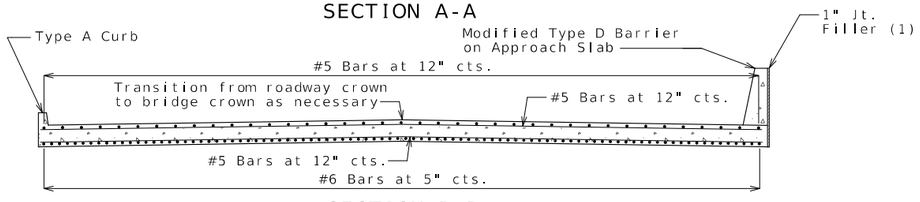
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



PART PLAN SHOWING REINFORCEMENT

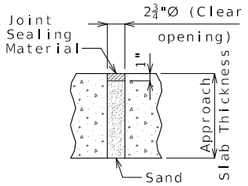


SECTION A-A



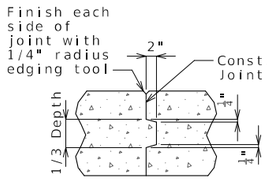
SECTION B-B

With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.

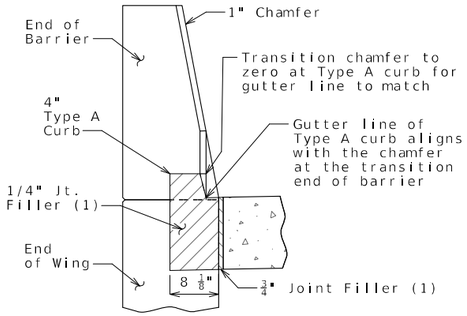


UNDERSEAL ACCESS HOLE DETAIL

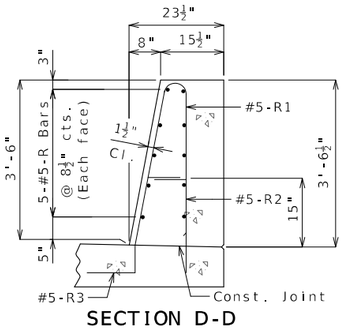
(If required)



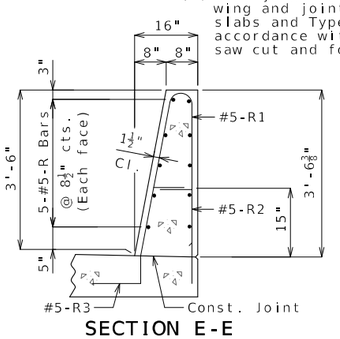
CONSTRUCTION JOINT DETAIL



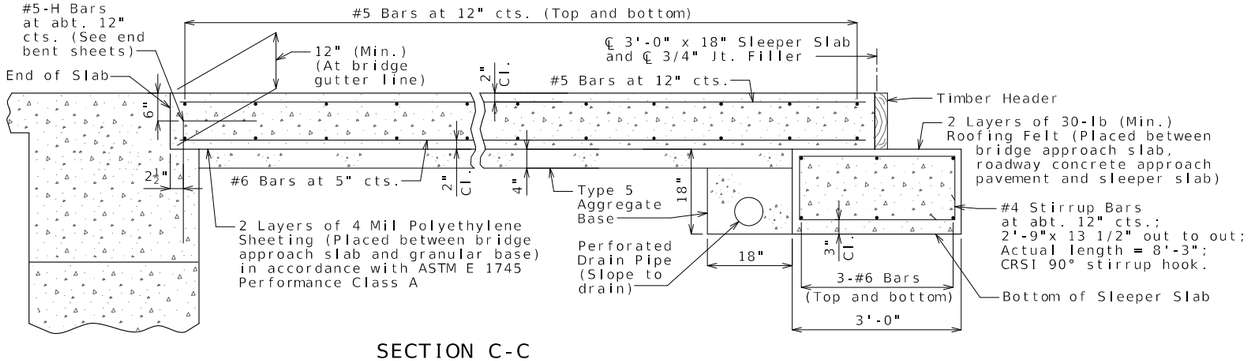
SECTION BETWEEN CURB AND BARRIER



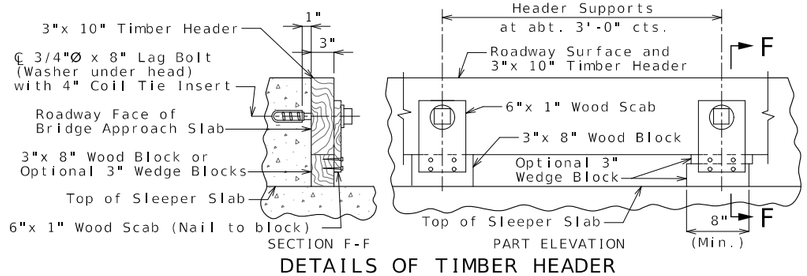
SECTION D-D



SECTION E-E



SECTION C-C



DETAILS OF TIMBER HEADER

Remove timber header when concrete pavement is placed.

General Notes:

All concrete for the bridge approach slab and sleeper slab shall be in accordance with Sec 503 (f'c = 4,000 psi).

The reinforcing steel in the bridge approach slab and the sleeper slab shall be epoxy coated Grade 60 with fy = 60,000 psi.

Drain pipe may be either 6" diameter corrugated metallic-coated pipe underdrain, 4" diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4" diameter corrugated polyethylene (PE) drain pipe.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

The reinforcing steel in the bridge approach slab and the sleeper slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 29 inches for #5 bars and 44 inches for #6 bars, or by mechanical bar splice.

Mechanical bar splices shall be in accordance with Sec. 710.

All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler except as noted.

The contractor shall pour and satisfactorily finish the bridge slab before placing the bridge approach slab.

Longitudinal construction joints in approach slab and sleeper slab shall be aligned with longitudinal construction joints in bridge slab.

For concrete approach pavement details, see roadway plans.

See Missouri Standard Plan 609.00 for details of Type A curb.

Payment for furnishing all materials, labor and excavation necessary to construct the approach slab, including the timber header, sleeper slab, underdrain, Type 5 aggregate base, joint filler and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Major) per square yard.

For details of Type D Barrier on Approach Slab, see Sheet No. 22.

(1) Seal joint between vertical face of approach slab and wing and joint between vertical face of the approach slabs and Type D barriers along ℄ I-44 with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

BRIDGE APPROACH SLAB (MAJOR)

TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
STATE OF MISSOURI
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/6/2024

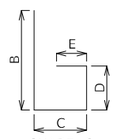
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	24

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9422

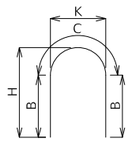
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

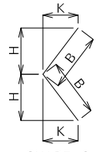
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



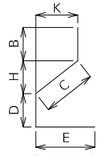
SHAPE 6
or 6S



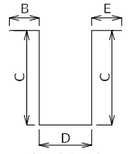
SHAPE 7



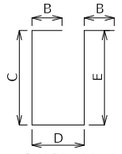
SHAPE 8
or 8S



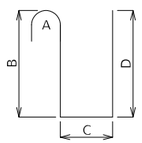
SHAPE 9
or 9S



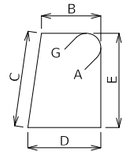
SHAPE 10
or 10S



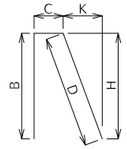
SHAPE 11
or 11S



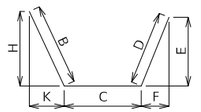
SHAPE 12



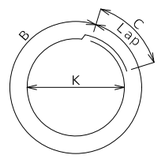
SHAPE 13S



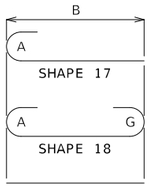
SHAPE 14
or 14S



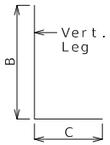
SHAPE 15
or 15S



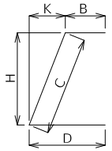
SHAPE 16



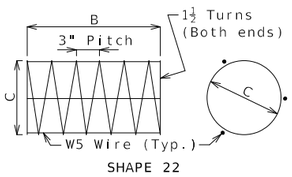
SHAPE 17
SHAPE 18
SHAPE 20



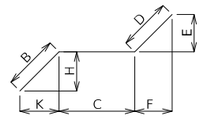
SHAPE 19
or 19S



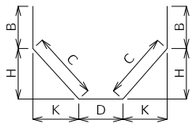
SHAPE 21
or 21S



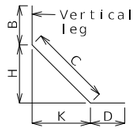
SHAPE 22



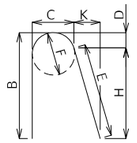
SHAPE 23
or 23S



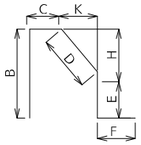
SHAPE 24
or 24S



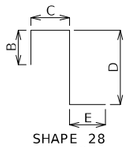
SHAPE 25
or 25S



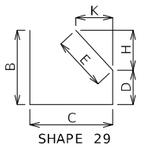
SHAPE 26



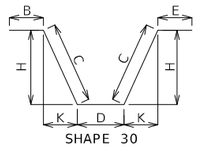
SHAPE 27S



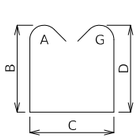
SHAPE 28
or 28S



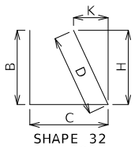
SHAPE 29
or 29S



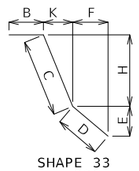
SHAPE 30
or 30S



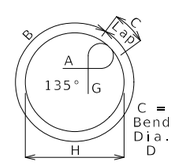
SHAPE 31S



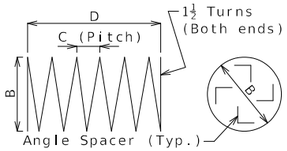
SHAPE 32
or 32S



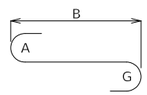
SHAPE 33
or 33S



SHAPE 34S



SHAPE 35 (1)

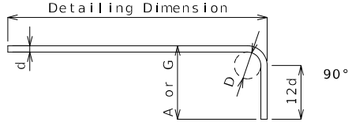


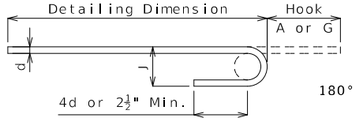
SHAPE 36

Finished Bend Diameters D and Hook Dimensions

Standard Pin Bend Shapes

Size	Case	D	A or G		J
			90°	180°	180°
#4	1	3"	8"	6"	4"
#5	1	3¾"	10"	7"	5"
#6	1	4½"	12"	8¼"	6"
#7	2	5¼"	14"	9⅜"	7"
	3	7"	15"	11½"	8¾"
#8	2	6"	16"	11"	8"
	3	8"	17"	13¼"	10"
#9	1	9½"	19½"	15½"	11¾"
#10	1	10¾"	22"	17½"	13¼"
#11	1	12"	24½"	19½"	14⅞"
#14	1	18¼"	31¼"	27½"	21⅝"
#18	1	24"	41½"	36¾"	28½"



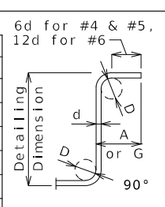


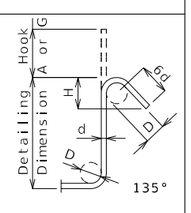
Stirrup Pin Bend Shapes (S)

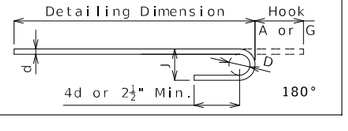
Size	Case	D	A or G			H	J
			90°	135°	180°	135°	180°
#4	2	2"	4½"	4½"	5"	2⅝"	3"
	3	3"	5"	5¼"	6"	3"	4"
#5	2	2½"	5¾"	5¾"	5¾"	3⅝"	3¾"
	3	3¾"	6¼"	6½"	7"	3⅞"	5"
#6	1	4½"	12"	7¾"	8¼"	4⅝"	6"

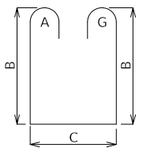
Applicable for all grades of steel.

Case 1 applies to all reinforcement. Case 2 applies to all reinforcement except for galvanized bars. Case 3 applies to galvanized bars only.

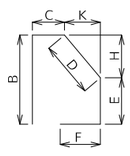








SHAPE 37S



SHAPE 38S

BENDING DIAGRAMS

All dimensions are out to out.

Shapes ending with an S shall be bent in accordance with stirrup pin bend shapes.

Unless otherwise noted, finished bending diameter D is the same for all bends of a shape.

(1) Shall be a deformed or plain spiral bar or wire.

Four angle or channel spacers are required for each column spiral. Spacers are to be placed on inside of spirals. Length and weight of column spirals do not include splices or spacers.

Reinforcing Steel Totals (Pounds)

		Substructure		Superstructure				Entire Bridge	
				Slab					
	Size	Plain	Epoxy	Plain	Epoxy	Barrier	Slip Form	Plain	Epoxy
By Size	W5	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0
	5	0	0	0	12,217	5,989	141	0	18,347
	6	0	0	0	27,085	0	0	0	27,085
	7	0	0	0	0	0	0	0	0
	8	0	0	0	3,808	0	0	0	3,808
	9	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0
	11	0	0	0	0	0	0	0	0
	14	0	0	0	0	0	0	0	0
	18	0	0	0	0	0	0	0	0
By Type		0	0	0	43,110	5,989	141	0	49,240

All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/6/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 25
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9422

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B	C	D	E	F	H	K	Nom. Length	Actual Length	Weight lb
		END BENT 1													
9	6 F100	Wing	E	23S		2 3.000	4 5.000	14.000	9.750	10.000	18.750	19.375	7 10	7 9	105
3	6 F101	Diaphragm	E	6S		5 5.000	2 7.000						8 0	7 10	35
4	6 H100	Beam	E	20		28 3.000							28 3	28 3	170
8	8 H101	Beam	E	20		28 3.000							28 3	28 3	603
4	6 H102	Beam	E	20		51 3.000							51 3	51 3	308
4	6 H103	Beam	E	20		47 0.000							47 0	47 0	282
8	8 H104	Beam	E	20		48 5.000							48 5	48 5	1034
4	6 H106	Beam	E	20		21 10.00							21 10	21 10	131
8	6 H107	Diaphragm	E	20		28 3.000							28 3	28 3	339
8	6 H108	Diaphragm	E	20		47 0.000							47 0	47 0	565
21	6 H109	Diaphragm	E	20		7 11.000							7 11	7 11	250
7	6 H110	Diaphragm	E	20		5 6.000							5 6	5 6	58
3	6 H111	Diaphragm	E	20		3 2.000							3 2	3 2	14
1	6 H112	Diaphragm	E	20		23.000							0 23	0 23	3
3	6 H113	Diaphragm	E	20		3 9.000							3 9	3 9	17
1	6 H114	Diaphragm	E	20		2 6.000							2 6	2 6	4
8	5 H115	Strand Tie	E	20		5 0.000							5 0	5 0	42
20	6 H116	Wing	E	20		11 8.000							11 8	11 8	350
8	8 H117	Wing	E	20		12 6.000							12 6	12 6	267
42	5 U100	Beam	E	31S		5 8.000	2 9.000	5 8.000					15 1	14 10	650
15	5 U101	Beam	E	13S		2 9.000	2 8.000	2 9.000	2 8.000				11 10	11 6	180
24	5 U102	Beam	E	13S		2 9.000	3 0.000	2 9.000	3 0.000				12 6	12 2	305
24	5 U103	Beam	E	13S		2 9.000	3 4.000	2 9.000	3 4.000				13 2	12 10	321
57	5 U104	Diaphragm	E	31S		3 4.000	2 3.000	3 4.000					9 11	9 8	575
57	6 U105	Diaphragm	E	19S		2 7.000	2 8.000						5 3	5 1	435
70	5 U106	Diaphragm	E	19S		2 0.000	15.000						3 3	3 2	231
94	6 U107	Diaphragm	E	19S		3 3.000	4 7.000						7 10	7 8	1082
30	5 V100	Beam	E	17		5 8.000							6 3	6 3	196
40	6 V101	Diaphragm	E	20		2 7.000							2 7	2 7	155
22	6 V102	Wing	E	20		6 7.000							6 7	6 7	218
		END BENT 2													
9	6 F200	Wing	E	23S		2 3.000	4 5.000	14.000	9.750	10.000	18.750	19.375	7 10	7 9	105
3	6 F201	Diaphragm	E	6S		5 5.000	2 7.000						8 0	7 10	35
4	6 H200	Beam	E	20		28 3.000							28 3	28 3	170
8	8 H201	Beam	E	20		28 3.000							28 3	28 3	603
4	6 H202	Beam	E	20		51 3.000							51 3	51 3	308
4	6 H203	Beam	E	20		47 0.000							47 0	47 0	282
8	8 H204	Beam	E	20		48 5.000							48 5	48 5	1034
4	6 H206	Beam	E	20		21 10.00							21 10	21 10	131
8	6 H207	Diaphragm	E	20		28 3.000							28 3	28 3	339
8	6 H208	Diaphragm	E	20		47 0.000							47 0	47 0	565
21	6 H209	Diaphragm	E	20		7 11.000							7 11	7 11	250
7	6 H210	Diaphragm	E	20		5 6.000							5 6	5 6	58
3	6 H211	Diaphragm	E	20		3 2.000							3 2	3 2	14
1	6 H212	Diaphragm	E	20		23.000							0 23	0 23	3
3	6 H213	Diaphragm	E	20		3 9.000							3 9	3 9	17
1	6 H214	Diaphragm	E	20		2 6.000							2 6	2 6	4
8	5 H215	Strand Tie	E	20		5 0.000							5 0	5 0	42
20	6 H216	Wing	E	20		11 8.000							11 8	11 8	350
8	8 H217	Wing	E	20		12 6.000							12 6	12 6	267
42	5 U200	Beam	E	31S		5 8.000	2 9.000	5 8.000					15 1	14 10	650
15	5 U201	Beam	E	13S		2 9.000	2 8.000	2 9.000	2 8.000				11 10	11 6	180
24	5 U202	Beam	E	13S		2 9.000	3 0.000	2 9.000	3 0.000				12 6	12 2	305
24	5 U203	Beam	E	13S		2 9.000	3 4.000	2 9.000	3 4.000				13 2	12 10	321
57	5 U204	Diaphragm	E	31S		3 4.000	2 3.000	3 4.000					9 11	9 8	575
57	6 U205	Diaphragm	E	19S		2 7.000	2 8.000						5 3	5 1	435
70	5 U206	Diaphragm	E	19S		2 0.000	15.000						3 3	3 2	231
94	6 U207	Diaphragm	E	19S		3 3.000	4 7.000						7 10	7 8	1082
30	5 V200	Beam	E	17		5 8.000							6 3	6 3	196
40	6 V201	Diaphragm	E	20		2 7.000							2 7	2 7	155
22	6 V202	Wing	E	20		6 7.000							6 7	6 7	218

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes C	SH	V	Dimensions B	C	D	E	F	H	K	Nom. Length	Actual Length	Weight lb
		SLAB													
320	6 S1	Slab	E	20		36 8.000							36 8	36 8	17623
114	5 S2	Slab	E	20		42 4.000							42 4	42 4	5034
282	5 S3	Slab	E	20		5 0.000							5 0	5 0	1471
16	5 S4	Slab	E	20		42 8.000							42 8	42 8	712
8	6 S5	Slab	E	20	2	11 7.000							11 7	11 7	
		Inc. = 15'-7"				58 4.000							58 4	58 4	420
		BARRIER													
10	5 K1	Barrier	E	27S		3 8.000	9.250	5.375	3 2.750		5.250	1.000	8 1	7 11	83
36	5 K2	Barrier	E	27S		3 8.000	9.250	14.500	2 5.750		14.250	2.750	8 2	7 11	297
10	5 K4	Barrier	E	19S	2	2 4.250	10.000						3 2	3 1	
		Inc. = 0.500"				2 6.250	10.000						3 4	3 3	33
10	5 K5	Barrier	E	38S	2			18.500	9.500	8.250	18.000	4.000	3 0	2 11	
		Inc. = 0.500"						20.500	9.500	8.250	20.000	4.500	3 2	3 1	31
6	5 K6	Barrier	E	19S		2 6.750	10.000						3 5	3 4	21
6	5 K7	Barrier	E	21S			2 6.625	10.000			2 6.000	6.250	3 5	3 3	20
18	5 K8	Barrier	E	19S	2	2 8.500	10.000						3 7	3 5	
		Inc. = 0.750"				3 2.500	10.000						4 1	3 11	70
18	5 K9	Barrier	E	21S	2		2 8.500	10.000			2 7.750	6.750	3 6	3 5	
		Inc. = 0.750"					3 2.500	10.000			3 1.750	7.750	4 1	3 11	68
12	5 K10	Barrier	E	19S		3 3.000	10.000						4 1	4 0	50
12	5 K11	Barrier	E	21S			3 3.000	10.000			3 2.250	7.750	4 1	3 11	49
12	5 K12	Barrier	E	20		12 9.000							12 9	12 9	160
6	5 K13	Barrier	E	20	2	6 0.000							6 0	6 0	
		Inc. = 3'-0"				12 0.000							12 0	12 0	56
12	5 K14	Barrier	E	20		12 9.000							12 9	12 9	160
6	5 K15	Barrier	E	20	2	6 0.000							6 0	6 0	
		Inc. = 3'-0"				12 0.000							12 0	12 0	56
205	5 R1	Barrier	E	26		3 3.000	5.500	2.250	3 1.375	5.500	3 0.750	6.750	6 11	6 10	1461
205	5 R2	Barrier	E	19S		20.500	9.500						2 6	2 5	517
205	5 R3	Barrier	E	27S			9.500	15.250	5.000	12.000	15.000	3.000	3 6	3 4	713
20	5 R4	Barrier	E	20		40 3.000							40 3	40 3	840
20	5 R5	Barrier	E	20		42 9.000							42 9	42 9	892
20	5 R6	Barrier	E	20		19 9.000							19 9	19 9	412
		SLIP FORM													
8	5 C1	Slip Form	E	20		12 0.000							12 0	12 0	100
4	5 C2	Slip Form	E	20		9 9.000							9 9	9 9	41

Nominal lengths are based on out to out dimensions shown in bending diagrams and are listed to the nearest inch for fabricator's use. Actual lengths are measured along centerline bar to the nearest inch. Weights are based on actual lengths.

For bending diagrams and steel reinforcing totals, see Sheet No. 25.

Detailed: May 2024
Checked: Jun. 2024

Codes:
C = Required coatings, where E = Epoxy Coated and G = Galvanized.
SH = Required shape, see bending diagrams.
V = Sets of varied bars and number of bars of each length. Bar dimensions vary in equal increments between dimensions shown on this line and the following line and the actual length dimension shown on this line and the following line vary by the specified increment.

All bars shall be Grade 60.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 26 of 30

BILL OF REINFORCING STEEL

TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
STATE OF MISSOURI
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

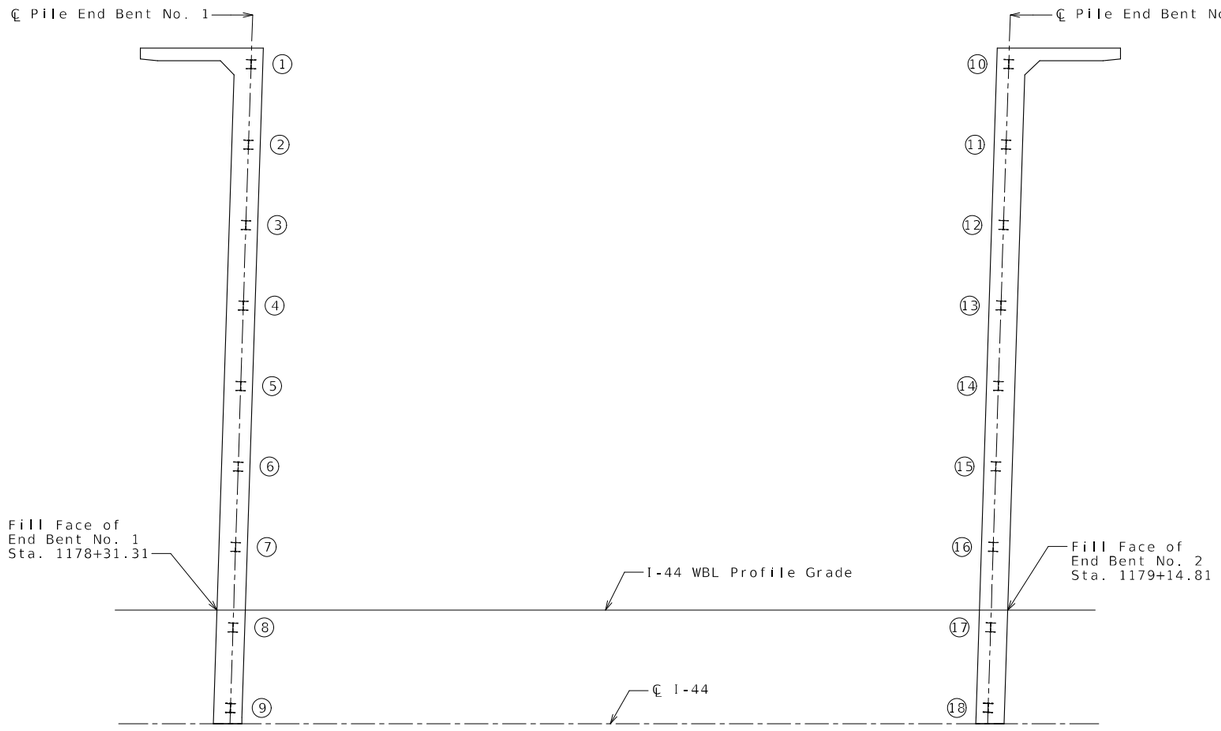
DATE PREPARED 9/6/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 26
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9422

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
MoDOT

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BURNS MCDONNELL
BMcD Project No. 146617



SPAN (1-2)

PART PLAN SHOWING PILE NUMBERING FOR RECORDING AS-BUILT PILE DATA

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
End Bent No. 1 (HP 12x53)			
1			
2			
3			
4			
5			
6			
7			
8			
9			

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
End Bent No. 2 (HP 12x53)			
10			
11			
12			
13			
14			
15			
16			
17			
18			

Note:
Indicate in remarks column:
A. Pile type and grade
B. Batter
C. Driven to practical refusal

This sheet to be completed by MoDOT construction personnel.

AS-BUILT PILE DATA

Detailed: May 2024
Checked: Jun. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 9/6/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	27

COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9422

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority
No.: 000165
BMcD Project No. 146617

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-1
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516843.3301 **Date of Work:** 08/03/23-08/04/23
Offset: **Easting:** 1415044.3222 **Depth to Water:**
Elevation: 1293.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0	0.0-0.3' Asphaltic concrete (3.5")							
	0.3-1.6' Portland cement concrete (12.5")							
	1.6-3.0' (GP) FILL: Gray, GRAVEL, with clay, trace sand	1290		22	11-4-4 (12)			MC = 12.7%
	3.0-12.0' (CH) FILL: Red and brown, gravelly fat CLAY, trace sand							
5				44	11-12-18 (45)		PP = 1.50 tsf	MC = 40.2%
				75		Qu Test Results MC = 26.5%	PP = 1.75 tsf	
		1285						
10				61	3-6-4 (15)		PP = 2.25 tsf	MC = 44.9%
	12.0-14.5' (GC) FILL: Red and brown, clayey GRAVEL	1280						
				50	4-3-4 (11)		PP = 3.00 tsf	MC = 22.4%
15	14.5-17.0' (CL) Dark gray, lean CLAY, trace sand and gravel							
	17.0-27.0' (CH) Dark gray, fat CLAY, trace gravel	1275						
				67	2-2-4 (9)		PP = 2.25 tsf	MC = 25.3%
20								
		1270						
	23.5' -Red and brown below 23.5 ft.			83	2-3-4 (11)		PP = 3.75 tsf	MC = 47.0%
25								

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-1
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516843.3301 **Date of Work:** 08/03/23-08/04/23
Offset: **Easting:** 1415044.3222 **Depth to Water:**
Elevation: 1293.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25	17.0-27.0' (CH) Dark gray, fat CLAY, trace gravel *(continued)*							
	27.0-29.5' (GC) Gray, red, and brown, clayey GRAVEL	1265						
				58	15-50		PP = 2.75 tsf	MC = 19.5%
30	29.5-40.0' LIMETONE, gray, hard to very hard, fresh, aphanitic, thin to thick bedded, dense, some chert							
		1260		96 (88)		Qu Test Results UCS = 1050 ksf		
35	35.0' -aphanitic to crystalline below 35.0 ft.							
		1255		100 (84)		Qu Test Results UCS = 1330 ksf		
40	Refusal at 29.5 feet. Bottom of borehole at 40.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
STATE OF MISSOURI

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/6/2024
ROUTE I-44 STATE MO
DISTRICT BR SHEET NO. 28
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9422

DESCRIPTION
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 28 of 30

BORING DATA

c:\bmcd_lib\pw_connect\trn\d0171032\B_A9422_028_JSU0076.dgn 9:00:12 AM 9/6/2024

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-2
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** TB **Operator:** LRK
Station: **Northing:** 516794.5256 **Date of Work:** 08/15/23-08/15/23
Offset: 5' W **Easting:** 1415110.2561 **Depth to Water:**
Elevation: 1275.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.5' Asphaltic concrete (5.0")	1275						
		0.5-6.0' (CH) FILL: Brown, fat CLAY, trace gravel and plastic sheet			56	3-4-6 (15)		PP = 2.50 tsf	MC = 20.2%
		3.0' - with gravel below 3.0 ft.			92			PP = 2.50 tsf	
5			1270						
		6.0-21.0' LIMESTONE, gray, very hard, slightly weathered, finely crystalline, thin bedded, dense			94 (60)		Qu Test Results UCS = 1230 ksf		
		8.0' -interbedded chert from 8.0 to 10.8 ft.							
10		9.3' - light gray- white below 9.3 ft.	1265						
					100 (93)		Qu Test Results UCS = 1180 ksf		
15			1260						
					97 (81)		Qu Test Results UCS = 1060 ksf		
20			1255						
		Refusal at 6.0 feet. Bottom of borehole at 21.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-4
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516840.5169 **Date of Work:** 08/02/23-08/03/23
Offset: **Easting:** 1415205.9087 **Depth to Water:** 28.0
Elevation: 1293.9 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.3' Asphaltic concrete (3.25")							
		0.3-1.0' Portland cement concrete (10.0")							
		1.0-3.0' (GP) FILL: Gray. crushed limestone			31	3-4-8 (18)			MC = 14.6%
		3.0-5.5' (GC) FILL: Red, brown, and gray, clayey GRAVEL	1290		39	6-7-4 (17)		PP = 1.50 tsf	MC = 32.2%
5									
		5.5-8.9' (CH) FILL: Red, brown, and gray, gravelly fat CLAY			50		Qu Test Results UCS = 1.41 ksf MC = 37.7% γ_{moist} = 103.6 pcf	PP = 2.50 tsf	
		8.9-12.0' (GC) FILL: Red, brown, and gray, clayey GRAVEL	1285		44	7-5-3 (12)		PP = 1.50 tsf	MC = 44.0%
10									
		12.0-24.6' (CH) Dark gray, fat CLAY, with gravel							
			1280		67	3-5-5 (15)		PP = 1.50 tsf	MC = 19.3%
15									
		18.5' -trace sand and gravel below 18.5 ft.	1275		100	2-3-4 (11)		PP = 2.25 tsf	MC = 23.4%
20									
			1270		100	5-15-13 (42)		PP = 3.50 tsf	MC = 20.9%
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

STATE OF MISSOURI
TRAVIS M. RAPP
NUMBER PE-2011019033
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/6/2024
ROUTE I-44 STATE MO
DISTRICT BR SHEET NO. 29
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9422

DESCRIPTION
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 29 of 30

BORING DATA

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-4
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516840.5169 **Date of Work:** 08/02/23-08/03/23
Offset: **Easting:** 1415205.9087 **Depth to Water:** 28.0
Elevation: 1293.9 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		24.6-29.1' (GC) Gray, red, and brown, clayey GRAVEL *(continued)*							
			1265						MC = 31.5%
30		29.1-30.5' (CH) Red and brown, fat CLAY, trace sand			50	8-1-2 (5)		PP = 1.75 tsf	
		30.5-40.5' LIMESTONE, gray, very hard, fresh, aphanitic to crystalline, medium to thick bedded, dense, chert present							
			1260		100 (93)		Qu Test Results UCS = 1170 ksf		
35									
			1255		100 (90)		Qu Test Results UCS = 1390 ksf		
40		Refusal at 30.5 feet. Bottom of borehole at 40.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-5
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516794.6417 **Date of Work:** 08/08/23-08/08/23
Offset: 5' E **Easting:** 1415143.3374 **Depth to Water:**
Elevation: 1275.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.3' Asphaltic concrete (4.0")	1275						
		0.3-1.4' (GP) FILL: Crushed limestone							
		1.4-3.8' (CL) FILL: Dark brown, lean CLAY (CL), trace sand 1.6' -silty from 1.4 to 1.8 ft.			56	5-3-2 (8)		PP = 2.00 tsf	LL = 43 PL = 19 MC = 27.0%
		3.5' -with gravel below 3.5 ft.							MC = 7.3%
5		3.8-6.1' (GP) White, gray, pink, GRAVEL, trace sand and fines	1270		22	17-13-14 (41)		PP = 1.50 tsf	
		6.0' -brown and gray, clayey below 6.0 ft.			100	50/0.3'		PP = 1.00 tsf	MC = 25.6%
		6.1-7.3' Gray, weathered LIMESTONE							
		7.3-25.0' LIMESTONE, gray, very hard, fresh, aphanitic to finely crystalline, medium to thick bedded, dense, occasional chert nodules present throughout							
10			1265		100 (94)		Qu Test Results UCS = 1250 ksf		
					105 (103)		Qu Test Results UCS = 1100 ksf		
15			1260						
					100 (95)		Qu Test Results UCS = 1300 ksf		
20			1255						
					100 (98)		Qu Test Results UCS = 2180 ksf		
25		Refusal at 7.3 feet Bottom of borehole at 25.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

TRAVIS M. RAPP
NUMBER PE-2011019033
STATE OF MISSOURI
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED 9/6/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 30
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9422

DESCRIPTION
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114
816-333-9400
Certificate of Authority No.: 000165
BMcD Project No. 146617

Detailed: May 2024
Checked: Jun. 2024

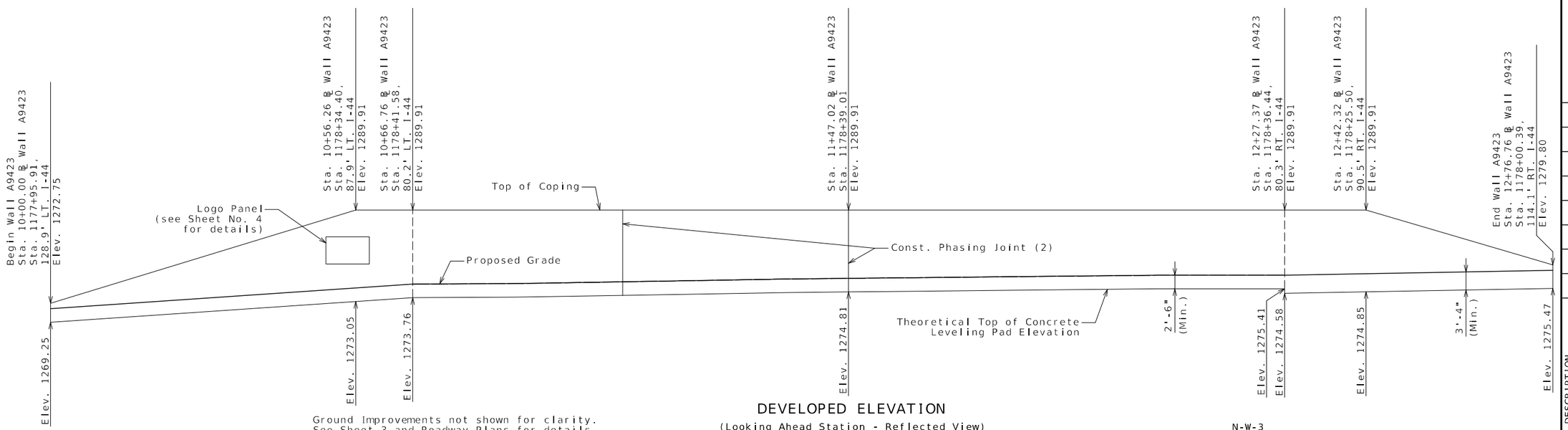
Note: For locations of borings, see Sheet No. 1.
Note: This drawing is not to scale. Follow dimensions.
Sheet No. 30 of 30

BORING DATA

c:\bmcd_lib\pw_connect\trn\d0171032\B_A9422_030_JSU0076.dgn 9:00:51 AM 9/6/2024

277' MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL SYSTEM

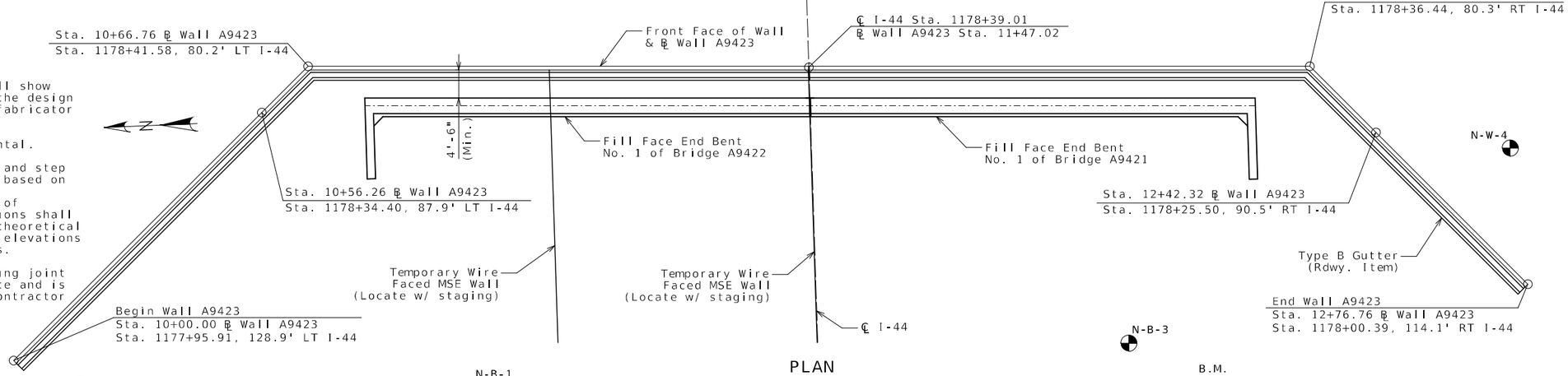
SEC/SUR 1 TWP 29N RGE 22W



Ground Improvements not shown for clarity.
See Sheet 3 and Roadway Plans for details.

DEVELOPED ELEVATION

(Looking Ahead Station - Reflected View)
Concrete leveling pad not shown for clarity (1)



(1) Wall contractor shall show the following items on the design drawings and/or on the fabricator shop drawings.

- Leveling pad horizontal.
- Leveling pad length and step elevations shall be based on wall manufacturer's recommendation. Top of leveling pad elevations shall not be higher than theoretical top of leveling pad elevations shown on these plans.

(2) Construction phasing joint location is approximate and is to be determined by Contractor and Wall Designer.

Indicates location of borings.

PLAN

Concrete leveling pad and coping not shown for clarity (1)
℄ wall stationing at front face of MSE wall

Notice and Disclaimer Regarding Boring Log Data

The locations of all subsurface borings for this structure are shown on the plan sheet(s) for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheets No. 5 thru 9 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.

B.M.

C.P. #520 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1157+31.28, 94.70' Rt. of ℄ I-44
Elev. 1278.57

C.P. #521 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1183+76.50, 114.67' Lt. of ℄ I-44
Elev. 1294.63

RETAINING WALL ALONG NATIONAL AVE. NEAR END BENT NO. 1 OF BRIDGES A9421 AND A9422

I-44 OVER NATIONAL AVE.
ABOUT 2.0 MILES EAST OF ROUTE 13
TIE STATION 1178+39.01

GENERAL PLAN & ELEVATION

Designed May 2024
Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 2:04:27 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	1

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9423

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications (Section 5 ASD Design)
Seismic Performance Category = A
Acceleration Coefficient = 0.09

Design Loading:

Φ_b = 22° and Unit weight, γ_b = 120 pcf for retained backfill material to be retained by the mechanically stabilized earth wall system.

Φ_f = 34° for improved foundation ground where wall is to bear. Unimproved foudation data is not applicable. Foundation Improvement is required full length of the wall.

For improved foundation ground, the allowable bearing pressure is 4.5 ksf.

The maximum applied bearing pressure for the controlling design case at the foundation level shall be shown on the shop drawings and shall be less than the allowable bearing pressure for foundation ground provided herein. For seismic design the maximum applied bearing pressure shall be less than two times the allowable bearing pressure.

Allowable bearing pressure and limits of improved foundation ground shall not be adjusted from that as shown on the plans.

Contractor shall include design Φ_f (actual $\Phi_f \geq 34°$) and the total unit weight, γ_f, for the select granular backfill (reinforced backfill and wedge area backfill) for structural systems on shop drawings. Contractor shall identify source of select granular backfill material, submit proctor in accordance with AASHTO T 99 (ASTM D698) and gradation with the shop drawings. When backfill material is too coarse to develop a proctor curve the contractor shall determine the maximum dry density (relative density) in accordance with ASTM D4253 and ASTM D4254 and assume percent passing the 200 sieve for optimum water content.

Total unit weight, γ_b = (95% compaction) x (maximum dry density) x (1 + optimum water content)

Design Φ_f = 34°for the select granular backfill (reinforced backfill) only for structural systems.

Factor of safety shall be 2.0 for overturning and 1.5 for sliding.

For seismic design the factor of safety shall be 1.5 for overturning and 1.1 for sliding.

Use default values for the pullout friction factor, F^*, in accordance with AASHTO figure 5.8.5.2A and default value for scale effect correction factor, α, in accordance with AASHTO table 5.8.5.2A. For approved steel strips not shown in AASHTO figure 5.8.5.2A, use $F^* \leq 2.0$ at zero depth and $F^* \leq \text{Tan } \Phi_f$ at 20 feet depth and Φ_f design = 34°. F^* and α values shall be shown on the shop drawings.

Design Unit Stresses:

All concrete for leveling pad and coping shall be Class B or B-1 with f'c = 4000 psi.

The minimum compressive strength of concrete for precast panel shall be 4,000 psi in accordance with Sec 1052.

Miscellaneous:

The MSE wall system shall be built vertical.

The MSE wall system shall be built in accordance with Sec 720.

The MSE wall system shall be a large block wall system.

Panel, concrete block and coping (or capstone) reinforcement shall be epoxy coated.

A filter cloth meeting the requirements for a Separation Geotextile material shall be placed between the select granular backfill for structural systems and the backfill being retained by the mechanically stabilized earth wall system.

Coping shall be required on this structure. When CIP coping sections extend beyond the limits of a single panel, bond breaker (roofing felt or other approved alternate) between wall panel and coping is required. Coping joints shall use 3/4-inch chamfers and shall be sealed with 3/4-inch joint filler. Coping reinforcement shall terminate 1 1/2-inch minimum from face of coping joint.

The contractor shall be solely responsible to coordinate construction of the wall with bridge and roadway construction and ensure that the bridge and roadway construction, resulting or existing obstructions, shall not impact the construction or performance of the wall. Soil reinforcement shall be designed and placed to avoid damage by pile driving, guardrail post installation, utility and sign foundations. (See Roadway and Bridge plans.)

General Notes Cont.:

Minimum 18" wide Geotextile strips shall be centered at vertical and horizontal joints of panel. Geotextile material shall be adhered to back face of panel using an adhesive compound supplied by the manufacturer. All edges of each fabric strip shall provide a positive seal. A minimum 18" overlap shall be provided between spliced filter fabric.

Aluminized soil reinforcement shall have edges coated with coating material per manufacturer.

Soil reinforcement shall be spaced to avoid roadway drop inlet behind wall.

All steel soil reinforcements shall be separated from other metallic elements by at least 3 inches.

The splay angle should be less than 15° and tensile capacity of splayed reinforcement shall be reduced by the cosine of the splay angle. Soil reinforcement shall clear the obstruction by at least 3 inches.

No reinforcement shall be left unconnected to the wall face or arbitrarily cut/bent in the field to avoid the obstruction.

Where interference between the vertical obstruction and the soil reinforcement is unavoidable, the design of the wall near the obstruction may be modified using one of the alternatives in FHWA-NHI-10-24, Section 5.4.2. Show detail layout on the drawings. For wall designs with horizontal obstructions in reinforced soil mass, see FHWA-NHI-10-024, Section 5.4.3.

Contractor shall be responsible for the internal stability, external stability, compound stability, and overall global stability of the temporary MSE wall structure. The soil parameters assumed for the temporary MSE wall design shall be those shown on the plan details for the MSE Wall and shown in the foundation report. The contractor shall submit the proposed method of temporary MSE wall construction to the engineer prior to beginning work.

Excavation:

Excavation quantities and pay items are given on the roadway plans. Excavation quantities are based on a soil reinforcement length of 0.8H. Where H is the wall height from top of leveling pad to top of wall. The soil reinforecement length may vary based upon the wall design selected by the contractor. Plan excavation quantities will be paid regardless of any actual quantities removed based on the soil reinforcement length and design selected.

Material Properties Used in Design				
Reinf. Fill/Select Granular Backfill		Active Force Computations		Foundation
Φ°	γ (pcf)	Φ°	γ (pcf)	Φ°

Note: MSE Wall designer shall include table on shop drawings and provide values used in the design computations. Effects of cohesion shall be ignored unless approved by the engineer.

Show range of acceptable theta (Θ) angle on shop drawings which must be consistent with design computations and proposed construction of wall. Show active force computation properties on shop drawings and in design computations. Coordination between wall designer (manufacturer) and contractor is required before shop drawing submittal.

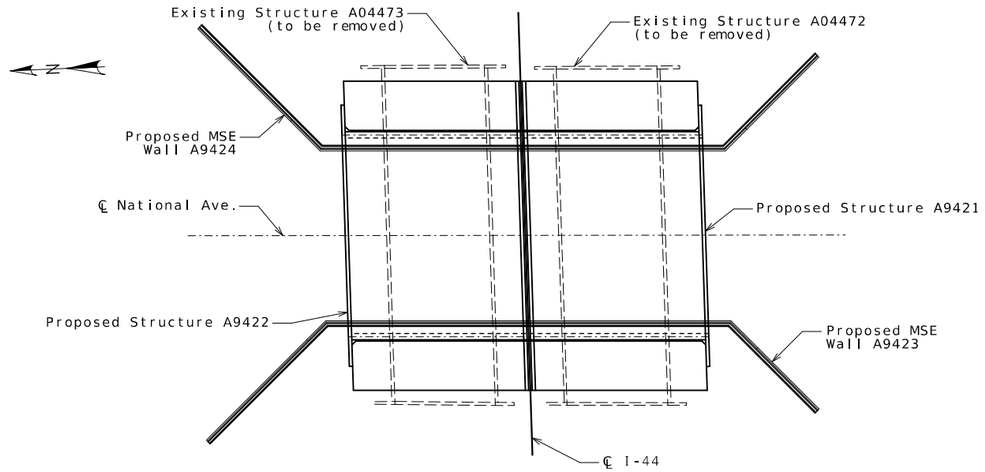
Estimated Quantities

Item		Total
Aesthetic Concrete Stain	lump sum	1
Concrete and Masonry Protection System	lump sum	1
Sacrificial Graffiti Protection System	lump sum	1
Mechanically Stabilized Earth Wall Systems	sq. foot	3752
Form Liners for MSE Wall Systems	sq. yard	4
Temporary MSE Wall System	lump sum	1

MSE Wall Systems Data Table

Proprietary Wall Systems		Combination Wall Systems			
Manufacturer	System	Facing Unit Manufacturer	Facing Unit	Geogrid Manufacturer	Geogrid

MSE Wall Systems Data Table is to be completed by MoDOT construction personnel to record the manufacturer of the proprietary wall system or the manufacturers of the combination wall system that was used for constructing the MSE wall.



LOCATION SKETCH

JOSHUA D. JOLLIFF NUMBER PE-2006002824 STATE OF MISSOURI PROFESSIONAL ENGINEER
10/24/2024 2:04:38 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED: 10/24/2024
ROUTE: I-44 | STATE: MO
DISTRICT: BR | SHEET NO.: 2
COUNTY: GREENE
JOB NO.: JSU0076
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9423

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE | REV.

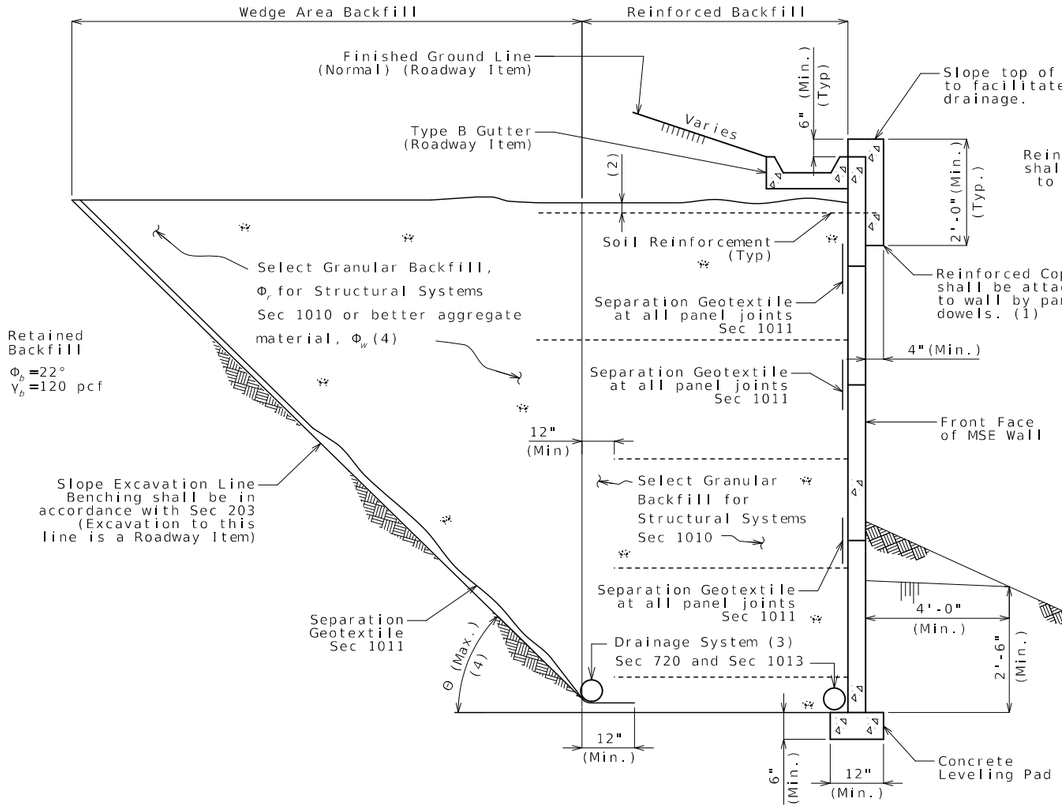
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

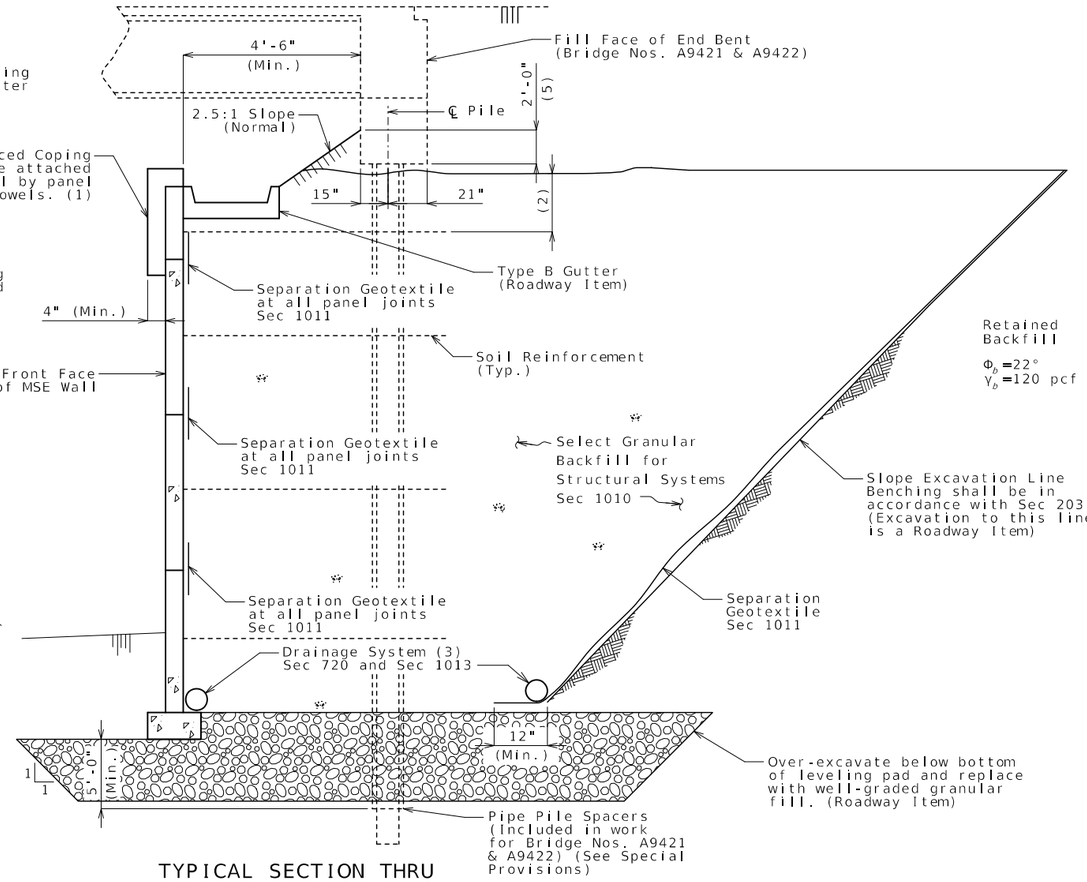
Detailed May 2024
Checked June 2024

GENERAL NOTES AND ESTIMATED QUANTITIES

Note: This drawing is not to scale. Follow dimensions.



TYPICAL SECTION THRU
LARGE BLOCK WALL SHOWING FILTER CLOTH



TYPICAL SECTION THRU
LARGE BLOCK WALL UNDER BRIDGE
SHOWING GROUND IMPROVEMENTS

(1) Inverted U-shape reinforced capstone may be used in lieu of coping. Panel dowels for level-up concrete shall be required and provided by manufacturer. The dowels shall be field trimmed to clear the capstone by a minimum of 1 1/2 inches and a maximum of 2 1/2 inches.

(2) Topmost layer of reinforcement shall be fully covered with select granular backfill for structural systems, as approved by the wall manufacturer, before placement of the Separation Geotextile.

(3) Minimum 6" diameter perforated PVC or PE pipe.

Manufacturer shall show drain details on design plans to be submitted as shown on MoDOT MSE wall plans and/or roadway plans.

Contractor shall modify the drain details as shown if it will improve flow as may be the case for stepped leveling pad, and for an uneven ground line (approval of the engineer required).

(4) Select granular backfill shall extend a minimum of 12" beyond the end of all soil reinforcement. Where the angle, Θ, between the retained backfill excavation/fill line and the horizontal is less than 90°, the wedge area backfill between Θ and 90° shall be filled with select granular backfill for structural systems meeting the requirements of Section 1010.

- For $(45° + \Phi_b/3) < \Theta \leq 90°$, properties for retained backfill shall be used for active force computations.

- For $\Theta \leq (45° + \Phi_b/3)$, contractor shall have the option to use select granular backfill, Φ_f, or better aggregate material, Φ_w, for active force computations in the wedge area backfill. For active force computations, the angle of internal friction for wedge area backfill material, Φ_f or Φ_w, shall be limited to 34° unless determined otherwise in accordance with Section 1010. If Φ_f or Φ_w > 34° is desired for wedge area backfill then test report shall be submitted with shop drawings. Φ_f or Φ_w shall not be greater than 40° for computations. Final configuration of this option shall be sent to Geotechnical Section for a new overall global stability analysis. Design Φ_w shall be shown on the shop drawings if used.

The slope excavation line shall be benched and separation geotextile shall be placed between the retained backfill and either select granular backfill or better aggregate material, and between the select granular backfill and better aggregate material.

(5) See Bridge Plans.

DETAILS FOR MSE WALL

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 2:04:41 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	3

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9423

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

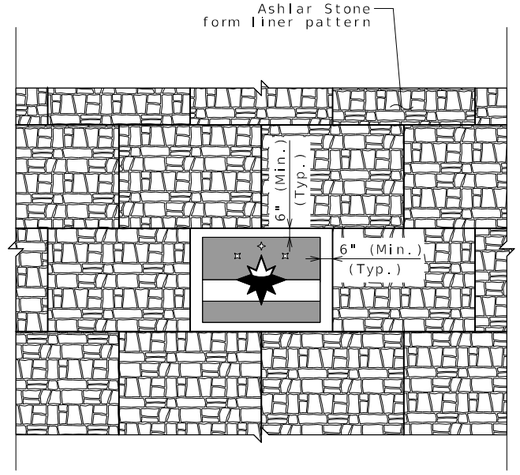
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.

Form Liner Relief	
Color	Relief
White	0"
Gray	1"
Black	2"

Note: Relief to extend out from face of panel.



MSE WALL PANEL WITH INSET LOGO DETAIL

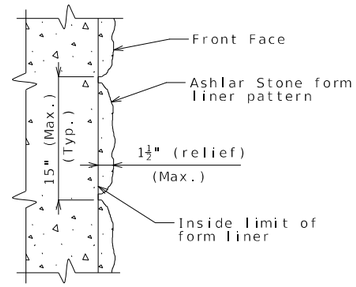
Notes:

Logo to be placed as a bas-relief form liner.

Logo to be centered on the panel. Panel to be placed in the wall as shown on the wall elevation (see Sheet No. 1).

Electronic image of logo available from City of Springfield upon request.

The cost of the logo will be considered completely covered by the contract unit price for Form Liners for MSE Wall Systems per square yard.



FORM LINER DETAIL (Large Block Wall)

Notes:

The cost of ashlar stone form liners for MSE wall systems, complete in place, will be considered completely covered by the contract unit price for Mechanically Stabilized Earth Wall System.

Form liner shall be constructed in accordance with Special Provisions.

The following is a list of form liner manufacturers and types which may be used. Depth of relief for all form liner pattern's shall vary up to 1 1/2". The height of any single 'stone' shall be 15" maximum.

- Scott System, Inc.: Form liner pattern #167 "Ashlar Stone"
- Fitzgerald Formliners: Form liner pattern #16986 "Ashlar Stone"
- Greenstreak: Form liner pattern #330 "Ashlar Stone"
- Spec Formliners: Form liner pattern #1515 "Ashlar Stone"
- Customrock: Form liner pattern #12020 "Tollway Ashlar"
- An approved equal

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

10/24/2024 2:04:44 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	4

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9423

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

Detailed May 2024
Checked June 2024

DETAILS FOR MSE WALL

Note: This drawing is not to scale. Follow dimensions.

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9423 - I-44 over National Ave_Wall 1\B_A9423_004_JSU0076_WALL_LOGO_DETAILS.dgn 1:12:52 PM 10/24/2024

Missouri Department of Transportation
Construction and Materials

BORING NO. N-W-1
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** TB **Operator:** LRK
Station: **Northing:** 516883.3232 **Date of Work:** 08/15/23-08/15/23
Offset: 25' W, 4.5' S **Easting:** 1415086.7596 **Depth to Water:**
Elevation: 1274.3 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.5' Asphaltic concrete (6.0")							
		0.5-5.0' (CL) FILL: Brown, lean CLAY, trace gravel and sand			39	2-2-2 (6)		PP = 1.00 tsf	MC = 19.0%
			1270		100		Qu Test Results UCS = 1.02 ksf MC = 18.8% γ_{moist} = 126.8 pcf	PP = 3.50 tsf	LL = 39 PL = 16
5		5.0-7.8' (CH) Reddish brown, fat CLAY, trace sand			83	2-2-5 (11)		PP = 2.00 tsf	MC = 48.3%
		7.8-10.5' (CH) Brown, gravelly fat CLAY	1265		50	12-8-10 (27)		PP = 2.50 tsf	MC = 20.4%
10		10.5-15.0' LIMESTONE, gray, very hard, slightly weathered, finely crystalline, thin bedded, dense			94 (59)		Qu Test Results UCS = 1110 ksf		
			1260						
15		Refusal at 10.5 feet. Bottom of borehole at 15.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. N-W-2
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** TB **Operator:** LRK
Station: **Northing:** 516857.5958 **Date of Work:** 08/15/23-08/15/23
Offset: 6' W **Easting:** 1415112.5957 **Depth to Water:** 8.5
Elevation: 1274.6 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.5' Asphaltic concrete (6.0")							
		0.5-3.3' (CH) Brown, fat CLAY, with gravel and chert			63		Qu Test Results UCS = 1.22 ksf MC = 37.8% γ_{moist} = 105.5 pcf	PP = 3.50 tsf	
		3.3-8.0' (CH) Reddish brown, fat CLAY, with gravel, trace sand	1270		6"	3-3-4 (11)		PP = 2.00 tsf	MC = 21.9%
5		5.5' - trace gravel below 5.5 ft. 6.0' - chert from 6.0 ft. to 6.2 ft.			6"	11-3-4 (11)		PP = 2.50 tsf	MC = 27.8%
		8.0-9.0' (GC) Brown, clayey GRAVEL			83	50			MC = 32.3%
10		9.0-18.0' LIMESTONE, gray, very hard, slightly weathered, finely crystalline, thin bedded, dense 9.1' - chert form 9.0 ft. to 9.2 ft. 11.0' - chert from 11 ft. to 11.2 ft.	1265		83 (67)				
			1260		100 (85)		Qu Test Results UCS = 1660 ksf		
15		Refusal at 9.0 feet. Bottom of borehole at 18.0 feet.			97 (75)		Qu Test Results UCS = 1350 ksf		

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 2:04:47 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 5
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9423

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
ENGINEERING CORPORATION - 000631
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
© Copyright CMT, Inc.

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-1
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516843.3301 **Date of Work:** 08/03/23-08/04/23
Offset: **Easting:** 1415044.3222 **Depth to Water:**
Elevation: 1293.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.3' Asphaltic concrete (3.5")							
		0.3-1.6' Portland cement concrete (12.5")							
		1.6-3.0' (GP) FILL: Gray, GRAVEL, with clay, trace sand	1290		22	11-4-4 (12)			MC = 12.7%
		3.0-12.0' (CH) FILL: Red and brown, gravelly fat CLAY, trace sand			44	11-12-18 (45)		PP = 1.50 tsf	MC = 40.2%
5					75		Qu Test Results MC = 26.5%	PP = 1.75 tsf	
			1285						
10					61	3-6-4 (15)		PP = 2.25 tsf	MC = 44.9%
		12.0-14.5' (GC) FILL: Red and brown, clayey GRAVEL	1280		50	4-3-4 (11)		PP = 3.00 tsf	MC = 22.4%
15		14.5-17.0' (CL) Dark gray, lean CLAY, trace sand and gravel							
		17.0-27.0' (CH) Dark gray, fat CLAY, trace gravel	1275		67	2-2-4 (9)		PP = 2.25 tsf	MC = 25.3%
20									
			1270						
25		23.5' -Red and brown below 23.5 ft.			83	2-3-4 (11)		PP = 3.75 tsf	MC = 47.0%

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\2023075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-1
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516843.3301 **Date of Work:** 08/03/23-08/04/23
Offset: **Easting:** 1415044.3222 **Depth to Water:**
Elevation: 1293.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** HSA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		17.0-27.0' (CH) Dark gray, fat CLAY, trace gravel *(continued)*							
		27.0-29.5' (GC) Gray, red, and brown, clayey GRAVEL	1265		58	15-50		PP = 2.75 tsf	MC = 19.5%
30		29.5-40.0' LIMETONE, gray, hard to very hard, fresh, aphanitic, thin to thick bedded, dense, some chert	1260		96 (88)		Qu Test Results UCS = 1050 ksf		
35		35.0' -aphanitic to crys:alline below 35.0 ft.	1255		100 (84)		Qu Test Results UCS = 1330 ksf		
40		Refusa at 29.5 feet. Bottom of borehole at 40.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\2023075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6 of 9

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9423 - I-44 over National Ave_Wall 1\B_A9423_006_JSU0076_BORING_DATA2.dgn 1:13:21 PM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 2:04:50 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 6
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9423

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-2
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** TB **Operator:** LRK
Station: **Northing:** 516794.5256 **Date of Work:** 08/15/23-08/15/23
Offset: 5' W **Easting:** 1415110.2561 **Depth to Water:**
Elevation: 1275.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.5' Asphaltic concrete (5.0")	1275						
		0.5-6.0' (CH) FILL: Brown, fat CLAY, trace gravel and plastic sheet			56	3-4-6 (15)		PP = 2.50 tsf	MC = 20.2%
		3.0' - with gravel below 3.0 ft.			92			PP = 2.50 tsf	
5			1270						
		6.0-21.0' LIMESTONE, gray, very hard, slightly weathered, finely crystalline, thin bedded, dense			94 (60)		Qu Test Results UCS = 1230 ksf		
		8.0' -interbedded chert from 8.0 to 10.8 ft.							
10		9.3' - light gray- white below 9.3 ft.	1265		100 (93)		Qu Test Results UCS = 1180 ksf		
15			1260		97 (81)		Qu Test Results UCS = 1060 ksf		
20			1255						
		Refusal at 6.0 feet. Bottom of borehole at 21.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-3
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516744.648 **Date of Work:** 07/31/23-08/01/23
Offset: **Easting:** 1415047.2711 **Depth to Water:**
Elevation: 1293.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.3' Asphaltic concrete (3.5")							
		0.3-1.5' Portland cement concrete (13.5")							
		1.5-1.9' (GP) FILL: Red and brown, clayey GRAVEL			44	15-24-11 (53)			MC = 24.2%
		1.9-3.5' FILL: Gray, crushed LIMESTONE	1290						
		3.5-12.0' (CH) FILL: Red and brown, fat CLAY, with gravel			72	3-5-2 (11)		PP = 1.00 tsf	MC = 20.0%
5		6.0' -trace gravel below 6.0 ft.			100	1-1-3 (6)		PP = 1.75 tsf	MC = 40.1%
			1285						
					100		Qu Test Results UCS = 1.55 ksf MC = 30.3% γ_{moist} = 111.0 pcf	PP = 1.75 tsf	
10		12.0-15.0' (GC) FILL: Red and brown, clayey GRAVEL	1280						
		14.8' -trace clay below 14.8 ft.			50	6-13-12 (38)		PP = 2.00 tsf	MC = 20.8%
15		15.0-19.2' (CL) FILL: Gray, lean CLAY, with gravel	1275						
		18.5' -dark brown and gray, trace sand below 18.5 ft.			56	28-33-9 (63)		PP = 2.75 tsf	MC = 18.9%
20		19.2-22.0' (GP) Gray, GRAVEL fragments (highly weathered rock)							
		22.0-24.7' (CH) Red and brown, fat CLAY, trace sand and gravel	1270		100	3-24-12 (54)		PP = 3.75 tsf	MC = 44.3%
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9423 - I-44 over National Ave_Wall 1\B_A9423_007_JSU0076_BORING_DATA3.dgn 1:13:46 PM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 2:04:54 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 7
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9423

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-3
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516744.648 **Date of Work:** 07/31/23-08/01/23
Offset: **Easting:** 1415047.2711 **Depth to Water:**
Elevation: 1293.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		24.7-29.2' (GP) Gray, GRAVEL fragments, with clay (highly weathered rock) *(continued)*	1265		100	50/0.1'			MC = 39.5%
30		29.2-45.2' LIMESTONE, gray, hard to very hard, fresh to slightly weathered, aphanitic to coarsly crystalline, medium bedded, dense, cherty	1260		100 (72)		Qu Test Results UCS = 1650 ksf		
35			1255		100 (87)		Qu Test Results UCS = 1250 ksf		
40		39.2' -chert nodules present below 39.2 ft.	1250		100 (70)		Qu Test Results UCS = 1850 ksf		
45		Refusal at 29.2 feet. Bottom of borehole at 45.2 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. N-W-3
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516713.9201 **Date of Work:** 08/14/23-08/14/23
Offset: **Easting:** 1415113.8169 **Depth to Water:**
Elevation: 1276.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-1.0' Asphaltic concrete (12.0")	1275						
		1.0-1.3' FILL: Crushed limestone (3.0")			47	10-17-7 (36)		PP = 3.50 tsf	MC = 12.3%
		1.3-8.0' (CH) Brown, gravelly, fat CLAY, trace sand 1.8' -chert from 1.8 ft to 2.0 ft.							
5		3.0' -reddish brown, with gravel below 3.0 ft.			72	4-4-3 (11)		PP = 3.50 tsf	MC = 35.8%
			1270						
		6.1' -no gravel below 6.1 ft.			56	8-8-5 (20)		PP = 2.50 tsf	MC = 42.8%
		8.0-8.7' (SC) Reddish brown, clayey SAND			100	50/0.2'		PP < 0.25 tsf	MC = 48.5%
10		8.7-13.7' LIMESTONE, gray, very hard, slightly weathered, finely crystalline, thin bedded, dense							
		10.2' -void from 10.2 ft. to 10.6 ft.	1265		92 (65)		Qu Test Results UCS = 1250 ksf		
		11.4' -chert from 11.2 ft. to 11.7 ft.							
		Refusal at 8.7 feet. Bottom of borehole at 13.7 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 9

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9423 - I-44 over National Ave_Wall 1\B_A9423_008_JSU0076_BORING_DATA4.dgn 1:14:12 PM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 2:04:58 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 8
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9423

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

TSi GRI Technical, Inc.

Missouri Department of Transportation
Construction and Materials

BORING NO. N-W-4
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516682.2731 **Date of Work:** 08/07/23-08/07/23
Offset: **Easting:** 1415076.012 **Depth to Water:**
Elevation: 1277.5 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-3.9' (CH) Reddish-brown, fat CLAY, with gravel, trace sand and roots	1275		56	8-17-21 (57)			MC = 11.6%
5		3.9-5.5' (GP) Gray, GRAVEL, trace clay and sand			50	15-14-7 (32)			MC = 20.7%
		5.5-8.8' (CH) Reddish-brown, fat CLAY, trace sand	1270		100		Qu Test Results UCS = 1.79 ksf MC = 50.3% γ_{moist} = 101.6 pcf		
		8.0' -with gravel, trace sand, below 8.0 ft.			100		Qu Test Results MC = 24.8%		
10		8.8-10.0' (GC) Gray and reddish-brown, Clayey GRAVEL			14	9-6-50/0.2'			MC = 27.5%
		10.0-10.1' Gray, weathered LIMESTONE							
		10.1-15.1' LIMESTONE, white gray to dark gray, very hard, fresh to slightly weathered, small zones moderately weathered, very finely crystalline to aphanitic, medium to thick bedded, mostly dense, chert zones present.	1265		97 (68)		Qu Test Results UCS = 1490 ksf		
15		Refusal at 10.1 feet. Bottom of borehole at 15.1 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For location of boring, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

10/24/2024 2:05:01 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	9

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9423

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

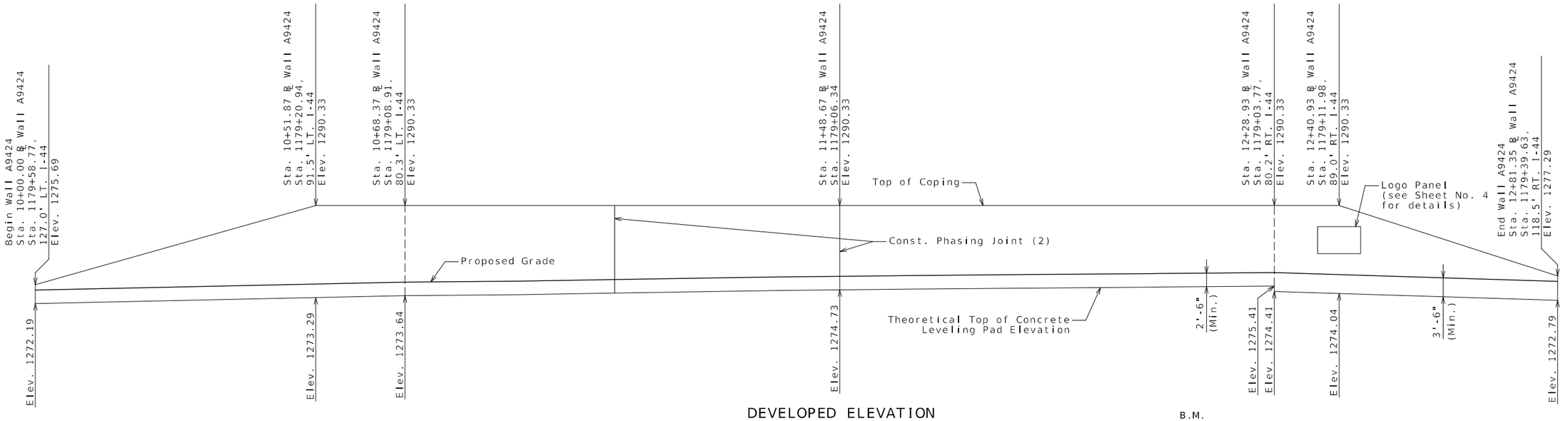
CMT
©Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9423 - I-44 over National Ave_Wall 1\B_A9423_009_JSU0076_BORING_DATA5.dgn 1:14:38 PM 10/24/2024

281' MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL SYSTEM

SEC/SUR 1 TWP 29N RGE 22W



DEVELOPED ELEVATION

(Looking Ahead Station)

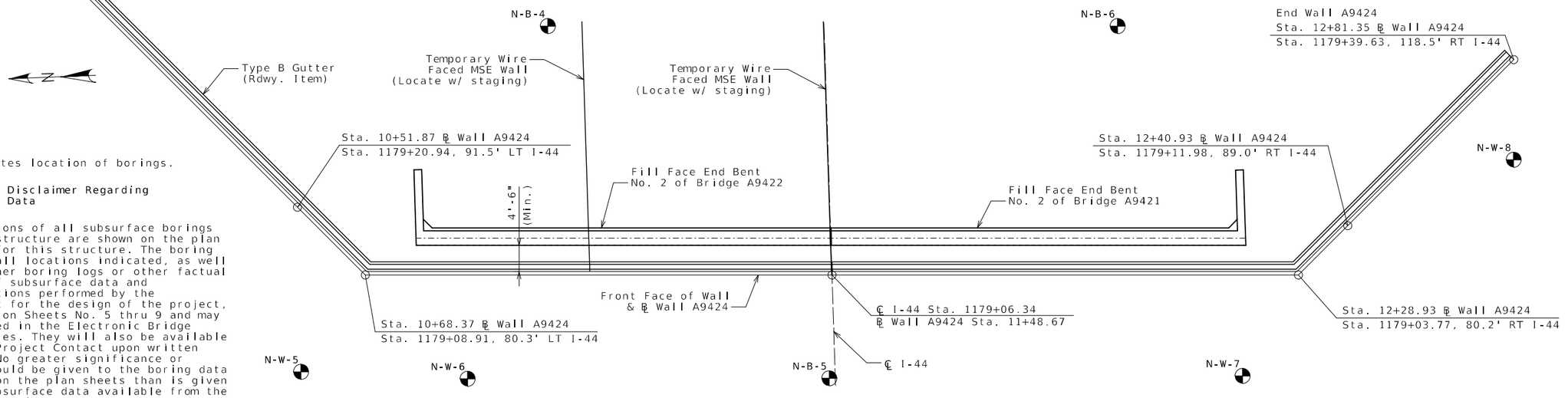
Concrete leveling pad not shown for clarity (1)

Ground Improvements not shown for clarity.
See Sheet 3 and Roadway Plans for details.

B.M.

C.P. #520 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1157+31.28, 94.70' Rt. of ℄ I-44
Elev. 1278.57

C.P. #521 - 5/8" I.B. w/ 2" Aluminum Cap
Sta. 1183+76.50, 114.67' Lt. of ℄ I-44
Elev. 1294.63



PLAN

Concrete leveling pad and coping not shown for clarity (1)

℄ wall stationing at front face of MSE wall

Indicates location of borings.

Notice and Disclaimer Regarding Boring Log Data

The locations of all subsurface borings for this structure are shown on the plan sheet(s) for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, are shown on Sheets No. 5 thru 9 and may be included in the Electronic Bridge Deliverables. They will also be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.

(1) Wall contractor shall show the following items on the design drawings and/or on the fabricator shop drawings.

- Leveling pad horizontal.
- Leveling pad length and step elevations shall be based on wall manufacturer's recommendation.Top of leveling pad elevations shall not be higher than theoretical top of leveling pad elevations shown on these plans.

(2) Construction phasing joint location is approximate and is to be determined by Contractor and Wall Designer.

Designed May 2024
Detailed May 2024
Checked June 2024

GENERAL PLAN & ELEVATION

Note: This drawing is not to scale. Follow dimensions. Sheet No. 1 of 9

RETAINING WALL ALONG NATIONAL AVE. NEAR END BENT NO. 2 OF BRIDGES A9421 AND A9422

I-44 OVER NATIONAL AVE.
ABOUT 2.0 MILES EAST OF ROUTE 13
TIE STATION 1179+06.34

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 2:07:56 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9424

REV. | DATE | DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9424 - I-44 over National Ave_Wall 2\B_A9424_001_JSU0076_WALL_PLAN_ELEVATION.dgn 1:18:28 PM 10/24/2024

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications (Section 5 ASD Design)
Seismic Performance Category = A
Acceleration Coefficient = 0.09

Design Loading:

Φ_b = 22° and Unit weight, γ_b = 120 pcf for retained backfill material to be retained by the mechanically stabilized earth wall system.

Φ_f = 34° for improved foundation ground where wall is to bear. Unimproved foudation data is not applicable. Foundation Improvement is required full length of the wall.

For improved foundation ground, the allowable bearing pressure is 4.5 ksf.

The maximum applied bearing pressure for the controlling design case at the foundation level shall be shown on the shop drawings and shall be less than the allowable bearing pressure for foundation ground provided herein. For seismic design the maximum applied bearing pressure shall be less than two times the allowable bearing pressure.

Allowable bearing pressure and limits of improved foundation ground shall not be adjusted from that as shown on the plans.

Contractor shall include design Φ_f (actual $\Phi_f \geq 34°$) and the total unit weight, γ_f, for the select granular backfill (reinforced backfill and wedge area backfill) for structural systems on shop drawings. Contractor shall identify source of select granular backfill material, submit proctor in accordance with AASHTO T 99 (ASTM D698) and gradation with the shop drawings. When backfill material is too coarse to develop a proctor curve the contractor shall determine the maximum dry density (relative density) in accordance with ASTM D4253 and ASTM D4254 and assume percent passing the 200 sieve for optimum water content.

Total unit weight, γ_b = (95% compaction) x (maximum dry density) x (1 + optimum water content)

Design Φ_f = 34°for the select granular backfill (reinforced backfill) only for structural systems.

Factor of safety shall be 2.0 for overturning and 1.5 for sliding.

For seismic design the factor of safety shall be 1.5 for overturning and 1.1 for sliding.

Use default values for the pullout friction factor, F^*, in accordance with AASHTO figure 5.8.5.2A and default value for scale effect correction factor, α, in accordance with AASHTO table 5.8.5.2A. For approved steel strips not shown in AASHTO figure 5.8.5.2A, use $F^* \leq 2.0$ at zero depth and $F^* \leq \text{Tan } \Phi_f$ at 20 feet depth and Φ_f design = 34°. F^* and α values shall be shown on the shop drawings.

Design Unit Stresses:

All concrete for leveling pad and coping shall be Class B or B-1 with f'c = 4000 psi.

The minimum compressive strength of concrete for precast panel shall be 4,000 psi in accordance with Sec 1052.

Miscellaneous:

The MSE wall system shall be built vertical.

The MSE wall system shall be built in accordance with Sec 720.

The MSE wall system shall be a large block wall system.

Panel, concrete block and coping (or capstone) reinforcement shall be epoxy coated.

A filter cloth meeting the requirements for a Separation Geotextile material shall be placed between the select granular backfill for structural systems and the backfill being retained by the mechanically stabilized earth wall system.

Coping shall be required on this structure. When CIP coping sections extend beyond the limits of a single panel, bond breaker (roofing felt or other approved alternate) between wall panel and coping is required. Coping joints shall use 3/4-inch chamfers and shall be sealed with 3/4-inch joint filler. Coping reinforcement shall terminate 1 1/2-inch minimum from face of coping joint.

The contractor shall be solely responsible to coordinate construction of the wall with bridge and roadway construction and ensure that the bridge and roadway construction, resulting or existing obstructions, shall not impact the construction or performance of the wall. Soil reinforcement shall be designed and placed to avoid damage by pile driving, guardrail post installation, utility and sign foundations. (See Roadway and Bridge plans.)

General Notes Cont.:

Minimum 18" wide Geotextile strips shall be centered at vertical and horizontal joints of panel. Geotextile material shall be adhered to back face of panel using an adhesive compound supplied by the manufacturer. All edges of each fabric strip shall provide a positive seal. A minimum 18" overlap shall be provided between spliced filter fabric.

Aluminized soil reinforcement shall have edges coated with coating material per manufacturer.

Soil reinforcement shall be spaced to avoid roadway drop inlet behind wall.

All steel soil reinforcements shall be separated from other metallic elements by at least 3 inches.

The splay angle should be less than 15° and tensile capacity of splayed reinforcement shall be reduced by the cosine of the splay angle. Soil reinforcement shall clear the obstruction by at least 3 inches.

No reinforcement shall be left unconnected to the wall face or arbitrarily cut/bent in the field to avoid the obstruction.

Where interference between the vertical obstruction and the soil reinforcement is unavoidable, the design of the wall near the obstruction may be modified using one of the alternatives in FHWA-NHI-10-24, Section 5.4.2. Show detail layout on the drawings. For wall designs with horizontal obstructions in reinforced soil mass, see FHWA-NHI-10-024, Section 5.4.3.

Contractor shall be responsible for the internal stability, external stability, compound stability, and overall global stability of the temporary MSE wall structure. The soil parameters assumed for the temporary MSE wall design shall be those shown on the plan details for the MSE Wall and shown in the foundation report. The contractor shall submit the proposed method of temporary MSE wall construction to the engineer prior to beginning work.

Excavation:

Excavation quantities and pay items are given on the roadway plans. Excavation quantities are based on a soil reinforcement length of 0.8H. Where H is the wall height from top of leveling pad to top of wall. The soil reinforecement length may vary based upon the wall design selected by the contractor. Plan excavation quantities will be paid regardless of any actual quantities removed based on the soil reinforcement length and design selected.

Material Properties Used in Design				
Reinf. Fill/Select Granular Backfill		Active Force Computations		Foundation
Φ°	γ (pcf)	Φ°	γ (pcf)	Φ°

Note: MSE Wall designer shall include table on shop drawings and provide values used in the design computations. Effects of cohesion shall be ignored unless approved by the engineer.

Show range of acceptable theta (Θ) angle on shop drawings which must be consistent with design computations and proposed construction of wall. Show active force computation properties on shop drawings and in design computations. Coordination between wall designer (manufacturer) and contractor is required before shop drawing submittal.

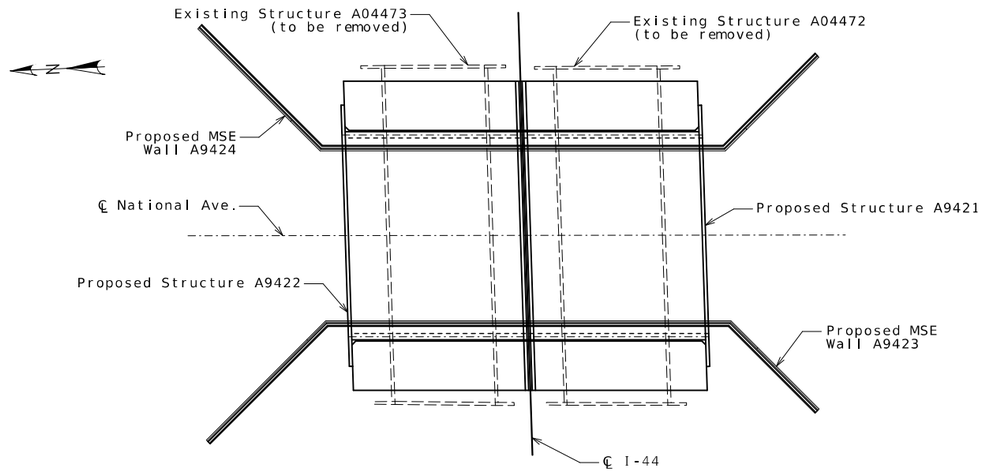
Estimated Quantities

Item		Total
Aesthetic Concrete Stain	lump sum	1
Concrete and Masonry Protection System	lump sum	1
Sacrificial Graffiti Protection System	lump sum	1
Mechanically Stabilized Earth Wall Systems	sq. foot	3950
Form Liners for MSE Wall Systems	sq. yard	4
Temporary MSE Wall System	lump sum	1

MSE Wall Systems Data Table

Proprietary Wall Systems		Combination Wall Systems			
Manufacturer	System	Facing Unit Manufacturer	Facing Unit	Geogrid Manufacturer	Geogrid

MSE Wall Systems Data Table is to be completed by MoDOT construction personnel to record the manufacturer of the proprietary wall system or the manufacturers of the combination wall system that was used for constructing the MSE wall.



LOCATION SKETCH

GENERAL NOTES AND ESTIMATED QUANTITIES

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

10/24/2024 2:08:19 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	2

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

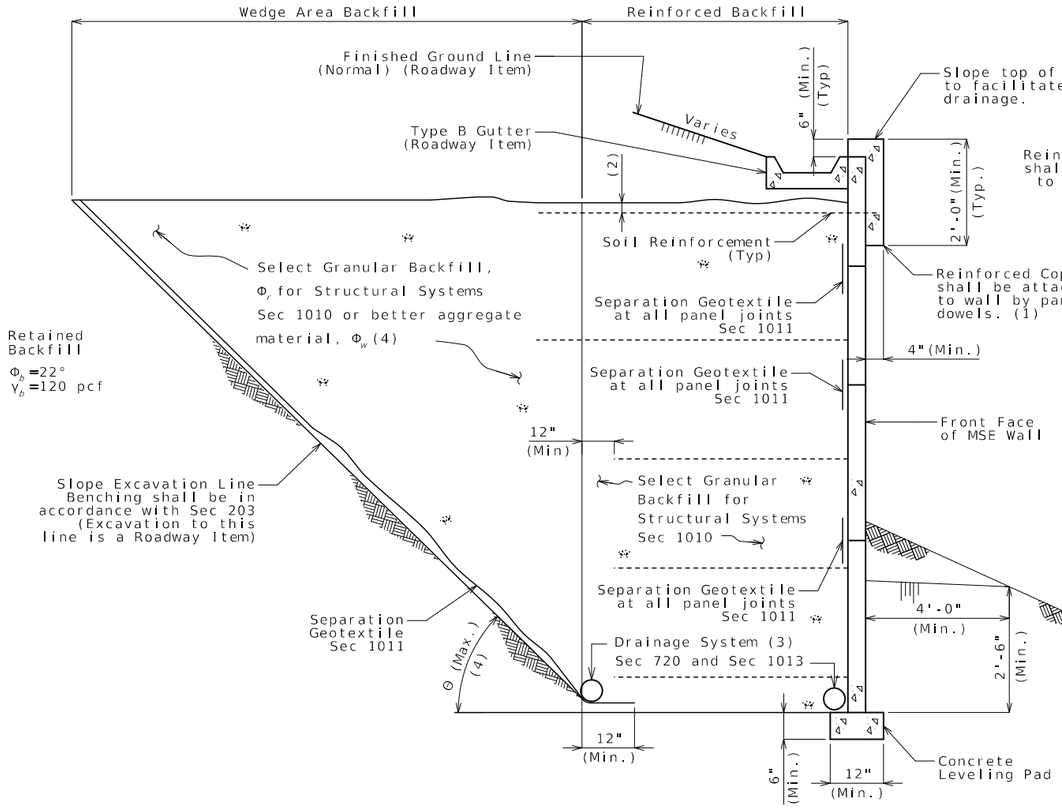
BRIDGE NO.
A9424

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

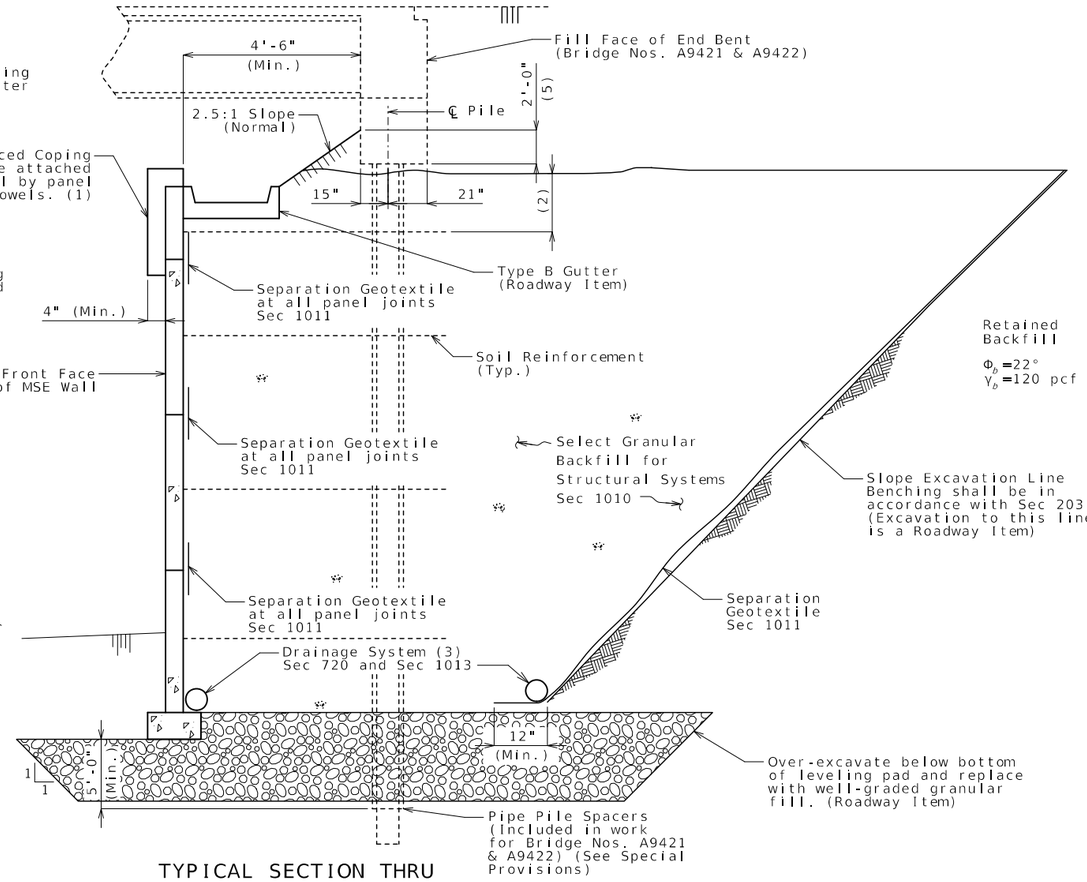
REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631



TYPICAL SECTION THRU
LARGE BLOCK WALL SHOWING FILTER CLOTH



TYPICAL SECTION THRU
LARGE BLOCK WALL UNDER BRIDGE
SHOWING GROUND IMPROVEMENTS

(1) Inverted U-shape reinforced capstone may be used in lieu of coping. Panel dowels for level-up concrete shall be required and provided by manufacturer. The dowels shall be field trimmed to clear the capstone by a minimum of 1 1/2 inches and a maximum of 2 1/2 inches.

(2) Topmost layer of reinforcement shall be fully covered with select granular backfill for structural systems, as approved by the wall manufacturer, before placement of the Separation Geotextile.

(3) Minimum 6" diameter perforated PVC or PE pipe.

Manufacturer shall show drain details on design plans to be submitted as shown on MoDOT MSE wall plans and/or roadway plans.

Contractor shall modify the drain details as shown if it will improve flow as may be the case for stepped leveling pad, and for an uneven ground line (approval of the engineer required).

(4) Select granular backfill shall extend a minimum of 12" beyond the end of all soil reinforcement. Where the angle, Θ, between the retained backfill excavation/fill line and the horizontal is less than 90°, the wedge area backfill between Θ and 90° shall be filled with select granular backfill for structural systems meeting the requirements of Section 1010.

- For $(45° + \Phi_b/3) < \Theta \leq 90°$, properties for retained backfill shall be used for active force computations.

- For $\Theta \leq (45° + \Phi_b/3)$, contractor shall have the option to use select granular backfill, Φ_f, or better aggregate material, Φ_w, for active force computations in the wedge area backfill. For active force computations, the angle of internal friction for wedge area backfill material, Φ_f or Φ_w, shall be limited to 34° unless determined otherwise in accordance with Section 1010. If Φ_f or Φ_w > 34° is desired for wedge area backfill then test report shall be submitted with shop drawings. Φ_f or Φ_w shall not be greater than 40° for computations. Final configuration of this option shall be sent to Geotechnical Section for a new overall global stability analysis. Design Φ_w shall be shown on the shop drawings if used.

The slope excavation line shall be benched and separation geotextile shall be placed between the retained backfill and either select granular backfill or better aggregate material, and between the select granular backfill and better aggregate material.

(5) See Bridge Plans.

DETAILS FOR MSE WALL

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 2:08:22 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	3

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9424

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

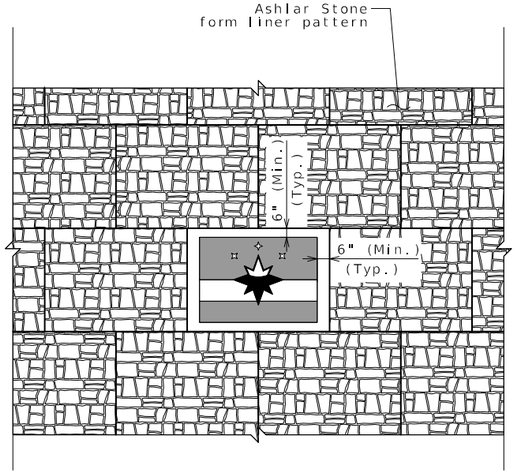
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.

Form Liner Relief	
Color	Relief
White	0"
Gray	1"
Black	2"

Note: Relief to extend out from face of panel.



MSE WALL PANEL WITH INSET LOGO DETAIL

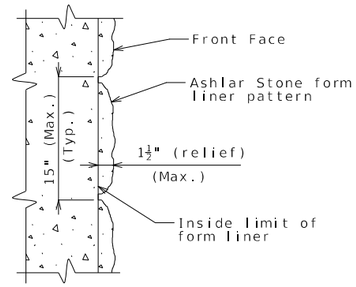
Notes:

Logo to be placed as a bas-relief form liner.

Logo to be centered on the panel. Panel to be placed in the wall as shown on the wall elevation (see Sheet No. 1).

Electronic image of logo available from City of Springfield upon request.

The cost of the logo will be considered completely covered by the contract unit price for Form Liners for MSE Wall Systems per square yard.



FORM LINER DETAIL (Large Block Wall)

Notes:

The cost of ashlar stone form liners for MSE wall systems, complete in place, will be considered completely covered by the contract unit price for Mechanically Stabilized Earth Wall System.

Form liner shall be constructed in accordance with Special Provisions.

The following is a list of form liner manufacturers and types which may be used. Depth of relief for all form liner pattern's shall vary up to 1 1/2". The height of any single 'stone' shall be 15" maximum.

- Scott System, Inc.: Form liner pattern #167 "Ashlar Stone"
- Fitzgerald Formliners: Form liner pattern #16986 "Ashlar Stone"
- Greenstreak: Form liner pattern #330 "Ashlar Stone"
- Spec Formliners: Form liner pattern #1515 "Ashlar Stone"
- Customrock: Form liner pattern #12020 "Tollway Ashlar"
- An approved equal

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 2:08:25 PM
Joshua D Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	4

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9424

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

Detailed May 2024
Checked June 2024

DETAILS FOR MSE WALL

Note: This drawing is not to scale. Follow dimensions.

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9424 - I-44 over National Ave_Wall 2\B_A9424_004_JSU0076_WALL_LOGO_DETAILS.dgn 1:18:43 PM 10/24/2024

Missouri Department of Transportation
Construction and Materials

BORING NO. N-W-5
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516885.4105 **Date of Work:** 08/08/23-08/08/23
Offset: 4' E **Easting:** 1415148.1957 **Depth to Water:**
Elevation: 1274.3 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.3' Asphaltic concrete (~4.0")							
		0.3-1.2' (GP) Crushed limestone							LL = 47 PL = 20 MC = 24.2%
		1.2-5.0' (CL) Dark-brown, lean CLAY, trace sand			33	7-3-3 (9)			
		3.0' -brown, with gravel, trace sand below 3.0 ft.	1270		100		Qu Test Results UCS = 2.09 ksf MC = 23.2% γ_{moist} = 123.5 pcf		
5		5.0-7.2' (CH) Possible FILL: Reddish-brown, fat CLAY, trace sand and gravel			78	4-7-3 (15)			MC = 36.6%
		7.2-8.0' (GP) Possible FILL: Gray, GRAVEL							
		8.0-8.8' (CH) Possible FILL: Reddish-brown, tan gray, fat CLAY, trace sand and gravel	1265		64	10-2-50/0.2'			MC = 18.6%
10		8.8-9.8' (GP) Possible FILL: Gray and brown, Clayey GRAVEL							
		9.8-14.8' LIMESTONE, gray, very hard, fresh, very finely crystalline to aphanitic, thin to thick bedded, dense	1260		100 (31)		Qu Test Results UCS = 1070 ksf		
		Refusal at 9.8 feet. Bottom of borehole at 14.8 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. N-W-6
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516856.8229 **Date of Work:** 08/08/23-08/08/23
Offset: 4' E **Easting:** 1415145.826 **Depth to Water:**
Elevation: 1274.6 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.3' Asphalt (4.0")							
		0.3-3.0' FILL: Gray, crushed limestone			28	20-7-3 (15)			MC = 1.7%
		3.0-5.0' (CL) FILL: Dark brown, lean CLAY, trace sand, gravel, and brick	1270		60		Qu Test Results MC = 18.0%	PP = 2.00 tsf	
5		5.0-9.6' (CH) Red, brown, and gray, gravelly fat CLAY, trace sand			78	9-11-15 (39)		PP = 2.75 tsf	MC = 23.3%
		8.5' -trace gravel below 8.5 ft.	1265		100	3-14-13 (41)		PP = 2.75 tsf	MC = 13.2%
10		9.6-10.7' (GP) Gray, GRAVEL, trace sand and fines							
		10.7-15.2' LIMESTONE, gray, very hard, fresh, aphanitic to finely crystalline, thin to thick bedded, dense	1260		100 (93)		Qu Test Results UCS = 1170 ksf		
15		Refusa at 10.7 feet. Bottom of borehole at 15.2 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 5 of 9

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9424 - I-44 over National Ave_Wall 2\B_A9424_005_JSU0076_BORING_DATA1.dgn 1:18:47 PM 10/24/2024

STATE OF MISSOURI
PROFESSIONAL ENGINEER
JOSHUA D. JOLLIFF
NUMBER PE-2006002824

10/24/2024 2:08:29 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
BR	5

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9424

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-4
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516840.5169 **Date of Work:** 08/02/23-08/03/23
Offset: **Easting:** 1415205.9087 **Depth to Water:** 28.0
Elevation: 1293.9 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.3' Asphaltic concrete (3.25")							
		0.3-1.0' Portland cement concrete (10.0")							
		1.0-3.0' (GP) FILL: Gray, crushed limestone			31	3-4-8 (18)			MC = 14.6%
		3.0-5.5' (GC) FILL: Red, brown, and gray, clayey GRAVEL	1290		39	6-7-4 (17)		PP = 1.50 tsf	MC = 32.2%
5		5.5-8.9' (CH) FILL: Red, brown, and gray, gravelly fat CLAY			50		Qu Test Results UCS = 1.41 ksf MC = 37.7% γ_{moist} = 103.8 pcf	PP = 2.50 tsf	
		8.9-12.0' (GC) FILL: Red, brown, and gray, clayey GRAVEL	1285		44	7-5-3 (12)		PP = 1.50 tsf	MC = 44.0%
10		12.0-24.6' (CH) Dark gray, fat CLAY, with gravel							
			1280		67	3-5-5 (15)		PP = 1.50 tsf	MC = 19.3%
15									
		18.5' -trace sand and gravel below 18.5 ft.	1275		100	2-3-4 (11)		PP = 2.25 tsf	MC = 23.4%
20									
			1270		100	5-15-13 (42)		PP = 3.50 tsf	MC = 20.9%
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-4
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516840.5169 **Date of Work:** 08/02/23-08/03/23
Offset: **Easting:** 1415205.9087 **Depth to Water:** 28.0
Elevation: 1293.9 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		24.6-29.1' (GC) Gray, red, and brown, clayey GRAVEL *(continued)*							
			1265		50	8-1-2 (5)		PP = 1.75 tsf	MC = 31.5%
30		29.1-30.5' (CH) Red and brown, fat CLAY, trace sand							
		30.5-40.5' LIMESTONE, gray, very hard, fresh, aphanitic to crystalline, medium to thick bedded, dense, chert present	1260		100 (93)		Qu Test Results UCS = 1170 ksf		
35									
			1255		100 (90)		Qu Test Results UCS = 1390 ksf		
40		Refusa at 30.5 feet. Bottom of borehole at 40.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6 of 9

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9424 - I-44 over National Ave_Wall 2\B_A9424_006_JSU0076_BORING_DATA2.dgn 1:19:12 PM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER

10/24/2024 2:08:34 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED
10/24/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
BR	6

COUNTY
GREENE

JOB NO.
JSU0076

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9424

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

REV.

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-5
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516794.6417 **Date of Work:** 08/08/23-08/08/23
Offset: 5' E **Easting:** 1415143.3374 **Depth to Water:**
Elevation: 1275.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.3' Asphaltic concrete (4.0")	1275						
		0.3-1.4' (GP) FILL: Crushed limestone							
		1.4-3.8' (CL) FILL: Dark brown, lean CLAY (CL), trace sand 1.6' -silty from 1.4 to 1.8 ft.			56	5-3-2 (8)		PP = 2.00 tsf	LL = 43 PL = 19 MC = 27.0%
		3.5' -with gravel below 3.5 ft.							
5		3.8-6.1' (GP) White, gray, pink, GRAVEL, trace sand and fines	1270		22	17-13-14 (41)		PP = 1.50 tsf	MC = 7.3%
		6.0' -brown and gray, clayey below 6.0 ft.			100	50/0.3"		PP = 1.00 tsf	MC = 25.6%
		6.1-7.3' Gray, weathered LIMESTONE							
		7.3-25.0' LIMESTONE, gray, very hard, fresh, aphanitic to finely crystalline, medium to thick bedded, dense, occasional chert nodules present throughout			100 (94)		Qu Test Results UCS = 1250 ksf		
10			1265						
					105 (103)		Qu Test Results UCS = 1100 ksf		
15			1260						
					100 (95)		Qu Test Results UCS = 1300 ksf		
20			1255						
					100 (98)		Qu Test Results UCS = 2180 ksf		
25		Refusal at 7.3 feet. Bottom of borehole at 25.0 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-6
Page 1 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516742.5508 **Date of Work:** 08/01/23-08/02/23
Offset: **Easting:** 1415201.8537 **Depth to Water:**
Elevation: 1294.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-0.5' Asphaltic concrete (6.0")							
		0.5-1.3' Portland cement concrete (10.0")							
		1.3-5.5' (CH) FILL: Red and brown, fat CLAY, with gravel			17	5-3-2 (8)		PP = 2.00 tsf	MC = 24.8%
		3.5' -trace gravel below 3.5 ft. 4.0' -dark gray below 4.0 ft.	1290		56	2-5-6 (17)		PP = 1.50 tsf	MC = 34.8%
5		5.5-16.0' (GC) FILL: Gray and brown, clayey GRAVEL			22	14-4-3 (11)		PP = 2.00 tsf	MC = 26.4%
		8.5' -red and brown below 8.5 ft.	1285		50	6-10-10 (30)		PP = 1.50 tsf	MC = 29.3%
10									
			1280		33	29-11-11 (33)		PP = 1.50 tsf	MC = 20.0%
15		16.0-22.0' (CL) FILL: Dark gray, lean CLAY, trace gravel							
			1275		83	3-8-10 (27)		PP = 2.00 tsf	LL = 48 PL = 18 MC = 24.6%
20									
		22.0-26.2' (GC) Red, brown, and gray, clayey GRAVEL	1270		72	17-10-11 (32)		PP = 2.00 tsf	MC = 20.6%
25									

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STLGEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 2:08:37 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 7
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9424

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

© Copyright CMT, Inc.

REV.

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9424 - I-44 over National Ave_Wall 2\B_A9424_007_JSU0076_BORING_DATA3.dgn 1:19:38 PM 10/24/2024

Missouri Department of Transportation
Construction and Materials

BORING NO. N-B-6
Page 2 of 2

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516742.5508 **Date of Work:** 08/01/23-08/02/23
Offset: **Easting:** 1415201.8537 **Depth to Water:**
Elevation: 1294.0 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
25		22.0-26.2' (GC) Red, brown, and gray, clayey GRAVEL *(continued)*							
		26.2-30.0' LIMESTONE, color, very hard, fresh to slightly weathered, aphanitc to coarsly crystalline, medium to thick bedded, dense, cherty	1265		98 (92)		Qu Test Results UCS = 1460 ksf		
30		30.0-36.2' LIMESTONE, color, very hard, fresh to slightly weathered, aphanitc to coarsly crystalline, medium to thick bedded, dense, cherty	1260		100 (100)		Qu Test Results UCS = 1230 ksf		
35		Refusal at 26.2 feet. Bottom of borehole at 36.2 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limted thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:05 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Missouri Department of Transportation
Construction and Materials

BORING NO. N-W-7
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JM **Operator:** LRK
Station: **Northing:** 516717.57 **Date of Work:** 08/14/23-08/14/23
Offset: 8' S, 32' E **Easting:** 1415136.8671 **Depth to Water:**
Elevation: 1276.1 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-6.3' (CH) FILL: Brown, fat CLAY, trace sand, gravel, and organics	1275		39	5-3-1 (6)		PP = 1.50 tsf	MC = 1.4% MC = 23.5%
					100		Qu Test Results MC = 16.6%	PP = 2.50 tsf	
5		6.0' -with sand and gravel below 6.0 ft. 6.3-8.4' (GP) Gray, limestone and chert GRAVEL	1270		33	17-17-5 (33)		PP = 2.50 tsf	MC = 24.6%
					60	50/0.4'			MC = 16.9%
10		8.4-13.5' LIMESTONE, gray, hard to very hard, slightly weathered, aphanitc to finely crystalline, thin bedded, dense, interbedded chert 9.6' -white and gray below 9.6 ft.	1265		100 (79)		Qu Test Results UCS = 1080 ksf		
		Refusal at 8.5 feet. Bottom of borehole at 13.5 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:06 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 9

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9424 - I-44 over National Ave_Wall 2\B_A9424_008_JSU0076_BORING_DATA4.dgn 1:20:04 PM 10/24/2024

STATE OF MISSOURI
PROFESSIONAL ENGINEER
JOSHUA D. JOLLIFF
NUMBER PE-2006002824

10/24/2024 2:08:42 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 8
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9424

DESCRIPTION | DATE | REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CMT
© Copyright CMT, Inc.
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

Missouri Department of Transportation
Construction and Materials

BORING NO. N-W-8
Page 1 of 1

Job No.: 20231075.00 **County:** Greene **Route:** I-44
Design: **Skew:** **Location:** Springfield, Missouri
Bent: **Logged By:** JU **Operator:** LRK
Station: **Northing:** 516675.4115 **Date of Work:** 08/07/23-08/07/23
Offset: **Easting:** 1415176.0637 **Depth to Water:**
Elevation: 1276.4 **Requested Northing:** **Depth Hole Open:**
Requested Station: **Requested Easting:** **Time Change:**
Requested Offset: **Equipment:** CME 550X,Split-Spoon Sampler, Shelby Tube
Requested Elevation: **Location Note:**
Drill No.: **Hammer Efficiency:** 90% **Drilling Method:** CFA

Depth (ft)	Graphic	Description	Elevation (ft)	Sample Type	REC % (RQD %)	Blow Counts (N_{60})	Shear Data	Field Tests	Index Tests
0		0.0-5.5' (GC) Gray, red, and brown, clayey GRAVEL, trace cobbles or boulders	1275		75		Qu Test Results MC = 20.3%	PP >4.50 tsf	
5		3.5' -trace sand below 3.5 ft.			39	15-28-26 (81)		PP >4.50 tsf	MC = 12.4%
		5.5-8.0' (CH) Red and brown, fat CLAY, with gravel	1270		61	12-5-9 (21)		PP = 4.25 tsf	MC = 38.0%
10		8.0-15.3' LIMESTONE, gray, very hard, slightly weathered, aphanitic to very finely crystalline, medium to thick bedded, dense, cherty			57 (18)				
			1265		100 (96)		Qu Test Results UCS = 1430 ksf		
15		Refusal at 8.0 feet. Bottom of borehole at 15.3 feet.							

N_{60} = (Em/60)Nm N_{60} - Corrected N value for standard 60% SPT efficiency; Em - Measured hammer efficiency in percent; Nm - Observed N-value
(1) = Assumed, (2) = Actual

Coordinate System: U.S. State Plane 1983 **Coordinate Zone:** Missouri Central **Coordinate Proj. Factor:** 1.0000701976
Coordinate Datum: NAD 83 (CONUS) **Coordinate Units:** U.S. Survey Feet

* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

LETTER BOREHOLE - MODOT 20150728.GDT - 1/23/24 12:06 - \\TSI\PROJECTS\STL\GEOTECH\2023 PROJECTS\20231075.00 I-44 THREE BRIDGES-SPRINGFIELD\WORKING FILES\MO DOT GINT (20231075) 3 BRIDGES.GPJ

Note: For locations of borings, see Sheet No. 1.

BORING DATA

Detailed May 2024
Checked June 2024

Note: This drawing is not to scale. Follow dimensions.

L:\MoDOT\22004246-00_New\424600\Structures\Sheets\JSU0076\A9424 - I-44 over National Ave_Wall 2\B_A9424_009_JSU0076_BORING_DATA5.dgn 1:20:29 PM 10/24/2024

STATE OF MISSOURI
JOSHUA D. JOLLIFF
NUMBER PE-2006002824
PROFESSIONAL ENGINEER
10/24/2024 2:08:45 PM
Joshua D. Jolliff
MO PE-2006002824

DATE PREPARED 10/24/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 9
COUNTY GREENE
JOB NO. JSU0076
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9424

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

©Copyright CMT, Inc.
CMT
CRAWFORD, MURPHY & TILLY, INC.
1631 WEST ELFINDALE STREET
SPRINGFIELD, MO 65807 (417) 869-6009
ENGINEERING CORPORATION - 000631

DESIGN DESIGNATION

A.A.D.T. - 2025 = 56,859
T = 27.2%
V = 60. 70 M.P.H.

FUNCTIONAL CLASSIFICATION- INTERSTATE

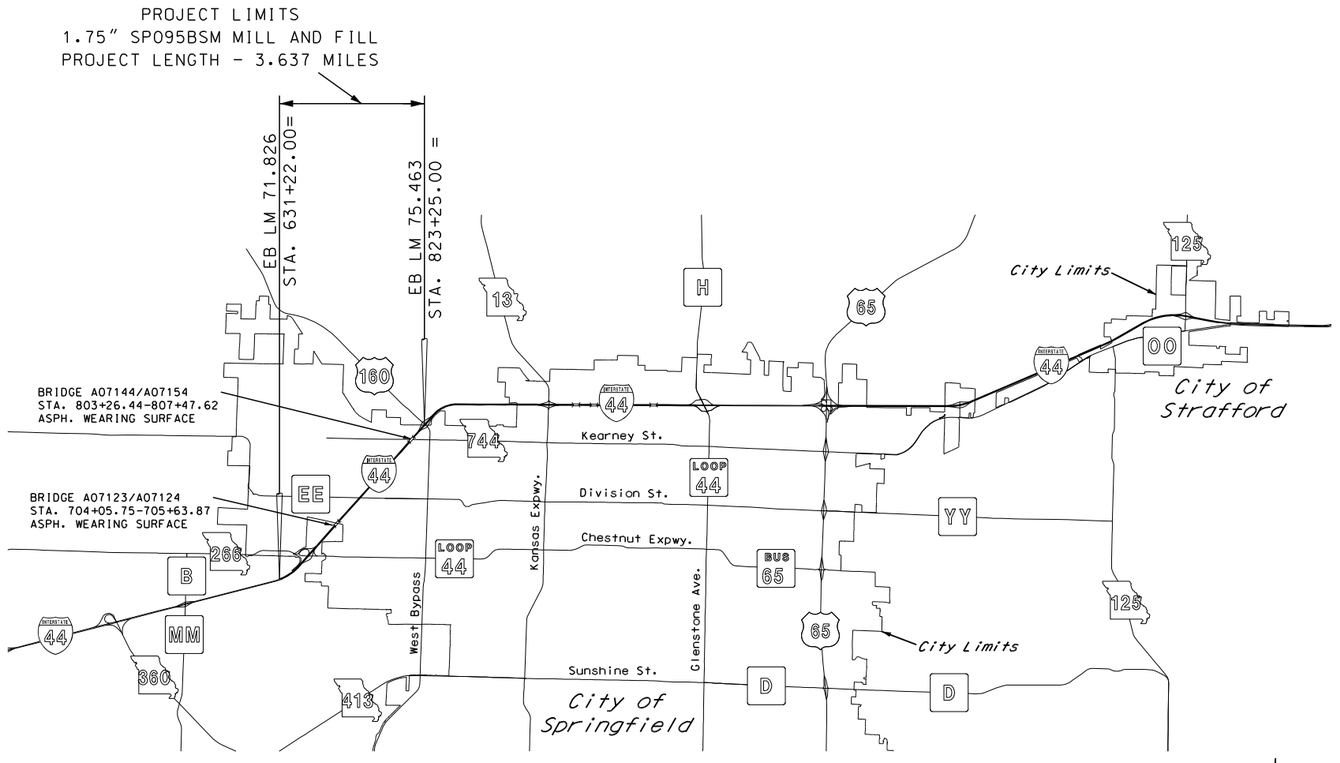
NO NEW RIGHT OF WAY REQUIRED

CONVENTIONAL SYMBOLS
(USED IN PLANS)

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
GUARD CABLE		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS	-FO-	FO
OVERHEAD CABLE TV	-OTV-	OTV
UNDERGROUND CABLE TV	-UTV-	UTV
OVERHEAD TELEPHONE	-OT-	OT
UNDERGROUND TELEPHONE	-UT-	UT
OVERHEAD POWER	-OE-	OE
UNDERGROUND POWER	-UE-	UE
SANITARY SEWER	-S-	S
STORM SEWER	-SS-	SS
GAS	-G-	G
WATER	-W-	W
MANHOLE		SAN
FIRE HYDRANT		HYD
WATER VALVE		WV
WATER METER		WM
DROP INLET		DI
DITCH BLOCK		
GROUND MOUNTED SIGN		SIGN
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL		PED
FENCE		
CHAIN LINK		V
WOVEN WIRE		X
GATE POST		
BENCHMARK		BM

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY
GREENE COUNTY



NOT TO SCALE

THE EXISTENCE AND APPROXIMATE LOCATION OF UTILITY FACILITIES KNOWN TO EXIST, AS SHOWN ON THE PLANS, ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE COMMISSION AT THIS TIME. THIS INFORMATION IS PROVIDED BY THE COMMISSION "AS-IS" AND THE COMMISSION EXPRESSLY DISCLAIMS ANY REPRESENTATION OR WARRANTY AS TO THE COMPLETENESS, ACCURACY, OR SUITABILITY OF THE INFORMATION FOR ANY USE. RELIANCE UPON THIS INFORMATION IS DONE AT THE RISK AND PERIL OF THE USER, AND THE COMMISSION SHALL NOT BE LIABLE FOR ANY DAMAGES THAT MAY ARISE FROM ANY ERROR IN THE INFORMATION. IT IS, THEREFORE, THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE, LOCATION AND STATUS OF ANY FACILITY. SUCH VERIFICATION INCLUDES DIRECT CONTACT WITH THE LISTED UTILITIES.

INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (1 SHEETS)	2
QUANTITIES (QU) (5 SHEETS)	3
PLAN-PROFILE (PP)	4-10
TRAFFIC CONTROL SHEETS (TC)	11-15
BRIDGE DRAWINGS (A07123)	1
BRIDGE DRAWINGS (A07124)	1
BRIDGE DRAWINGS (A07144)	1
BRIDGE DRAWINGS (A07154)	1

LENGTH OF PROJECT

BEGINNING OF PROJECT	STA. 631+22.00	
END OF PROJECT	STA. 823+25.00	
APPARENT LENGTH	19,203.00	FEET
EQUATIONS AND EXCEPTIONS:		
NET LENGTH	19,203.00	FEET
STATE LENGTH	3.637	MILES
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES	0	ACRES

ERIC J REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER
STATE OF MISSOURI

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 10/25/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 1
COUNTY: GREENE
JOB NO.: J8I3225
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

REVISED: 5-5-2020

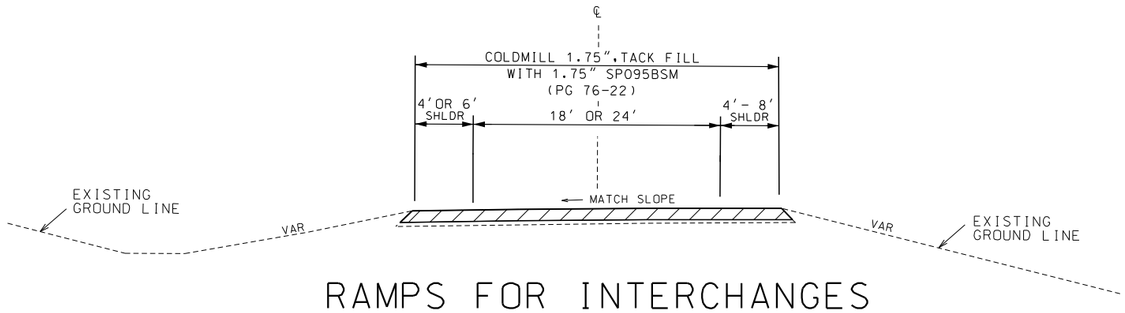
NOTE: NO ADDITIONAL PAYMENT WILL BE MADE FOR ADDITIONAL COLDMILLING (UP TO 3") REQUIRED TO REMOVE ENTIRE TOP LIFT DUE TO DELAMINATION. THIS APPLIES TO ENTIRE PROJECT LIMITS.

LANE WIDTH NOTED IS TYPICAL LANE WIDTH. ADJUST PAVING WIDTHS TO EXISTING FIELD CONDITIONS.

SURFACE PLACEMENT - ONE PASS PER LANE

NO S.E. CORRECTION

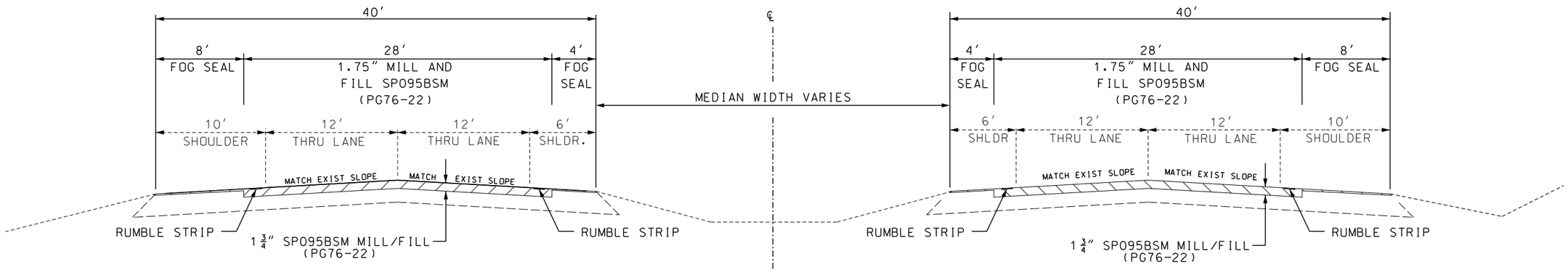
ASPHALT FACTORS
COMBINED FACTOR
SP095BSM (PG76-22) 1.950 TONS/CY
TACK COAT
MILL/FILL 0.10 GAL/SY
FOG SEAL
0.10 GAL/SY
IRREGULARITIES: 75 TONS/MI



RAMPS FOR INTERCHANGES

ROUTE 266 (CHESTNUT EXPRESSWAY) INTERCHANGE

ROUTE 160 (WEST BYPASS)/744 INTERCHANGE



INTERSTATE 44

STA. 631+22.00 TO STA. 823+25.00

NOTE BRIDGES A07123, A07124, A07144, A07154 ASPH. WEARING SURFACE

TYPICAL SECTIONS
SHEET 1 OF 1

STATE OF MISSOURI
ERIC J REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 10/25/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY: GREENE

JOB NO.: J8I3225

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.0411-44 Resurfacing_Springfield (MoDOT)\Civil\Sheet_Files\ORD\Typicals\002_TS_01_J8I3225_I5.dgn 1:10:12 PM 10/25/2024

REMOVAL OF IMPROVEMENTS

SHEET	STA	STA	LOCATION	LF	DESCRIPTION
5	661+58	666+08	EB INSIDE	450	GUARDRAIL
6	691+60	703+85	EB OUTSIDE	1,225	GUARDRAIL
6	700+20	703+70	EB INSIDE	350	GUARDRAIL
6 to 7	706+32	716+70	EB OUTSIDE	1,038	GUARDRAIL
7	732+16	735+91	EB INSIDE	375	GUARDRAIL
8	748+24	749+62	EB OUTSIDE	138	GUARDRAIL
8	761+39	762+39	EB OUTSIDE	100	GUARDRAIL
9 to 10	794+03	802+91	EB OUTSIDE	888	GUARDRAIL
10	799+78	802+91	EB INSIDE	313	GUARDRAIL
10	808+32	818+45	EB OUTSIDE	1,013	GUARDRAIL
10	820+45	825+33	EB OUTSIDE	488	GUARDRAIL
10	820+71	824+84	EB INSIDE	413	GUARDRAIL
5	664+91	669+41	WB INSIDE	450	GUARDRAIL
6	692+67	703+30	WB OUTSIDE	1,063	GUARDRAIL
6	703+70	703+98	EB INSIDE	1	BRIDGE APPROACH
6	703+85	704+16	EB OUTSIDE	1	BRIDGE APPROACH
6	705+54	705+67	WB OUTSIDE	1	BRIDGE APPROACH
6	705+69	706+01	WB INSIDE	1	BRIDGE APPROACH
6 to 7	705+67	718+05	WB OUTSIDE	1,238	GUARDRAIL
6 to 7	706+01	709+39	WB INSIDE	338	GUARDRAIL
7	735+55	739+30	WB INSIDE	375	GUARDRAIL
8	748+23	749+48	WB OUTSIDE	125	GUARDRAIL
9 to 10	793+69	802+69	WB OUTSIDE	900	GUARDRAIL
10	802+69	803+13	WB OUTSIDE	1	BRIDGE APPROACH
10	802+91	803+24	EB INSIDE	1	BRIDGE APPROACH
10	802+91	803+31	EB OUTSIDE	1	BRIDGE APPROACH
10	807+17	807+49	WB OUTSIDE	1	BRIDGE APPROACH
10	807+45	807+77	WB INSIDE	1	BRIDGE APPROACH
10	808+01	808+32	EB OUTSIDE	1	BRIDGE APPROACH
10	807+77	809+65	WB INSIDE	188	GUARDRAIL
10	807+49	817+49	WB OUTSIDE	1,000	GUARDRAIL
			TOTAL	1 LS	

COLDMILLING PAVEMENT

SHEET	STA	STA	DIRECTION	COLMILLING BIT. PAVEMENT 3 IN. OR LESS S.Y.	REMARKS
4 to 6	631+22	703+79	WB	29,274	WB MAINLINE & ENT. & EXIT RAMPS TO & FROM CHESTNUT EXPWY TO BRIDGE A07123
4 to 6	631+22	704+16	EB	29,545	EB MAINLINE & ENT. & EXIT RAMPS TO & FROM CHESTNUT EXPWY, TO BRIDGE A07124
6 to 10	705+54	803+13	WB	33,275	WB MAINLINE & ENT. RAMP FROM KEARNEY ST, FROM BRIDGE A07123 TO BRIDGE A07144
6 to 10	705+90	803+31	EB	31,156	EB MAINLINE FROM BRIDGE A07123 TO BRIDGE A07154
10	808+32	823+25	WB	7,681	WB MAINLINE & ENT. RAMP FROM N WEST BYPASS, BRIDGE A07144 TO END
10	808+88	823+25	EB	7,508	EB MAINLINE & EXIT RAMP TO N WEST BYPASS, BRIDGE A07154 TO END
			TOTAL	138,439	

MOBILIZATION	1 LUMP SUM

CONTRACTOR FURNISHED SURVEYING AND STAKING	1 LUMP SUM

SUMMARY OF QUANTITIES

SHEET 1 OF 5

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/25/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
J8I3225

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.0411-44 Resurfacing_Springfield (MoDOT)\Civil\Sheet_Files\ORD\Quantities\003_QU_01-04_J8I3225_I1.dgn 1:12:34 PM 10/25/2024

PAVEMENT MARKING

SHEET	STA	STA	DIRECTION	HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS							REMARKS
				6-IN SOLID WHITE	6-IN INTERMITTENT WHITE	6-IN DOTTED WHITE	6-IN SOLID YELLOW	12-IN SOLID WHITE	THERMOPLASTIC TURN ARROW		
									RIGHT	LEFT	
				LF	LF	LF	LF	LF	EA	EA	
4 to 10	631+22	823+25	EB		4,800						MIDDLE LINE
4 to 10	631+22	823+25	EB				19,213				INSIDE LINE
4 to 5	631+22	663+31	EB	3,274							OUTSIDE LINE UNTIL EXIT 72
4 to 5	652+63	656+22	EB			90					BEFORE 6" LINE INTO EXIT 72
5	656+22	658+54	EB					232			AFTER DOTTED LINE STRAIGHT
5	656+53	658+44	EB					192			AFTER DOTTED LINE CURVING INTO EXIT 72
5	658+44	663+45	EB				540				AFTER 6" LINE CURVING INTO EXIT 72
5	658+54	673+76	EB	1,515							OUTSIDE LINE IN BETWEEN EXIT RAMP 72 & ENTRANCE RAMP
5	669+83	673+82	EB				425				LINE CURVING INTO ENTRANCE RAMP
5 to 10	669+90	823+02	EB	15,380							OUTSIDE LINE FROM ENTRANCE RAMP TO EXIT 75
5	673+76	675+80	EB					210			STRAIGHT BEFORE DOTTED LINE FROM ENTRANCE RAMP
5	673+82	675+21	EB					141			CURVING BEFORE DOTTED LINE FROM ENTRANCE RAMP
5	675+80	679+33	EB			89					AFTER 6" LINE FROM ENTRANCE RAMP
10	812+40	816+09	EB			93					BEFORE 6" LINE INTO EXIT 75
10	816+09	818+43	EB					229			AFTER DOTTED LINE STRAIGHT
10	816+56	818+34	EB					180			AFTER DOTTED LINE CURVING INTO EXIT 75
10	818+34	823+09	EB				510				AFTER 12" LINE CURVING INTO EXIT 75
10	818+43	823+25	EB	467							OUTSIDE LINE IN BETWEEN EXIT RAMP 75 & ENTRANCE RAMP
4 to 10	631+22	823+25	WB		4,797						MIDDLE LINE
4 to 5	631+22	669+58	WB	3,899							OUTSIDE LINE FROM ENTRANCE RAMP TO STA 631+22
4 to 10	631+22	823+25	WB				19,200				INSIDE LINE
4 to 5	652+11	665+47	WB			334					AFTER 6" LINE FROM ENTRANCE RAMP
5	665+47	667+54	WB					207			BEFORE DOTTED LINE STRAIGHT
5	666+65	667+51	WB					89			BEFORE DOTTED LINE CURVING FROM ENTRANCE RAMP
5	667+51	669+84	WB				315				BEFORE 6" LINE CURVING FROM ENTRANCE RAMP
5	667+54	675+05	WB	751							OUTSIDE LINE IN BETWEEN EXIT 72 AND ENTRANCE RAMP
5	670+92	675+14	WB				555				AFTER 6" LINE CURVING INTO EXIT 72
5 to 9	671+12	795+50	WB	12,652							OUTSIDE LINE IN BETWEEN ENTRANCE RAMP AND EXIT 72
5	675+05	678+82	WB					377			AFTER DOTTED LINE STRAIGHT
5	675+14	676+98	WB					188			AFTER DOTTED LINE CURVING INTO EXIT 72
5	678+82	681+65	WB			71					BEFORE 6" LINE INTO EXIT 72
9	785+72	789+32	WB			90					AFTER 6" LINE FROM ENTRANCE RAMP
9	789+32	791+33	WB					248			BEFORE DOTTED LINE STRAIGHT
9	790+06	791+80	WB					128			BEFORE DOTTED LINE CURVING FROM ENTRANCE RAMP
9	791+33	765+62	WB				505				BEFORE 6" LINE CURVING FROM ENTRANCE RAMP
9 to 10	791+80	821+45	WB	2,990							OUTSIDE LINE FROM ENTRANCE RAMP TO NEXT ENTRANCE RAMP
10	810+93	814+81	WB			97					AFTER 6" LINE FROM ENTRANCE RAMP
10	814+81	816+90	WB					209			AFTER DOTTED LINE STRAIGHT
10	815+42	816+80	WB					138			AFTER DOTTED LINE CURVING FROM ENTRANCE RAMP
10	816+80	821+52	WB				495				BEFORE 6" LINE CURVING FROM ENTRANCE RAMP
10	816+90	823+25	WB	636							OUTSIDE LINE IN BETWEEN EXIT 75 AND ENTRANCE RAMP
5	661+25	663+40	EB					237			RAMP 2 LANE LINE
5	661+48	661+54	EB						1		RAMP 2
5	661+48	661+54	EB							1	RAMP 2
			SUBTOTAL	41,564	9,597	864	41,758	3,005	1	1	
			TOTAL	52,025			41,758	3,005	2		

SUMMARY OF QUANTITIES
SHEET 2 OF 5

STATE OF MISSOURI
ERIC J REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 10/25/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY GREENE

JOB NO. J8I3225

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

ASPHALT SURFACING

SHEET	STA	STA	DIRECTION	PVMT AREA	ASPHALTIC CONCRETE MIX PG 76-22 (SP095BSM)	TACK COAT	BITUMINOUS FOG SEAL (0.1 GAL/SY)	TYPICAL LANE WIDTH	REMARKS
				S.F.	TON	GAL	GAL	LF	
4 to 6	631+22	703+79	WB	263,469	2,775.0	2,927.4	642.4	12.0	WB MAINLINE & ENT. & EXIT RAMPS TO & FROM CHESTNUT EXPWY TO BRIDGE A07123
4 to 6	631+22	704+16	EB	265,907	2,801.0	2,954.5	733.3	12.0	EB MAINLINE & ENT. & EXIT RAMPS TO & FROM CHESTNUT EXPWY, TO BRIDGE A07124
6 to 10	705+54	803+13	WB	299,473	3,154.0	3,327.5	965.1	12.0	WB MAINLINE & ENT. RAMP FROM KEARNEY ST, FROM BRIDGE A07123 TO BRIDGE A07144
6 to 10	705+90	803+31	EB	280,407	2,953.0	3,115.6	983.3	12.0	EB MAINLINE FROM BRIDGE A07123 TO BRIDGE A07154
10	808+32	823+25	WB	69,131	728.0	768.1	139.0	12.0	WB MAINLINE & ENT. RAMP FROM N WEST BYPASS, BRIDGE A07144 TO END
10	808+88	823+25	EB	67,571	712.0	750.8	152.0	12.0	EB MAINLINE & EXIT RAMP TO N WEST BYPASS, BRIDGE A07154 TO END
	631+22	823+25			273.0				IRREGULARITIES 75 TONS/MI
				TOTAL	13,396.0	13,843.9	3,615.1		
				USE	13,396.0	13,844	3,615		

*ANY AND ALL IRREGULARITIES MAY BE UNDERRUN AND NO ADJUSTMENT TO ANY UNIT BID COST WILL BE MADE

BITUMINOUS SHOULDER RUMBLE STRIPS

SHEET	STA	STA	LOCATION	RUMBLE STRIPS	REMARKS
				STA.	
4 to 6	631+22	704+01	EB I-44	72.8	INSIDE SHOULDER
4	631+22	650+49	EB I-44	19.3	OUTSIDE SHOULDER
4 to 6	631+22	703+95	WB I-44	72.7	INSIDE SHOULDER
4	631+22	650+30	WB I-44	19.1	OUTSIDE SHOULDER
5	658+54	673+70	EB I-44	15.2	OUTSIDE SHOULDER
5	667+54	675+05	WB I-44	7.5	OUTSIDE SHOULDER
5 to 6	682+08	704+16	EB I-44	22.1	OUTSIDE SHOULDER
5 to 6	683+15	704+79	WB I-44	21.6	OUTSIDE SHOULDER
6 to 10	705+74	803+26	EB I-44	97.5	INSIDE SHOULDER
6 to 10	705+90	803+31	EB I-44	97.4	OUTSIDE SHOULDER
6 to 10	705+64	803+26	WB I-44	97.6	INSIDE SHOULDER
6 to 9	705+54	783+69	WB I-44	78.2	OUTSIDE SHOULDER
9 to 10	791+80	803+13	WB I-44	11.3	OUTSIDE SHOULDER
10	808+40	823+25	EB I-44	14.9	INSIDE SHOULDER
10	818+59	823+25	EB I-44	4.7	OUTSIDE SHOULDER
10	808+40	823+25	WB I-44	14.9	INSIDE SHOULDER
10	816+90	823+25	WB I-44	6.4	OUTSIDE SHOULDER
			TOTAL	673.2	

SUMMARY OF QUANTITIES
SHEET 3 OF 5

STATE OF MISSOURI
ERIC J REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 10/25/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY: GREENE
JOB NO.: J8I3225
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.041 I-44 Resurfacing_Springfield (MoDOT)\Civil\Sheet_Files\ORD\Quantities\003_QU_01-04_J8I3225_I1.dgn 1:14:30 PM 10/25/2024

MGS GUARDRAIL

PLAN SHEET NO.	STA	STA	LOC	MGS GUARDRAIL 6-FT POST 6 FT. - 3 IN. SPACING	MGS GUARDRAIL 8-FT POST 6 FT. - 3 IN. SPACING	MGS BRIDGE APPROACH TRANSITION SECTION	MGS END ANCHOR	TYPE A CRASHWORTHY END TERMINAL MASH	SHAPING SLOPES CLASS III	REMARKS
				L.F.	L.F.	EA	EA	EA	STA.	
5	661+58	666+08	EB INSIDE	450.0			1		4.60	
6	691+60	703+85	EB OUTSIDE		1,225.0	1				BR A07124
6	700+20	703+70	EB INSIDE	350.0		1			3.90	BR A07124
6 to 7	706+32	716+70	EB OUTSIDE		1,037.5		1			BR A07124
7	732+16	735+91	EB INSIDE	375.0			1		3.90	
8	748+24	749+62	EB OUTSIDE	137.5			1		1.50	
8	761+39	762+39	EB OUTSIDE	100.0			1		1.10	
9 to 10	794+03	802+91	EB OUTSIDE		887.5	1				BR A07154
10	799+78	802+91	EB INSIDE	312.5		1			3.50	BR A07154
10	808+32	818+45	EB OUTSIDE		1,012.5	1	1			BR A07154
10	820+45	825+33	EB OUTSIDE	487.5			1		5.00	
10	820+71	824+84	EB INSIDE	412.5			1		4.20	
5	664+91	669+41	WB INSIDE	450.0			1		4.60	
6	692+67	703+30	WB OUTSIDE		1,062.5		1			BR A07123
6 to 7	705+67	718+05	WB OUTSIDE		1,237.5	1				BR A07123
6	706+01	709+39	WB INSIDE	337.5		1			3.80	BR A07123
7	735+55	739+30	WB INSIDE	375.0			1		3.90	
8	748+23	749+48	WB OUTSIDE	125.0			1	1	1.90	
9 to 10	793+69	802+69	WB OUTSIDE		900.0	1	1			BR A07144
10	807+49	817+49	WB OUTSIDE		1,000.0	1				BR A07144
10	807+77	809+65	WB INSIDE	187.5		1			2.30	BR A07144
			TOTAL	4,100.0	8,362.5	10.0	13.0	1.0	44.2	
			USE	4,100	8,363	10	13	1	45	

SUMMARY OF QUANTITIES

SHEET 4 OF 5

STATE OF MISSOURI
ERIC J REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/25/2024

ROUTE	STATE
I-44	MO

DISTRICT	SHEET NO.
SW	3

COUNTY
GREENE

JOB NO.
J8I3225

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

EFFECTIVE: 07-01-2024

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
WARNING SIGNS								
WO1-1L	48X48	16.00						TURN (SYMBOL LEFT)
WO1-1R	48X48	16.00						TURN (SYMBOL RIGHT)
WO1-2L	48X48	16.00						CURVE (SYMBOL LEFT)
WO1-2R	48X48	16.00						CURVE (SYMBOL RIGHT)
WO1-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT)
WO1-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT)
WO1-4L	48X48	16.00						REVERSE CURVE (SYMBOL LEFT)
WO1-4R	48X48	16.00						REVERSE CURVE (SYMBOL RIGHT)
WO1-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-6	60X30	12.50						HORIZONTAL ARROW (SYMBOL)
WO1-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)
WO1-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
WO1-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)
WO1-8	18X24	3.00						CHEVRON (SYMBOL)
WO1-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
WO3-1	48X48	16.00						STOP AHEAD (SYMBOL)
WO3-2	48X48	16.00	2	32			11	YIELD AHEAD (SYMBOL)
WO3-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)
WO3-4	48X48	16.00						BE PREPARED TO STOP
WO3-5	48X48	16.00						SPEED LIMIT AHEAD
WO4-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)
WO4-1R	48X48	16.00	2	32			86	MERGE (SYMBOL FROM RIGHT)
WO4-1aL	48X48	16.00	2	32			6A	MERGE (LEFT)
WO4-1aR	48X48	16.00	2	32			6B	MERGE (RIGHT)
WO4-3R	48X48	16.00	2	32			87	ADDED LANE (RIGHT)
WO5-1	48X48	16.00	2	32			43	ROAD/BRIDGE/RAMP NARROWS
WO5-3	48X48	16.00						ONE LANE BRIDGE
WO5-5	48X48	16.00						NARROW LANES
WO6-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)
WO6-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)
WO6-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)
WO7-3a	30X24	5.00						NEXT XX MILES (PLAQUE)
WO8-1	48X48	16.00						BUMP
WO8-2	48X48	16.00						DIP
WO8-3	48X48	16.00						PAVEMENT ENDS
WO8-4	48X48	16.00						SOFT SHOULDER
WO8-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)
WO8-6	48X48	16.00						TRUCK CROSSING
WO8-6c	48X48	16.00						TRUCK ENTRANCE
WO8-7	36X36	9.00						LOOSE GRAVEL
WO8-7a	36X36	9.00						FRESH OIL / LOOSE GRAVEL
WO8-9	48X48	16.00						LOW SHOULDER
WO8-11	48X48	16.00						UNEVEN LANES
WO8-12	48X48	16.00						NO CENTER LINE
WO8-15	48X48	16.00						GROOVED PAVEMENT
WO8-15P	30X24	5.00						MOTORCYCLE (PLAQUE)
WO8-17L	48X48	16.00						SHOULDER DROP-OFF (SYMBOL LEFT)
WO8-17R	48X48	16.00						SHOULDER DROP-OFF (SYMBOL RIGHT)
WO8-17P	30X24	5.00						SHOULDER DROP-OFF (PLAQUE)
W10-1	42RND.	9.62						RAILROAD CROSSING
WO12-1	24X24	4.00						DOUBLE DOWN ARROW (SYMBOL)
WO12-2	48X48	16.00						LOW CLEARANCE (SYMBOL)
W012-2x	24X18	3.00						LOW CLEARANCE (PLAQUE)
WO12-2a	84X24	14.00						OVERHEAD LOW CLEARANCE (FEET AND INCHES)
WO12-4	120X60	50.00						LOW CLEARANCE XX FT XX IN XX MILES AHEAD
WO12-5	120X60	50.00						WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD
WO13-1	30X30	6.25						ADVISORY SPEED (PLAQUE)
WO16-2	30X24	5.00						XXX FEET (PLAQUE)
WO16-3	30X24	5.00						X MILE (PLAQUE)
WO20-1	48X48	16.00	8	128			2	ROAD/BRIDGE/RAMP WORK AHEAD
WO20-2	48X48	16.00						DETOUR AHEAD
WO20-3	48X48	16.00						ROAD CLOSED AHEAD
WO20-4	48X48	16.00						ONE LANE ROAD AHEAD
WO20-5	48X48	16.00	4	64			5	RIGHT/CENTER/LEFT LANE CLOSED AHEAD
WO20-5a	48X48	16.00						2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
WO20-6a	48X48	16.00	4	64			6	RIGHT/CENTER/LEFT LANE CLOSED
WO20-7a	48X48	16.00						FLAGGER (SYMBOL)
WO21-2	36X36	9.00						FRESH OIL
WO21-5	48X48	16.00	4	64			21	SHOULDER WORK / SHOULDER WORK AHEAD
WO22-1	48X48	16.00						BLASTING ZONE AHEAD
WO22-2	42X36	10.50						TURN OFF 2-WAY RADIO AND PHONE
WO22-3	42X36	10.50						END BLASTING ZONE

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
GUIDE SIGNS								
E05-1	36X48	12.00	2	24			49	GORE EXIT
E05-2	48X36	12.00	2	24			73	EXIT OPEN
E05-2a	48X36	12.00						EXIT CLOSED
GO20-1	60X24	10.00	2	20			1	ROAD WORK NEXT 4 MILES
GO20-2	48X24	8.00	4	32			26	END ROAD WORK
GO20-4	36X18	4.50						PILOT CAR FOLLOW ME
GO20-4a	42X30	8.75						PILOT CAR IN USE WAIT & FOLLOW
GO20-4a	18X12	1.50						PILOT CAR IN USE WAIT & FOLLOW
GO20-5aP	36X24	6.00	10	60			54	WORK ZONE (PLAQUE)
MO4-8a	24X18	3.00						END DETOUR
MO4-9L	48X36	12.00						DETOUR (LEFT)
MO4-9R	48X36	12.00						DETOUR (RIGHT)
MO4-9P	48X12	4.00						STREET NAME (PLAQUE)
MO4-10L	48X18	6.00						DETOUR ARROW (LEFT)
MO4-10R	48X18	6.00						DETOUR ARROW (RIGHT)
REGULATORY SIGNS								
R1-1	48X48	13.25						STOP
R1-2	48TRI.	6.93	2	13.86			13	YIELD
R1-2a	36X36	9.00						TO ONCOMING TRAFFIC (PLAQUE)
R1-3P	30X12	2.50						ALL WAY (PLAQUE)
R2-1	36X48	12.00	4	48			25	SPEED LIMIT 70
R2-1	48X48	16.00	6	96			4	SPEED LIMIT 60
R3-1	48X48	16.00						NO RIGHT TURN (SYMBOL)
R3-2	48X48	16.00						NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00						NO TURNS
R3-4	48X48	16.00						NO U-TURN (SYMBOL)
R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25						RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00	4	48			46	DO NOT PASS
R4-2	36X48	12.00	4	48			46A	PASS WITH CARE
R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)
R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)
R5-1	30X30	6.25						DO NOT ENTER
R5-1a	36X24	6.00						WRONG WAY
R6-1L	54X18	6.75						ONE WAY ARROW (LEFT)
R6-1R	54X18	6.75						ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00						ONE WAY (LEFT)
R6-2R	24X30	5.00						ONE WAY (RIGHT)
R9-9	24X12	2.00						SIDEWALK CLOSED
R9-11L	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE
R9-11R	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE
R10-6	24X36	6.00						STOP HERE ON RED (45^ ARROW)
R11-2	48X30	10.00						ROAD CLOSED
R11-3a	60X30	12.50						ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50						ROAD CLOSED TO THRU TRAFFIC
CONST-3A	60X48	20.00	4	80			53	FINE SIGN
CONST-3X	56X12	4.67	4	18.68			53A	SPEEDING/PASSING (PLATE)
MISCELLANEOUS SIGNS								
CONST-5	48X36	12.00						POINT OF PRESENCE
CONST-5	96X48	32.00	2	64			63	POINT OF PRESENCE
CONST-8	48X36	12.00	4	48			62	WORK ZONE NO PHONE ZONE

	TOTAL
616-10.05 CONSTRUCTION SIGNS	1137
616-10.10 RELOCATED SIGNS	*

ITEM NUMBER	TOTAL QTY	DESCRIPTION
6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)
6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
6122020		REPLACEMENT SAND BARREL
6122030		IMPACT ATTENUATOR (RELOCATION)
6123001	1	TRUCK MOUNTED ATTENUATOR (TMA)
6161008	8	ADVANCED WARNING RAIL SYSTEM
6161012		BUOYS (BOATS KEEP OUT)
6161013		BUOYS (NO WAKE)
6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
6161025	450	CHANNELIZER (TRIM LINE)
6161030		TYPE III MOVEABLE BARRICADE
6161033	28	DIRECTION INDICATOR BARRICADE
6161040	2	FLASHING ARROW PANEL
6161047		TYPE III OBJECT MARKER
6161055	28	SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A	2	CHANGEABLE MESSAGE SIGN W/O COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED
6161099		CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002		TEMPORARY LONG-TERM RUMBLE STRIPS
6173600D		TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/RETAINED
6173602B		TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/COMMISSION RETAINED
6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6176000B		TEMPORARY TRAFFIC BARRIER COMMISSION FURNISHED/RETAINED
6177000B		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION COMMISSION FURNISHED/RETAINED
6208064A		TEMPORARY RAISED PAVEMENT MARKER
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

* NO DIRECT PAY WILL BE MADE FOR RELOCATION OF CONSTRUCTION SIGNING OR DEVICES.

NOTES:
ALL WARNING SIGNS SHALL HAVE FLUORESCENT SHEETING.

THE CONTRACTOR SHALL MAINTAIN PROVIDE TEMPORARY PAVEMENT MARKINGS PER SEC 620 (NO DIRECT PAY)

SUMMARY OF QUANTITIES
SHEET 5 OF 5

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 10/25/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 3
COUNTY: GREENE
JOB NO.: J8I3225
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

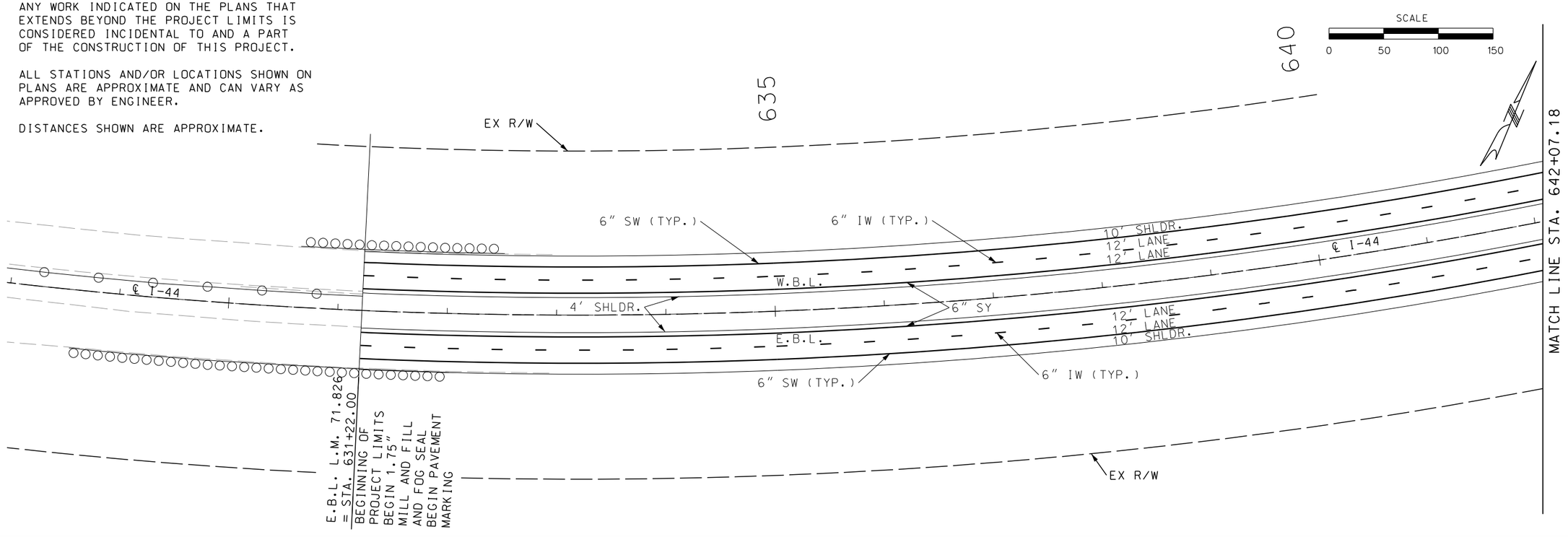
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

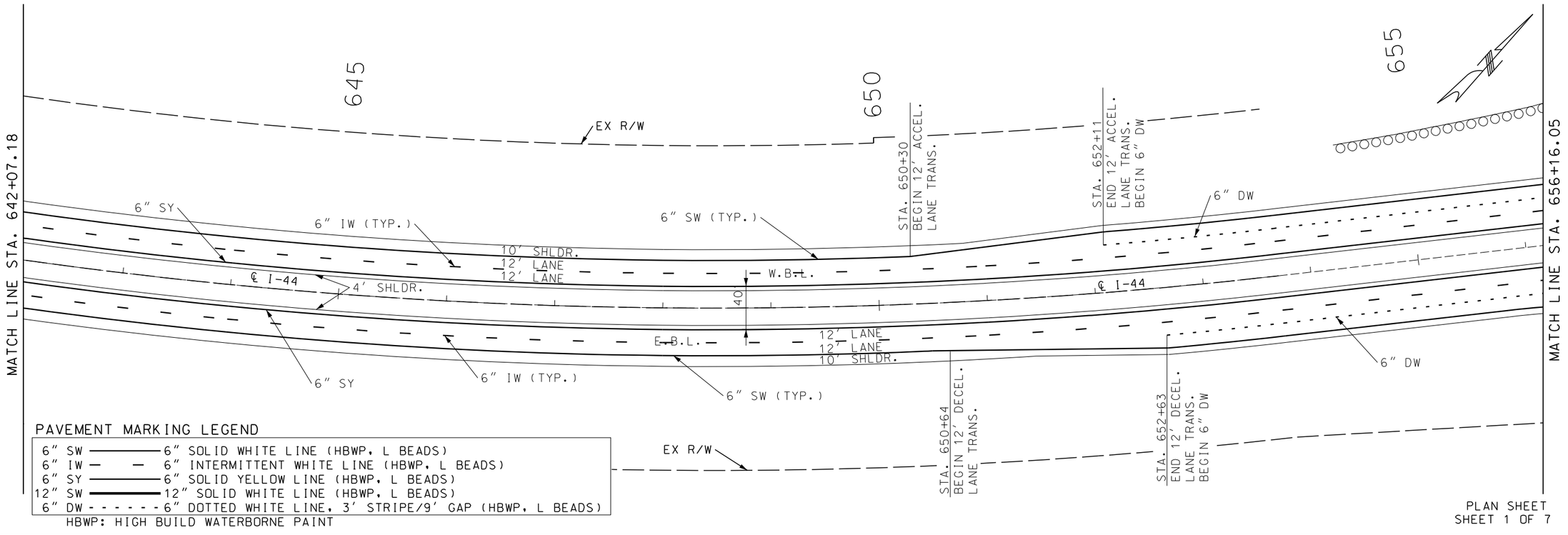
Hg Consult, Inc engineers planners
9111 NE 79th Street: Kansas City, MO 64158: (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

ANY WORK INDICATED ON THE PLANS THAT EXTENDS BEYOND THE PROJECT LIMITS IS CONSIDERED INCIDENTAL TO AND A PART OF THE CONSTRUCTION OF THIS PROJECT.

ALL STATIONS AND/OR LOCATIONS SHOWN ON PLANS ARE APPROXIMATE AND CAN VARY AS APPROVED BY ENGINEER.

DISTANCES SHOWN ARE APPROXIMATE.





PAVEMENT MARKING LEGEND

6" SW	6" SOLID WHITE LINE (HBWP, L BEADS)
6" IW	6" INTERMITTENT WHITE LINE (HBWP, L BEADS)
6" SY	6" SOLID YELLOW LINE (HBWP, L BEADS)
12" SW	12" SOLID WHITE LINE (HBWP, L BEADS)
6" DW	6" DOTTED WHITE LINE, 3' STRIPE/9' GAP (HBWP, L BEADS)

HBWP: HIGH BUILD WATERBORNE PAINT

PLAN SHEET
SHEET 1 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
10/25/2024	
ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	4
COUNTY	
GREENE	
JOB NO.	
J8I3225	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.0411-44 Resurfacing_Springfield (MoDOT)\Civil\Sheet_Files\ORD\Plan\004_PL_01_J8I3225_I50.dgn 1:10:25 PM 10/25/2024

MATCH LINE STA. 656+16.05

660

6" SY

6" DW

6" SW (TYP.)

6" IW (TYP.)

6" DW

6" SW (TYP.)

6' SHLDR
12' LANE
12' LANE
12' LANE

℄ I-44

4' SHLDR.

W.B.L.

E.B.L.

(UIP)

EX R/W

STA. 656+22
END 6" DW
BEGIN 12" SW

12" SW

STA. 658+54
END 12" SW
BEGIN 6" SW

STA. 658+44
END 12" SW
BEGIN 6" SY

6" SY

6' SHLDR.

540'
MILL & FILL
TO CONCRETE JOINT
END 6" SW
AND 6" SY

RAMP 2

STA. 661+58 TO STA. 666+08
REMOVE 450' TYPE A. GUARDRAIL
AND END ANCHOR
INSTALL 450' M.G.S. GUARDRAIL
AND MGS END ANCHOR RECONNECT
TO EXIST. TYPE A C.E.T.

STA. 664+91 TO STA. 669+41
REMOVE 450' TYPE A. GUARDRAIL
AND END ANCHOR.
INSTALL 450' M.G.S. GUARDRAIL
AND MGS END ANCHOR RECONNECT
TO EXIST. TYPE A C.E.T.

ROUTE 266
(CHESTNUT
EXPRESSWAY)

665

STA. 665+47
END 6" DW
BEGIN 12" SW

6' SHLDR.
(UIP)

12" SW

STA. 667+54
END 12" SW
BEGIN 6" SY

STA. 667+51
END 12" SW
BEGIN 6" SW

315'
MILL & FILL
TO CONCRETE JOINT
END 6" SW
AND 6" SY

RAMP 1

6" SY

6" SW (TYP.)

12' LANE
12' LANE

℄ I-44

12' LANE
12' LANE
10' SHLDR
(UIP)

6" IW (TYP.)

EB L.M. 72.480 I-44
WB L.M. 220.698 I-44
= RTE. 266
(CHESTNUT EXPRESSWAY)

6" SW (TYP.)

LOOP 44
(CHESTNUT
EXPRESSWAY)

SCALE
0 50 100 150

MATCH LINE STA. 669+54.06

670

RAMP 3

555'
MILL & FILL
TO CONCRETE JOINT
BEGIN 6" SW
AND 6" SY

675

STA. 675+14
END 6" SY
BEGIN 12" SW

STA. 675+05
END 6" SW
BEGIN 12" SW

6" SY

6" SW (TYP.)

12" SW

6' SHLDR.

6" SY

EX R/W

680

STA. 678+82
END 12" SW
BEGIN 6" DW

6" DW

6" IW (TYP.)

STA. 681+65
BEGIN 12" DECEL.
LANE TRANS.
END 6" DW

6" SW (TYP.)

STA. 683+14
END 12' DECEL.
LANE TRANS.

12' LANE
12' LANE

W.B.L.

10' SHLDR

(UIP)

4' SHLDR.

℄ I-44

12' LANE
12' LANE
10' SHLDR

6' SHLDR.

6" SY

12" SW

6" IW (TYP.)

6" DW

6' SHLDR.

6" SW (TYP.)

E.B.L.

6" SY

STA. 673+82
END 6" SY
BEGIN 12" SW

STA. 673+76
END 6" SW
BEGIN 12" SW

STA. 675+80
END 12" SW
BEGIN 6" DW

EX R/W

STA. 679+33
BEGIN 12" ACCEL.
LANE TRANS.
END 6" DW

STA. 682+08
END 12' ACCEL.
LANE TRANS.

RAMP 4

425'
MILL & FILL
TO CONCRETE JOINT
BEGIN 6" SW
AND 6" SY

MATCH LINE STA. 683+58.11

PLAN SHEET
SHEET 2 OF 7

ERIC J REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER
STATE OF MISSOURI

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/25/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	5

COUNTY
GREENE

JOB NO.
J8I3225

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.0411-44 Resurfacing_Springfield (MoDOT)\Civil\Sheet_Files\ORD\Plan\005_PL_02_J8I3225_I50.dgn 1:10:29 PM 10/25/2024

685

690

695

EX R/W

EX R/W

MATCH LINE STA. 683+58.11

MATCH LINE STA. 697+62.17

STA. 692+67 TO STA. 703+30
REMOVE 1062.5' TYPE A. GUARDRAIL AND END ANCHOR
INSTALL 1062.5' M.G.S. GUARDRAIL AND MGS END ANCHOR
RECONNECT TO EXIST. BRIDGE APPROACH TRANS.

6" IW (TYP.)

6" SY

6" SW (TYP.)

10' SHLDR
12' LANE
12' LANE

W.B.L.

℄ I-44

4' SHLDR.

E.B.L.

12' LANE
12' LANE
10' SHLDR

6" IW (TYP.)

6" SY

(UIP)

6" SW (TYP.)

STA. 691+60 TO STA. 703+85
REMOVE 1225' TYPE A. GUARDRAIL
INSTALL 1225' M.G.S. GUARDRAIL
RECONNECT TO EXIST. TYPE A C.E.T.
INSTALL NEW MGS BRIDGE APPROACH TRANS.

EX R/W

SCALE
0 50 100 150

700

705

710

EX R/W

+79 END 1.75" MILL & FILL SEE BRIDGE PLANS

+54 SEE BRIDGE PLANS BEG.1.75" MILL & FILL

STA. 705+67 TO STA. 718+05
REMOVE 1237.5' TYPE A. GUARDRAIL
INSTALL 1237.5' M.G.S. GUARDRAIL
RECONNECT TO EXIST. TYPE A C.E.T.
INSTALL NEW MGS BRIDGE APPROACH TRANS.

STA. 706+01 TO STA. 709+39
REMOVE 337.5' TYPE A. GUARDRAIL
INSTALL 337.5' M.G.S. GUARDRAIL
RECONNECT TO EXIST. TYPE A C.E.T.
INSTALL NEW MGS BRIDGE APPROACH TRANS.

6" SW (TYP.)

(UIP)

6" SY

6" IW (TYP.)

10' SHLDR
12' LANE
12' LANE

W.B.L.

BR. NO. A07123

℄ I-44

(R)

4' SHLDR.

(UIP)

E.B.L.

BR. NO. A07124

12' LANE
12' LANE
10' SHLDR

(R)

6" SW (TYP.)

6" IW (TYP.)

6" SY

MATCH LINE STA. 697+62.17

MATCH LINE STA. 711+66.23

STA. 700+20 TO STA. 703+70
REMOVE 350' TYPE A. GUARDRAIL
INSTALL 350' M.G.S. GUARDRAIL
RECONNECT TO EXIST. TYPE A C.E.T.
INSTALL NEW MGS BRIDGE APPROACH TRANS.

EX R/W

+16 END 1.75" MILL & FILL SEE BRIDGE PLANS

+90 SEE BRIDGE PLANS BEG.1.75" MILL & FILL

STA. 706+32 TO STA. 716+70
REMOVE 1037.5' TYPE A. GUARDRAIL AND END ANCHOR
INSTALL 1037.5' M.G.S. GUARDRAIL AND MGS END ANCHOR
RECONNECT TO EXIST. BRIDGE APPROACH TRANS.

PLAN SHEET
SHEET 3 OF 7

STATE OF MISSOURI
ERIC J REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 10/25/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	6

COUNTY: GREENE

JOB NO.: J8I3225

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

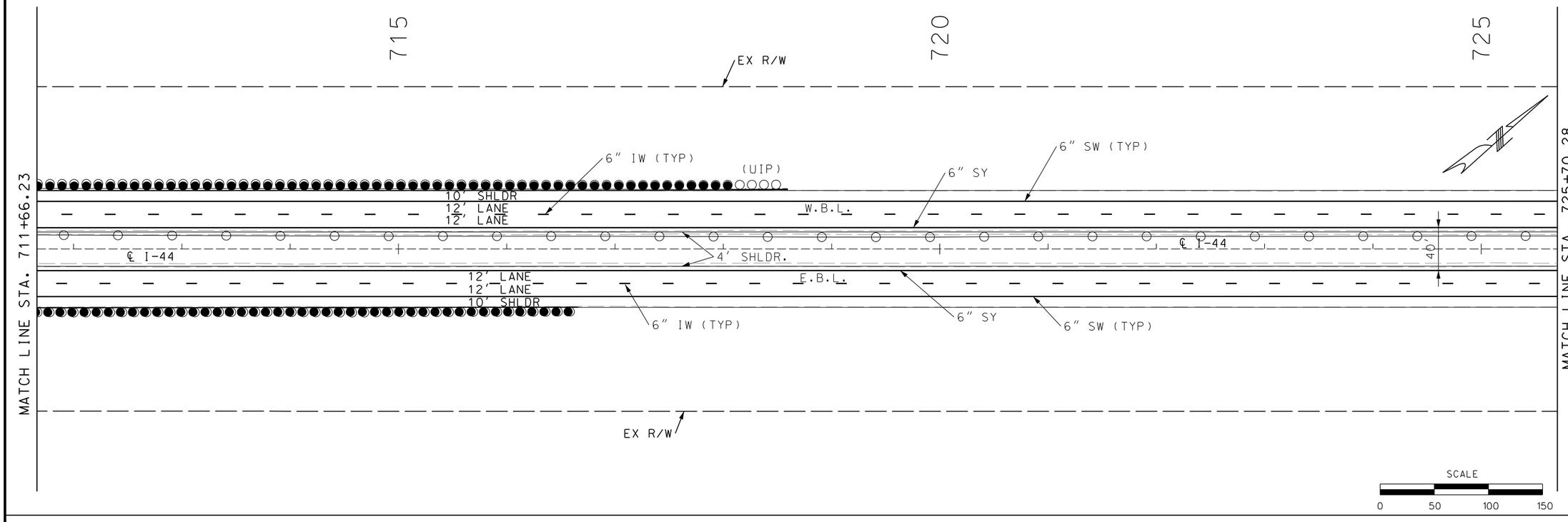
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

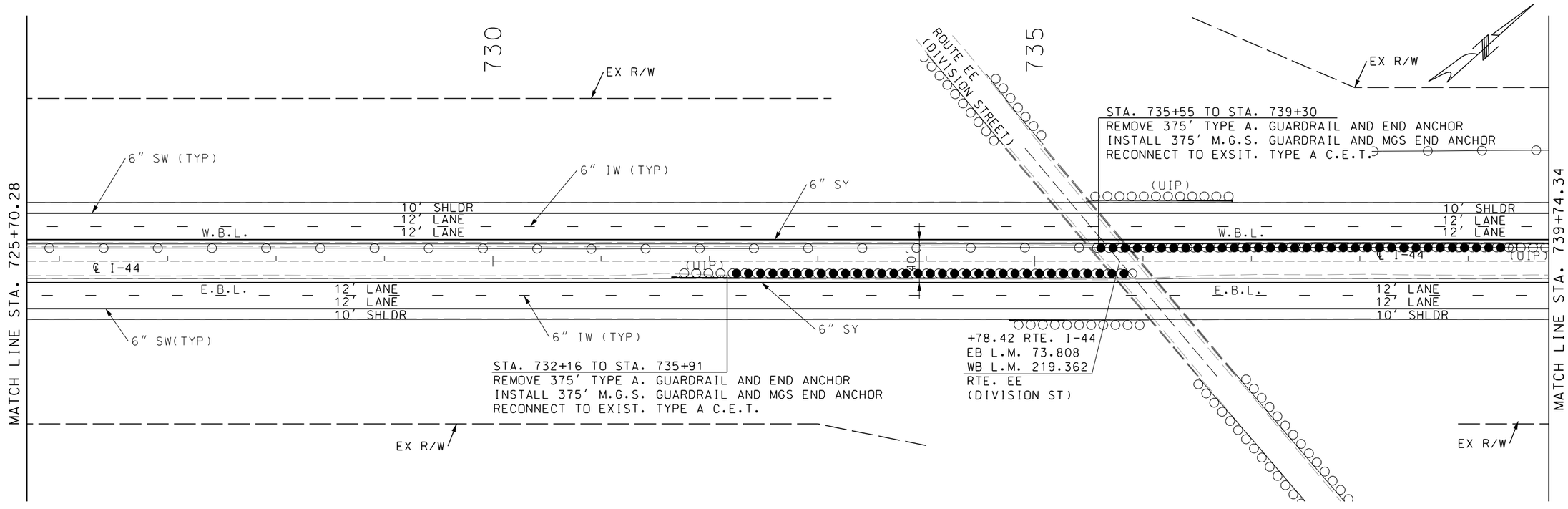
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.041I-44 Resurfacing_Springfield (MoDOT)\Civil\Sheet_Files\ORD\Plan\006_PL_03_J8I3225_I50.dgn 1:10:32 PM 10/25/2024





PLAN SHEET
SHEET 4 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/25/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	7

COUNTY
GREENE

JOB NO.
J8I3225

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

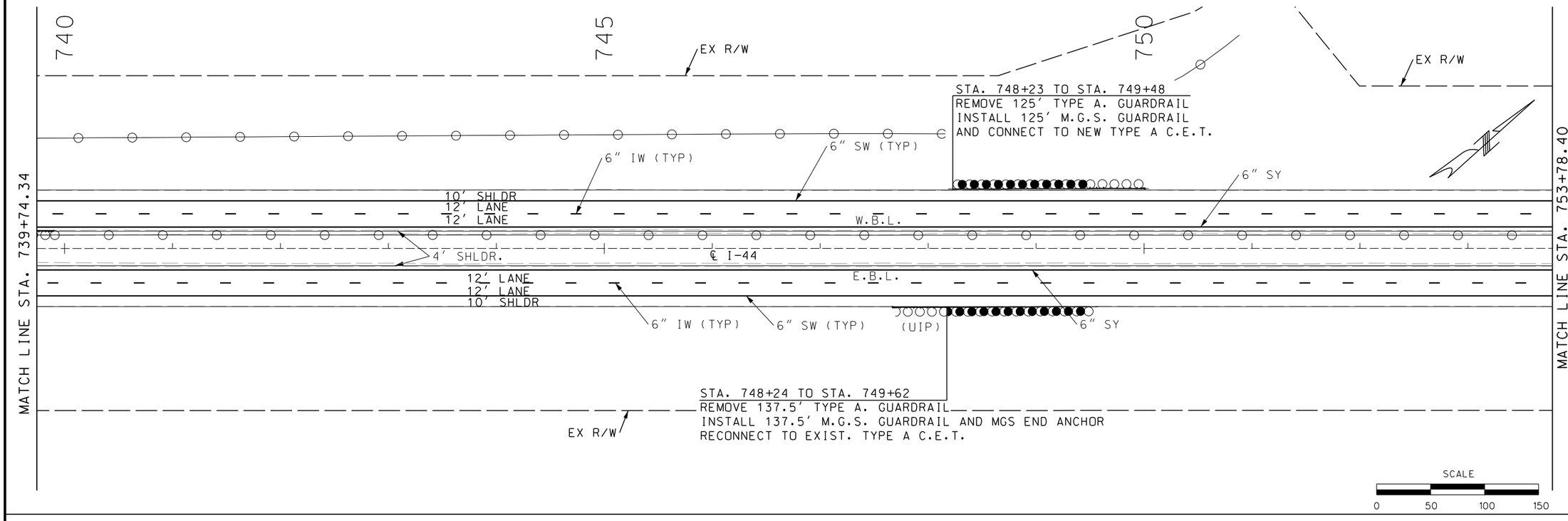
DATE	DESCRIPTION

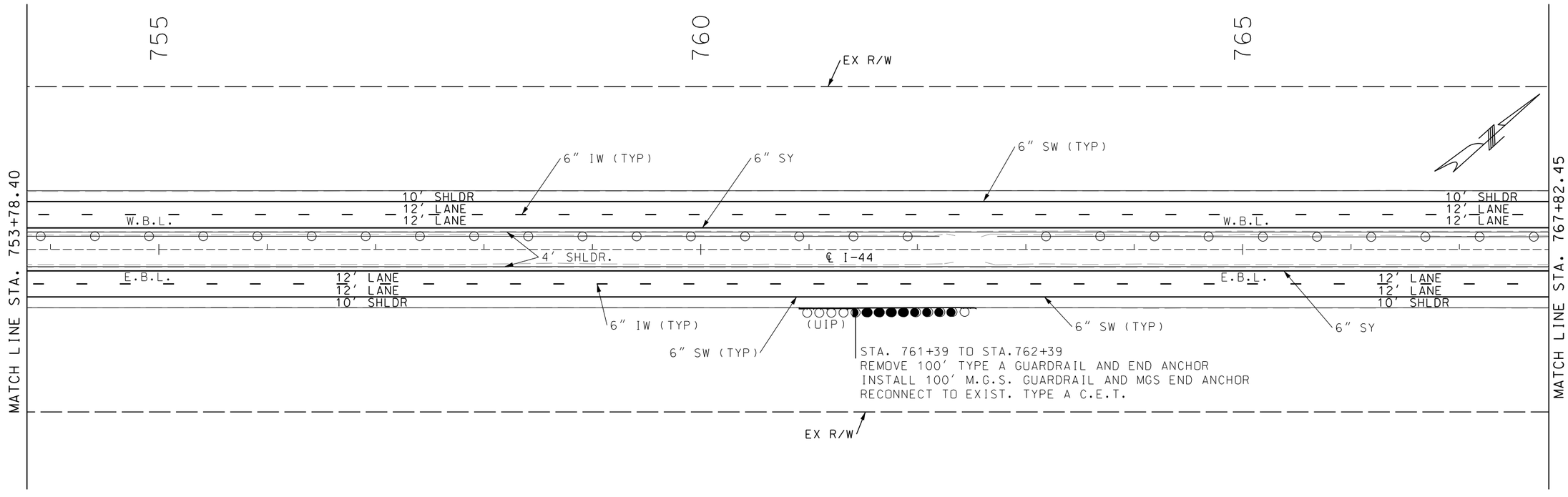
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.0411-44 Resurfacing_Springfield (MoDOT)\Civil\Sheet_Files\ORD\Plan\007_PL_04_J8I3225_I50.dgn 1:10:35 PM 10/25/2024





PLAN SHEET
SHEET 5 OF 7

STATE OF MISSOURI
ERIC J REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/25/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	8

COUNTY
GREENE

JOB NO.
J8I3225

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

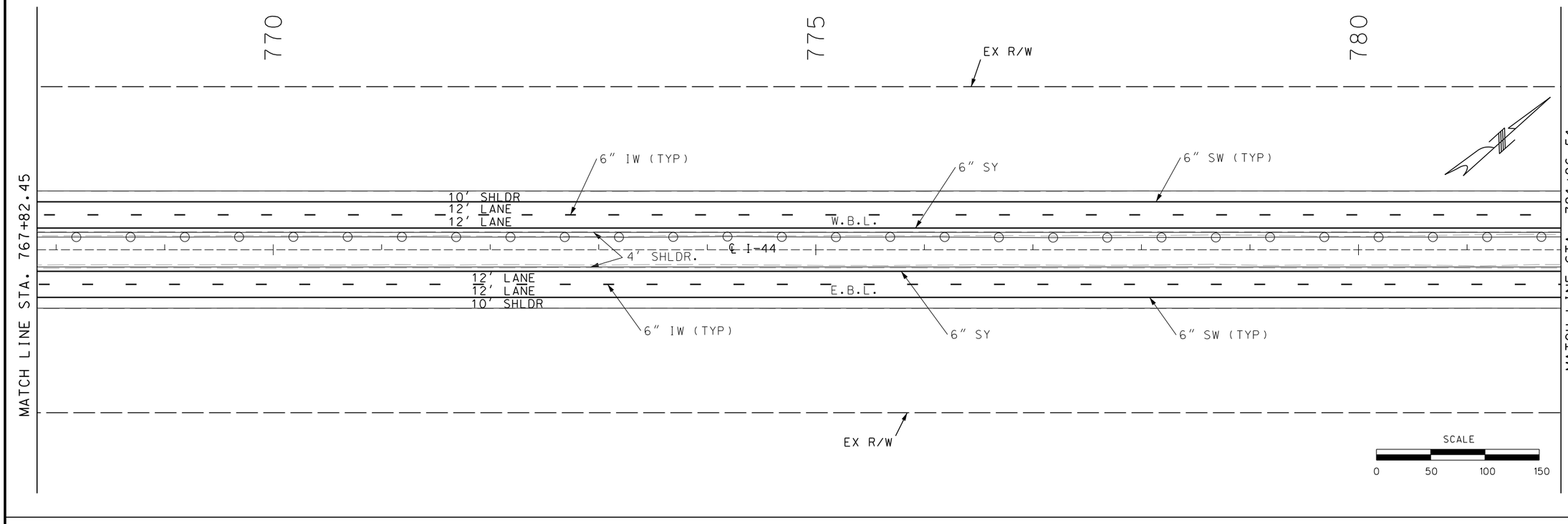
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

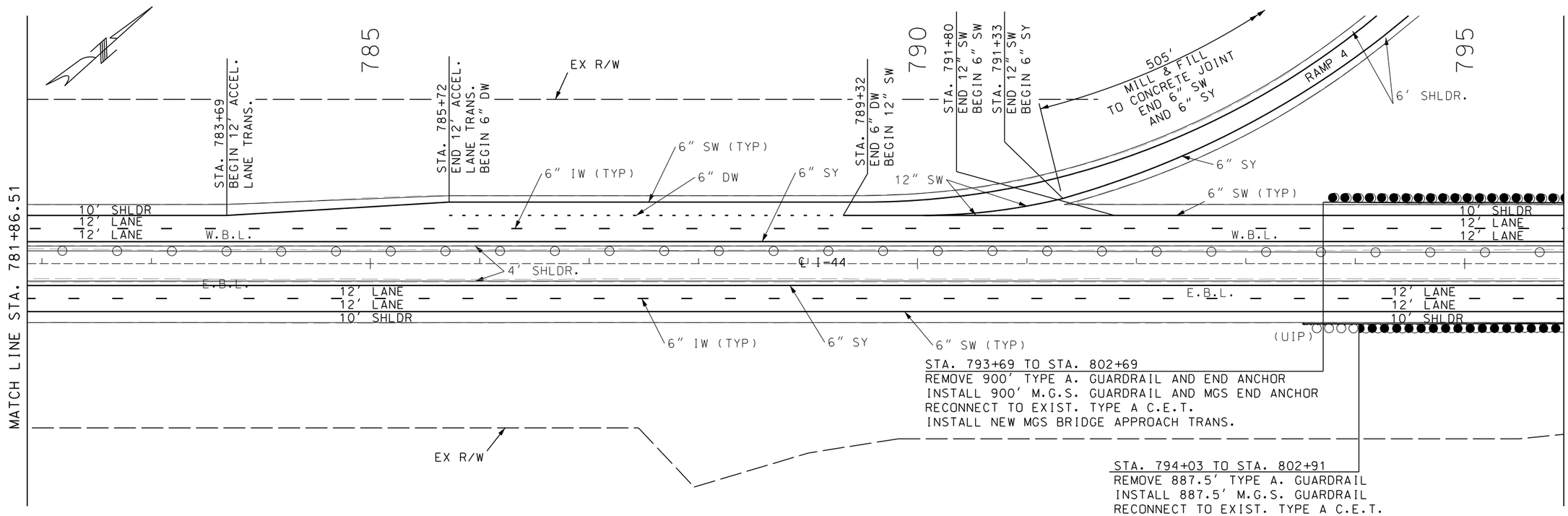
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.0411-44 Resurfacing_Springfield (MoDOT)\Civil\Sheet_Files\ORD\Plan\008_PL_05_J8I3225_I50.dgn 1:10:39 PM 10/25/2024





PLAN SHEET
SHEET 6 OF 7

STATE OF MISSOURI
ERIC J REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/25/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	9

COUNTY
GREENE

JOB NO.
J8I3225

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.041 I-44 Resurfacing_Springfield (MoDOT)\Civil\Sheet_Files\ORD\Plan\009_PL_06_J8I3225_I50.dgn 1:10:42 PM 10/25/2024

MATCH LINE STA. 795+90.57

800

6" SW (TYP)
6" IW (TYP)
6" SY
10' SHLDR
12' LANE
12' LANE
4' SHLDR.
W.B.L.
(UIP)
℄ I-44
(R)
+13 END 1.75" MILL & FILL SEE BRIDGE PLANS

STA. 799+78 TO STA. 802+91
REMOVE 312.5' TYPE A GUARDRAIL
INSTALL 312.5' M.G.S. GUARDRAIL
CONNECT TO EXIST C.E.T.
INTALL NEW MGS BRIDGE APPROACH TRANS.

12' LANE
12' LANE
10' SHLDR
E.B.L.
6" SW (TYP)
6" SY
6" IW (TYP)
+31 END 1.75" MILL & FILL SEE BRIDGE PLANS

805

EX R/W
ROUTE 744 (KEARNEY ST)

EB L.M. 75.260 I-44
WB L.M. 218.041 I-44
= RTE. 744
(KEARNEY ST)

STA. 807+49 TO STA. 817+49
REMOVE 1000' TYPE A GUARDRAIL
INSTALL 1000' M.G.S. GUARDRAIL
CONNECT TO EXISTING C.E.T.
INSTALL NEW MGS BRIDGE APPROACH TRANS.

+32 SEE BRIDGE PLANS BEGIN 1.75" MILL & FILL BEGIN 12' ACCEL LANE TRANS.

BR. NO. A07144
BR. NO. A07154

STA. 807+77 TO STA. 809+65
REMOVE 187.5' TYPE A GUARDRAIL
INSTALL 187.5' M.G.S. GUARDRAIL
CONNECT TO EXISTING C.E.T.
INSTALL NEW MGS BRIDGE APPROACH TRANS.

STA. 808+32 TO STA. 818+45
REMOVE 1012.5' TYPE A GUARDRAIL AND END ANCHOR
INSTALL 1012.5' M.G.S. GUARDRAIL,
INSTALL NEW MGS BRIDGE APPROACH TRANS. AND MGS END ANCHOR

+88 SEE BRIDGE PLANS BEGIN 1.75" MILL & FILL

MATCH LINE STA. 809+94.62

SCALE
0 50 100 150

810

EX R/W

STA. 810+93
END 12' ACCEL. LANE TRANS.
BEGIN 6" DW

6" DW
6" SW (TYP)
6" IW (TYP)
12" SW

815

STA. 814+81
END 6" DW
BEGIN 12" SW

STA. 816+90
END 12" SW
BEGIN 6" SW

STA. 816+80
END 12" SW
BEGIN 6" SY

495' MILL & FILL TO CONCRETE JOINT END 6" SW AND 6" SY

820

RAMP 1

STA. 823+25
END 1.75" MILL & FILL.
FOG SEAL & PAVEMENT MARKINGS

6' SHLDR.
4' SHLDR.
6" SY
6" SW (TYP)
10' SHLDR
12' LANE
12' LANE
W.B.L.
℄ I-44
(UIP)
E.B.L.

MATCH LINE STA. 809+94.62

STA. 810+11
BEGIN 12' DECEL. LANE TRANS.

STA. 812+40
END 12' DECEL. LANE TRANS.
BEGIN 6" DW

EX R/W

STA. 816+09
END 6" DW
BEGIN 12" SW

STA. 818+43
END 12" SW
BEGIN 6" SW

STA. 818+34
END 12" SW
BEGIN 6" SY

510' MILL & FILL TO CONCRETE JOINT END 6" SW AND 6" SY

RAMP 2

STA. 820+71 TO STA. 824+84
REMOVE 412.5' TYPE A GUARDRAIL AND END ANCHOR
INSTALL 412.5' M.G.S. GUARDRAIL AND MGS END ANCHOR
CONNECT TO EXISTING C.E.T.

STA. 820+45 TO STA. 825+33
REMOVE 487.5' TYPE A GUARDRAIL AND END ANCHOR
INSTALL 487.5' M.G.S. GUARDRAIL AND MGS END ANCHOR
CONNECT TO EXISTING C.E.T.

MATCH LINE STA. 823+98.68

PLAN SHEET
SHEET 7 OF 7

STATE OF MISSOURI
ERIC J. REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/25/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	10

COUNTY
GREENE

JOB NO.
J8I3225

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

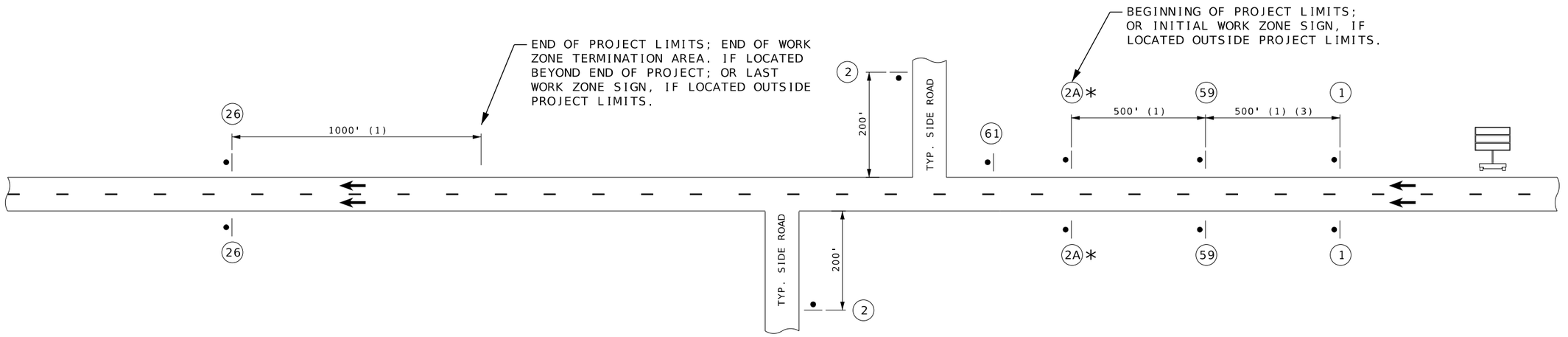
Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.0411-44 Resurfacing_Springfield (MoDOT)\Civil\Sheet_Files\ORD\Plan\010_PL_07_J8I3225_I50.dgn 1:10:45 PM 10/25/2024

REVISED: 4/10/2024

GENERAL NOTES:

1. ANY EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.
2. TEMPORARY SIGNING SHOWN IS FOR WORK ON ONE SIDE OF THE ROAD. FOR WORK ON THE OTHER SIDE, REVERSE ORDER OF THE SIGNS AND CHANNELIZERS.
3. SIGNING SHOWN SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
4. ALTERNATE TRAFFIC CONTROL MAY BE USED AS NEEDED AT THE APPROVAL OF THE ENGINEER.
5. REFER TO STANDARD DRAWING 616.10, 619.10, AND 620.10 FOR ADDITIONAL DETAILS AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.
6. SPEED LIMIT SIGNS INDICATING THE NORMAL SPEED LIMIT SHALL BE INSTALLED AT THE END OF THE WORK ZONE, PROVIDED NO FURTHER WORK ZONES WILL BE ENCOUNTERED WITHIN THE NEXT 1/2 MILE.
7. TEMPORARY SPEED LIMIT SIGNS SHALL BE COVERED OR REMOVED WHEN THE CONDITIONS REQUIRING REDUCED SPEEDS DO NOT EXIST.
8. NO DIRECT PAYMENT WILL BE MADE FOR THE RELOCATION OF CHANNELIZERS, CONSTRUCTION SIGNS, OR FLASHING ARROW PANEL.
9. ALL SIGNS SHALL BE PORTABLE MOUNT AND ARE TO BE MOVED AS WORK PROGRESSES, UNLESS OTHERWISE NOTED. ALL TRAFFIC CONTROL ITEMS SHALL BE REMOVED FROM THE ROADWAY DURING NON-WORKING HOURS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING PROPER TRAFFIC CONTROL SETUPS THROUGHOUT CONSTRUCTION AS DESCRIBED IN THESE PLANS OR AS APPROVED BY THE ENGINEER.
11. THE CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS TO ALL BUSINESSES AND STREETS. NO STREET OR ENTRANCE SHALL BE COMPLETELY BLOCKED.
12. SPACING & DISTANCES OF TRAFFIC CONTROL DEVICES ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD & APPROVED BY THE ENGINEER.
13. TRAFFIC CONTROL SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).



(1) DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS. WHERE TRAFFIC BACKUPS ARE EXPECTED BEYOND THE ADVANCE WARNING AREA, ADDITIONAL SIGNING MAY BE NEEDED.

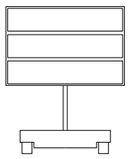
(2) CONST-5-96 SIGN IS PLACED IN A VISIBLE AREA WITHIN THE PROJECT LIMITS PROVIDED ITS PLACEMENT DOES NOT DISRUPT A SEQUENCE OF SIGNS. IF A VISIBLE LOCATION WITHIN THE PROJECT IS NOT AVAILABLE, THE SIGN MAY BE PLACED 500 FEET BEFORE SIGN CONST-7-72.

(3) THE "WORK ZONE NO PHONE ZONE" SIGN IS PLACED A MINIMUM OF 500 FEET BEFORE THE ROAD WORK AHEAD SIGN.

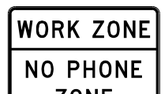
(4) CMS PLACEMENT SHALL BE APPROVED BY THE ENGINEER.

TYPICAL BEGINNING AND END OF PROJECT

(DIVIDED HIGHWAY)



(4)

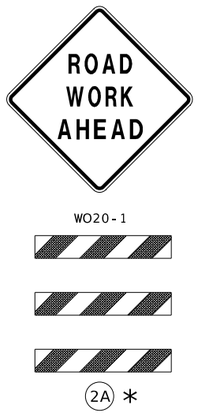


CONST-8

59 (3)

GO20-1

1



WO20-1

2A *

WO20-1

2

GO20-2

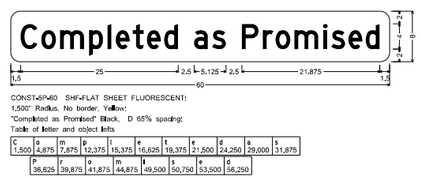
26

*SIGN 2A WITH AWRS MUST BE GROUND OR SKID MOUNTED.

CONST-4-96 SHEFLAT SHEET:
3.000" Radius, 1.000" Border, White on, Blue:
"Road", 8" Dr; "Resurfacing", 8" Dr; "Winter 2026", 6" Dr;

CONST-5-96

61 (2)



CONST-5P-60 SHEFLAT SHEET FLUORESCENT:
1,500" Radius, No border, Yellow:
"Completed as Promised" Black, D 65% spacing;
Table of letter and object lefts

C	o	m	p	l	e	t	e	d	a	s
1,500	4,875	7,875	12,375	15,375	16,625	19,375	21,500	24,250	29,000	31,875
P	r	o	m	i	s	e	d			
36,625	39,875	41,875	44,875	49,500	50,750	53,500	58,250			

TRAFFIC CONTROL SHEET 1 OF 5

STATE OF MISSOURI
ERIC J REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 10/25/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	11

COUNTY: GREENE

JOB NO.: J8I3225

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

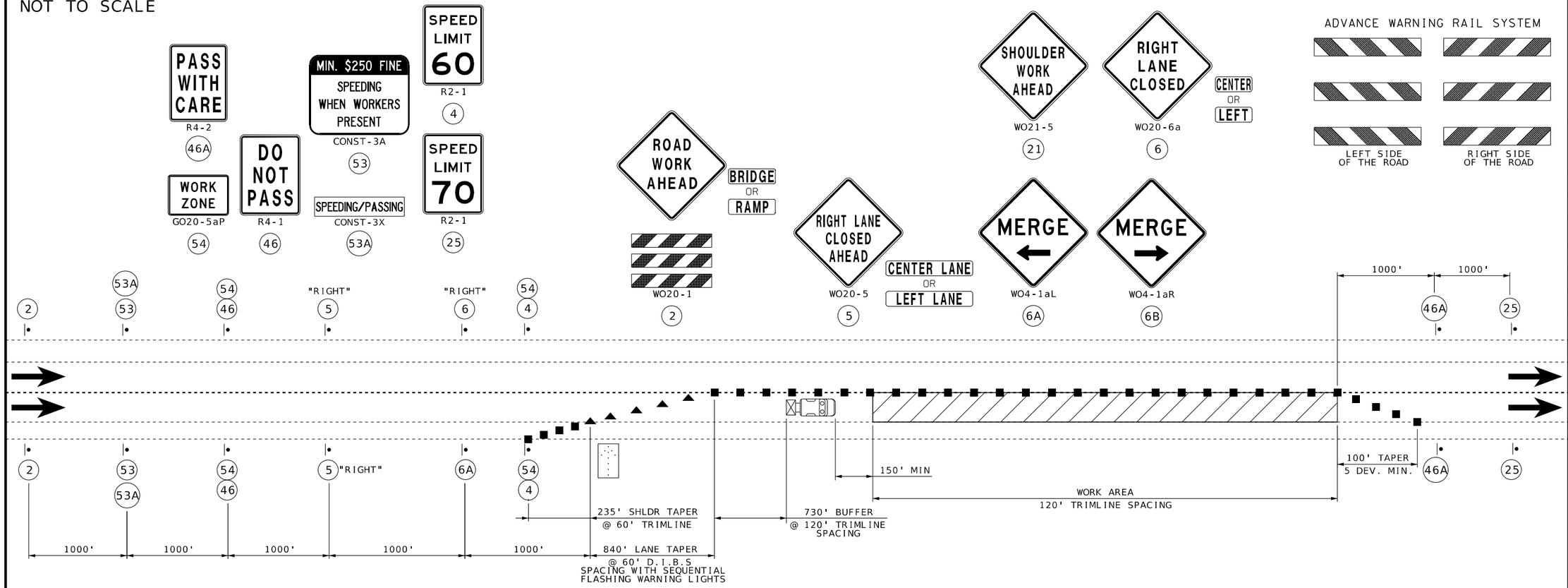
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Consult Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

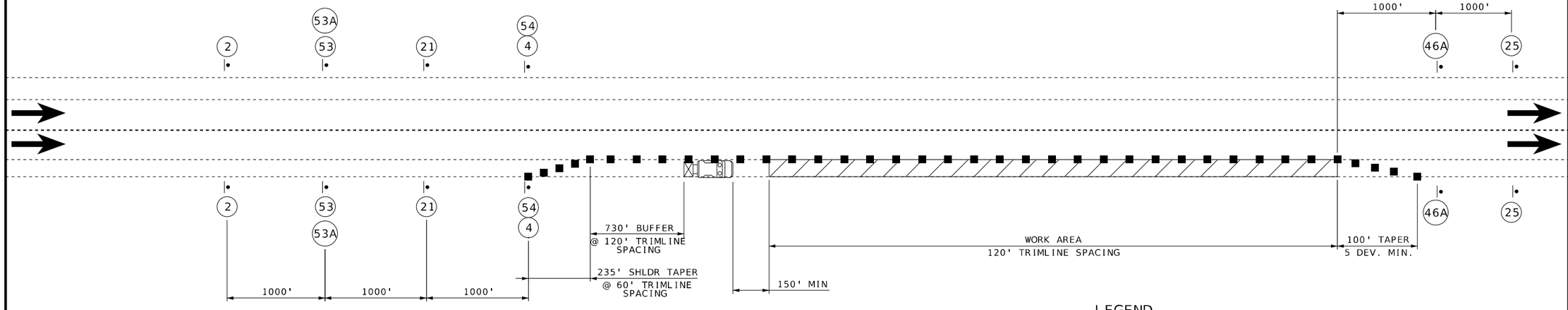
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.0411-44 Resurfacing_Springfield (MoDOT)\Civil\Sheet_Files\ORD\Plan\11_TC_01_J8I3225_i1_BEG-END PROJ.dgn 1:10:49 PM 10/25/2024

NOT TO SCALE



SINGLE LANE CLOSURE



SHOULDER WORK

LEGEND

SIGN
FLASHING ARROW PANEL
PROTECTIVE VEHICLE WITH TRUCK MOUNTED ATTENUATOR (TMA)
WORK AREA
CHANNELIZERS
DIRECTIONAL INDICATOR BARRICADE

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

TRAFFIC CONTROL
SHEET 2 OF 5

STATE OF MISSOURI
ERIC J REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 10/25/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 12
COUNTY: GREENE
JOB NO.: J8I3225
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE

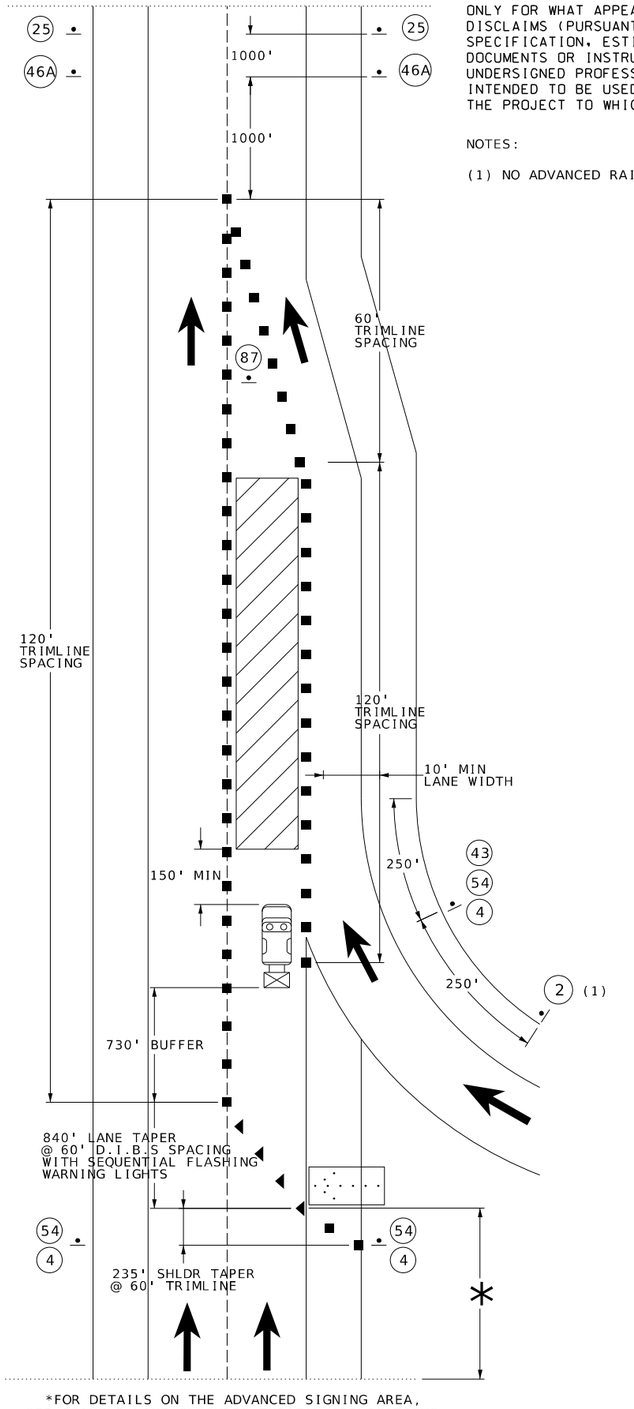
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.041 I-44 Resurfacing_Springfield (MoDOT)\Civil\Sheet_Files\ORD\Plan\12_TC_02_J8I3225_i1_LANECLOSE-SHLDRWRK.dgn 1:10:53 PM 10/25/2024

NOT TO SCALE



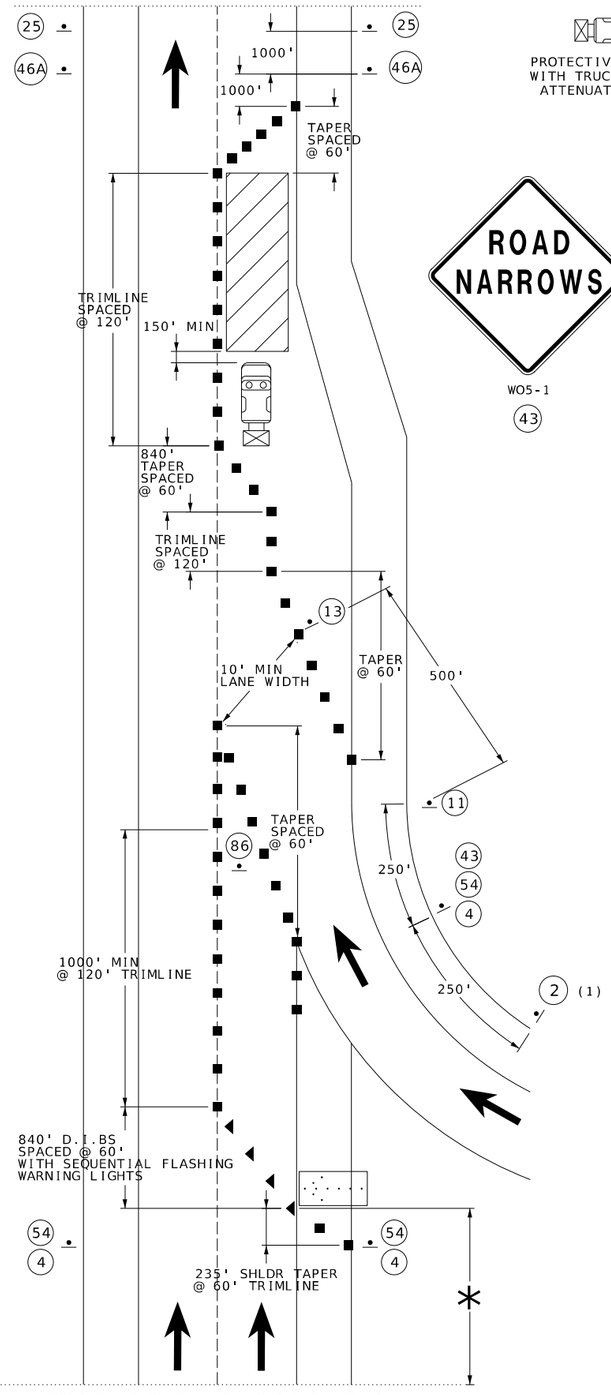
*FOR DETAILS ON THE ADVANCED SIGNING AREA, SEE "SINGLE LANE CLOSURE" TYPICAL APPLICATIONS

DISCLAIMER

THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

NOTES:

(1) NO ADVANCED RAIL WARNING SYSTEM ON SIGN



*FOR DETAILS ON THE ADVANCED SIGNING AREA, SEE "SINGLE LANE CLOSURE" TYPICAL APPLICATIONS

LEGEND

PROTECTIVE VEHICLE WITH TRUCK MOUNTED ATTENUATOR (TMA)

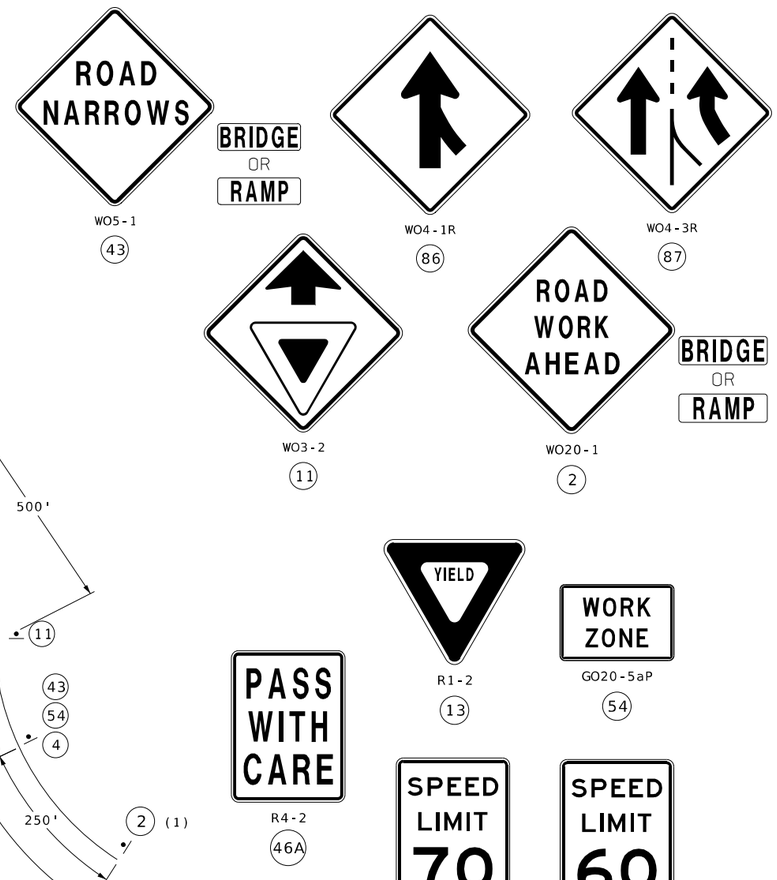
SIGN

WORK AREA

FLASHING ARROW PANEL

CHANNELIZERS

DIRECTIONAL INDICATOR BARRICADE



TRAFFIC CONTROL
SHEET 3 OF 5

WORK IN THE VICINITY OF A ENTRANCE RAMP

STATE OF MISSOURI
ERIC J REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
10/25/2024

ROUTE	STATE
I-44	MO
DISTRICT	SHEET NO.
SW	13

COUNTY
GREENE

JOB NO.
J8I3225

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

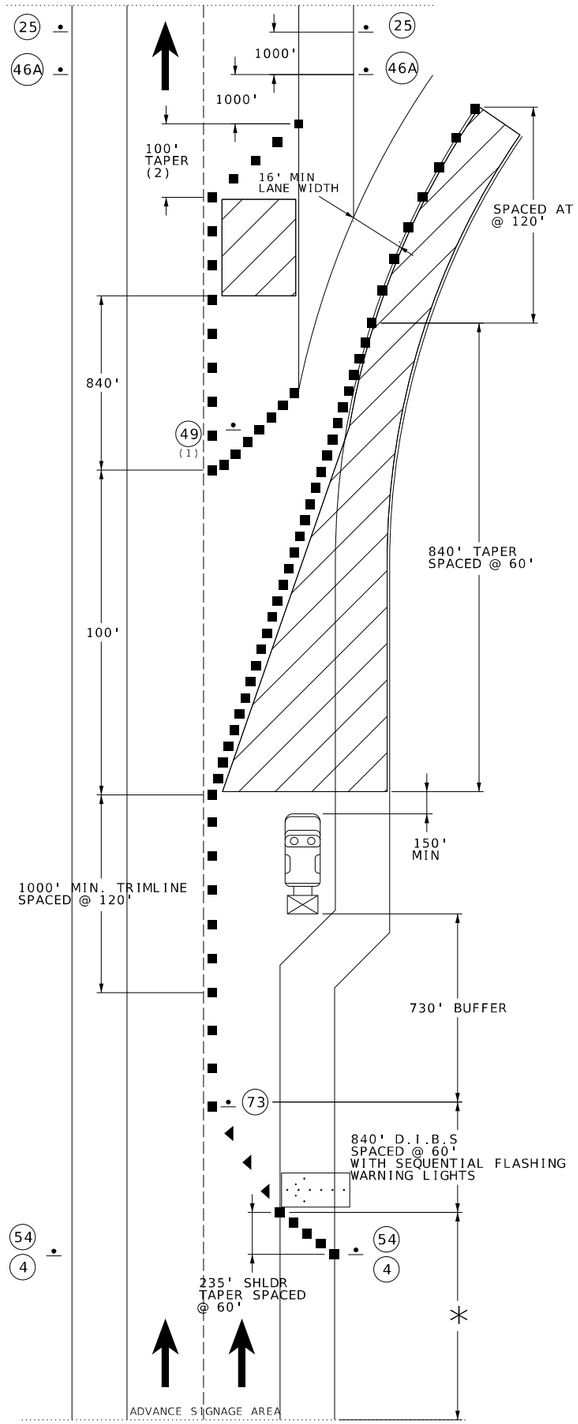
DATE	DESCRIPTION

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

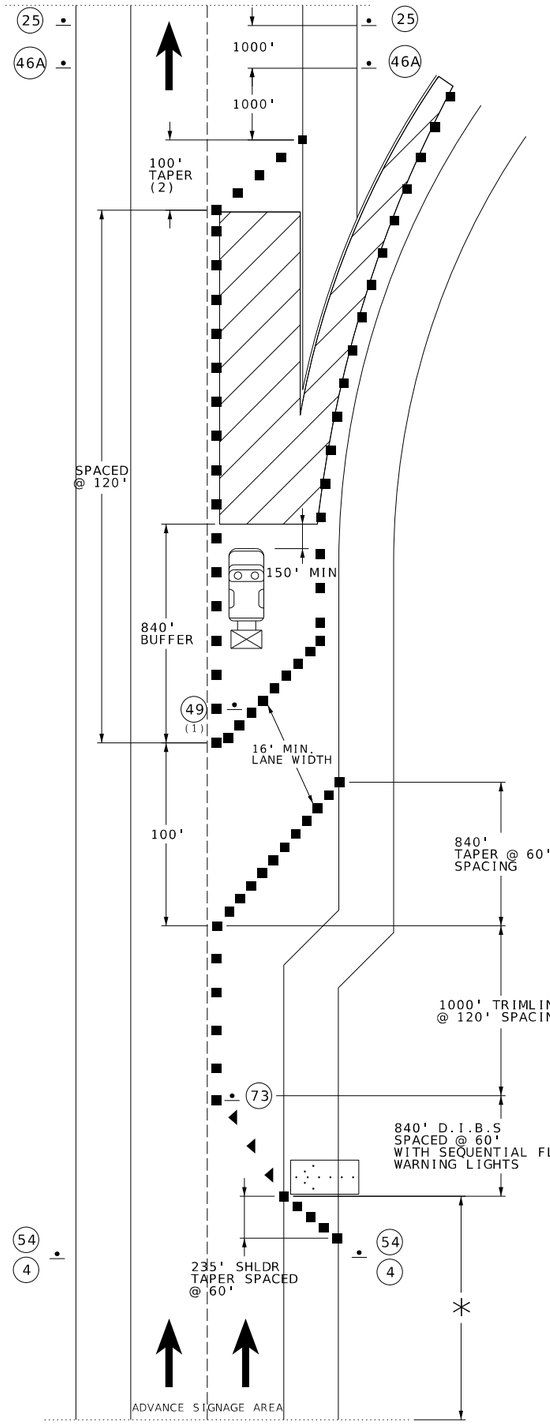
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

NOT TO SCALE



*FOR DETAILS ON THE ADVANCE SIGNING AREA, SEE "SINGLE LANE CLOSURE" TYPICAL APPLICATIONS



*FOR DETAILS ON THE ADVANCE SIGNING AREA, SEE "SINGLE LANE CLOSURE" TYPICAL APPLICATIONS

LEGEND

- PROTECTIVE VEHICLE WITH TRUCK MOUNTED ATTENUATOR (TMA)
- SIGN
- WORK AREA
- FLASHING ARROW PANEL
- CHANNELIZERS
- DIRECTIONAL INDICATOR BARRICADE

NOTES:

(1) PLACE TEMPORARY SIGN AT A MOUNTING HEIGHT OF 7' WITHIN THE TEMPORARY GORE

(2) 5 CHANNELIZER DEVICES MINIMUM

E05-2
73

R2-1
25

R2-1
4

E05-1
49
(1)

GO20-5aP
54

R4-2
46A

TRAFFIC CONTROL
SHEET 4 OF 5

WORK IN THE VICINITY OF AN EXIT RAMP

STATE OF MISSOURI
ERIC J REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	10/25/2024
ROUTE	I-44
STATE	MO
DISTRICT	SW
SHEET NO.	14
COUNTY	GREENE
JOB NO.	J8I3225
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

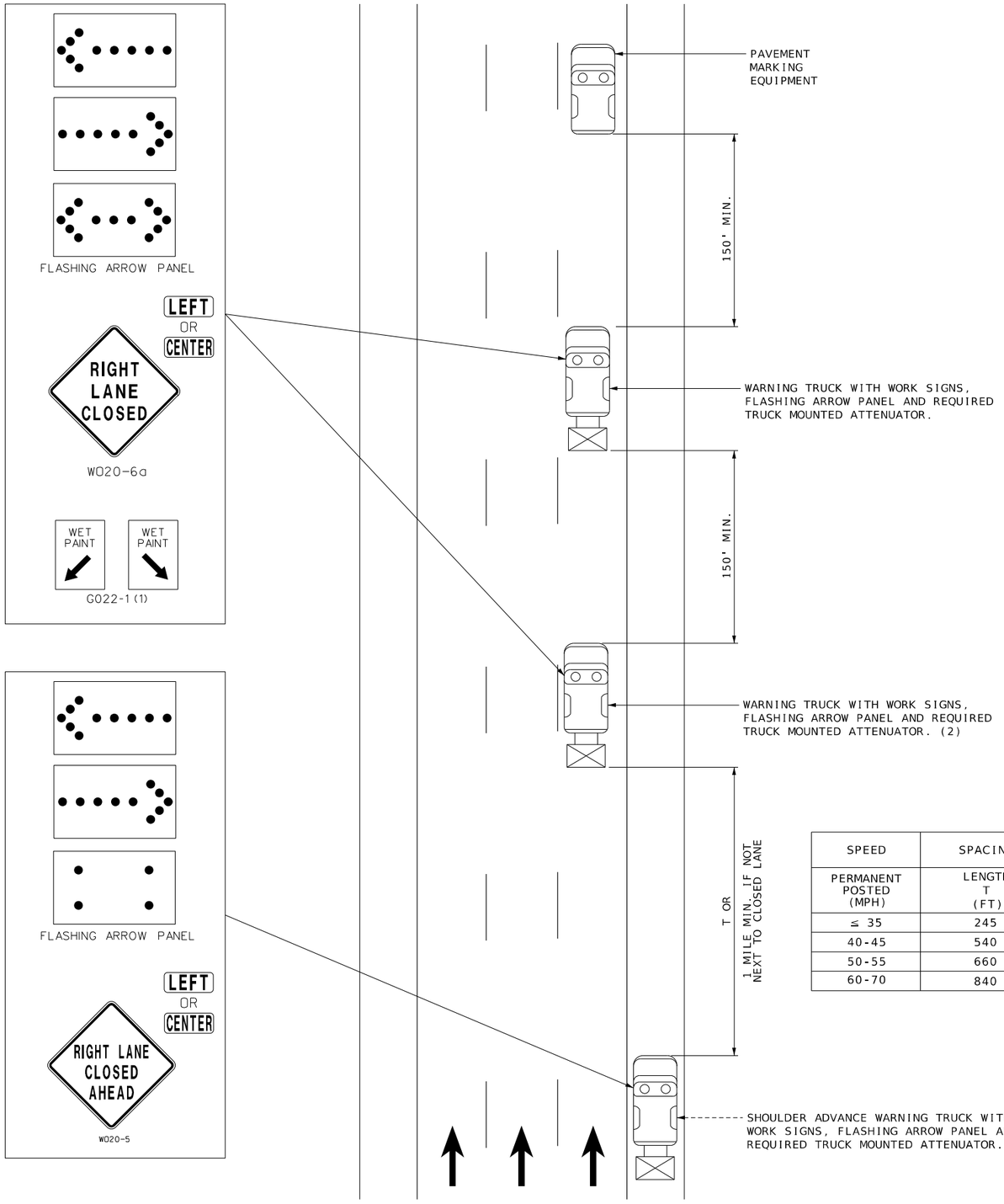
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg Consult, Inc engineers planners
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720
Hg CONSULT, INC.
PRO. ENGINEER 2010005873

REVISED: 2/5/2024



SPEED	SPACING
PERMANENT POSTED (MPH)	LENGTH T (FT)
≤ 35	245
40-45	540
50-55	660
60-70	840

NOTES:

UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCKS EQUIPPED WITH PROPER WARNING DEVICES.

PROTECTIVE TRUCK AND WORK VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

FLASHING ARROW PANELS AND SIGNS SHALL BE INCIDENTAL TO TRUCK MOUNTED ATTENUATORS, WHEREVER USED. NO ADDITIONAL PAYMENT WILL BE MADE.

(1) WET PAINT SIGNS ARE INSTALLED TO INDICATE THE SIDE IN WHICH THE PAVEMENT MARKING MATERIAL IS BEING APPLIED. AT THE CONTRACTOR'S OPTION, A FRONT FACING WET PAINT SIGN MAY BE INSTALLED ON THE LEFT SIDE OF THE PAVEMENT MARKING EQUIPMENT.

(2) WARNING TRUCK IS POSITIONED AT THE NO TRACK POINT OF THE PAVEMENT MARKING MATERIAL, OR SPACING SHOWN, WHICH EVER IS GREATER.

FLASHING ARROW PANELS SHALL, AS A MINIMUM, BE TYPE B, WITH A SIZE OF 60 X 30 INCHES.

VEHICLE-MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGENDS ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.

A FLASHING ARROW BOARD SHALL BE USED WHEN A FREEWAY LANE IS CLOSED. WHEN MORE THAN ONE LANE CLOSED, A SEPARATE FLASHING ARROW PANEL BOARD SHALL BE USED FOR EACH CLOSED LANE.

STRIPING ON MULTI-LANE HIGHWAY

TRAFFIC CONTROL
SHEET 5 OF 5

STATE OF MISSOURI
ERIC J REINKEMEYER
NUMBER PE-2006002846
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 10/25/2024
ROUTE: I-44 | STATE: MO
DISTRICT: SW | SHEET NO.: 15
COUNTY: GREENE
JOB NO.: J8I3225
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

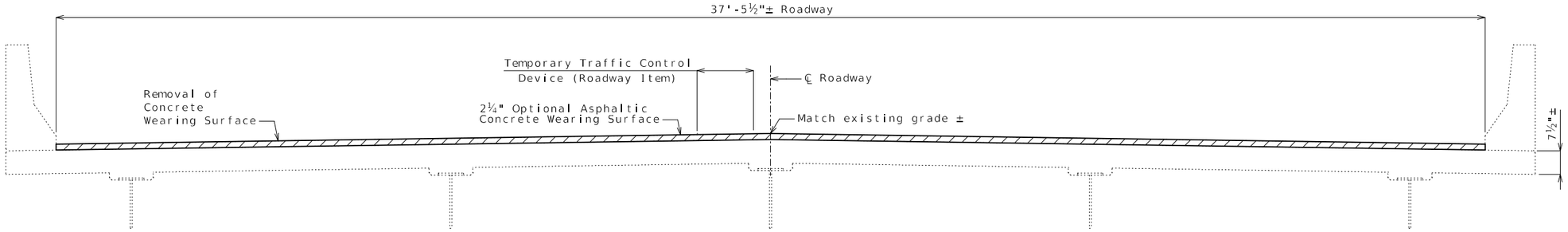
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Hg CONSULT, INC.
PRO. ENGINEER 2010005873
9111 NE 79th Street Kansas City, MO 64158 (816)912-4720

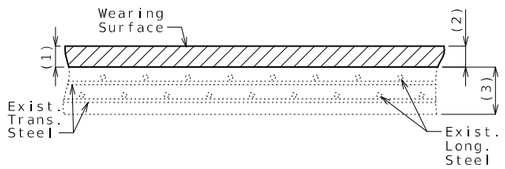
G:\Shared drives\Hg Projects (Yr 2021-2022)\2022\22.0411-44 Resurfacing_Springfield (MoDOT)\Civil\Sheet_Files\ORD\Plan\15_TC_05_J8I3225_i1_MOB_OP_MULTILN.dgn 1:11:04 PM 10/25/2024

SEC/SUR 18 TWP 29N RGE 22W

U.I.P. AND REHABILITATE EXISTING (48'-58'-48') CONTINUOUS WIDE FLANGE BEAM SPANS (SKEW: 30°0'0" R.A.)



TYPICAL SECTION THRU EXISTING DECK



WEARING SURFACE DETAILS

(1) Removal of existing 2¼"± low slump concrete wearing surface

(2) 2¼" minimum optional asphaltic concrete wearing surface

(3) Original depth of deck minus previous scarification

Estimated Quantities		
Item		Total
Removal of Concrete Wearing Surface	sq. foot	5,931
Optional Asphaltic Concrete Wearing Surface (Bridges)	sq. yard	659

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications
Bridge Deck Rating = 6

Design Loading:

HS20-44 Modified (1961) and Military 24,000 lb Tandem Axle (1961)

Miscellaneous:

Roadway surfacing adjacent to bridge ends shall match new bridge wearing surface (roadway item).

All concrete repairs shall be in accordance with Sec 704, unless otherwise noted.

Outline of existing work is indicated by light dashed lines. Heavy lines indicate new work.

In order to maintain grade and a minimum thickness of wearing surface as shown on plans it may be necessary to use additional quantities of wearing surface at various locations throughout the structure. The cost of furnishing and installing the wearing surface will be considered completely covered in the contract unit price, including all additional labor, materials or equipment for variations in thickness of wearing surface.

Traffic Handling:

Traffic to be maintained on structure during construction. See roadway plans for traffic control.

REPAIRS TO BRIDGE: ROUTE I-44 WB OVER BNSF RAILROAD

ROUTE I-44 FROM ROUTE 266 TO ROUTE 13
ABOUT 0.7 MILES NORTHEAST OF ROUTE 266
BEGINNING STATION 703+89.97± (Match Existing)

STATE OF MISSOURI
CHRIS LINNEMAN
NUMBER PE-2002016690
PROFESSIONAL ENGINEER

08/12/2024 12:14:13 PM
Chris Linneman - Civil
MO PE-2002016690

DATE PREPARED 8/12/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY GREENE
JOB NO. J8I3225
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A07123

DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.

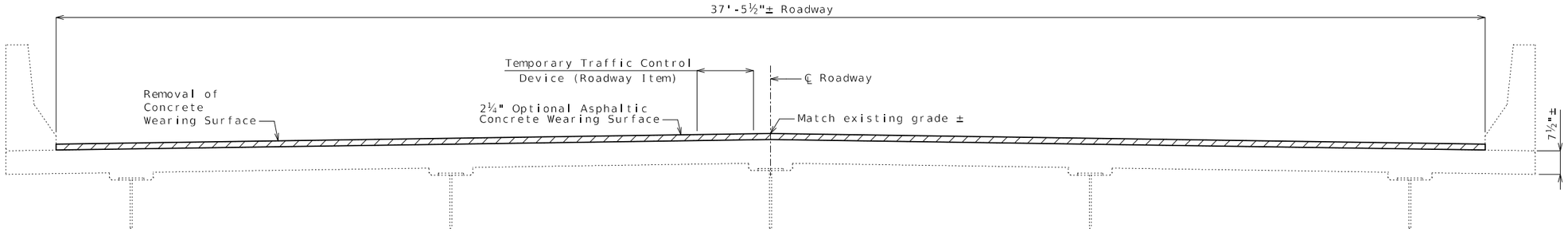
Detailed Jul. 2024
Checked Jul. 2024

Note: This drawing is not to scale. Follow dimensions.

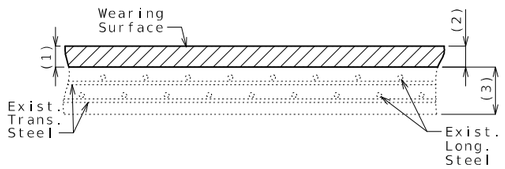
O:\2021R2\MoDOT_ORD_v10.10.01.03\22032.20 CMT MoDOT J8I3225 I-44 Resurfacing\DGN\Bridge\Final\Plotsheets\001_A07123_J8I3225_Front-Sheet.dgn 12:12:23 PM 8/12/2024

SEC/SUR 18 TWP 29N RGE 22W

U.I.P. AND REHABILITATE EXISTING (48'-58'-48') CONTINUOUS WIDE FLANGE BEAM SPANS (SKEW: 30°0'0" R.A.)



TYPICAL SECTION THRU EXISTING DECK



WEARING SURFACE DETAILS

(1) Removal of existing 2¼"± low slump concrete wearing surface

(2) 2¼" minimum optional asphaltic concrete wearing surface

(3) Original depth of deck minus previous scarification

Estimated Quantities		
Item		Total
Removal of Concrete Wearing Surface	sq. foot	5,931
Optional Asphaltic Concrete Wearing Surface (Bridges)	sq. yard	659

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications
Bridge Deck Rating = 6

Design Loading:

HS20-44 Modified (1961) and Military 24,000 lb Tandem Axle (1961)

Miscellaneous:

Roadway surfacing adjacent to bridge ends shall match new bridge wearing surface (roadway item).

All concrete repairs shall be in accordance with Sec 704, unless otherwise noted.

Outline of existing work is indicated by light dashed lines. Heavy lines indicate new work.

In order to maintain grade and a minimum thickness of wearing surface as shown on plans it may be necessary to use additional quantities of wearing surface at various locations throughout the structure. The cost of furnishing and installing the wearing surface will be considered completely covered in the contract unit price, including all additional labor, materials or equipment for variations in thickness of wearing surface.

Traffic Handling:

Traffic to be maintained on structure during construction. See roadway plans for traffic control.

REPAIRS TO BRIDGE: ROUTE I-44 EB OVER BNSF RAILROAD

ROUTE I-44 FROM ROUTE 266 TO ROUTE 13
ABOUT 0.7 MILES NORTHEAST OF ROUTE 266
BEGINNING STATION 704+26.53± (Match Existing)

STATE OF MISSOURI
CHRIS LINNEMAN
NUMBER PE-2002016690
PROFESSIONAL ENGINEER

08/12/2024 12:14:06 PM
Chris Linneman - Civil
MO PE-2002016690

DATE PREPARED 8/12/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY GREENE
JOB NO. J8I3225
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A07124

DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.

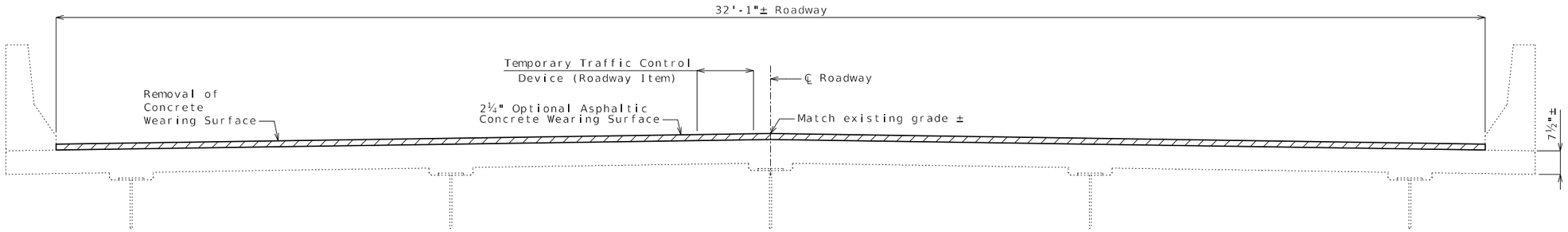
Detailed Jul. 2024
Checked Jul. 2024

Note: This drawing is not to scale. Follow dimensions.

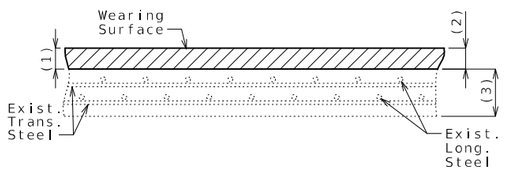
O:\2021R2\MoDOT_ORD_v10.10.01.03\22032.20 CMT MoDOT J8I3225 I-44 Resurfacing\DGN\Bridge\Final\Plotsheets\002_A07124_J8I3225_Front-Sheet.dgn 12:12:28 PM 8/12/2024

SEC/SUR 5 TWP 29N RGE 22W

U.I.P. AND REHABILITATE EXISTING (44'-53'-44')(58'-72'-72'-58') CONTINUOUS WIDE FLANGE BEAM SPANS (SKEW: 16°0'0" R.A. & 41°0'0" R.A.)



TYPICAL SECTION THRU EXISTING DECK



WEARING SURFACE DETAILS

(1) Removal of existing 2¼"± low slump concrete wearing surface

(2) 2¼" minimum optional asphaltic concrete wearing surface

(3) Original depth of deck minus previous scarification

Estimated Quantities		
Item		Total
Removal of Concrete Wearing Surface	sq. foot	13,047
Optional Asphaltic Concrete Wearing Surface (Bridges)	sq. yard	1,450

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications
Bridge Deck Rating = 6

Design Loading:

HS20-44 Modified (1961) and Military 24,000 lb Tandem Axle (1961)

Miscellaneous:

Roadway surfacing adjacent to bridge ends shall match new bridge wearing surface (roadway item).

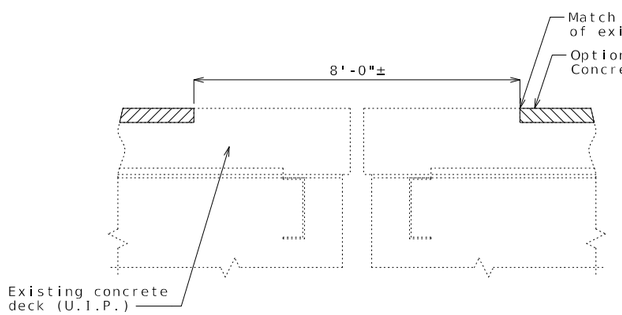
All concrete repairs shall be in accordance with Sec 704, unless otherwise noted.

Outline of existing work is indicated by light dashed lines. Heavy lines indicate new work.

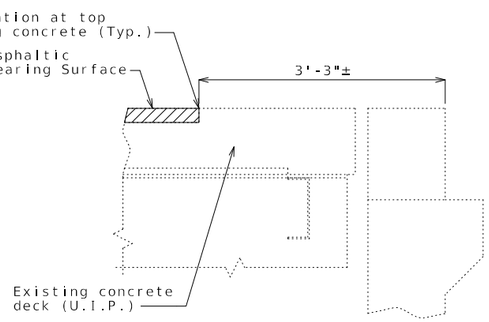
In order to maintain grade and a minimum thickness of wearing surface as shown on plans it may be necessary to use additional quantities of wearing surface at various locations throughout the structure. The cost of furnishing and installing the wearing surface will be considered completely covered in the contract unit price, including all additional labor, materials or equipment for variations in thickness of wearing surface.

Traffic Handling:

Traffic to be maintained on structure during construction. See roadway plans for traffic control.



SECTION THRU INTERMEDIATE BENT NO. 4



SECTION THRU END BENT NO. 8

REPAIRS TO BRIDGE: ROUTE I-44 WB OVER ROUTE 744 AND ABANDONED RAILROAD

ROUTE I-44 FROM ROUTE 266 TO ROUTE 160
ABOUT 2.6 MILES NORTHEAST OF ROUTE 266
BEGINNING STATION 803+19.28± (Match Existing)

Detailed Jul. 2024
Checked Jul. 2024

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
CHRIS LINNEMAN
NUMBER PE-2002016690
PROFESSIONAL ENGINEER

08/12/2024 12:13:59 PM
Chris Linneman - Civil
MO PE-2002016690

DATE PREPARED 8/12/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY GREENE
JOB NO. J8I3225
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A07144

DESCRIPTION

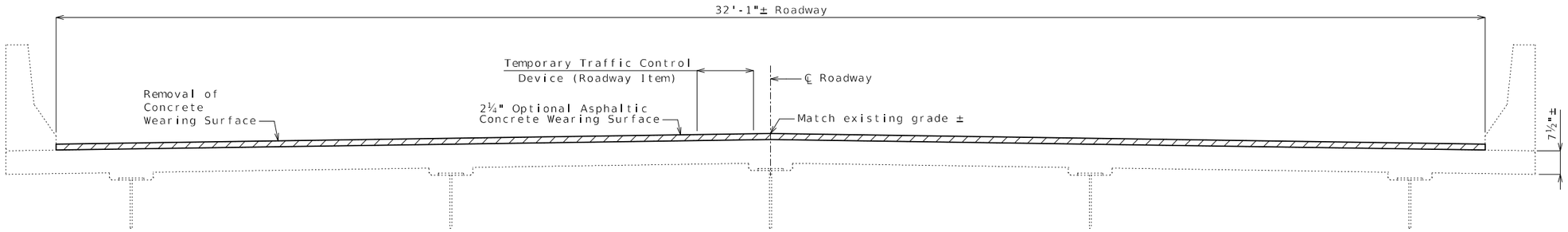
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

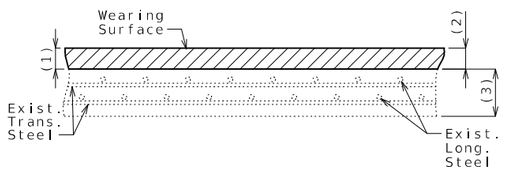
REV.

SEC/SUR 5 TWP 29N RGE 22W

U.I.P. AND REHABILITATE EXISTING (44'-53'-44')(37')(58'-72'-72'-58') CONTINUOUS WIDE FLANGE BEAM SPANS (SKEW: 16°0'0" R.A. & 41°0'0" R.A.)



TYPICAL SECTION THRU EXISTING DECK



WEARING SURFACE DETAILS

(1) Removal of existing 2¼"± low slump concrete wearing surface

(2) 2¼" minimum optional asphaltic concrete wearing surface

(3) Original depth of deck minus previous scarification

Estimated Quantities		
Item		Total
Removal of Concrete Wearing Surface	sq. foot	14,243
Optional Asphaltic Concrete Wearing Surface (Bridges)	sq. yard	1,583

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications
Bridge Deck Rating = 6

Design Loading:

HS20-44 Modified (1961) and Military 24,000 lb Tandem Axle (1961)

Miscellaneous:

Roadway surfacing adjacent to bridge ends shall match new bridge wearing surface (roadway item).

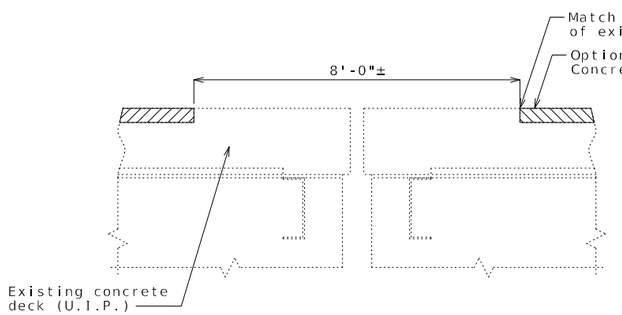
All concrete repairs shall be in accordance with Sec 704, unless otherwise noted.

Outline of existing work is indicated by light dashed lines. Heavy lines indicate new work.

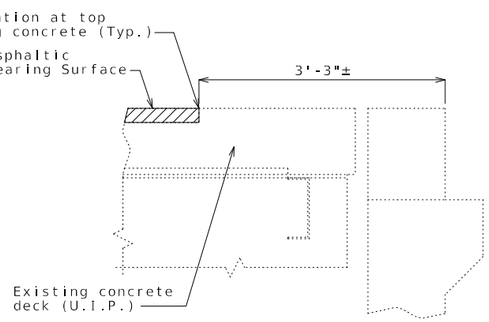
In order to maintain grade and a minimum thickness of wearing surface as shown on plans it may be necessary to use additional quantities of wearing surface at various locations throughout the structure. The cost of furnishing and installing the wearing surface will be considered completely covered in the contract unit price, including all additional labor, materials or equipment for variations in thickness of wearing surface.

Traffic Handling:

Traffic to be maintained on structure during construction. See roadway plans for traffic control.



SECTION THRU INTERMEDIATE BENTS NO. 4 & 5
Int. Bent No 5 shown, Int. Bent No. 4 similar.



SECTION THRU END BENTS NO. 1 & 9

REPAIRS TO BRIDGE: ROUTE I-44 EB OVER ROUTE 744 AND ABANDONED RAILROAD

ROUTE I-44 FROM ROUTE 266 TO ROUTE 160
ABOUT 2.6 MILES NORTHEAST OF ROUTE 266
BEGINNING STATION 803+37.52± (Match Existing)

STATE OF MISSOURI
CHRIS LINNEMAN
NUMBER PE-2002016690
PROFESSIONAL ENGINEER
08/12/2024 12:14:20 PM
Chris Linneman - Civil
MO PE-2002016690

DATE PREPARED 8/12/2024
ROUTE I-44 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY GREENE
JOB NO. J8I3225
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A07154

DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

EFK•Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.

Detailed Jul. 2024
Checked Jul. 2024

Note: This drawing is not to scale. Follow dimensions.

O:\2021R2\MoDOT_ORD_v10.10.01.03\22032.20 CMT MoDOT J8I3225 I-44 Resurfacing\DGN\Bridge\Final\Plotsheets\004_A07154_J8I3225_Front-Sheet.dgn 12:12:35 PM 8/12/2024

DESIGN DESIGNATION

A.A.D.T. I-44 (2025) = 56,859
A.A.D.T. I-44 (2050) = 75,782
TRUCKS = 27.2%
DHV = 30.0%
DESIGN SPEED = 60 M.P.H.
D = 50.7%
FUNCTIONAL CLASSIFICATION - INTERSTATE

NO NEW R/W REQUIRED

CONVENTIONAL SYMBOLS
(USED IN PLANS)

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
GUARD CABLE		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS	– FO –	FO
OVERHEAD CABLE TV	-OTV-	OTV
UNDERGROUND CABLE TV	-UTV-	UTV
OVERHEAD TELEPHONE	– OT –	OT
UNDERGROUND TELEPHONE	– UT –	UT
OVERHEAD POWER	– OE –	OE
UNDERGROUND POWER	– UE –	UE
SANITARY SEWER	— S —	S
STORM SEWER	– SS –	SS
GAS	— G —	G
WATER	— W —	W
MANHOLE	SAN	
FIRE HYDRANT	HYD	
WATER VALVE	WV	
WATER METER	WM	
DROP INLET	DI	
DITCH BLOCK		
GROUND MOUNTED SIGN	SIGN	
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL	PED	
FENCE		
CHAIN LINK	—— V ——	
WOVEN WIRE	—— X ——	
GATE POST		
BENCHMARK	BM	

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

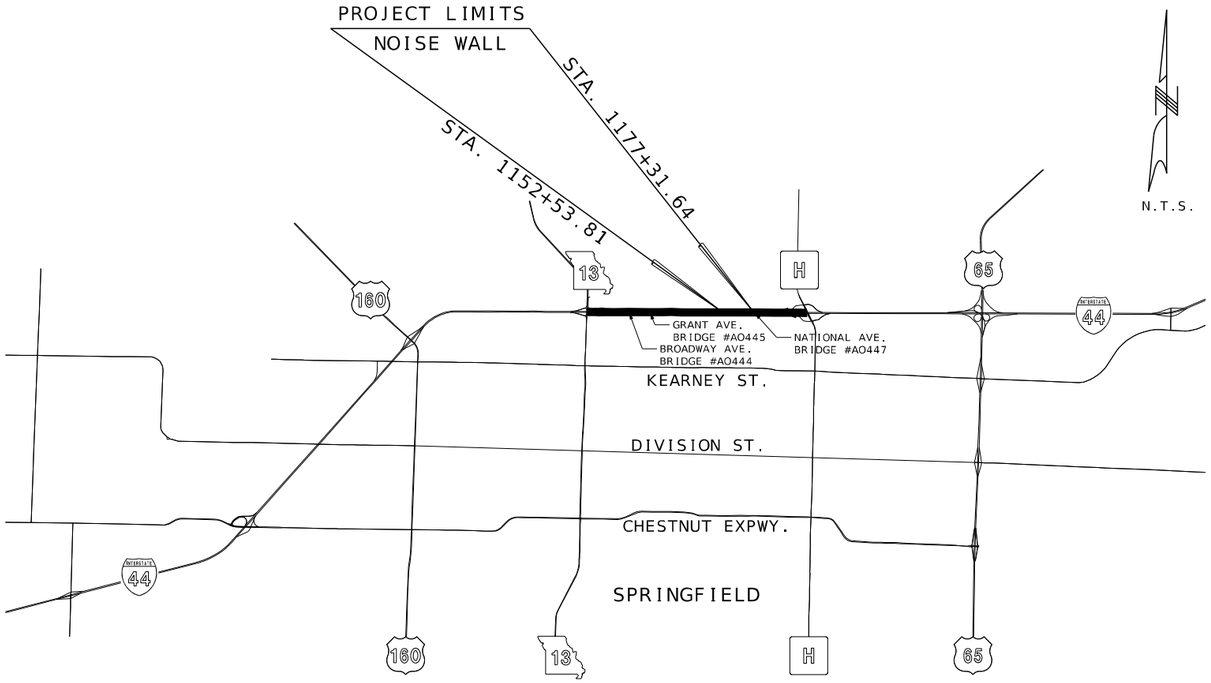
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

PLANS FOR PROPOSED STATE HIGHWAY

GREENE COUNTY

SECTION 01 T29N R22W

KEY MAP
LOCATION OF GREENE COUNTY



THE EXISTENCE AND APPROXIMATE LOCATION OF UTILITY FACILITIES KNOWN TO EXIST, AS SHOWN ON THE PLANS, ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE COMMISSION AT THIS TIME. THIS INFORMATION IS PROVIDED BY THE COMMISSION "AS-IS" AND THE COMMISSION EXPRESSLY DISCLAIMS ANY REPRESENTATION OR WARRANTY AS TO THE COMPLETENESS, ACCURACY, OR SUITABILITY OF THE INFORMATION FOR ANY USE. RELIANCE UPON THIS INFORMATION IS DONE AT THE RISK AND PERIL OF THE USER, AND THE COMMISSION SHALL NOT BE LIABLE FOR ANY DAMAGES THAT MAY ARISE FROM ANY ERROR IN THE INFORMATION. IT IS, THEREFORE, THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE, LOCATION AND STATUS OF ANY FACILITY. SUCH VERIFICATION INCLUDES DIRECT CONTACT WITH THE LISTED UTILITIES.

DISCLAIMER: THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO)SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (2 SHEETS)	2
QUANTITIES (QU) (1 SHEET)	3
PLAN / PROFILE (PL / PR)	4-9
REFERENCE POINTS (RP)	10
COORDINATE POINTS (CP)	11

LENGTH OF PROJECT

BEGINNING OF PROJECT	STA. 1152+53.81	
END OF PROJECT	STA. 1177+31.64	
APPARENT LENGTH	2,477.83	FEET
EQUATIONS AND EXCEPTIONS:	0	FEET
TOTAL CORRECTIONS	0	FEET
NET LENGTH OF PROJECT	2,477.83	FEET
STATE LENGTH	0.469	MILES
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES	0.04	ACRES

STATE OF MISSOURI
SAMUEL CHARLES TAPKO
NUMBER PE-2017015108
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/6/2024
ROUTE 44 | STATE MO
DISTRICT SW | SHEET NO. 1
COUNTY GREENE
JOB NO. JSU0114
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

REV. | DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

GBA
9801 Renner Blvd, Ste. 300
Lenexa, KS 66219
913.492.0400
GBAteam.com

GEORGE BUTLER ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 000059

SAMUEL C. TAPKO
PROFESSIONAL ENGINEER
PE-2017015108

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

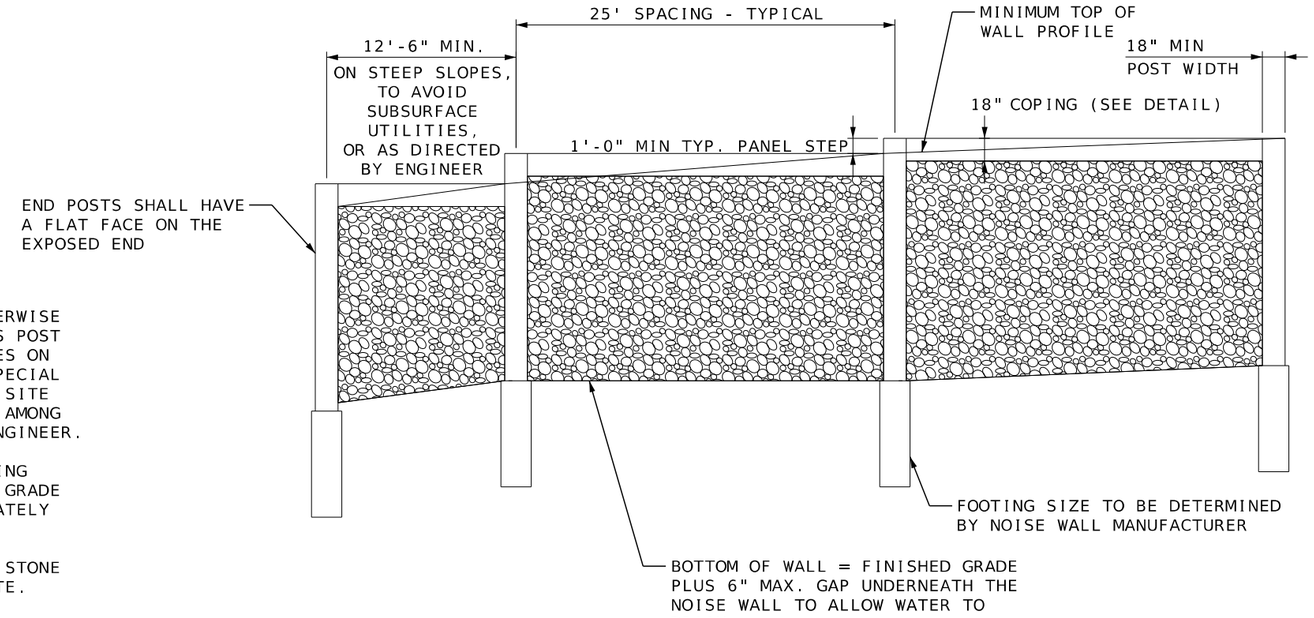
c:\bms\gba-pw-01\shelby reynolds\dms14165\001_TITLE_JSU0114_l1.dgn 2:58:11 PM 8/6/2024

NOISE WALLS SHALL USE 25 FOOT STANDARD POST SPACING UNLESS OTHERWISE SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER. IN STEEPER AREAS POST SPACING MAY BE SHORTENED TO 12 FOOT 6 INCHES OR 16 FOOT 8 INCHES ON CENTER TO ACCOMMODATE THE GRADE CHANGE AS SHOWN. IN ADDITION SPECIAL CIRCUMSTANCES MAY ALSO REQUIRE THE SHORTER POST SPACING DUE TO SITE CONDITIONS SUCH AS END OF WALL, WALL TRANSITIONS, OR UTILITIES AMONG OTHERS. SPACING CHANGES WILL ONLY BE MADE AS APPROVED BY THE ENGINEER.

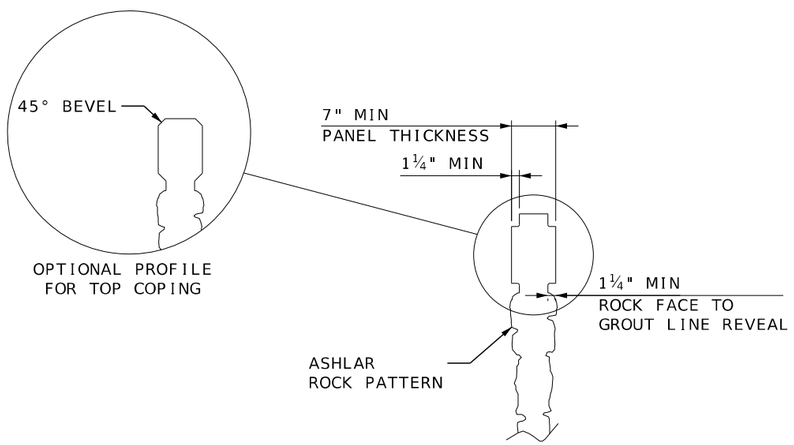
PANELS MAY VARY IN HEIGHT DEPENDING ON THE SITE CONDITIONS, USING TALLEST PANEL HEIGHTS TO ACHIEVE THE FEWEST HORIZONTAL JOINTS. GRADE CHANGES WILL BE HANDLED WITH A TYPICAL STEP HEIGHT OF APPROXIMATELY 12 INCHES UNLESS OTHERWISE SHOWN ON PLANS.

DESIGN TREATMENTS FOR THE NOISE WALL PANELS WILL USE AN ASHLAR STONE PATTERN ON BOTH SIDES. NOISE WALL POSTS SHALL BE SMOOTH CONCRETE. END POSTS SHALL HAVE A FLAT FACE ON THE EXPOSED END.

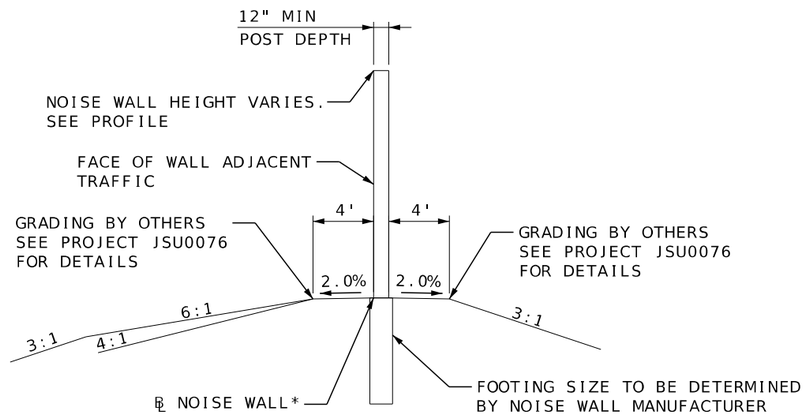
ALL WALL ELEMENTS WILL BE STAINED WITH A PENETRATING CONCRETE STAIN PROVIDING A UNIFORM COLOR. FOR AESTHETIC CONCRETE STAIN REQUIREMENTS, SEE JOB SPECIAL PROVISIONS.



NOISE WALL ELEVATION



TOP OF WALL COPING DETAIL



NOISE WALL TYPICAL SECTION AT FOOTING

* ℄ NOISE WALL IS LOCATED AT THE FACE OF WALL ADJACENT TRAFFIC. PROFILE GRADE IS PROVIDED AT ℄ NOISE WALL.

NOISE WALLS ON SLOPES MAY NEED TO BE ADJUSTED TO ASSURE THAT THE FOOTINGS ARE COVERED.

NOISE WALL DETAILS SHEET 1 OF 2

STATE OF MISSOURI SAMUEL CHARLES TAPKO NUMBER PE-2017015108 PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/6/2024

ROUTE 44 | STATE MO

DISTRICT SW | SHEET NO. 2

COUNTY GREENE

JOB NO. JSU0114

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

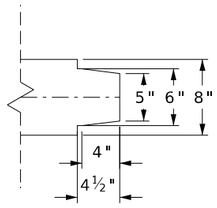
REV. | DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

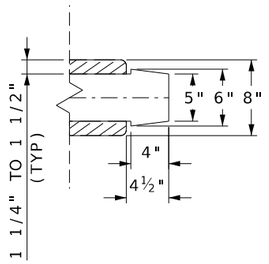
GBA
9801 Renner Blvd, Ste. 300
Lenexa, KS 66219
913.492.0400
GBAteam.com

GEORGE BUTLER ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 000059

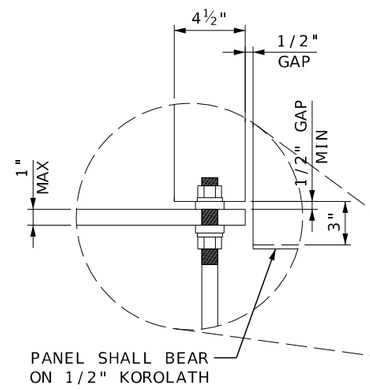
SAMUEL C. TAPKO
PROFESSIONAL ENGINEER
PE-2017015108



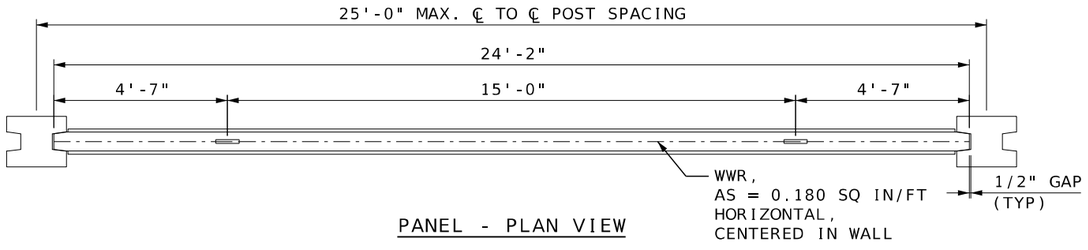
TOP PANEL END
PLAN VIEW



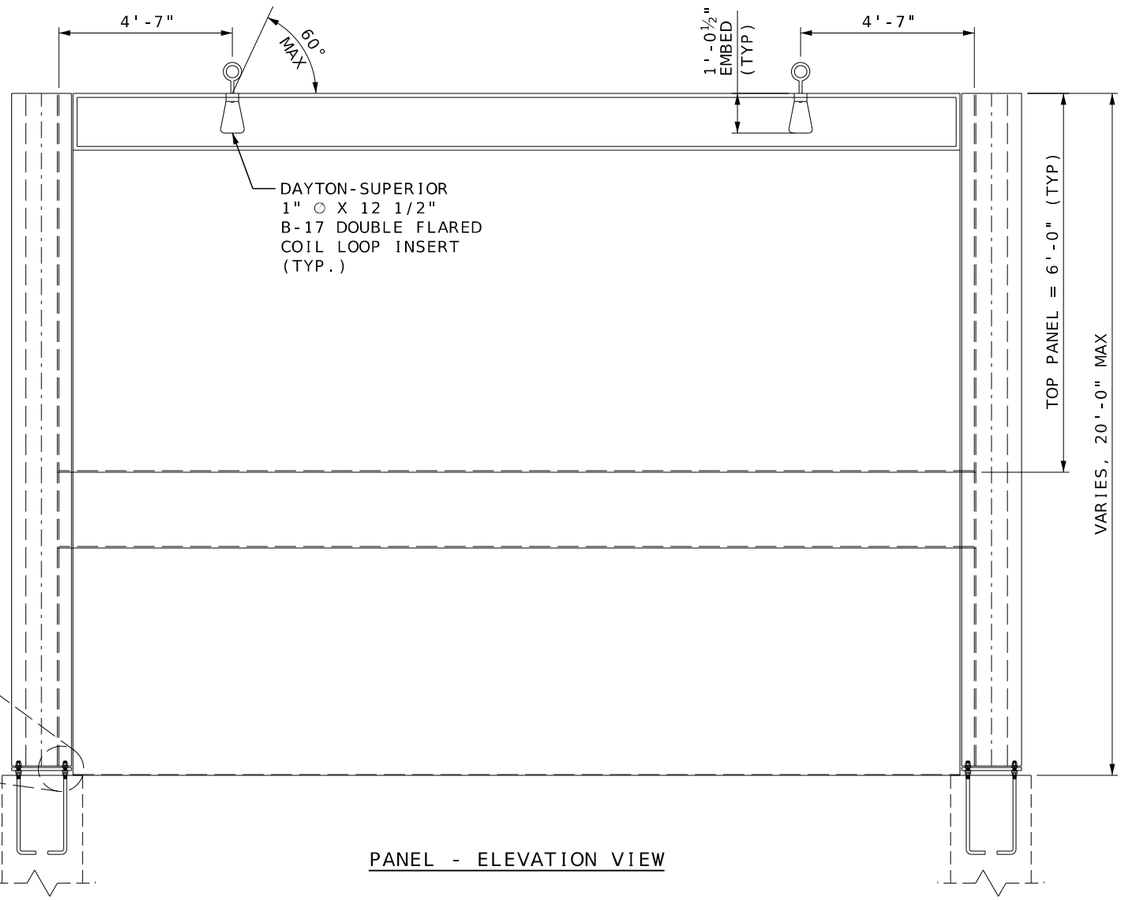
MIDDLE & BOTTOM PANEL END
PLAN VIEW



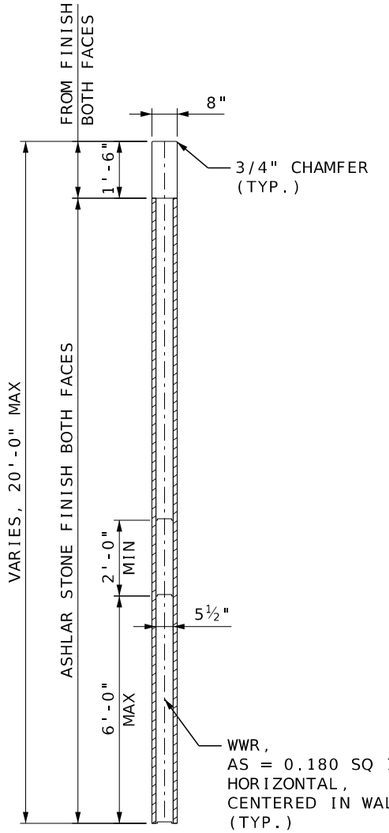
PANEL NOTCH
DETAIL



PANEL - PLAN VIEW



PANEL - ELEVATION VIEW



PANEL - SECTION

STATE OF MISSOURI
SAMUEL CHARLES TAPKO
NUMBER PE-2017015108
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/6/2024

ROUTE	STATE
44	MO
DISTRICT	SHEET NO.
SW	2

COUNTY
GREENE

JOB NO.
JSU0114

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

GBA
9801 Renner Blvd, Ste. 300
Lenexa, KS 66219
913.492.0400
GBAteam.com

GEORGE BUTLER ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 000059

SAMUEL C. TAPKO
PROFESSIONAL ENGINEER
PE-2017015108

REV.

NOISE WALL
DETAILS
SHEET 2 OF 2

MOBILIZATION
1 LUMP SUM

CONTRACTOR FURNISHED SURVEYING AND STAKING
1 LUMP SUM

NOISE WALL

SHEET NO.	ALIGNMENT	STATION BEGIN	STATION END	NOISE WALL SYSTEM (SF)	AESTHETIC CONCRETE STAIN (LS)	FORM LINERS (SY)
4-9	NOISE WALL	0+00.00	25+00.00	47,250	1	10,500
			PROJECT TOTAL	47,250	1	10,500

NOTE: A MINIMUM OF TWO COATS OF AESTHETIC CONCRETE STAIN SHALL BE APPLIED TO EACH FACE OF WALL.

TEMPORARY TRAFFIC CONTROL

ALIGNMENT	STATION	SIDE	SIGN	SIZE (IN)	AREA (SF)	QTY (EA)	TOTAL (SF)
I-44	1142+54	RT	WO20-1	48X48	16.00	1	16.00
					PROJECT TOTAL		16.00

NOTE: SEE TYPICAL APPLICATION TA-1S DETAILS.

SUMMARY OF QUANTITIES
SHEET 1 OF 1

STATE OF MISSOURI
SAMUEL CHARLES TAPKO
NUMBER PE-2017015108
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/6/2024

ROUTE	STATE
44	MO
DISTRICT	SHEET NO.
SW	3

COUNTY GREENE

JOB NO. JSU0114

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

REV.	DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

GBA
9801 Renner Blvd, Ste. 300
Lenexa, KS 66219
913.492.0400
GBAteam.com

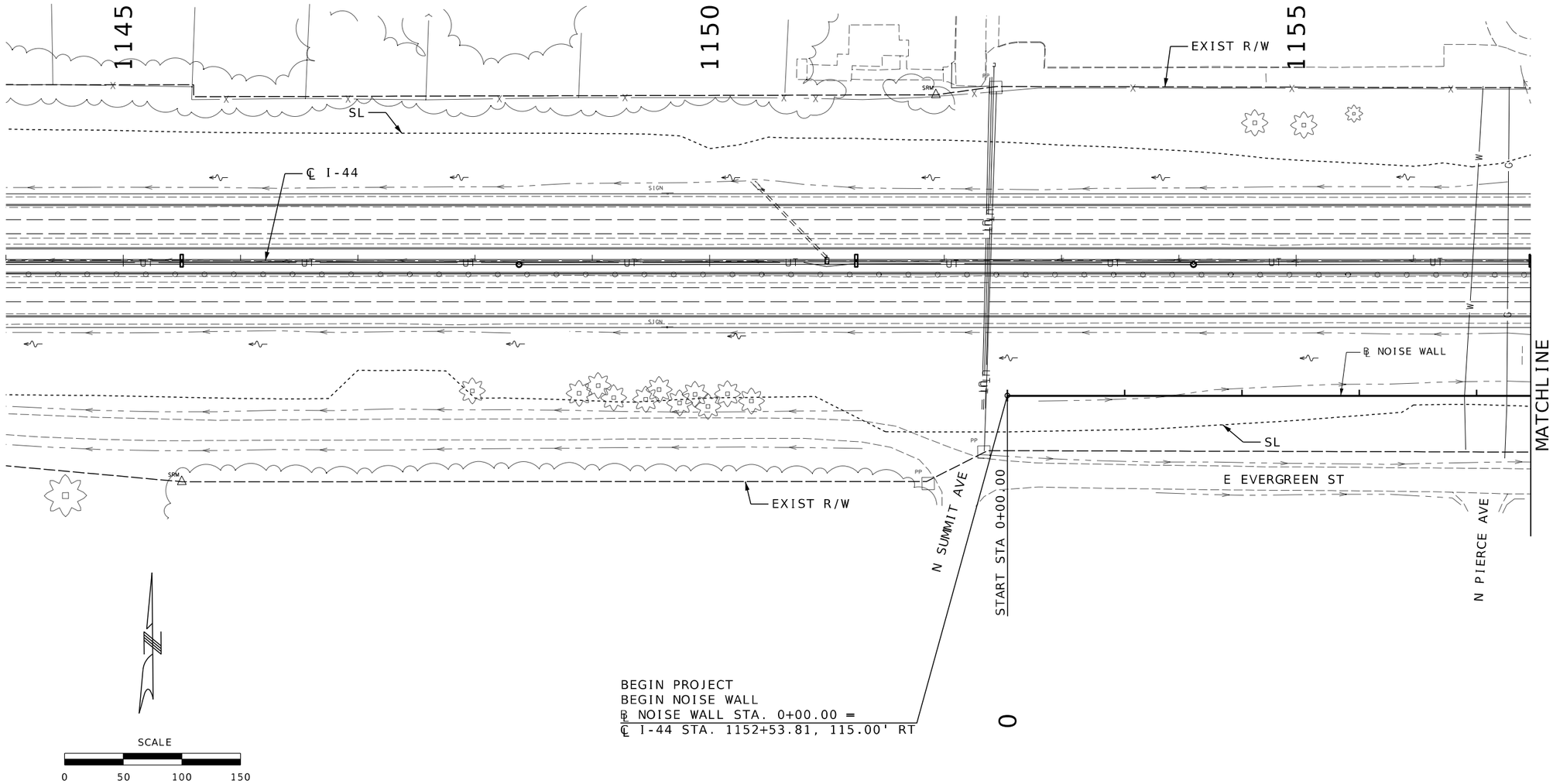
GEORGE BUTLER ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 000059

SAMUEL C. TAPKO
PROFESSIONAL ENGINEER
PE-2017015108

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

ANY WORK INDICATED ON THE PLANS THAT EXTENDS
BEYOND THE PROJECT LIMITS IS CONSIDERED INCIDENTAL
TO AND A PART OF THE CONSTRUCTION OF THIS PROJECT.

ALL BEARINGS BASED ON STATE PLANE BEARINGS CENTRAL ZONE.



NOISE WALL
PLAN
SHEET 1 OF 3

STATE OF MISSOURI
SAMUEL CHARLES TAPKO
NUMBER PE-2017015108
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/6/2024

ROUTE	STATE
44	MO
DISTRICT	SHEET NO.
SW	4

COUNTY
GREENE

JOB NO.
JSU0114

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

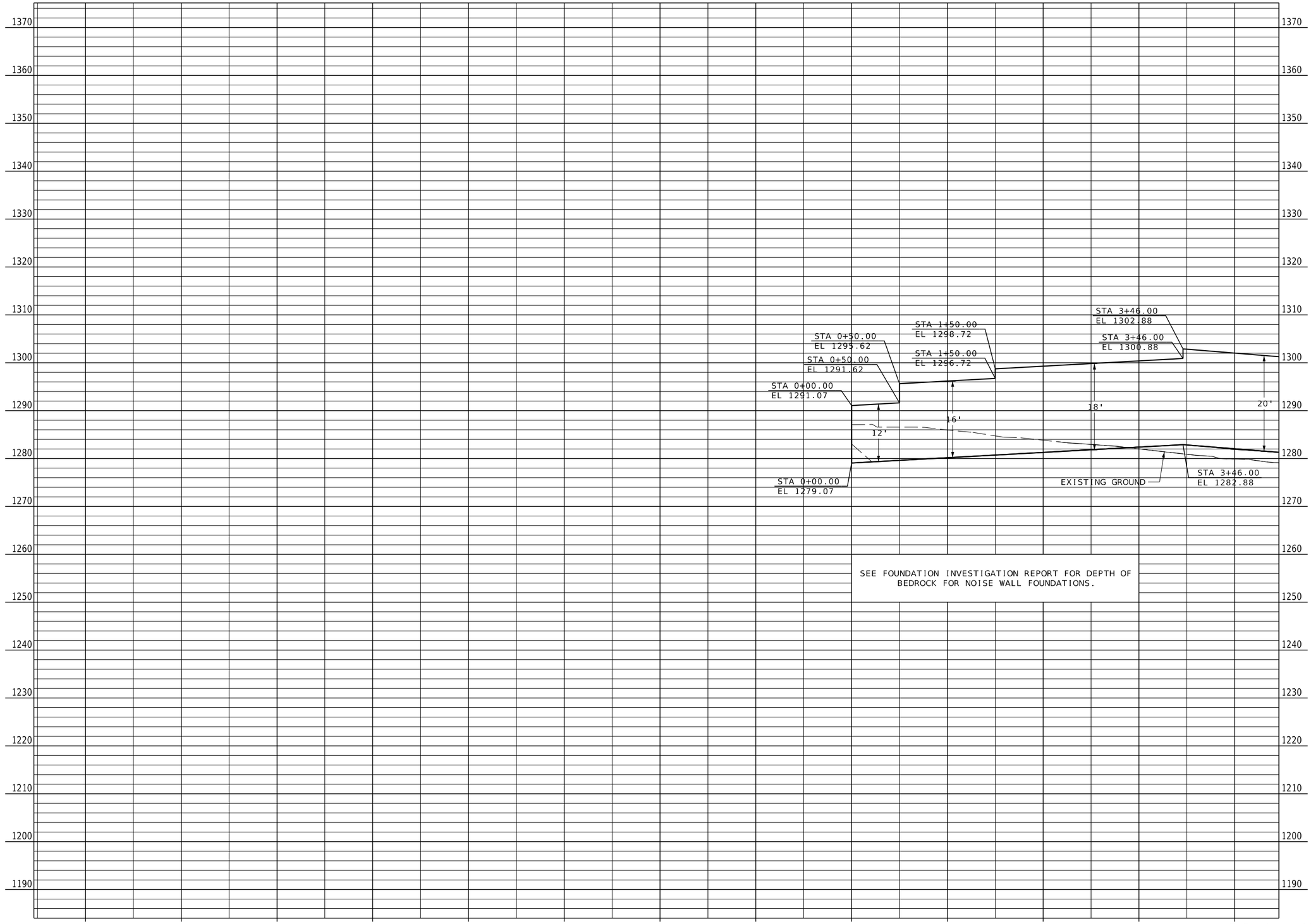
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

GBA
9801 Renner Blvd, Ste. 300
Lenexa, KS 66219
913.492.0400
GBAteam.com

GEORGE BUTLER
ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 000059

SAMUEL C. TAPKO
PROFESSIONAL
ENGINEER
PE-2017015108



NOISE WALL PROFILE
SHEET 1 OF 3

STATE OF MISSOURI
SAMUEL CHARLES TAPKO
NUMBER PE-2017015108
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/6/2024

ROUTE	STATE
44	MO

DISTRICT	SHEET NO.
SW	5

COUNTY
GREENE

JOB NO.
JSU0114

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

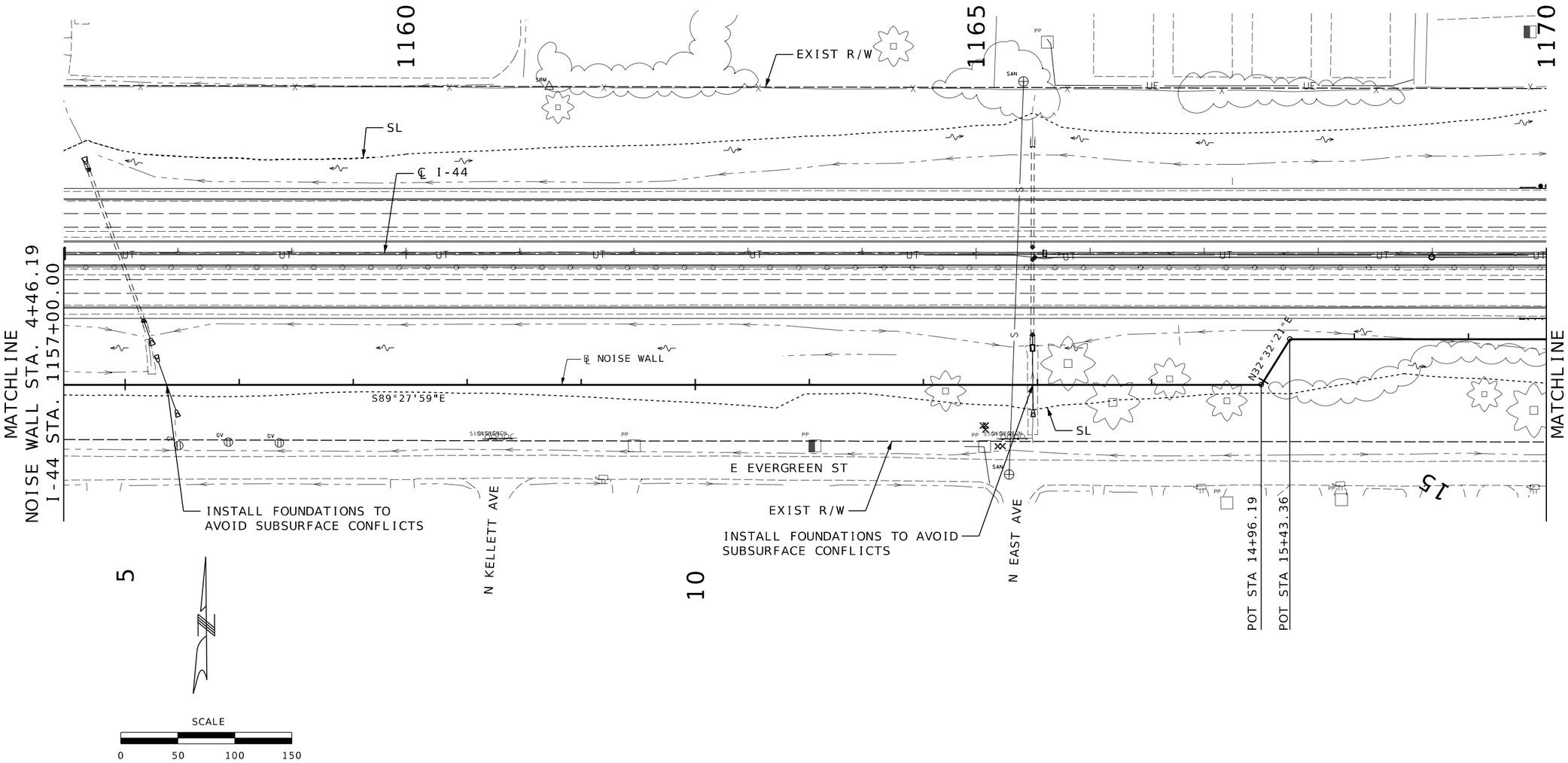
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

GBA
9801 Renner Blvd, Ste. 300
Lenexa, KS 66219
913.492.0400
GBAteam.com

GEORGE BUTLER ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 000059

SAMUEL C. TAPKO
PROFESSIONAL ENGINEER
PE-2017015108



NOISE WALL
PLAN
SHEET 2 OF 3

STATE OF MISSOURI
SAMUEL CHARLES TAPKO
NUMBER PE-2017015108
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/6/2024

ROUTE	STATE
44	MO
DISTRICT	SHEET NO.
SW	6

COUNTY
GREENE

JOB NO.
JSU0114

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

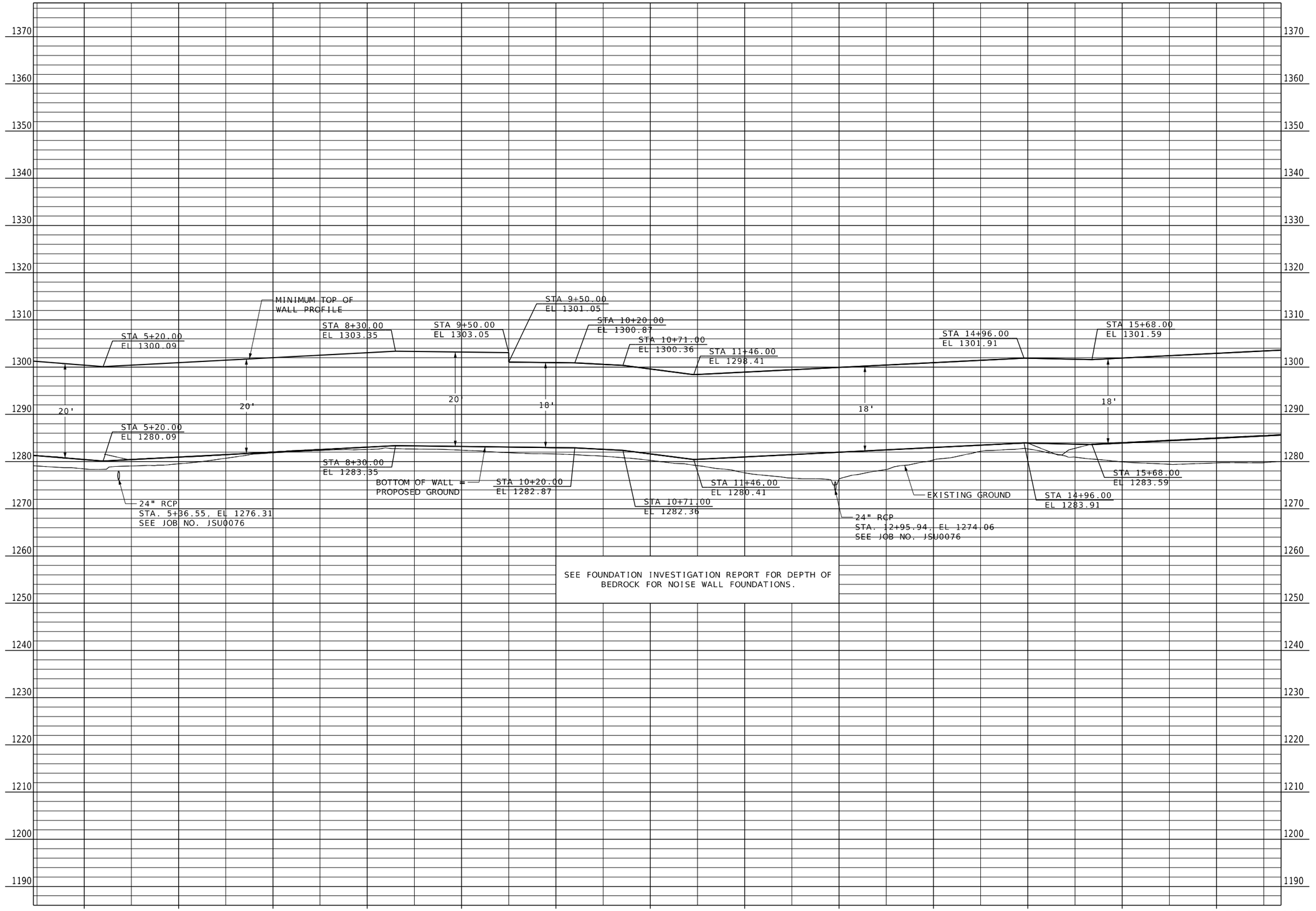
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

GBA
9801 Renner Blvd, Ste. 300
Lenexa, KS 66219
913.492.0400
GBAteam.com

GEORGE BUTLER ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 000059

SAMUEL C. TAPKO
PROFESSIONAL ENGINEER
PE-2017015108



NOISE WALL PROFILE
SHEET 2 OF 3

STATE OF MISSOURI
SAMUEL CHARLES TAPKO
NUMBER PE-2017015108
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/6/2024

ROUTE	STATE
44	MO
DISTRICT	SHEET NO.
SW	7

COUNTY
GREENE

JOB NO.
JSU0114

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

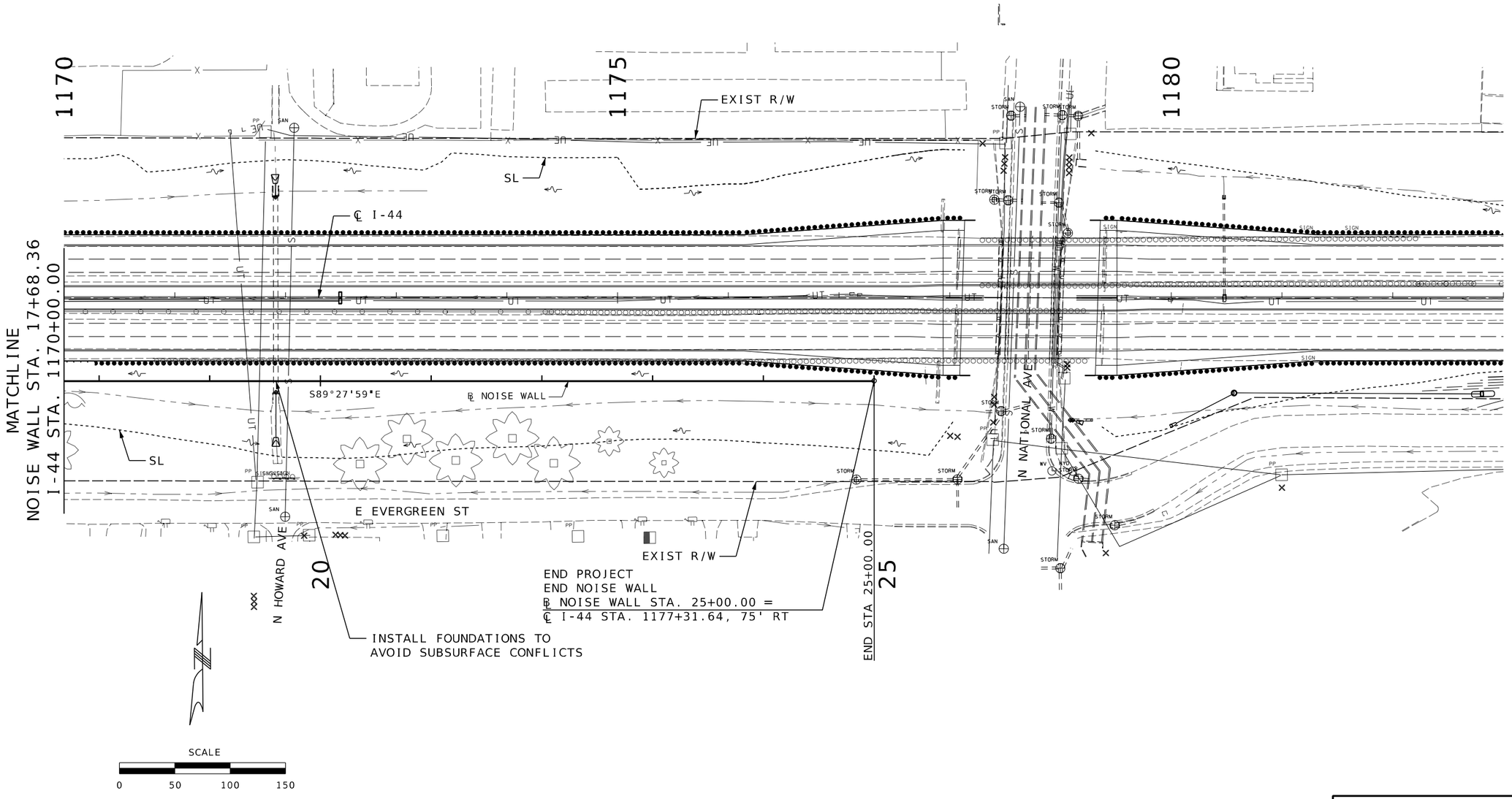
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

GBA
9801 Renner Blvd, Ste. 300
Lenexa, KS 66219
913.492.0400
GBAteam.com

GEORGE BUTLER
ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 000059

SAMUEL C. TAPKO
PROFESSIONAL
ENGINEER
PE-2017015108



NOISE WALL
PLAN
SHEET 3 OF 3

STATE OF MISSOURI
SAMUEL CHARLES TAPKO
NUMBER PE-2017015108
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/6/2024

ROUTE	STATE
44	MO
DISTRICT	SHEET NO.
SW	8

COUNTY
GREENE

JOB NO.
JSU0114

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

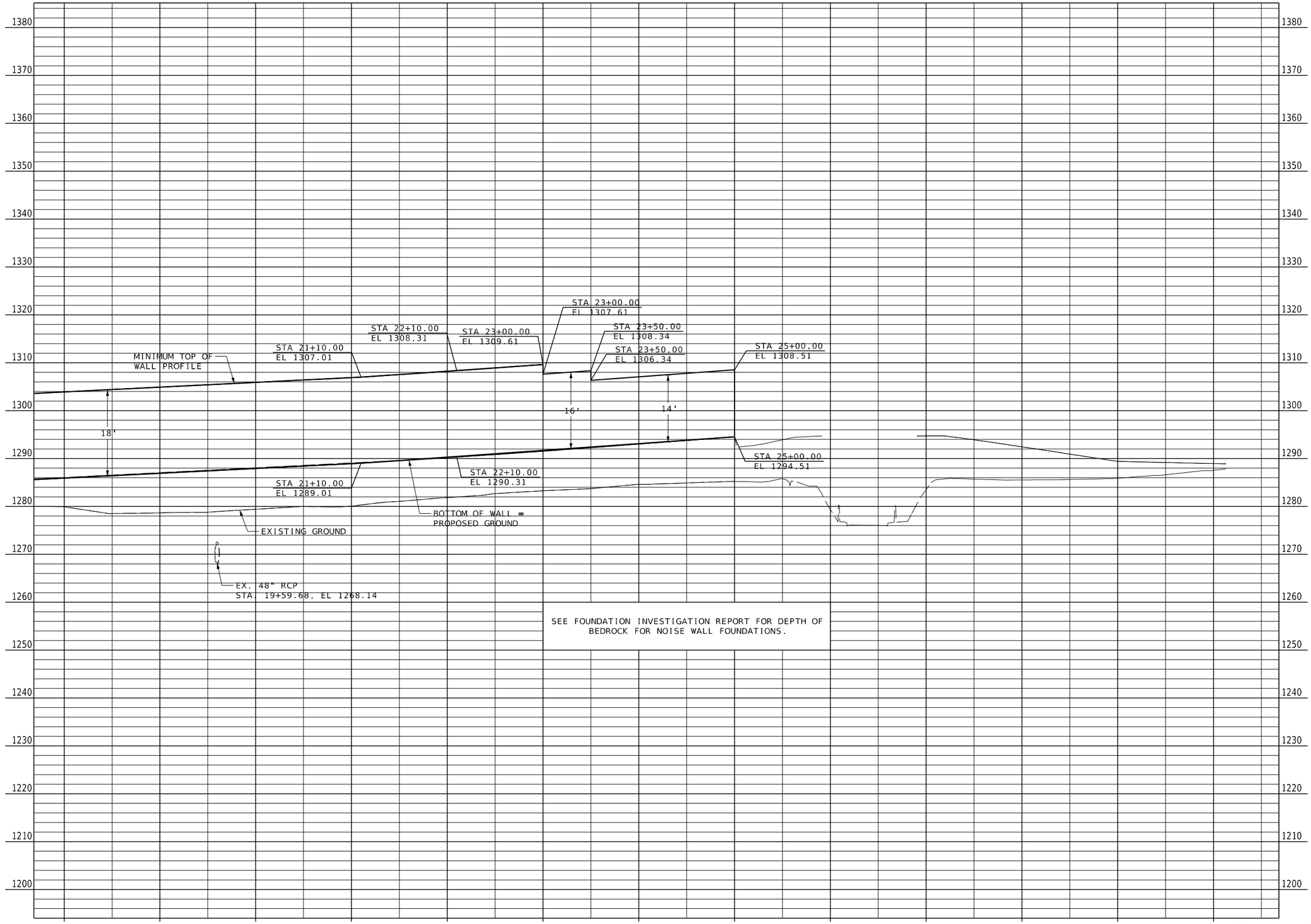
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

GBA
9801 Renner Blvd, Ste. 300
Lenexa, KS 66219
913.492.0400
GBAteam.com

GEORGE BUTLER ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 000059

SAMUEL C. TAPKO
PROFESSIONAL ENGINEER
PE-2017015108



NOISE WALL PROFILE
SHEET 3 OF 3

STATE OF MISSOURI
SAMUEL CHARLES TAPKO
NUMBER PE-2017015108
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
8/6/2024

ROUTE	STATE
44	MO

DISTRICT	SHEET NO.
SW	9

COUNTY
GREENE

JOB NO.
JSU0114

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

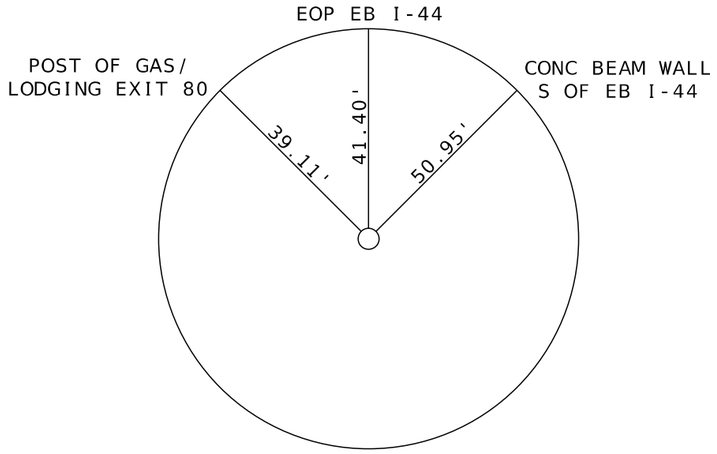
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

GBA
9801 Renner Blvd, Ste. 300
Lenexa, KS 66219
913.492.0400
GBAteam.com

GEORGE BUTLER ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 000059

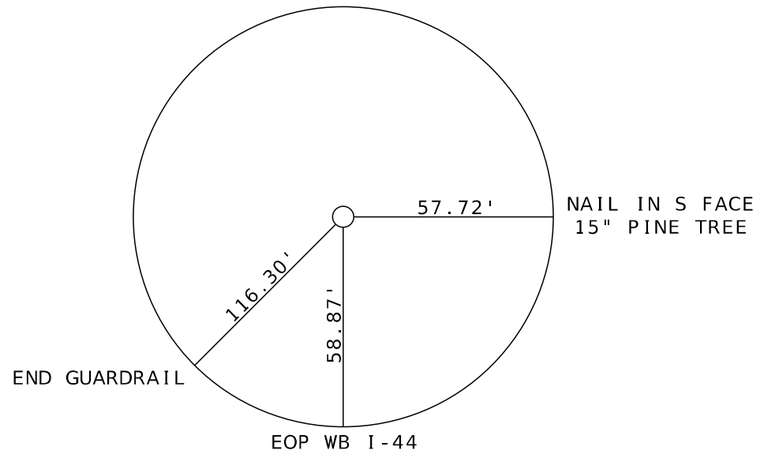
SAMUEL C. TAPKO
PROFESSIONAL ENGINEER
PE-2017015108

EX. I-44
STA 1157+31.28 R3
CP#520 OFFSET 94.7



5/8" I.B.
N: 516,717.69
E: 1,412,985.72
ELEV: 1,278.572'

EX. I-44
STA 1183+76.50 R3
CP#521 OFFSET -114.67



5/8" I.B.
N: 516,902.41
E: 1,415,632.78
ELEV: 1,294.629'

REFERENCE POINTS
SHEET 1 OF 1

STATE OF MISSOURI
SAMUEL CHARLES TAPKO
NUMBER PE-2017015108
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/6/2024

ROUTE	STATE
44	MO

DISTRICT	SHEET NO.
SW	10

COUNTY: GREENE
JOB NO.: JSU0114
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

GBA
9801 Renner Blvd, Ste. 300
Lenexa, KS 66219
913.492.0400
GBAteam.com

GEORGE BUTLER ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 000059

SAMUEL C. TAPKO
PROFESSIONAL ENGINEER
PE-2017015108

ALL PROJECT COORDINATES HAVE BEEN PROJECTED FROM THE MISSOURI STATE PLANE COORDINATE (SPC) SYSTEM OF 1983 USING AN AVERAGE PROJECT PROJECTION (GRID TO GROUND) FACTOR. TO GET BACK TO STATE PLANE COORDINATES MULTIPY THE PROJECT COORDINATES BY THE AVERAGE GRID FACTOR AS SHOWN IN THE "REFERENCE CONTROL INFORMATION" PORTION OF THIS TABLE.

PROJECT COORDINATE INFORMATION

COORDINATE SYSTEM	MISSOURI STATE PLANE
HORIZONTAL DATUM	NAD83
VERTICAL DATUM	NAVD88: U.S. FEET
GEOID MODEL	GEOID 12B
ELEVATIONS DETERMINED BY	OPUS FOR PRIMARY CONTROL
PROJECT PROJECTION FACTOR	1.0000702

REFERENCE CONTROL INFORMATION

COORDINATE SYSTEM	MISSOURI STATE PLANE
CONTROL STATION	MODOT GNSS
DESIGNATION	
CORS_ID	
PID	
LATITUDE	
LONGITUDE	
NORTHING (M)	
EASTING (M)	
ZONE	CENTRAL
PROJECT AVERAGE GRID FACTOR	0.9999298073

EXAMPLE OF PROJECT COORDINATE TO S.P.C.

PROJECT NORTHING X AVERAGE GRID FACTOR
= STATE PLANE NORTHING
PROJECT EASTING X AVERAGE GRID FACTOR
= STATE PLANE EASTING

EXAMPLE: CONTROL POINT #520
N 516717.69 X 0.9999298073 = N 516681.42
E 1412985.72 X 0.9999298073 = E 1412886.54

LINEAR UNIT CONVERSION

1 METER = 3.280833333 US SURVEY FEET (USFT)

COORDINATE POINT LISTING

SHEET NO	STATION	LOCATION	OFFSET (USFT)	MODIFIED STATE PLANE (GROUND) NORTHING (US SURVEY FT)	EASTING (US SURVEY FT)	ELEVATION (US SURVEY FT)	DESCRIPTION	GPK POINT ID
PROJECT CONTROL POINTS								
6	1157+31.28 R3	EX. I-44	94.7	516717.69	1412985.72	1278.572	5/8" I.B. W/ ALUMINUM CAP SET S TOP BANK EB I-44	
-	1183+76.50 R3	EX. I-44	-114.67	516902.41	1415632.78	1294.629	5/8" I.B. W/ ALUMINUM CAP SET N TOP BANK WB I-44	
ALIGNMENTS								
4	0+00.00	NOISE WALL		516701.83	1412508.08		POB	
6	14+96.19	NOISE WALL		516687.90	1414004.21		POT	
6	15+43.36	NOISE WALL		516727.66	1414029.58		POT	
8	25+00.00	NOISE WALL		516718.75	1414986.18		POE	

STATE OF MISSOURI
SAMUEL CHARLES TAPKO
NUMBER PE-2017015108
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 8/6/2024

ROUTE 44 | STATE MO

DISTRICT SW | SHEET NO. 11

COUNTY GREENE

JOB NO. JSU0114

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

GBA
9801 Renner Blvd, Ste. 300
Lenexa, KS 66219
913.492.0400
GBAteam.com

GEORGE BUTLER ASSOCIATES, INC.
PRO. ENGINEER 000133
ARCHITECT 000212
PRO. LAND SURVEYOR 000059

COORDINATE POINTS
SHEET 1 OF 1

SAMUEL C. TAPKO
PROFESSIONAL ENGINEER
PE-2017015108