

DESIGN DESIGNATION

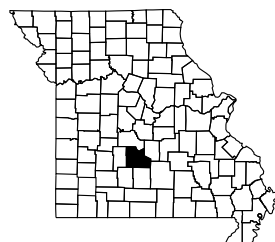
A.A.D.T. - 2024 = 464
A.A.D.T. - 2044 = 515
D.H.V. = 10 %
T = 1 %
V = 55 M.P.H.
D = 50 %

FUNCTIONAL CLASSIFICATION - LOCAL

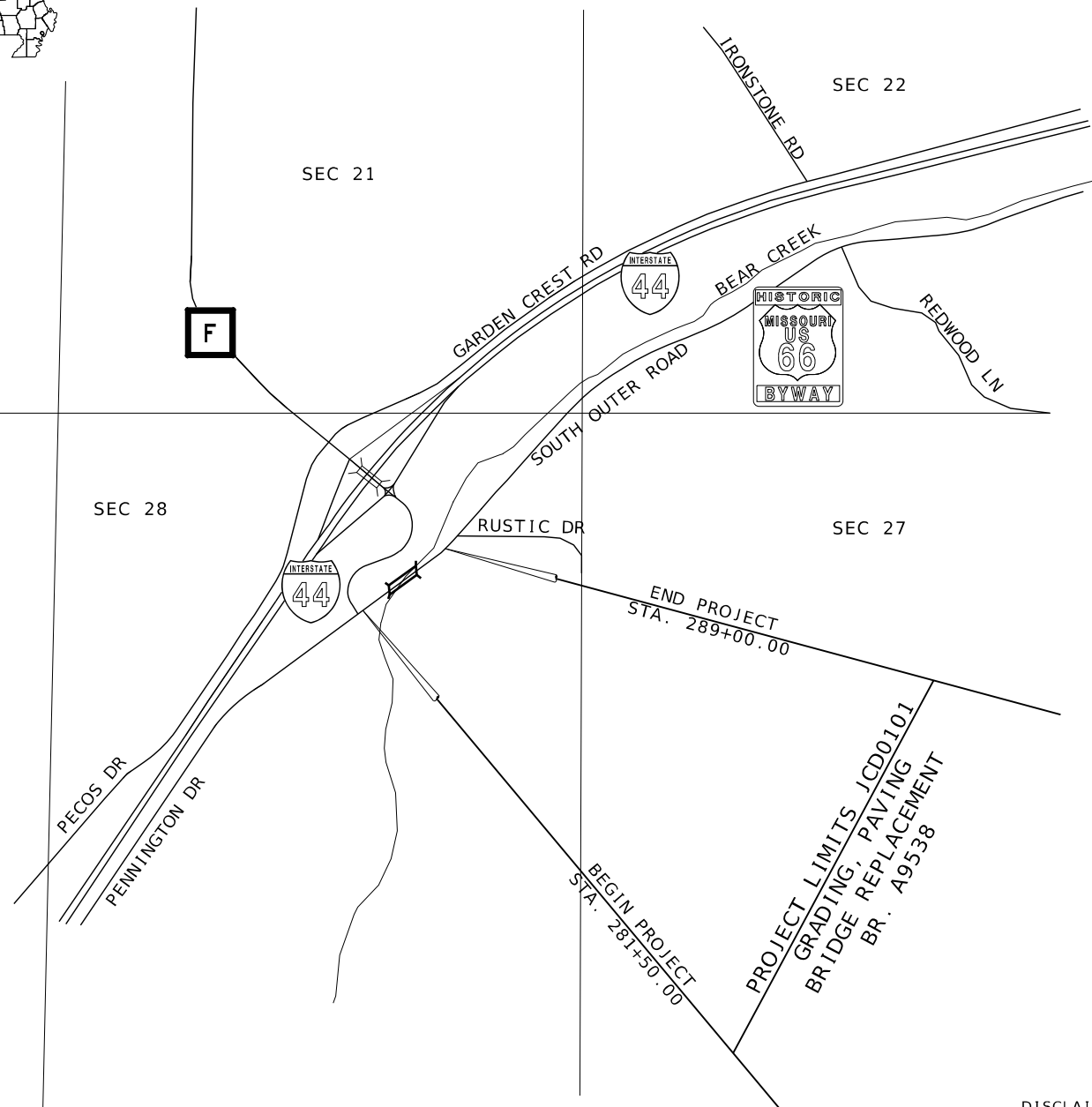
NO RIGHT OF WAY TO BE ACQUIRED

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY
LACLEDE COUNTY

T35N R15W SEC 28



NOT TO SCALE



CONVENTIONAL SYMBOLS

(USED IN PLANS)

- Legend for symbols: BUILDINGS AND STRUCTURES, GUARD RAIL, GUARD CABLE, CONCRETE RIGHT-OF-WAY MARKER, STEEL RIGHT-OF-WAY MARKER, LOCATION SURVEY MARKER, UTILITIES (FIBER OPTICS, OVERHEAD CABLE TV, UNDERGROUND CABLE TV, OVERHEAD TELEPHONE, UNDERGROUND TELEPHONE, OVERHEAD POWER, UNDERGROUND POWER, SANITARY SEWER, STORM SEWER, GAS, WATER), MANHOLE, FIRE HYDRANT, WATER VALVE, WATER METER, DROP INLET, DITCH BLOCK, GROUND MOUNTED SIGN, LIGHT POLE, H-FRAME POWER POLE, TELEPHONE PEDESTAL, FENCE (CHAIN LINK, WOVEN WIRE, GATE POST), BENCHMARK.

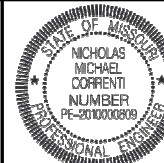
NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

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INDEX OF SHEETS

Table with columns: DESCRIPTION, SHEET NUMBER. Rows include: TITLE SHEET (1), TYPICAL SECTIONS (TS) (1 SHEET) (2), QUANTITIES (QU) (3 SHEETS) (3), PLAN-PROFILE (PP) (4-5), REFERENCE POINTS (RP) (6), TRAFFIC CONTROL (TC) (7-9), EROSION CONTROL (EC) (10), SIGNING & PAVEMENT MARKING (PM) (11-12), BRIDGE DRAWINGS (B) A9538 (1-25), CROSS SECTION (XS) (1-13).



11/27/2024 2:59:34 PM
Nicholas Michael Correnti - Civil
MO PE-2010000809

DATE PREPARED 11/27/2024

ROUTE STATE SOR 44E MO

DISTRICT SHEET NO. CD 1

COUNTY LACLEDE

JOB NO. JCD0101

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

Table with columns: DESCRIPTION, DATE.

LENGTH OF PROJECT

Table with columns: DESCRIPTION, VALUE. Rows include: BEGINNING OF PROJECT (STA. 281+50.00), END OF PROJECT (STA. 289+00.00), APPARENT LENGTH (750.00 FEET), EQUATIONS AND EXCEPTIONS (NONE).

Table with columns: DESCRIPTION, VALUE. Rows include: TOTAL CORRECTIONS (0.00 FEET), NET LENGTH OF PROJECT (750.00 FEET), STATE LENGTH (0.142 MILES), FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES (0.89 ACRES).

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



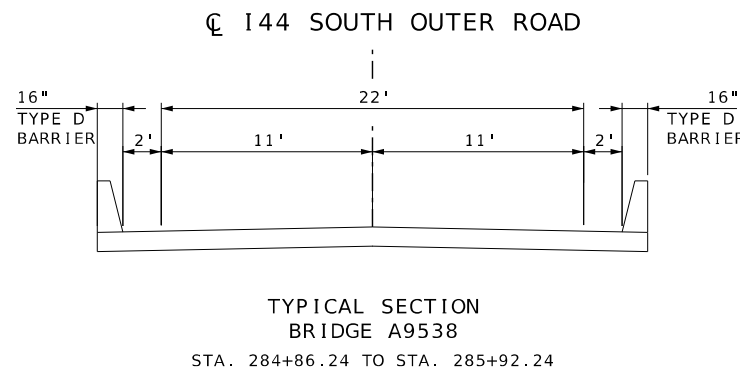
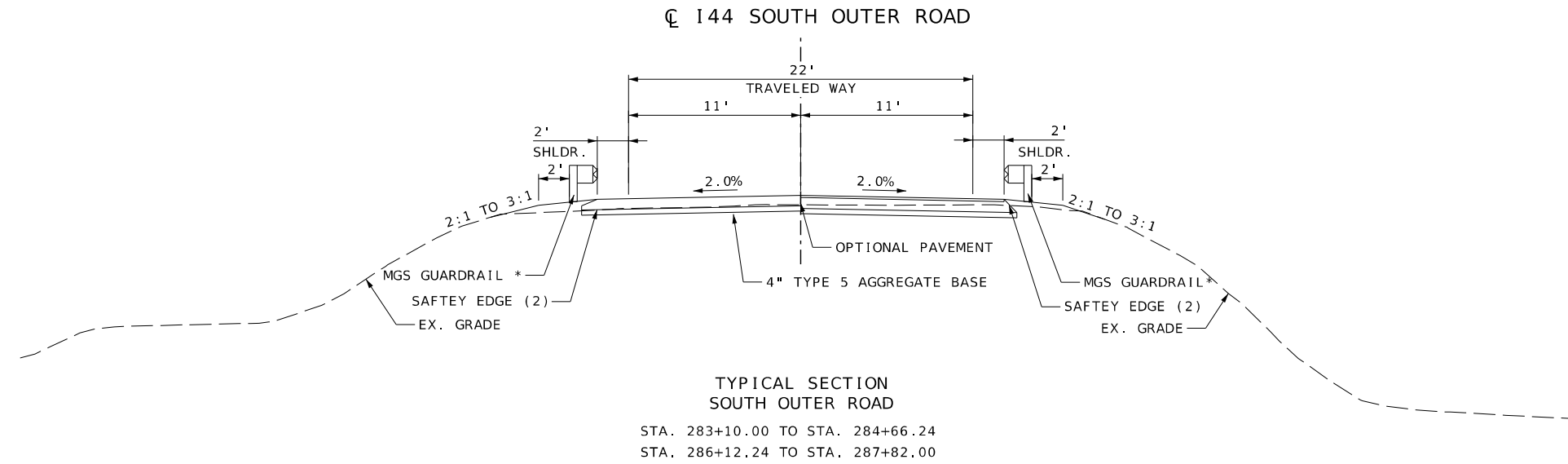
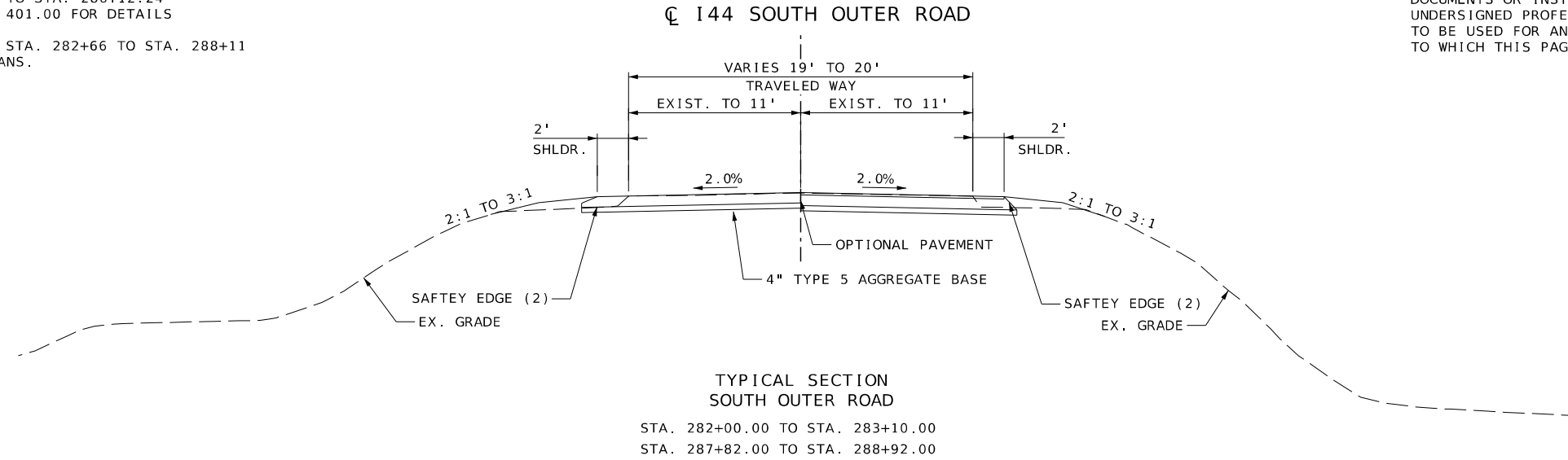
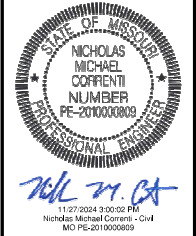
EFK Moen Civil Engineering Design

13523 Barrett Parkway Dr Suite 250 St. Louis, MO 63021 Phone 314-394-3100 Fax 314-394-3199 Missouri Certificate of Authority: 001578

- (1) BRIDGE EXCEPTION FOR BRIDGE APPROACH SLAB FROM STA. 284+66.24 TO STA. 284+86.24 AND STA. 285+92.24 TO STA. 286+12.24
- (2) SEE STANDARD PLANS 401.00 FOR DETAILS

*MGS GUARDRAIL BETWEEN STA. 282+66 TO STA. 288+11 AS SHOWN ON THE PLANS.

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OPTIONAL PAVEMENT	
ASPHALT OPTION	CONCRETE OPTION
2.0" BP-1 W/PG 64-22	8 IN. CONCRETE PAVEMENT
8.0" BITUMINOUS BASE W/ PG 64-22	(15 FT. JOINTS AND 1.25" DOWELS)

APPLICATION RATES:
 BP-1 PG64-22: 1.990 TONS/C.Y.
 BIT BASE PG64-22: 1.970 TONS/C.Y.
 TACK COAT: 0.10 GAL/S.Y. (COLDMILLED SURFACE)

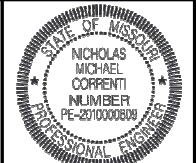
NOT TO SCALE

TYPICAL SECTION
 SHEET 1 OF 1



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Nick M. Correnti
 12/2/2024 10:42:01 AM
 Nicholas Michael Correnti - CIVIL
 MO PE-2010000809

REMOVAL OF IMPROVEMENTS								
SHEET NO.	STA	STA	LOC	ROADWAY	L.F.	S.F.	EACH	DESCRIPTIONS
4	282+00		LT&RT	I-44 SOR	23.3			FULL DEPTH SAWCUT
4-5	282+00	288+92	LT&RT	I-44 SOR		6623		PAVEMENT REMOVAL
4-5	283+34	286+95	RT	I-44 SOR	360.9			EXISTING GUARDRAIL
4	283+67		LT	I-44 SOR			1	EXISTING SIGN POST AND FOOTING
4-5	283+84	287+45	LT	I-44 SOR	361.1			EXISTING GUARDRAIL
4-5	286+12	288+92	LT&RT	I-44 SOR		7014		PAVEMENT REMOVAL
5	287+59		LT	I-44 SOR			1	EXISTING SIGN POST AND FOOTING
5	288+92		LT&RT	I-44 SOR	23.6			FULL DEPTH SAWCUT
					PAY TOTAL		1 LUMP SUM	

TYPE 5 AGGREGATE BASE							
SHEET NO.	ROADWAY	STA	STA	LOC	AREA	TYPE 5 AGG. FOR BASE	REMARKS
					S.F.	4 INCH THICK	
					S.F.	S.Y.	
4	I-44 SOR	282+00	284+66	LT&RT	6775.6	752.8	
4-5	I-44 SOR	286+12	288+92	LT&RT	7141.7	793.5	
					SUBTOTAL	1546.3	
					PAY TOTAL	1546	

OPTIONAL PAVEMENT							
SHEET NO.	ROADWAY	STA	STA	LOC	AREA	OPTIONAL PAVEMENT	REMARKS
					S.F.	S.Y.	
4	I-44 SOR	282+00	284+66	LT&RT	6775.6	752.8	
4-5	I-44 SOR	286+12	288+92	LT&RT	7141.7	793.5	
					SUBTOTAL	1546.3	
					PAY TOTAL	1546.3	

PERMANENT PAVEMENT MARKING							
SHEET NO.	ROADWAY	STA	STA	LOC	4" YELLOW WATERBORNE PAVEMENT MARKING TYPE P BEADS	4" WHITE WATERBORNE PAVEMENT MARKING TYPE P BEADS	REMARKS
					L.F.	L.F.	
11	I-44 SOR	282+00	288+92	CL	1384		DOUBLE SOLID YELLOW
11	I-44 SOR	282+00	288+92	LT		692	
11	I-44 SOR	282+00	288+92	RT		692	
					SUBTOTAL	1384	1384
					PAY TOTAL	1384	1384

MOBILIZATION	1 LUMP SUM
ADDITIONAL MOBILIZATION FOR SEEDING	4 EACH
CONTRACTOR FURNISHED SURVEYING AND STAKING	1 LUMP SUM

SEEDING AND MULCHING							
SHEET NO.	ROADWAY	STA	STA	LOC	PERMANENT SEEDING AND MULCHING - COOL SEASON MIXTURES	TEMPORARY SEEDING AND MULCHING	REMARKS
					ACRES	ACRES	
4-5	I-44 SOR	282+00	288+92	CL	0.35	0.50	SEE NOTES BELOW
					SUBTOTAL	1 LUMP SUM	
					PAY TOTAL	1 LUMP SUM	

NOTES:
 (1) LUMP SUM COST SHALL FOR SEEDING AND MULCHING SHALL COVER ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS.
 (2) SEED AND MULCH AREAS BASED OFF PROPOSED SLOPE LIMITS.
 (3) CONTRACTOR SHALL TAKE CARE TO NOT DISTURB MORE AREA THAN DEPICTED ON THE PLANS.

SUMMARY OF QUANTITIES
 SHEET 1 OF 3

DESCRIPTION

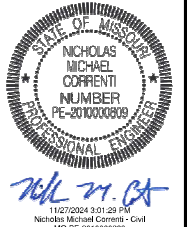
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



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

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EROSION CONTROL										
SHEET NO.	ROADWAY	STA	STA	LOC	SILT FENCE	ROCK DITCH CHECK	ALTERNATE DITCH CHECK	TYPE C BERM	SEDIMENT REMOVAL	REMARKS
					L.F.	L.F.	L.F.	L.F.	C.Y.	
10	I-44 SOR	281+88	285+56	LT	357				4	
10	I-44 SOR	281+88	284+54	RT	268	90			8	
10	I-44 SOR	284+47	285+72	LT&RT				161		
10	I-44 SOR	285+23	289+00	RT	368				4	
10	I-44 SOR	285+93	289+07	LT	315				3	
10	I-44 SOR	285+33	285+94	LT&RT				154		
10	I-44 SOR	281+88	289+07	LT&RT		75	150		5	DITCH CHECKS TO BE PLACED AS DIRECTED BY THE ENGINEER
SUBTOTAL					1308	165	150	315	24	
PAY TOTAL					1308	165	150	315	24	

EARTHWORK							
XS SHEET NO	ROADWAY	LOC.	CLASS A EXCAVATION	FILL	COMPACTING EMBANKMENT	SUBGRADE COMPACTION, 6 IN DEPTH	REMARKS
			C.Y.	C.Y.	C.Y.	100 FT	
1-13	I-44 SOR	LT&RT	386	196	196		
1-13	I-44 SOR	LT&RT				3	WEST OF BRIDGE OPTIONAL PAVEMENT AREA
1-13	I-44 SOR	LT&RT				3	EAST OF BRIDGE OPTIONAL PAVEMENT AREA
SUBTOTAL			386		196	6	
PAY TOTAL			386		196	6	

NOTE: ASSUMING 25% SHRINKAGE

ROCK BLANKET									
SHEET NO.	ROADWAY	STA	STA	LOC	FURNISHING	PLACING	PERMANENT	REMARKS	
					TYPE 2 ROCK BLANKET	TYPE 2 ROCK BLANKET	EROSION CONTROL GEOTEXTILE		
					C.Y.	C.Y.	S.Y.		
4	I-44 SOR	284+38	286+39	LT & RT	821.0	821.0	849.9		
SUBTOTAL					821.0	821.0	849.9		
PAY TOTAL					821	821	850		

GUARDRAIL								
SHEET NO.	ROADWAY	STA	STA	LOC	MGS BRIDGE APPROACH TRANSITION SECTION (REGULAR/NO CURB)	MGS GUARDRAIL	TYPE A CRASHWORTHY END TERMINAL (MASH)	REMARKS
					EA.	L.F.	EA.	
4	I-44 SOR	282+66	284+38	RT	1	100.0	1	
4	I-44 SOR	283+78	284+87	LT	1	37.5	1	
4-5	I-44 SOR	285+92	287+01	RT	1	37.5	1	
4-5	I-44 SOR	286+39	288+11	LT	1	100.0	1	
SUBTOTAL					4	275.0	4	
PAY TOTAL					4	275	4	

SUMMARY OF QUANTITIES
 SHEET 2 OF 3

DESCRIPTION

DATE

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

Table with columns: SIGN, SIZE IN., AREA SQ. FT., QTY EACH, TOTAL AREA SQ. FT., QTY RELOC EACH, TOTAL RELOC SQ. FT., SIGN NUM., DESCRIPTION. Contains rows for Warning Signs (WO1-1L to WO22-1), Regulatory Signs (R1-1 to R11-3a), and Miscellaneous Signs (CONST-5 to CONST-8).

Table with columns: SIGN, SIZE IN., AREA SQ. FT., QTY EACH, TOTAL AREA SQ. FT., QTY RELOC EACH, TOTAL RELOC SQ. FT., SIGN NUM., DESCRIPTION. Contains rows for Guide Signs (E05-1 to M5-1L) and Relocated Signs (616-10.05 to 616-10.10).

Table with columns: ITEM NUMBER, TOTAL QTY, DESCRIPTION. Lists items such as IMPACT ATTENUATOR, BUOYS, FLASHING ARROW PANEL, TEMPORARY TRAFFIC BARRIER, etc.

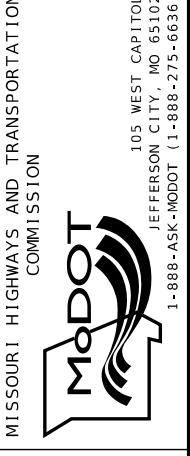
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SUMMARY OF QUANTITIES SHEET 3 OF 3



Project information form including: DATE PREPARED 11/27/2024, ROUTE SOR 44E, STATE MO, DISTRICT CD, SHEET NO. 3, COUNTY LACLEDE, JOB NO. JCD0101, CONTRACT ID.

Table with columns: DATE, DESCRIPTION. For project description details.



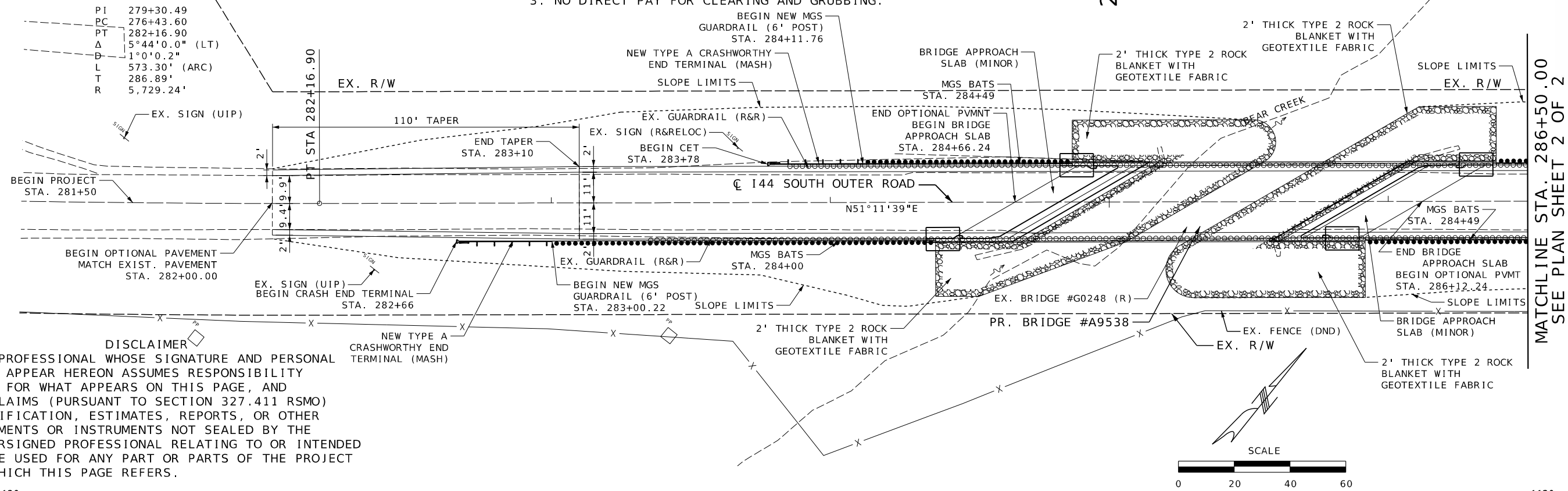
EFK Moen Civil Engineering Design, 13523 Barrett Parkway Dr, Suite 250, St. Louis, MO 63021. Phone 314-394-3100, Fax 314-394-3199. Missouri Certificate of Authority: 001578.

EXISTING BRIDGE G0248: FILL FACE STA. 284+96, 60° SKEW
REMOVE 1-SPAN, 90', SUPERSTRUCTURE, & SUBSTRUCTURE.

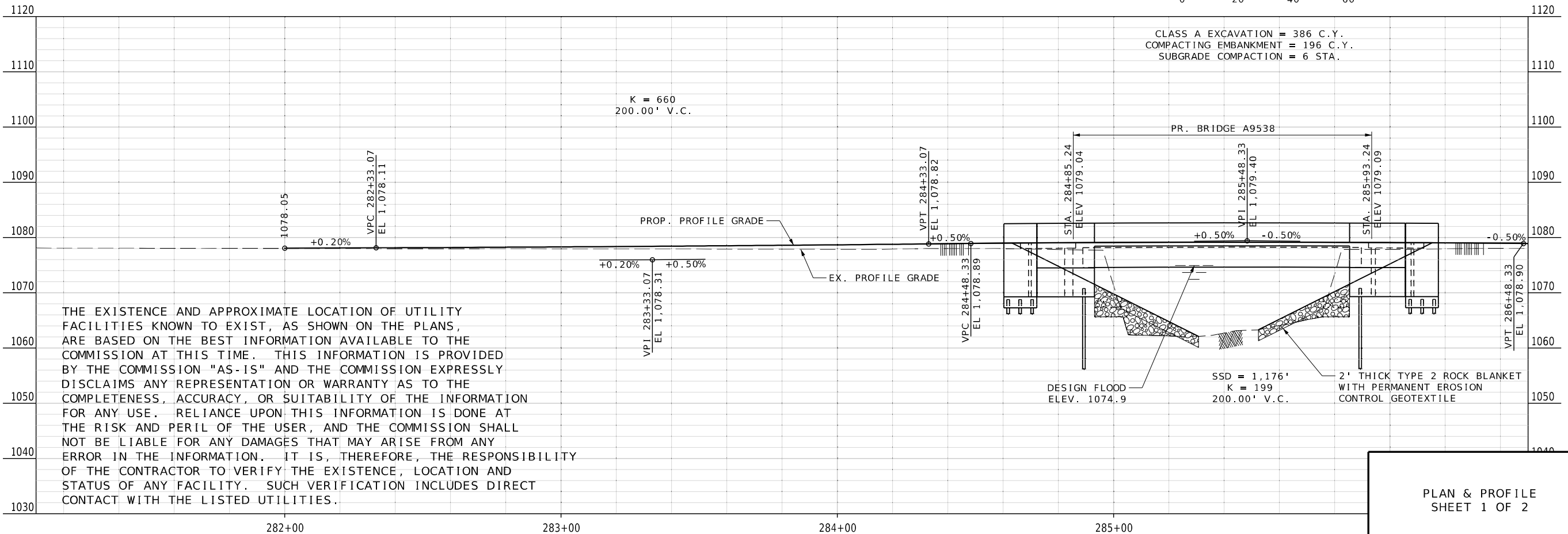
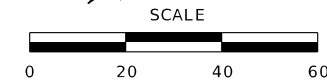
CONSTRUCT 1-SPAN, 100' PRESTRESSED CONCRETE NU-GIRDER BRIDGE
(A9538). FILL FACE STA. 284+85.24, 60° L.A. SKEW CONSTRUCT
BRIDGE RAIL (TYPE D BARRIER) & BRIDGE APPROACH SLAB (MINOR).

NOTES:

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2. ANY WORK INDICATED OF THE PLANS THAT EXTENDS BEYOND THE PROJECT LIMITS IS CONSIDERED INCIDENTAL TO AND A PART OF THE CONSTRUCTION OF THIS PROJECT.
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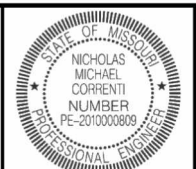


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PLAN & PROFILE
SHEET 1 OF 2



11/27/2024 3:03:02 PM
Nicholas Michael Correnti - Civil
MO PE-201000809

DATE PREPARED 11/27/2024	
ROUTE SOR 44E	STATE MO
DISTRICT CD	SHEET NO. 4
COUNTY LACLEDE	
JOB NO. JCD0101	
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)

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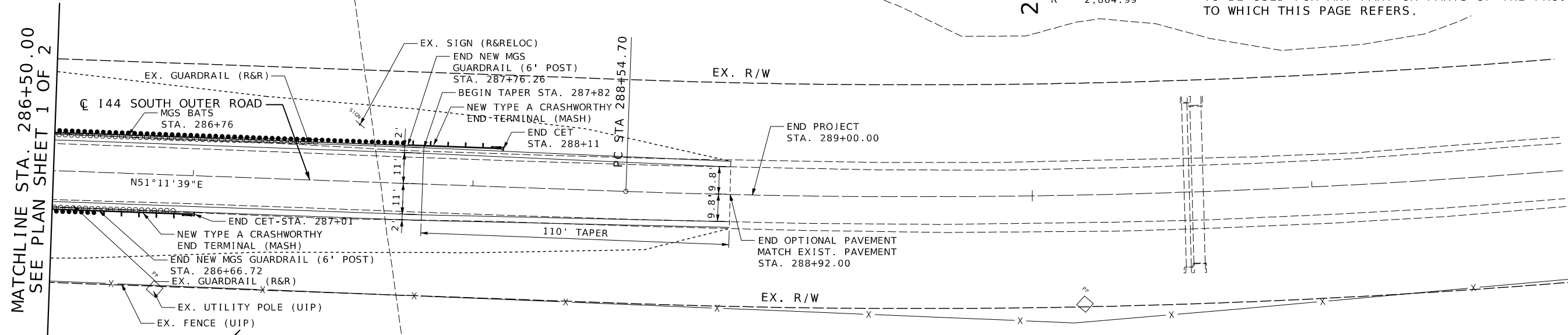
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REMOVE 1-SPAN, 90', SUPERSTRUCTURE, & SUBSTRUCTURE.

CONSTRUCT 1-SPAN, 100' PRESTRESSED CONCRETE NU-GIRDER BRIDGE
(A9538). FILL FACE STA. 284+85.24, 60° L.A. SKEW CONSTRUCT
BRIDGE RAIL (TYPE D BARRIER) & BRIDGE APPROACH SLAB (MINOR).

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PI 290+94.86
PC 288+54.70
PT 293+33.90
Δ 9°35'0.0" (LT)
D 1°59'59.5"
L 479.20' (ARC)
T 240.16'
R 2,864.99'

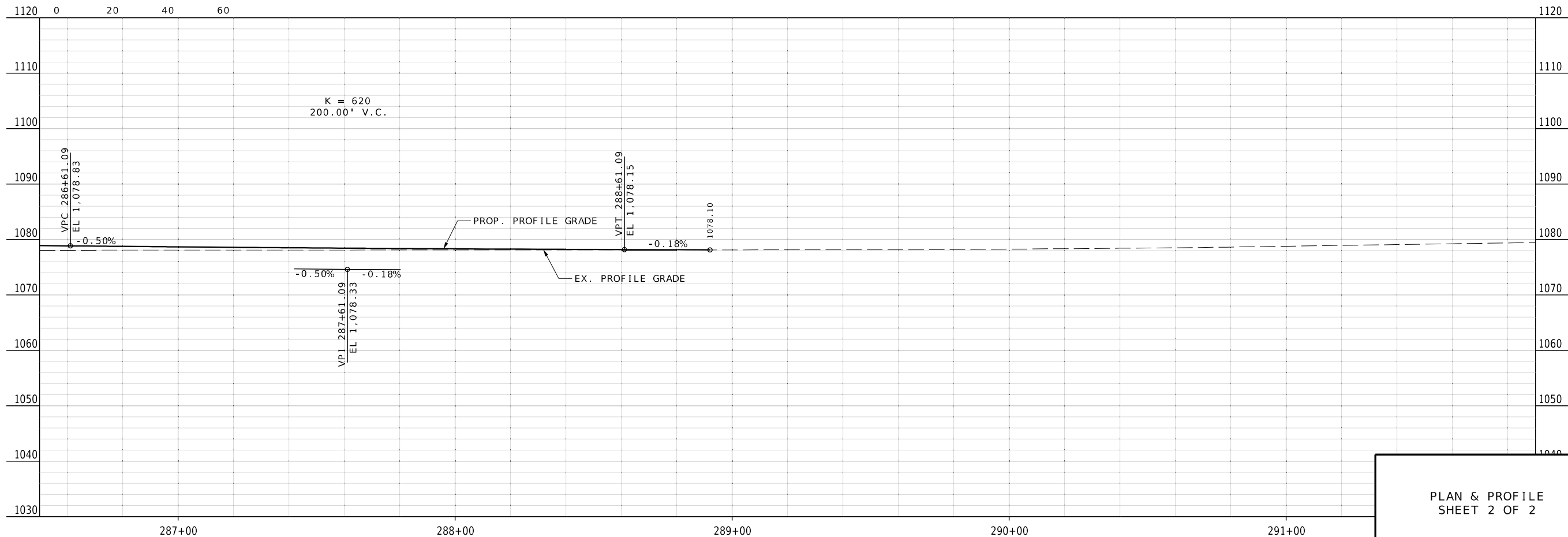


MATCHLINE STA. 286+50.00
SEE PLAN SHEET 1 OF 2



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11/27/2024 3:03:29 PM
Nicholas Michael Correnti - CIVIL
MO PE-2010000809

DATE PREPARED 11/27/2024	
ROUTE SOR 44E	STATE MO
DISTRICT CD	SHEET NO. 5
COUNTY LACLEDE	
JOB NO. JCD0101	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

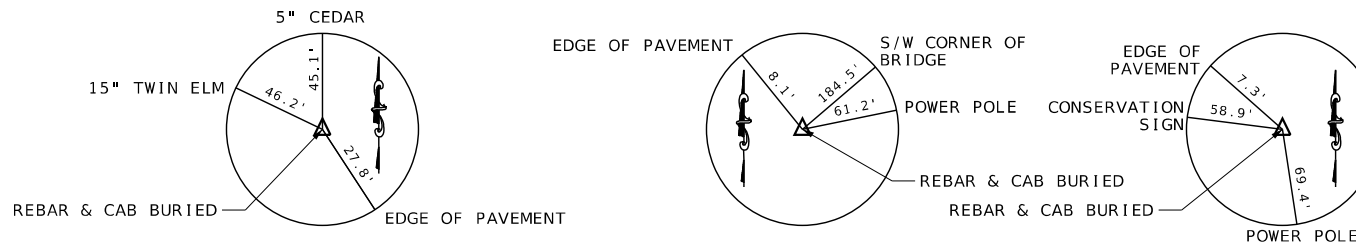
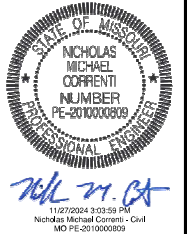
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PLAN & PROFILE
SHEET 2 OF 2

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CONTROL POINT NO. 801
 BURIED REBAR & CAP
 N: 693531.387
 E: 1614183.496
 EL: 1118.61

CONTROL POINT NO. 802
 BURIED REBAR & CAP
 N: 694385.180
 E: 1615540.014
 EL: 1077.26

CONTROL POINT NO. 803
 BURIED REBAR & CAP
 N: 695119.302
 E: 1616369.147
 EL: 1081.49

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	MODIFIED STATE PLANE
HORIZONTAL DATUM	NAD 1983
VERTICAL DATUM	NAVD88
GEOID MODEL	G2018U7
ELEVATIONS DETERMINED BY	MODOT GNSS
PROJECT PROJECTION FACTOR	1.00011370
REFERENCE CONTROL INFORMATION	
COORDINATE SYSTEM	
CONTROL STATION	
DESIGNATION	MODOT NEBO CORS ARP
CORS_ID	MONF
PID	DN7496
LATITUDE	373419.54018
LONGITUDE	922033.30401
NORTHING (M)	192952.769
EASTING (M)	513905.224
ZONE	CENTRAL
PROJECT AVERAGE GRID FACTOR	0.99988666
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 #CP801 N 693531.387 X 0.9998866 = N 693452.782 E 1614183.496 X 0.9998866 = E 1614000.448	
LINEAR UNIT CONVERSION	
1 METER = 3.280833333 US SURVEY FEET (USFT)	

PROJECT COORDINATE INFORMATION		COORDINATE POINT LISTING							
SHEET NO	STATION	LOCATION	OFFSET (USFT)	MODIFIED STATE PLANE (GROUND)			DESCRIPTION	GPK POINT ID	
				NORTHING (US SURVEY FT)	EASTING (US SURVEY FT)	ELEVATION (US SURVEY FT)			
PROJECT CONTROL POINTS									
	266+87.09	I-44 SOR	41.51' LT	693,531.387	1,614,183.496	1,118.61	BURIED REBAR & CAP	801	
4	282+88.03	I-44 SOR	19.63' RT	694,385.180	1,615,540.014	1,077.26	BURIED REBAR & CAP	802	
	293+94.38	I-44 SOR	17.44' RT	695,119.302	1,616,369.147	1,081.49	BURIED REBAR & CAP	803	
4	280+45.90	I-44 SOR	66.80' LT	694,304.025	1,615,297.153	1,077.94	CHISELED "L" IN NW CORNER OF CULVERT H.W. UNDER RTE. F	BM 1-23	
ALIGNMENTS									
	255+15.60	I-44 SOR		692,593.377	1,613,474.288		POINT OF BEGINNING		
	261+57.30	I-44 SOR		693,123.754	1,613,835.506		PC		
	264+45.91	I-44 SOR		693,362.299	1,613,997.968		PI		
	267+26.90	I-44 SOR		693,519.318	1,614,240.131		PT		
	276+43.60	I-44 SOR		694,019.559	1,615,008.309		PC		
	279+30.49	I-44 SOR		694,176.114	1,615,248.717		PI		
4	282+16.90	I-44 SOR		694,355.902	1,615,472.283		PT		
4	288+54.70	I-44 SOR		694,755.599	1,615,969.305		PC		
	290+94.86	I-44 SOR		694,906.103	1,616,156.456		PI		
	293+33.90	I-44 SOR		695,085.664	1,616,315.939		PT		
	309+07.00	I-44 SOR		696,261.825	1,617,360.586		POINT OF ENDING		

DESCRIPTION
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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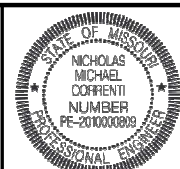
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REFERENCE/COORDINATE POINT SHEET 1 OF 1

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD
- BRIDGE REPLACEMENT WORK AREA

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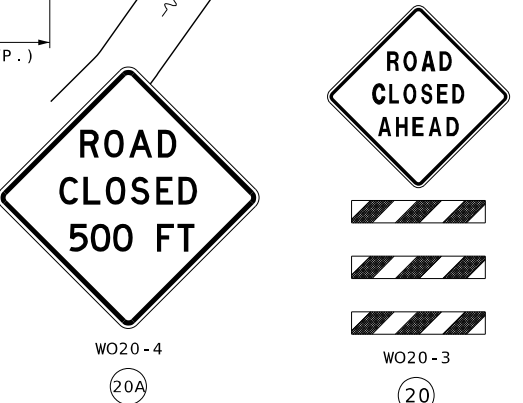
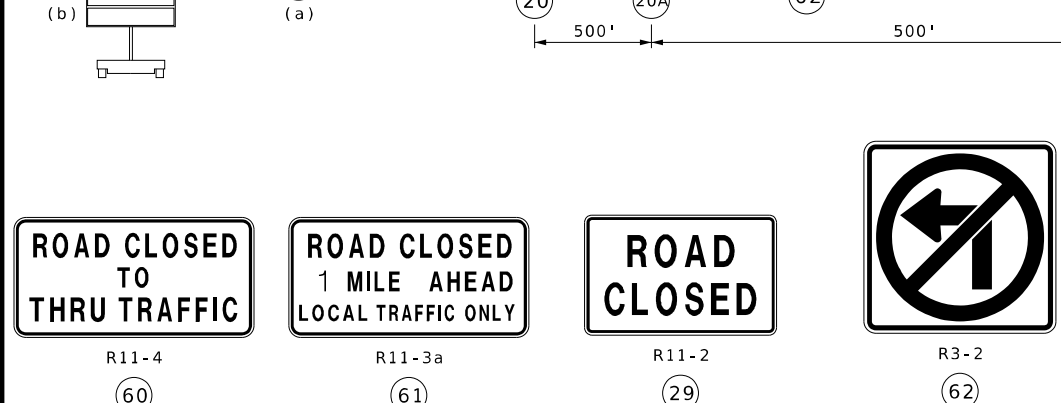
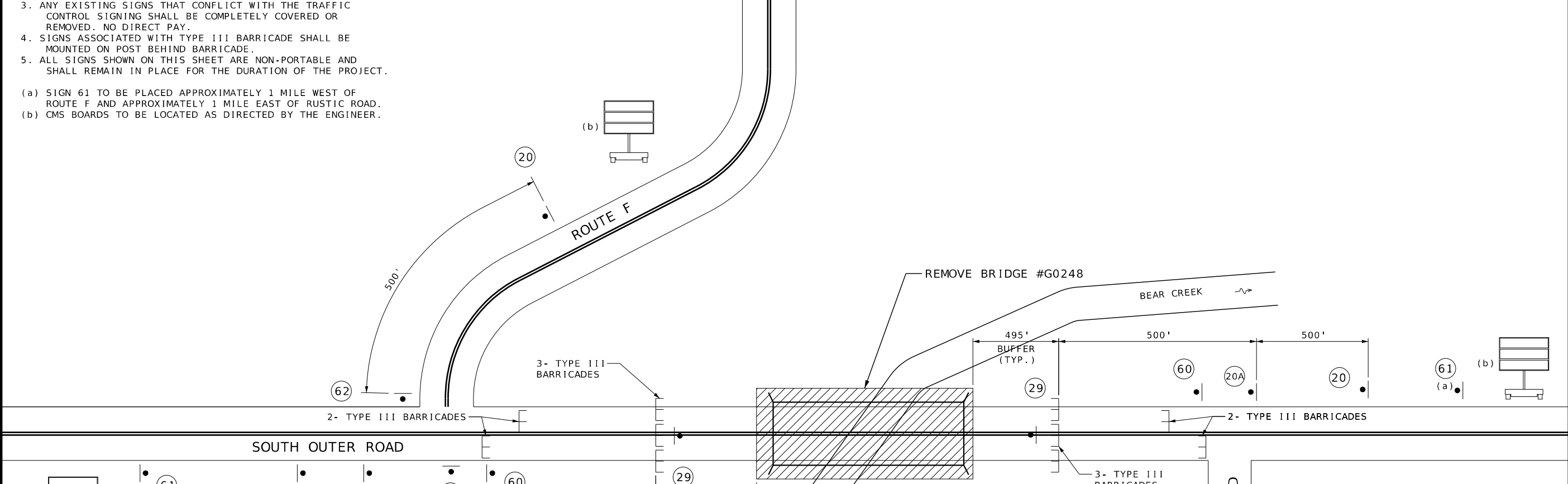
NM
11/27/2024 3:04:49 PM
 Nicholas Michael Correnti - Civil
 MO-PE-2010000809

DATE PREPARED	
11/27/2024	
ROUTE	STATE
SOR 44E	MO
DISTRICT	SHEET NO.
CD	7
COUNTY	
LACLEDE	
JOB NO.	
JCD0101	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

GENERAL NOTES:

1. PLACEMENT OF TRAFFIC CONTROL SIGNS IS APPROXIMATE AND MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
2. SIGN SPACING 500' OR AS DIRECTED BY THE ENGINEER.
3. ANY EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED. NO DIRECT PAY.
4. SIGNS ASSOCIATED WITH TYPE III BARRICADE SHALL BE MOUNTED ON POST BEHIND BARRICADE.
5. ALL SIGNS SHOWN ON THIS SHEET ARE NON-PORTABLE AND SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.

(a) SIGN 61 TO BE PLACED APPROXIMATELY 1 MILE WEST OF ROUTE F AND APPROXIMATELY 1 MILE EAST OF RUSTIC ROAD.
 (b) CMS BOARDS TO BE LOCATED AS DIRECTED BY THE ENGINEER.



NOT TO SCALE

TRAFFIC CONTROL SHEET 1 OF 3

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
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Civil Engineering Design

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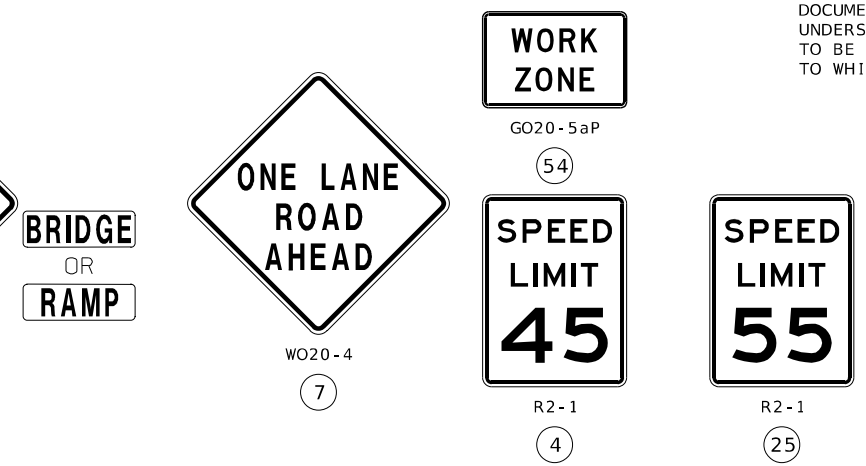
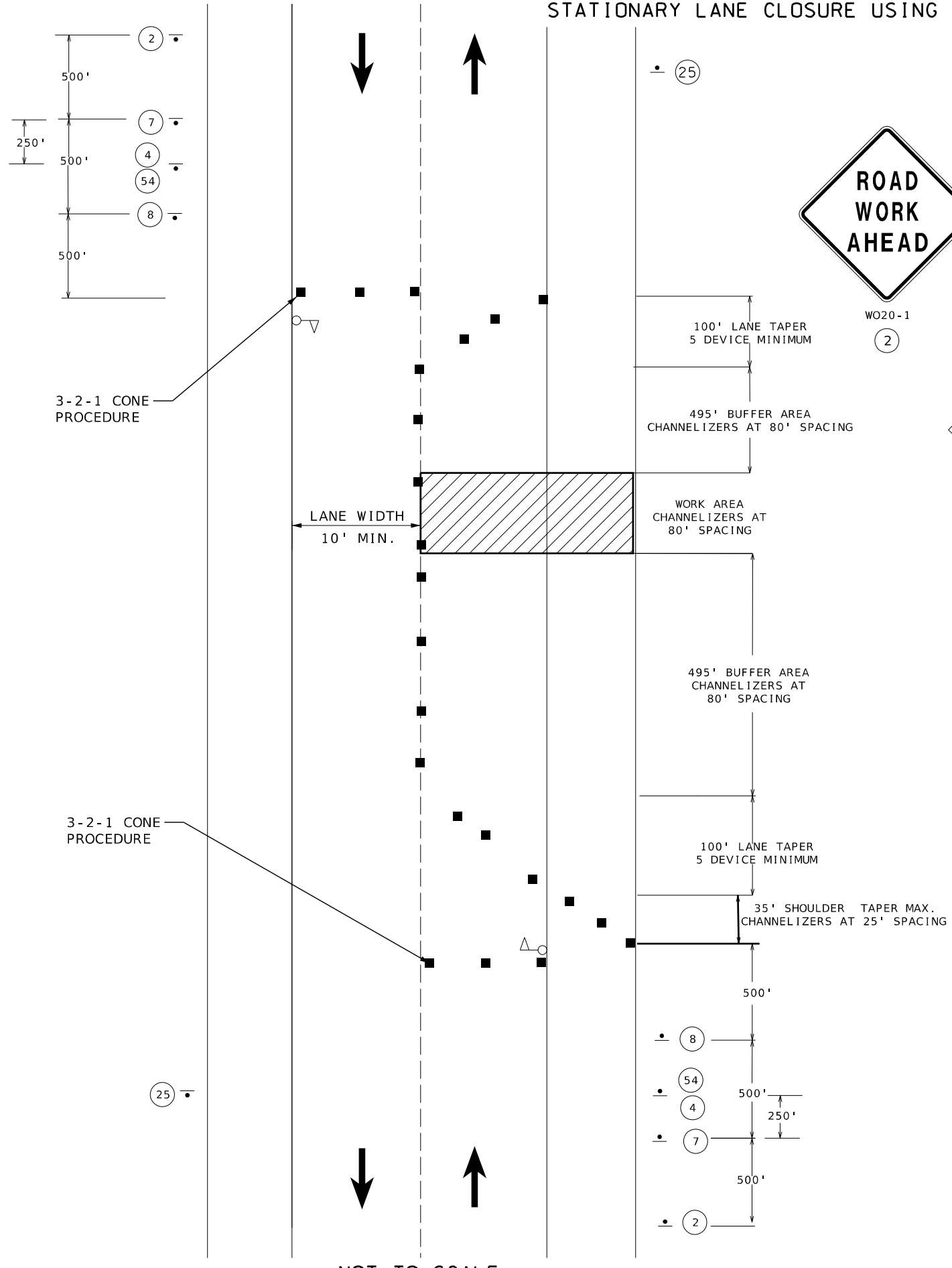
STATIONARY LANE CLOSURE USING FLAGGERS ON TWO-LANE ROAD

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DISTRICT	SHEET NO.	CD	8
COUNTY			
LACLEDE			
JOB NO.			
JCD0101			
CONTRACT ID.			
PROJECT NO.			
BRIDGE NO.			



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER
- ◁ FLAGGER
- ▨ WORK AREA

NOTES:

- FLAGGERS MUST MAINTAIN A MINIMUM OF 100 FT FROM EQUIPMENT AND/OR WORKERS.
- THE CONTRACTOR SHALL PROVIDE LIGHTING FOR THE FLAGGER STATIONS AT NIGHT AT NO DIRECT PAY. THE STATION SHALL BE ILLUMINATED WITH AN AVERAGE MAINTAINED INTENSITY OF 0.6 FOOTCANDLES.
- THE CONTRACTOR SHALL BE RESPONSIBLE WITH PROVIDING AND ENSURING THE FLAGGERS HAVE CURRENT FLAGGER CERTIFICATION TRAINING AS SPECIFIED IN SEC 616.
- THE CONTRACTOR SHALL MAKE ADJUSTMENTS TO WORK ZONE TO FIT ACTUAL FIELD CONDITIONS.

TRAFFIC CONTROL
 SHEET 2 OF 3

DATE	DESCRIPTION

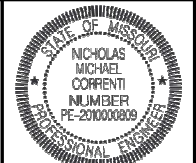
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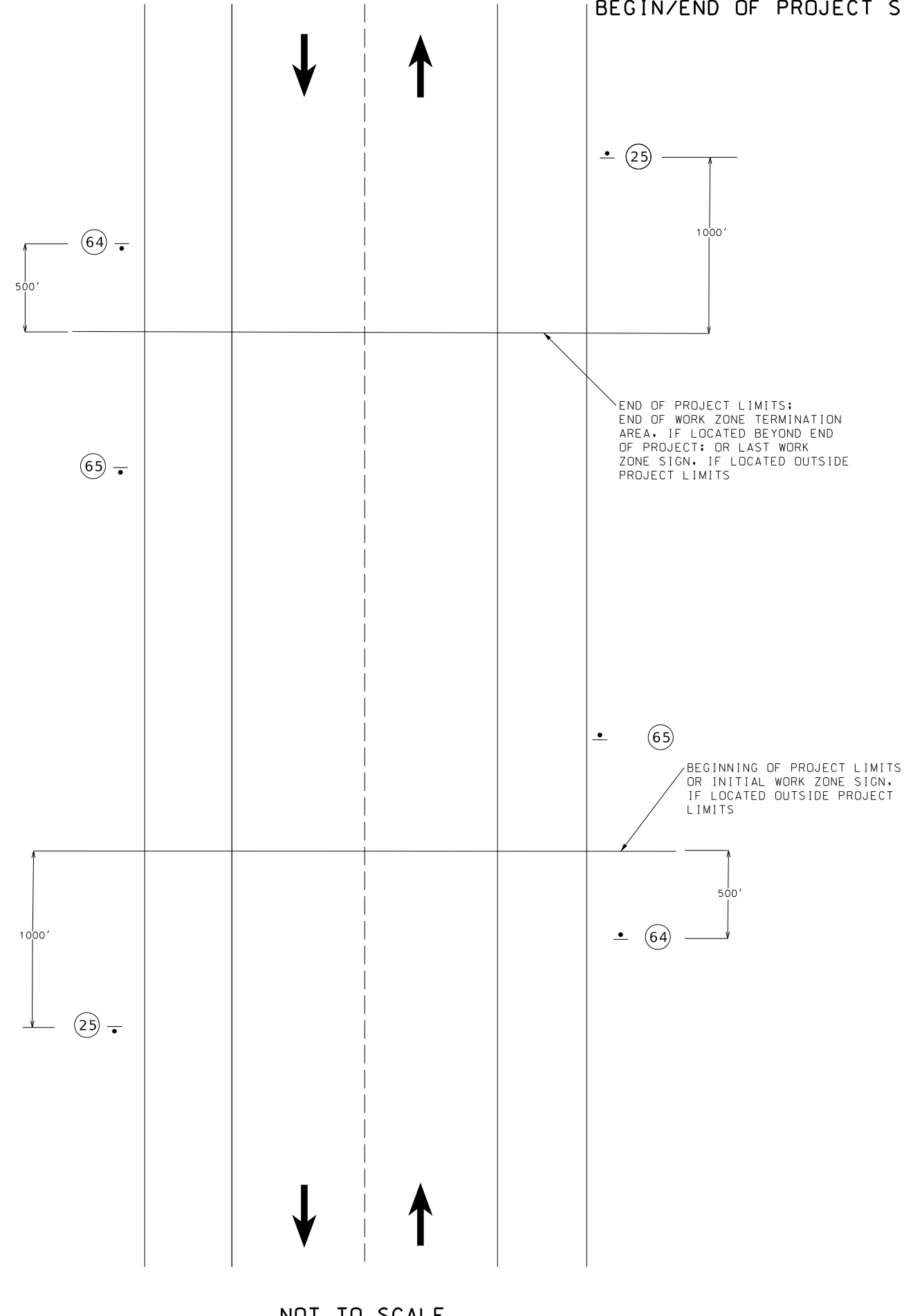
BEGIN/END OF PROJECT SIGNING FOR UNDIVIDED TWO-LANE

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ROUTE SOR 44E	STATE MO
DISTRICT CD	SHEET NO. 9
COUNTY LACLEDE	
JOB NO. JCD0101	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	



END OF PROJECT LIMITS;
 END OF WORK ZONE TERMINATION
 AREA, IF LOCATED BEYOND END
 OF PROJECT; OR LAST WORK
 ZONE SIGN, IF LOCATED OUTSIDE
 PROJECT LIMITS

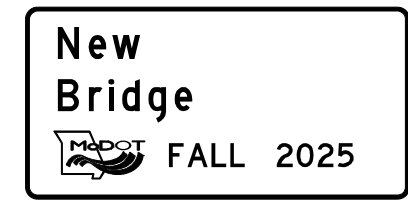
BEGINNING OF PROJECT LIMITS;
 OR INITIAL WORK ZONE SIGN,
 IF LOCATED OUTSIDE PROJECT
 LIMITS



R2-1
(25)



CONST-8
(64)



CONST-5-96
(65)
(3)

- NOTES:
- (1) THE CONTRACTOR IS RESPONSIBLE FOR COMPLETELY COVERING OR REMOVING ALL EXISTING SIGNING, PAVEMENT MARKING, OR SIGNALS THAT CONFLICTS WITH THE TEMPORARY TRAFFIC CONTROL
 - (2) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ADJUSTMENTS ACCORDING TO FIELD CONDITIONS. WHERE TRAFFIC BACKUPS OCCUR OR ARE EXPECTED BEYOND THE ADVANCE WARNING AREA. THE CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING ADDITIONAL SIGNING.
 - (3) THE CONTRACTOR SHALL INSTALL SIGN 65 IN A VISIBLE AREA WITHIN THE PROJECT LIMITS THAT DOES NOT DISRUPT THE SEQUENCE OF OTHER WORK ZONE SIGNS. IF THIS LOCATION CANNOT BE FOUND WITHIN THE PROJECT, THE CONTRACTOR MAY INSTALL THE SIGN 500 FEET PRIOR TO SIGN 50.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
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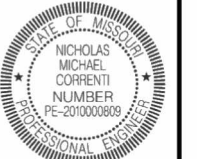
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TRAFFIC CONTROL
 SHEET 3 OF 3

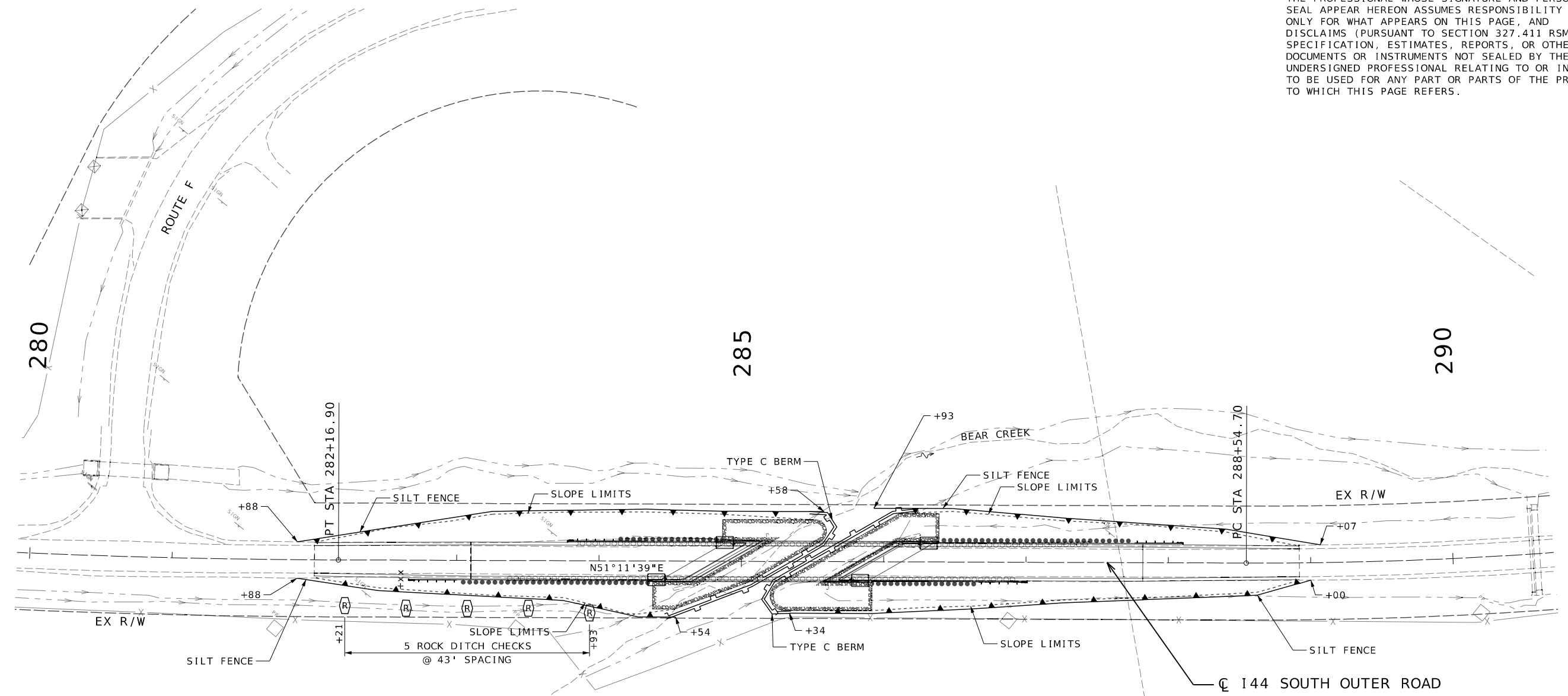
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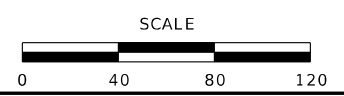
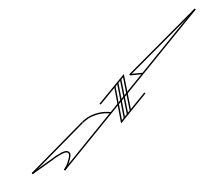
DATE PREPARED		11/27/2024	
ROUTE	STATE		
SOR 44E	MO		
DISTRICT	SHEET NO.		
CD	10		
COUNTY			
LACLEDE			
JOB NO.			
JCD0101			
CONTRACT ID.			
PROJECT NO.			
BRIDGE NO.			



TEMPORARY EROSION CONTROL LEGEND

-  ROCK DITCH CHECK
-  TEMPORARY BERM TYPE C
-  SILT FENCE

PRIMARY RECEIVING WATER: BEAR CREEK



EROSION CONTROL
 SHEET 1 OF 1

DATE	DESCRIPTION

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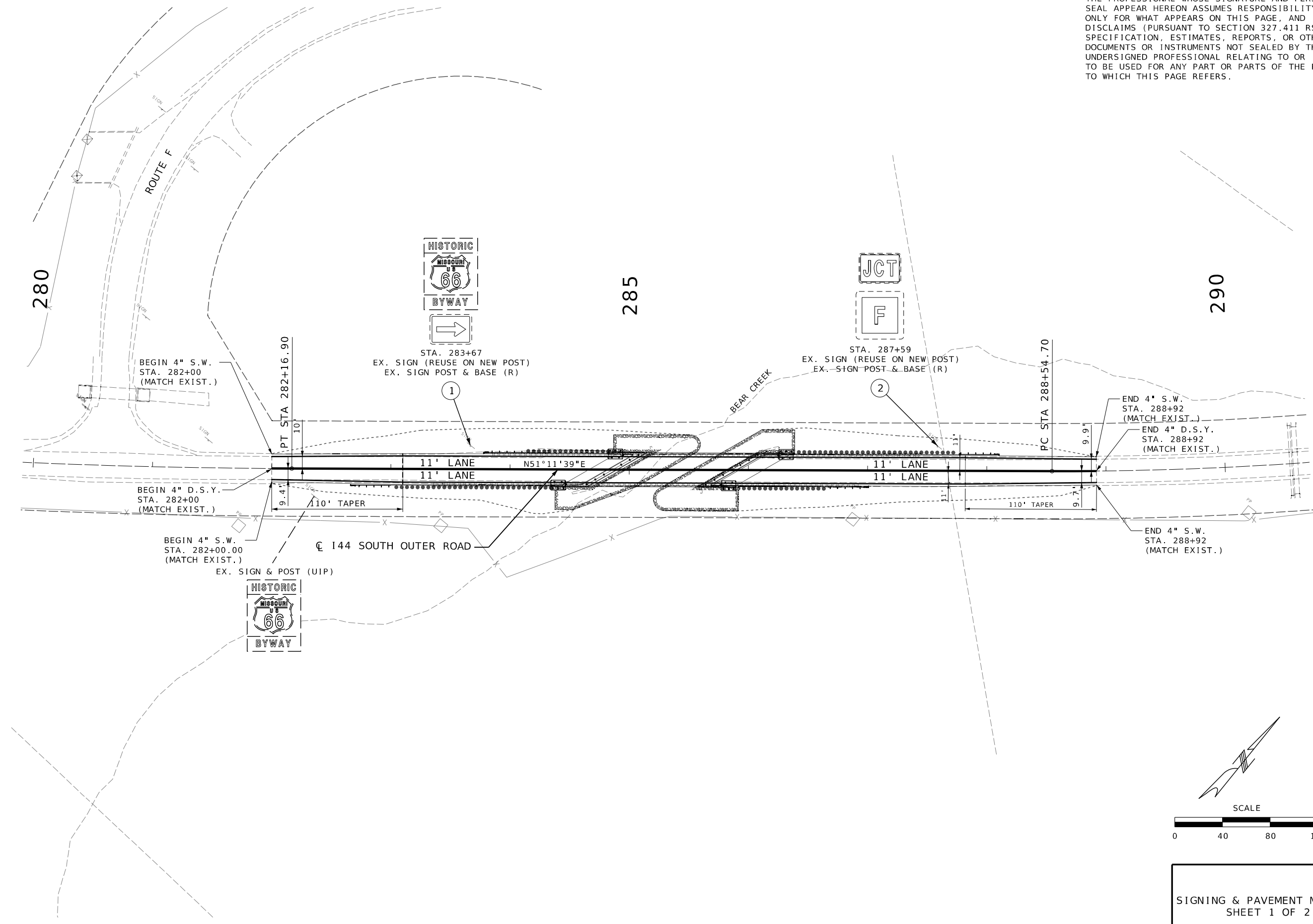
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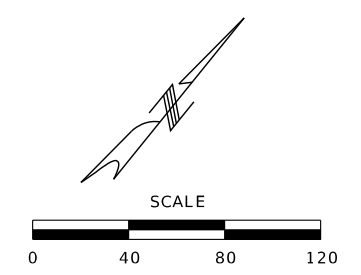
DATE PREPARED 11/27/2024	
ROUTE SOR 44E	STATE MO
DISTRICT CD	SHEET NO. 11
COUNTY LACLEDE	
JOB NO. JCD0101	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	



DATE	DESCRIPTION

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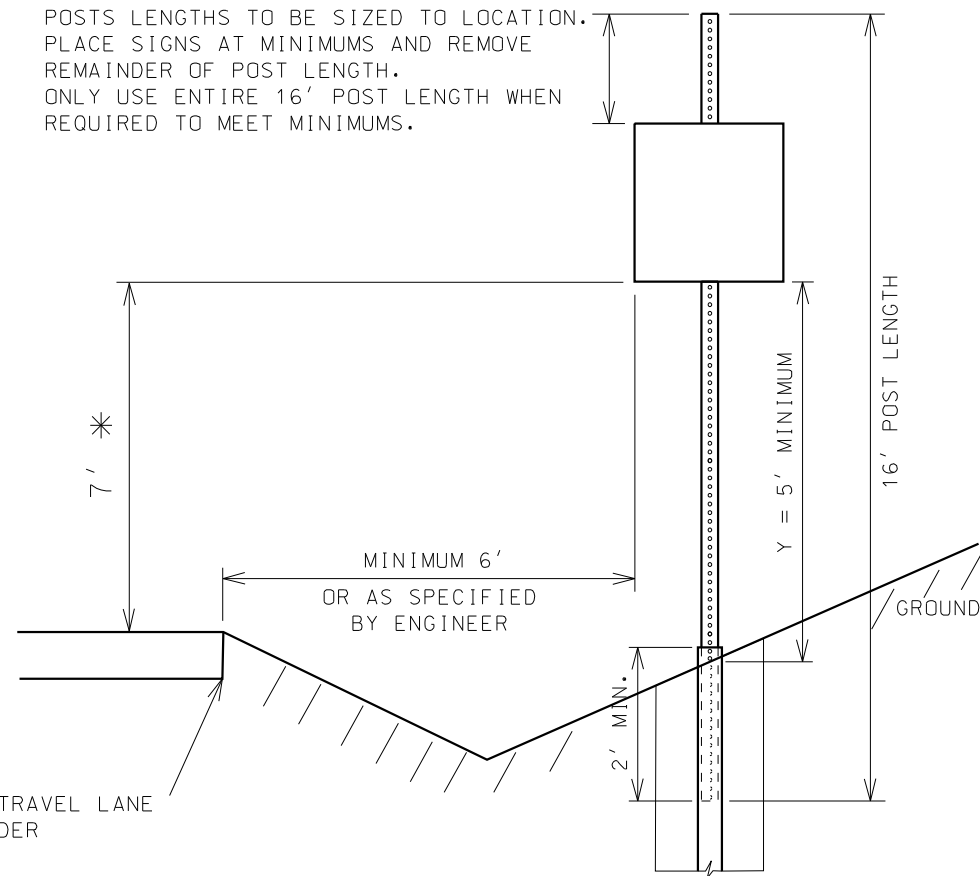


SIGNING & PAVEMENT MARKING
 SHEET 1 OF 2

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MOUNTING HEIGHT DETAIL

POSTS LENGTHS TO BE SIZED TO LOCATION. PLACE SIGNS AT MINIMUMS AND REMOVE REMAINDER OF POST LENGTH. ONLY USE ENTIRE 16' POST LENGTH WHEN REQUIRED TO MEET MINIMUMS.



SEE STANDARD PLANS 903.03 FOR INSTALLATION DETAILS

- POSTS - 12 GAUGE - 2.5" X 2.5"
- ANCHORS - 7 GAUGE - 3" X 3" O.D.
- BREAKAWAY - CERTIFIED NCHRP 350 COMPLIANT USE REQUIRED FOR DOUBLE POST INSTALLATIONS ONLY
- GALVANIZATION - ALL PSST POSTS, ANCHORS AND BREAKAWAY CASTINGS SHALL BE GALVANIZED PER MoDOT STANDARD SPECIFICATIONS

* 7' MINIMUM REQUIRED IN URBAN APPLICATIONS AND PREFERRED IN RURAL APPLICATIONS. IN RURAL APPLICATIONS ONLY - IN SITUATIONS WHERE THE 7' MINIMUM CAN NOT BE ATTAINED WITH A 16' PSST A RANGE OF 5' - 7' CAN BE USED AS LONG AS DISTANCE "Y" IS ALSO MAINTAINED.

NOTE: PERFORATED SQUARE STEEL TUBE (PSST) POSTS ARE PAID AS 16 LINEAR FOOT. CONTRACTOR IS RESPONSIBLE TO PROPERLY PLACE SIGN AS SHOWN ABOVE IN "MOUNTING HEIGHT DETAIL"

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ROUTE SOR 44E	STATE MO
DISTRICT CD	SHEET NO. 12
COUNTY LACLEDE	
JOB NO. JCD0101	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102
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SIGNS				PERFORATED SQUARE STEEL TUBE														EFFECTIVE: 07-01-2024	REMARKS AND OTHER REQUIRED ITEMS
SIGN NO.	SIGN SIZE	STATION OR LOG MILE	HORIZ CLEAR IF NOT LOCATION	2- INCH POST						2.5- INCH POST						BREAK- AWAY ASSEMBLY			
				POST NO. 1	POST NO. 2	TOTAL	ANCHORS			POST NO. 1	POST NO. 2	TOTAL	ANCHORS						
				ITEM NO. 9031270A	ITEM NO. 9031271A	ITEM NO. 9031273A	ITEM NO. 9031274	ITEM NO. 9031280	ITEM NO. 9031272A	ITEM NO. 9031281A	ITEM NO. 9031285	ITEM NO. 9031241	ITEM NO. 9031280	ITEM NO. 9031272A	ITEM NO. 9031281A	ITEM NO. 9031285	ITEM NO. 9031241		
1	EXIST.	283+67	1-44 SOR										16	16			1		
2	EXIST.	287+59	1-44 SOR										16	16			1		
SUBTOTAL																			
TOTAL														32	32		2		

NOT TO SCALE

SIGNING & PAVEMENT MARKING
2.5" PSST POST DETAILS
SHEET 2 OF 2

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(100') PRESTRESSED CONCRETE NU-GIRDER SPAN

SEC/SUR 28 TWP 35N RGE 15W



12/04/2024 9:29:04 AM
Chris Linneman - Civil
MO PE-2002016690

DATE PREPARED
12/4/2024

ROUTE
SOR 44E MO

DISTRICT
BR SHEET NO.
1

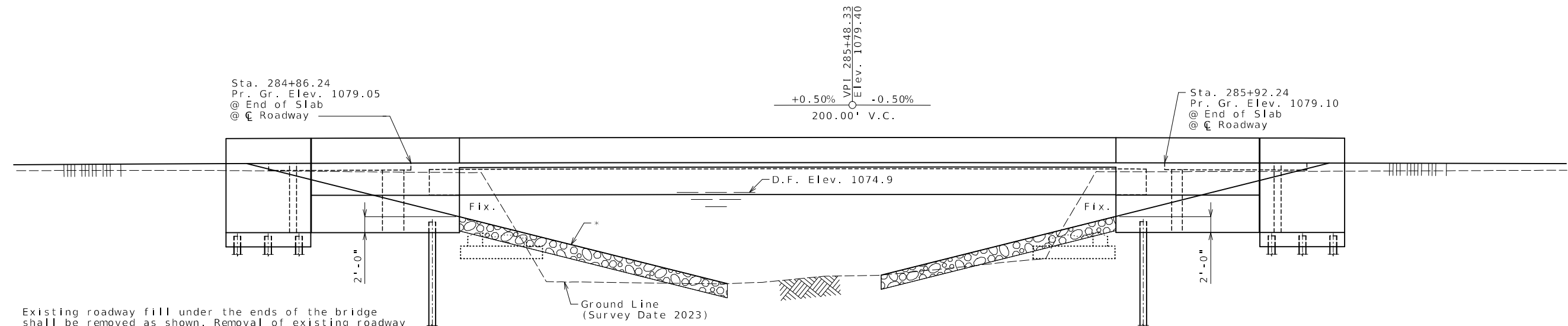
COUNTY
LACLEDE

JOB NO.
JCD0101

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9538

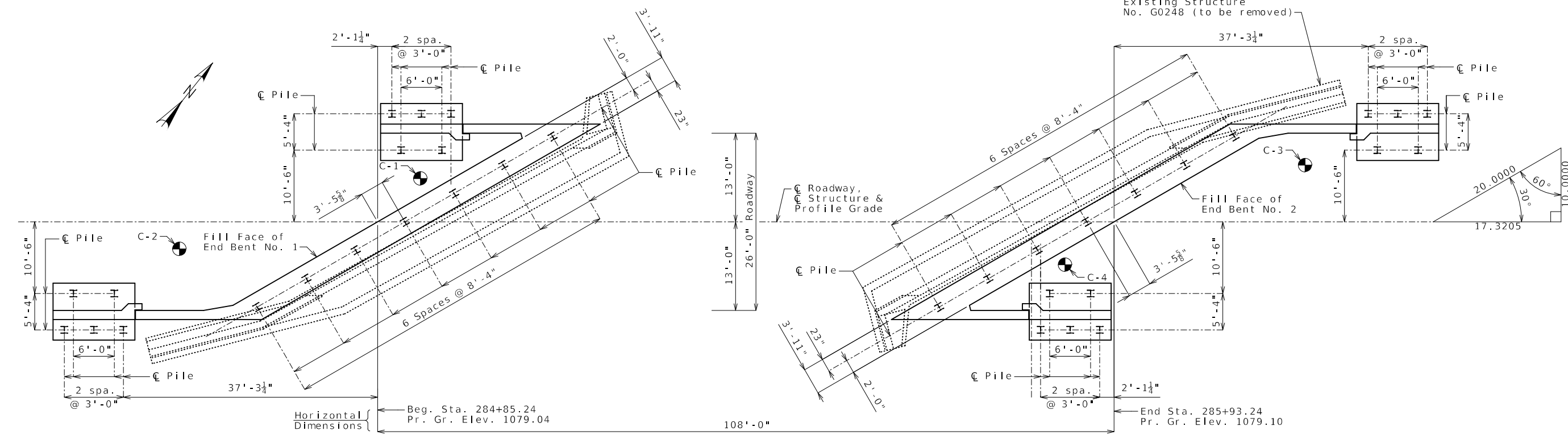


GENERAL ELEVATION

* 2:1 (H:V) Slope 2'-0" Type 2 Rock Blanket with Permanent Erosion Control Geotextile (Roadway Item)(Typ.)

Existing roadway fill under the ends of the bridge shall be removed as shown. Removal of existing roadway fill will be considered completely covered by the contract unit price for roadway excavation.

Roadway fill 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.



SPAN (1-2)
PLAN

● 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 Sheet No. 25 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. 1-23 CHISELED "L" IN N.W. CORNER OF HEADWALL AT ROUTE F AND ROUTE 66. ELEV. 1077.94

BRIDGE: ROUTE 1-44 SOUTH OUTER ROAD OVER BEAR CREEK

ROUTE 1-44 SOUTH OUTER ROAD FROM ROUTE F TO ROUTE MM ABOUT 0.1 MILES EAST OF ROUTE F BEGINNING STATION 284+85.24

DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



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

Designed Aug. 2024
Detailed Aug. 2024
Checked Aug. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 25

Estimated Quantities				
Item		Substr.	Superstr.	Total
Class 1 Excavation	cu. yard	400		400
Removal of Bridges (G0248)	lump sum			1
Bridge Approach Slab (Minor)	sq. yard		116	116
Galvanized Structural Steel Piles (12 in.)	linear foot	652		652
Pile Point Reinforcement	each	34		34
Class B Concrete (Substructure)	cu. yard	154.2		154.2
Type D Barrier	linear foot		308	308
Slab on Concrete NU-Girder	sq. yard		338	338
NU 43, Prestressed Concrete NU-Girder	linear foot		402	402
Reinforcing Steel (Bridges)	pound	7,540		7,540
Slab Drain	each		16	16
Vertical Drain at End Bents	each		2	2
Plan Neoprene Bearing Pad	each		8	8

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 (except detached wing walls) is included in the Estimated Quantities for Slab on Concrete NU-Girder.

Cost of L4x4 ASTM A709 Grade 36 HP pile anchors and 3/4-inch diameter ASTM F3125 Grade A325 Type 1 bolts, complete in place, will be considered completely covered by the contract unit price for Galvanized Structural Steel Piles (12 in.).

Estimated Quantities for Slab on Concrete NU Girder		
Item		Total
Class B-2 Concrete	cu. yard	153
Reinforcing Steel (Epoxy Coated)	pound	14,610

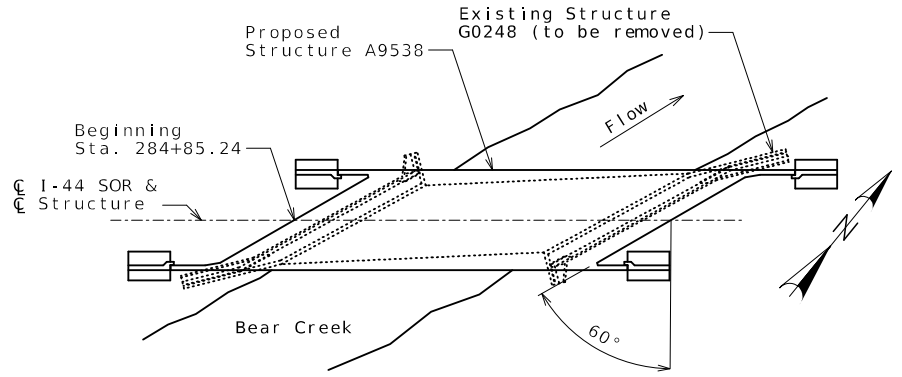
The table of Estimated Quantities for Slab on Concrete NU Girder represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from 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 1, II or III.

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 thickness and minimum joint material thickness.

The prestressed panel quantities are not included in the table of Estimated Quantities for Slab on Concrete NU-Girder.



LOCATION SKETCH

Hydrologic Data
Drainage Area = 7.9 mi ²
Design Flood Frequency = 50 years
Design Flood Discharge = 3,370 cfs
Design Flood (D.F.) Elevation = 1074.9
Base Flood (100-year)
Base Flood Elevation = 1075.8
Base Flood Discharge = 4,390 cfs
Estimated Backwater = 0.0 ft
Average Velocity thru Opening = 7.6 ft/s
Freeboard (50-year)
Freeboard = -1.3 ft
Roadway Overtopping
Overtopping Flood Discharge > 5,950 cfs
Overtopping Flood Frequency > 500 years
500-year Flood Elevation = 1077.3

Foundation Data					
Type	Design Data	Bent Number			
		1 (Detached Wing Walls Only)	1 (Except Detached Wing Walls)	2 (Detached Wing Walls Only)	2 (Except Detached Wing Walls)
Load Bearing Pile	Pile Type and Size	HP 12x53	HP 12x53	HP 12x53	HP 12x53
	Number	ea 10	7	10	7
	Approximate Length Per Each	ft 21	24	12	22
	Pile Point Reinforcement	ea All	All	All	All
	Min. Galvanized Penetration (Elev.)	ft Full Length	Full Length	Full Length	Full Length
	Pile Driving Verification Method	DF	DF	DF	DF
	Resistance Factor	0.40	0.40	0.40	0.40
	Minimum Nominal Axial Compressive Resistance	kip 350	543	350	543

DF = FHWA-modified Gates Dynamic Pile Formula

Minimum Nominal Axial Compressive Resistance = $\frac{\text{Maximum Factored Loads}}{\text{Resistance Factor}}$

Pile point reinforcement need not be galvanized. Shop drawings will not be required for pile point reinforcement.

All piles shall be galvanized down to the minimum galvanized penetration (elevation).

The contractor shall make every effort to achieve the minimum galvanized penetration (elevation) shown on the plans for all piles. Deviations in penetration less than 5 feet of the minimum will be considered acceptable provided the contractor makes the necessary corrections to ensure the minimum penetration is achieved on subsequent piles.

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.

GENERAL NOTES AND QUANTITIES

Detailed Aug. 2024
Checked Aug. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 2 of 25

General Notes:

Design Specifications:
2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)
2011 AASHTO Guide Specifications for LRFD Seismic Bridge Design (2nd Ed.) and 2014 Interim Revisions (Seismic Details)
Seismic Design Category = B

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-2 Concrete (Superstructure, except Prestressed Girders and Barrier) f'c = 4,000 psi
Class B-1 Concrete (Barrier) f'c = 4,000 psi
Reinforcing Steel (ASTM A706 Grade 60) fy = 60,000 psi
Structural Steel HP Pile (ASTM A709 Grade 50) fy = 50,000 psi
For prestressed panel stresses, see Sheet No. 14.
For prestressed girder stresses, see Sheets No. 12 & 13.

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 1 1/2" unless otherwise shown.

Traffic Handling:
Structure to be closed during construction. See roadway plans for traffic control.

Miscellaneous:
Payment for furnishing all materials, labor and excavation necessary to construct both detached wing walls at End Bents No. 1 and No. 2 including the Class 1 Excavation, Galvanized Structural Steel Pile, (12 in.) Class B Concrete (Substr.) and Reinforcing Steel (Bridges), will be considered completely covered by the contract unit price for these items.

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

STATE OF MISSOURI
CHRIS LINNEMAN
PE-2002016690
PROFESSIONAL ENGINEER

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Chris Linneman - Civil
MO PE-2002016690

DATE PREPARED
12/4/2024

ROUTE STATE
SOR 44E MO

DISTRICT SHEET NO.
BR 2

COUNTY
LACLEDE

JOB NO.
JCD0101

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9538

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

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MO PE-2002016690

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12/4/2024

ROUTE SOR 44E STATE MO

DISTRICT BR SHEET NO. 3

COUNTY LACLEDE

JOB NO. JCD0101

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9538

DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



105 WEST CAPITOL JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

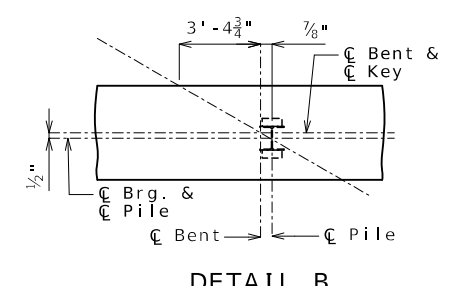
EFK Moen

Civil Engineering Design

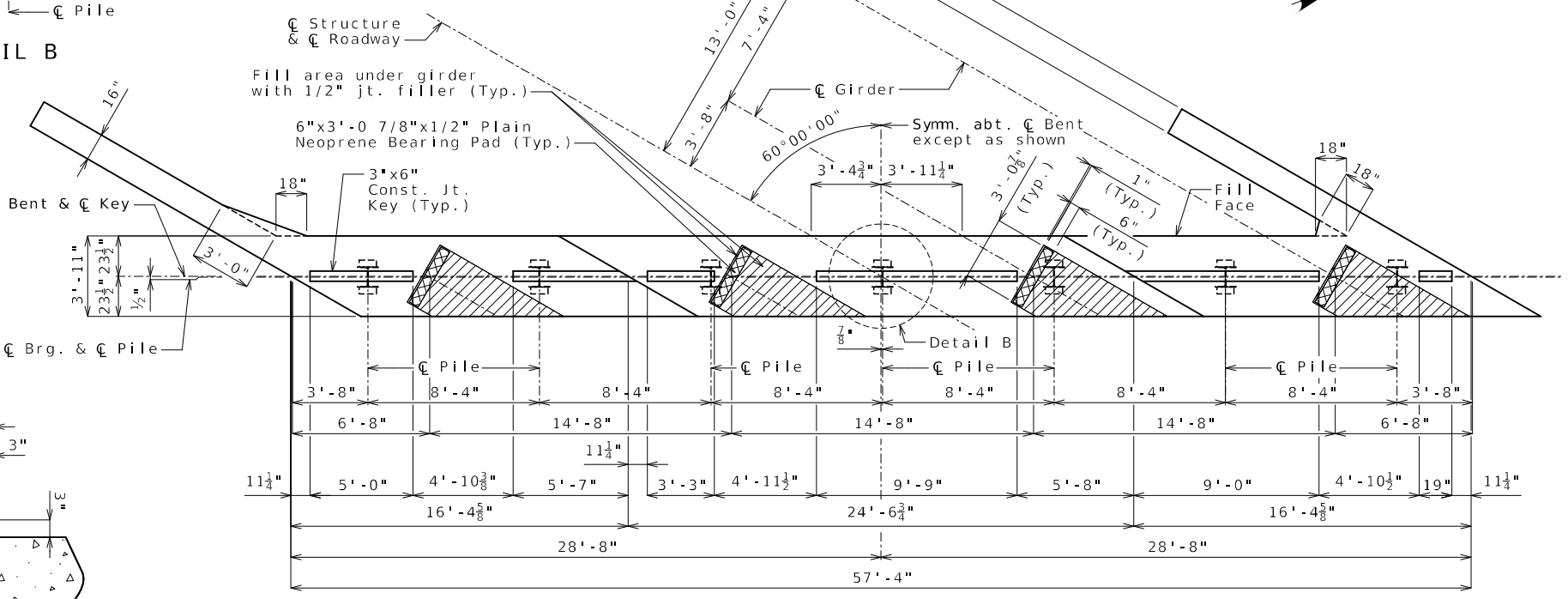
13523 Barrett Parkway Dr Phone 314-394-3100

Suite 250 St. Louis, MO 63021 Fax 314-394-3199

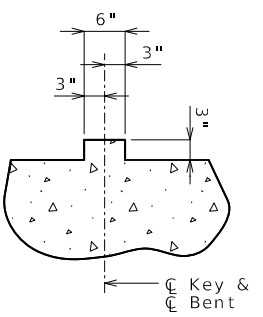
Missouri Certificate of Authority: 001578



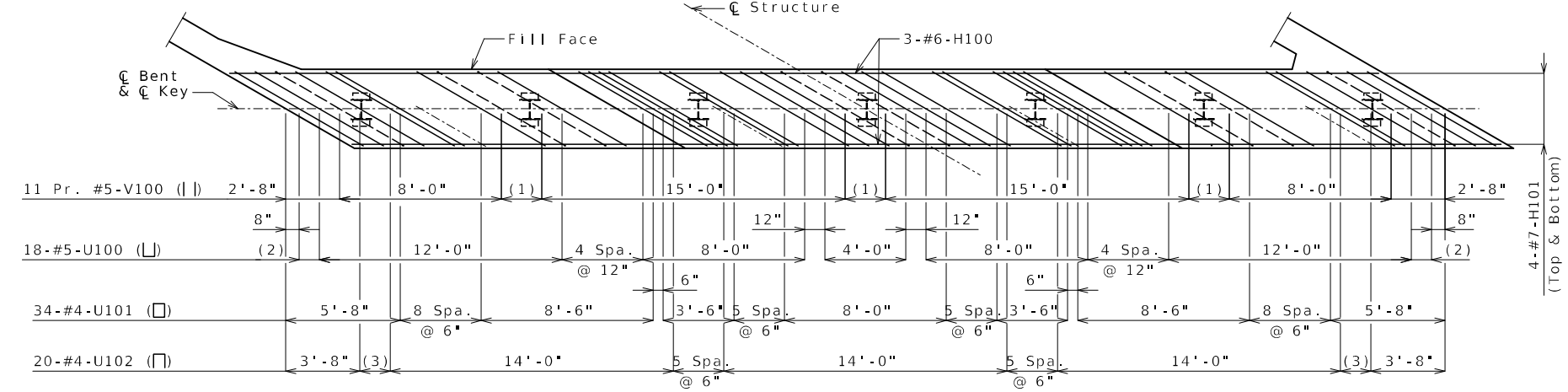
DETAIL B



PLAN OF BEAM



SECTION THRU KEY



PLAN OF BEAM SHOWING REINFORCEMENT

- (1) 2 Spa. @ 12"
- (2) 1 Spa. @ 12"
- (3) 3 Spa. @ 6"

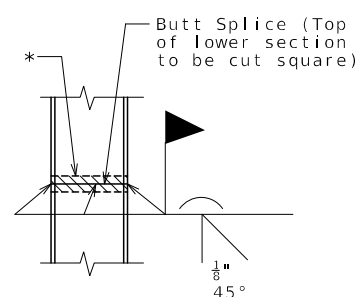
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General Notes:

Work this sheet with Sheets No. 4 & 5.

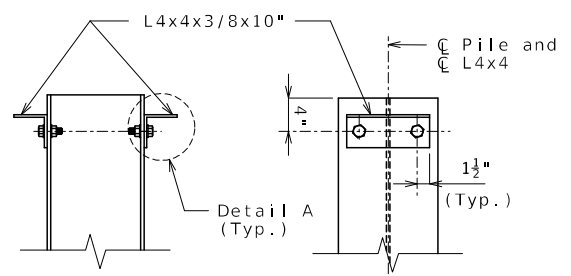
All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

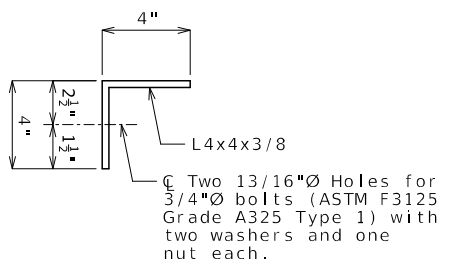


STEEL PILE SPLICE
(If required)

* Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



DETAILS OF HP PILE ANCHORS



DETAIL A

Angles shall be coated with a minimum of two coats of non-aluminum epoxy mastic primer to provide a dry film thickness of 4 mils minimum, 8 mils maximum, or galvanized in accordance with Sec 1081. Bolts, washers and nuts shall be galvanized in accordance with AASHTO M 232 (ASTM A153), Class C.

Substructure Quantity Table for Bent No. 1		
Item		Quantity
Class 1 Excavation	cu. yard	60
Galvanized Structural Steel Piles (12 in.)	linear foot	168
Pile Point Reinforcement	each	7
Class B Concrete (Substructure)	cu. yard	48.4

These quantities are included in the Estimated Quantities table on Sheet No. 2.

DETAILS OF END BENT NO. 1

Detailed Aug. 2024
Checked Aug. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 25

Notes:

Work this sheet with Sheets No. 3 & 5.

For details of Detached Wing Wall, See Sheet No. 6.

For Sections A-A, B-B, C-C, D-D, Elevations E-E & F-F, see Sheet No. 5.

The #6-F101 and #6-F103 bars shall be bent in the field to clear girders.

The U bars shall be placed parallel to centerline of roadway.

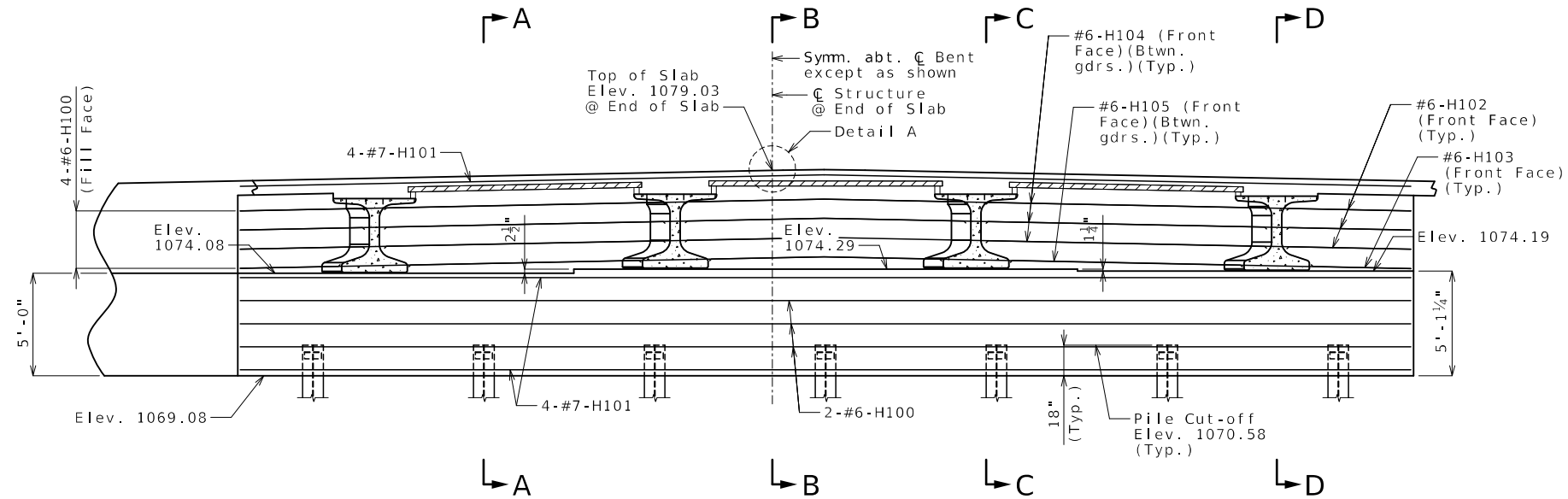
All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

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.

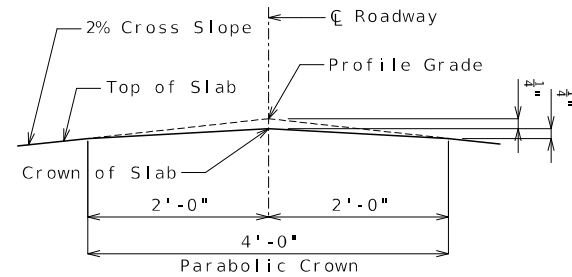
For locations of coil tie rods and #5-H106 (strand tie bar), see Sheets No. 12 & 13.

For details of vertical drain at end bents, see Sheet No. 7.

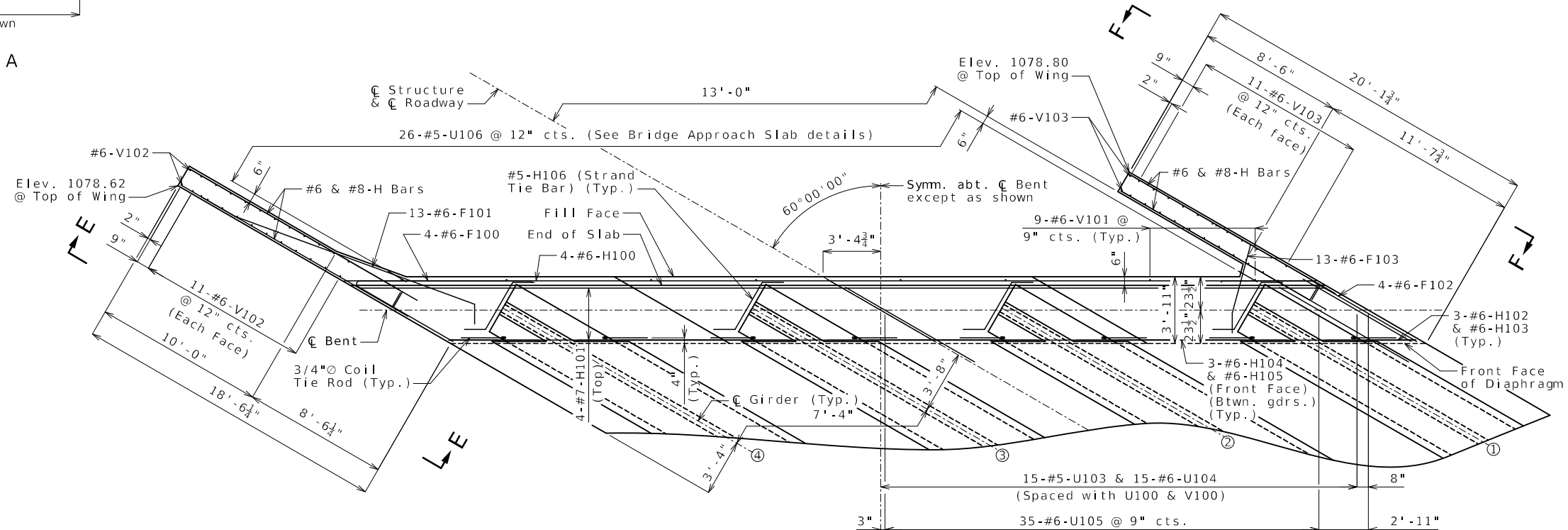
For details of bridge approach slab, see Sheet No. 21.



SECTION NEAR END BENT



DETAIL A



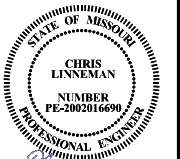
PART PLAN

DETAILS OF END BENT NO. 1

Detailed Aug. 2024
Checked Aug. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 4 of 25



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MO PE-2002016690

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12/4/2024

ROUTE SOR 44E STATE MO

DISTRICT BR SHEET NO. 4

COUNTY LACLEDE

JOB NO. JCD0101

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9538

DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

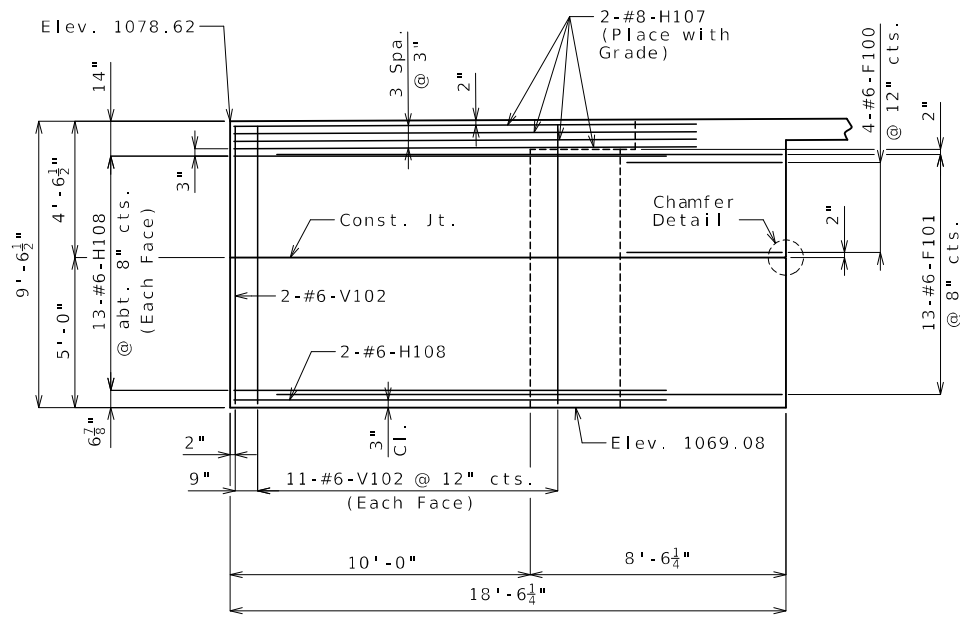
MoDOT

105 WEST CAPITOL JEFFERSON CITY, MO 65102

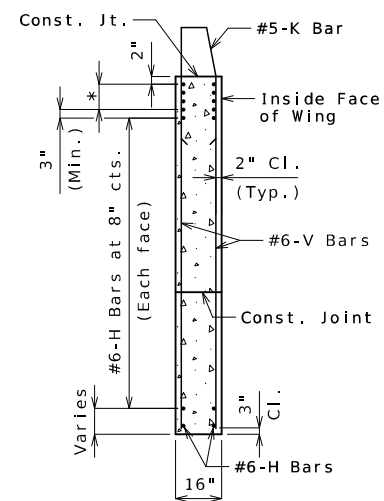
1-888-ASK-MODOT (1-888-275-6636)

Missouri Certificate of Authority: 001578

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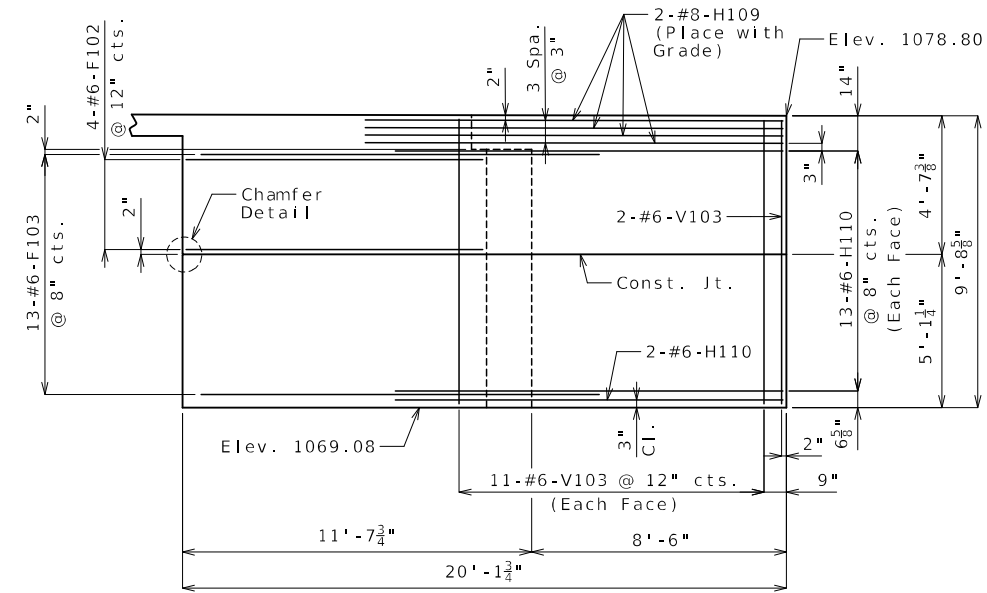


ELEVATION E-E

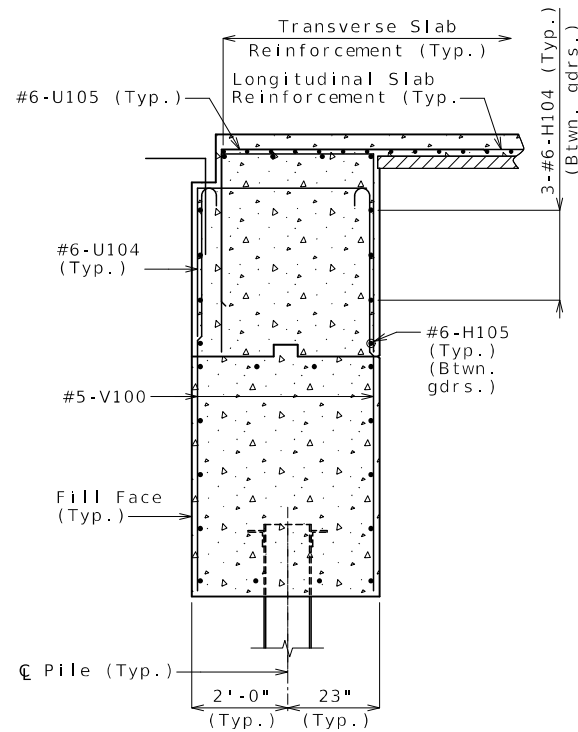


TYPICAL SECTION THRU WING

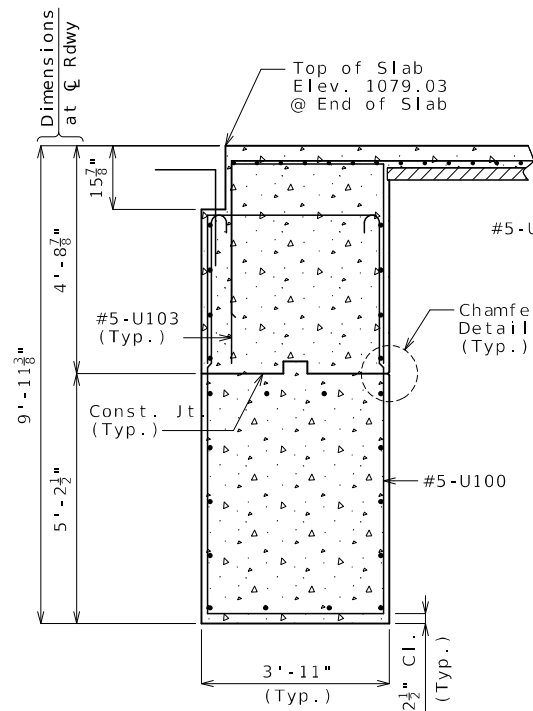
* #8-H Bars at 3" cts. (Each face) (Place with grade)



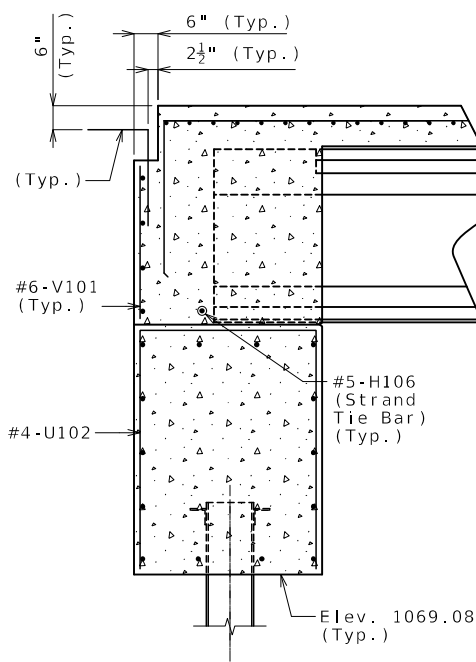
ELEVATION F-F



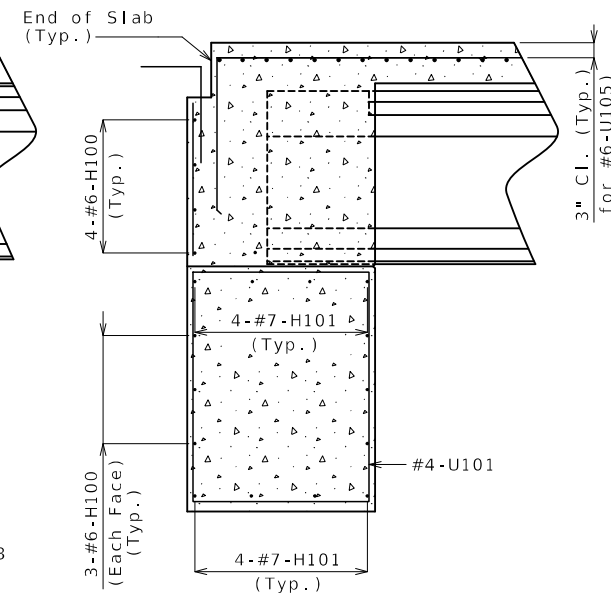
SECTION A-A



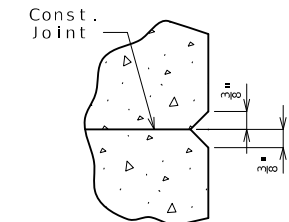
SECTION B-B



SECTION C-C



SECTION D-D



CHAMFER DETAIL

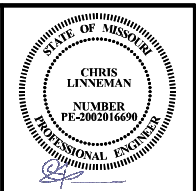
General Notes:
 Work this sheet with Sheets No. 3 & 4.
 For Reinforcement of the barrier, see Sheet No. 19.

DETAILS OF END BENT NO. 1

Detailed Aug. 2024
 Checked Aug. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 5 of 25



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ROUTE STATE
 SOR 44E MO

DISTRICT SHEET NO.
 BR 5

COUNTY
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JOB NO.
 JCD0101

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
 A9538

DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

EFFK Moen

Civil Engineering Design

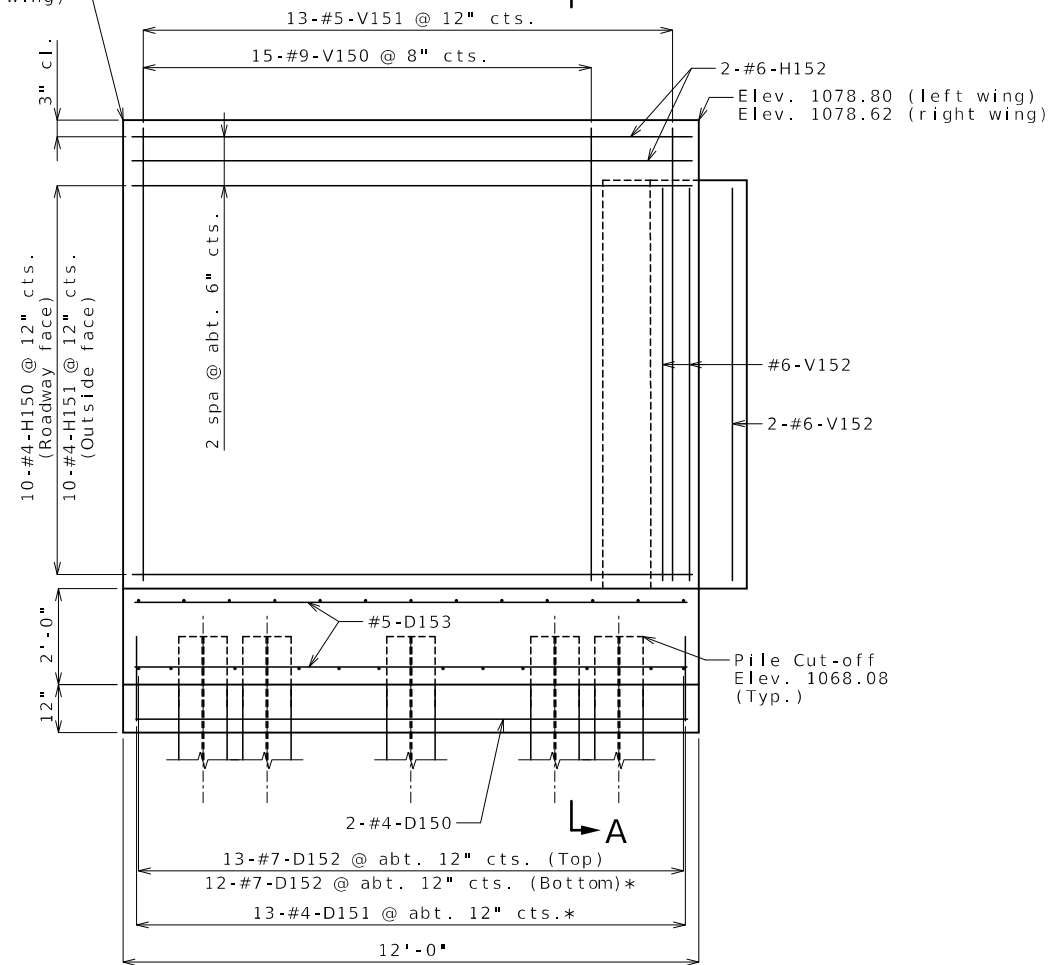
13523 Barrett Parkway Dr Phone 314-394-3100

Suite 250 St. Louis, MO 63021 Fax 314-394-3199

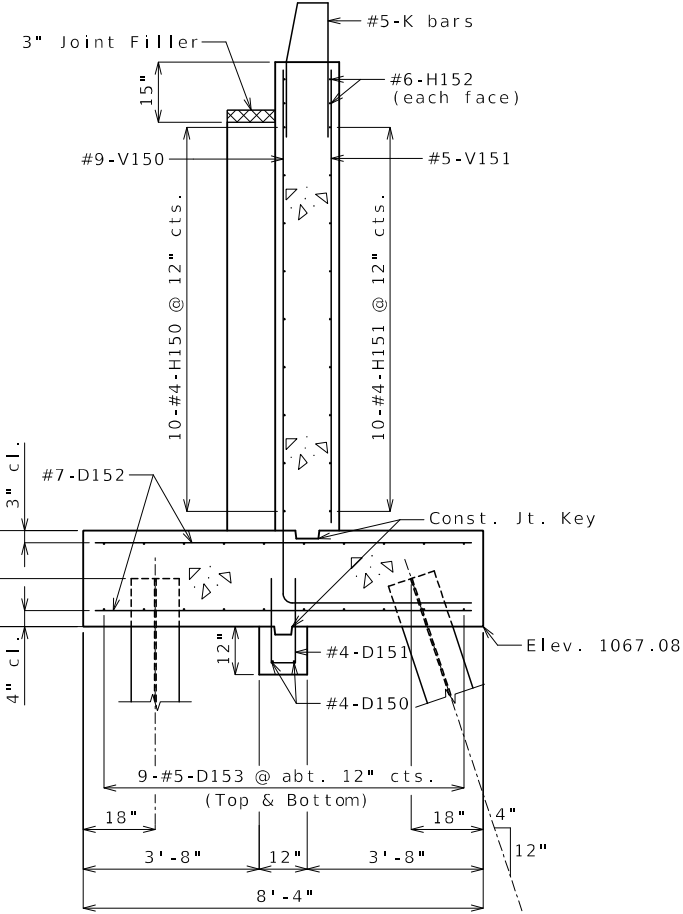
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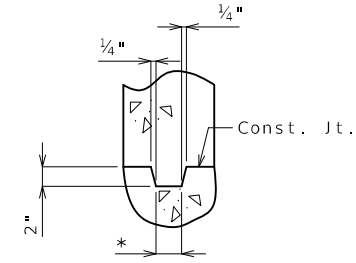
Elev. 1078.77 (left wing)
Elev. 1078.55 (right wing)



ELEVATION



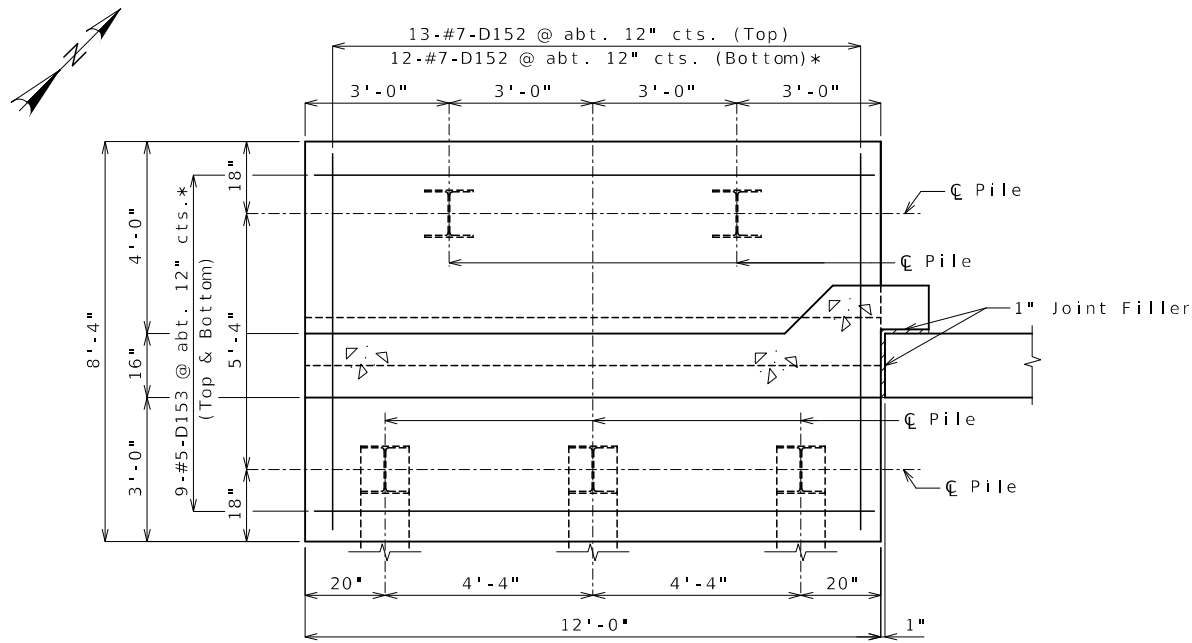
SECTION A-A



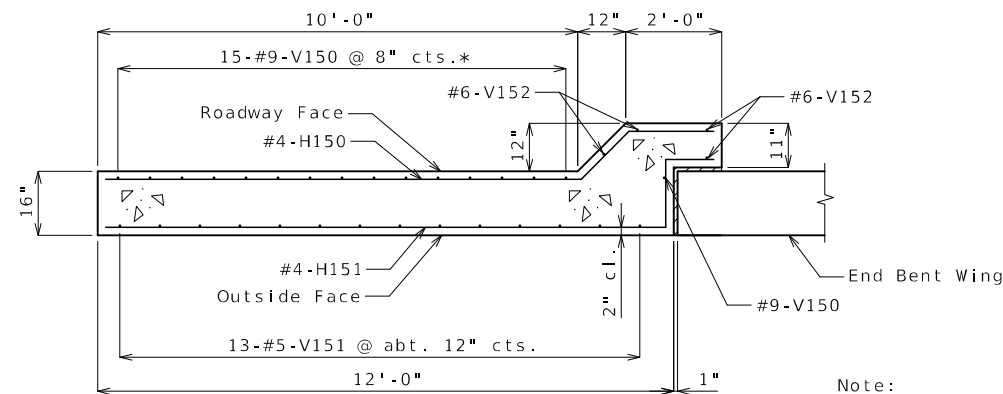
SECTION THRU KEY

* Approximately one third of wall thickness

*Adjust bar spacing as needed to avoid piles



PLAN OF FOOTING



PLAN OF WALL

Note:
For pile splice and anchor details, see Sheet No. 3.
For reinforcement of the barrier, see Sheet No. 20.

Substructure Quantity Table for Detached Wing Walls at Bent No. 1

Item	Quantity	Total
Class 1 Excavation	cu. yard	140
Galvanized Structural Steel Piles (12 in.)	linear foot	210
Pile Point Reinforcement	each	10
Class B Concrete (Substructure)	cu. yard	28.7
Reinforcing Steel (Bridges)	pound	3,780

These quantities are included in the estimated quantities table on Sheet No. 2

DETAILS OF DETACHED WING WALLS AT END BENT NO. 1

(Right wing wall shown, left wing wall mirrored)

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6 of 25

Detailed Aug. 2024
Checked Aug. 2024



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ROUTE SOR 44E STATE MO
DISTRICT BR SHEET NO. 6
COUNTY LACLEDE
JOB NO. JCD0101
CONTRACT ID.

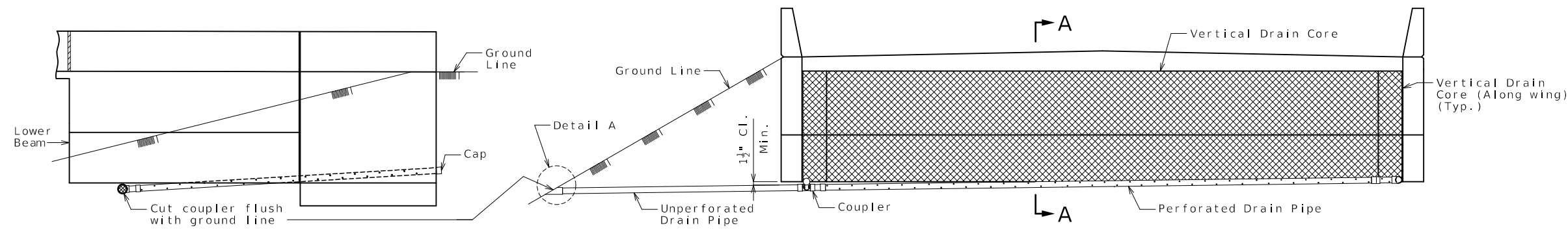
PROJECT NO.
BRIDGE NO. A9538

DESCRIPTION

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

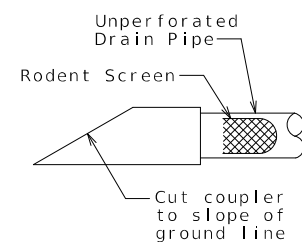
EFK Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

REV.

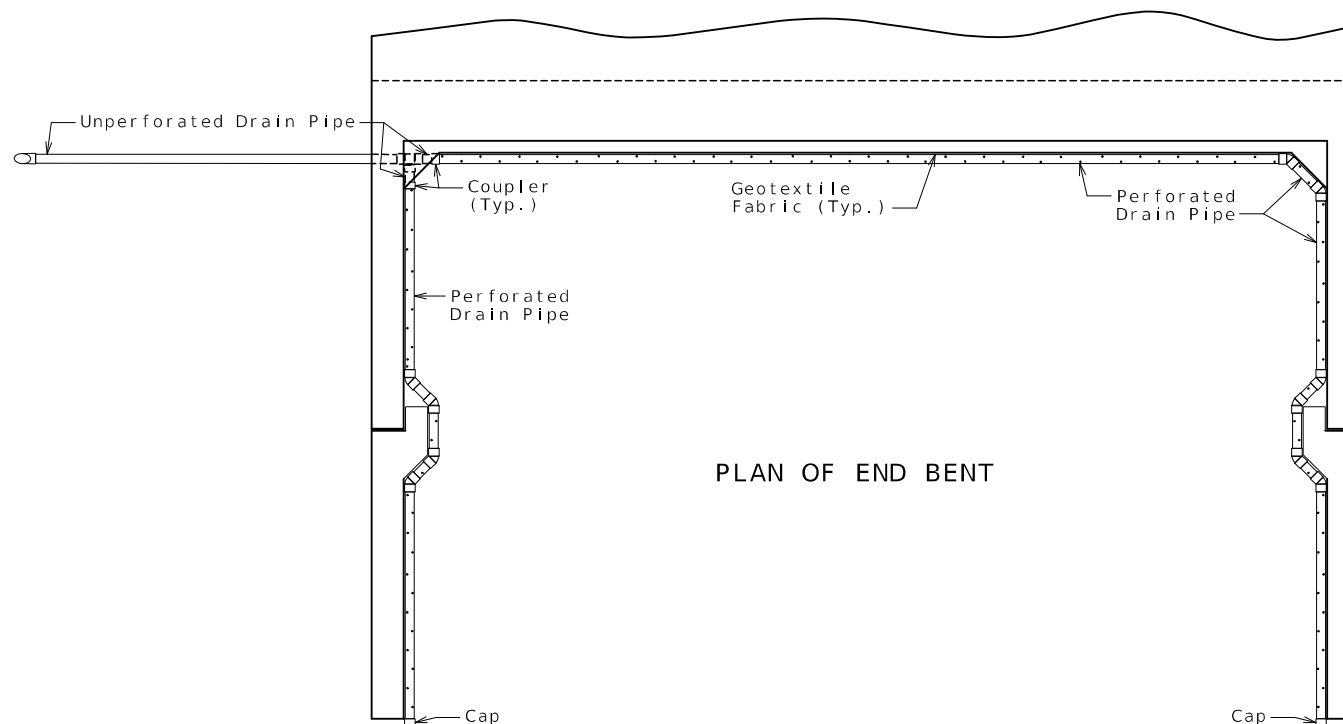


ELEVATION OF WING

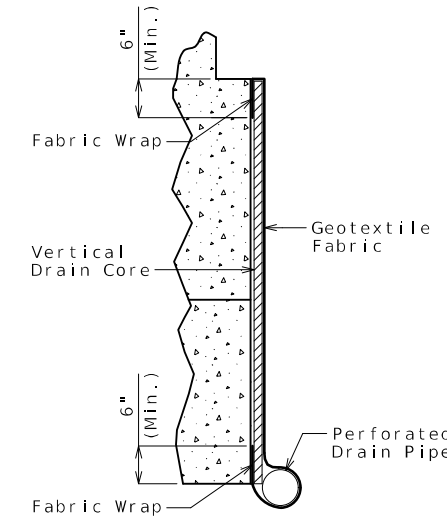
ELEVATION OF END BENT



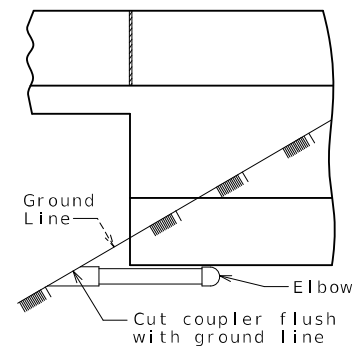
DETAIL A



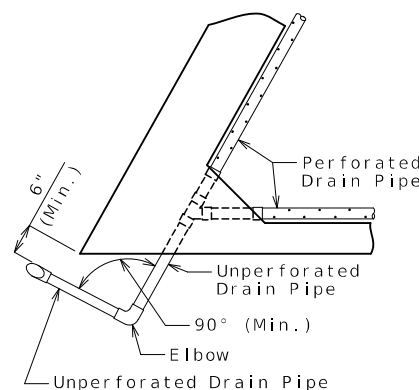
PLAN OF END BENT



PART SECTION A-A
(Section thru wing similar)



ELEVATION OF WING



PART PLAN

OPTIONAL TURNED DRAIN

(Use only when straight drain is not practical.)

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.

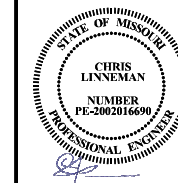
VERTICAL DRAIN AT END BENTS

(Squared end bent shown, skewed end bent similar)

Detailed Aug. 2024
Checked Aug. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 7 of 25



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DATE PREPARED
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ROUTE SOR 44E	STATE MO
DISTRICT BR	SHEET NO. 7

COUNTY

LACLEDE

JOB NO.

JCD0101

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A9538

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
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Phone 314-394-3100
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Missouri Certificate of Authority: 001578

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ROUTE SOR 44E STATE MO

DISTRICT BR SHEET NO. 8

COUNTY LACLEDE

JOB NO. JCD0101

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9538

DESCRIPTION

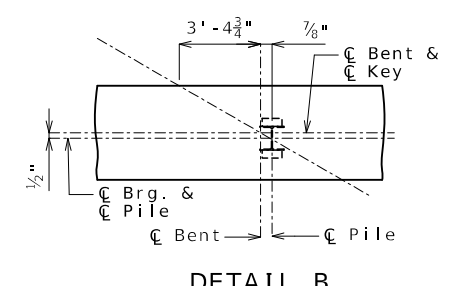
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



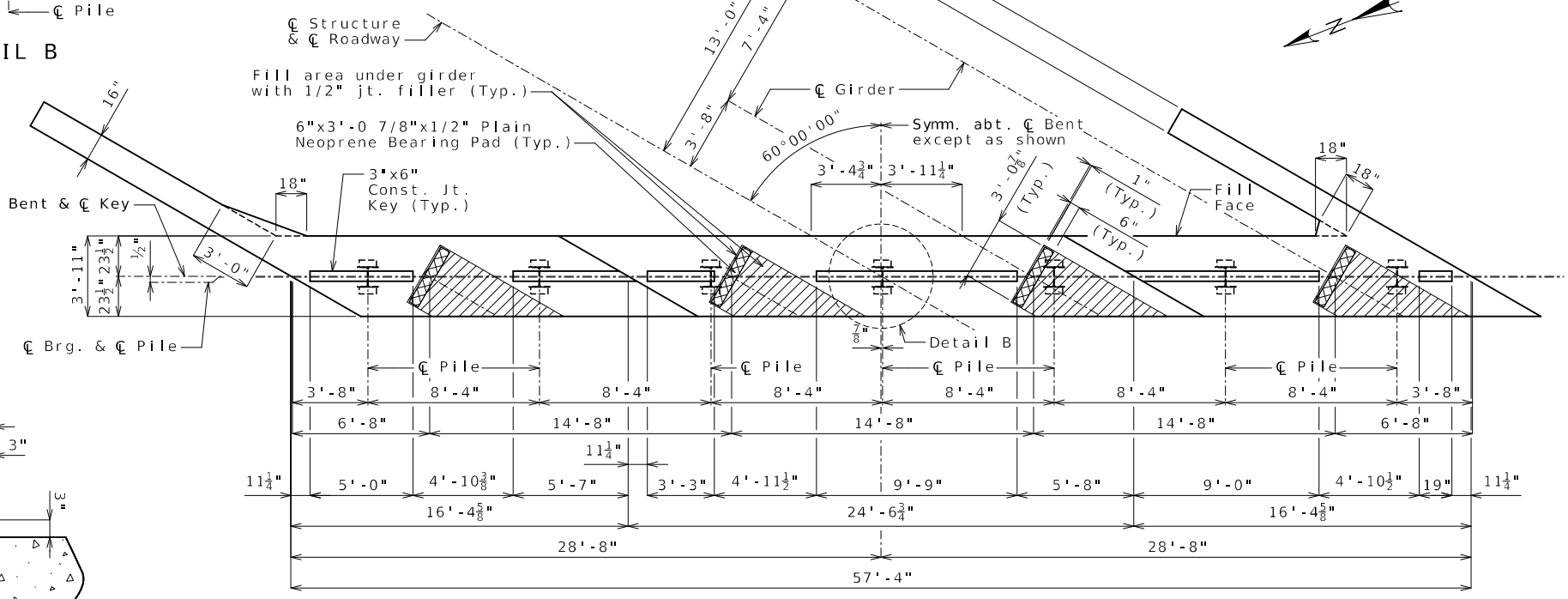
105 WEST CAPITOL JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

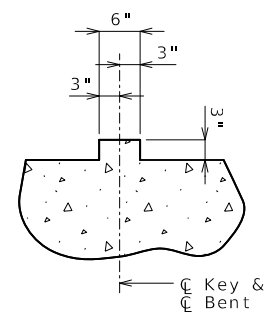
Missouri Certificate of Authority: 001578



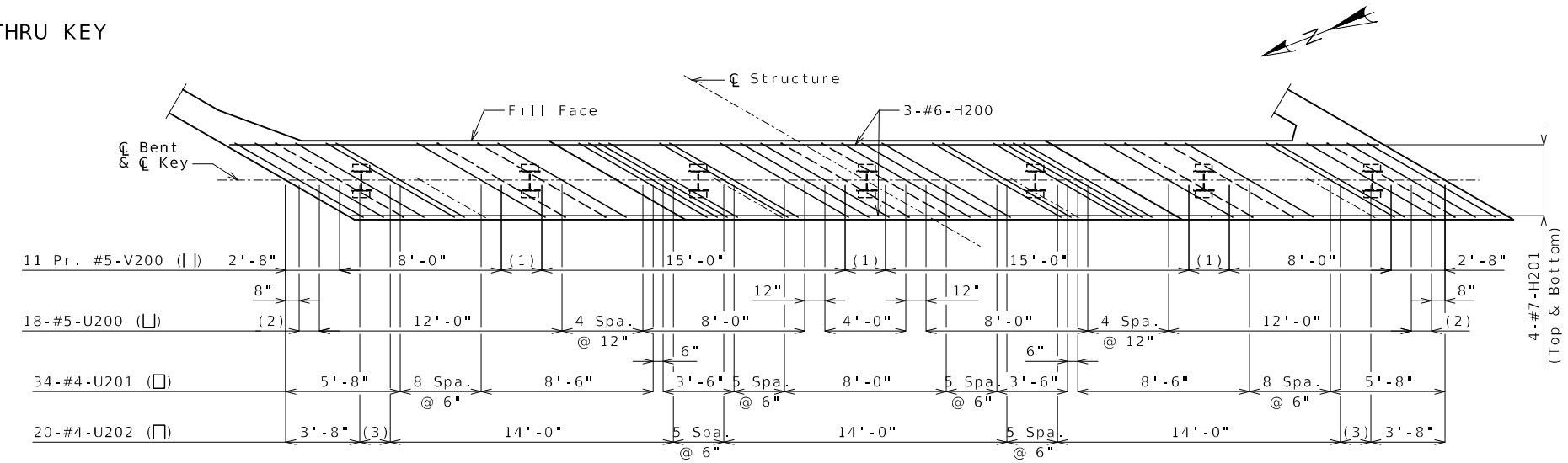
DETAIL B



PLAN OF BEAM



SECTION THRU KEY



PLAN OF BEAM SHOWING REINFORCEMENT

- (1) 2 Spa. @ 12"
- (2) 1 Spa. @ 12"
- (3) 3 Spa. @ 6"

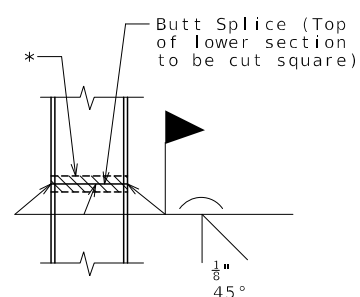
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General Notes:

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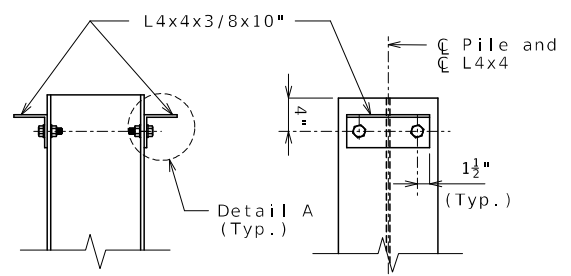
All U bars and pairs of V bars shall be placed parallel to centerline of roadway.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

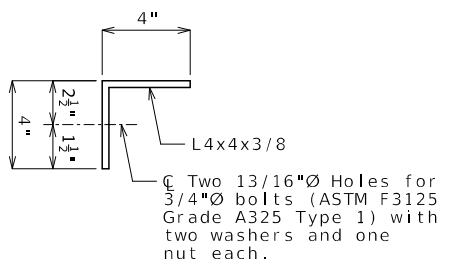


STEEL PILE SPLICE
(If required)

* Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



DETAILS OF HP PILE ANCHORS



DETAIL A

Angles shall be coated with a minimum of two coats of non-aluminum epoxy mastic primer to provide a dry film thickness of 4 mils minimum, 8 mils maximum, or galvanized in accordance with Sec 1081. Bolts, washers and nuts shall be galvanized in accordance with AASHTO M 232 (ASTM A153), Class C.

Substructure Quantity Table for Bent No. 2		
Item		Quantity
Class 1 Excavation	cu. yard	60
Galvanized Structural Steel Piles (12 in.)	linear foot	154
Pile Point Reinforcement	each	7
Class B Concrete (Substructure)	cu. yard	48.4

DETAILS OF END BENT NO. 2

Detailed Aug. 2024
Checked Aug. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 25

Notes:

Work this sheet with Sheets No. 8 & 10.

For details of Detached Wingwall, See Sheet No. 11.

For Sections A-A, B-B, C-C, Elevations D-D, E-E & F-F, see Sheet No. 10.

The #6-F201 and #6-F203 bars 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 locations of coil tie rods and #5-H206 (strand tie bar), see Sheets No. 12 & 13.

For details of vertical drain at end bents, see Sheet No. 7.

For details of bridge approach slab, see Sheet No. 21.



12/09/2024 9:12:25 AM
Chris Linneman - Civil
MO PE-2002016690

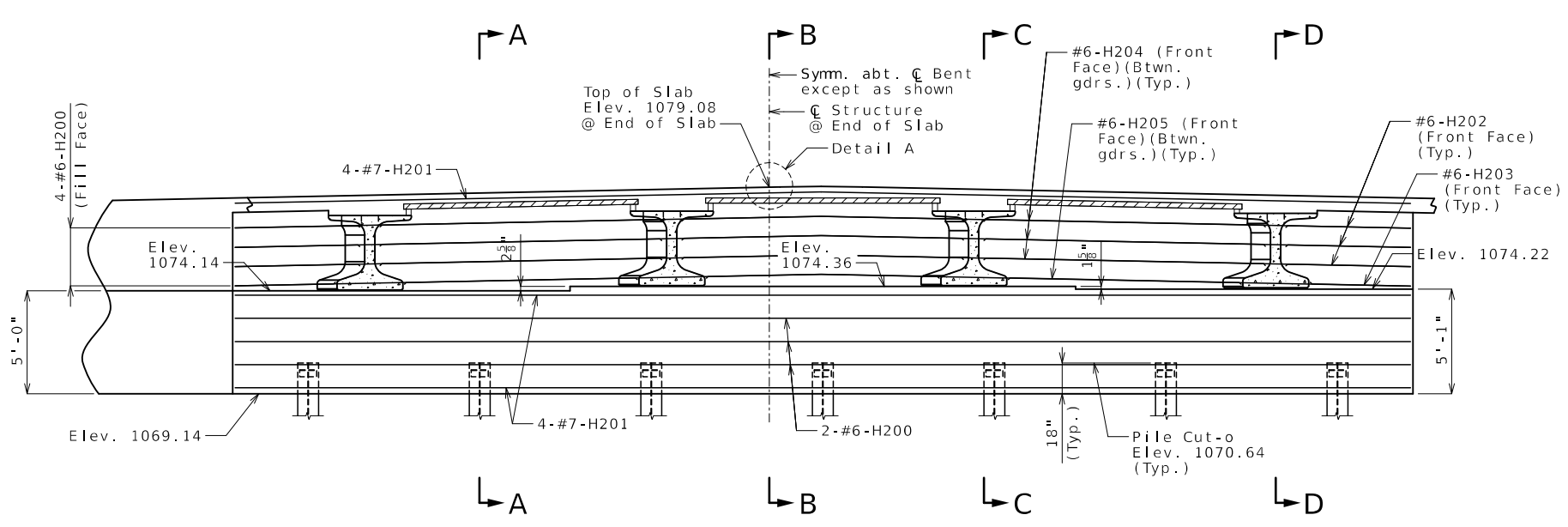
DATE PREPARED
12/9/2024
ROUTE STATE
SOR 44E MO
DISTRICT SHEET NO.
BR 9

COUNTY
LACLEDE
JOB NO.
JCD0101
CONTRACT ID.

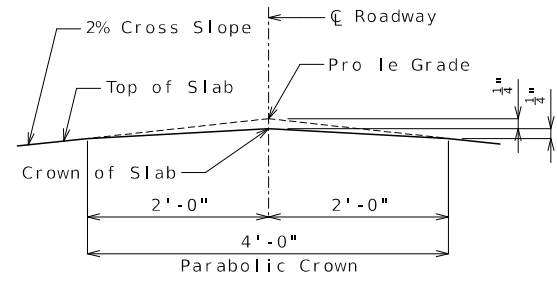
PROJECT NO.
BRIDGE NO.
A9538

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

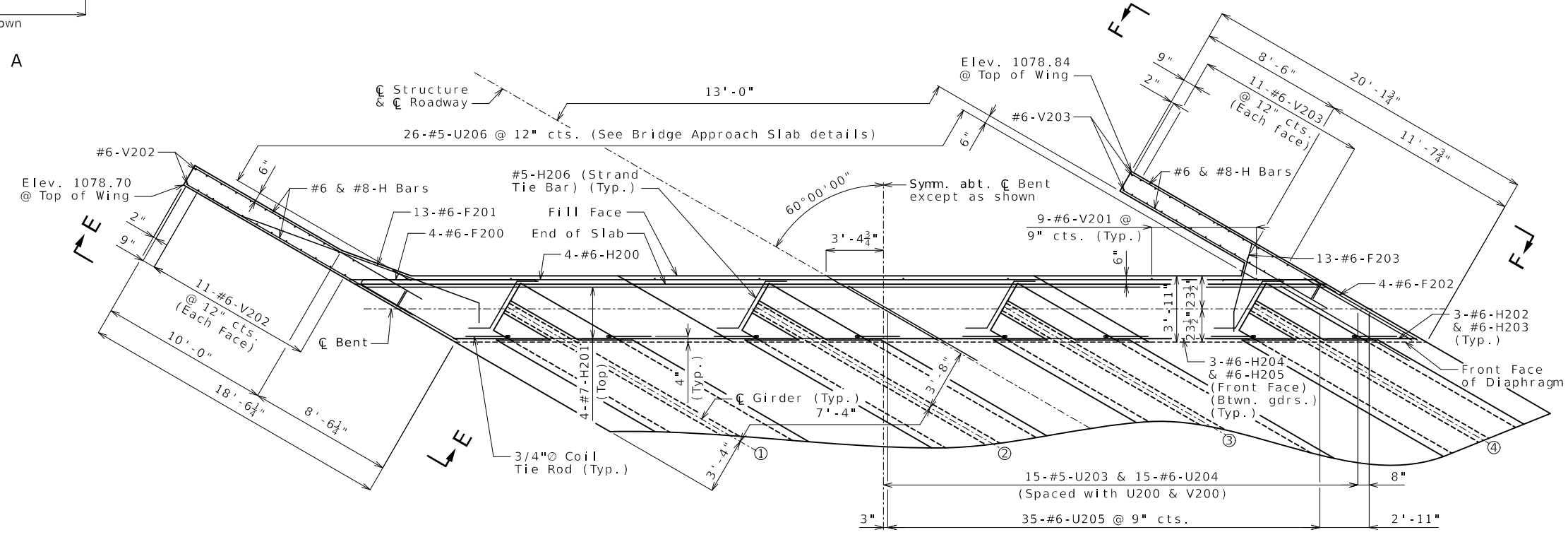
EFK Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578



SECTION NEAR END BENT



DETAIL A



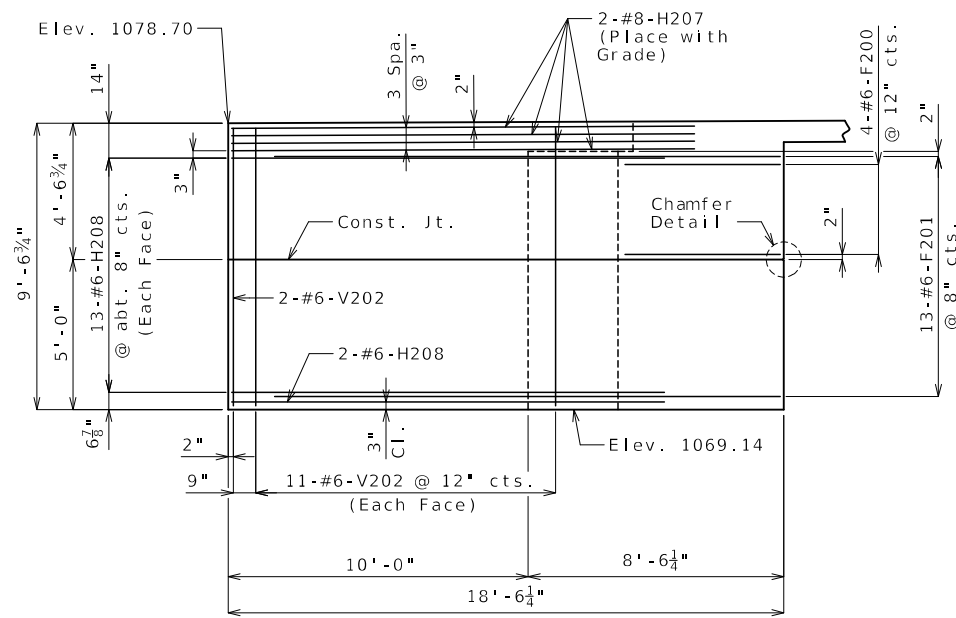
PART PLAN

DETAILS OF END BENT NO. 2

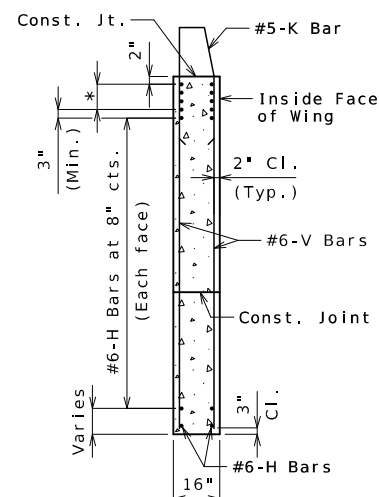
Detailed Aug. 2024
Checked Aug. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9 of 25

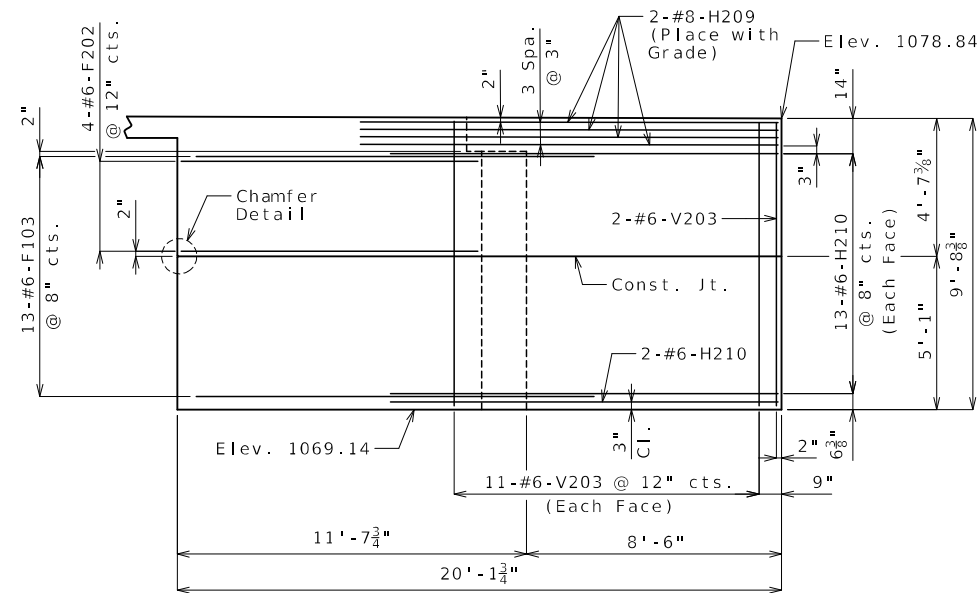


ELEVATION E-E

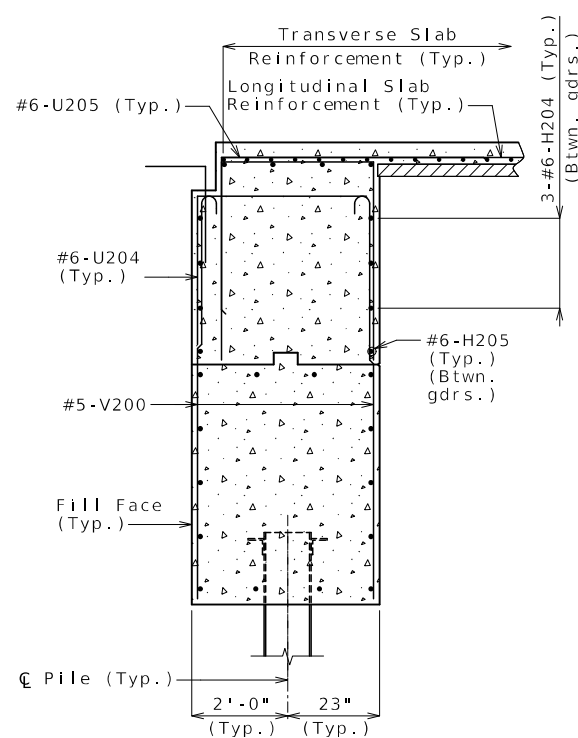


TYPICAL SECTION THRU WING

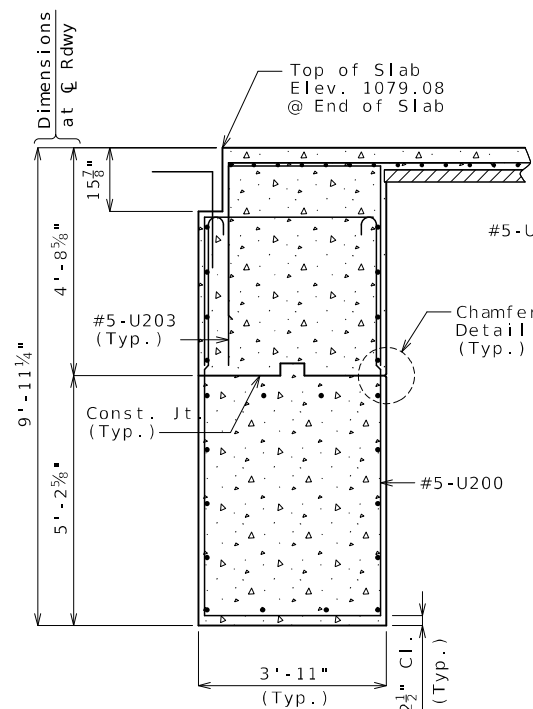
* #8-H Bars at 3\"/>



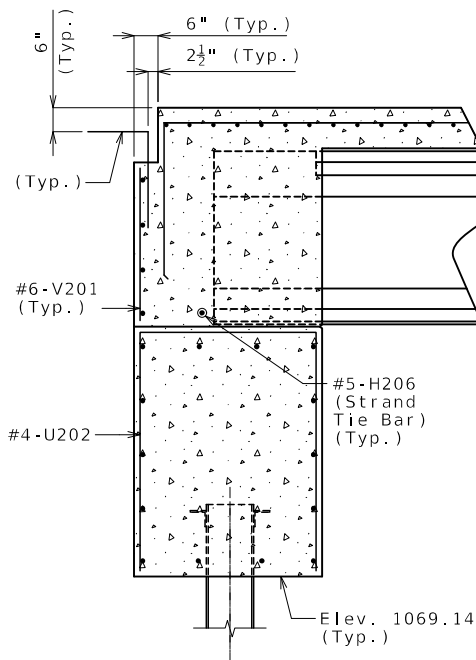
ELEVATION F-F



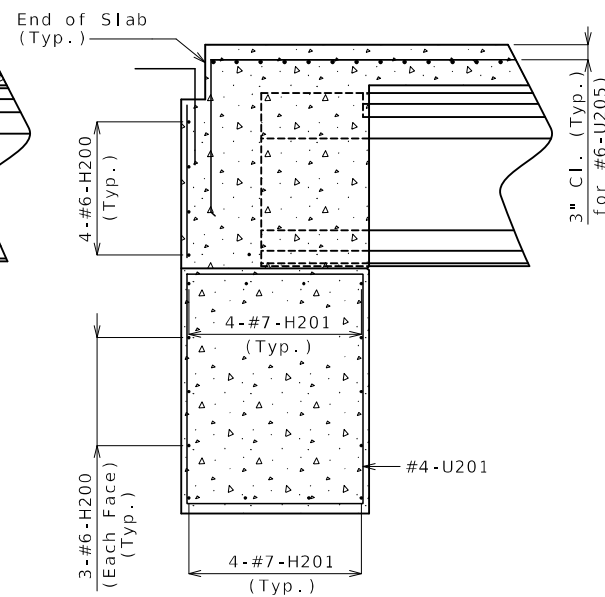
SECTION A-A



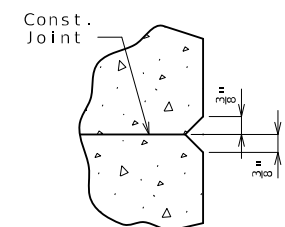
SECTION B-B



SECTION C-C



SECTION D-D



CHAMFER DETAIL

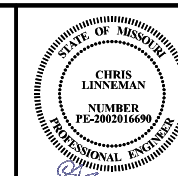
General Notes:
 Work this sheet with Sheets No. 8 & 9.
 For Reinforcement of the barrier, see Sheet No. 19.

DETAILS OF END BENT NO. 2

Detailed Aug. 2024
 Checked Aug. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 10 of 25



12/04/2024 9:32:51 AM
 Chris Linneman - Civil
 MO PE-2002016690

DATE PREPARED
 12/4/2024

ROUTE SOR 44E MO

DISTRICT BR SHEET NO. 10

COUNTY LACLEDE

JOB NO. JCD0101

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9538

DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

REV.

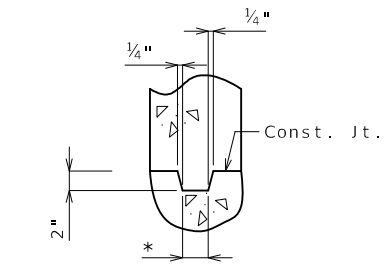
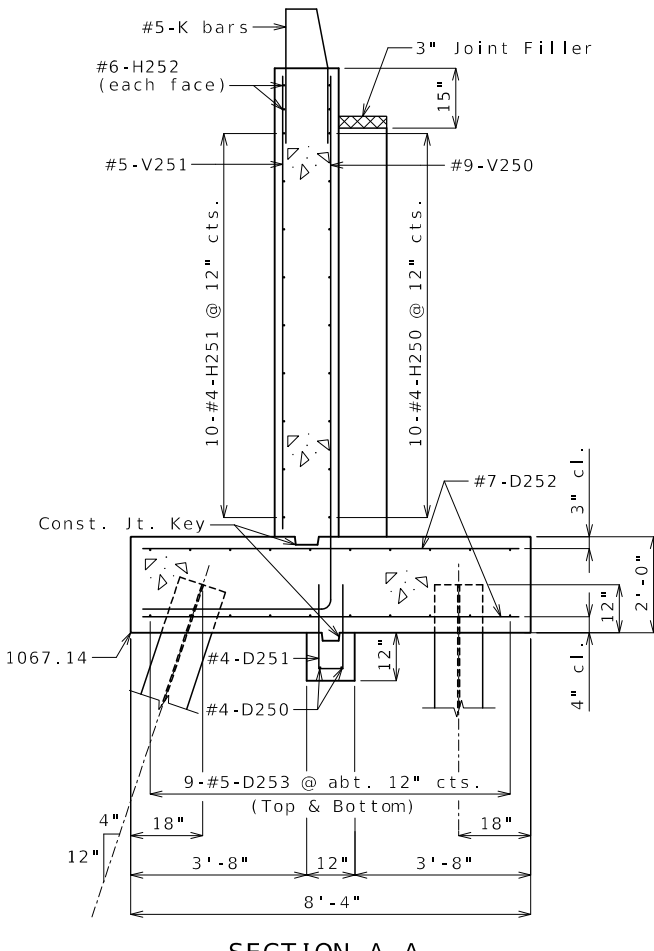
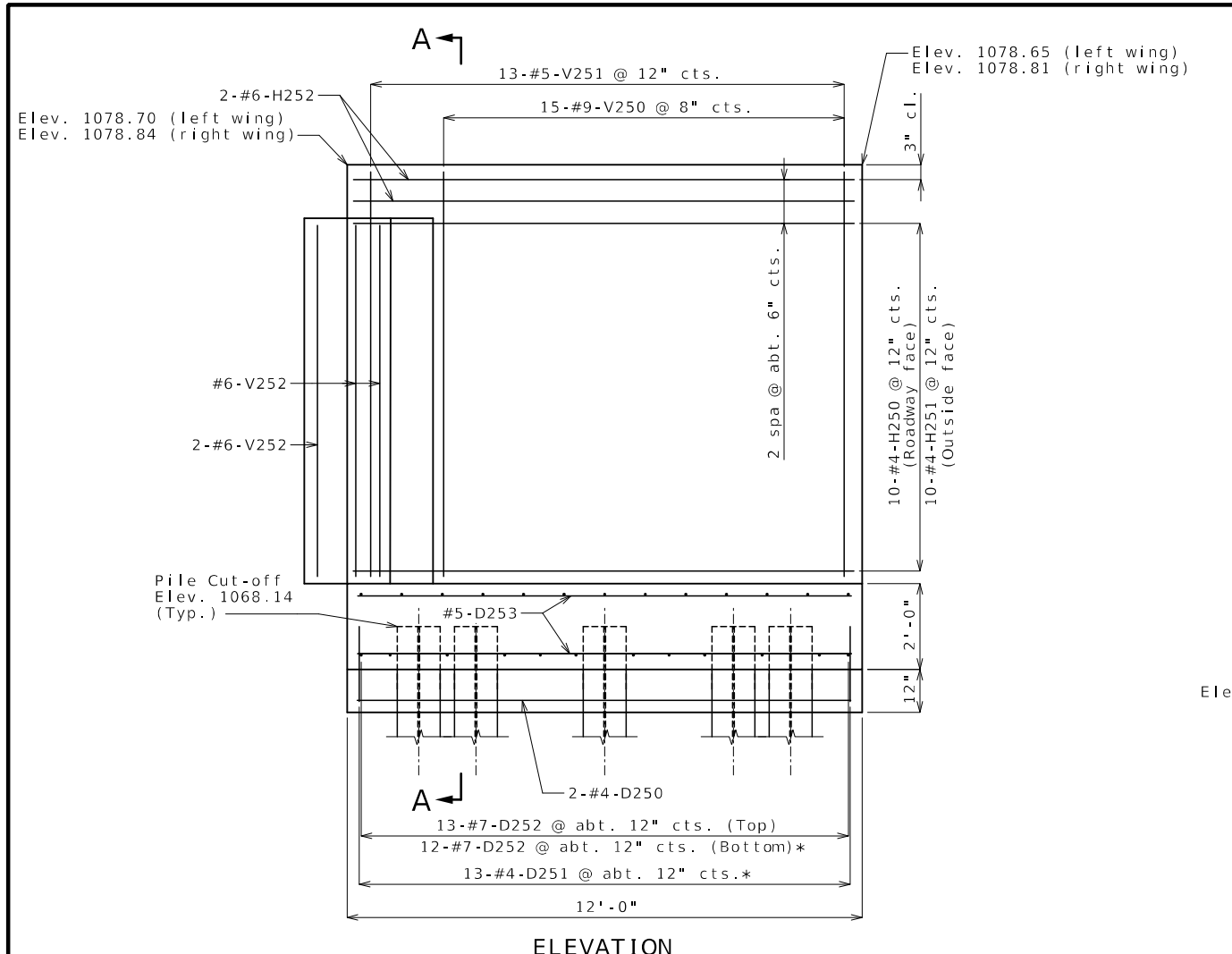
EFK Moen

Civil Engineering Design

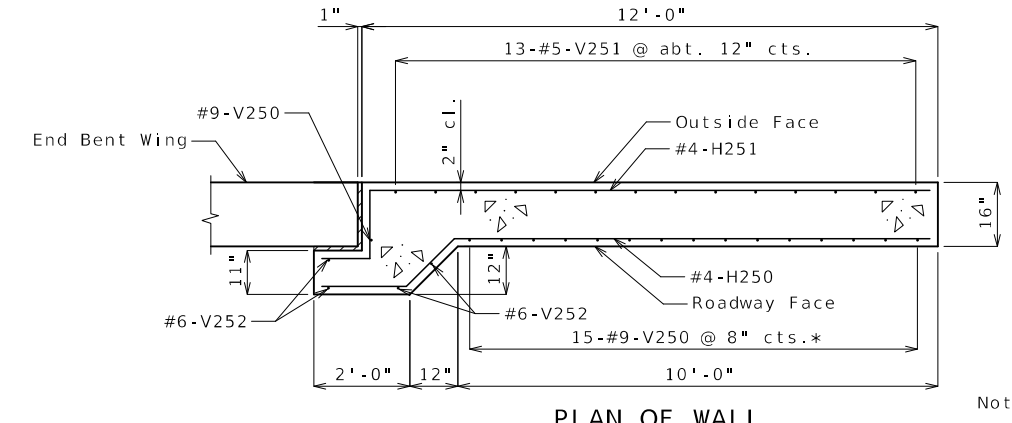
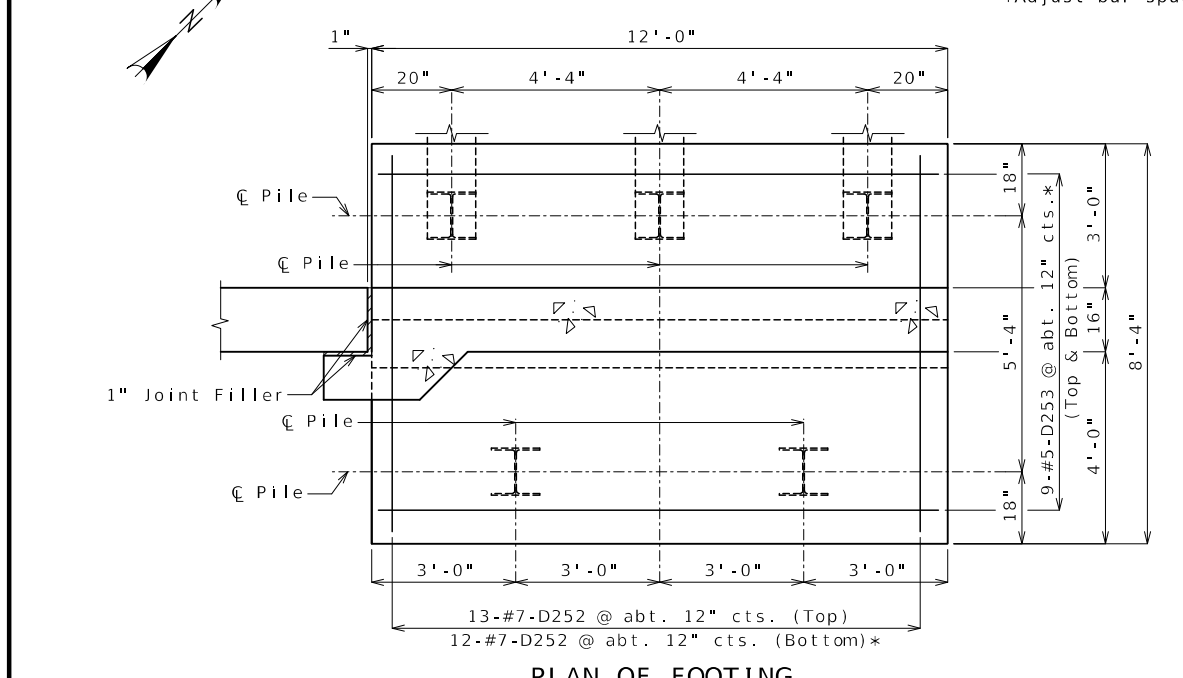
13523 Barrett Parkway Dr Phone 314-394-3100

Suite 250 St. Louis, MO 63021 Fax 314-394-3199

Missouri Certificate of Authority: 001578



SECTION THRU KEY
 * Approximately one third of wall thickness



DETAILS OF DETACHED WING WALLS AT END BENT NO. 2
 (Left wing wall shown, right wing wall mirrored)

*Adjust bar spacing as needed to avoid piles

Note:
 For pile splice and anchor details, see Sheet No. 8.
 For reinforcement of the barrier, see Sheet No. 20.

Substructure Quantity Table for Detached Wing Walls at Bent No. 2		
Item	Quantity	Total
Class 1 Excavation	cu. yard	140
Galvanized Structural Steel Piles (12 in.)	linear foot	120
Pile Point Reinforcement	each	10
Class B Concrete (Substructure)	cu. yard	28.7
Reinforcing Steel (Bridges)	pound	3,780

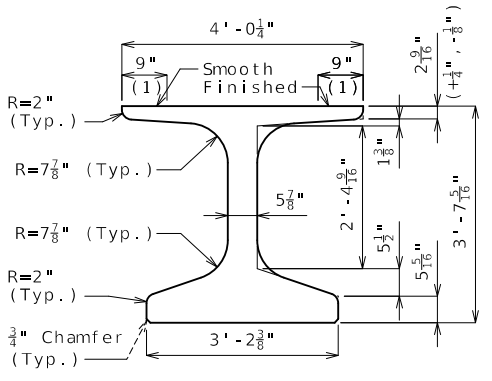
These quantities are included in the estimated quantities table on Sheet No. 2

DATE PREPARED: 12/4/2024
 ROUTE: SOR 44E | DISTRICT: BR | COUNTY: LACLEDE | JOB NO.: JCD0101 | CONTRACT ID.:
 PROJECT NO.:
 BRIDGE NO.: A9538
 MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
 105 WEST CAPITOL JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)

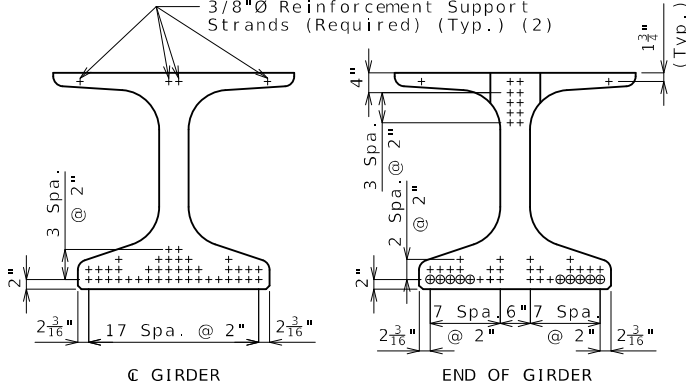
EFK Moen
 Civil Engineering Design
 13523 Barrett Parkway Dr Suite 250
 St. Louis, MO 63021
 Phone: 314-394-3100
 Fax: 314-394-3199
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(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.

(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about \bar{C} Girder. May be moved laterally in pairs.

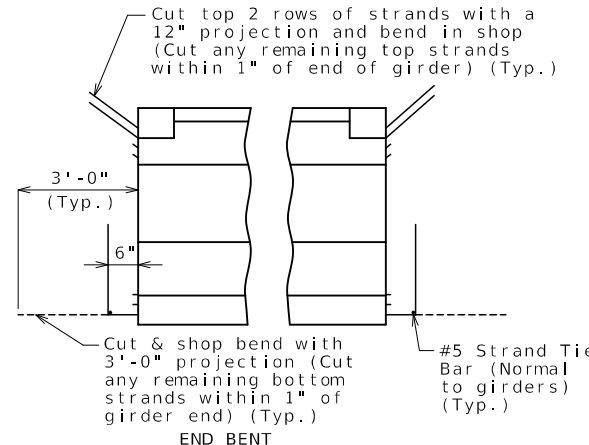


DIMENSIONS

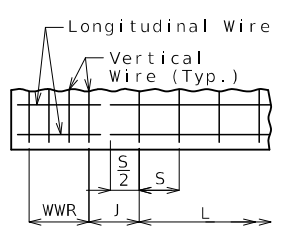


STRAND ARRANGEMENT

+ Indicates prestressing strand. o Indicates cut & shop bend with 3'-0" projection.



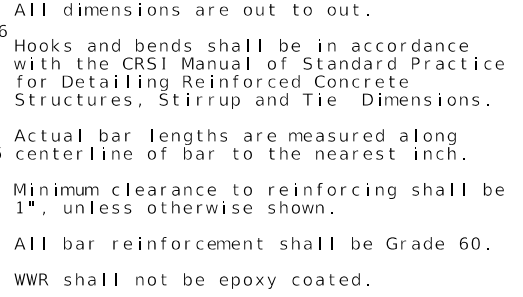
STRANDS AT GIRDER ENDS



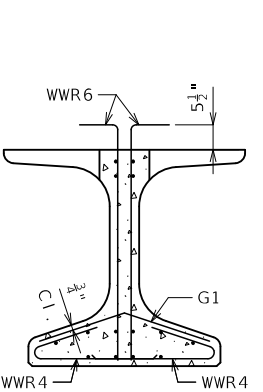
WELDED WIRE PLACEMENT

S = Vertical wire spacing
L = Length of WWR mats
J = Distance between WWR mats

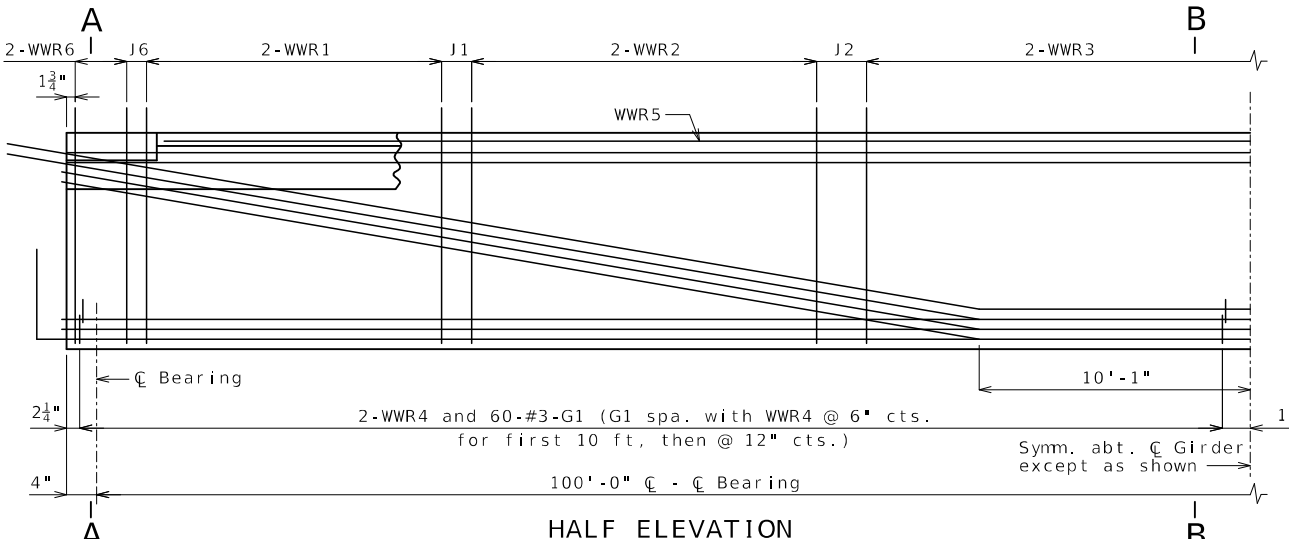
Bill of Reinforcing Steel					
Bars Each Girder-WWR Sheet				Bending Diagrams	
No.	Size/Mark	Length	Shape		
120	3 G1	2'-10"	8	Shape 8	
2	4 G3	7'-8 1/2"	20		
24	4 G6	Varies	20		
Welded Wire Each Girder				Shape 20	
Mark	Size	S	W		
WWR1	D20	4"	W8	2'-0"	8"
WWR2	D20	8"	W8	14'-0"	10 1/4"
WWR3	D20	12"	W8	62'-0"	--
WWR6	D31	2"	W12	16"	4"



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.

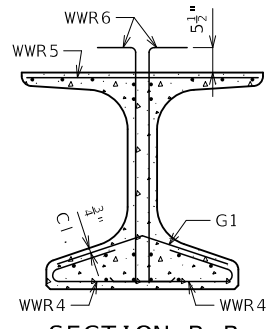


SECTION A-A
Strands not shown for clarity.

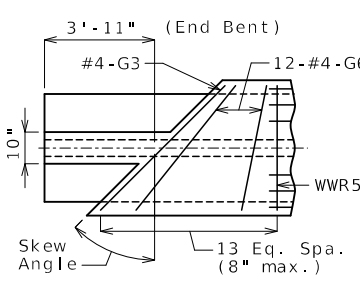


HALF ELEVATION

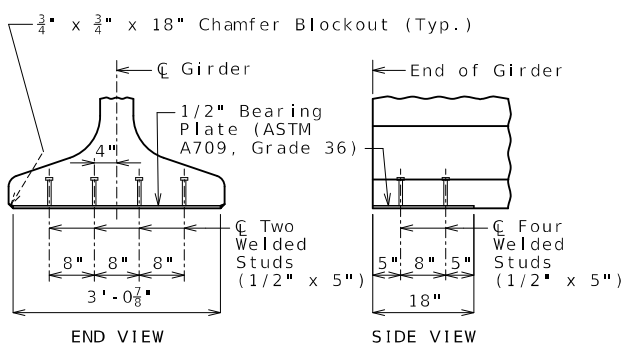
Reinforcement support strands not shown for clarity.



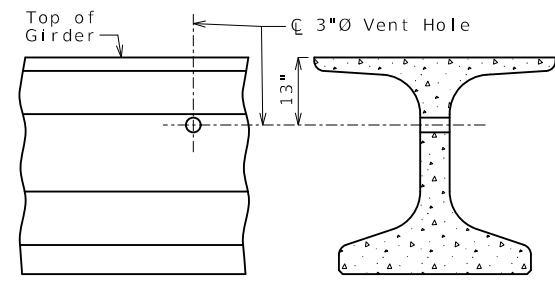
SECTION B-B
Strands not shown for clarity.



TOP FLANGE BLOCKOUT

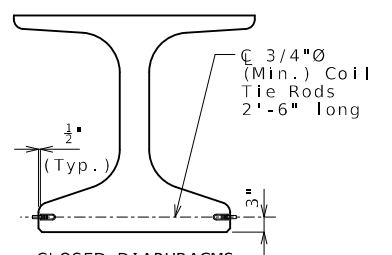


BEARING PLATE



VENT HOLE

Place vent holes at or near upgrade 1/3 point of girders and clear reinforcing steel or strands by 1 1/2" minimum.



COIL TIES

General Notes:

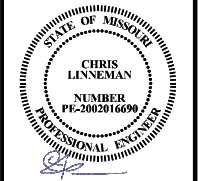
Concrete for prestressed beams shall be Class A-1 with $f'c = 8000$ psi and $f'ci = 6500$ psi.
Use 40 strands, 0.6" \bar{C} Grade 270, with an initial prestress force of 1758 kips.
Pretensioned members shall be in accordance with Sec 1029.
Fabricator shall be responsible for location and design of lifting devices.
Exterior and interior girders are the same except: coil inserts for slab drains.
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. 16.
For location of coil inserts at slab drains, see Sheet No. 15.
For location of coil ties at integral bents, see Sheets No. 4 and 9.
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.

NU-GIRDERS - SPAN (1-2)

Detailed Aug. 2024
Checked Aug. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 12 of 25



DATE PREPARED
12/4/2024
ROUTE SOR 44E
DISTRICT BR
COUNTY LACLEDE
JOB NO. JCD0101
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9538

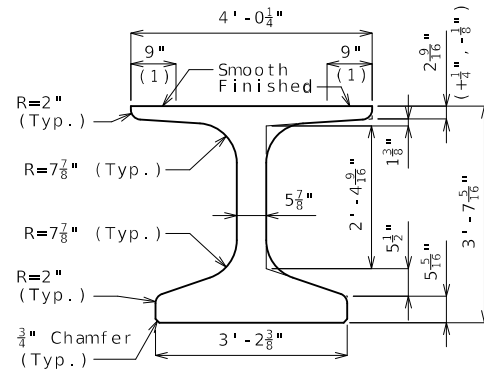
DESCRIPTION

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

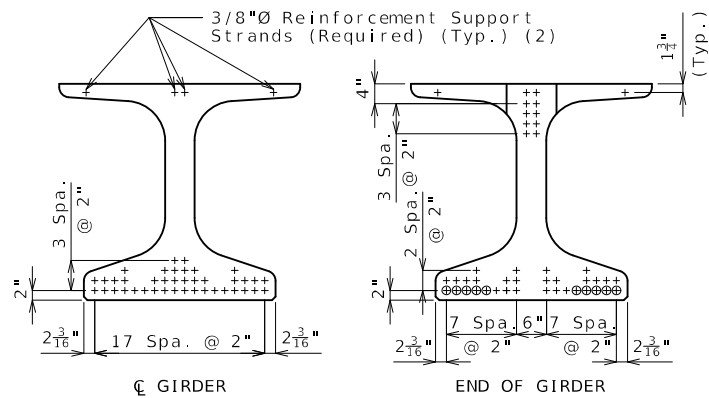
EFK Moen
Civil Engineering Design
13523 Barrett Parkway Dr
Suite 250
St. Louis, MO 63021
Phone 314-394-3100
Fax 314-394-3199
Missouri Certificate of Authority: 001578

(1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.



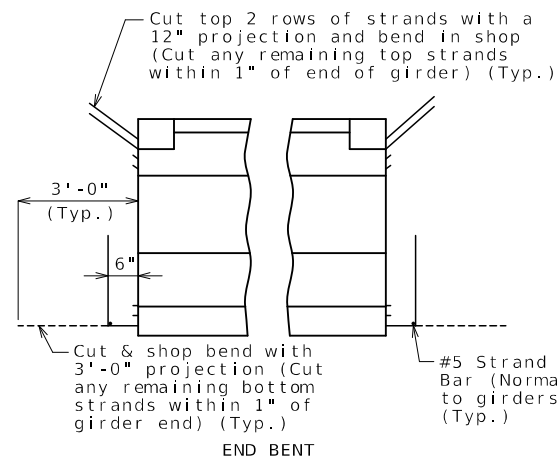
DIMENSIONS

(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about C Girder. May be moved laterally in pairs.

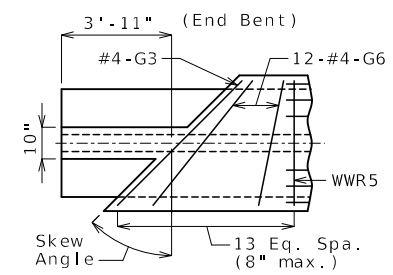


STRAND ARRANGEMENT

+ Indicates prestressing strand. o Indicates cut & shop bend with 3'-0" projection.



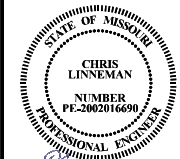
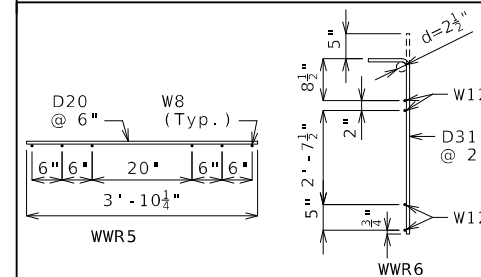
STRANDS AT GIRDER ENDS



TOP FLANGE BLOCKOUT

Bill of Reinforcing Steel - Each Girder				
No.	Size/Mark	Length	Shape	Bending Diagrams
186	5 B1	5'-0"	11	Shape 20
206	4 D1	4'-0"	9	
2	4 G3	7'-8 1/2"	20	Shape 9 Shape 11
24	4 G6	Varies	20	

Welded Wire Reinforcement - Each Girder



12/04/2024 9:32:33 AM
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MO PE-2002016690

DATE PREPARED
12/4/2024

ROUTE SOR 44E MO
DISTRICT SHEET NO. BR 13

COUNTY LACLEDE

JOB NO. JCD0101

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9538

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.

General Notes:

Concrete for prestressed girders shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 40 strands, 0.6"Ø Grade 270, with an initial prestress force of 1758 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: coil inserts for slab drains.

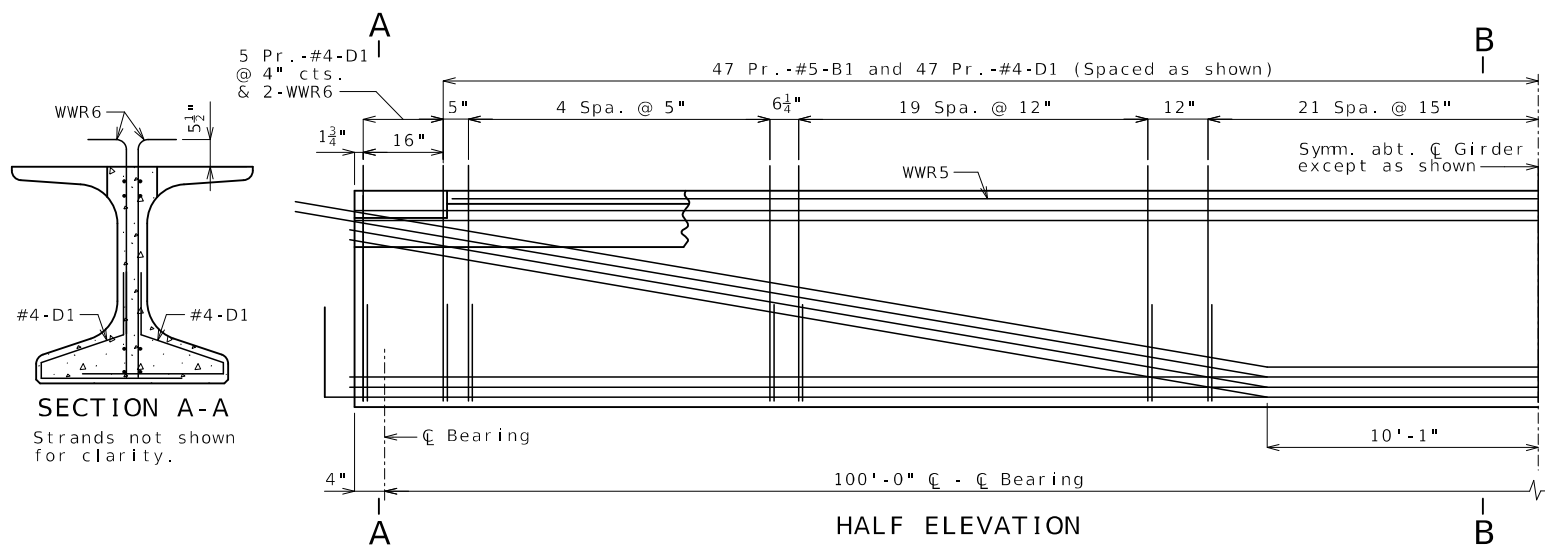
The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. 16.

For location of coil inserts at slab drains, see Sheet No. 15.

For location of coil ties at integral bents, see Sheets No. 4 and 9.

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.

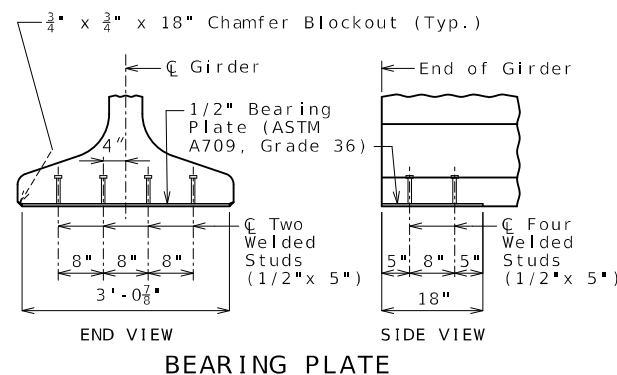


HALF ELEVATION

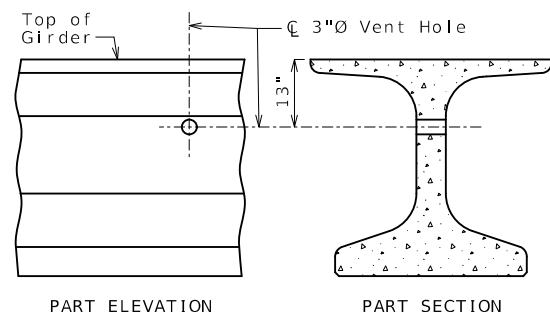
Reinforcement support strands not shown for clarity.

SECTION A-A
Strands not shown for clarity.

SECTION B-B
Strands not shown for clarity.

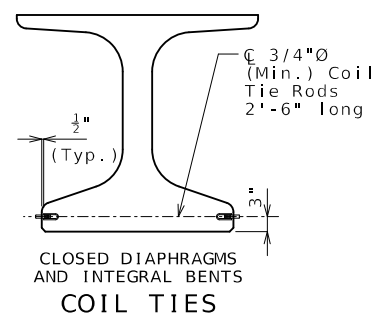


BEARING PLATE



VENT HOLE

Place vent holes at or near upgrade 1/3 point of girders and clear reinforcing steel or strands by 1 1/2" minimum.



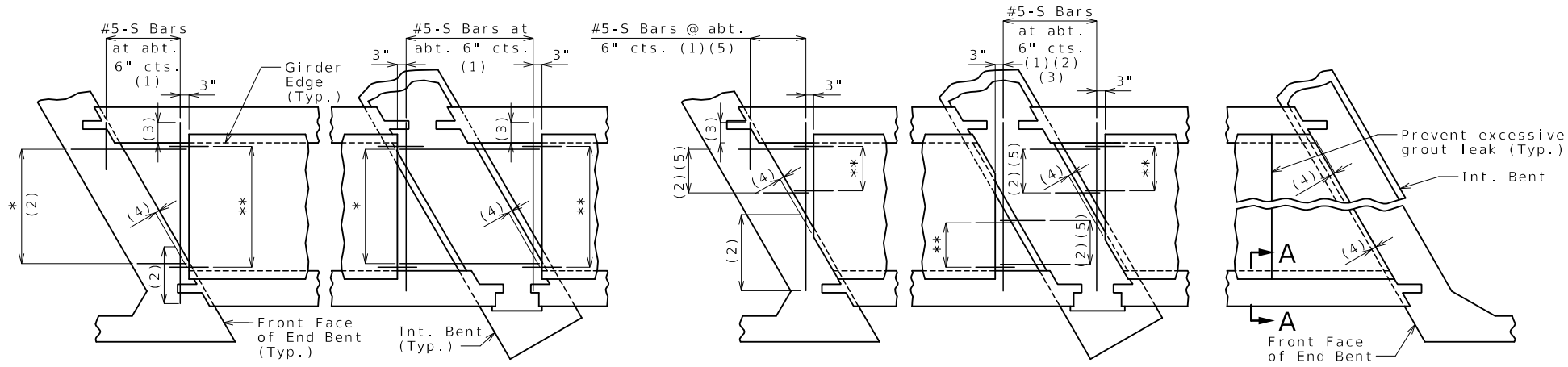
COIL TIES

NU-GIRDERS (ALTERNATE REINFORCEMENT) - SPAN (1-2)

Detailed Aug. 2024
Checked Aug. 2024

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 13 of 25



SQUARED END PANELS OR TRUNCATED END PANELS
PLAN SHOWING PANEL PLACEMENT

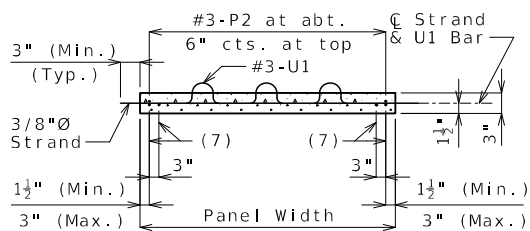
* #5-S Bars at abt. 9" cts. (1)
** #3-P1 at 12" cts. (End panels only)

SKewed END PANELS
Joint Filler Dimensions

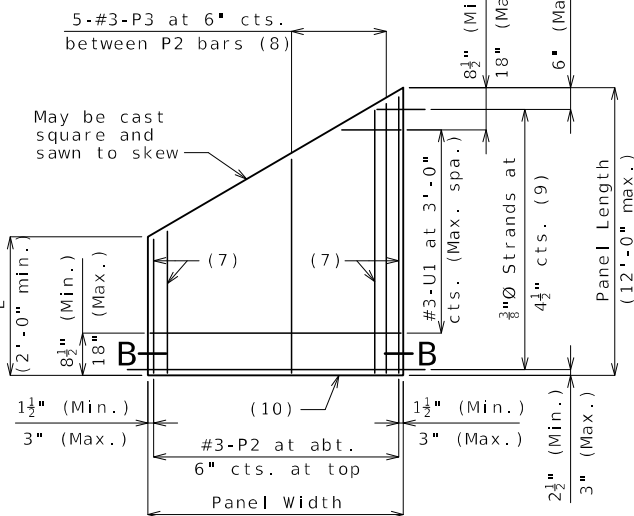
Width	Height	
	Min.	Max.
3"	1"	4"

BENDING DIAGRAM FOR U1 BAR

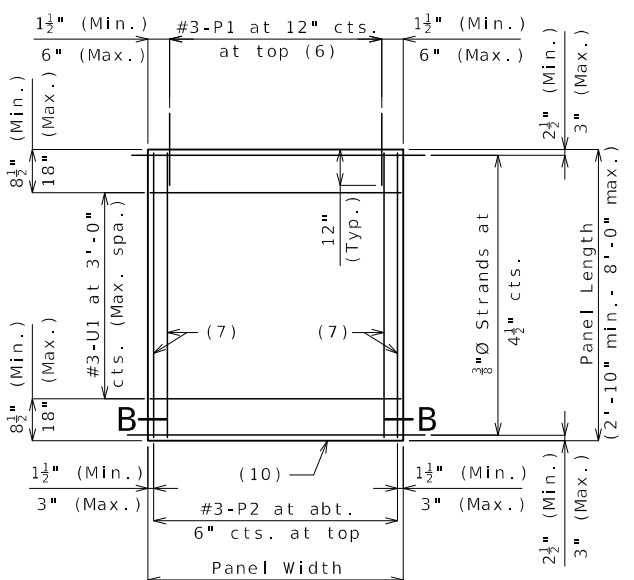
U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars.



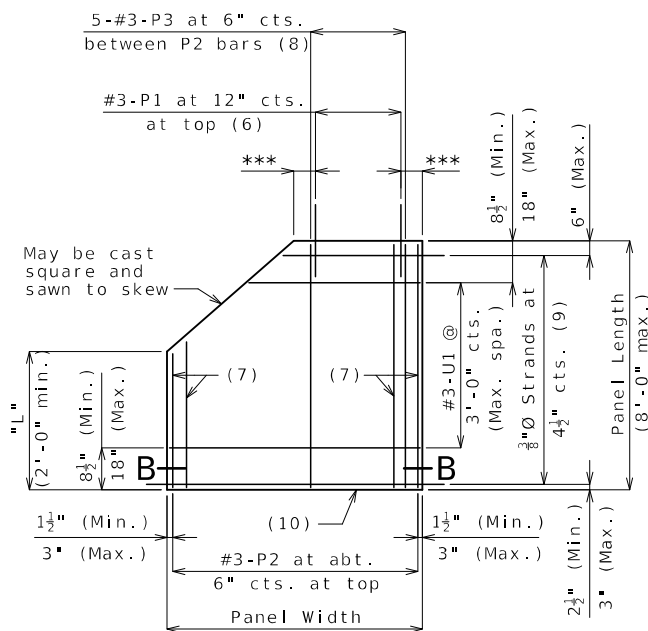
SECTION B-B



PLAN OF OPTIONAL SKewed END PANEL



PLAN OF SQUARED PANEL



PLAN OF OPTIONAL TRUNCATED END PANEL

*** 3" (Min.), 6" (Max.)

SECTION A-A

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 and int. 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 bents 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.

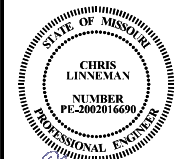
Use Slab Haunching Diagram on Sheet No. 16 for determining thickness of joint filler within the limits noted in the table of Joint Filler Dimensions.

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.



12/04/2024 9:32:27 AM
Chris Linneman - Civil
MO PE-2002016690

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12/4/2024

ROUTE
SOR 44E MO

DISTRICT
BR

SHEET NO.
14

COUNTY
LACLEDE

JOB NO.
JCD0101

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9538

DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

MoDOT

EFK Moen

Civil Engineering Design

13523 Barrett Parkway Dr

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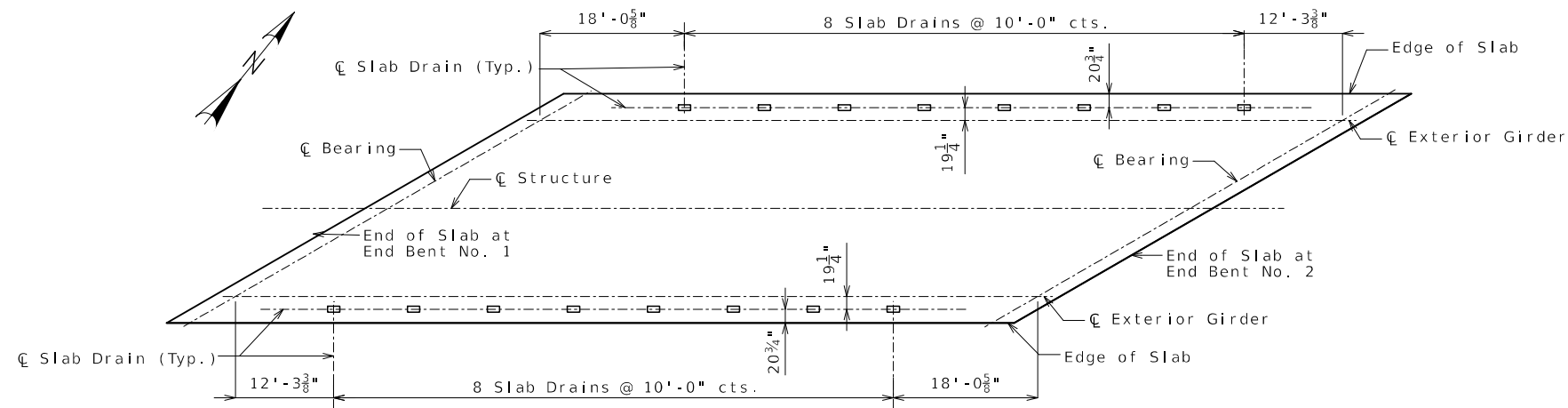
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PRESTRESSED PANELS

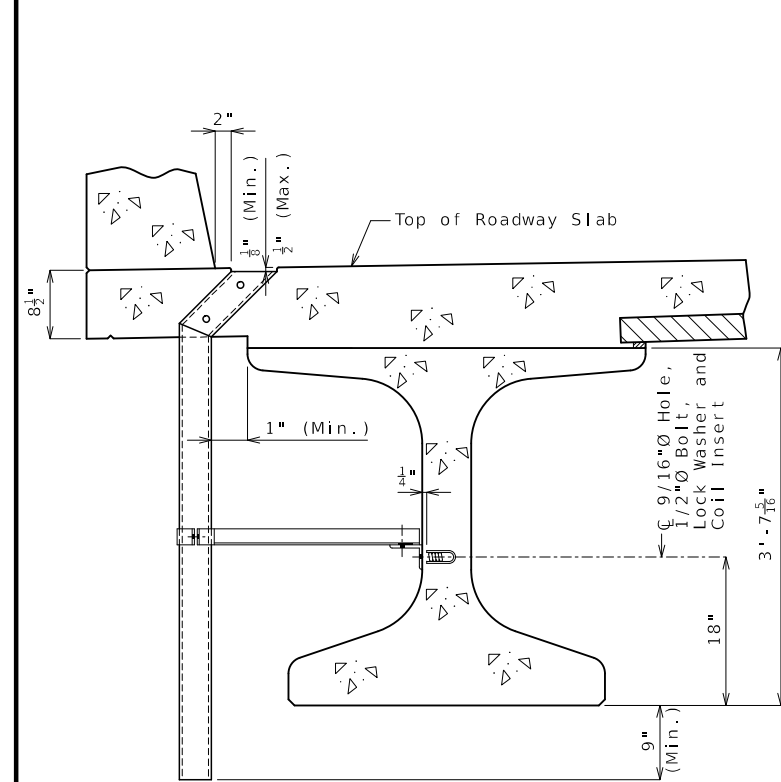
Detailed Aug. 2024
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Note: This drawing is not to scale. Follow dimensions.

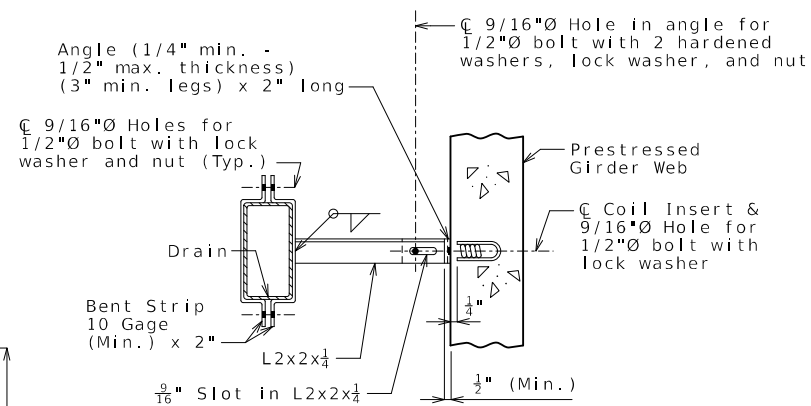
Sheet No. 14 of 25



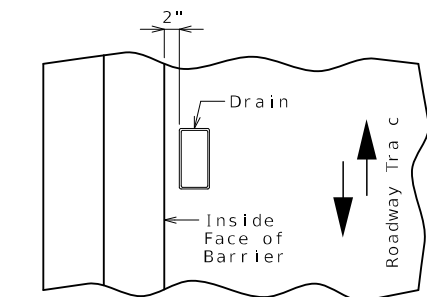
PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS



PART SECTION NEAR DRAIN

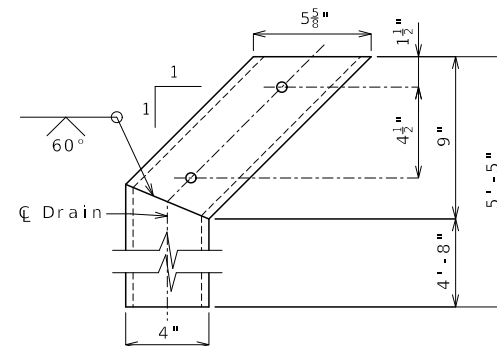


PART SECTION SHOWING BRACKET ASSEMBLY

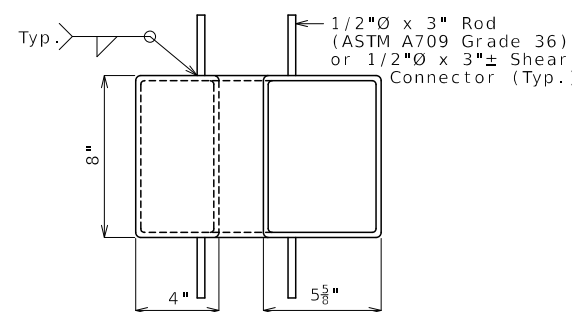


PART PLAN OF SLAB AT DRAIN

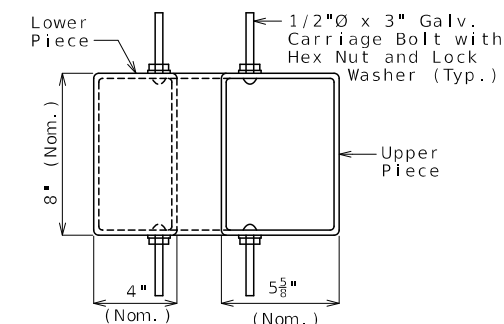
SLAB DRAINS



ELEVATION OF DRAIN



PLAN OF STEEL DRAIN OPTION



PLAN OF FRP DRAIN OPTION

General Notes:

Contractor shall have the option to construct either steel or FRP slab drains. All drains shall be of same type.

Slab drain bracket assembly shall be ASTM A709 Grade 36 steel.

Locate drains in slab by dimensions shown in Part Section Near Drain.

Reinforcing steel shall be shifted to clear drains.

The coil inserts and bracket assembly shall be galvanized in accordance with ASTM A123.

All bolts, hardened washers, lock washers and nuts shall be galvanized in accordance with AASHTO M 232 (ASTM A153), Class C.

All 1/2"Ø bolts shall be ASTM A307.

Shop drawings will not be required for the slab drains and the bracket assembly.

The coil insert required for the bracket assembly attachment shall be located on the prestressed girder shop drawings.

Coil inserts shall have a concrete pull-out strength (ultimate load) of at least 2,500 pounds in 5,000 psi concrete.

The bolt required to attach the slab drain bracket assembly to the prestressed girder web shall be supplied by the prestressed girder fabricator.

Notes for Steel Drain:

Slab drains may be fabricated of either 1/4" welded sheets of ASTM A709 Grade 36 steel or from 1/4" structural steel tubing ASTM A500 or A501.

Outside dimensions of drains are 8" x 4".

The drains shall be galvanized in accordance with ASTM A123.

Notes for FRP Drain:

Drains shall be machine lamination-wound thermosetting resin tubing meeting the requirements of ASTM D2996 with the following exceptions:

Shape of drains shall be rectangular with outside nominal dimensions of 8" x 4".

Minimum reinforced wall thickness shall be 1/4 inch.

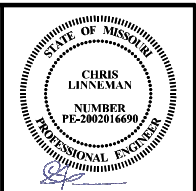
The resin used shall be ultraviolet (UV) resistant and/or have UV inhibitors mixed throughout. Drains may have an exterior coating for additional UV resistance.

The color of the slab drain shall be gray (Federal Standard 26373). The color shall be uniform throughout the resin and any coating used.

The combination of materials used in the manufacture of the drains shall be tested for UV resistance in accordance with ASTM D4329 Cycle A. The representative material shall withstand at least 500 hours of testing with only minor discoloration and without any physical deterioration. The contractor shall furnish the results of the required ultraviolet testing prior to acceptance of the slab drains.

At the contractor's option, drains may be field cut. The method of cutting FRP slab drain shall be as recommended by the manufacturer to ensure a smooth, chip free cut.

Both upper and lower drain pieces shall be rigidly connected to each other. Drain or shall not be obstructed. Approval of the engineer is required.



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Chris Linneman - Civil
MO PE-200216690

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ROUTE SOR 44E	STATE MO
DISTRICT BR	SHEET NO. 15
COUNTY LACLEDE	
JOB NO. JCD0101	
CONTRACT ID.	

PROJECT NO.
BRIDGE NO. A9538

DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

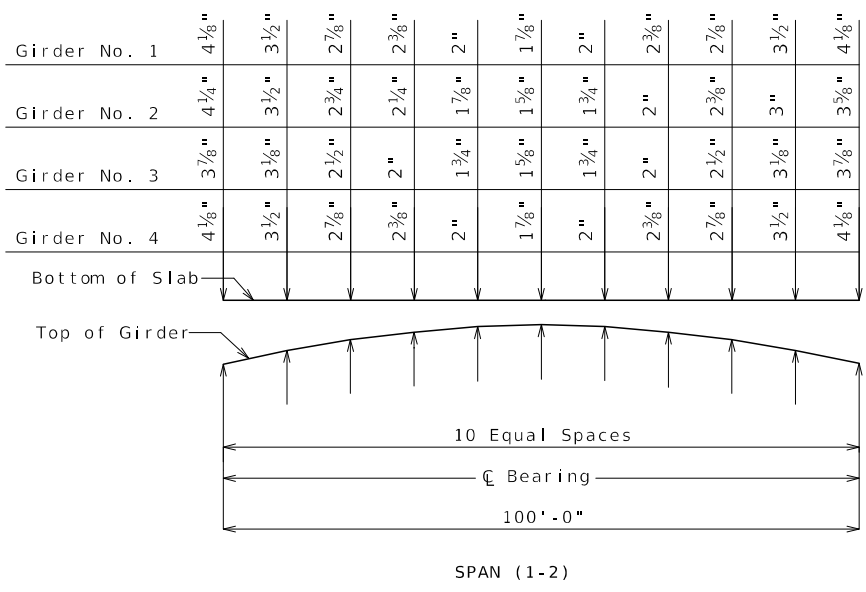
EFK Moen
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Missouri Certificate of Authority: 001578



12/04/2024 9:33:02 AM
Chris Linneman - Civil
MO PE-2002016690

DATE PREPARED
12/4/2024
ROUTE STATE
SOR 44E MO
DISTRICT SHEET NO.
BR 16
COUNTY
LACLEDE
JOB NO.
JCD0101
CONTRACT ID.

PROJECT NO.
BRIDGE NO.
A9538

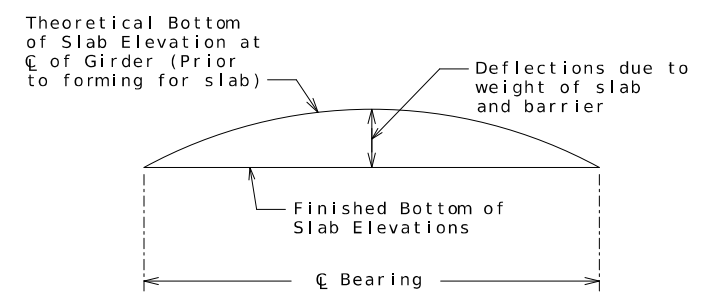


THEORETICAL SLAB HAUNCHING DIAGRAM

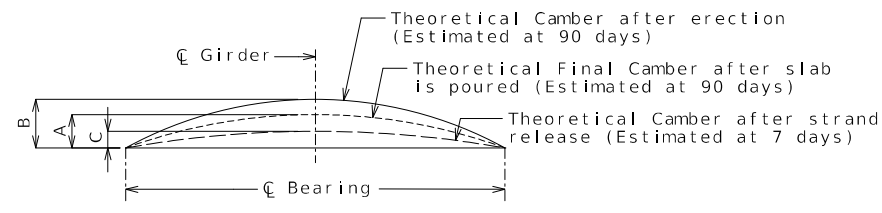
Theoretical Bottom of Slab Elevations at Centerline of Girder (Prior to forming for slab) (Estimated at 90 days)

Girder Number	Span (1-2) (100'-0" @ Brg. - @ Brg.)										
	@ Brg.	.10	.20	.30	.40	.50	.60	.70	.80	.90	@ Brg.
1	1078.18	1078.26	1078.33	1078.39	1078.42	1078.42	1078.41	1078.37	1078.30	1078.22	1078.13
2	1078.30	1078.38	1078.46	1078.51	1078.55	1078.56	1078.55	1078.52	1078.47	1078.39	1078.31
3	1078.26	1078.35	1078.43	1078.50	1078.54	1078.56	1078.55	1078.53	1078.48	1078.41	1078.34
4	1078.07	1078.17	1078.26	1078.33	1078.38	1078.41	1078.41	1078.39	1078.34	1078.28	1078.21

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.



TYPICAL SLAB ELEVATIONS DIAGRAM



Girder	Span (1-2)		
	A	B	C
Exterior	3"	5"	2 7/8"
Interior	3"		

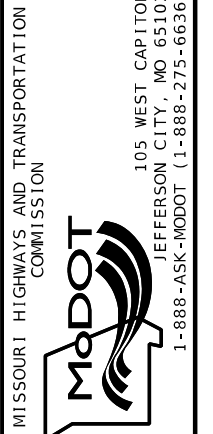
GIRDER CAMBER DIAGRAM

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.

If girder beam 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. The haunch shall be limited to ensure the projecting girder reinforcement is embedded into slab at least 2 inches. 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.



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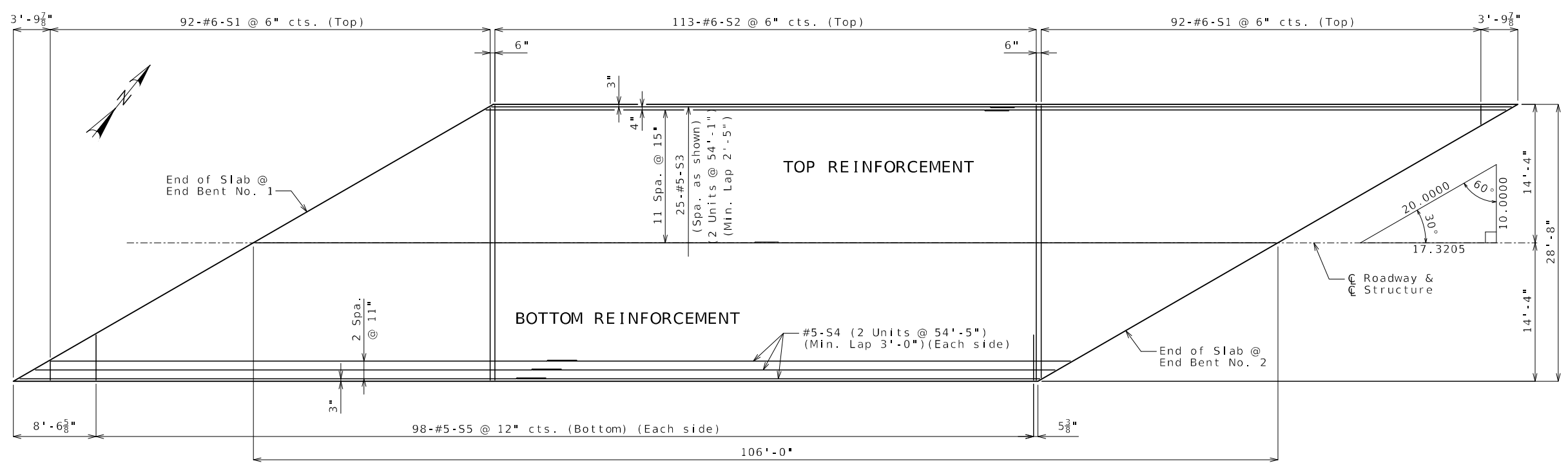
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 Chris Linneman - Civil
 MO PE-2002016690
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 12/4/2024
 ROUTE STATE
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 BR 17
 COUNTY
 LACLEDE
 JOB NO.
 JCD0101
 CONTRACT ID.

PROJECT NO.
 BRIDGE NO.
 A9538

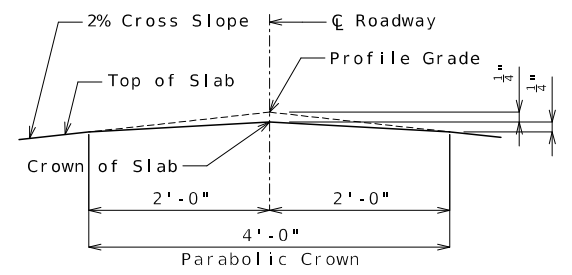
DESCRIPTION

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

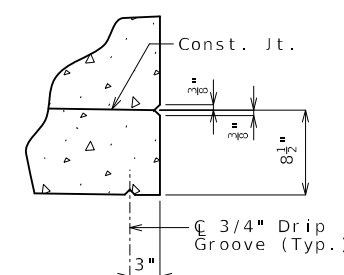
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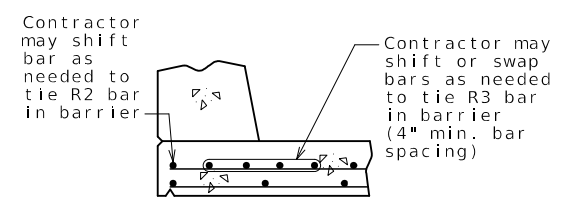
(SPAN 1-2)
PLAN OF SLAB SHOWING REINFORCEMENT



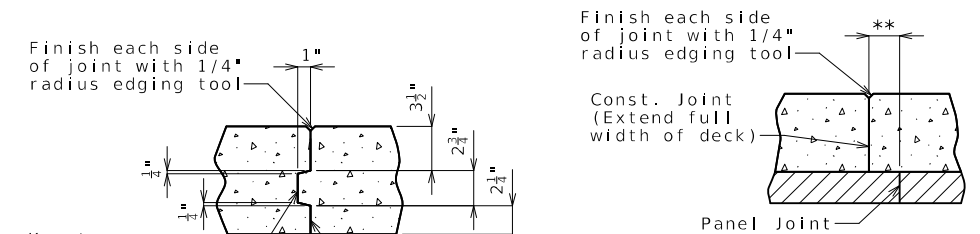
DETAIL A



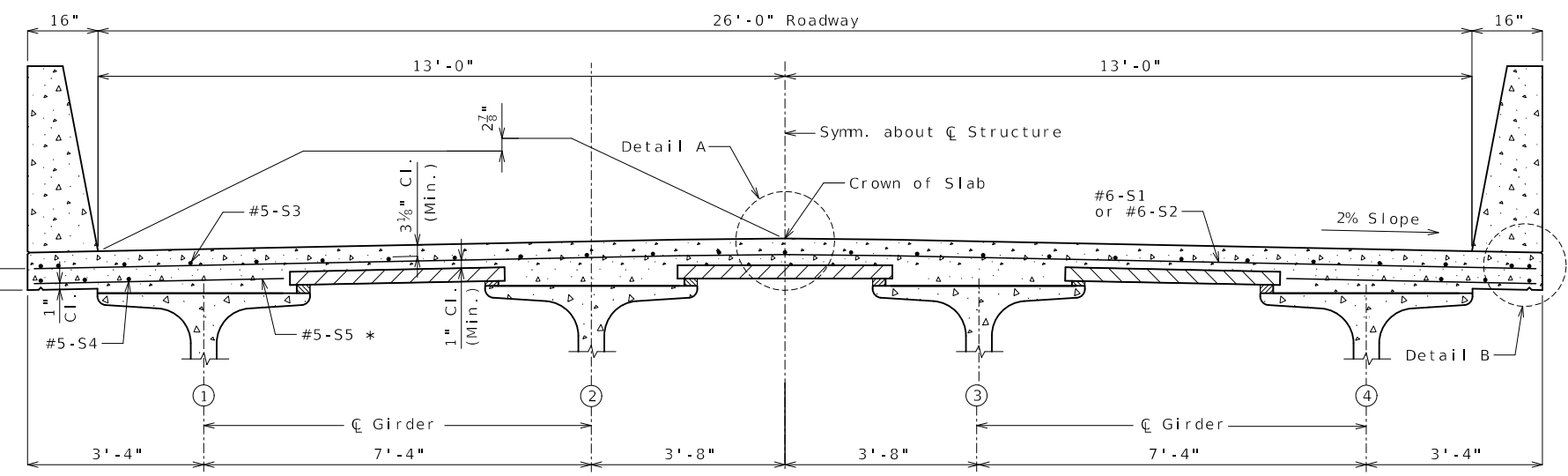
DETAIL B



OPTIONAL SHIFTING TOP BARS AT BARRIER



FULL DEPTH SLAB SLAB CONSTRUCTION JOINT



SECTION THRU SLAB

* Alternate bar shape available, see barrier sheet.

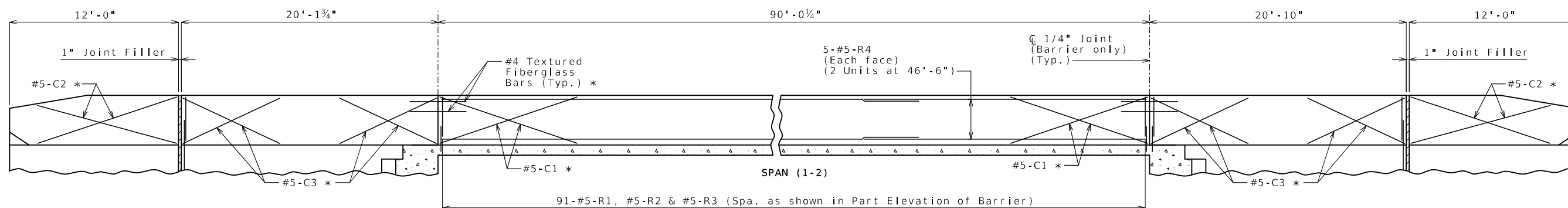
SLAB DETAILS

Notes:
 Longitudinal slab dimensions are measured horizontally.
 The Contractor shall pour and satisfactorily finish the roadway slab at a rate of note less than 25 cubic yards per hour.
 For details of precast prestressed panels, see Sheet No. 14.
 For reinforcement of barrier not shown, see Sheet No. 18.
 For Theoretical Bottom of Slab Elevations, Girder Camber Diagram and Theoretical Slab Haunching Diagram, see Sheet No. 16.
 For details and locations of Slab Drains, see Sheet No. 15.

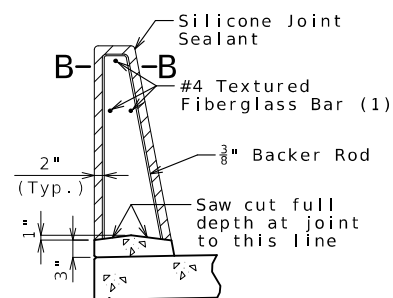
Detailed Aug. 2024
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Note: This drawing is not to scale. Follow dimensions.

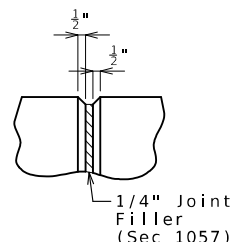
Sheet No. 17 of 25



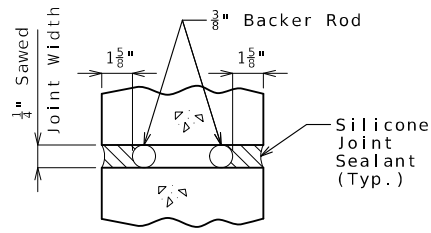
ELEVATION OF BARRIER
(Left barrier shown, right barrier similar)
Longitudinal dimensions are horizontal.



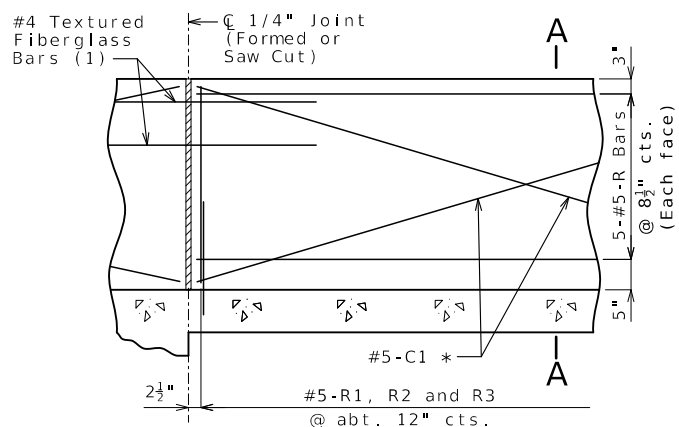
SECTION THRU SAW CUT JOINT



PART ELEVATION AT FORMED JOINT

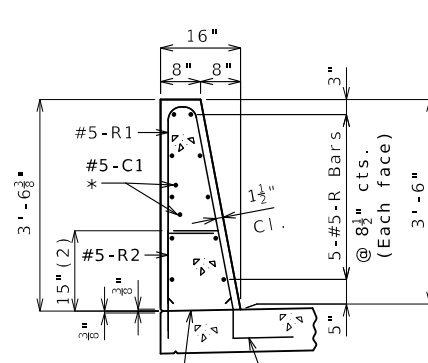


SECTION B-B



PART ELEVATION OF BARRIER

(1) Four feet long, centered on joint, slip-formed option only

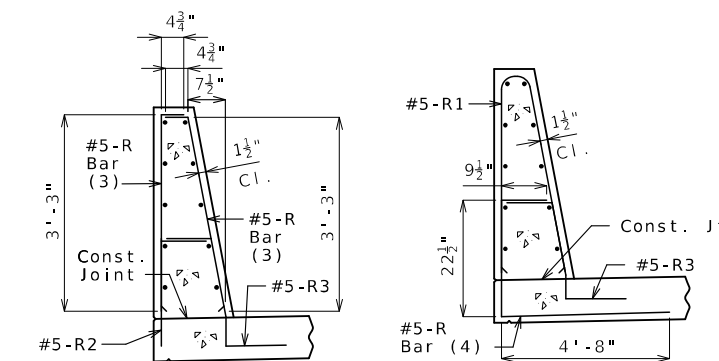


SECTION A-A

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.

General Notes:

* Slip-formed option only.

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.

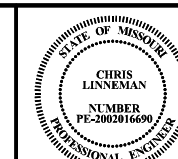
Concrete in barrier shall be Class B-1.

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.

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.



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Chris Linneman - Civil
MO PE-2002016690

DATE PREPARED
12/4/2024

ROUTE 44E STATE MO
DISTRICT BR SHEET NO. 18

COUNTY LACLEDE
JOB NO. JCD0101
CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9538

DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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TYPE D BARRIER

Sheet No. 18 of 25

Detailed Aug. 2024
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MO PE-2002016690

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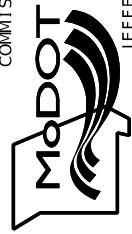
ROUTE SOR 44E MO
DISTRICT BR SHEET NO. 19

COUNTY LACLEDE
JOB NO. JCD0101
CONTRACT ID.

PROJECT NO.
BRIDGE NO. A9538

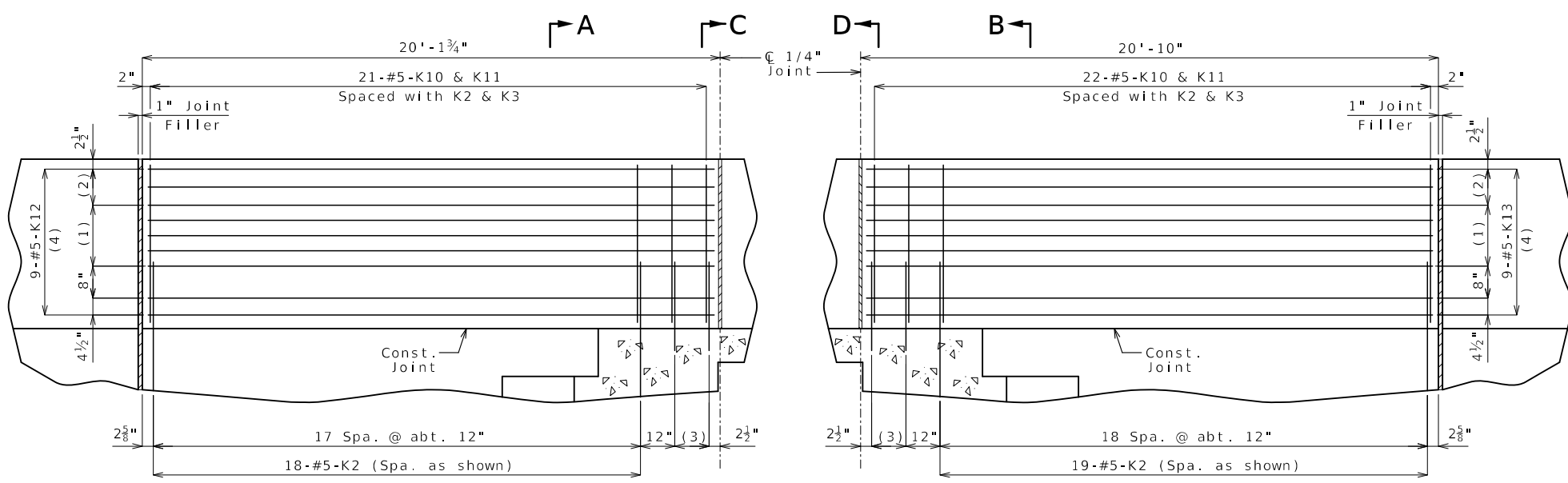
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

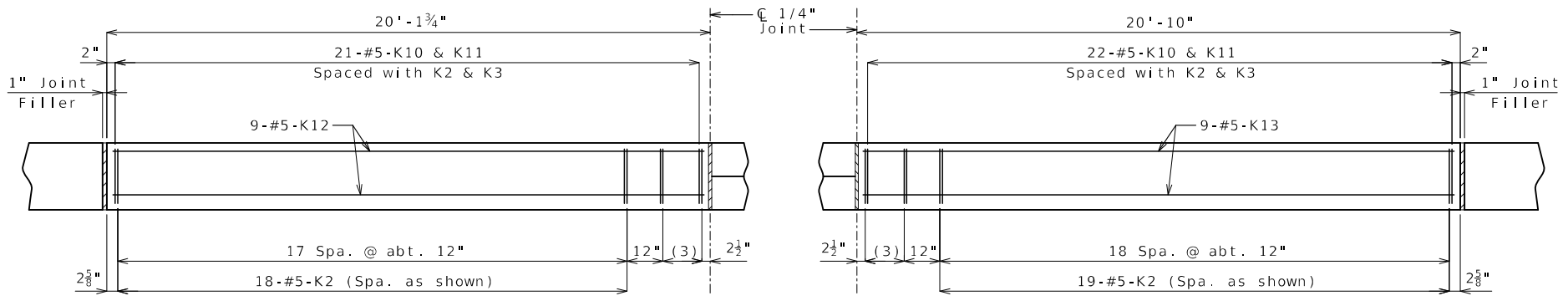


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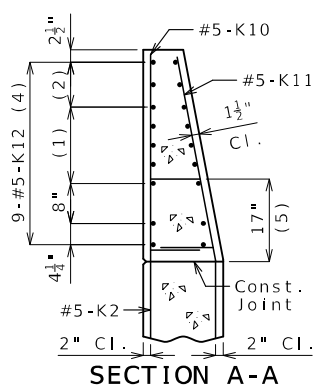
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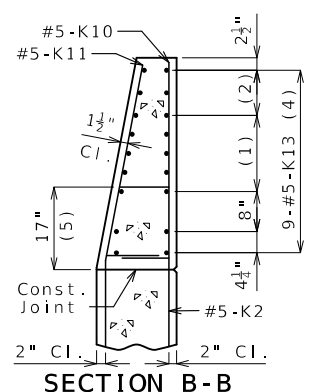
PART ELEVATION



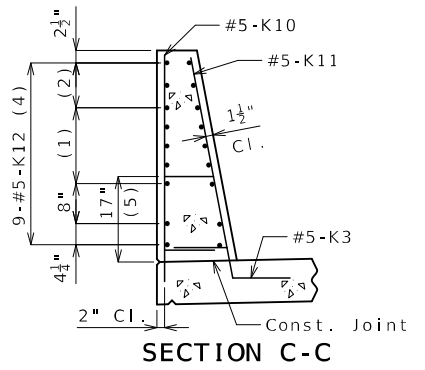
PART PLAN



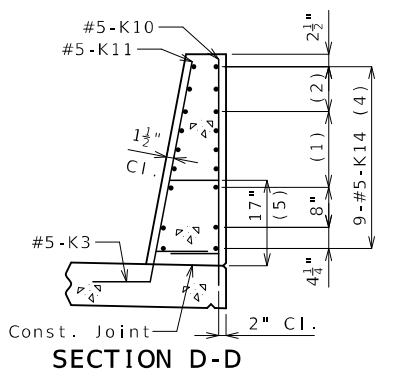
SECTION A-A



SECTION B-B

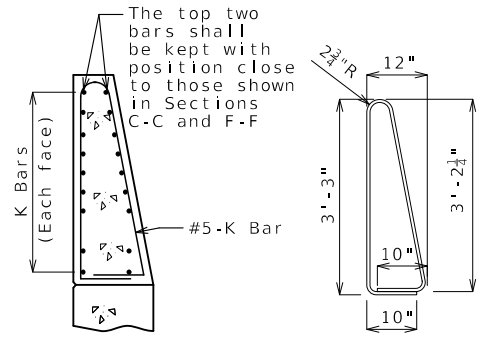


SECTION C-C



SECTION D-D

- (1) 4 Spa. @ 3 1/4"
- (2) 2 Spa. @ 4 1/2"
- (3) 3-#5-K3 @ 12" cts.
- (4) Spaced as shown, each face
- (5) To top of bar



K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE

(Other K bars not shown for clarity)

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:

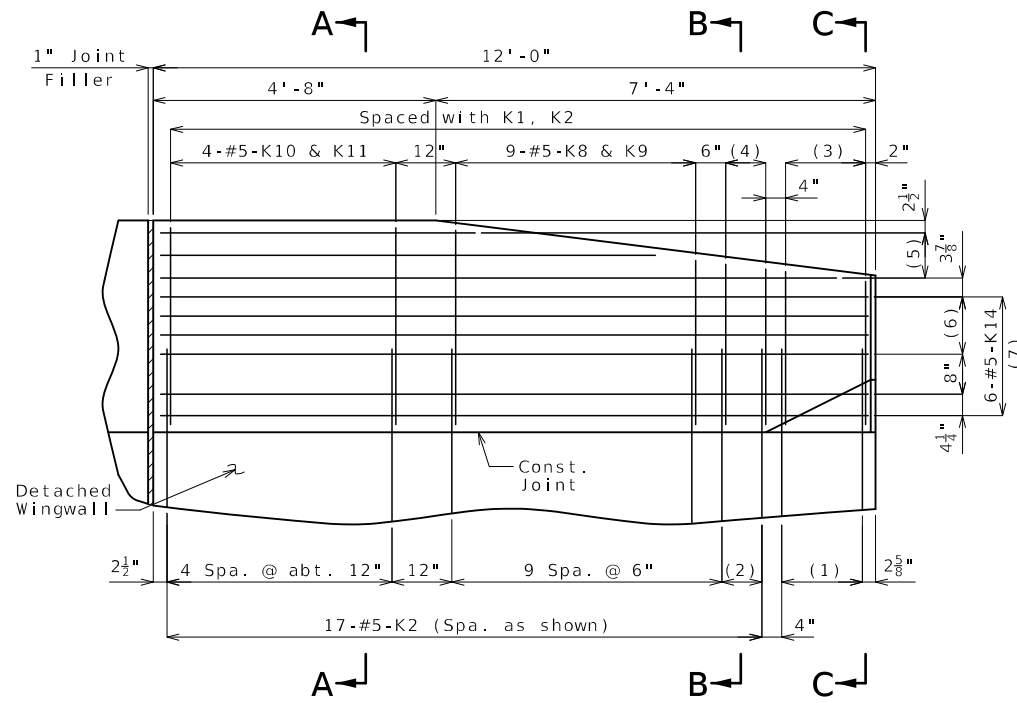
Minimum clearance to reinforcing steel shall be 1 1/2" except as shown for bars embedded into end bent.

The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

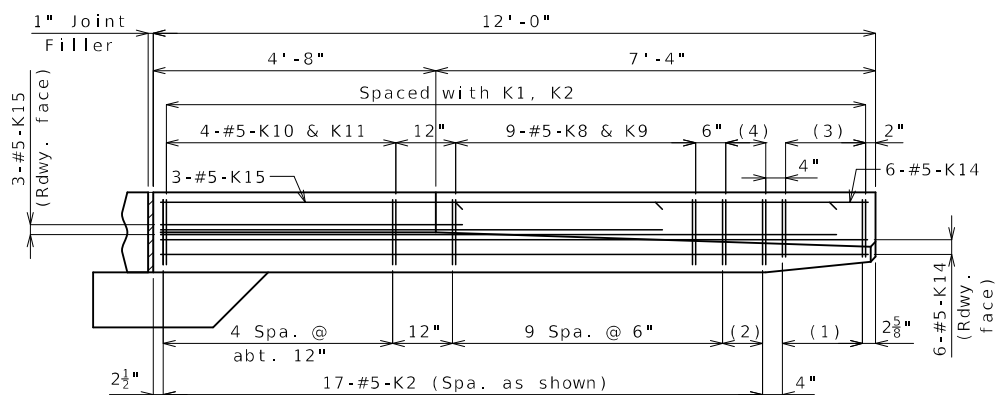
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TYPE D BARRIER AT END BENTS

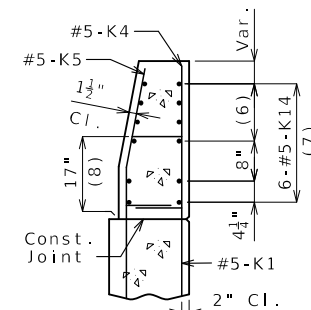
(Left barrier shown, right barrier similar)



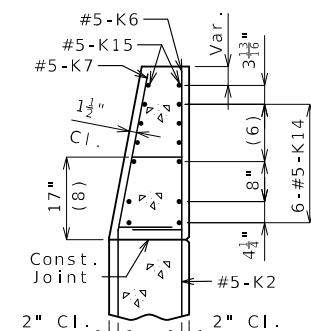
PART ELEVATION



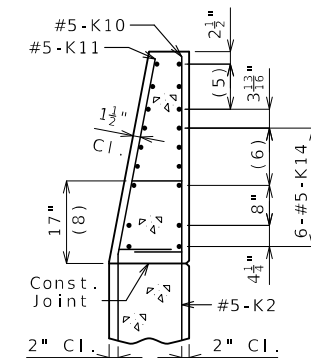
PART PLAN



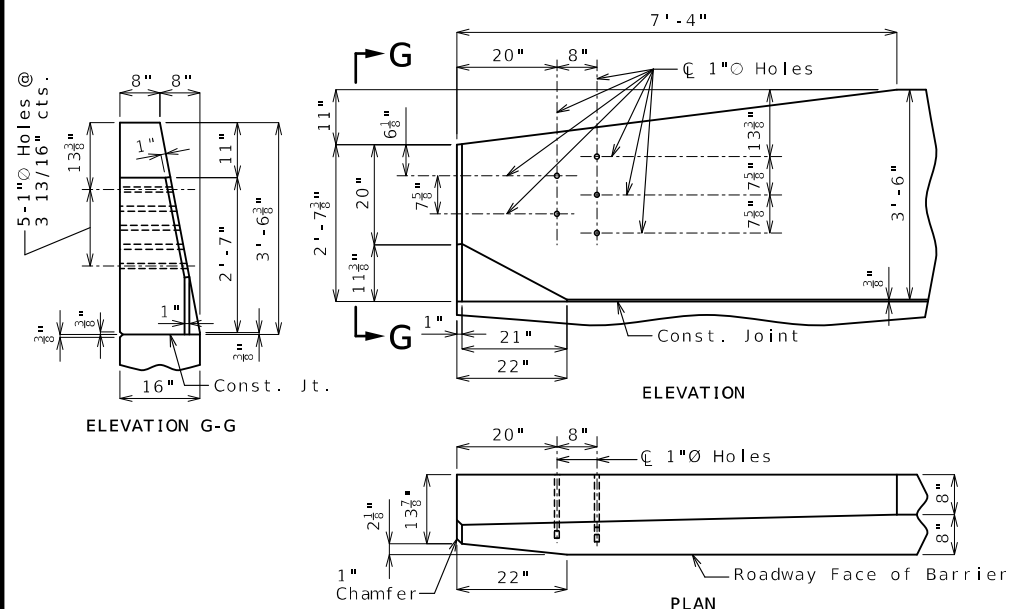
SECTION C-C



SECTION B-B



SECTION A-A



DETAILS OF GUARD RAIL ATTACHMENT

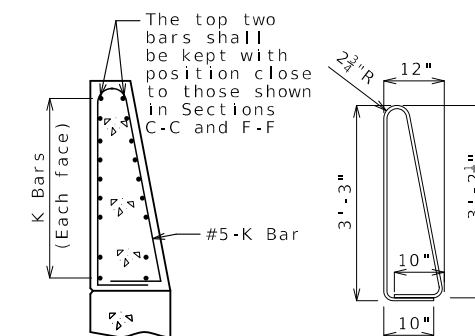
- (1) 5-#5-K1 @ 4" cts.
- (2) 2 spaces @ 4"
- (3) 5-#5-K4 & K5
- (4) 3-#5-K6 & K7
- (5) 3-#5-K15 @ 4 1/2" cts., each face
- (6) 3 spaces @ 3 13/16"
- (7) Spaced as shown, each face
- (8) To top of bar

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.



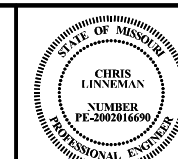
K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE
(Other K bars not shown for clarity)

The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

TYPE D BARRIER AT DETACHED WING WALL

(Bent No. 2 Left barrier shown, similar for all detached wing walls)



12/04/2024 9:35:22 AM
Chris Linneman - Civil
MO PE-2002016690

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12/4/2024

ROUTE SOR 44E STATE MO

DISTRICT BR SHEET NO. 20

COUNTY LACLEDE

JOB NO. JCD0101

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9538

DESCRIPTION

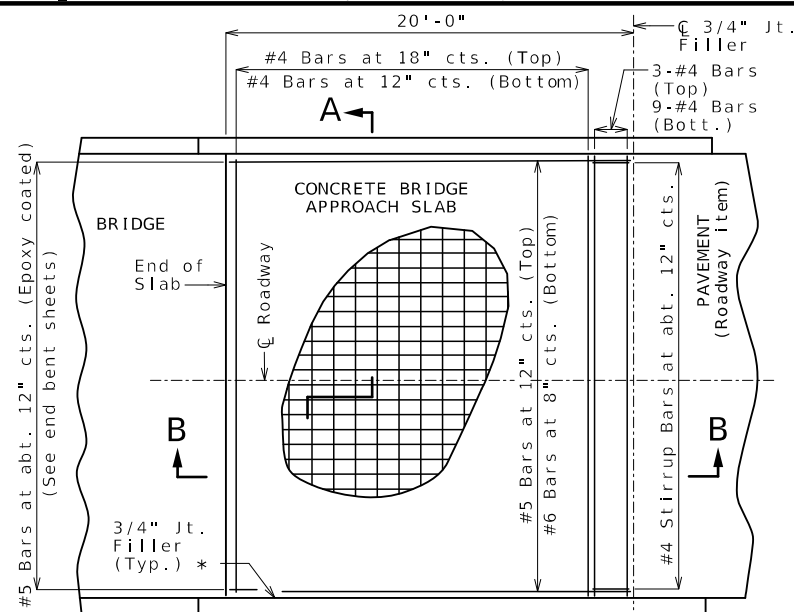
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



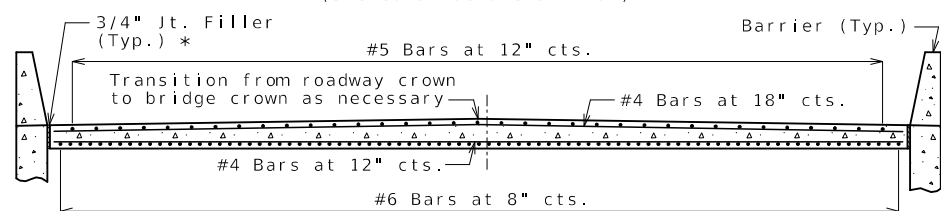
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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

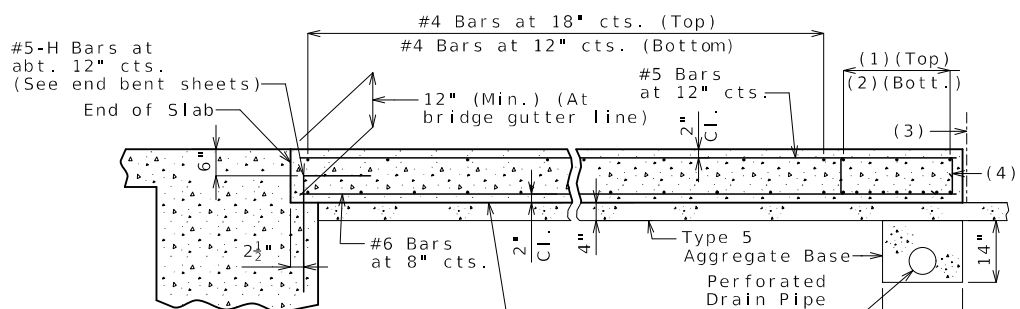


PART PLAN OF SQUARED STRUCTURE
(Skewed structure similar)

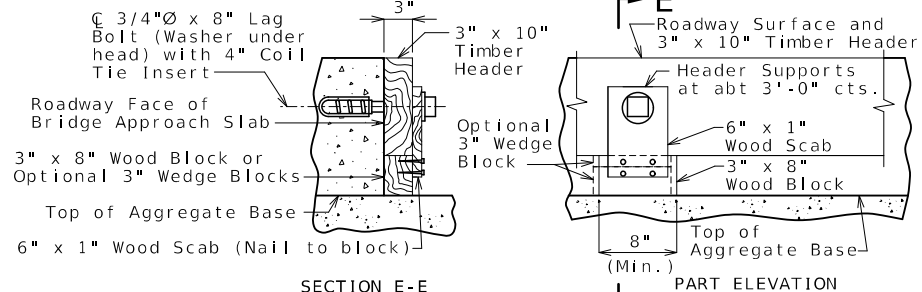


SECTION A-A

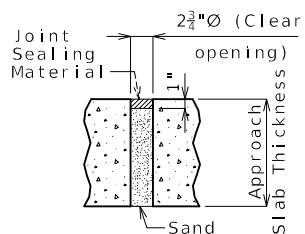
With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.



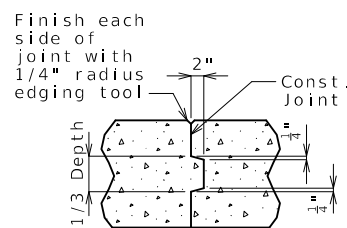
SECTION B-B
(Integral end bent)



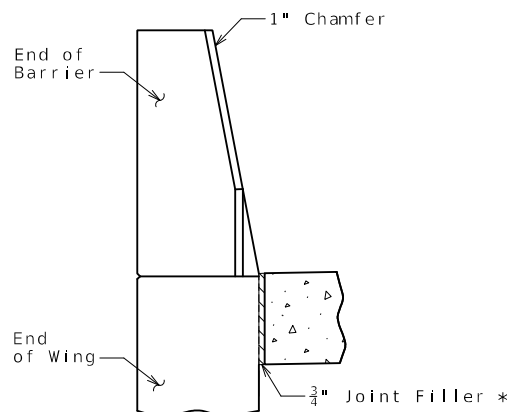
DETAILS OF TIMBER HEADER
Remove timber header when concrete pavement is placed.
OPTIONAL CONCRETE SLAB



UNDERSEAL ACCESS HOLE DETAIL
(If required)



CONSTRUCTION JOINT DETAIL



SECTION BETWEEN CURB AND BARRIER

Notes For Concrete Slab Only:

All concrete for the bridge approach slab shall be in accordance with Sec 503 ($f'c = 4,000$ psi).
The reinforcing steel in the bridge approach slab shall be epoxy coated Grade 60 with $f_y = 60,000$ psi.

Longitudinal construction joints in bridge approach slab shall be aligned with longitudinal construction joints in bridge slab.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

The reinforcing steel in the bridge approach slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 23 inches for #4 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.

Payment for furnishing all materials, labor and excavation necessary to construct the concrete bridge approach slab, including the timber header, 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 (Minor) per square yard.

See Missouri Standard Plan 609.00 for details of Type A curb.

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.

General Notes:

Contractor shall have the option to construct either slab except as noted.

The contractor shall pour and satisfactorily finish the bridge slab before placing the bridge approach slab.

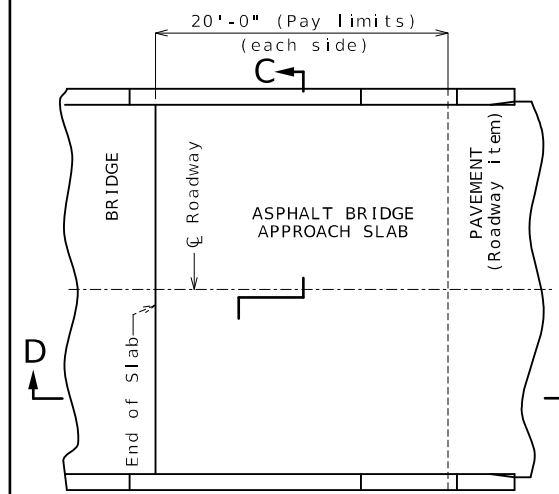
MoDOT Construction personnel will indicate the bridge approach slab used for this structure:

- Concrete Bridge Approach Slab
- Asphalt Bridge Approach Slab

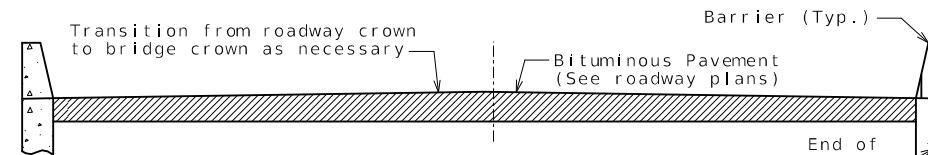
Notes For Asphalt Slab Only:

Payment for furnishing all materials, labor and excavation necessary to construct the asphalt bridge approach slab, including tack, and Type 5 aggregate base within the pay limits shown, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Minor) per square yard.

Application of tack is required between lifts per Sec 403.

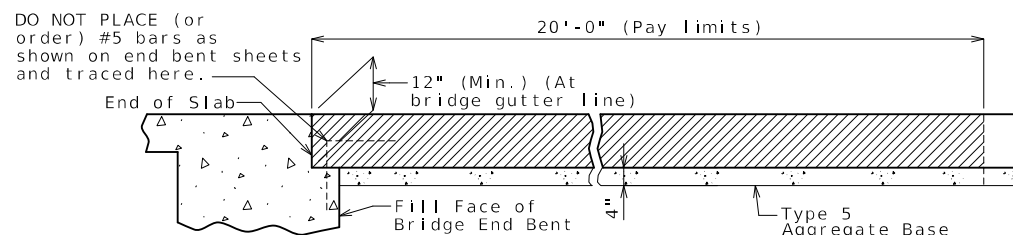


PART PLAN
(Squared structure shown, skewed structure similar)



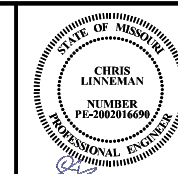
SECTION C-C

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 D-D

OPTIONAL ASPHALT SLAB (NOT ALLOWED WITH CONCRETE PAVEMENT)



12/04/2024 9:35:16 AM
Chris Linneman - Civil
MO PE-2002016690

DATE PREPARED
12/4/2024

ROUTE SOR 44E MO

DISTRICT BR SHEET NO. 21

COUNTY LACLEDE

JOB NO. JCD0101

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9538

DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

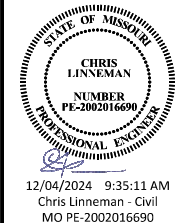
EFK Moen

Civil Engineering Design

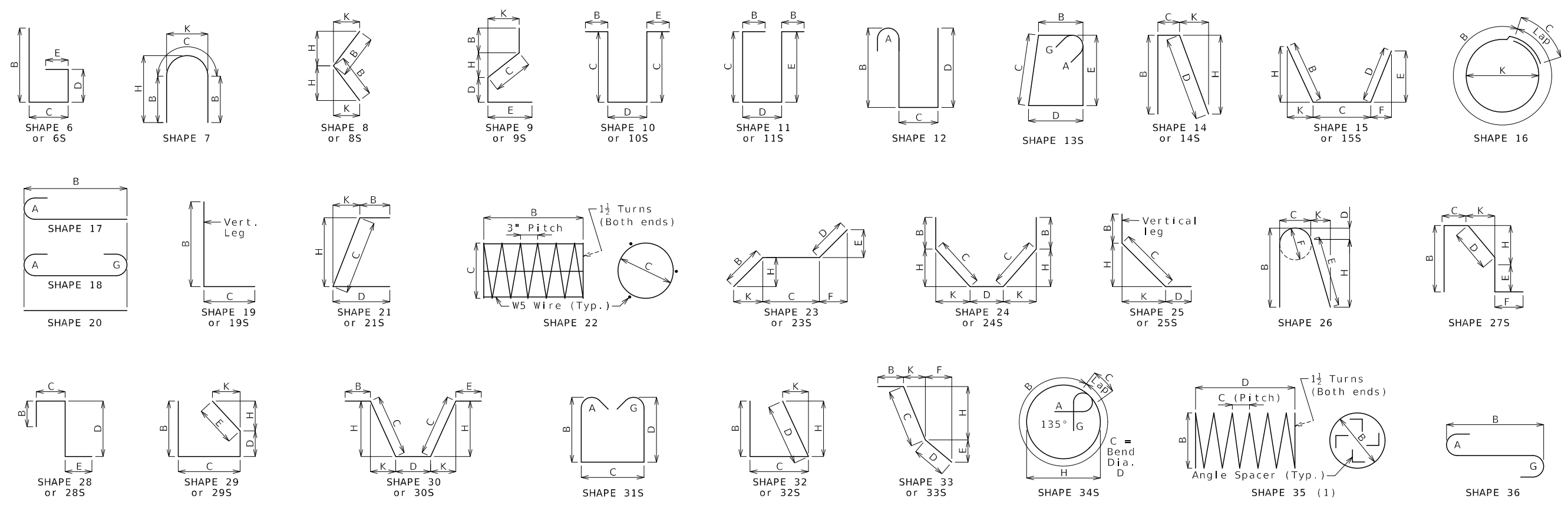
13523 Barrett Parkway Dr Phone 314-394-3100

Suite 250 St. Louis, MO 63021 Fax 314-394-3199

Missouri Certificate of Authority: 001578



12/04/2024 9:35:11 AM
 Chris Linneman - Civil
 MO PE-2002016690
 DATE PREPARED
 12/4/2024
 ROUTE
 SOR 44E MO
 DISTRICT SHEET NO.
 BR 22
 COUNTY
 LACLEDE
 JOB NO.
 JCD0101
 CONTRACT ID.
 PROJECT NO.
 BRIDGE NO.
 A9538

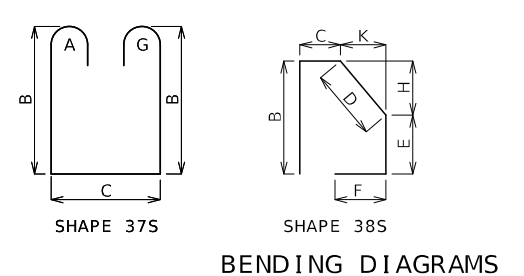


Finished Bend Diameters D and Hook Dimensions

Standard Pin Bend Shapes					
Size	Case	D	A or G		J
			90°	180°	180°
#4	1	3"	8"	6"	4"
#5	1	3 3/4"	10"	7"	5"
#6	1	4 1/2"	12"	8 1/4"	6"
#7	2	5 1/2"	14"	9 3/4"	7"
	3	7"	15"	11 1/2"	8 3/4"
#8	2	6"	16"	11"	8"
	3	8"	17"	13 3/4"	10"
#9	1	9 1/2"	19 1/2"	15 1/2"	11 3/4"
#10	1	10 3/4"	22"	17 1/2"	13 1/4"
#11	1	12"	24 1/2"	19 1/2"	14 7/8"
#14	1	18 1/4"	31 1/4"	27 1/2"	21 5/8"
#18	1	24"	41 1/2"	36 1/4"	28 1/2"

Stirrup Pin Bend Shapes (S)							
Size	Case	D	A or G		H	J	
			90°	135°	180°	135°	180°
#4	2	2"	4 1/2"	4 1/2"	5"	2 5/8"	3"
	3	3"	5"	5 1/4"	6"	3"	4"
#5	2	2 1/2"	5 3/4"	5 3/4"	5 3/4"	3 3/8"	3 3/4"
	3	3 3/4"	6 1/4"	6 1/4"	7"	3 5/8"	5"
#6	1	4 1/2"	12"	7 3/4"	8 1/4"	4 5/8"	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.



All dimensions are out to out. (1) Shall be a deformed or plain spiral bar or wire.
 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.
 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	
	Plain	Epoxy	Slab		Barrier	Slip Form	Plain	Epoxy
			Plain	Epoxy				
4	940	0	0	1566	0	0	940	1566
5	1366	0	0	2474	9249	315	1366	13673
6	472	0	0	8035	0	0	472	27846
7	1602	0	0	1400	0	0	1602	2800
8	0	0	0	1132	0	0	0	1132
9	3156	0	0	0	0	0	3156	0
By Type	7,536	0	0	14,607	9,249	315	7,536	47,017

All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

 105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
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EFK Moen
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 Fax 314-394-3199
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Table: Bill of Reinforcing Steel. Columns include No. Req., Size/Mark, Location, Codes (C, SH, V), Dimensions (B, C, D, E, F, H, K), Nom. Length, Actual Length, Weight. Rows include various structural elements like FOOTING, WALL, BEAM, DIAPHRAGM, WING, and BARRIER.

Table: Bill of Reinforcing Steel. Columns include No. Req., Size/Mark, Location, Codes (C, SH, V), Dimensions (B, C, D, E, F, H, K), Nom. Length, Actual Length, Weight. Rows include various structural elements like BEAM, DIAPHRAGM, WING, SLAB, and BARRIER.

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. _.

Detailed Aug. 2024
Checked Aug. 2024

All bars shall be Grade 60.

BILL OF REINFORCING STEEL

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 23 of 25

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.



12/04/2024 9:34:56 AM
Chris Linneman - Civil
MO PE-2002016690

DATE PREPARED
12/4/2024

ROUTE STATE
SOR 44E MO
DISTRICT SHEET NO.
BR 23

COUNTY
LACLEDE

JOB NO.
JCD0101

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9538

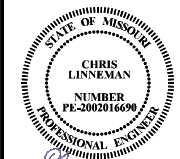
Table with 10 columns for description and 4 columns for quantities. Includes items like SLAB, BARRIER, and WING.

DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION logo and address: 105 WEST CAPITOL JEFFERSON CITY, MO 65102

EFK Moen Civil Engineering Design logo and contact info: 13523 Barrett Parkway Dr Suite 250 St. Louis, MO 63021

REV.



12/04/2024 9:34:50 AM
Chris Linneman - Civil
MO PE-2002016690

DATE PREPARED
12/4/2024

ROUTE SOR 44E STATE MO

DISTRICT BR SHEET NO. 24

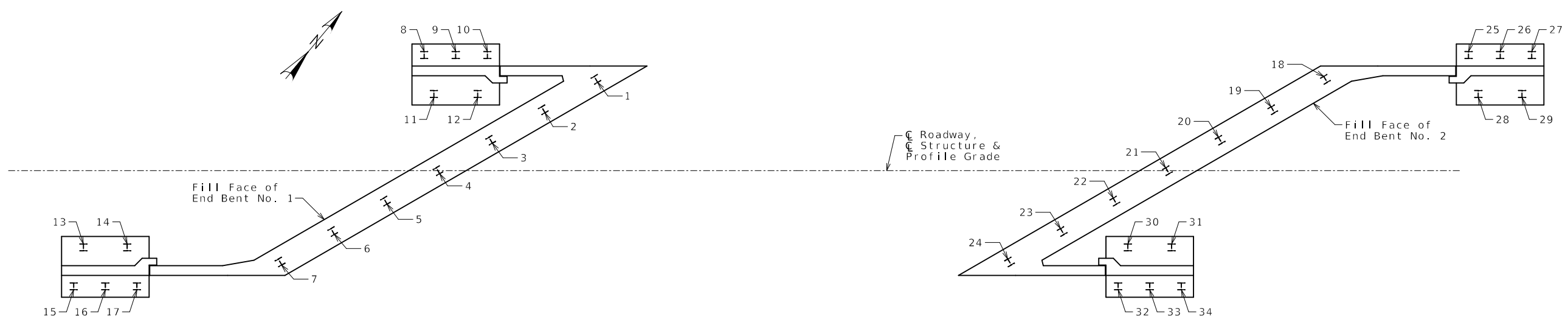
COUNTY LACLEDE

JOB NO. JCD0101

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9538



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
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
			End Bent No. 2
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			

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.

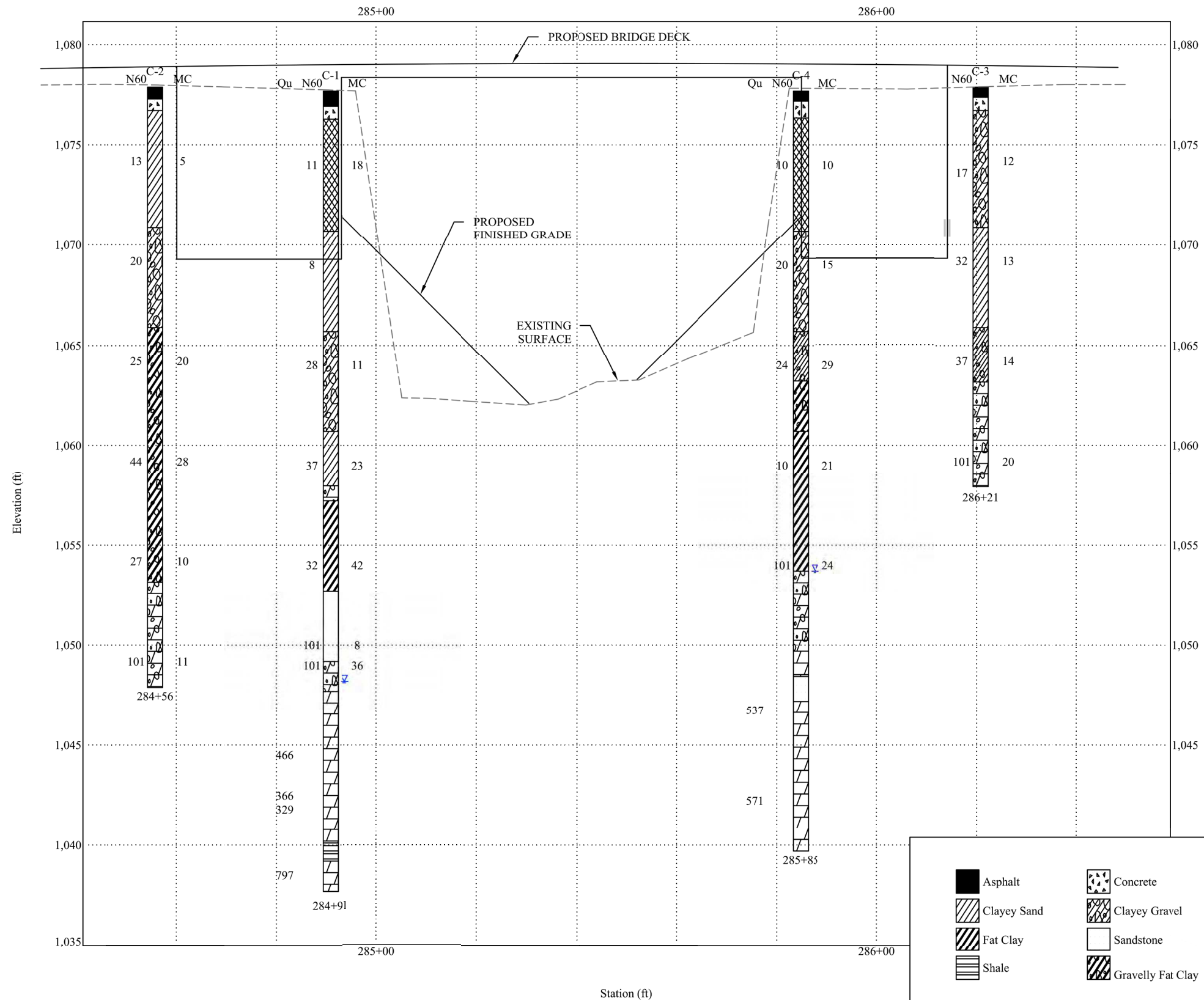
DESCRIPTION

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

DocuSign Envelope ID: A89592EC-8AB5-4654-BC95-DC9319DE5465



General Notes/Legend
 GROUNDWATER LEVEL AT THE TIME OF DRILLING
 VARIATIONS IN SUBSURFACE CONDITIONS MAY AND LIKELY EXIST BETWEEN BORINGS. DASHED HORIZONS ARE INTERPRETED AND ARE SHOWN FOR ILLUSTRATION ONLY.

PROJECT NAME
 JCD0101 SOR 1-44E BRIDGE
 OVER BEAR CREEK
 LACLEDE COUNTY, MISSOURI

SUBSURFACE PROFILE



DATE PREPARED
12/4/2024

ROUTE SOR 44E
DISTRICT BR
STATE MO
SHEET NO. 25

COUNTY LACLEDE
JOB NO. JCD0101
CONTRACT ID.

PROJECT NO.
BRIDGE NO. A9538

DESCRIPTION

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

SCALE
1" = 5' V
1" = 20' H

JOB NUMBER
2024-0128.10

FIGURE DATE
10/03/2024

DRAWN BY RCV

CHECKED BY MGM

FIGURE
4

BORING DATA

Note: For locations of borings, see Sheet No. 1.

Note: This drawing is not to scale. Follow dimensions. Sheet No. 25 of 25

Detailed Aug. 2024
Checked Aug. 2024