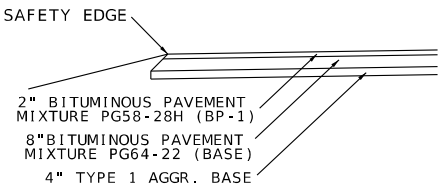
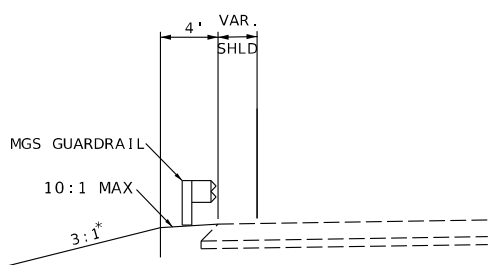


OPTIONAL PAVEMENT DESIGN
8" JPCP @ 15' JOINTS W/ 1.25" DOWELS
ON 4" TYPE 1 AGGR. FOR BASE
RTE. H, RTE. B & RTE. DD
J.P.C.P.DESIGN



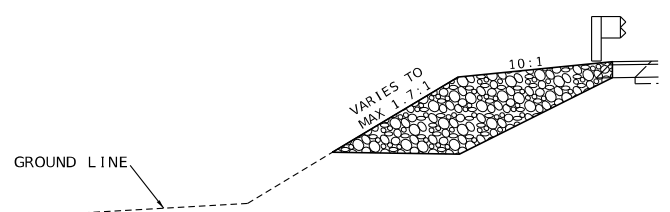
OPTIONAL PAVEMENT DESIGN
10" HMA
ON 4" TYPE 1 AGGR. FOR BASE
RTE. H, RTE. B & RTE. DD
HMA DESIGN



RTE DD. & RTE. H GUARDRAIL DESIGN

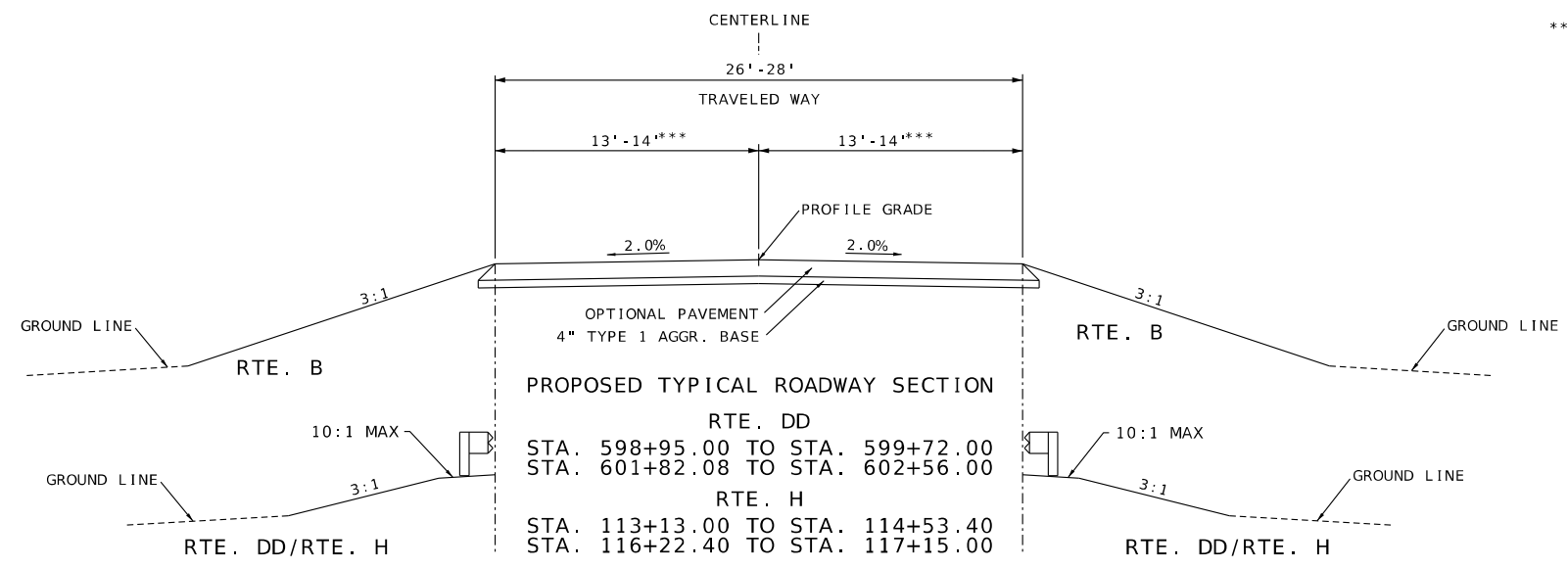
RTE. DD
STA. 598+45.00 TO STA. 599+70.80 RT
STA. 598+97.44 TO STA. 599+98.44 LT
STA. 601+55.87 TO STA. 602+57.00 RT
STA. 601+83.67 TO STA. 603+34.77 LT

RTE. H
STA. 113+35.90 TO STA. 114+73.40 RT.
STA. 113+85.90 TO STA. 114+73.40 LT.
STA. 116+02.40 TO STA. 116+89.90 RT.
STA. 116+02.40 TO STA. 117+52.40 LT.



SHAPING SLOPES - MODIFIED MATERIAL REQUIRED

RTE.DD
STA. 601+76.08 TO STA. 602+50.00

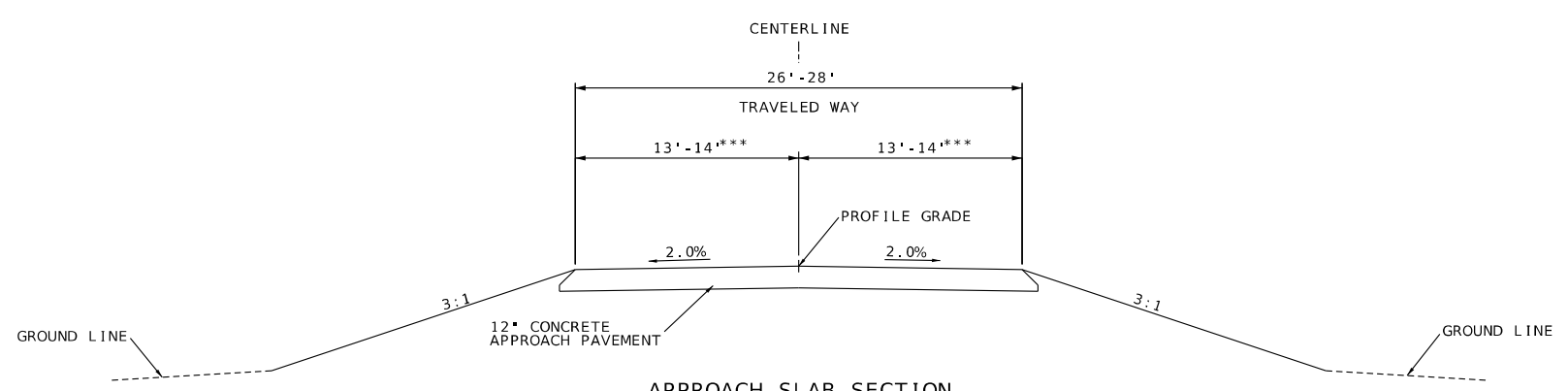


PROPOSED TYPICAL ROADWAY SECTION

RTE. DD
STA. 598+95.00 TO STA. 599+72.00
STA. 601+82.08 TO STA. 602+56.00

RTE. H
STA. 113+13.00 TO STA. 114+53.40
STA. 116+22.40 TO STA. 117+15.00

RTE. B
STA. 193+10.00 TO STA. 194+16.00
STA. 195+81.54 TO STA. 196+90.00

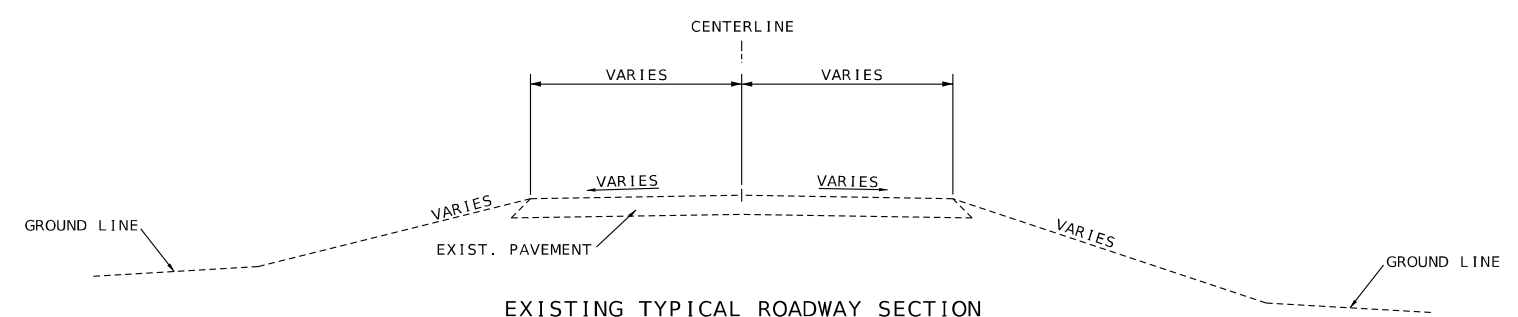


APPROACH SLAB SECTION

RTE. DD
STA. 599+72.00 TO STA. 599+92.00
STA. 601+62.08 TO STA. 601+82.08

RTE. H
STA. 114+53.40 TO STA. 114+73.40
STA. 116+02.40 TO STA. 116+22.40

RTE. B
STA. 194+16.00 TO STA. 194+36.00
STA. 195+61.54 TO STA. 195+81.54



EXISTING TYPICAL ROADWAY SECTION

*** - ROADWAY WIDTH:
RTE H
STA. 113+13.00 MATCH EXISTING
10.7' LT & 10.3' RT
STA. 113+13.00 TO STA. 114+53.40
TRANSITION LT & RT
STA. 114+53.40 TO STA. 116+22.40
14.0' LT & 14.0' RT
STA. 116+22.40 TO STA. 117+15.00
TRANSITION LT & RT
STA. 117+15.00 MATCH EXISTING
10.3' LT & 11.2' RT

RTE DD
STA. 598+95.00 MATCH EXISTING
10.8' LT
STA. 598+95.00 TO STA. 599+86.00
TRANSITION LT
STA. 599+86.00 TO STA. 601+96.08
14.0' LT
STA. 601+96.08 TO STA. 602+56.00
TRANSITION LT
STA. 602+56.00 MATCH EXISTING
10.0' LT
STA. 598+95.00 MATCH EXISTING
9.8' RT
STA. 598+95.00 TO STA. 599+58.00
TRANSITION RT
STA. 599+58.00 TO STA. 601+68.08
14.0' RT
STA. 601+68.08 TO STA. 602+56.00
TRANSITION RT
STA. 602+56.00 MATCH EXISTING
10.0' RT

RTE B
STA. 193+10.00 MATCH EXISTING
10.1' LT
STA. 193+10.00 TO STA. 194+22.06
TRANSITION LT
STA. 194+22.06 TO STA. 195+87.60
13.0' LT
STA. 195+87.60 TO STA. 196+90.00
TRANSITION LT
STA. 196+90.00 MATCH EXISTING
10.2' LT
STA. 193+10.00 MATCH EXISTING
11.4' RT
STA. 193+10.00 TO STA. 194+09.94
TRANSITION RT
STA. 194+09.94 TO STA. 195+75.48
13.0' RT
STA. 195+75.48 TO STA. 196+90.00
TRANSITION RT
STA. 196+90.00 MATCH EXISTING
10.6' RT

NOT TO SCALE

TYPICAL SECTIONS
SHEET 1 OF 1

STATE OF MISSOURI
MICHELE R. KEAL
NUMBER
PE-2005000711
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED,
SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
6/25/2024

ROUTE
B/DD/H

DISTRICT
NW

COUNTY
ANDREW & BUCH

JOB NO.
JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

MoDOT

benesch

4435 MAIN STREET, SUITE 1150
KANSAS CITY, MO 64111
913/441-1100, FAX 913/441-1468
CERTIFICATE OF AUTHORITY NUMBER FO09T0024

TEMPORARY EROSION CONTROL						
BEGIN STATION	END STATION	SIDE	SILT FENCE (LF)	TYPE 3B EROSION CONTROL BLANKET (SY)	TYPE C BERM (LF)	SEDIMENT REMOVAL (CY)
RTE B						
193+10.00	194+28.11	RT	121.5			1
193+10.00	194+42.02	LT	135.1			1
194+28.11	194+66.84	CL			134.0	
195+21.96	195+73.13	CL			151.7	
195+54.54	196+90.00	RT	136.6			1
195+73.13	196+90.00	LT	119.1			1
SUBTOTALS			512.3		286	4
RTE H						
112+65.66	114+79.11	RT	216			2
112+73.58	114+74.36	LT	204.9			2
113+55.00	114+77.20	LT		244.6		
114+74.36	115+09.85	CL			128.2	1
115+60.53	115+95.71	CL			127.4	1
115+94.77	118+02.10	RT	209.3			2
115+95.71	118+13.85	LT	219.1			2
116+22.44	117+15.00	RT		101.8		
SUBTOTALS			849.3	346.4	255.6	10
RTE DD						
598+12.83	599+81.27	RT	178.6			2
598+65.81	600+09.43	LT	166.7			2
600+00.00	600+08.10	LT		10.8		
599+81.27	600+17.69	CL			122.9	1
601+20.30	601+73.23	CL			140.6	1
601+42.79	602+87.04	RT	148.3			2
601+73.23	603+67.34	LT	198.5			2
SUBTOTALS			692.1	10.8	263.5	10
PAY TOTALS			2054	358	805	24

PAVEMENT MARKING							
BEGIN STATION	END STATION	ROUTE	LENGTH (FT)	STANDARD WATERBORNE PAVEMENT MARKING PAINT TYPE P BEADS			REMARKS
				4" SOLID WHITE (FT)	4" INT. YELLOW (FT)	4" SOLID YELLOW (FT)	
193+10.00	196+90.00	B	380.00		95.0	380.0	
598+95.00	602+56.00	DD	361.00		90.3	361.0	
113+13.00	117+15.00	H	402.00	804.0	100.5	804.0	
			TOTALS		285.8	1545.0	
			PAY TOTALS	804	1,831		
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.							

MOBILIZATION
1 LUMP SUM

CONTRACTOR FURNISHED SURVEYING & STAKING
1 LUMP SUM

SEEDING AND MULCHING			
BEGIN STATION	END STATION	COOL SEASON MIXTURES (AC)	MULCHING (AC)
RTE B			
193+10.00	196+90.00	0.1	0.1
SUBTOTALS		0.1	0.1
RTE DD			
598+95.00	602+56.00	0.2	0.2
SUBTOTALS		0.2	0.2
RTE H			
113+13.00	117+15.00	0.2	0.2
SUBTOTALS		0.2	0.2
PAY TOTALS		0.5	0.5

DATE PREPARED
6/25/2024

ROUTE
B/DD/H

DISTRICT
NW

STATE
MO

SHEET NO.
3

COUNTY
ANDREW & BUCH

JOB NO.
JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

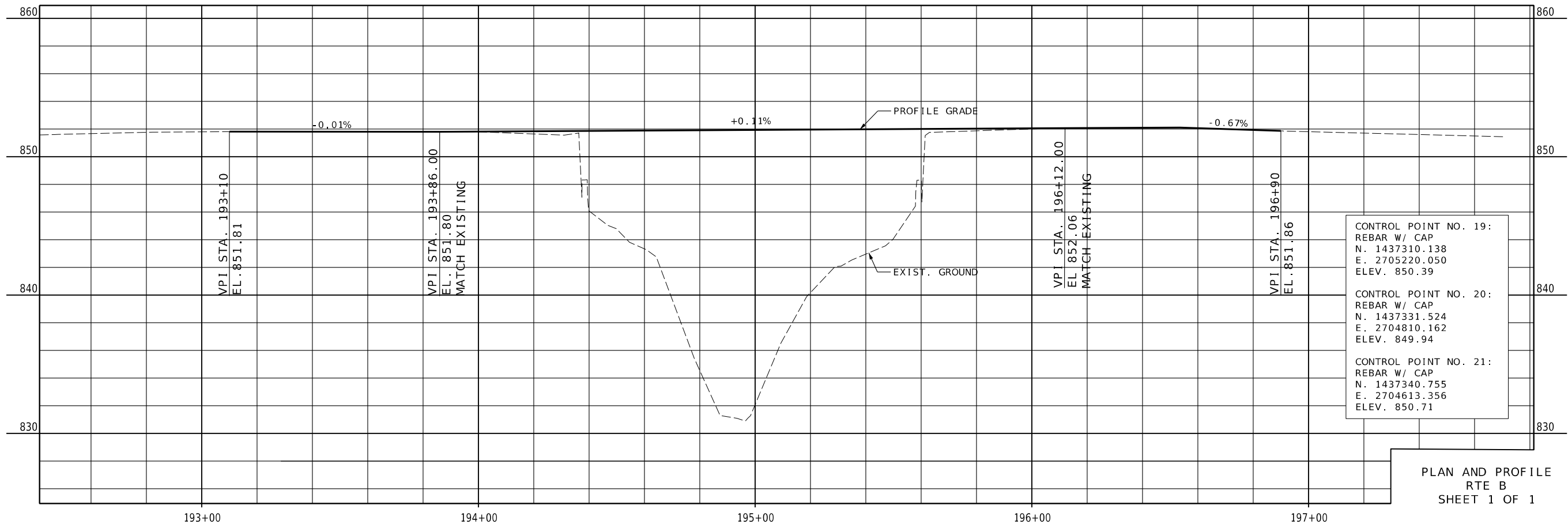
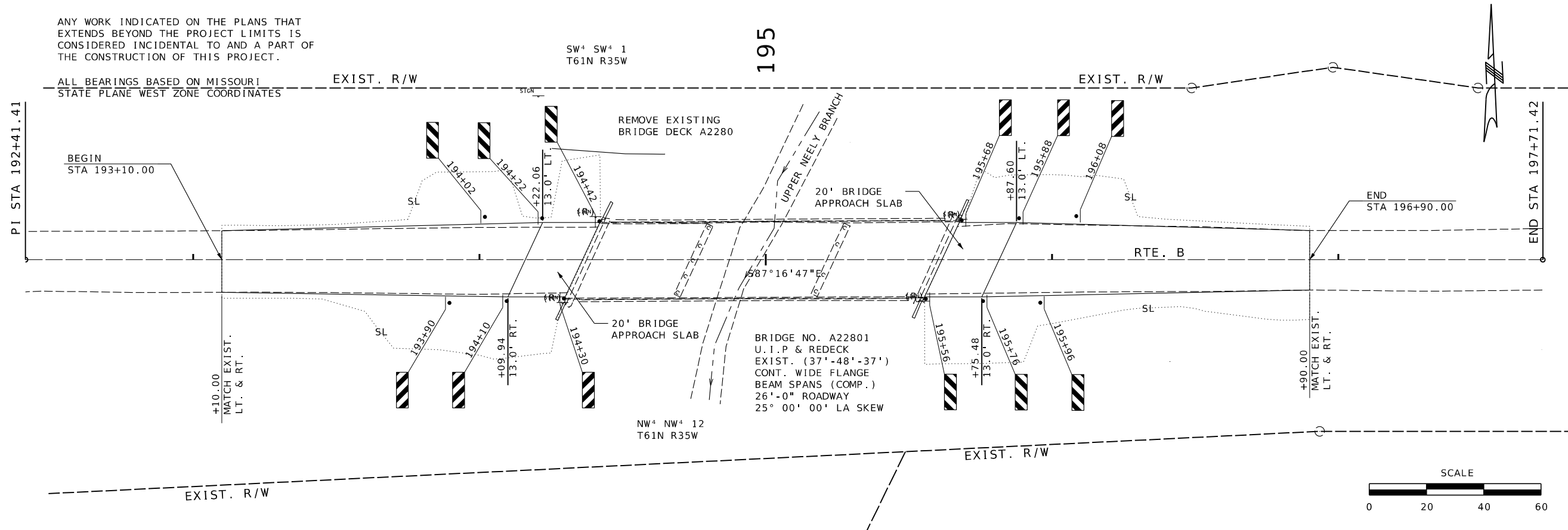
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

4435 MAIN STREET, SUITE 1150
KANSAS CITY, MO 64111
913/441-1100, FAX 913/441-1468
CERTIFICATE OF AUTHORITY NUMBER F009T0024

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

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

ALL BEARINGS BASED ON MISSOURI STATE PLANE WEST ZONE COORDINATES



DATE PREPARED
6/25/2024

ROUTE STATE
B/DD/H MO

DISTRICT SHEET NO.
NW 4

COUNTY
ANDREW & BUCH

JOB NO.
JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MODOT

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

CERTIFICATE OF AUTHORITY NUMBER F009T0024

benesch

4435 MAIN STREET, SUITE 1150
KANSAS CITY, MO 64111
913/441-1100, FAX 913/441-1468

ROAD CLOSED
3 MILES AHEAD
LOCAL TRAFFIC ONLY

ROAD CLOSED
6 MILES AHEAD
LOCAL TRAFFIC ONLY

ROAD CLOSED
TO
THRU TRAFFIC

ROAD
CLOSED

R11-3a

R11-3a

61

61a

R11-4

R11-2

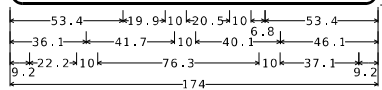
62

63

Mo. Rte B
Closed Ahead
Use Alternative Route

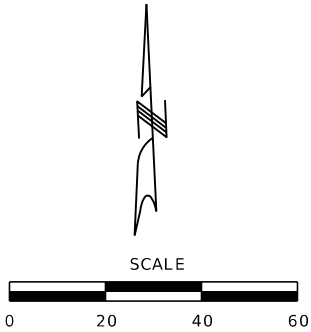
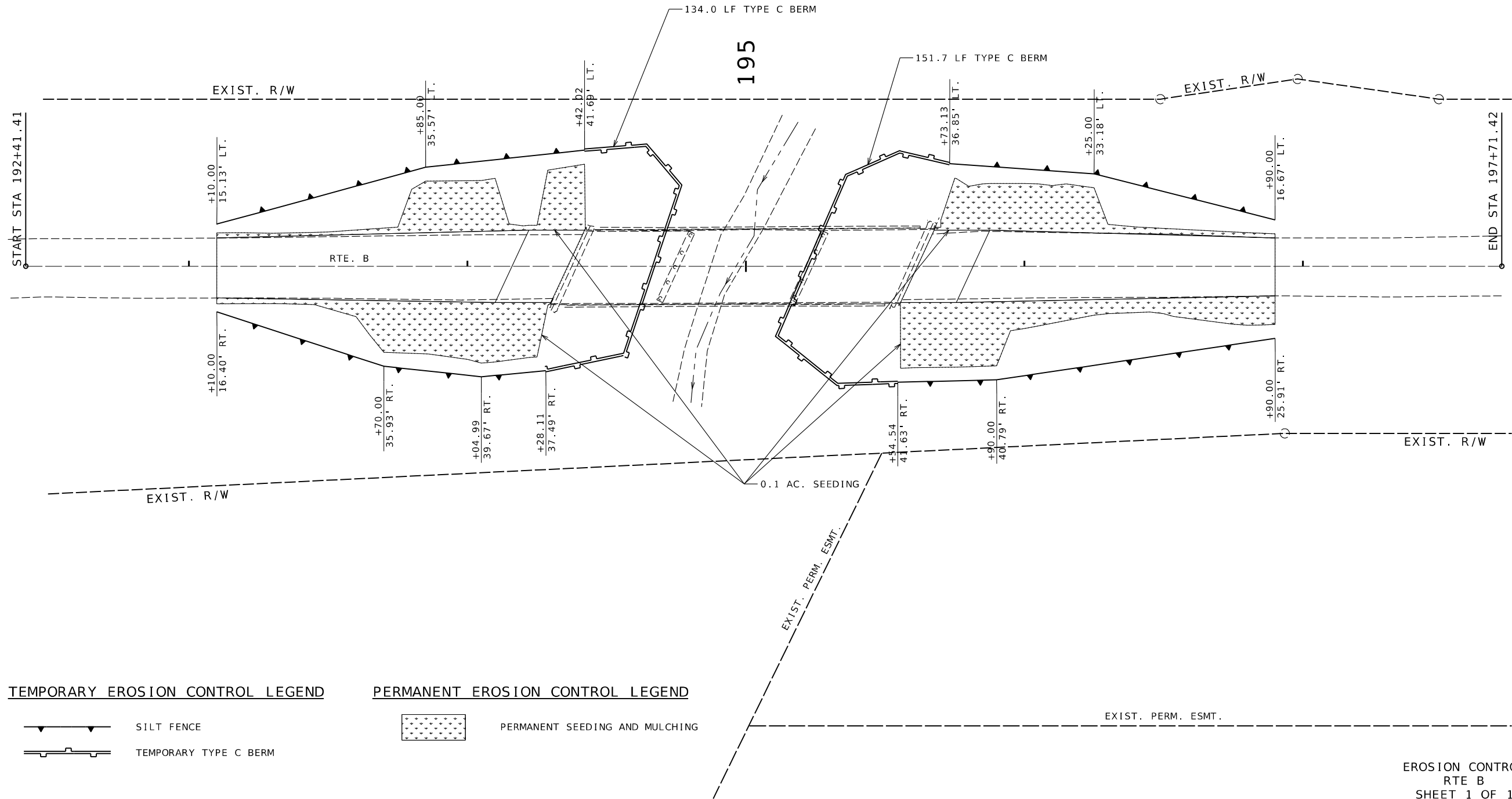
SP-1

Mo. Rte B
Closed Ahead
Use Alternative Route



6.0" Radius, 1.3" Border, Black on Orange:
Mo. Rte B, D: *Closed Ahead*, D:
Use Alternative Route, D:
Table of letter and object lefts

Use Alternative Route", D:										
Table of letter and object lefts										
M	o	R	t	e	B					
53.4	64.1	71.8	83.3	92.0	98.3	113.8				
C	i	s	e	d	A	n	a	i	d	
36.1	45.6	49.8	57.2	64.7	72.2	87.8	98.4	106.6	114.1	122.3
U	s	e								
9.2	18.4	42.5	8							
A	i	t	e	r	s	A	t	i	v	e
41.4	52.2	55.6	62.2	70.5	76.7	84.9	92.8	99.9	103.8	112.1
R	t	e	u	s	A	s	e			
127.0	136.6	145.0	153.0	159.3						



DATE PREPARED 6/25/2024	
ROUTE B/DD/H	STATE MO
DISTRICT NW	SHEET NO. 6
COUNTY ANDREW & BUCH	
JOB NO. JNW0008	
CONTRACT ID.	

PROJECT NO.
BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-273-6636)

benesch

4435 MAIN STREET, SUITE 1150
KANSAS CITY, MO 64111
913/441-1100, FAX 913/441-1468
CERTIFICATE OF AUTHORITY NUMBER F009T0024

EROSION CONTROL
RTE B
SHEET 1 OF 1

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

EFFECTIVE 07-01-2022

SIGNS

902 SIGNAL SIGNS TABULATED ON D-37A SHEET

CONCRETE FOOTINGS EMBEDDED

ITEM NO. 9031010
CY

STRUCTURAL STEEL POSTS *

POST DES NO.

POST NO. 1
LF

POST NO. 2
LF

POST NO. 3
LF

LBS PER FT

TOTAL ITEM NO. 9031210
LBS

PIPE POSTS *

PIPE SIZE
IN.

POST NO. 1
LF

POST NO. 2
LF

LBS PER FT

TOTAL ITEM NO. 9031220
LBS

BACKING BARS **

2" X 1/4" BARS @ 2.55 LBS PER FT

NO. EACH

LGTH IN.

TOTAL LF

TOTAL LBS

U-CHANNEL POST

ITEM NO. 9031250A
LF

PERFORATED SQUARE STEEL TUBE

2 IN. POST

POST NO. 1
LF

POST NO. 2
LF

TOTAL ITEM NO. 9031270A
LF

DRIVEN 12-GA. ITEM NO. 9031271A
EA

ANCHORS

DRIVEN 7-GA. ITEM NO. 9031273A
EA

CONCRETE 7-GA. ITEM NO. 9031274
EA

2.5 IN. POST

POST NO. 1
LF

POST NO. 2
LF

TOTAL ITEM NO. 9031280
LF

2.25" INSERT (6 FT) ITEM NO. 9031272A
EA

ANCHORS

DRIVEN 7-GA. ITEM NO. 9031281A
EA

CONCRETE 7-GA. ITEM NO. 9031285
EA

BREAK-AWAY ASSEMBLY

ITEM NO. 9031241
EA

REMARKS AND OTHER REQUIRED ITEMS

SIGN NO.

SIGN SIZE

STATION

LOCATION

SIGN DTL. SHT. NO.

12"X36"

193+90

RTE B, 15.13' RT

12"X36"

194+02

RTE B, 14.93' LT

12"X36"

194+10

RTE B, 14.48' RT

12"X36"

194+22

RTE B, 14.49' LT

12"X36"

194+30

RTE B, 13.60' RT

12"X36"

194+42

RTE B, 13.41' LT

12"X36"

195+56

RTE B, 13.69' RT

12"X36"

195+68

RTE B, 13.74' LT

12"X36"

195+76

RTE B, 14.48' RT

12"X36"

195+88

RTE B, 14.47' LT

12"X36"

195+96

RTE B, 15.04' RT

12"X36"

196+08

RTE B, 15.22' LT

SUBTOTAL

TOTAL

* BREAKAWAY ASSEMBLY IS INCIDENTAL FOR STRUCTURAL STEEL AND PIPE POSTS.

** BACKING BARS ARE TOTALED WITH STRUCTURAL STEEL OR PIPE POSTS.

STRUCTURAL STEEL POST AND FOOTING DATA TABLE

POST DES. NO.	NOM. SIZE	POST		STUB LENGTH	DIA.	FOOTING							
		WEIGHT				LEVEL GROUND	6:1 GRADE		4:1 GRADE		3:1 OR 2:1 GRADE		
		LBS/FT	LBS/IN				DEPTH	C.Y.	DEPTH	C.Y.	DEPTH	C.Y.	DEPTH
1	W6	9.0	0.75	3'-0"	15"	3'-0"	0.14	3'-2"	0.15	3'-3"	0.16	3'-6"	0.17
2	W6	15.0	1.25	4'-0"	24"	4'-0"	0.47	4'-2"	0.50	4'-3"	0.51	4'-6"	0.54
3	W8	18.0	1.50	4'-6"	28"	4'-6"	0.71	4'-8"	0.73	4'-9"	0.74	5'-0"	0.78
4	W10	22.0	1.83	5'-0"	36"	5'-0"	1.31	5'-2"	1.36	5'-3"	1.39	5'-6"	1.45
5	W10	26.0	2.17	5'-0"	36"	5'-0"	1.31	5'-3"	1.37	5'-5"	1.43	5'-9"	1.52
6	W12	35.0	2.92	5'-6"	36"	5'-6"	1.44	5'-9"	1.52	5'-11"	1.56	6'-3"	1.65

ROUND PIPE POST AND FOOTING DATA TABLE

NOM. SIZE (IN.)	WEIGHT		STUB LENGTH	FOOTING		CONCRETE C.Y.
	LBS/FT	LBS/IN		DIA.	DEPTH	
2 1/2	5.79	0.48	4'- 3/4"	12"	4-6"	0.13
3	7.58	0.63	4'- 3/4"	12"	4-6"	0.13
4	10.79	0.90	5'- 3/4"	18"	5-6"	0.36

STATE OF MISSOURI
MICHELE R. KEAL
NUMBER PE-2005000711
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
6/25/2024

ROUTE
B/DD/H

STATE
MO

DISTRICT
NW

SHEET NO.
7

COUNTY
ANDREW & BUCH

JOB NO.
JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

MoDOT

benesch

4435 MAIN STREET, SUITE 1150
KANSAS CITY, MO 64111
913/441-1100, FAX 913/441-1468
CERTIFICATE OF AUTHORITY NUMBER FO09T0024

D-29

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

DATE PREPARED	
6/25/2024	
ROUTE	STATE
B/DD/H	MO
DISTRICT	SHEET #
NW	8
COUNTY	
ANDREW & BUCK	
JOB NO.	
JNW0008	
CONTRACT ID.	

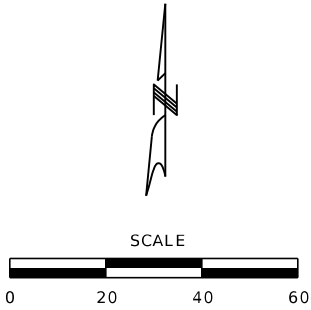
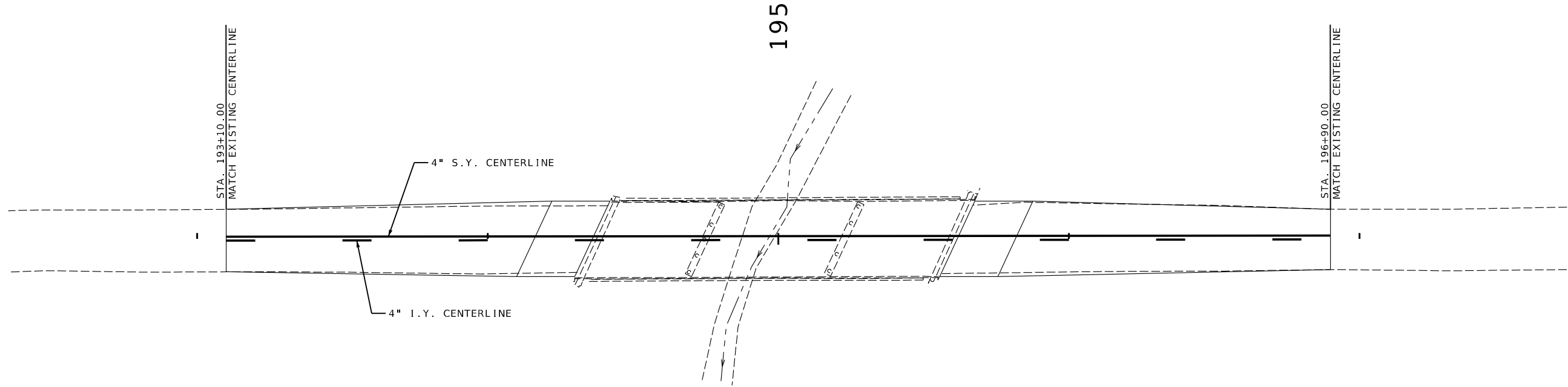
PROJECT NO.
BRIDGE NO.

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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITAL
JEFFERSON CITY, MO. 65102

benesch
4435 MAIN STREET, SUITE 1150
KANSAS CITY, MO 64111
913/741-1100, FAX 913/741-1468



PAVEMENT MARKING
RTE B
SHEET 1 OF 1

benesch
4435 MAIN STREET, SUITE 1150
KANSAS CITY, MO 64111
913/441-1100 FAX 913/441-1468
CERTIFICATE OF AUTHORITY NUMBER F009T0024

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

DATE	DESCRIPTION

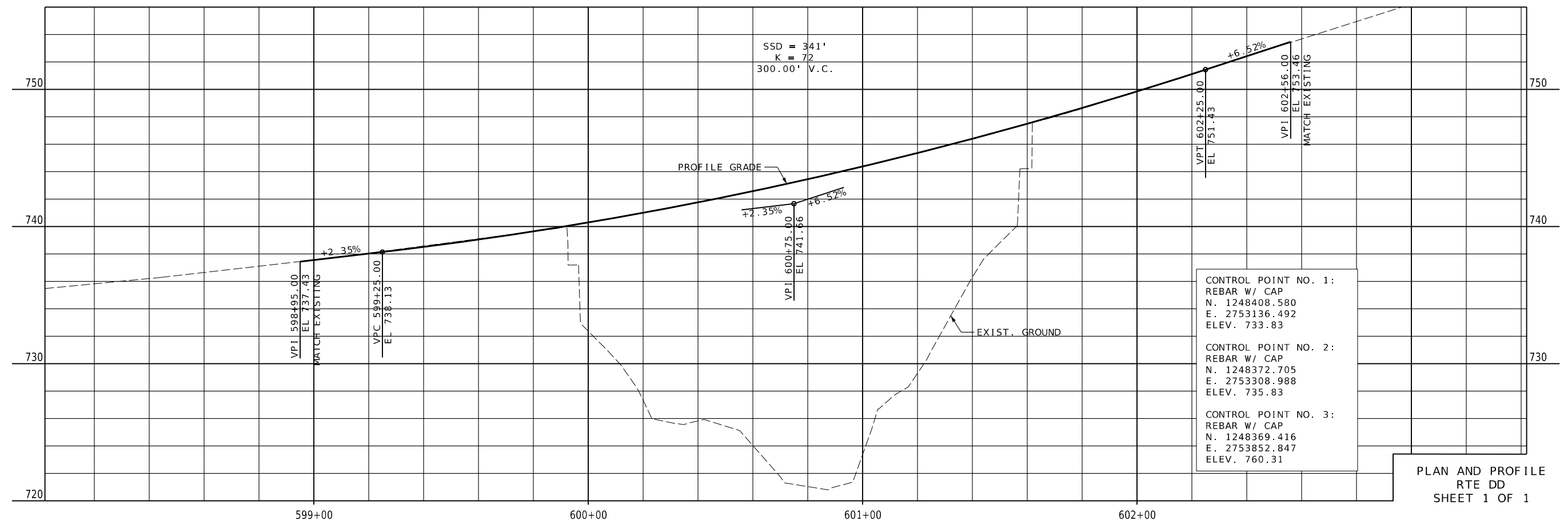
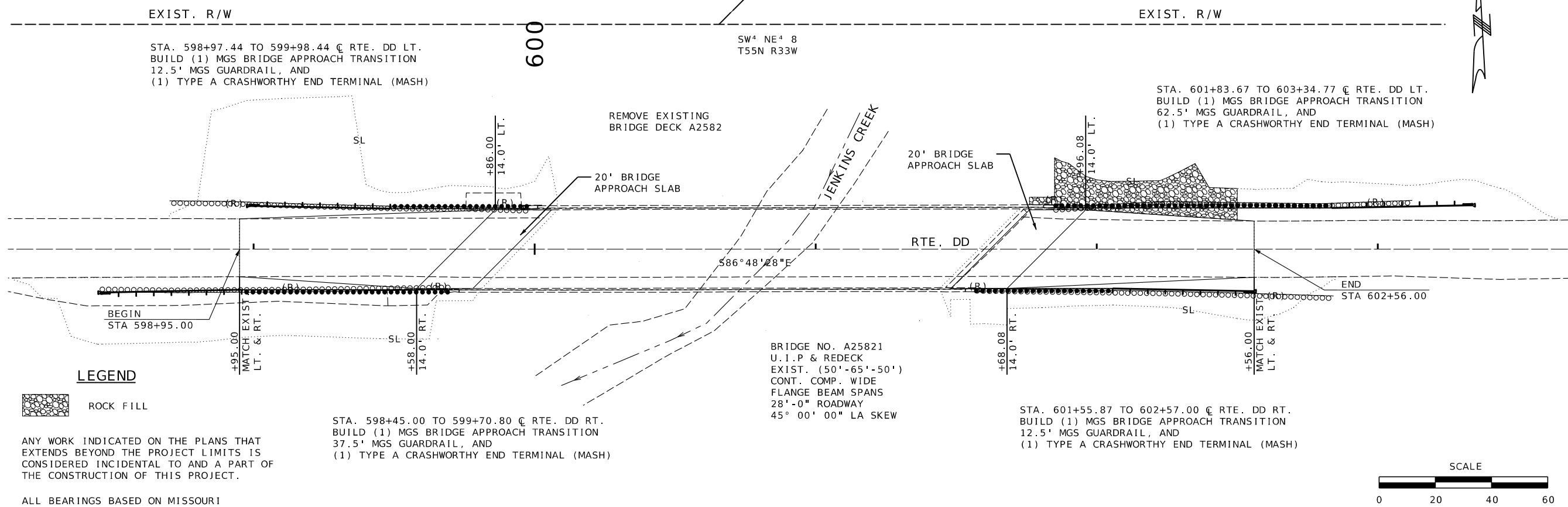
COUNTY	
ANDREW & BUCH	
JOB NO.	
JNW0008	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

STATE OF MISSOURI
MICHELE R. KOL
NUMBER
PE-2025000711
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED,
SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
6/25/2024

ROUTE	STATE
B/DD/H	MO
DISTRICT	SHEET NO.
NW	9

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



STATE OF MISSOURI
MICHELE R. KEAL
NUMBER
PE-2005000711
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED,
SEALED AND DATED ELECTRONICALLY

DATE PREPARED
6/25/2024

ROUTE
B/DD/H

DISTRICT
NW

COUNTY
ANDREW & BUCH

JOB NO.
JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

MoDOT

benesch

4435 MAIN STREET, SUITE 1150
KANSAS CITY, MO 64111
913/441-1100, FAX 913/441-1468
CERTIFICATE OF AUTHORITY NUMBER FO09T0024

\$FILE\$ 5:03:37 PM 6/25/2024

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



WO20-3

20

ROAD CLOSED
2 MILES AHEAD
LOCAL TRAFFIC ONLY

R11-3a

61

ROAD CLOSED
5 MILES AHEAD
LOCAL TRAFFIC ONLY

R11-3a

61a

ROAD CLOSED
TO
THRU TRAFFIC

R11-4

62

ROAD
CLOSED

R11-2

63

Mo. Rte DD
Closed Ahead
Use Alternative Route

SP-2

DD

CTY. RD. 115

HORN RD.

20

62

63

DD

20

63

62

DD

DD

SE 145 RD.

GOWER

SP-2

H

H

JENKINS CREEK

CTY. RD. 354

CTY. RD. 515E

TRAFFIC CONTROL LEGEND

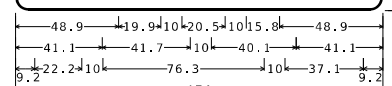
• SIGN (SINGLE SIDED)

E BARRICADE

WORK ZONE

NOTE: EXISTING SIGN.
COVER GOWER

Mo. Rte DD
Closed Ahead
Use Alternative Route



6.0" Radius, 1.3" Border, Black on Orange:
"Mo. Rte DD", D; "Closed Ahead", D;
"Use Alternative Route", D;
Table of letter and object lefts

M	o	R	t	e	D	D
48.9	59.6	67.2	78.8	87.5	93.7	109.3
41.1	50.6	54.8	62.2	69.7	77.2	92.8
U	s	e				
9.2	18.4	25.8				
A	I	t	e	n	a	I
41.4	52.0	56.0	62.2	70.5	76.7	84.9
127.7	136.6	145.0	153.0	159.3		



DATE PREPARED
6/25/2024

ROUTE
B/DD/H

STATE
MO

DISTRICT
NW

SHEET NO.
11

COUNTY
ANDREW & BUCH

JOB NO.
JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

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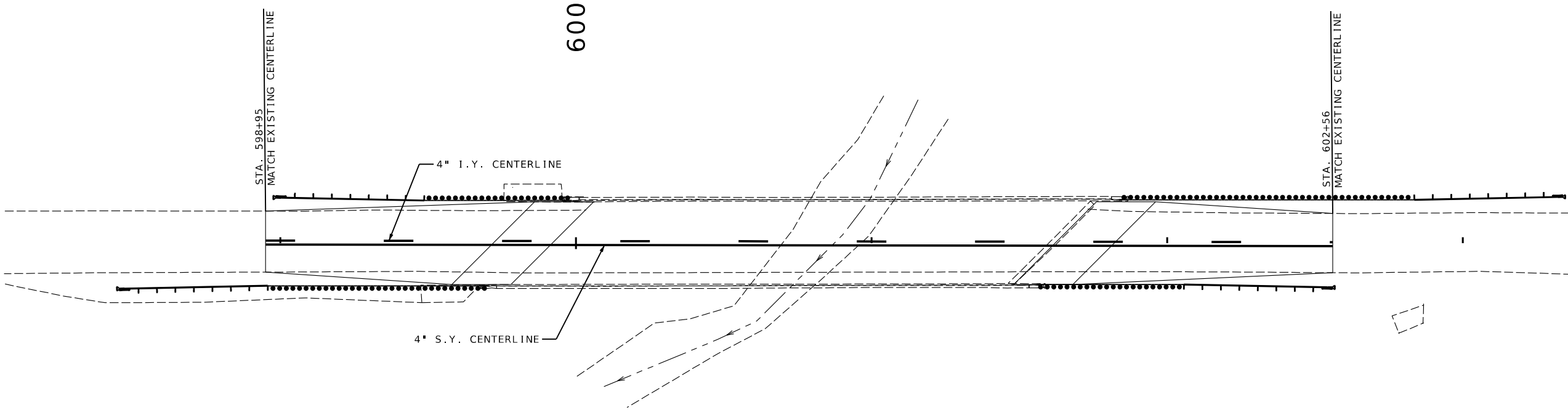
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PAVEMENT MARKING
RTE DD
SHEET 1 OF 1



DATE PREPARED 6/25/2024	
ROUTE B/DD/H	STATE MO
DISTRICT NW	SHEET NO. 13
COUNTY ANDREW & BUCH	
JOB NO. JNW0008	
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)



4435 MAIN STREET, SUITE 1150
KANSAS CITY, MO 64111
913/441-1100, FAX 913/441-1468
CERTIFICATE OF AUTHORITY NUMBER F009T0024

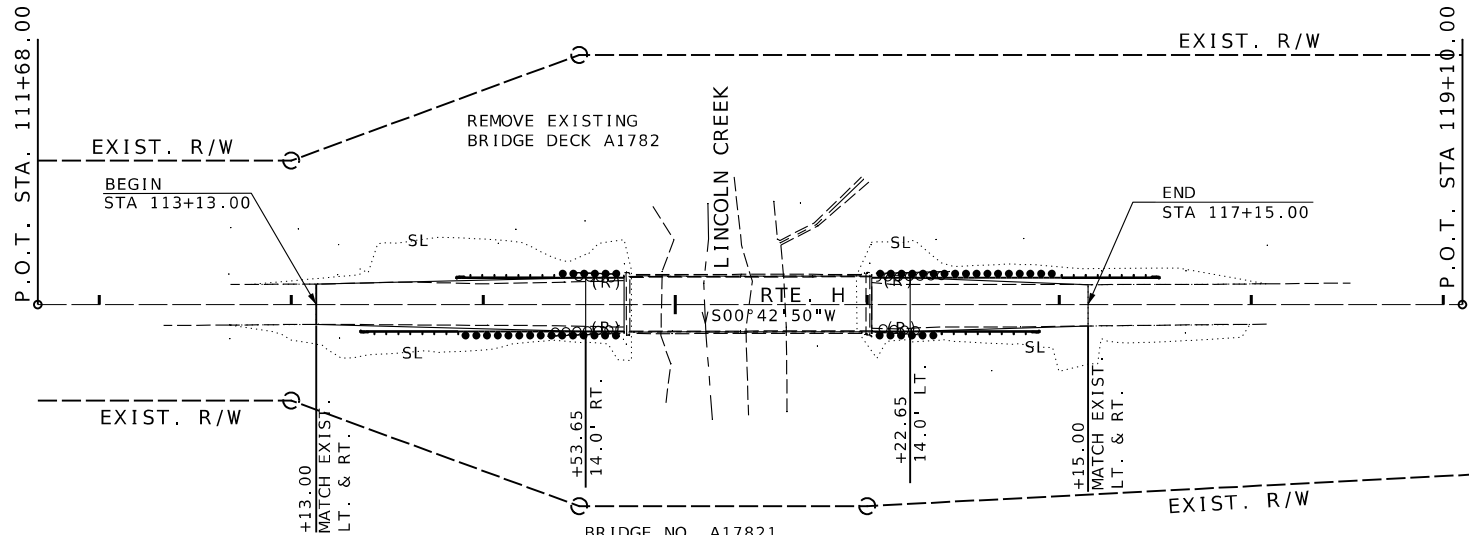
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

STA. 113+85.90 TO 114+73.40 @ RTE. H LT.
BUILD (1) MGS BRIDGE APPROACH TRANSITION AND
(1) TYPE A CRASHWORTHY END TERMINAL (MASH)

SE⁴ SE⁴ 18
T60N R36W

115

STA. 116+02.40 TO 117+52.40 @ RTE. H LT.
BUILD (1) MGS BRIDGE APPROACH TRANSITION
62.5' MGS GUARDRAIL, AND
(1) TYPE A CRASHWORTHY END TERMINAL (MASH)



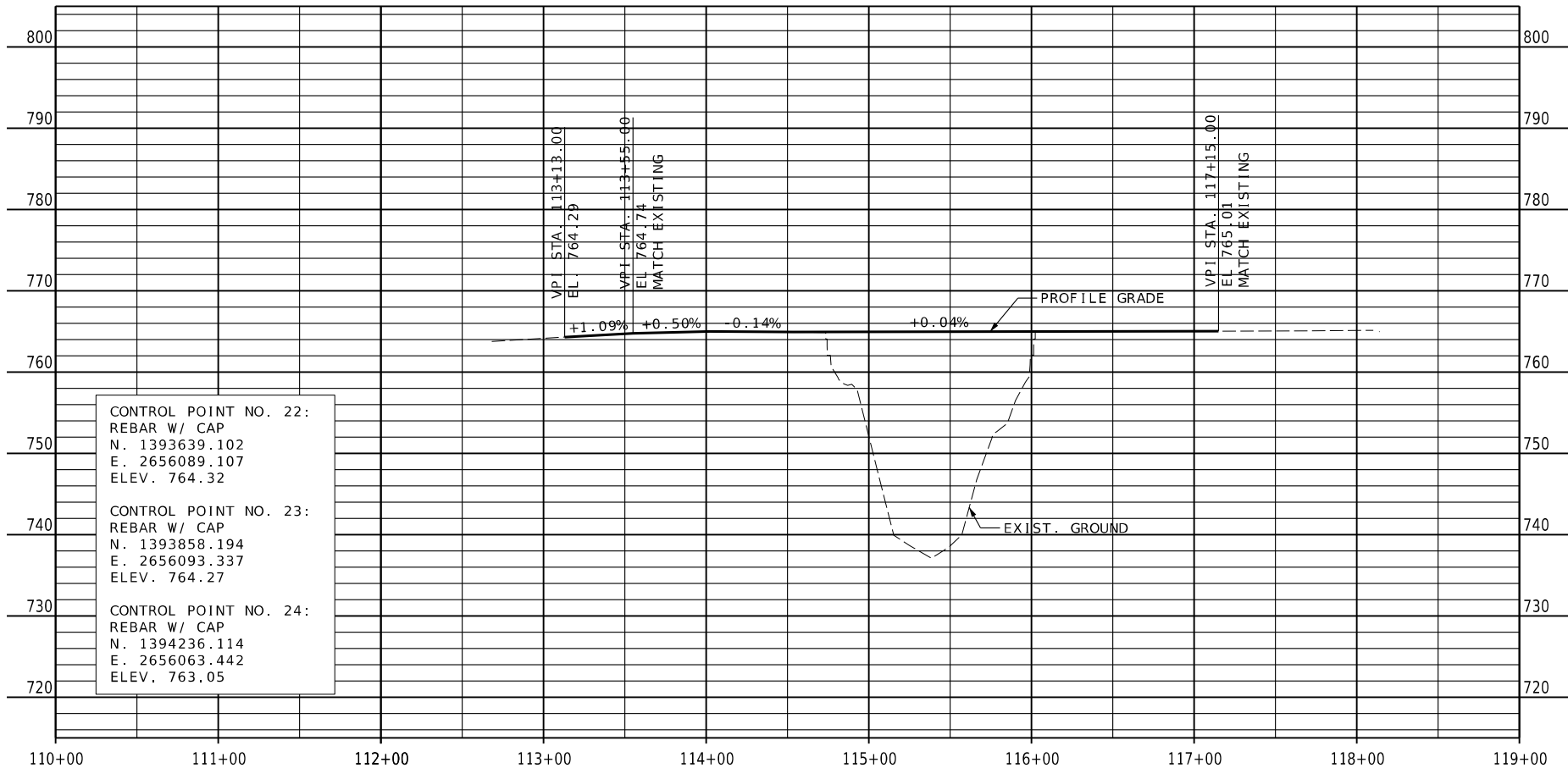
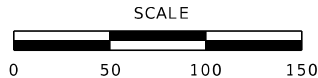
ANY WORK INDICATED ON THE PLANS THAT
EXTENDS BEYOND THE PROJECT LIMITS IS
CONSIDERED INCIDENTAL TO AND A PART OF
THE CONSTRUCTION OF THIS PROJECT.

ALL BEARINGS BASED ON MISSOURI
STATE PLANE WEST ZONE COORDINATES

STA. 113+35.90 TO 114+73.40 @ RTE. H RT.
BUILD (1) MGS BRIDGE APPROACH TRANSITION
50' MGS GUARDRAIL, AND
(1) TYPE A CRASHWORTHY END TERMINAL (MASH)

BRIDGE NO. A17821
U.I.P & REDECK
EXIST. (38'-50'-38')
CONT. COMP. WIDE
FLANGE BEAMS PANS
28'-0" ROADWAY

STA. 116+02.40 TO 116+89.90 @ RTE. H RT.
BUILD (1) MGS BRIDGE APPROACH TRANSITION AND
(1) TYPE A CRASHWORTHY END TERMINAL (MASH)



CONTROL POINT NO. 22:
REBAR W/ CAP
N. 1393639.102
E. 2656089.107
ELEV. 764.32

CONTROL POINT NO. 23:
REBAR W/ CAP
N. 1393858.194
E. 2656093.337
ELEV. 764.27

CONTROL POINT NO. 24:
REBAR W/ CAP
N. 1394236.114
E. 2656063.442
ELEV. 763.05

PLAN AND PROFILE
RTE H
SHEET 1 OF 1

STATE OF MISSOURI
MICHELE R. KEAL
NUMBER
PE-2005000711
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED,
SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
6/25/2024

ROUTE
B/DD/H

STATE
MO

DISTRICT
NW

SHEET NO.
14

COUNTY
ANDREW & BUCH

JOB NO.
JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

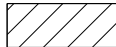


MODOT

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

benesch

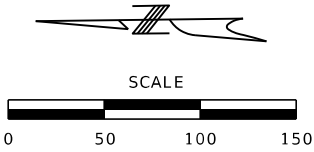
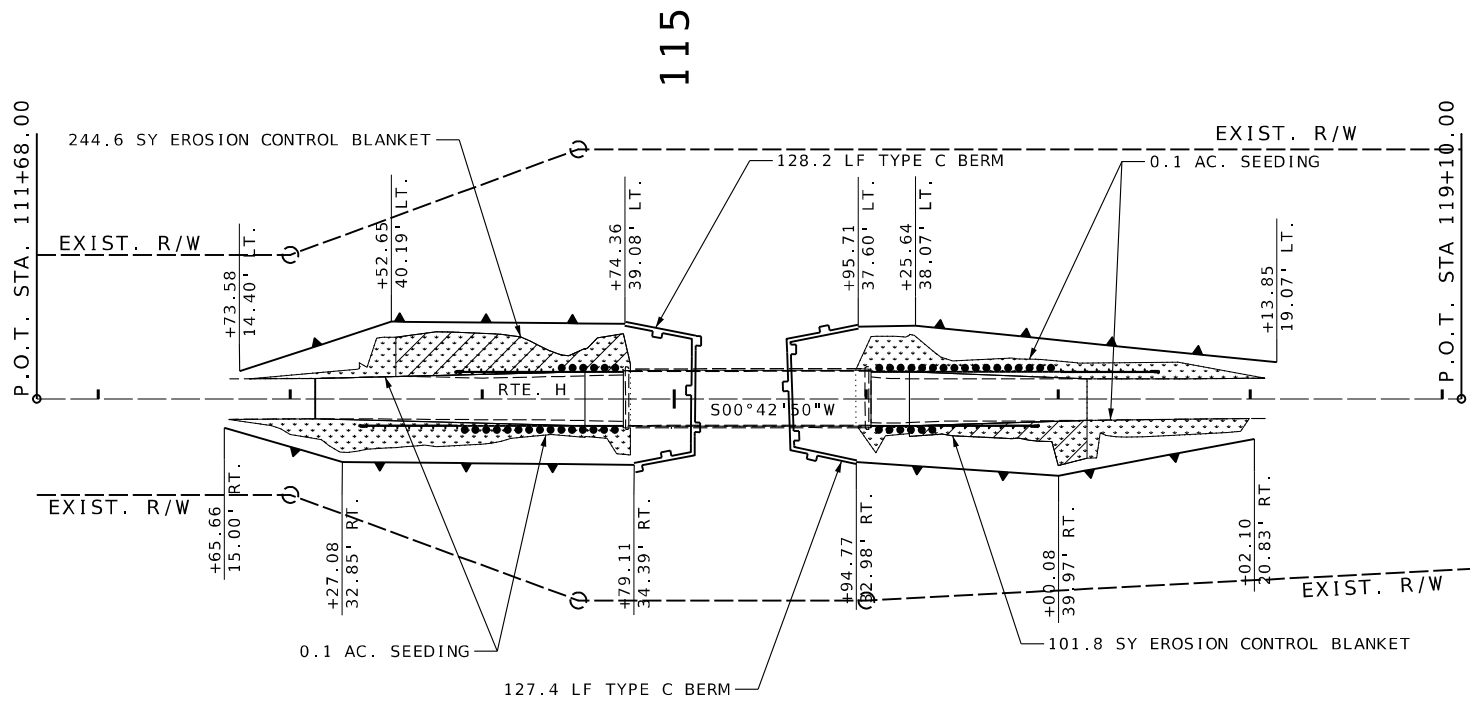
4435 MAIN STREET, SUITE 1150
KANSAS CITY, MO 64111
913/441-1100, FAX 913/441-1468
CERTIFICATE OF AUTHORITY NUMBER FO09T0024

TEMPORARY EROSION CONTROL LEGEND

-  EROSION CONTROL BLANKET
-  SILT FENCE
-  TEMPORARY BERM TYPE C

PERMANENT EROSION CONTROL LEGEND


-  PERMANENT SEEDING AND MULCHING



EROSION CONTROL
RTE H
SHEET 1 OF 1

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-273-6636)

benesch

4435 MAIN STREET, SUITE 1150
KANSAS CITY, MO 64111
913/441-1100, FAX 913/441-1468
CERTIFICATE OF AUTHORITY NUMBER F009T0024

STATE OF MISSOURI
MICHELE R. KSA
NUMBER PE-2025000711
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED,
SEALED AND DATED ELECTRONICALLY

DATE PREPARED
6/25/2024

ROUTE B/DD/H	STATE MO
DISTRICT NW	SHEET NO. 16

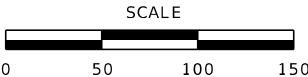
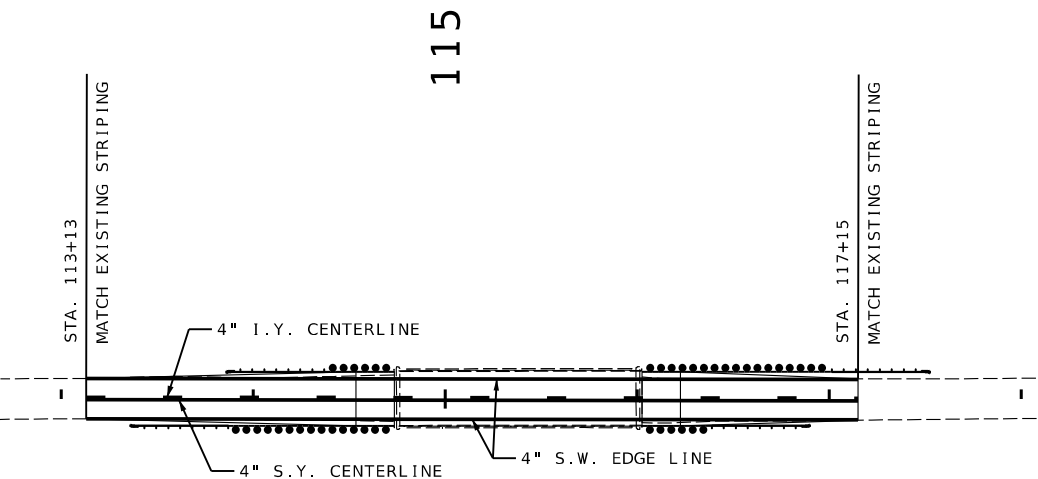
COUNTY
ANDREW & BUCH

JOB NO.
JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO.




PAVEMENT MARKING
RTE H
SHEET 1 OF 1



4435 MAIN STREET, SUITE 1150
KANSAS CITY, MO 64111
913/441-1100 FAX 913/441-1468
CERTIFICATE OF AUTHORITY NUMBER F009T0024

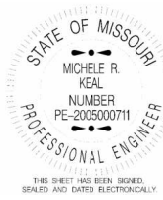
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION



105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-273-6636)

DATE	DESCRIPTION

COUNTY	
ANDREW & BUCH	
JOB NO.	
JNW0008	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	



STATE OF MISSOURI
MICHELE R. KEAL
NUMBER PE-2025000711
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED,
SEALED AND DATED ELECTRONICALLY

DATE PREPARED
6/25/2024

ROUTE	STATE
B/DD/H	MO
DISTRICT	SHEET NO.
NW	17

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LOCHNER JOB: 21679 MoDOT NW District 11 Bridges PLOTTED BY: JCASEY PLOT CONFIGURATION: MoDOT PDF Sheet.pltcfq

Prior to deck removal, Profile Grade along bridge shall be recorded at tenth points of each span. See Bridge JSP's for additional details.

Remove existing deck from beams and top of upper construction joint of End Bents

Existing Const. Joint

DETAILS OF CONCRETE REMOVAL AT END BENTS

The cost of concrete removal as shown will be considered completely covered by the contract unit price for Removal of Existing Bridge Deck. Vertical backwall reinforcement to be cut off one inch below concrete removal surface and the resulting holes shall be filled with a qualified special mortar.

A smooth, level surface shall be provided at Bents No.1 and 4 removal lines.

General Notes:

Stay-In-Place Forms:

Corrugated steel forms, supports, closure elements and accessories shall be in accordance with grade requirement and coating designation G165 of ASTM A653. Complete shop drawings of the permanent steel deck forms shall be required in accordance with Sec 1080.

Corrugations of stay-in-place forms shall be filled with an expanded polystyrene material. The polystyrene material shall be placed in the forms with an adhesive in accordance with the manufacturer's recommendations.

Form sheets shall not rest directly on the top of beam flanges. Sheets shall be securely fastened to form supports with a minimum bearing length of one inch on each end. Form supports shall be placed in direct contact with the flange. Welding on or drilling holes in the beam flanges will not be permitted. All steel fabrication and construction shall be in accordance with Sec 1080 and 712. Certified field welders will not be required for welding of the form supports.

The design of stay-in-place corrugated steel forms is per manufacturer which shall be in accordance with Sec 703 for false work and forms. Maximum actual weight of corrugated steel forms allowed shall be 4 psf assumed for beam loading.

The contractor shall provide a method of preventing the direct contact of the stay-in-place forms and connection components with uncoated weathering steel members that is approved by the engineer.

Pouring and Finishing Slab:

The contractor shall provide bracing necessary for lateral and torsional stability of the beams during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not weld on or drill holes in the beams. The cost for furnishing, installing, and removing bracing will be considered completely covered by the contract unit price for Slab on Steel.

Slab shall be poured upgrade from end to end at a minimum rate of 25 cubic yards per hour.

Alternate pour sequences may be submitted to the engineer for approval. Keyed construction joints shall be provided between pours.

Haunching:

(1) Slab is to be considered a uniform thickness as shown on the plans. Haunching will vary. See front sheet for slab thickness. For adjusted girder deflection due to weight of new deck and barriers, see Bridge Electronic Deliverables.

Bearing Devices:

The existing bearings at End Bents No. 1 and 4 shall be cleaned and coated. See Bridge JSP's for additional details.

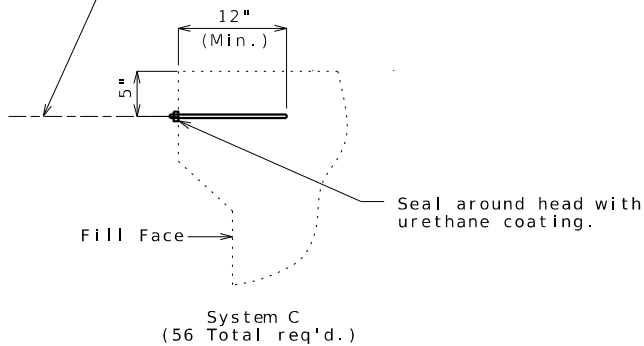
Resin Anchor Systems:

The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039.

Cost of furnishing and installing the resin anchor systems, complete in place, will be considered completely covered by the contract unit price for Slab on Steel.

The minimum embedment depth in concrete with $f'c = 4,000$ psi for the resin anchor systems shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5 inches, unless noted otherwise.

Resin Anchor System A with 5/8" Ø threaded rod with flat washer & two heavy hex nuts at 12" cts. (burr threads to prevent loosening). All hardware for Resin Anchor System C shall be galvanized in accordance with ASTM A153.



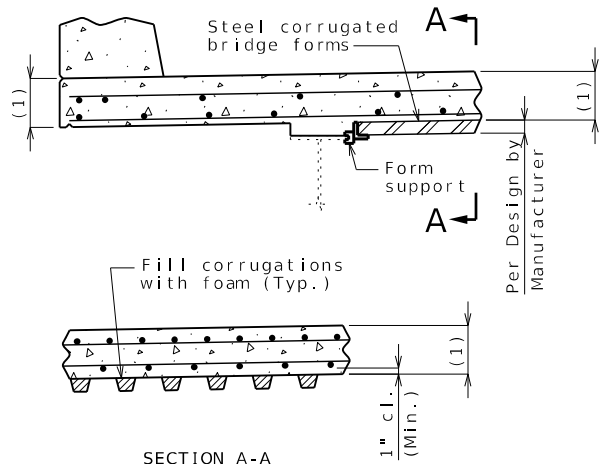
DETAIL A

Install resin anchor systems at 12" cts. per Detail A this sheet. (End Bents No. 1 & 4)

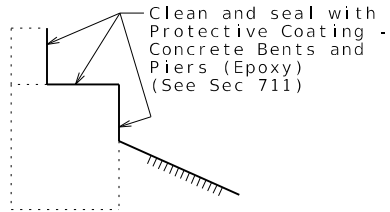
Provide a smooth, level surface for 2 Layers of 30 lb. (Min.) Roofing Felt

Haunch to bear on exist. diaphragm

PART SECTION THRU SLAB AT END BENTS



OPTIONAL STAY-IN-PLACE FORM DETAILS



TYPICAL SECTION THRU END BENTS NO. 1 & 4 SHOWING PROTECTIVE COATING



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED 7/3/2024

ROUTE H STATE MO

DISTRICT BR SHEET NO. 2

COUNTY ANDREW

JOB NO. JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A17821

DESCRIPTION	DATE

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

Lochner
15717 College Boulevard | Lenexa, Kansas 66219
Certificate of Authority #FO0727076

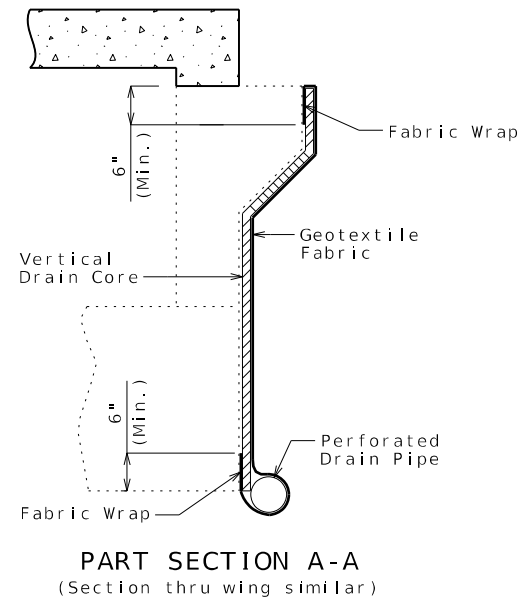
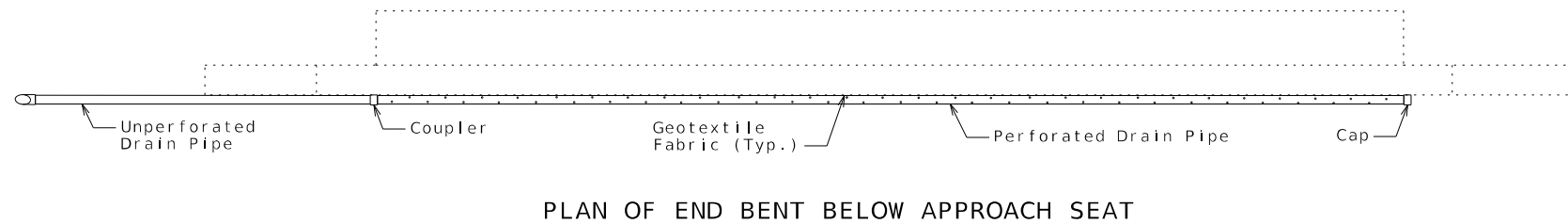
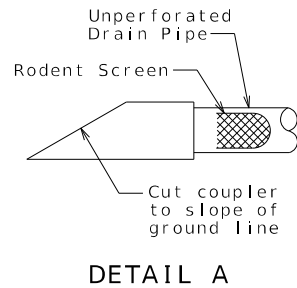
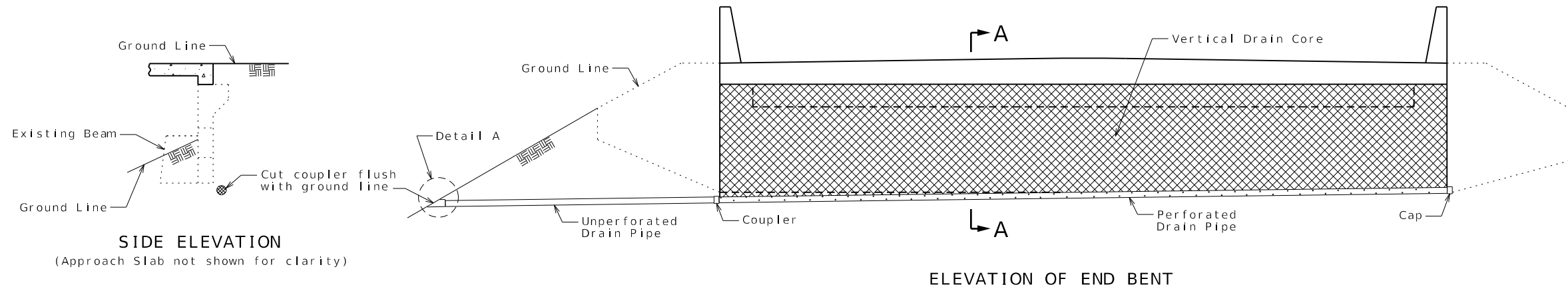
DESIGNED BY: KIW JAN 2024
DETAILED BY: JTC JAN 2024
CHECKED BY: NSC FEB 2024

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

Sheet No. 2 of 8

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LOCHNER JOB: 21679 MoDOT NW District 11 Bridges PLOTTED BY: JCASEY PLOT CONFIGURATION: MoDOT PDF Sheet.pltcfq



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. The pipe shall slope to lowest grade of ground line.

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)

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

Sheet No. 3 of 8



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
7/3/2024

ROUTE H STATE MO

DISTRICT BR SHEET NO. 3

COUNTY ANDREW

JOB NO. JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A17821

DESCRIPTION	DATE

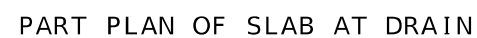
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Lochner

15717 College Boulevard | Lenexa, Kansas 66219
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SLAB DRAINS

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

Sheet No. 4 of 8

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 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, except as shown.

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

The bolt hole for the bracket assembly attachment shall be shifted to the minimum extent necessary to field drill in the existing web.

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 filament-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".

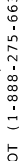
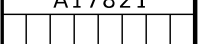
Minimum reinforced wall thickness shall be 1/4 inch.

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 recommended by the manufacturer to ensure a smooth, chip free cut.



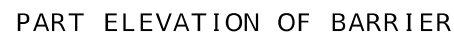
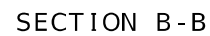
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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



f-Lochner

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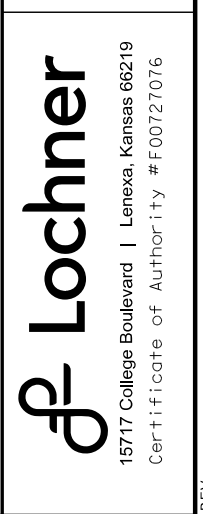
SECTION A-A

R-BAR PERMISSIBLE ALTERNATE SHAPE

TYPE H BARRIER

General Notes:

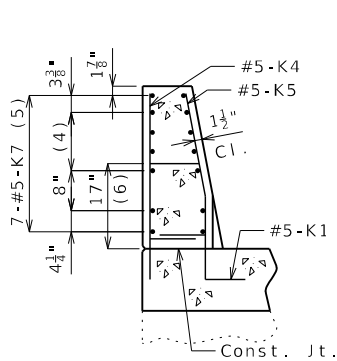
For slip-formed option, both sides of barrier shall have a vertically broomed finish and the top shall have a transversely broomed finish.



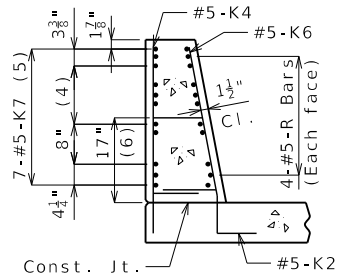
PLOT CONFIGURATION:MoDOT PDF Sheet.pltcfq

PLOTTED BY:JCASEY

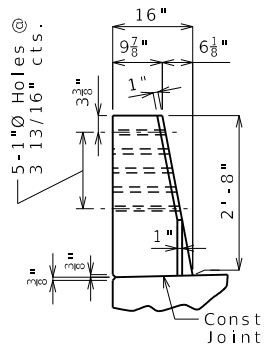
LOCHNER JOB: 21679 MoDOT NW District 11 Bridges



ELEVATION A-A

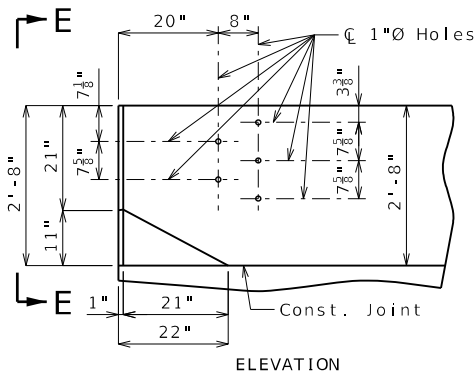


SECTION B-B

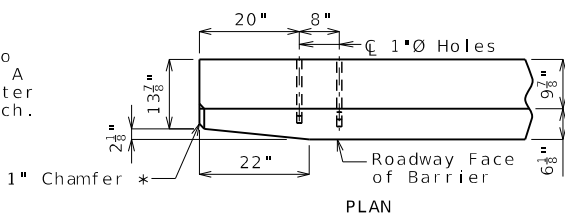


ELEVATION E-E

* Transition to zero at Type A curb for gutter lines to match.

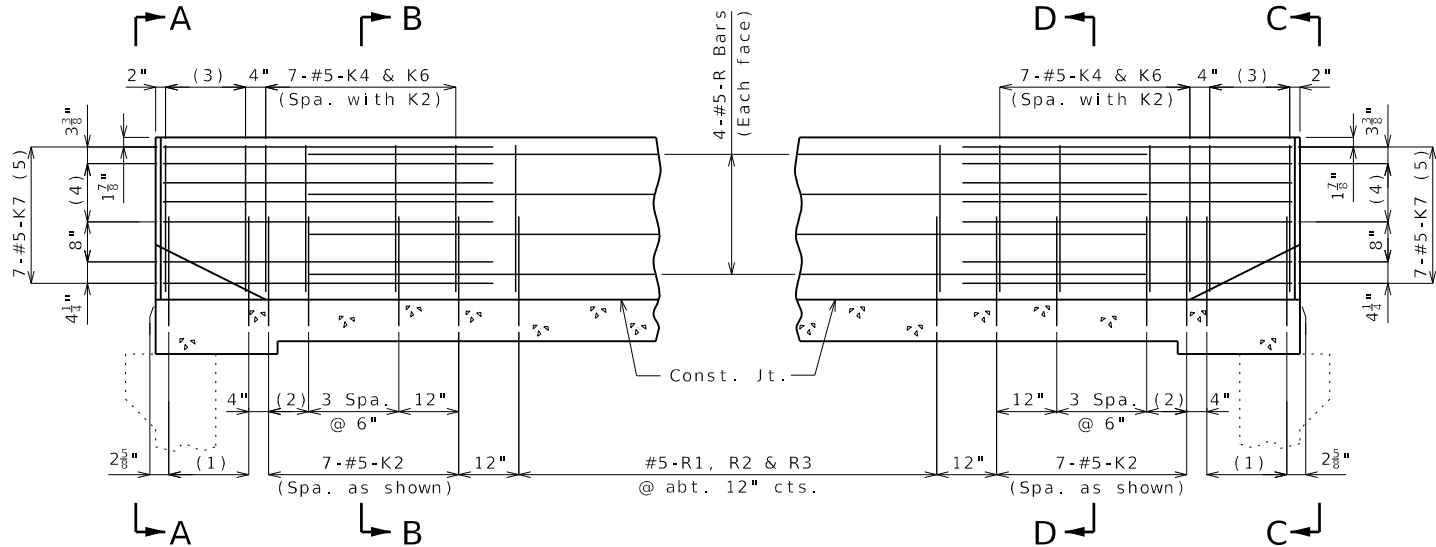


ELEVATION



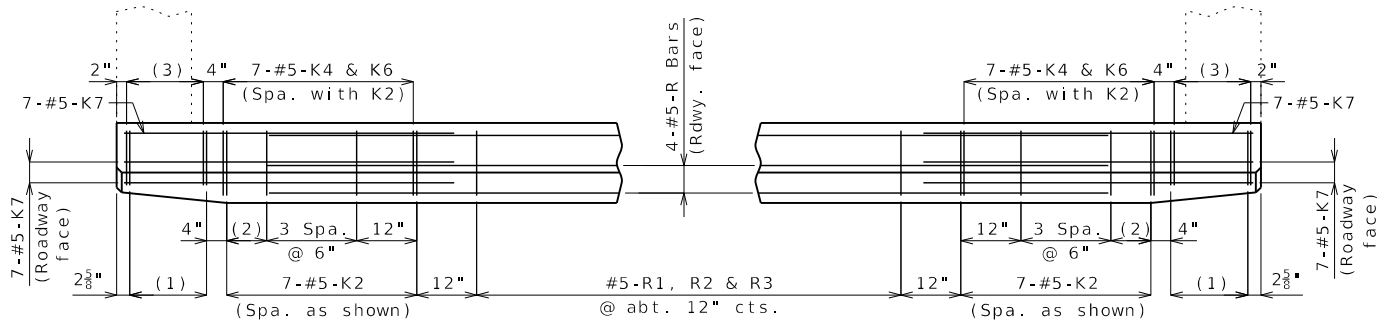
PLAN

DETAILS OF GUARD RAIL ATTACHMENT



PART ELEVATION

- (1) 5-#5-K1 @ 4" cts.
(2) 2 Spaces @ 4"
(3) 5-#5-K4 and 5-#5-K5, spaced with K1
(4) 3 Spaces @ 3 1/8"
(5) Spaced as shown, each face
(6) To top of bar



PART PLAN

General Notes:

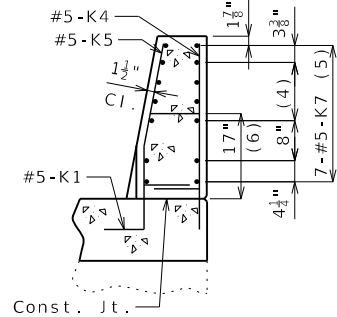
Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type H Barrier.

Reinforcing Steel:

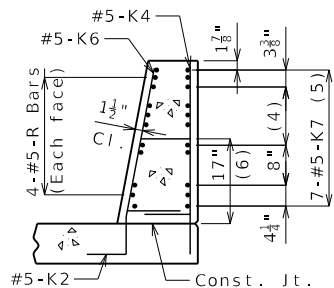
Minimum clearance to reinforcing steel shall be 1 1/2".
Use a minimum lap of 3'-1" between K7 bars and R bars.

TYPE H BARRIER AT END BENTS

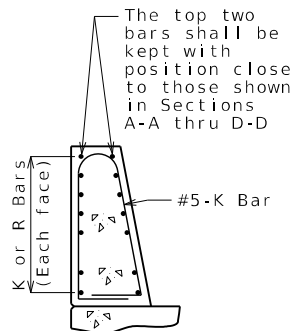
(Left barrier shown, right barrier similar)



ELEVATION C-C



SECTION D-D



K4-K5

K4-K6

PERMISSIBLE ALTERNATE SHAPES

(Other K bars not shown for clarity)

The K4-K5 and K4-K6 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

DESIGNED BY: NSC FEB 2024
DETAILED BY: JTC FEB 2024
CHECKED BY: KLV MAR 2024

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

Sheet No. 6 of 8

B_A17821_006_JNW0008_TYPE H BARRIER END OF SLAB.dgn 1:46:33 PM 7/3/2024



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DATE PREPARED 7/3/2024

ROUTE H STATE MO

DISTRICT BR SHEET NO. 6

COUNTY ANDREW

JOB NO. JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A17821

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102

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

Lochner

15717 College Boulevard | Lenexa, Kansas 66219

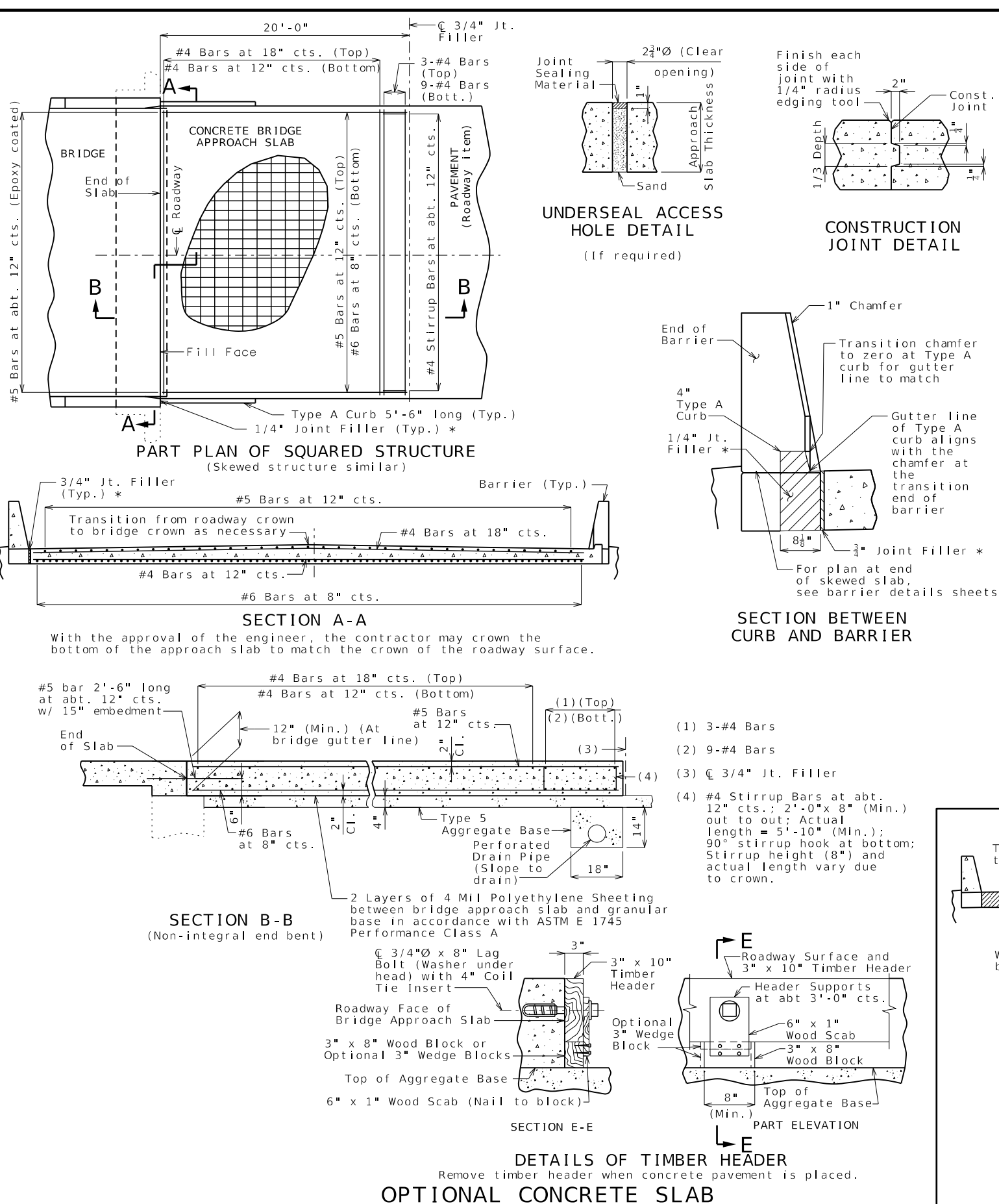
Certificate of Authority #F00727076

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PLOT CONFIGURATION: MoDOT PDF Sheet.pltcfq

PLOTTED BY: JCASEY

LOCHNER JOB: 21679 MoDOT NW District 11 Bridges



BRIDGE APPROACH SLAB (MINOR)

Non-integral end bent shown.

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

Sheet No. 7 of 8

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.

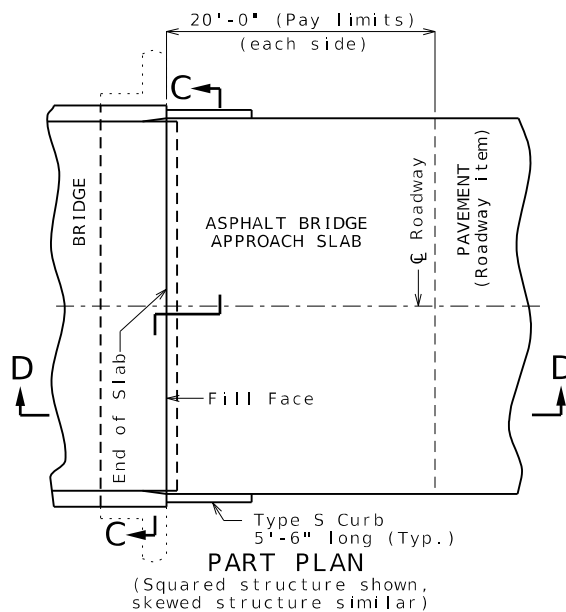
MoDOT Construction personnel will indicate the bridge approach slab used for this structure:

- ☐ 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, curb, 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.



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
7/3/2024

ROUTE
H

STATE
MO

DISTRICT
BR

SHEET NO.
7

COUNTY
ANDREW

JOB NO.
JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A17821

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

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

Lochner

15717 College Boulevard | Lenexa, Kansas 66219
Certificate of Authority #F00727076

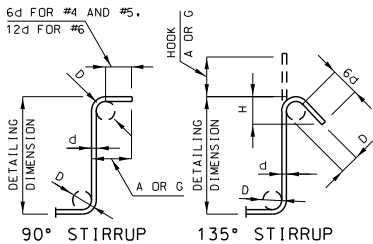
PLOT CONFIGURATION:MoDOT PDF Sheet.pltctg

PLOTTED BY: JCASEY

LOCHNER JOB: 21679 MoDOT NW District 11 Bridges

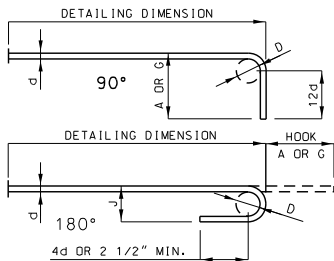
BILL OF REINFORCING STEEL

NO.	REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS												NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT		
										B		C		D		E		F		H					K	
										FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.				FT.	IN.
SUPERSTRUCTURE																										
SLAB																										
198	5	S1	Top & Bott. Long.	E	20					45	6.000									45	6	45	6		9396	
96	6	S2	Top Longit.	E	20					28	0.000									28	0	28	0		4037	
388	6	S3	Top & Bott. Trans.	E	20					30	5.000									30	5	30	5		17726	
TYPE H BARRIER																										
246	5	R1	Barrier	E	14	S				2	5.000	6.500	2	5.500			2	5.000	5.500	5	5	5	3		1347	
246	5	R2	Barrier	E	19	S					19.000	9.500								2	5	2	3		577	
246	5	R3	Barrier	E	27	S						9.500	15.250	3.500	12.000	15.000	3.000	3	4	3	2			812		
32	5	R4	Barrier	E	20					36	11.000									36	11	36	11		1232	
32	5	R5	Barrier	E	20					11	8.000									11	8	11	8		389	
16	5	R6	Barrier	E	20					25	8.000									25	8	25	8		428	
20	5	K1	Barrier	E	27	S				21.000	9.250	5.375	15.250	12.000	5.250	1.000	5	3	4	11				103		
28	5	K2	Barrier	E	27	S				21.000	9.250	17.250	3.500	12.000	17.000	3.250	5	3	4	11				144		
48	5	K4	Barrier	E	19	S				2	5.000	10.000							3	3	3	2			159	
20	5	K5	Barrier	E	14	S					8.250	9.500	19.250			4.250	18.750	3	13	0				63		
28	5	K6	Barrier	E	21	S				2	4.875	10.000			2	4.250	6.000	3	3	3	1			90		
56	5	K7	Barrier	E	20					5	6.000							5	6	5	6				321	
SLIP-FORM OPTION																										
32	5	C1	Barrier	E	20					12	0.000									12	0	12	0		401	
								</																		



STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK A OR G	135° HOOK A OR G	APPROX. H
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	12"	8"	4 1/2"

NOTE: UNLESS OTHERWISE NOTED, DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.

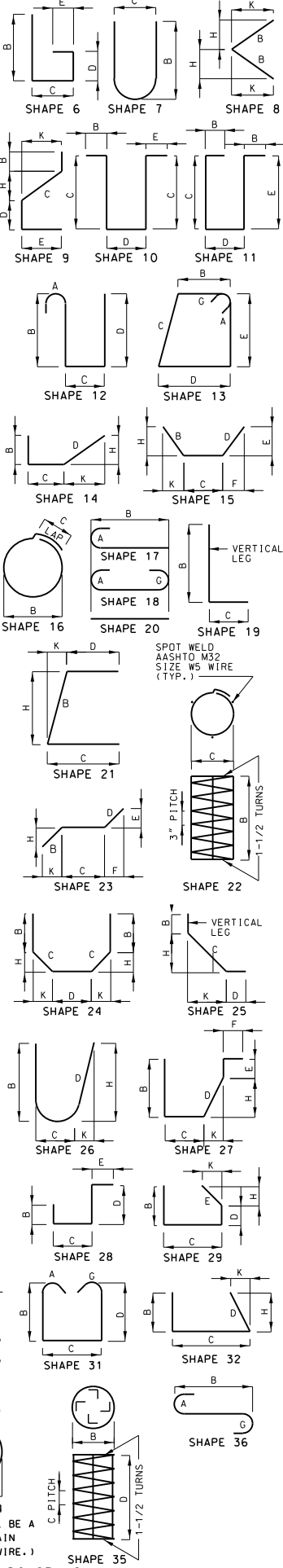


END HOOK DIMENSIONS				
ALL GRADES				
BAR SIZE	D (IN.)	180° HOOKS A OR G	90° HOOKS J	A OR G
#3	2 1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	12"
#7	5 1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9 1/2"	15"	11 3/4"	19"
#10	10 3/4"	17"	13 1/4"	22"
#11	12"	19"	14 3/4"	2'-0"
#14	18 1/4"	2'-3"	21 3/4"	2'-7"

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.
HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.
E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.
NO. EA. = NUMBER OF BARS OF EACH LENGTH.
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)
ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.
PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.
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 (GRADE 60) FY = 60,000 PSI.

BILL OF REINFORCING STEEL

NO.	REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS												NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED

7/3/2024

ROUTE H STATE MO

DISTRICT BR SHEET NO. 8

COUNTY ANDREW

JOB NO. JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A17821

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102

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

MoDOT

Lochner

15717 College Boulevard | Lenexa, Kansas 66219

Certificate of Authority #FO0727076

REV.

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

Table Showing S2 Bar Lengths			
Int. Bent No. 2		Int. Bent No. 3	
Span 1	Span 2	Span 2	Span 3
11'-3"	14'-6"	14'-6"	11'-3"

Required Lap Length For Bar Splices **	
Bar Size	Splice Length
4	2'-7"
5	3'-3"
6	3'-10"
7	4'-11"

** Unless otherwise shown.

General Notes:

Design Specifications:
2002 AASHTO LFD (17th Ed.) Standard Specifications
Seismic Performance Category A

Design Loading:
H15-44 (1965) (Existing)
HS20-44 (New Construction)
35 lb/sf Future Wearing Surface
Earth - 120 lb/cf, Equivalent Fluid Pressure 45 lb/cf
Fatigue Stress - Case III

Design Unit Stresses:
Class B-1 Concrete (Barrier) f'c = 4,000 psi
Class B-2 Concrete (End Bents & Superstructure, except Barrier) f'c = 4,000 psi
Reinforcing Steel (Grade 60) fy = 60,000 psi

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.

Miscellaneous:
Bars bonded in existing concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, existing bars shall extend into new concrete at least 40 diameters for plain bars and 30 diameters for deformed bars, unless otherwise noted.

Roadway surfacing adjacent to bridge ends shall match new bridge slab surface. (Roadway item)

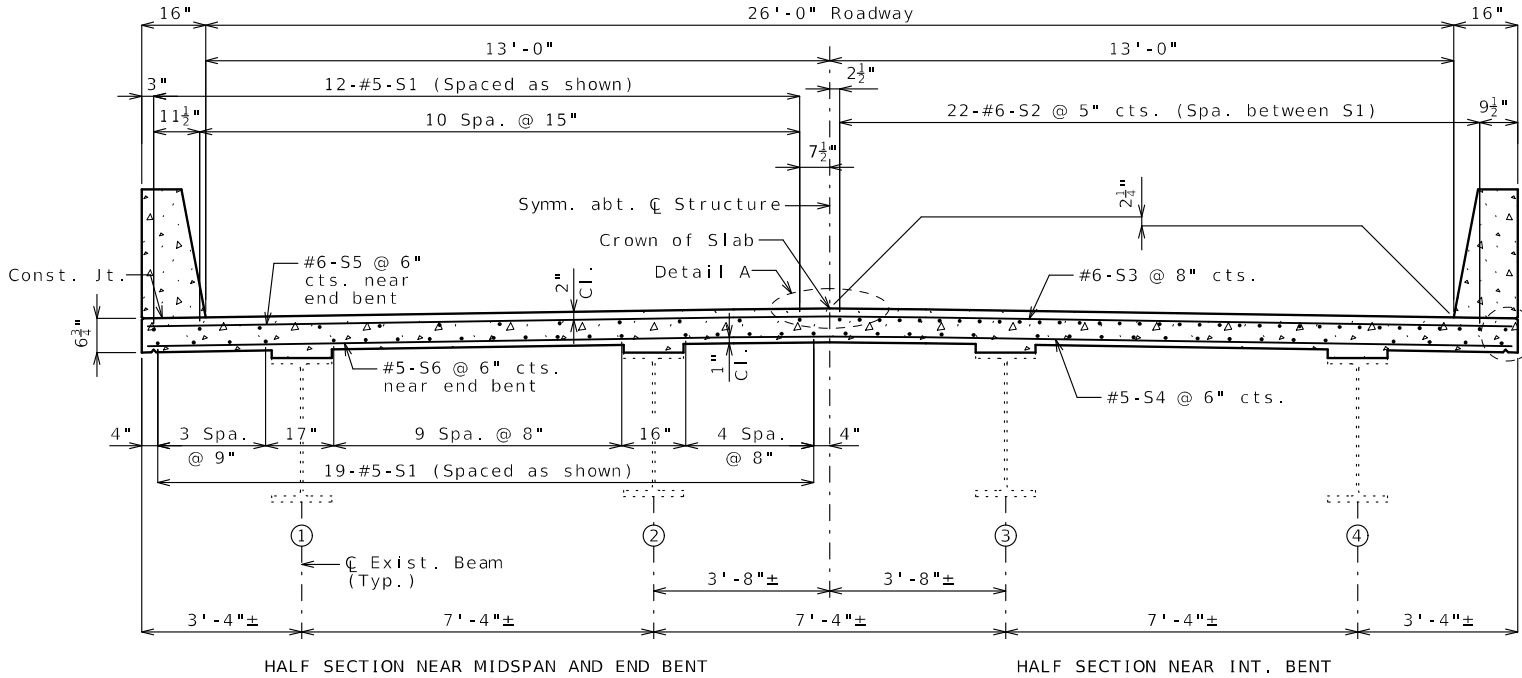
Outline of existing work is indicated by light dashed lines. Heavy lines indicate new work.

Contractor shall verify all dimensions in field before ordering new material.

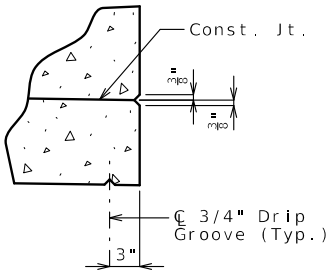
The area exposed by the removal of concrete and not covered with new concrete shall be coated with an approved qualified special mortar in accordance with Sec 704.

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

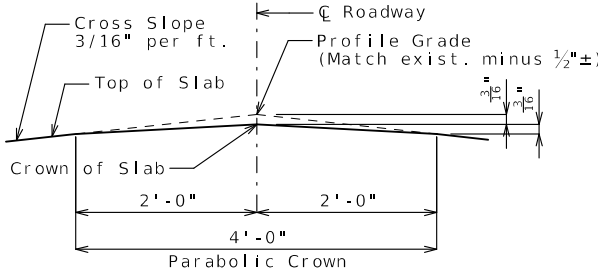
U.I.P. AND REDECK EXISTING (37'- 48'- 37') CONTINUOUS WIDE FLANGE BEAM SPANS (COMPOSITE) (SKEW: 25° L.A.)



SEC/SUR 1 TWP 61N RGE 35W



DETAIL B



DETAIL A

Estimated Quantities

Item		Total
Removal of Miscellaneous ACM (Non-Friable)	sq. foot	11
Removal of Existing Bridge Deck	sq. foot	3,610
Bridge Approach Slab (Minor)	sq. yard	118
Slab on Steel	sq. yard	398
Type H Barrier	linear foot	251
Substructure Repair (Formed)	sq. foot	20
Slab Drain	each	22
Surface Preparation for Applying Epoxy - Mastic Primer	lump sum	1
Aluminum Epoxy-Mastic Primer	lump sum	1
* Open Cell Foam Joint Seal	linear foot	52
Vertical Drain at End Bents	each	2

Cost of any required excavation for bridge will be considered completely covered by the contract unit price for other items.

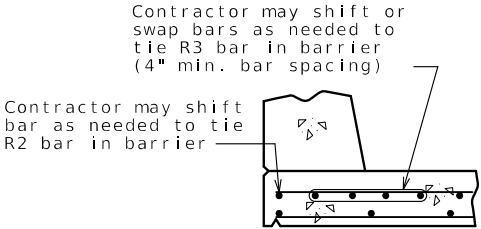
*Concrete Bridge Approach Slab only. See Special Provisions.

Estimated Quantities for Slab on Steel

Item		Total
Class B-2 Concrete	cu. yard	86
Reinforcing Steel (Epoxy Coated)	pound	35,780

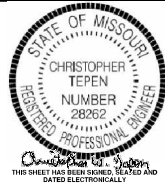
The table of Estimated Quantities for Slab on Steel represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab (or with the horizontal dimensions as shown on the plan of slab). Payment for stay-in-place corrugated steel forms, 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.

OPTIONAL SHIFTING TOP BARS AT BARRIER



REPAIRS TO BRIDGE:
ROUTE B OVER UPPER NEELY BRANCH

ROUTE B FROM ROUTE N TO ROUTE 48
ABOUT 0.4 MILE EAST OF ROUTE N
BEGINNING STATION 194+36.00± (MATCH EXISTING)



07/10/2024
DATE PREPARED
7/9/2024
ROUTE B STATE MO
DISTRICT BR SHEET NO. 1
COUNTY ANDREW
JOB NO. JNW0008
CONTRACT ID.

PROJECT NO. ---
BRIDGE NO. A22801

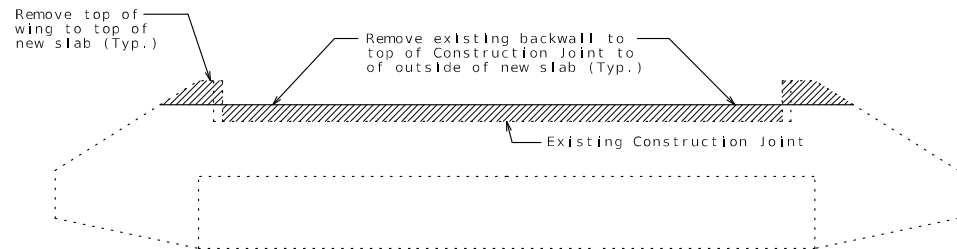
DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



One Main Plaza, 4435 Main St., Ste 1150
Kansas City, MO 64111
913/441-1100, FAX 913/441-1468



DETAILS OF CONCRETE REMOVAL AT END BENTS

The cost of concrete removal as shown will be considered completely covered by the contract unit price for Removal of Existing Bridge Deck. Vertical backwall reinforcement to be cut off one inch below concrete removal surface and the resulting holes shall be filled with a qualified special mortar.

A smooth, level surface shall be provided at Bents No. 1 & 4 removal lines.

General Notes:

Stay-In-Place Forms:

Corrugated steel forms, supports, closure elements and accessories shall be in accordance with grade requirement and coating designation G165 of ASTM A653. Complete shop drawings of the permanent steel deck forms shall be required in accordance with Sec 1080.

Corrugations of stay-in-place forms shall be filled with an expanded polystyrene material. The polystyrene material shall be placed in the forms with an adhesive in accordance with the manufacturer's recommendations.

Form sheets shall not rest directly on the top of beam flanges. Sheets shall be securely fastened to form supports with a minimum bearing length of one inch on each end. Form supports shall be placed in direct contact with the flange. Welding on or drilling holes in the beam flanges will not be permitted. All steel fabrication and construction shall be in accordance with Sec 1080 and 712. Certified field welders will not be required for welding of the form supports.

The design of stay-in-place corrugated steel forms is per manufacturer which shall be in accordance with Sec 703 for false work and forms. Maximum actual weight of corrugated steel forms allowed shall be 4 psf assumed for beam loading.

The contractor shall provide a method of preventing the direct contact of the stay-in-place forms and connection components with uncoated weathering steel members that is approved by the engineer.

Pouring and Finishing Slab:

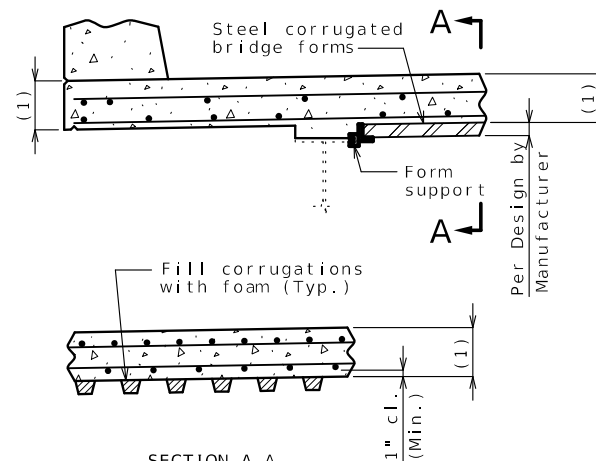
The contractor shall provide bracing necessary for lateral and torsional stability of the beams during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not weld on or drill holes in the beams. The cost for furnishing, installing, and removing bracing will be considered completely covered by the contract unit price for Slab on Steel.

Slab shall be poured upgrade from end to end at a minimum rate of 25 cubic yards per hour.

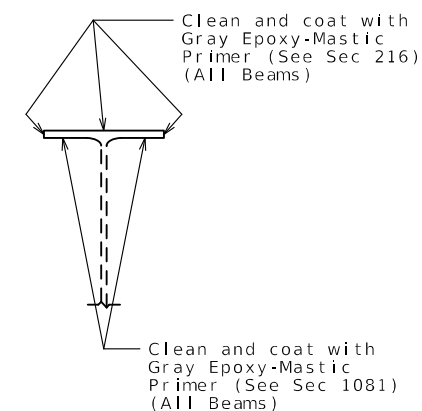
Alternate pour sequences may be submitted to the engineer for approval. Keyed construction joints shall be provided between pours.

Haunching:

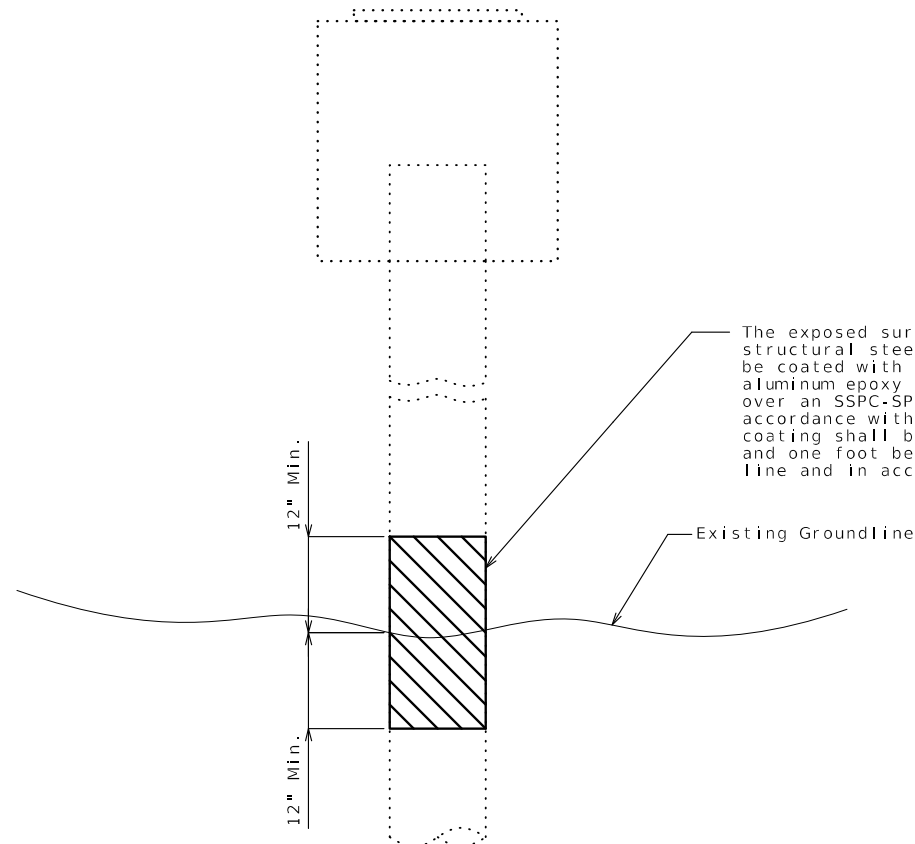
(1) Slab is to be considered a uniform thickness as shown on the plans. Haunching will vary. See front sheet for slab thickness. For adjusted girder deflection due to weight of new deck and barriers, see Bridge Electronic Deliverables.



OPTIONAL STAY-IN-PLACE FORM DETAILS



TYPICAL SECTION THRU BEAM SHOWING PROTECTIVE COATING



INT. BENT PROTECTIVE COATING DETAILS

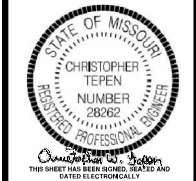
REHAB DETAILS

Detailed OCT 2023
Checked MAR 2024

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

Sheet No. 2 of 10

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07/10/2024

DATE PREPARED

7/9/2024

ROUTE STATE

B MO

DISTRICT SHEET NO.

BR 2

COUNTY

ANDREW

JOB NO.

JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A22801

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



One Main Plaza, 4435 Main St., Ste 1150
Kansas City, MO 64111
913/441-1100, FAX 913/441-1468

10:30

7/9/2024



07/10/2024

DATE PREPARED
7/9/2024

ROUTE	STATE
B	MO
DISTRICT	SHEET NO.
BR	5

COUNTY
ANDREW
JOB NO.
JNW0008
CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A22801

DESCRIPTION	DATE

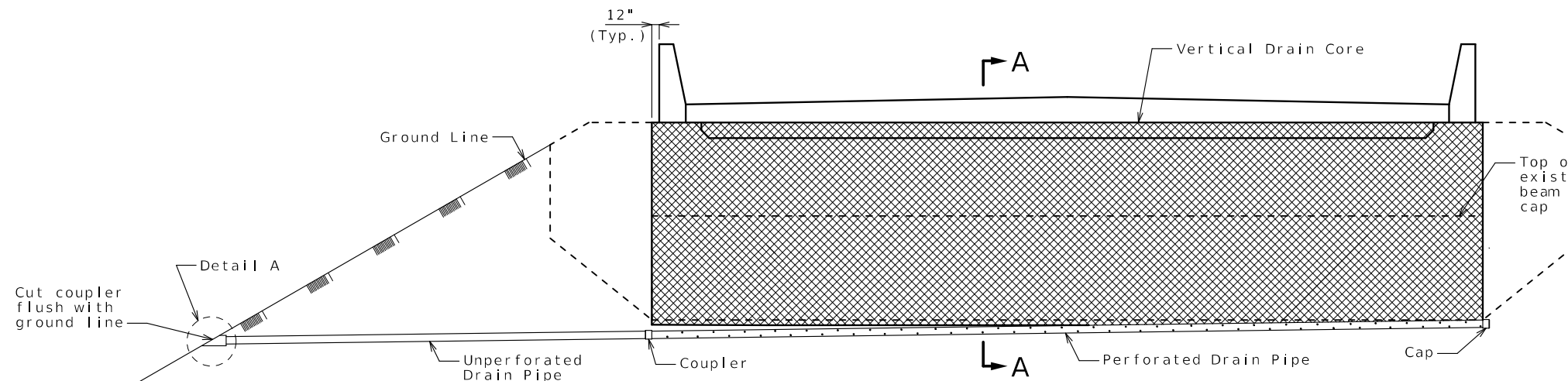
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

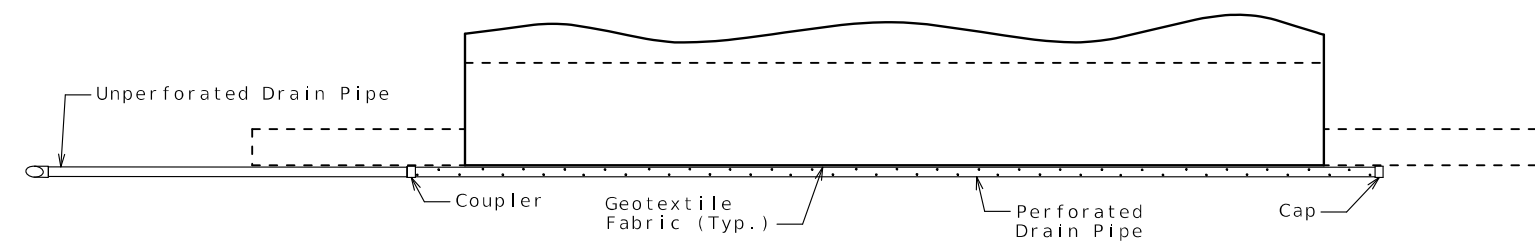
MoDOT

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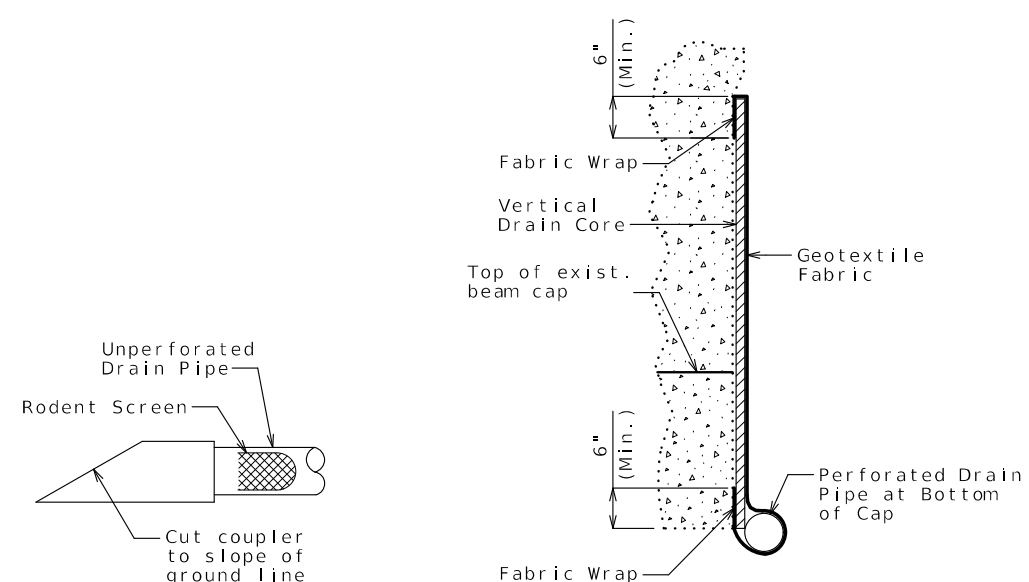
One Main Plaza, 4435 Main St., Ste 1150
Kansas City, MO 64111
913/441-1100, FAX 913/441-1468



ELEVATION OF END BENT



PLAN OF END BENT



PART SECTION A-A
(Section thru wing similar)

DETAIL A

VERTICAL DRAIN AT END BENTS

(Squared end bent shown, skewed end bent similar)

General Notes:

All drain pipe shall be sloped 1 to 2 percent.

Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.

Drain pipe shall be placed at fill face of end bent and inside face of wings. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.

Perforated pipe shall be placed at fill face side and inside face of wings at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.

All excavation necessary for installation of vertical drain will be considered completely covered by the contract unit price for Vertical Drain at End Bents.

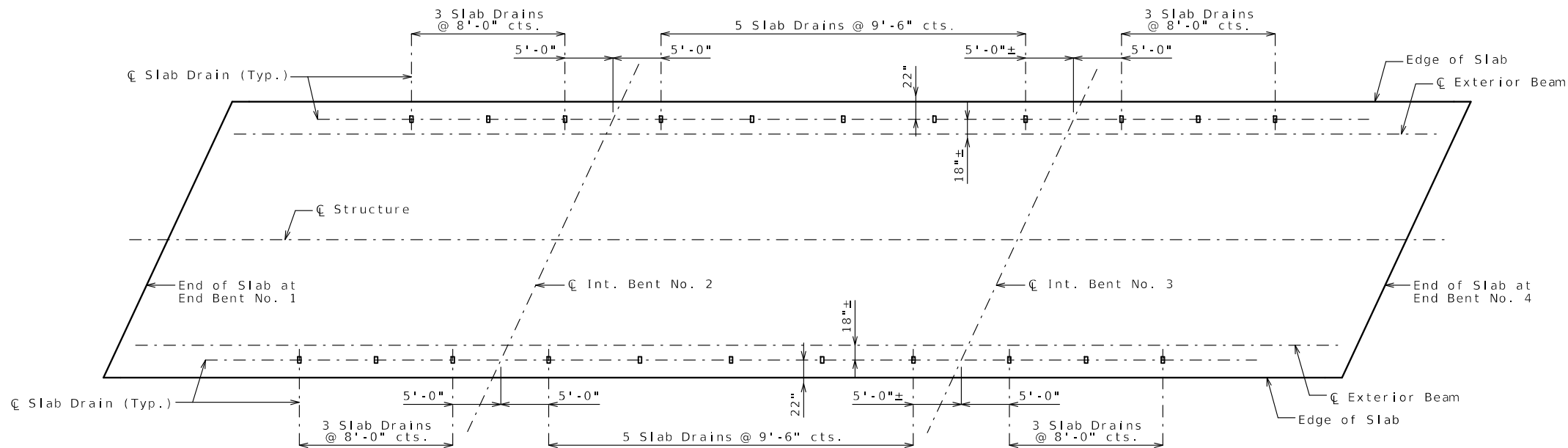
Detailed OCT 2023
Checked MAR 2024

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

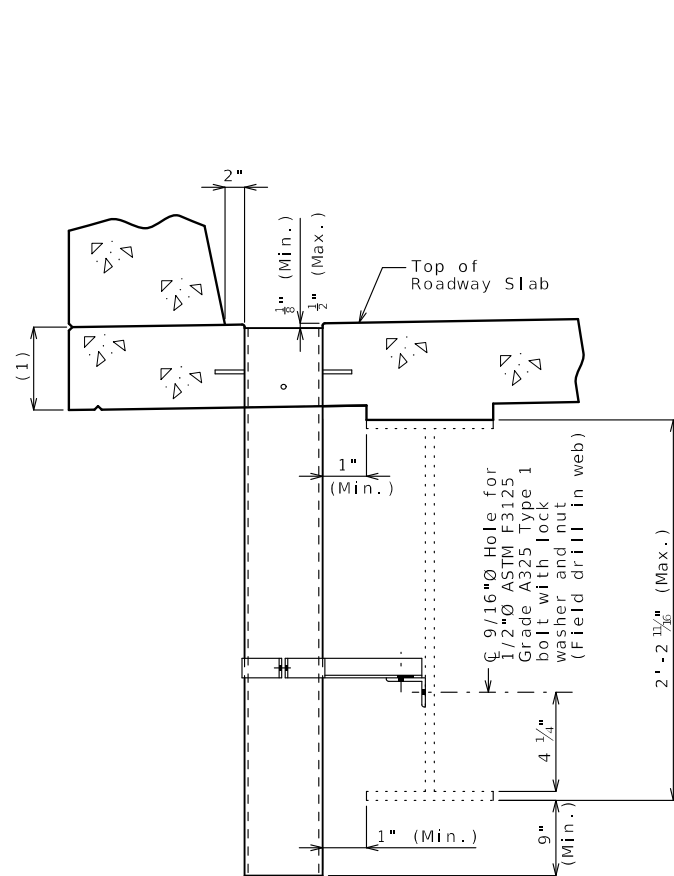
Sheet No. 5 of 10

Y:\Kansas\130900S\130991.00_NW_Bundle_NW0008\Eng_Docs\Bridge\A2280\B_A22801_005_JNW0008_VERTICAL DRAINS.dgn (Default)

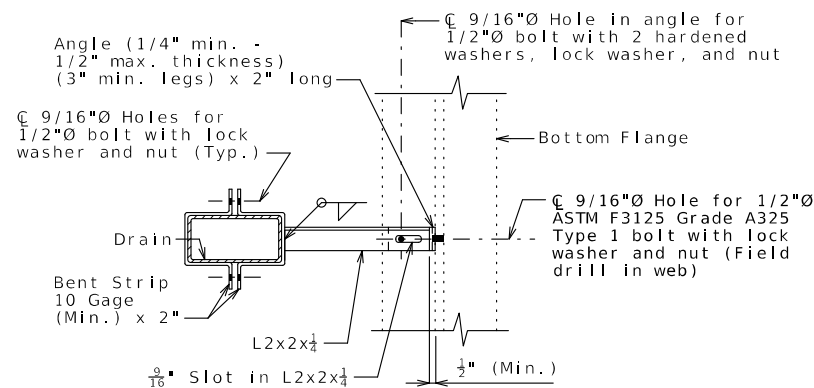
10:30 7/9/2024



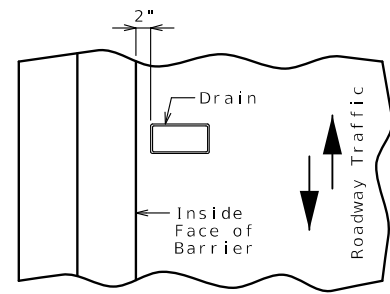
PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS



PART SECTION NEAR DRAIN

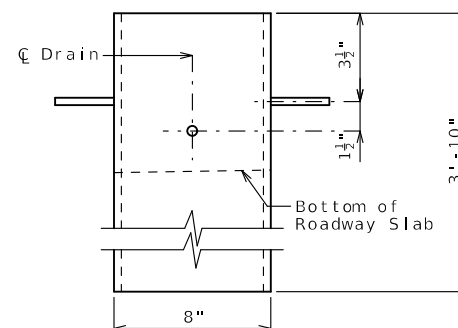


PART SECTION SHOWING BRACKET ASSEMBLY

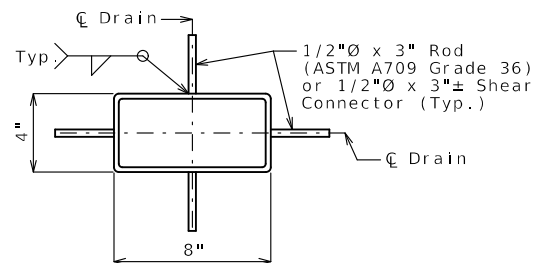


PART PLAN OF SLAB AT DRAIN

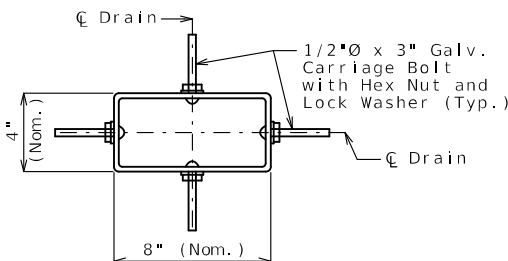
SLAB DRAINS



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 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, except as shown.

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

The bolt hole for the bracket assembly attachment shall be shifted to the minimum extent necessary to field drill in the existing web.

(1) See front sheet for slab thickness.

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 filament-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".

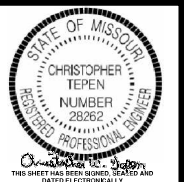
Minimum reinforced wall thickness shall be 1/4 inch.

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 recommended by the manufacturer to ensure a smooth, chip free cut.



07/10/2024

DATE PREPARED

7/9/2024

ROUTE STATE

B MO

DISTRICT SHEET NO.

BR 6

COUNTY

ANDREW

JOB NO.

JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A22801

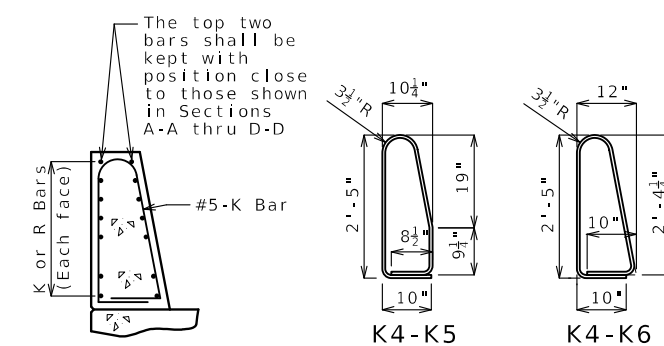
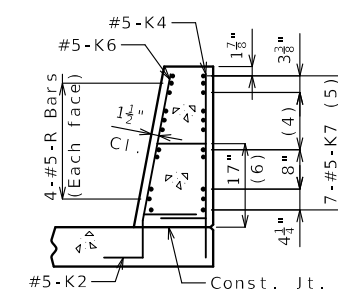
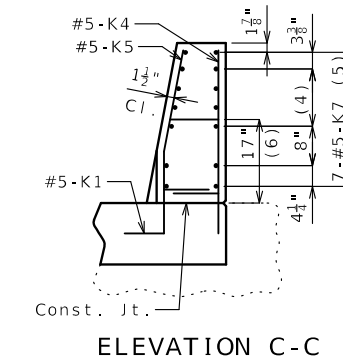
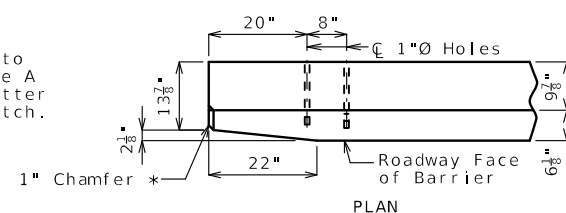
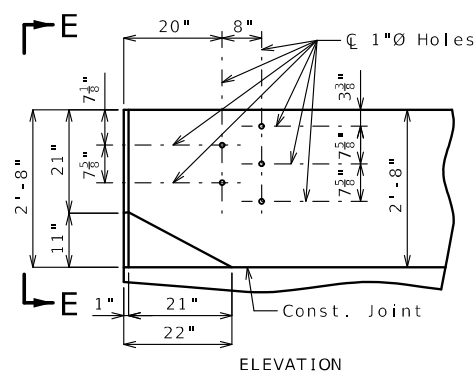
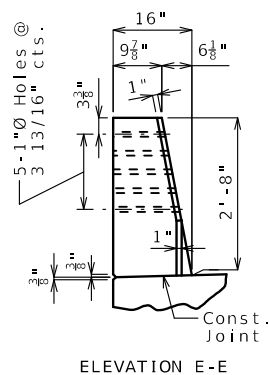
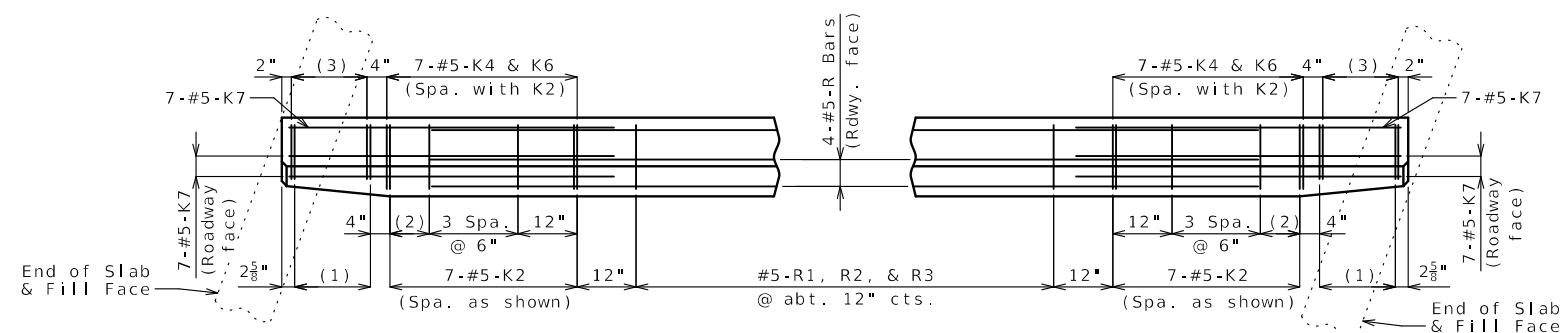
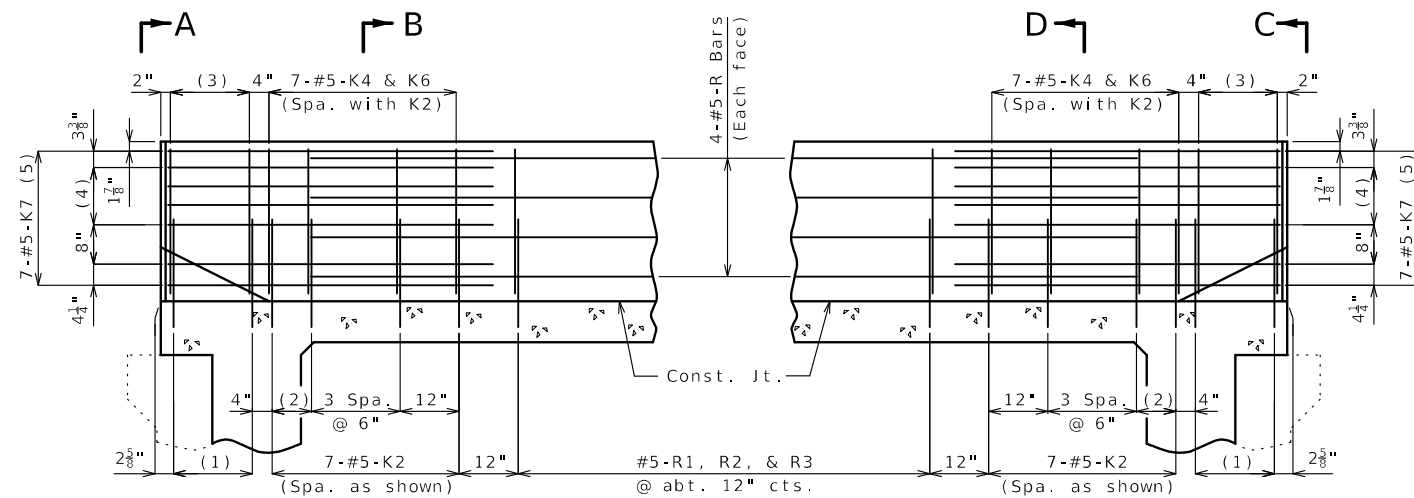
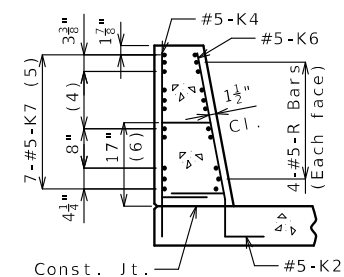
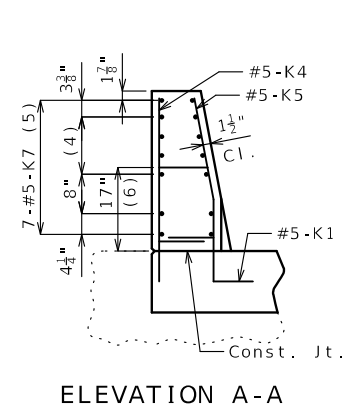
DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



One Main Plaza, 4435 Main St., Ste 1150
Kansas City, MO 64111
913/441-1100, FAX 913/441-1468



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 H Barrier.

Reinforcing Steel:

Minimum clearance to reinforcing steel shall be 1 1/2".

Use a minimum lap of 3'-1" between K7 bars and R bars.

TYPE H BARRIER AT END BENTS

(Left barrier shown, right barrier similar)

Detailed OCT 2023
Checked MAR 2024

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

Sheet No. 8 of 10

Y:\Kansas\130900S\130991.00_NW_Bundle_NW0008\Eng_Docs\Bridge\A2280\B_A22801_008_JNW0008_TYPE H BARRIER END BENT.dgn (Default)

07/10/2024

DATE PREPARED

7/9/2024

ROUTE	STATE
D	MO

B	MO
DISTRICT	SHEET NO.

DISTRICT	SHEET NO.
BR	8

COUNTY

ANDREW

JOB NO.
INW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A22801

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[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

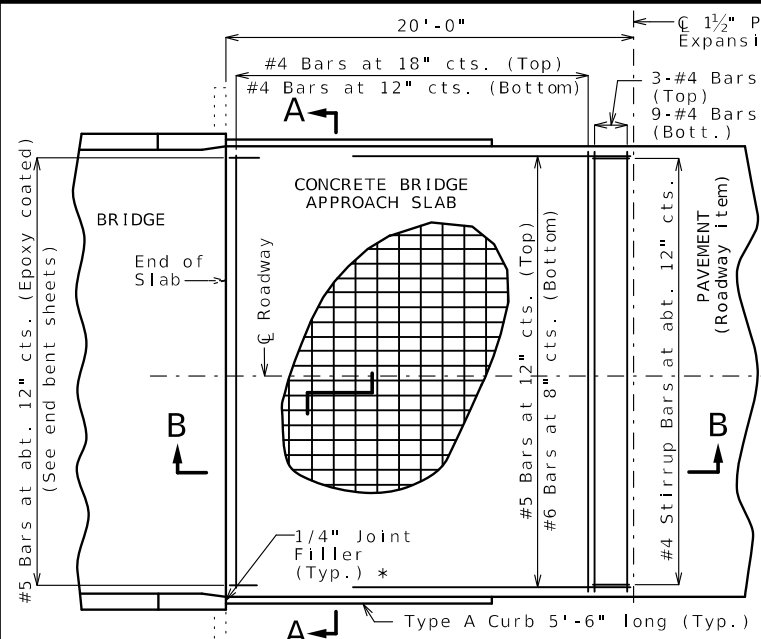
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

benesch

One Main Plaza, 4435 Main St., Ste 1150
Kansas City, MO 64111
913/441-1100, FAX 913/441-1468

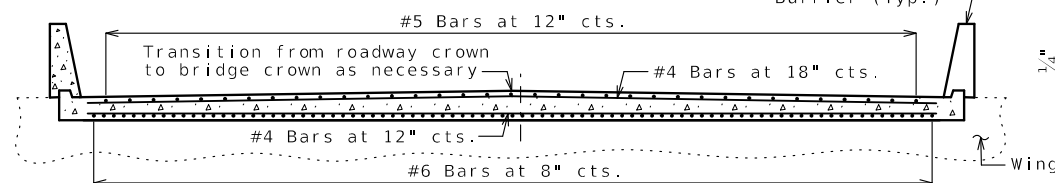
• 471

10:31 7/9/2024



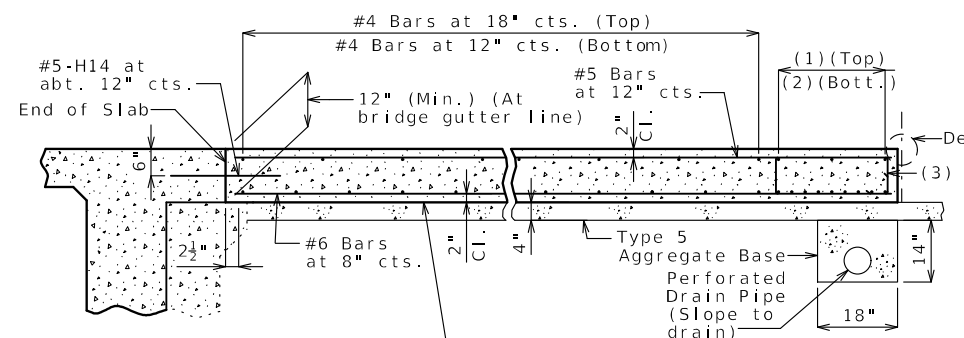
PART PLAN OF SQUARED STRUCTURE
(Skewed structure similar)

UNDERSEAL ACCESS
HOLE DETAIL
(If required)

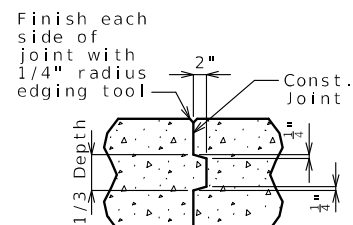


SECTION A-A

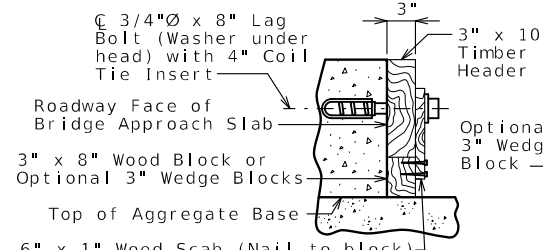
With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.



SECTION B-B
(Integral end bent)

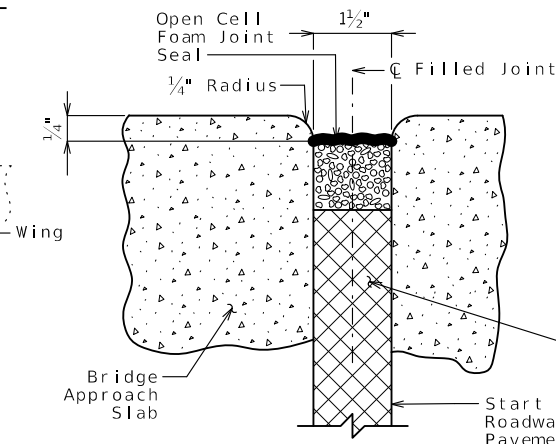


CONSTRUCTION
JOINT DETAIL



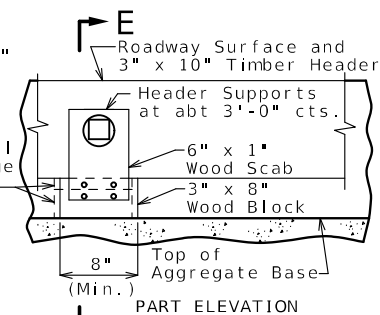
SECTION E-E

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



DETAIL A

- (1) 3-#4 Bars
- (2) 9-#4 Bars
- (3) #4 Stirrup Bars at abt. 12" cts.; 2'-0" x 8" (Min.) out to out; Actual length = 5'-10" (Min.); 90° stirrup hook at bottom; Stirrup height (8") and actual length vary due to crown.



PART ELEVATION

BRIDGE APPROACH SLAB (MINOR)

Integral end bents shown, non-integral end bent similar.

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.

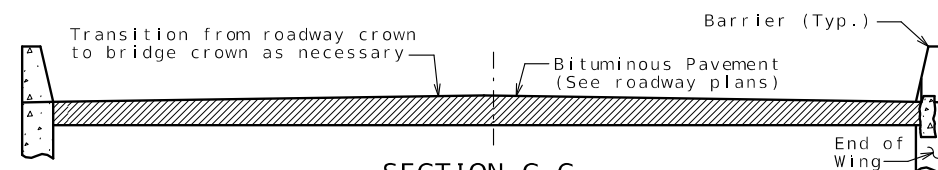
Payment for furnishing all materials, labor and excavation necessary to construct the concrete bridge approach slab, including the timber header, underdrain, Type 5 aggregate base, joint filler, and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered 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.

* Seal joint between vertical face of approach slab and wing with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

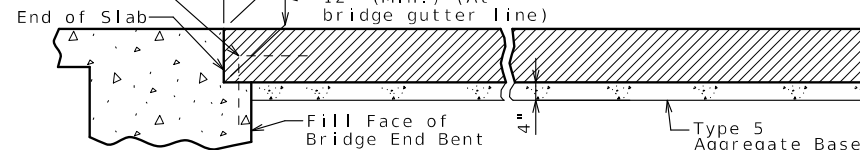
1 1/2" Preformed Flexible Foam Expansion Joint Filler



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.

DO NOT PLACE (or order) #5 bars as shown on end bent sheets and traced here.



SECTION D-D

OPTIONAL ASPHALT SLAB (NOT ALLOWED WITH CONCRETE PAVEMENT)

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.

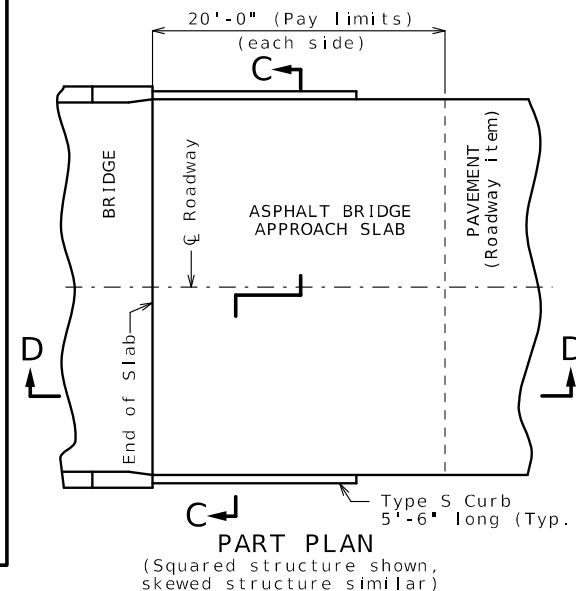
MoDOT Construction personnel will indicate the bridge approach slab used for this structure:

- ☐ Concrete Bridge Approach Slab
☐ Asphalt Bridge Approach Slab

Notes For Asphalt Slab Only:

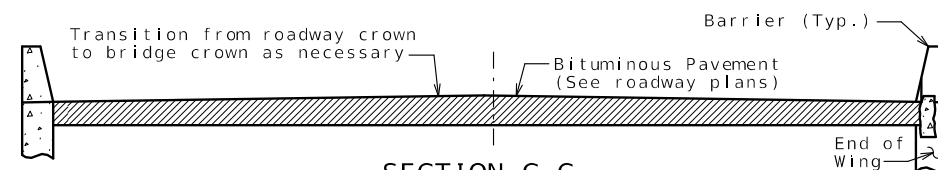
Payment for furnishing all materials, labor and excavation necessary to construct the asphalt bridge approach slab, including tack, curb, and Type 5 aggregate base within the pay limits shown, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab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

Application of tack is required between lifts per Sec 403.



PART PLAN

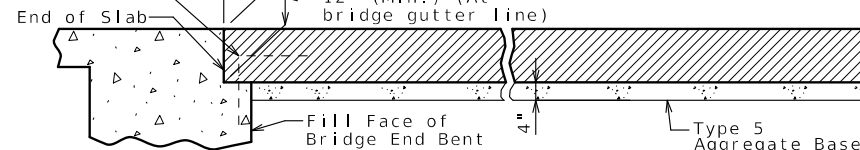
(Squared structure shown, skewed structure similar)



SECTION C-C

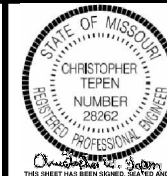
With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.

DO NOT PLACE (or order) #5 bars as shown on end bent sheets and traced here.



SECTION D-D

OPTIONAL ASPHALT SLAB (NOT ALLOWED WITH CONCRETE PAVEMENT)



07/10/2024

DATE PREPARED

7/9/2024

ROUTE STATE

B MO

DISTRICT SHEET NO.

BR 9

COUNTY

ANDREW

JOB NO.

JN0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

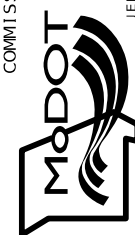
A22801

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

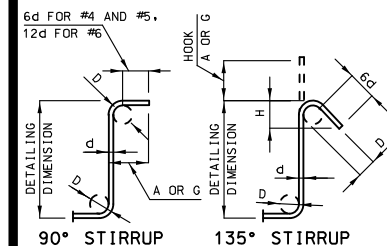


benesch

One Main Plaza, 4435 Main St., Ste 1150
Kansas City, MO 64111
913/441-1100, FAX 913/441-1468

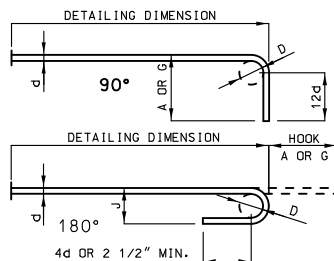
BILL OF REINFORCING STEEL

NO.	REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS																NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
										B		C		D		E		F		H		K						
										FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.			
SUPERSTRUCTURE END BENT NO. 1																												
6	6	H10	Diaphragm	E	21					0	11.50	3	4.00	3	4.00			0	10.50	0	4.75	7	8	7	4	66		
12	6	H11	Diaphragm	E	20					17	7.00										17	7	17	7	317			
1	6	H12	Slab	E	20					31	3.00										31	3	31	3	47			
4	6	H13	Slab	E	20					31	3.00										31	3	31	3	188			
32	5	H14	Approach	E	20					2	6.00										2	6	2	6	83			
33	5	U10	Slab	E	19	S				3	11.00		8.00								4	7	4	6	155			
64	5	U11	Diaphragm	E	10	S					2	7.00	0	12.50							6	3	6	0	401			
2	4	U12	Shear Block	E	21	S				3	8.00	1	3.00	1	3.00			3	4.00	0	18.50	6	2	6	0	8		
SUPERSTRUCTURE END BENT NO. 4																												
6	6	H10	Diaphragm	E	21					0	11.50	3	4.00	3	4.00			0	10.50	0	4.75	7	8	7	4	66		
12	6	H11	Diaphragm	E	20					17	7.00										17	7	17	7	317			
1	6	H12	Slab	E	20					31	3.00										31	3	31	3	47			
4	6	H13	Slab	E	20					31	3.00										31	3	31	3	188			
32	5	H14	Approach	E	20					2	6.00										2	6	2	6	83			
33	5	U10	Slab	E	19	S				3	11.00		8.00								4	7	4	6	155			
64	5	U11	Diaphragm	E	10	S					2	7.00	0	12.50							6	3	6	0	401			
2	4	U12	Shear Block	E	21	S				3	8.00	1	3.00	1	3.00			3	4.00	0	18.50	6	2	6	0	8		
SLAB																												
186	5	S1	Slab	E	20					44	5.00										44	5	44	5	8617			
88	6	S2	Slab	E	20					25	9.00										25	9	25	9	3404			
169	6	S3	Slab	E	20					28	5.00										28	5	28	5	7213			
224	5	S4	Slab	E	20					28	5.00										28	5	28	5	6639			
50	6	S5	Slab	E	20			V	2	2	0.00										2	0	2	0	1117			
		Incr.	= 12.8750"							27	9.00										27	9	27	9				
50	5	S6	Slab	E	20			V	2	2	0.00										2	0	2	0	776			
		Incr.	= 12.8750"							27	9.00										27	9	27	9				
TYPE H BARRIER																												
238	5	R1	Barrier	E	14	S				2	5.00	0	6.50	2	5.50			2	5.00	0	5.50	5	5	5	3	1303		
238	5	R2	Barrier	E	19	S				0	18.75	0	9.50								2	4	2	3	559			
238	5	R3	Barrier	E	27	S					0	9.50	0	15.25	0	3.25	0	12.00	0	3.00	3	4	3	1	765			
32	5	R4	Barrier	E	20					36	0.00										36	0	36	0	1202			
32	5	R5	Barrier	E	20					11	7.00										11	7	11	7	387			
16	5	R6	Barrier	E	20					23	7.00										23	7	23	7	394			
20	5	K1	End Post	E	27	S				0	20.75	0	9.25	0	5.25	0	15.00	0	12.00	0	5.25	0	1.00	5	2	4	10	101
28	5	K2	End Post	E	27	S				0	20.75	0	9.25	0	17.25	0	3.25	0	12.00	0	17.00	0	3.25	5	3	4	11	144
48	5	K4	End Post	E	19	S				2	5.00	0	10.00								3	3	3	2	159			
20	5	K5	End Post	E	14	S				0	8.25	0	9.50	0	19.25			0	4.25	0	18.75	3	1	3	0	63		
28	5	K6	End Post	E	21	S				2	4.75			0	10.00			2	4.25	0	6.00	3	3	3	1	90		
56	5	K7	End Post	E	20					5	6.00										5	6	5	6	321			
SLIP FORM OPTION																												
32	5	C1	Slip Form	E	20					12	0.00										12	0	12	0	401			



STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK	135° HOOK	APPROX. H
		HOOK A OR G	HOOK A OR G	
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	12"	8"	4 1/2"

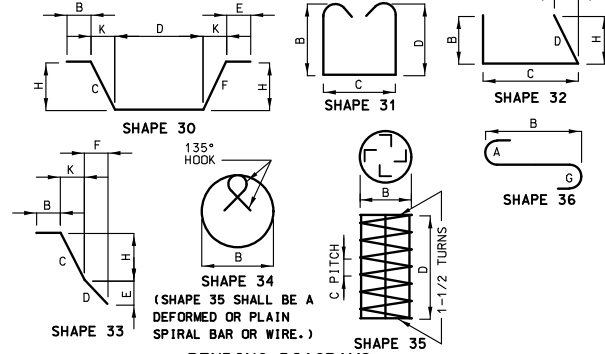
NOTE: UNLESS OTHERWISE NOTED, DIAMETER
"D" IS THE SAME FOR ALL BENDS AND HOOKS
ON A BAR.



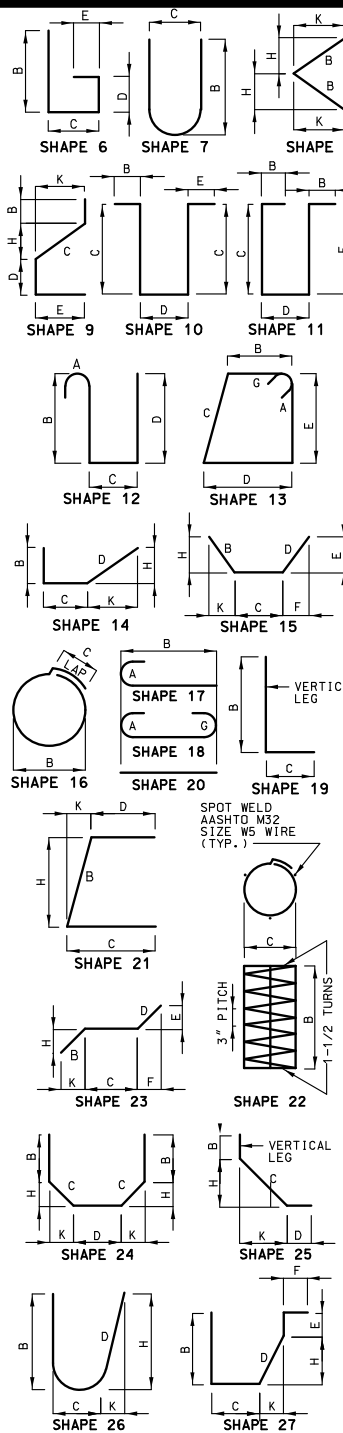
END HOOK DIMENSIONS				
BAR SIZE	D (1 IN.)	ALL GRADES		
		180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#3	2 1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	12"
#7	5 1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9 1/2"	15"	11 3/4"	19"
#10	10 3/4"	17"	13 1/4"	22"
#11	12"	19"	14 3/4"	21'-0"
#14	18 1/4"	21'-3"	21 3/4"	27'-3"

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.
HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.
E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.
NO. EA. = NUMBER OF BARS OF EACH LENGTH.
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAM AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)
ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.
PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.
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 (GRADE 60) FY = 60,000 PSI.

BILL OF REINFORCING STEEL

[illegible]

BENDING DIAGRAMS



07/10/2024	
DATE PREPARED	
7/9/2024	
ROUTE	STATE
B	MO
DISTRICT	SHEET #
BR	10
COUNTY	
ANDREW	
JOB NO.	
JNW0008	
CONTRACT ID.	
PROJECT NO.	

BRIDGE NO.	
A22801	

[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

One Main Plaza, 4435 Main St, Ste 1150
Kansas City, MO 64111
913/441-1100 FAX 913/441-1468



Detailed OCT 2023
Checked MAR 2024

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

Sheet No. 10 of 10

Y:\Kansas\130900S\130991.00_NW_Bundle_NW0008\Eng_Docs\Bridge\A2280\B_A22801_010_JNW0008_BOR.dgn (Default)

10:31 7/9/20

58 PM 7/3/2024

LOCHNER JOB: 21679 MoDOT NW District 11 Bridges PLOTTED BY: JCASEY PLOT CONFIGURATION: MoDOT PDF Sheet.plt.ctb

General Notes:

Stay-In-Place Forms:

Corrugated steel forms, supports, closure elements and accessories shall be in accordance with grade requirement and coating designation G165 of ASTM A653. Complete shop drawings of the permanent steel deck forms shall be required in accordance with Sec 1080.

Corrugations of stay-in-place forms shall be filled with an expanded polystyrene material. The polystyrene material shall be placed in the forms with an adhesive in accordance with the manufacturer's recommendations.

Form sheets shall not rest directly on the top of beam flanges. Sheets shall be securely fastened to form supports with a minimum bearing length of one inch on each end. Form supports shall be placed in direct contact with the flange. Welding on or drilling holes in the beam flanges will not be permitted. All steel fabrication and construction shall be in accordance with Sec 1080 and 712. Certified field welders will not be required for welding of the form supports.

The design of stay-in-place corrugated steel forms is per manufacturer which shall be in accordance with Sec 703 for false work and forms. Maximum actual weight of corrugated steel forms allowed shall be 4 psf assumed for beam loading.

The contractor shall provide a method of preventing the direct contact of the stay-in-place forms and connection components with uncoated weathering steel members that is approved by the engineer.

Pouring and Finishing Slab:

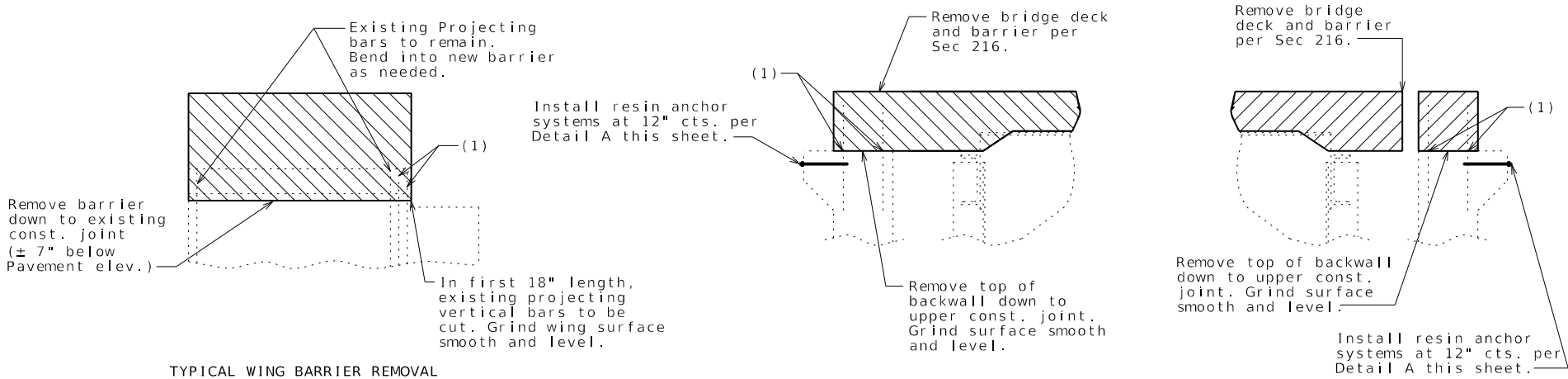
The contractor shall provide bracing necessary for lateral and torsional stability of the beams during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not weld on or drill holes in the beams. The cost for furnishing, installing, and removing bracing will be considered completely covered by the contract unit price for Slab on Steel.

Slab shall be poured upgrade from end to end at a minimum rate of 25 cubic yards per hour.

Alternate pour sequences may be submitted to the engineer for approval. Keyed construction joints shall be provided between pours.

Haunching:

(2) Slab is to be considered a uniform thickness as shown on the plans. Haunching will vary. See front sheet for slab thickness. Adjust haunch over beams to match existing grade. Adjust for concrete dead load deflection per detail this sheet.



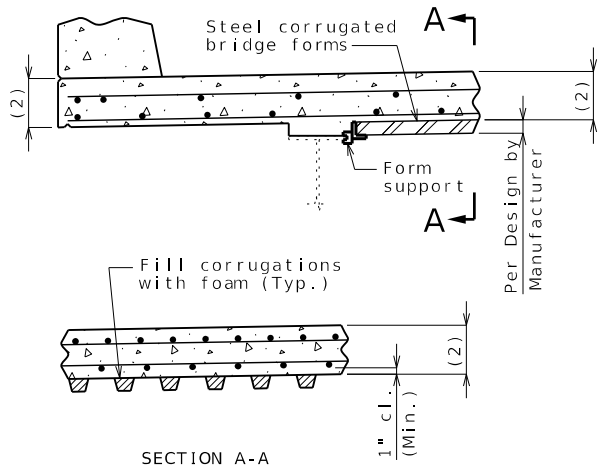
DETAILS OF CONCRETE REMOVAL

Prior to deck removal, profile grade along bridge shall be recorded at tenth points of each span.

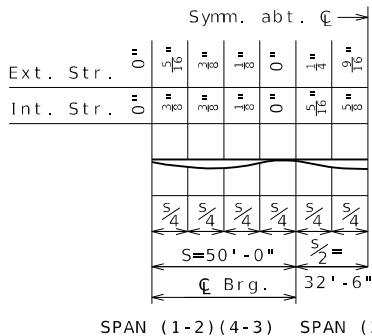
The cost of concrete removal as shown will be considered completely covered by the contract unit price for Removal of Existing Bridge Deck.

(1) Vertical reinforcement to be cut off one inch below concrete removal surface and the resulting holes shall be filled with a qualified special mortar.

A smooth, level surface shall be provided at top of backwall removal lines.



OPTIONAL STAY-IN-PLACE FORM DETAILS



CONCRETE DEAD LOAD DEFLECTION

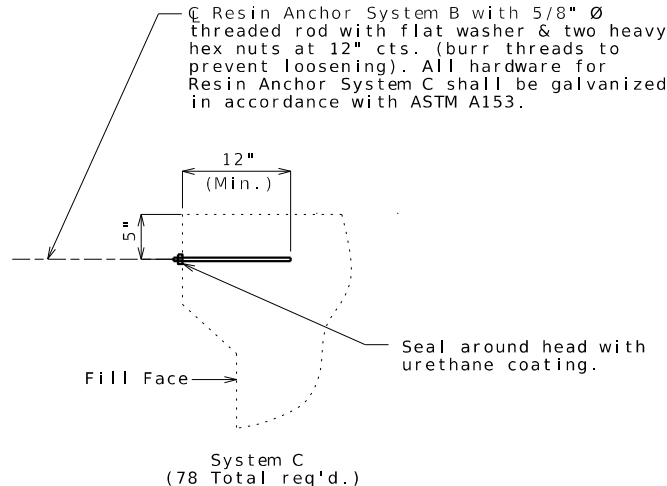
Includes dead load of concrete slab and barrier

Resin Anchor Systems:

The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039.

Cost of furnishing and installing the resin anchor systems, complete in place, will be considered completely covered by the contract unit price for Slab on Steel.

The minimum embedment depth in concrete with $f'c = 4,000$ psi for the resin anchor systems shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5 inches, unless noted otherwise.



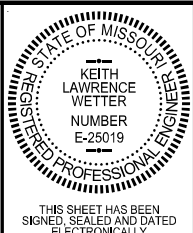
DETAIL A

DESIGNED BY: K LW JAN 2024
DETAILED BY: J TC JAN 2024
CHECKED BY: N SC FEB 2024

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

Sheet No. 2 of 11

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THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED

7/3/2024

ROUTE DD STATE MO

DISTRICT BR SHEET NO. 2

COUNTY BUCHANAN

JOB NO. JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A25821

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102

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

MoDOT

Lochner

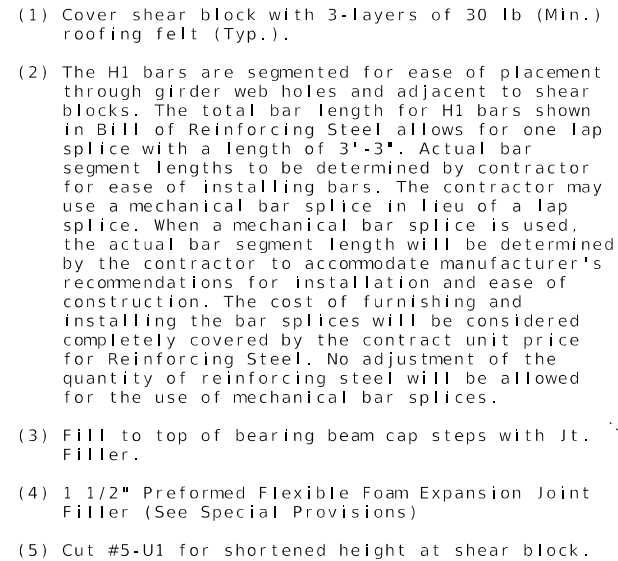
15717 College Boulevard | Lenexa, Kansas 66219

Certificate of Authority #FO0727076

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LOCHNER JOB: 21679 MoDOT NW District 11 Bridges



(Looking Back Station at C Bearing)

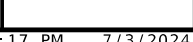


PART SECTION B-B

END BENT NO. 1



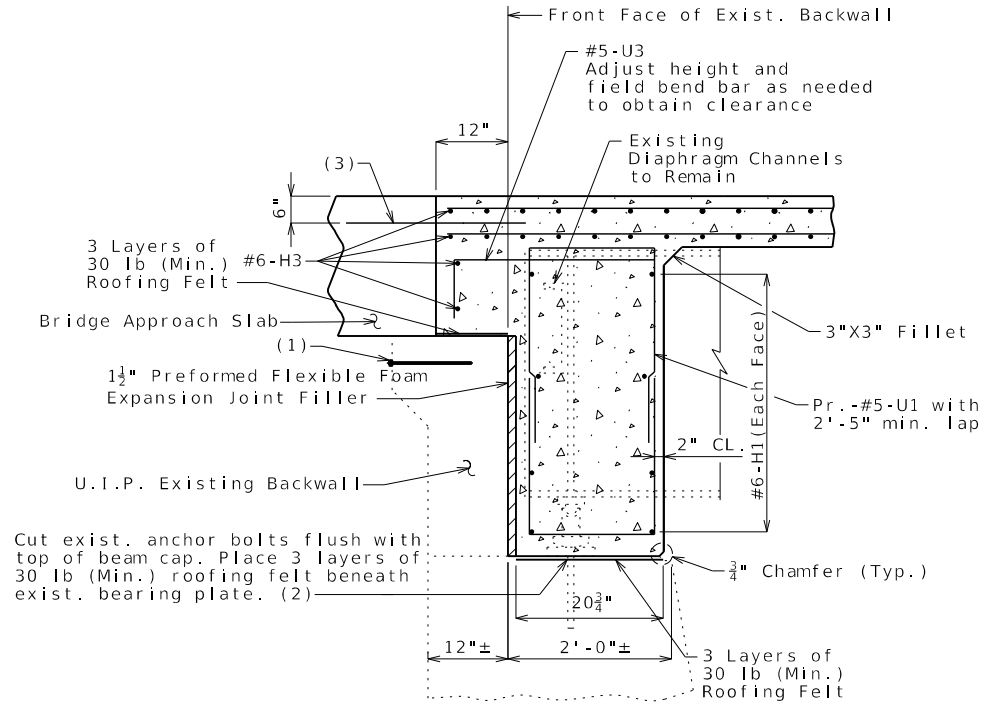
Notes:
For Section A-A, See Sheet No. 4.



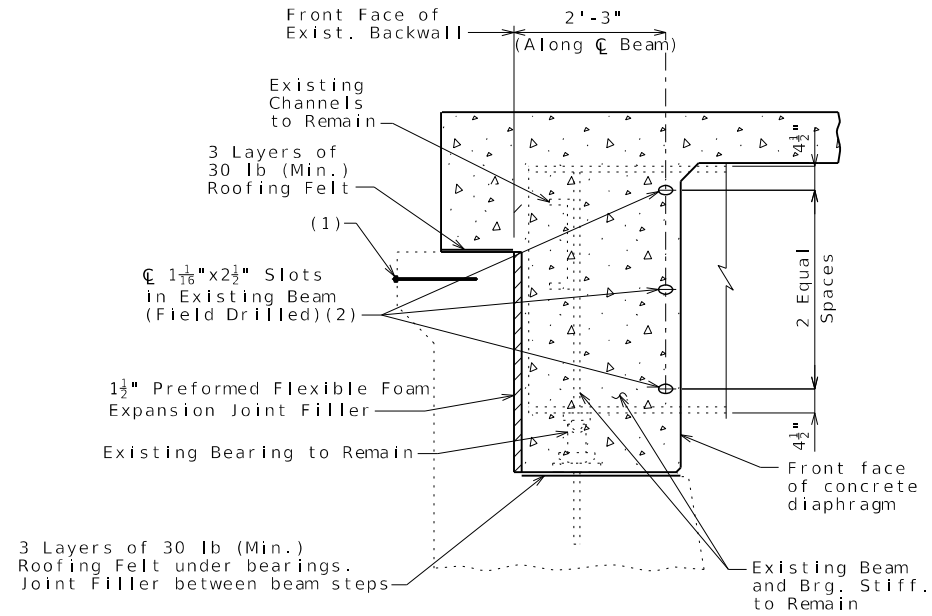
REV.

LOCHNER JOB: 21679 MoDOT NW District 11 Bridges PLOTTED BY: JCASEY PLOT CONFIGURATION: MoDOT PDF Sheet.pltcfq

DESIGNED BY: DMA FEB 2024
DETAILED BY: RCL FEB 2024
CHECKED BY: NSC MAR 2024



SECTION A-A



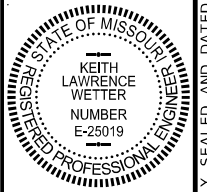
DETAIL OF WEB HOLES
(Reinforcing steel not shown for clarity)

- Notes:
- (1) For pavement seat reinforcement, see Sheet No. 2.
 - (2) These tasks will be considered completely covered by the contract unit price for Slab on Steel.
 - (3) 38-#5-H2 at 12" cts., placed parallel to $\text{\textcircled{C}}$ Roadway with 15" embedment.

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

Sheet No. 4 of 11

END BENT DETAILS



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7/3/2024

ROUTE DD STATE MO
DISTRICT BR SHEET NO. 4

COUNTY
BUCHANAN

JOB NO.
JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A25821

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-273-6636)

Lochner

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PLOT CONFIGURATION: MoDOT PDF Sheet.pltcfq

PLOTTED BY: JCASEY

LOCHNER JOB: 21679 MoDOT NW District 11 Bridges

- (1) Cover shear block with 3-layers of 30 lb (Min.) roofing felt (Typ.).
- (2) The H1 bars are segmented for ease of placement through girder web holes and adjacent to shear blocks. The total bar length for H1 bars shown in Bill of Reinforcing Steel allows for one lap splice with a length of 3'-3". Actual bar segment lengths to be determined by contractor for ease of installing bars. The contractor may use a mechanical bar splice in lieu of a lap splice. When a mechanical bar splice is used, the actual bar segment length will be determined by the contractor to accommodate manufacturer's recommendations for installation and ease of construction. The cost of furnishing and installing the bar splices will be considered completely covered by the contract unit price for Reinforcing Steel. No adjustment of the quantity of reinforcing steel will be allowed for the use of mechanical bar splices.
- (3) Fill to top of bearing beam cap steps with Jt. Filler.
- (4) 1 1/2" Preformed Flexible Foam Expansion Joint Filler (See Special Provisions)
- (5) Cut #5-U1 for shortened height at shear block.

Notes:
The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039.

Cost of furnishing and installing the preformed flexible foam expansion joint filler, complete in place, will be considered completely covered by the contract unit price for Slab on Steel.

Cost of furnishing and installing the resin anchor systems, complete in place, will be considered completely covered by the contract unit price for Slab on Steel.

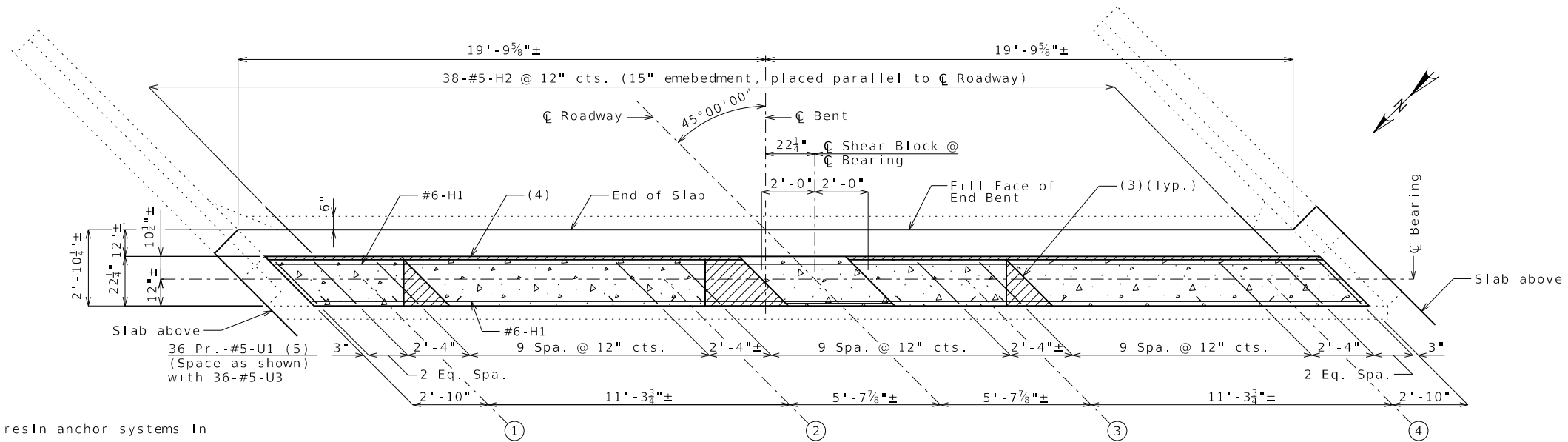
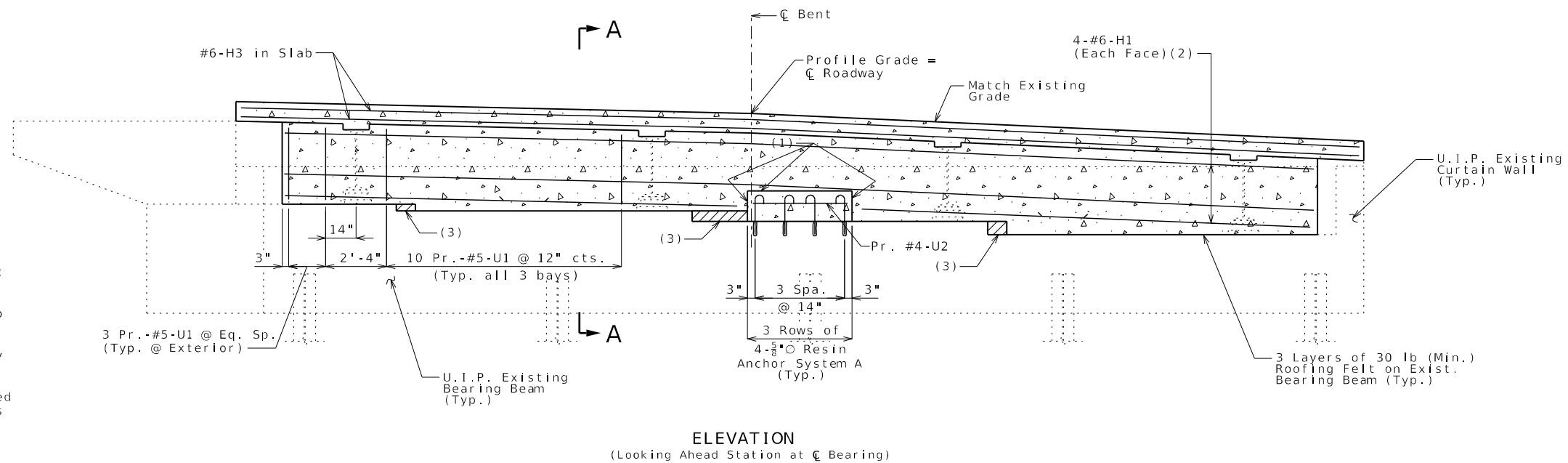
The minimum embedment depth in concrete with $f'_c = 4,000$ psi for the resin anchor systems shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5".

An epoxy coated #5 Grade 60 reinforcing bar shall be substituted for the 5/8"Ø threaded rod.

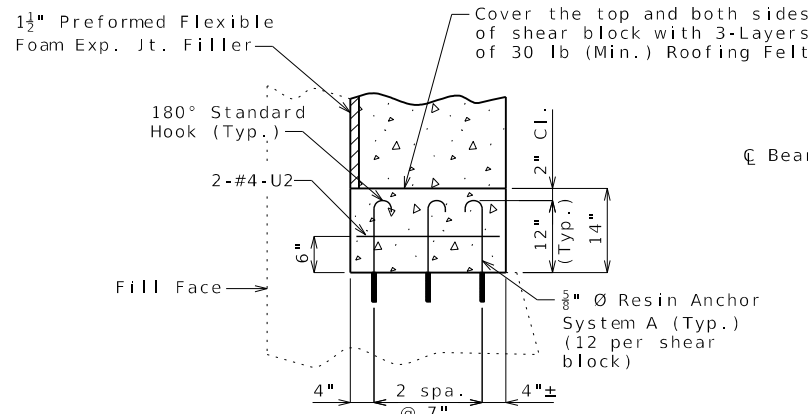
The exposed and accessible surfaces of the existing structural steel and bearings that will be encased in concrete shall be cleaned with a minimum of SSPC-SP-3 surface preparation and coated with a minimum of one coat of gray epoxy-mastic primer (non-aluminum) in accordance with Sec 1081 to produce a dry film thickness of not less than 3 mils before concrete is poured. The surface preparation and coating for beams and girders shall extend a minimum of one foot outside the face of the beam and girder encasement. Payment for cleaning and coating steel to be encased in concrete will be considered completely covered by the contract unit price for Slab on Steel.

The cost of field drilling holes in existing wide flange beam webs will be considered completely covered by the contract unit price for Slab on Steel.

Payment for shear blocks and all resin anchor systems, complete in place, will be considered completely covered by the contract unit price for Slab on Steel.

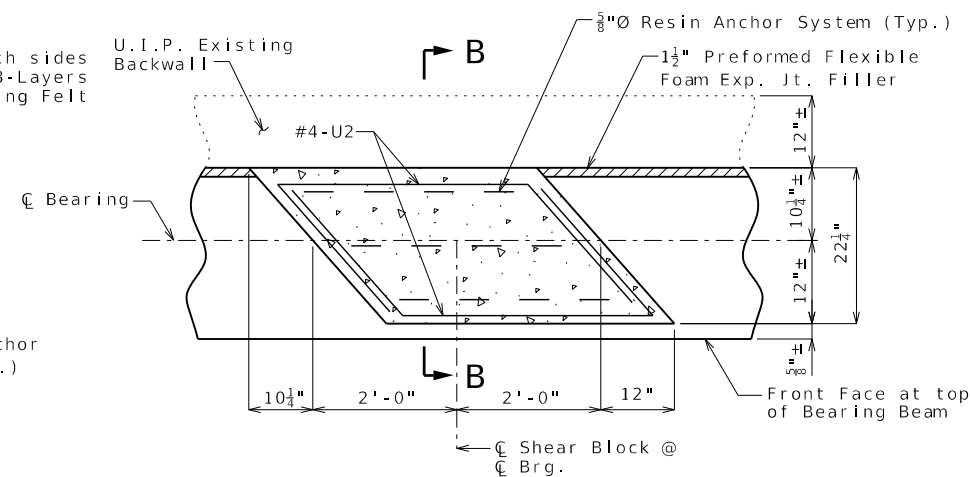


PLAN THRU DIAPHRAGM



PART SECTION B-B

END BENT NO. 4



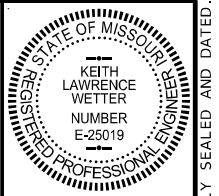
SHEAR BLOCK PLAN

Notes:
For Section A-A, See Sheet No. 4.

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

Sheet No. 5 of 11

B_A25821_005_JNW0008_END BENT NO 4.dgn 1:47:36 PM 7/3/2024



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ROUTE DD STATE MO

DISTRICT BR SHEET NO. 5

COUNTY BUCHANAN

JOB NO. JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A25821

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

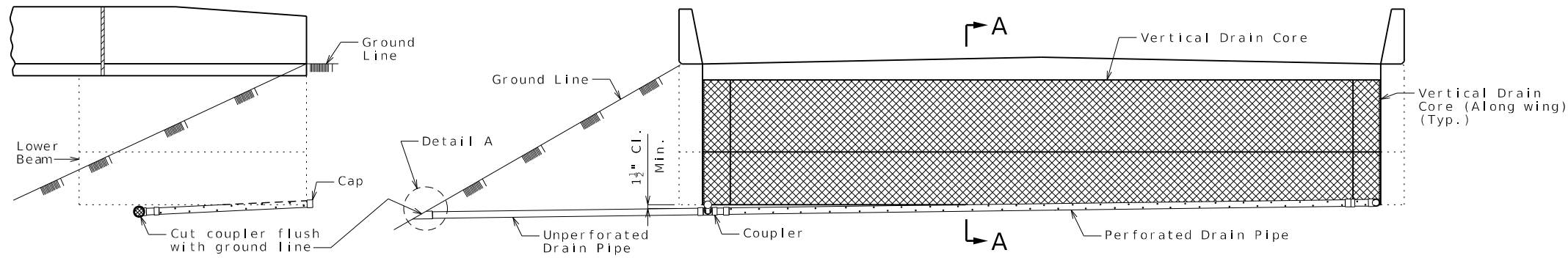
MoDOT

Lochner

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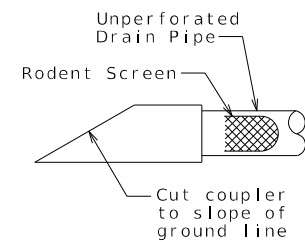
REV.

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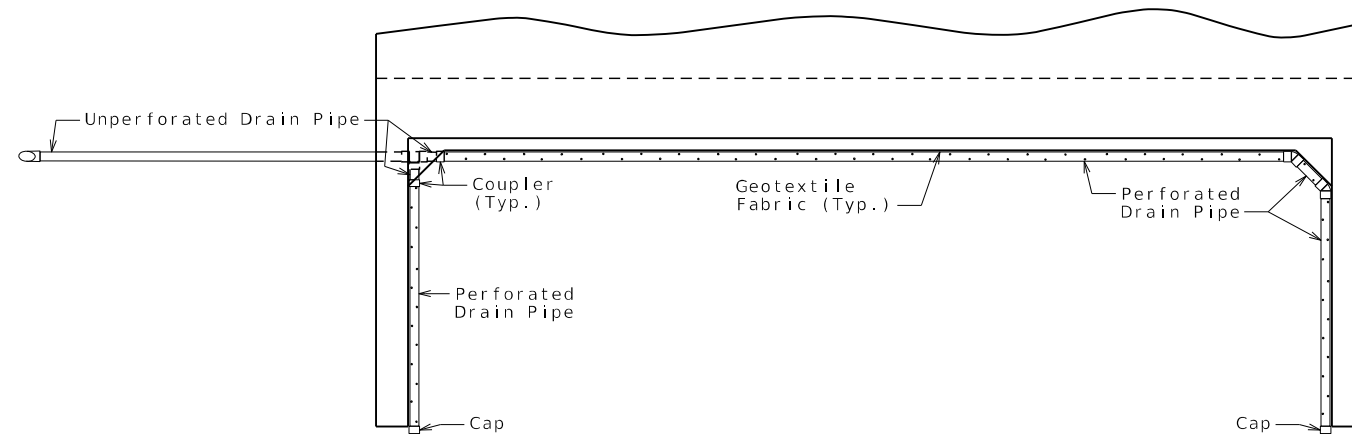


ELEVATION OF WING

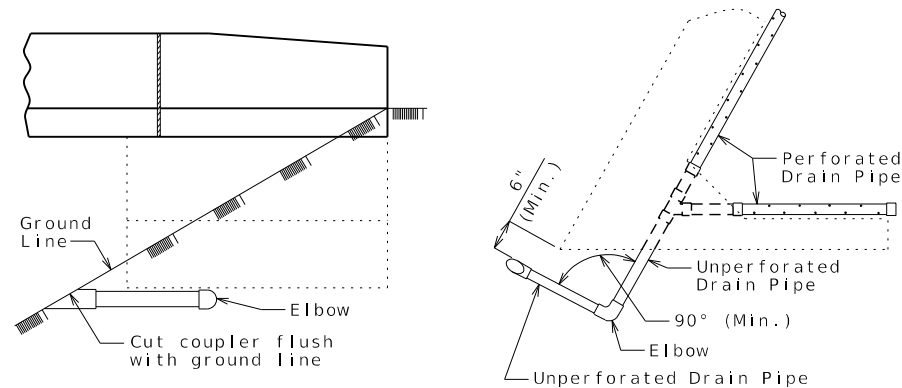
ELEVATION OF END BENT



DETAIL A



PLAN OF END BENT

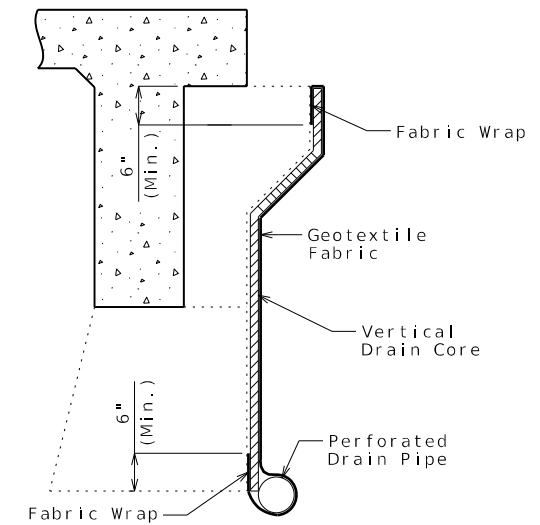


ELEVATION OF WING

PART PLAN

OPTIONAL TURNED DRAIN

(Use only when straight drain is not practical.)



PART SECTION A-A
(Section thru wing similar)

General Notes:

All drain pipe shall be sloped 1 to 2 percent.

Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.

Drain pipe shall be placed at fill face of end bent and inside face of wings. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.

Perforated pipe shall be placed at fill face side and inside face of wings at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.



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ROUTE	STATE
DD	MO

DISTRICT BR	SHEET NO 6
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COUNTY
BUCHANAN

JOB NO.
JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A25821

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COMMISSION

**105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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VERTICAL DRAIN AT END BENTS

(Squared end bent shown, skewed end bent similar)

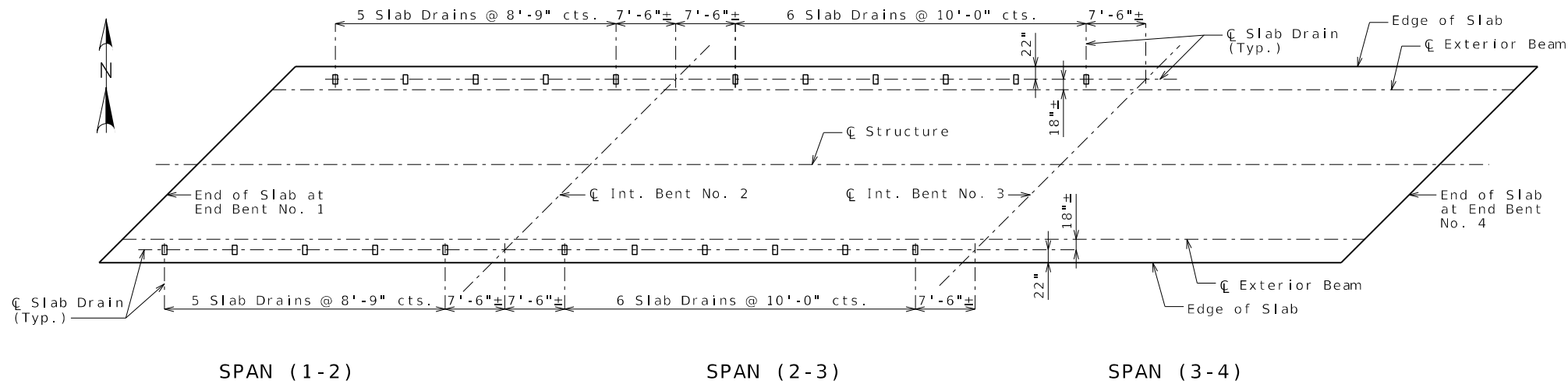
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6 of 11

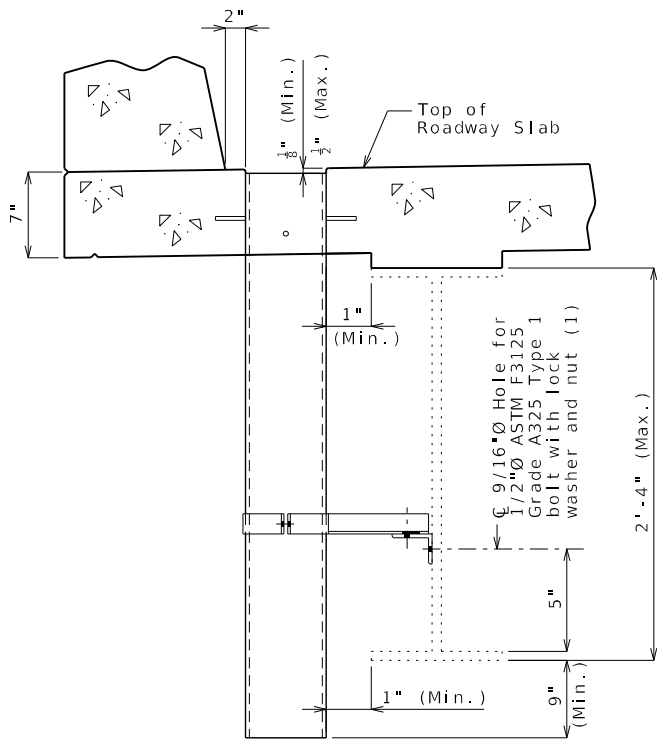
PLOT CONFIGURATION:MoDOT PDF Sheet.pltcfq

PLOTTED BY: JCASEY

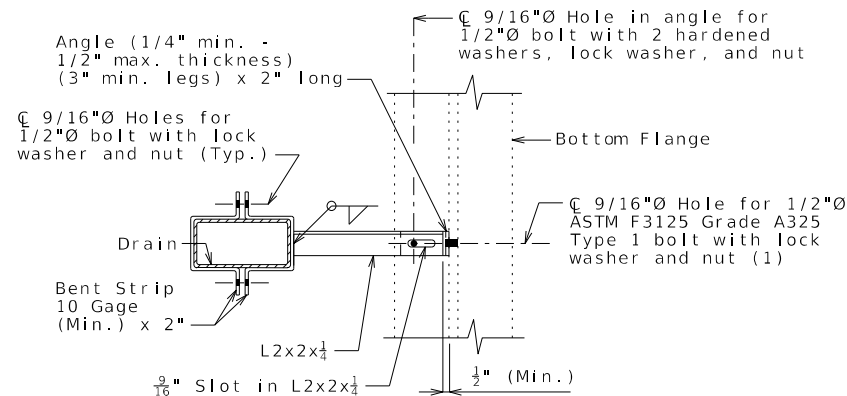
LOCHNER JOB: 21679 MoDOT NW District 11 Bridges



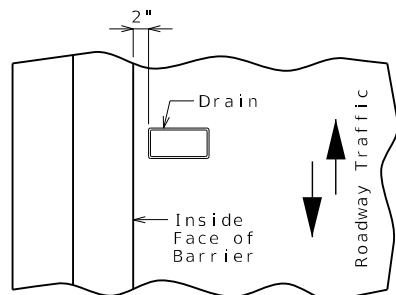
PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS



PART SECTION NEAR DRAIN

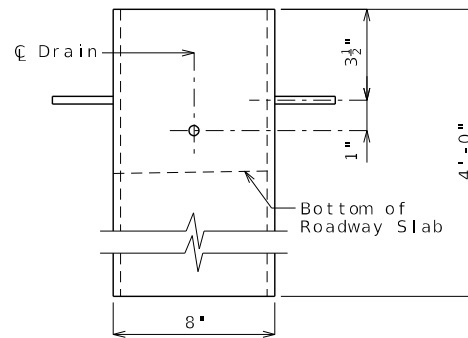


PART SECTION SHOWING BRACKET ASSEMBLY
(1) Field drill in existing web.

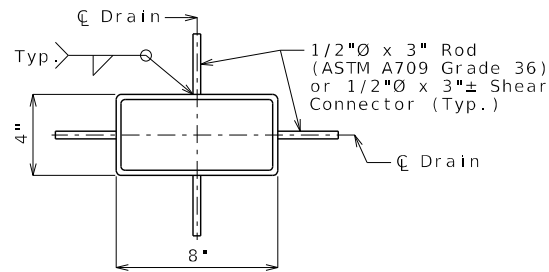


PART PLAN OF SLAB AT DRAIN

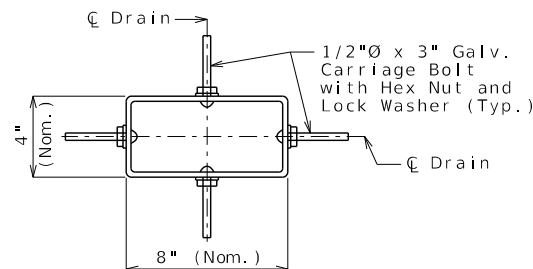
SLAB DRAINS



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 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, except as shown.

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

The bolt hole for the bracket assembly attachment shall be shifted to the minimum extent necessary to field drill in the existing web.

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 filament-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 recommended by the manufacturer to ensure a smooth, chip free cut.



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DATE PREPARED 7/3/2024

ROUTE DD STATE MO

DISTRICT BR SHEET NO. 7

COUNTY BUCHANAN

JOB NO. JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A25821

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

MoDOT

Lochner

15717 College Boulevard | Lenexa, Kansas 66219 Certificate of Authority #F00727076

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DESIGNED BY: KIW FEB 2024
DETAILED BY: JTC FEB 2024
CHECKED BY: BPW MAR 2024

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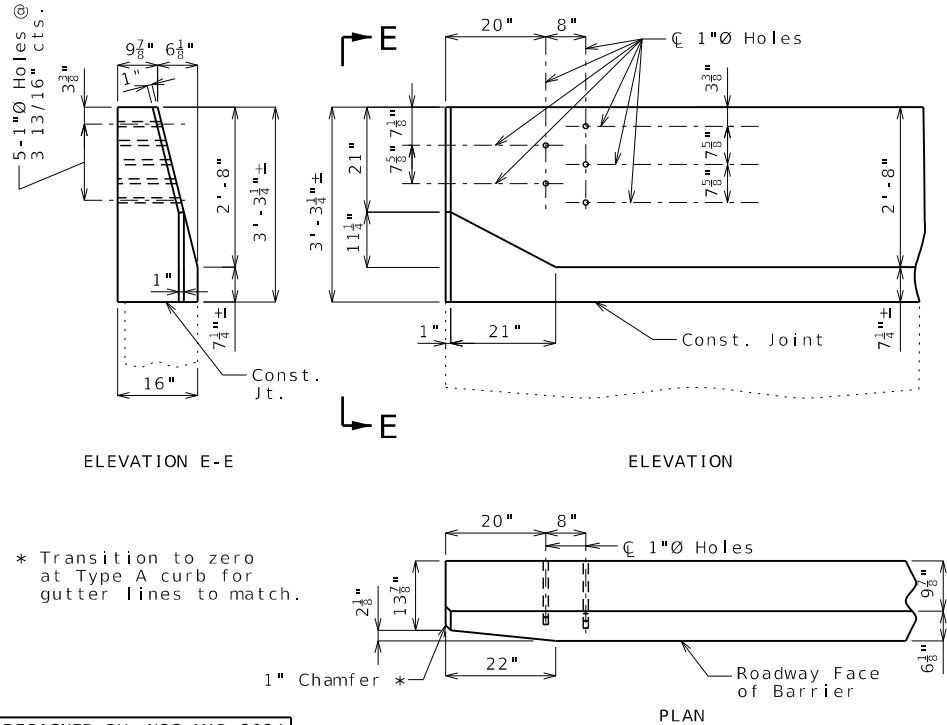
Sheet No. 7 of 11

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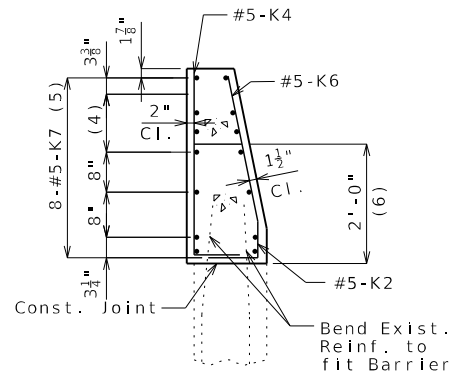
LOCHNER JOB: 21679 MoDOT NW District 11 Bridges PLOTTED BY: JCASEY PLOT CONFIGURATION: MoDOT PDF Sheet.pltcfq

* Transition to zero at Type A curb for gutter lines to match.

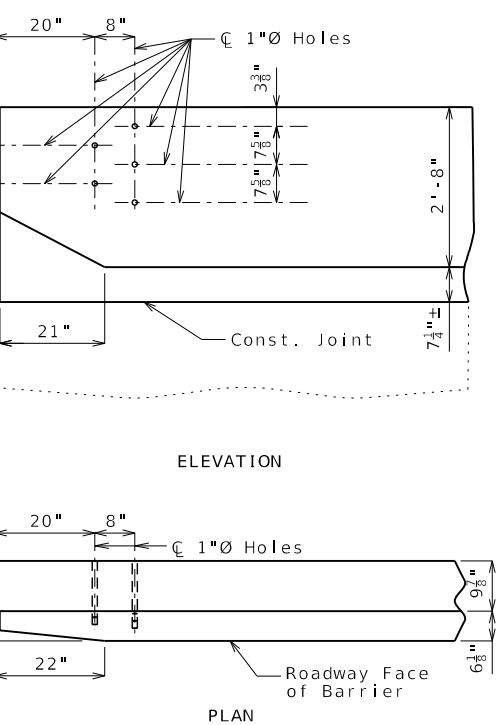
DESIGNED BY: NSC MAR 2024
DETAILED BY: JTC MAR 2024
CHECKED BY: DMA MAR 2024



SECTION A-A

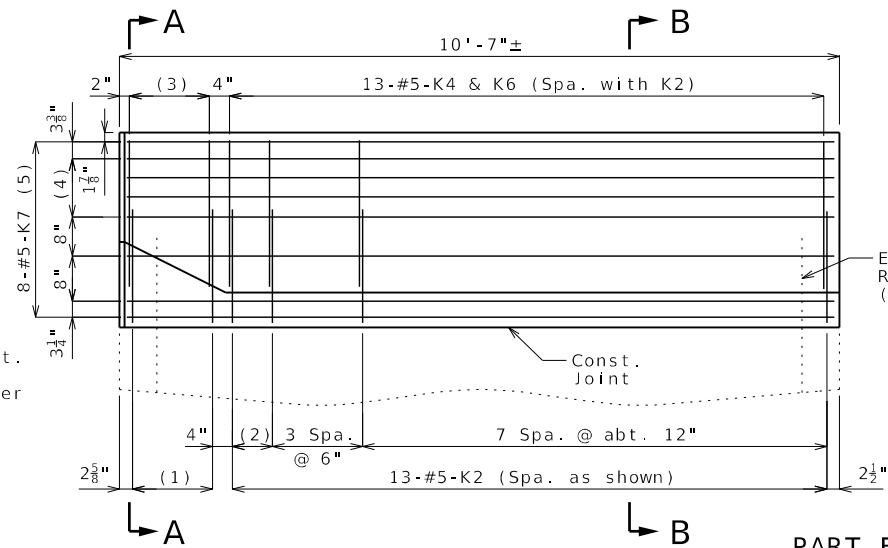


SECTION B-B



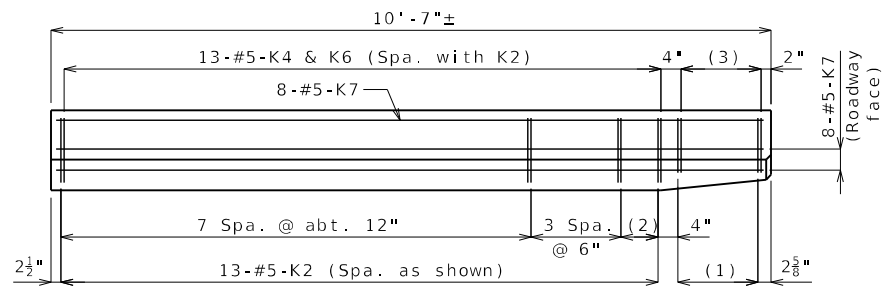
DETAILS OF GUARD RAIL ATTACHMENT

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

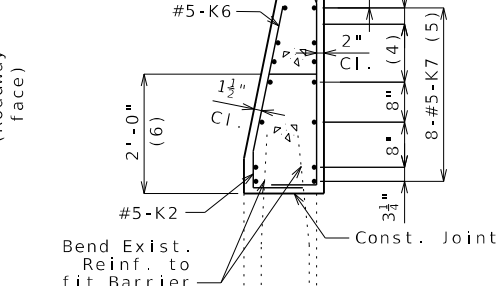
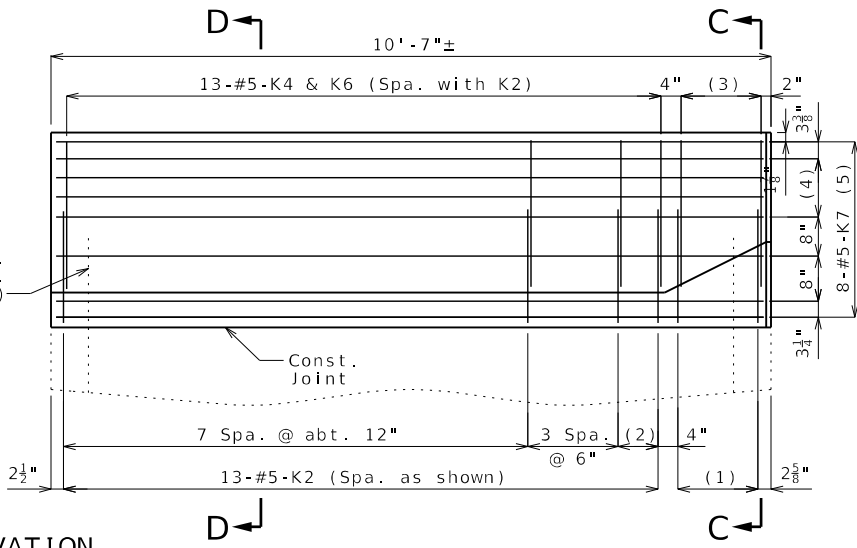


PART ELEVATION

- (1) 5-#5-K1 @ 4" cts.
(2) 2 Spaces @ 4"
(3) 5-#5-K4 and 5-#5-K5, spaced with K1
(4) 3 Spaces @ 3 1/8"
(5) Spaced as shown, each face
(6) To top of bar

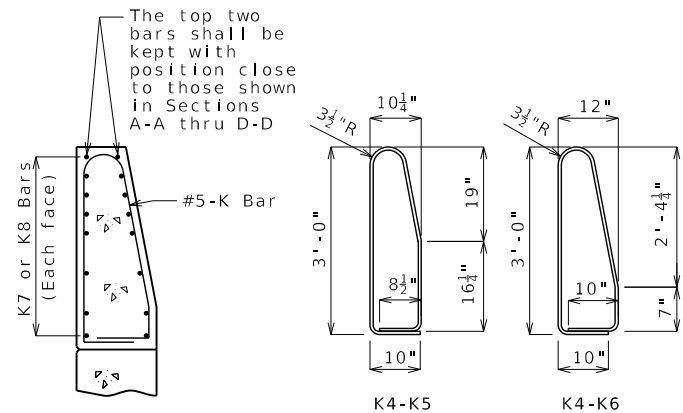
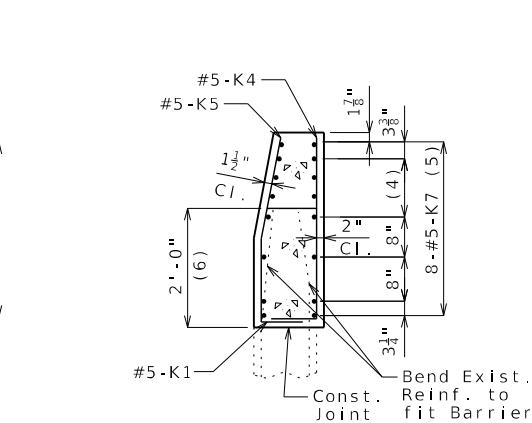


PART PLAN



SECTION D-D

SECTION C-C



PERMISSIBLE ALTERNATE SHAPES

(Other K bars not shown for clarity)

The K4-K5 and K4-K6 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

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 H Barrier.

Reinforcing Steel:

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

TYPE H BARRIER AT END BENTS

(Left barrier shown, right barrier similar)

Sheet No. 9 of 11

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



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DATE PREPARED 7/3/2024

ROUTE DD STATE MO

DISTRICT BR SHEET NO. 9

COUNTY BUCHANAN

JOB NO. JNW0008

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A25821

DESCRIPTION

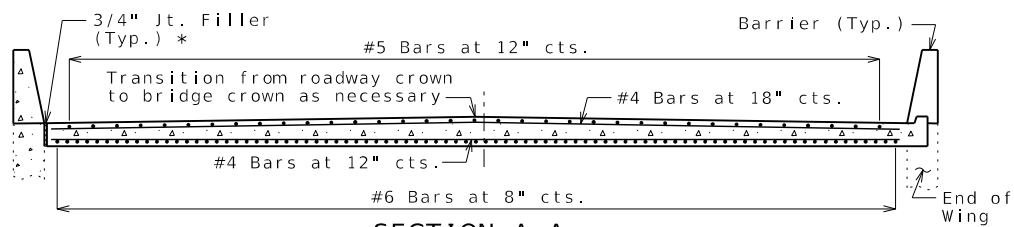
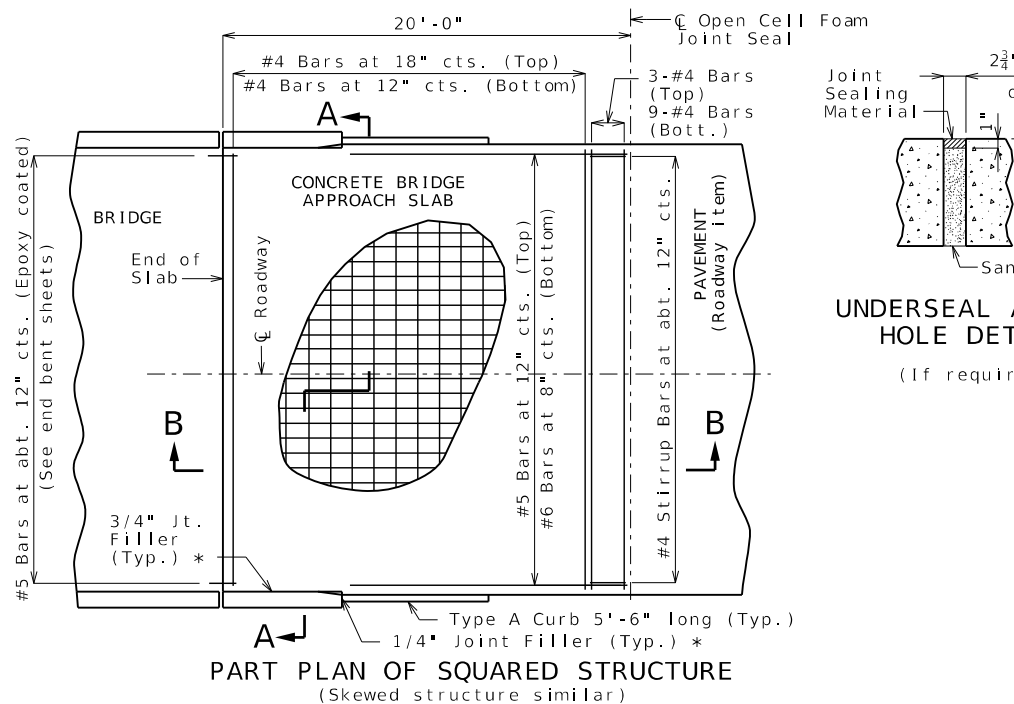
DATE

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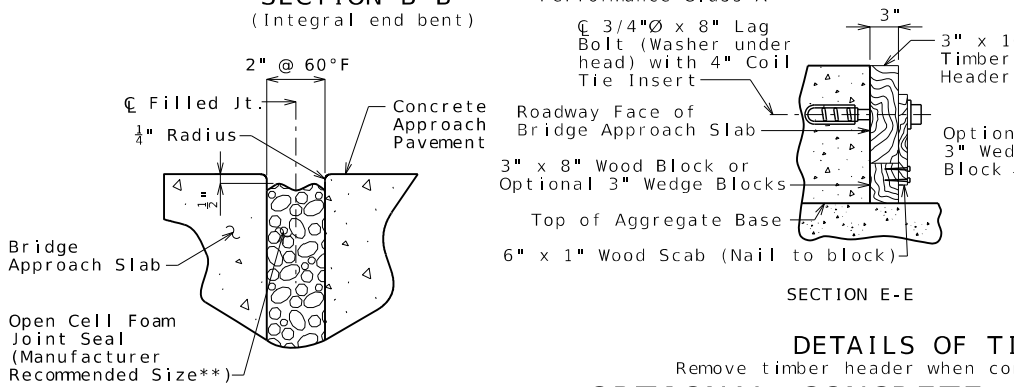
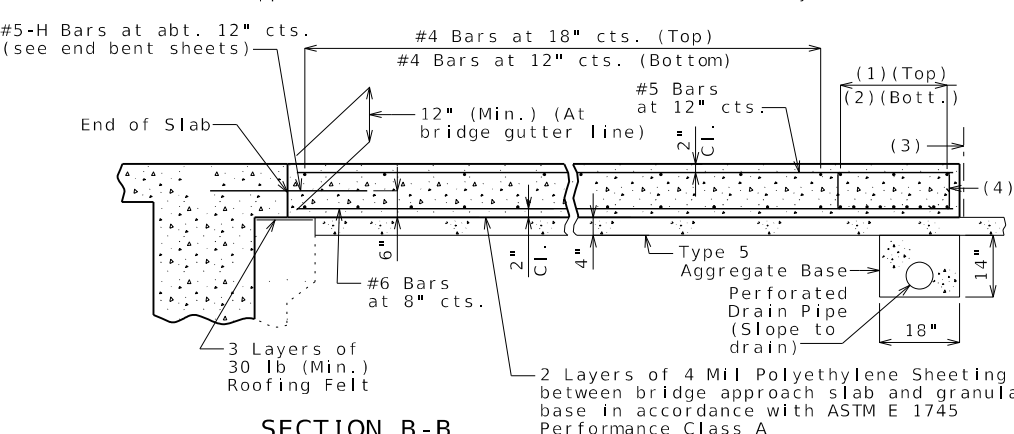
PLOT CONFIGURATION: MoDOT PDF Sheet.pltcfq

PLOTTED BY: JCASEY

LOCHNER JOB: 21679 MoDOT NW District 11 Bridges



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



Open Cell Foam Joint Seal (Manufacturer Recommended Size)**

Concrete Approach Pavement

Bridge Approach Slab

Remove timber header when concrete pavement is placed.

OPTIONAL CONCRETE SLAB

DETAILS OF TIMBER HEADER

OPTIONAL ASPHALT SLAB (NOT ALLOWED WITH CONCRETE PAVEMENT)

SECTION E-E

SECTION C-C

SECTION D-D

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

SECTION F-F

SECTION G-G

SECTION H-H

SECTION I-I

SECTION J-J

SECTION K-K

SECTION L-L

SECTION M-M

SECTION N-N

SECTION O-O

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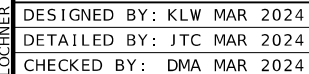
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SECTION FF-FF

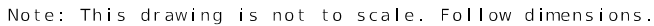
SECTION GG-GG

Plot Configuration: Model PDF Sheet. plotq

PREPARED BY: JCASEY



NOTE: UNLESS OTHERWISE NOTED, DIAMETER
"D" IS THE SAME FOR ALL BENDS AND HOOKS
ON A BAR.



NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.
HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.
E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.
NO. EA. = NUMBER OF BARS OF EACH LENGTH.
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)
ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.
PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.
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 (GRADE 60) FY = 60,000 PSI.



THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY

DATE PREPARED

7 / 3 / 2024

ROUTE	STATE
DD	MO

DISTRICT	SHEET NO
BR	11

COUNTY
BUCHANAN

JOB NO.
INW0008

CONTRACT ID.

PROJECT NO. _____

BRIDGE NO.
A25821

A25021			

[illegible]

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

Lochner
15717 College Boulevard | Lenexa, Kansas 66219
Certificate of Authority #F00727076

15717 College Boulevard | Lenexa, Kansas 66219
Certificate of Authority #F00727076

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

REV.