DESIGN DESIGNATION

8TH STREET
A.A.D.T. - 2018 = 3300
A.A.D.T. - 2038 = 4600
T = 4%
V = 30 M.P.H.
FUNCTIONAL CLASSIFICATION- MAJOR COLLECTOR

9TH STREET
A.A.D.T. - 2018 = 3900
A.A.D.T. - 2038 = 5200
T = 3.9%
V = 30 M.P.H.
FUNCTIONAL CLASSIFICATION- MINOR ARTERIAL

10TH STREET
A.A.D.T. - 2018 = 10100
A.A.D.T. - 2038 = 13600
T = 3.9%
V = 30 M.P.H.
FUNCTIONAL CLASSIFICATION- MINOR ARTERIAL

RAMP TENTH TO I370E
A.A.D.T. - 2018 = 3600
A.A.D.T. - 2038 = 4900
T = 22%
V = 40 M.P.H.
FUNCTIONAL CLASSIFICATION- INTERSTATE

CHESTNUT AVENUE
A.A.D.T. - 2018 = 10600
A.A.D.T. - 2038 = 14900
T = 5%
V = 30 M.P.H.
FUNCTIONAL CLASSIFICATION- MINOR COLLECTOR

NO RIGHT-OF-WAY IS ACQUIRED

CONVENTIONAL SYMBOLS
(USED IN PLANS)

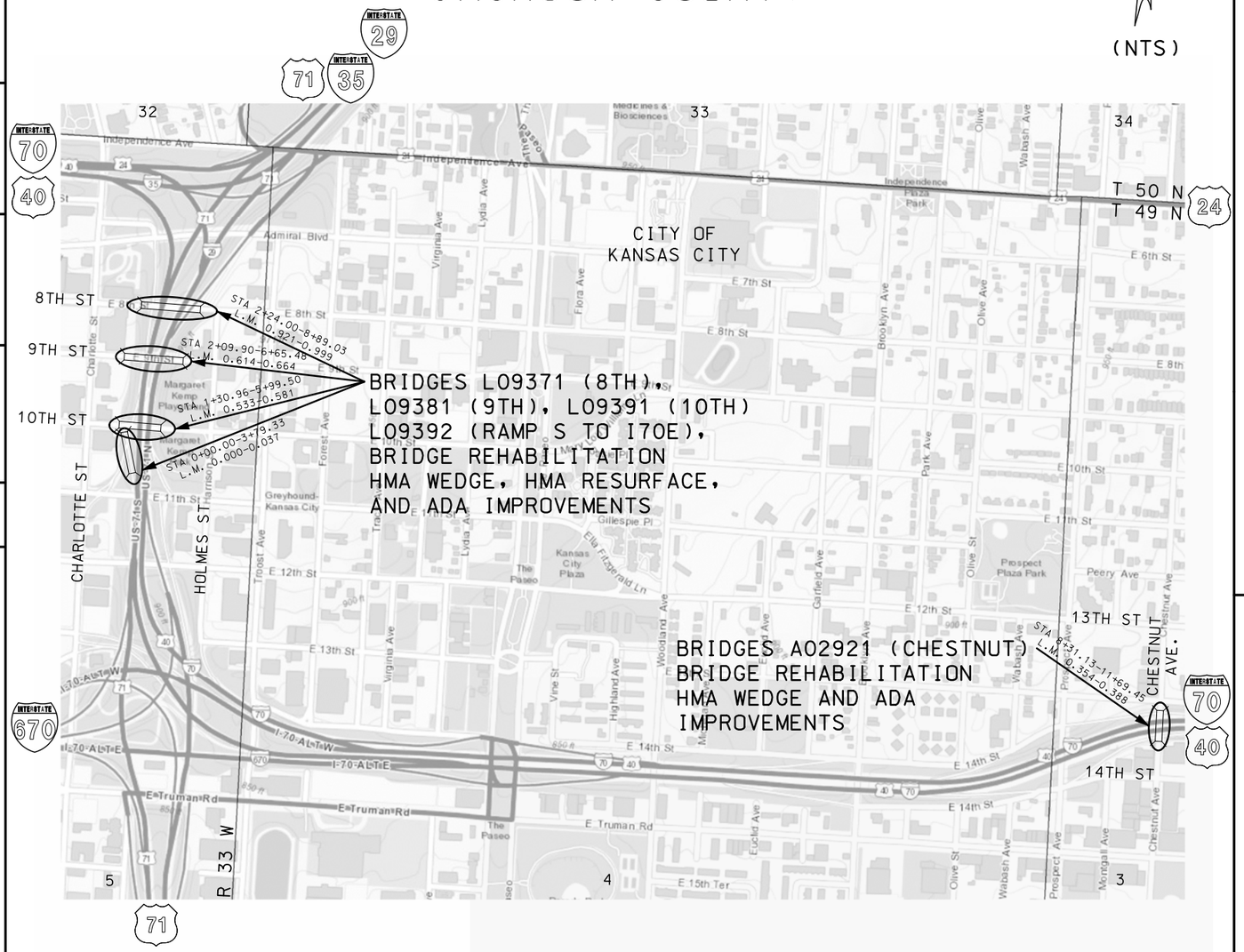
	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS	-FO-	-FO-
OVERHEAD TELEPHONE		
UNDERGROUND TELEPHONE	-T-	-T-
OVERHEAD POWER		
UNDERGROUND POWER	-P-	-P-
GAS	-G-	-G-
WATER	-W-	-W-
MANHOLE	SAN	
FIRE HYDRANT	HYD	
WATER VALVE	WV	
WATER METER	WM	
DROP INLET	D	
DITCH BLOCK		
GROUND MOUNTED SIGN	SIGN	
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL	PED	
FENCE		
CHAIN LINK	-V-	
WOVEN WIRE	-X-	
GATE POST		
BENCHMARK	BM	

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY

JACKSON COUNTY

(NTS)



INDEX OF SHEETS

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REFERENCE POINTS (RP)	15
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L09371	1-23
L09381	1-24
L09391	1-28
L09392	1-15
CROSS SECTIONS (XS)	1-52

LENGTH OF PROJECT

8TH STREET		
BEGINNING OF PROJECT	STA. 2+24.00	
END OF PROJECT	STA. 8+89.03	
APPARENT LENGTH	665.03	FEET
9TH STREET		
BEGINNING OF PROJECT	STA. 2+09.90	
END OF PROJECT	STA. 6+65.48	
APPARENT LENGTH	455.58	FEET
10TH STREET		
BEGINNING OF PROJECT	STA. 1+30.96	
END OF PROJECT	STA. 5+99.50	
APPARENT LENGTH	468.54	FEET
RAMP S		
BEGINNING OF PROJECT	STA. 0+00.00	
END OF PROJECT	STA. 3+79.33	
APPARENT LENGTH	379.33	FEET
CHESTNUT AVENUE		
BEGINNING OF PROJECT	STA. 8+31.13	
END OF PROJECT	STA. 11+69.58	
APPARENT LENGTH	338.45	FEET
EQUATIONS AND EXCEPTIONS:		
TOTAL CORRECTIONS	0.00	FEET
NET LENGTH OF PROJECT	2306.93	FEET
STATE LENGTH	0.437	MILES

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 1/10/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	1

COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

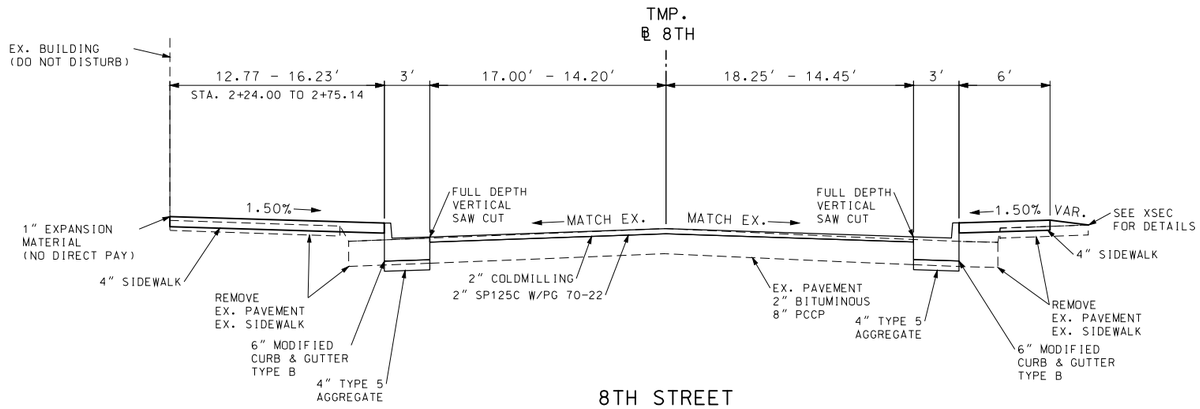
DESCRIPTION	DATE

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

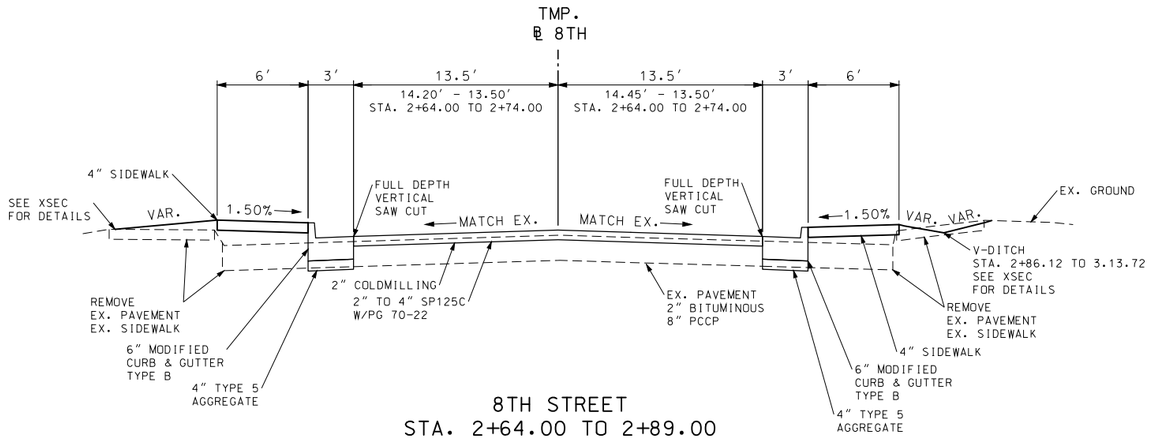
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
MoDOT

ASPHALT ESTIMATE FACTORS

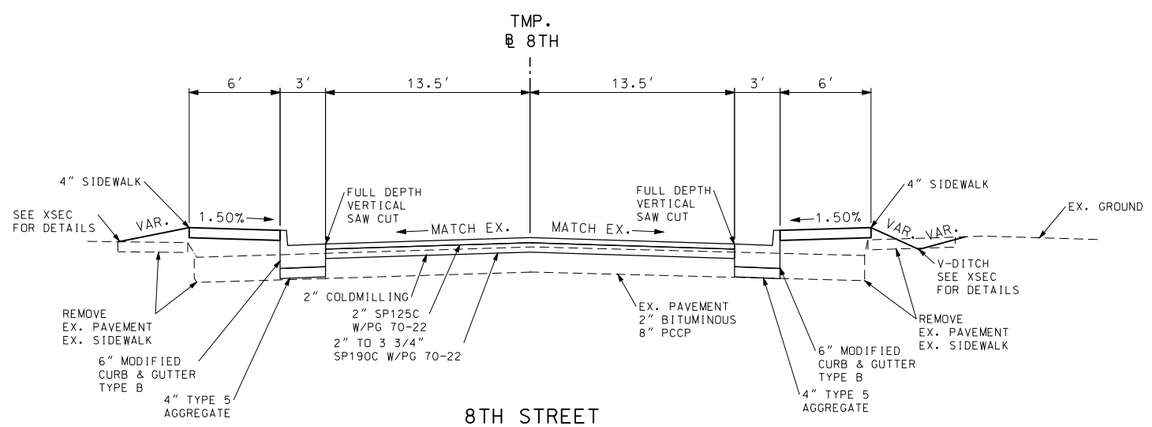
SP125C = 1.97 TONS/CY
SP190C = 1.98 TONS/CY
TACK COAT = 0.1 GALS/SY
(COLDMILLING)
TACK COAT = 0.8 GALS/SY
(BETWEEN LAYERS)



8TH STREET
STA. 2+24.00 TO 2+64.00



8TH STREET
STA. 2+64.00 TO 2+89.00



8TH STREET
STA. 2+89.00 TO 3+09.00

8TH STREET
TYPICAL SECTIONS
SHEET 1 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
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DATE PREPARED
1/8/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	2

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

ASPHALT ESTIMATE FACTORS

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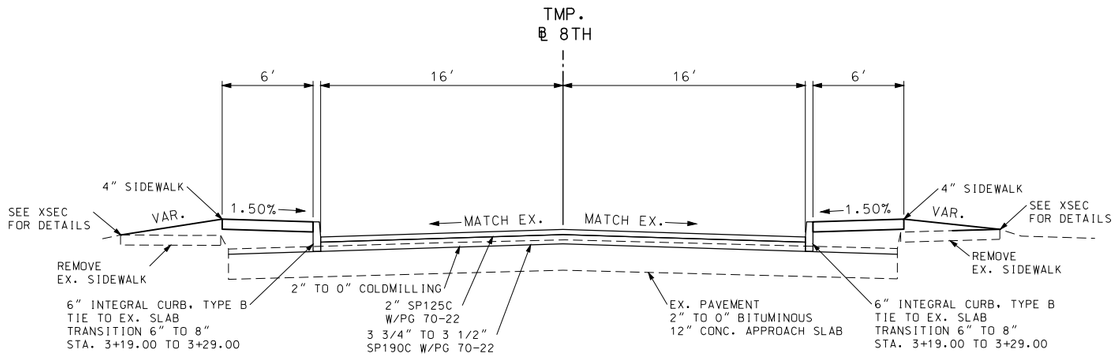
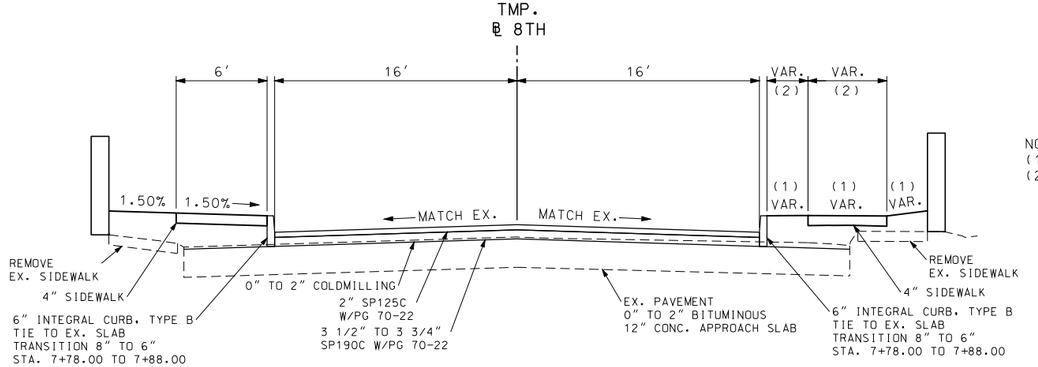
TACK COAT = 0.8 GALS/SY
(BETWEEN LAYERS)



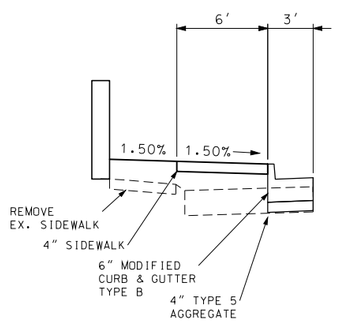
8TH STREET
STA. 3+09.00 TO 3+29.00

8TH STREET
BRIDGE EXCEPTION
STA. 3+29.00 TO 7+78.00

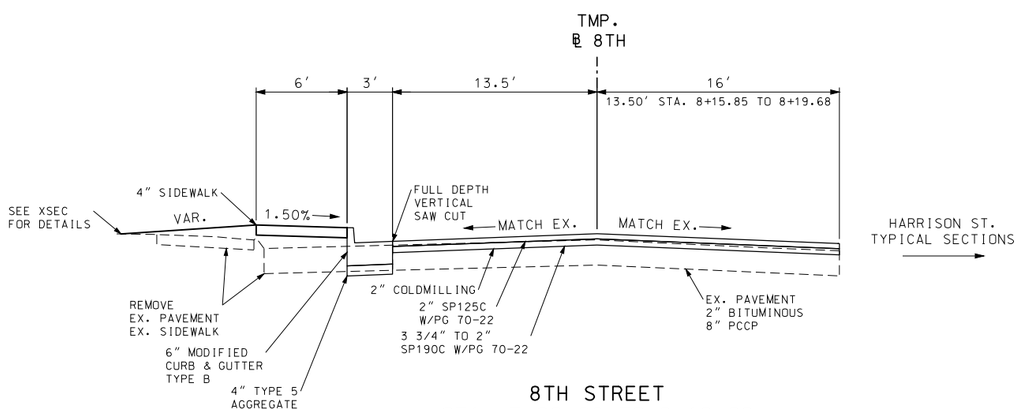


NOTES:
(1) - SEE XSEC FOR DETAILS
(2) - SEE SPECIAL SHEETS
FOR DETAILS

8TH STREET
STA. 7+78.00 TO 7+98.00



8TH STREET
STA. 7+98.00 TO 8+14.47 LT.



8TH STREET
STA. 7+98.00 TO 8+19.68

8TH STREET
TYPICAL SECTIONS
SHEET 2 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
1/8/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	2

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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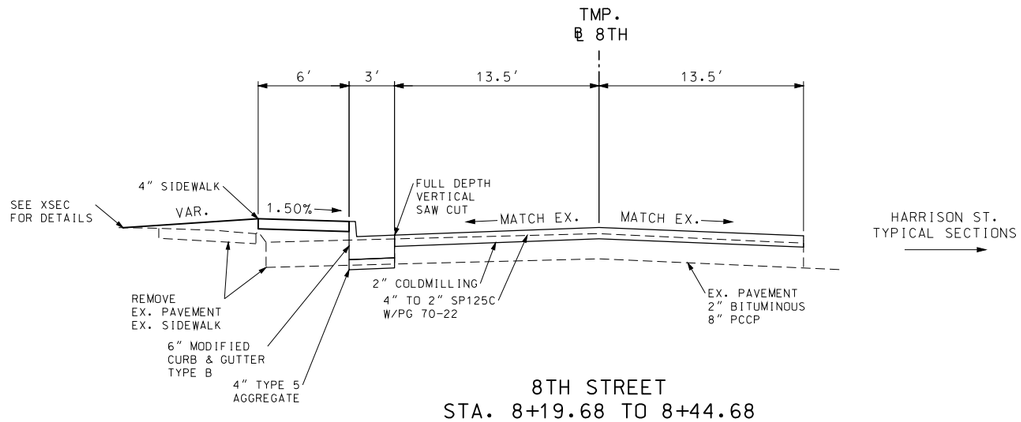
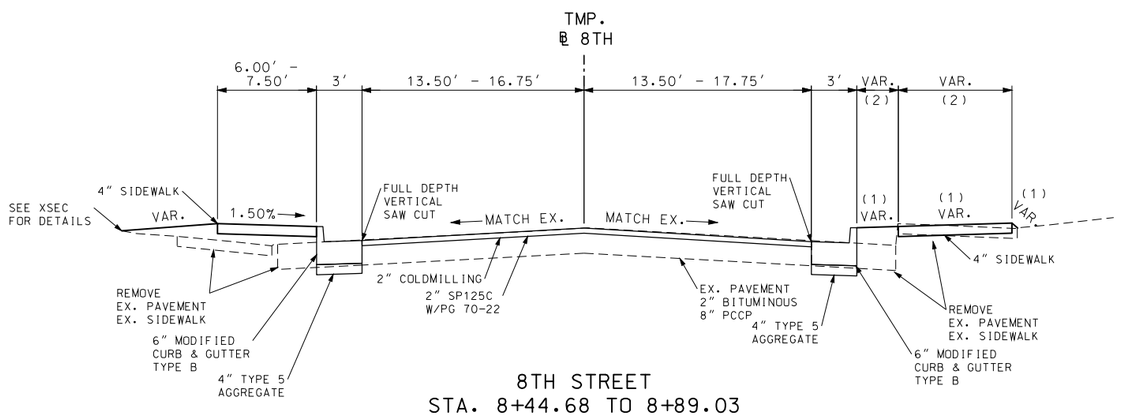
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

ASPHALT ESTIMATE FACTORS

SP125C = 1.97 TONS/CY
SP190C = 1.98 TONS/CY
TACK COAT = 0.1 GALS/SY
(COLDMILLING)
TACK COAT = 0.8 GALS/SY
(BETWEEN LAYERS)



8TH STREET
STA. 8+19.68 TO 8+44.68



8TH STREET
STA. 8+44.68 TO 8+89.03

NOTES:
(1) - SEE XSEC FOR DETAILS
(2) - SEE SPECIAL SHEETS
FOR DETAILS

8TH STREET
TYPICAL SECTIONS
SHEET 3 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

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DATE PREPARED
1/8/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	2

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

ASPHALT ESTIMATE FACTORS

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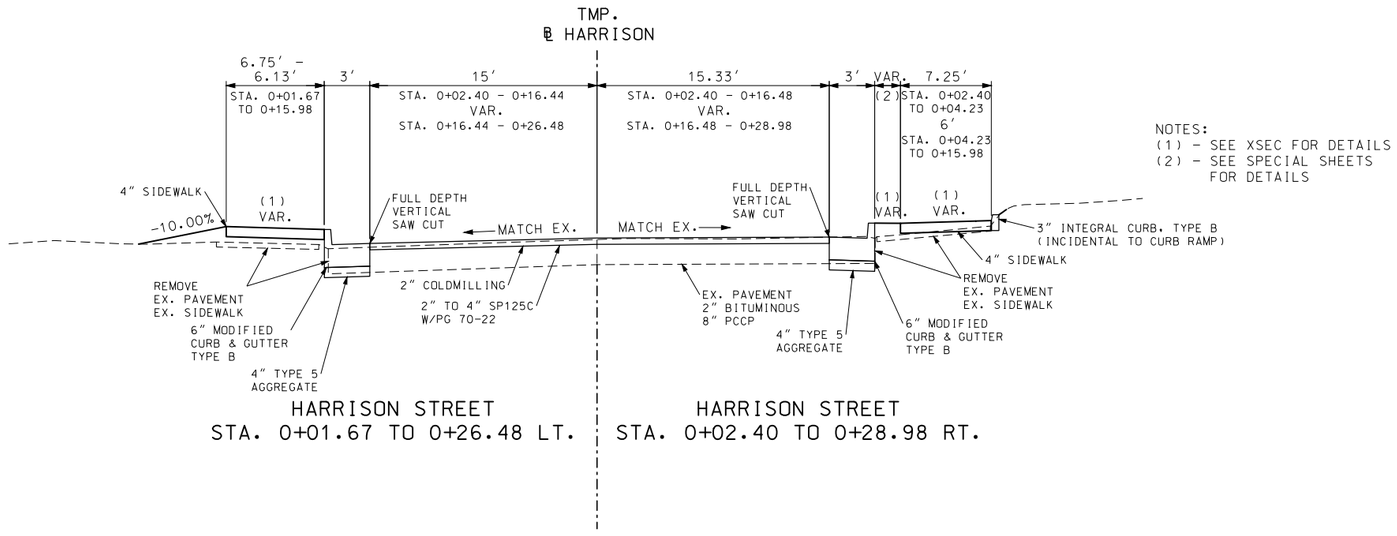
(COLDMILLING)
TACK COAT = 0.8 GALS/SY
(BETWEEN LAYERS)



HARRISON STREET
STA. 0+01.67 TO 0+26.48 LT.

HARRISON STREET
STA. 0+02.40 TO 0+28.98 RT.

NOTES:
(1) - SEE XSEC FOR DETAILS
(2) - SEE SPECIAL SHEETS FOR DETAILS

HARRISON STREET
TYPICAL SECTIONS
SHEET 4 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
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DATE PREPARED
1/8/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	2

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

ASPHALT ESTIMATE FACTORS

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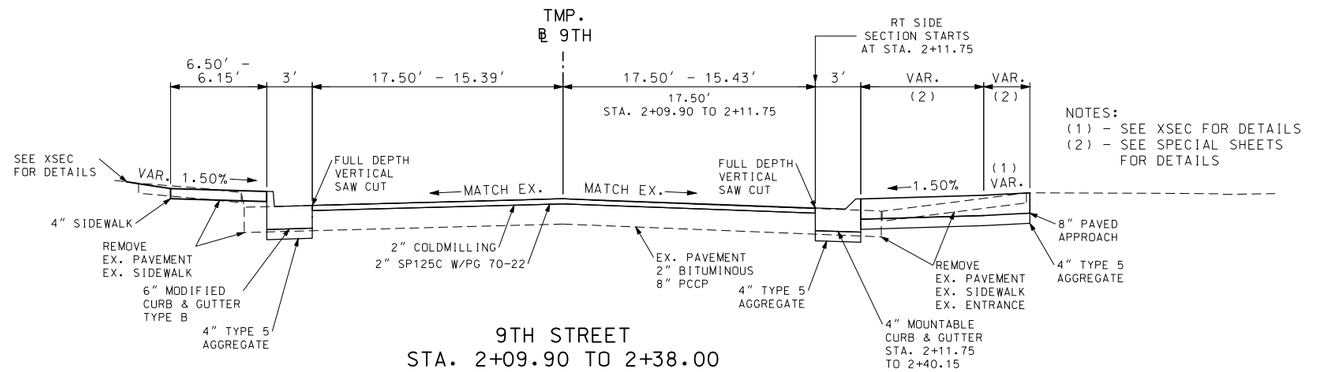
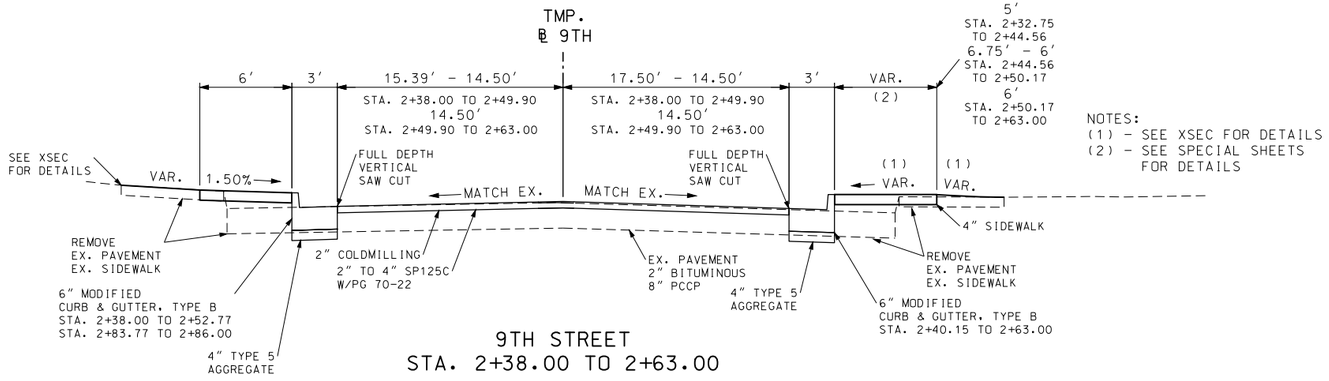
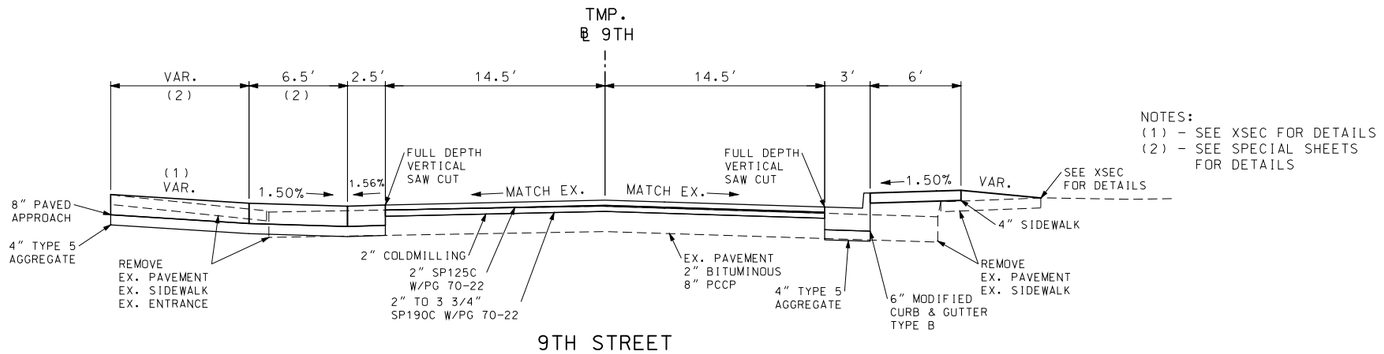
TACK COAT = 0.1 GALS/SY
(COLDMILLING)
TACK COAT = 0.8 GALS/SY
(BETWEEN LAYERS)



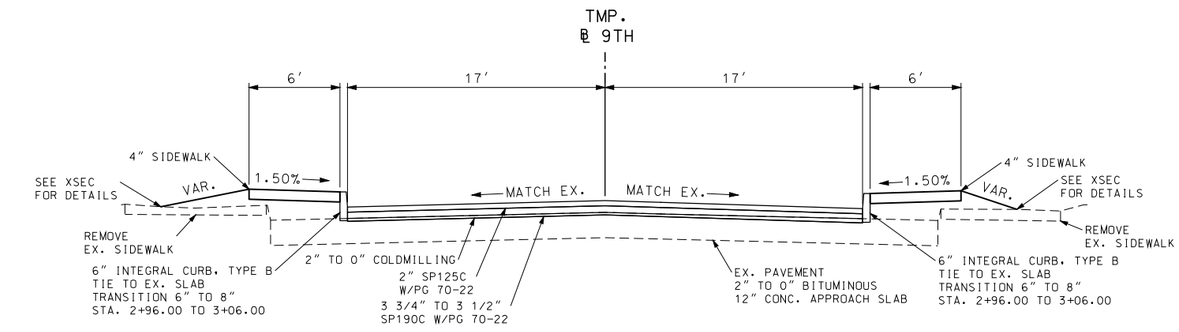
9TH STREET
STA. 2+09.90 TO 2+38.00



9TH STREET
STA. 2+38.00 TO 2+63.00



9TH STREET
STA. 2+63.00 TO 2+86.00



9TH STREET
STA. 2+86.00 TO 3+06.00

9TH STREET
TYPICAL SECTIONS
SHEET 5 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
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DATE PREPARED 1/8/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	2

COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

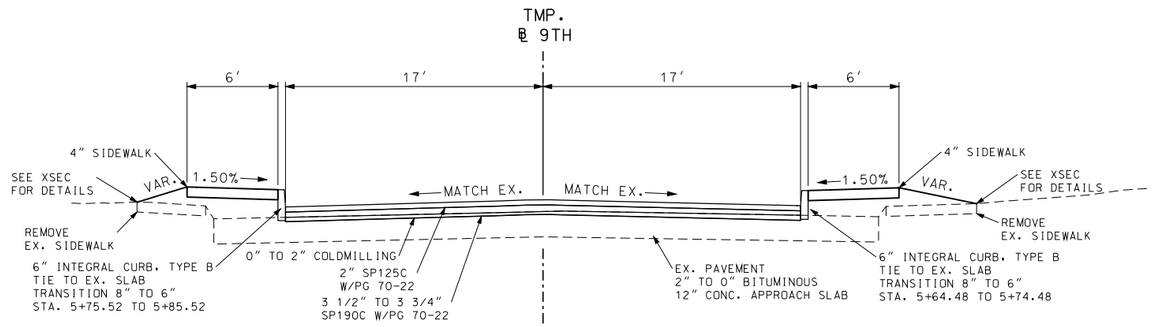
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION	DATE

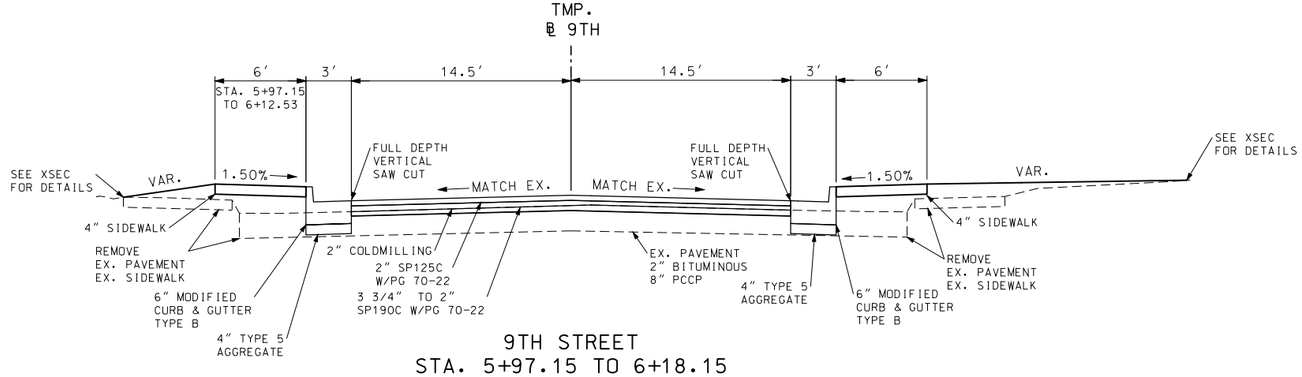
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

ASPHALT ESTIMATE FACTORS

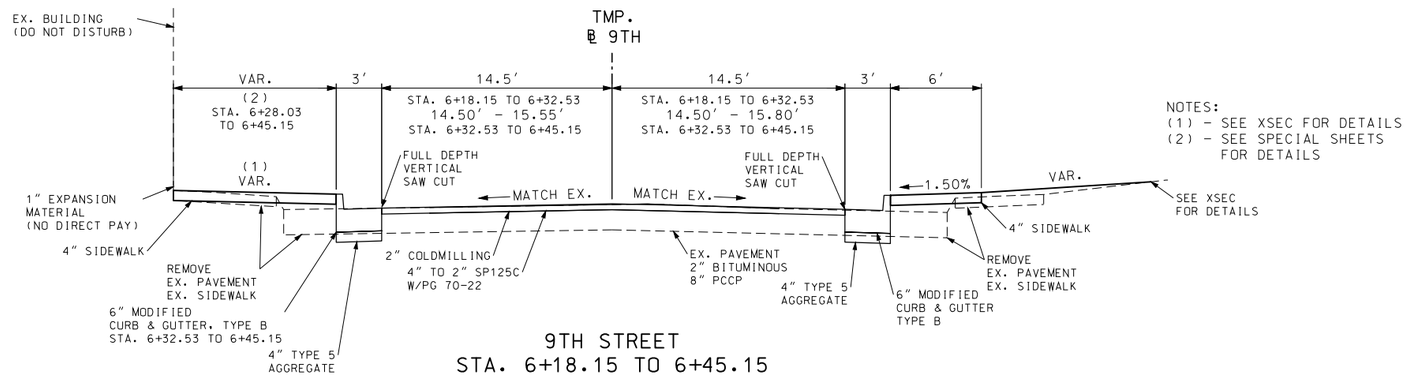
SP125C = 1.97 TONS/CY
SP190C = 1.98 TONS/CY
TACK COAT = 0.1 GALS/SY
(COLDMILLING)
TACK COAT = 0.8 GALS/SY
(BETWEEN LAYERS)



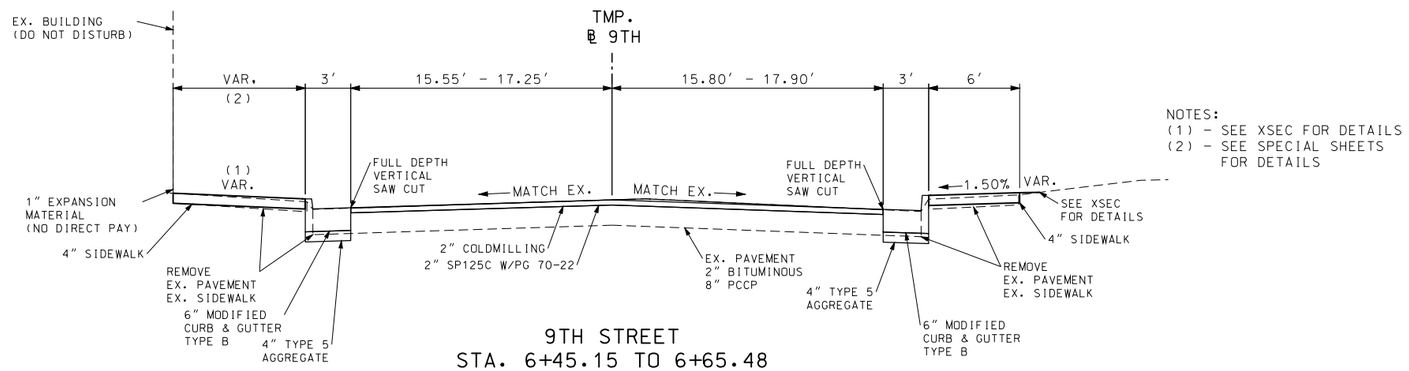
9TH STREET
STA. 5+75.52 TO 5+97.15 LT. | STA. 5+64.48 TO 5+97.15 RT.



9TH STREET
STA. 5+97.15 TO 6+18.15



9TH STREET
STA. 6+18.15 TO 6+45.15



9TH STREET
STA. 6+45.15 TO 6+65.48

9TH STREET
TYPICAL SECTIONS
SHEET 6 OF 14

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
1/8/2018	
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	2
COUNTY	
JACKSON	
JOB NO.	
J4I3198	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

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

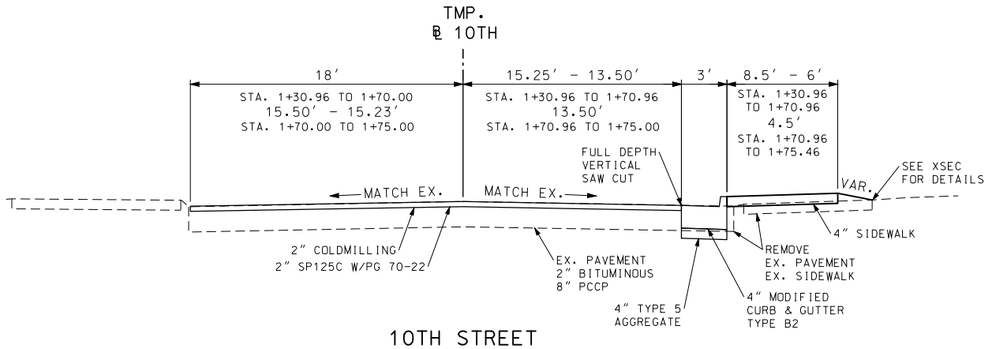
DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

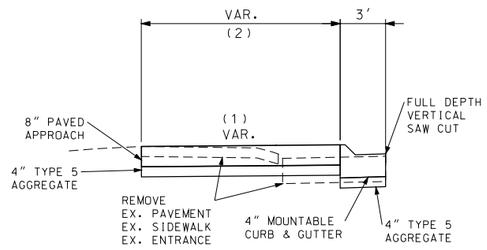
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

ASPHALT ESTIMATE FACTORS

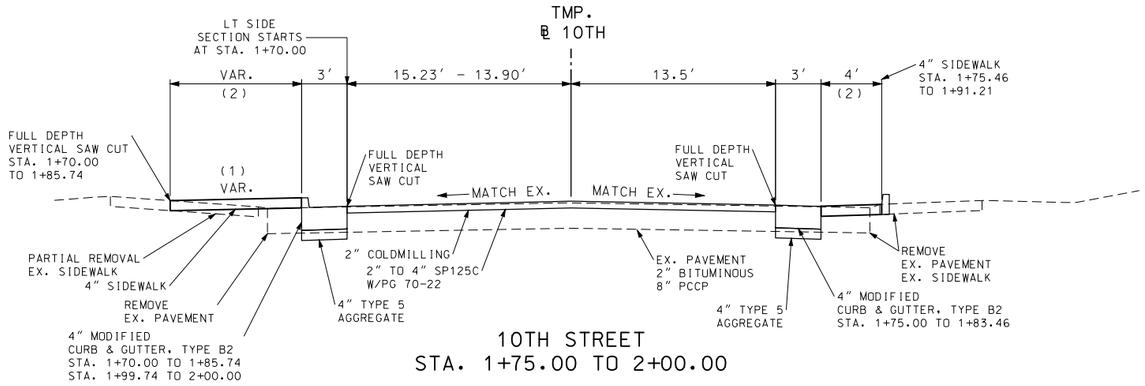
SP125C = 1.97 TONS/CY
SP190C = 1.98 TONS/CY
TACK COAT = 0.1 GALS/SY
(COLDMILLING)
TACK COAT = 0.8 GALS/SY
(BETWEEN LAYERS)



10TH STREET
STA. 1+30.96 TO 1+75.00

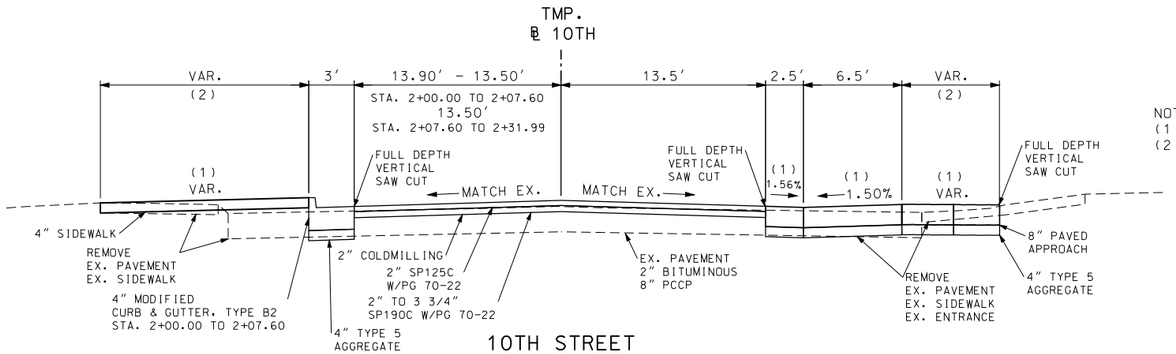


8TH STREET
STA. 1+85.74 TO 1+99.74 LT.



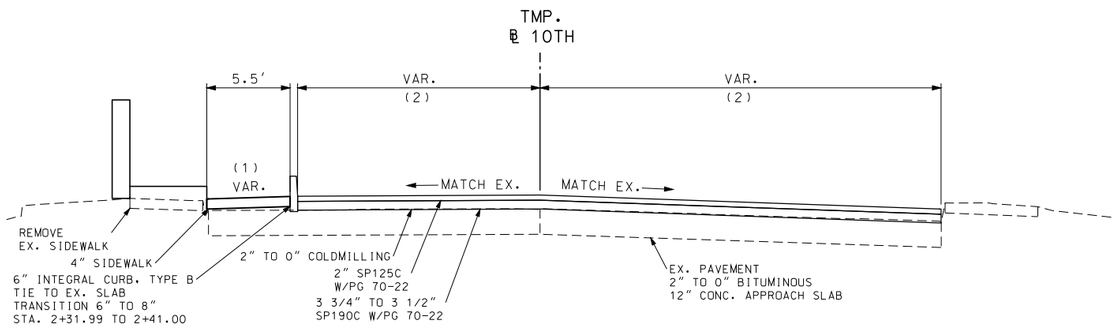
10TH STREET
STA. 1+75.00 TO 2+00.00

NOTES:
(1) - SEE XSEC FOR DETAILS
(2) - SEE SPECIAL SHEETS
FOR DETAILS



10TH STREET
STA. 2+00.00 TO 2+21.00

NOTES:
(1) - SEE XSEC FOR DETAILS
(2) - SEE SPECIAL SHEETS
FOR DETAILS



10TH STREET
STA. 2+21.00 TO 2+41.00

NOTES:
(1) - SEE XSEC FOR DETAILS
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FOR DETAILS

10TH STREET
TYPICAL SECTIONS
SHEET 7 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
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DATE PREPARED
1/10/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	2

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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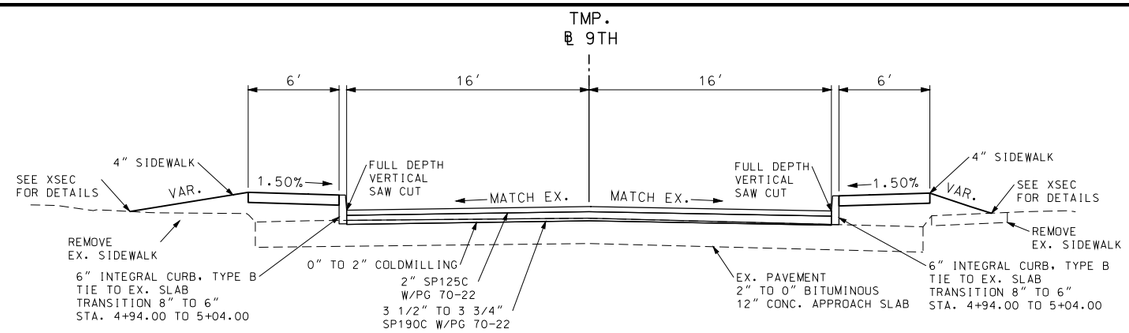
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

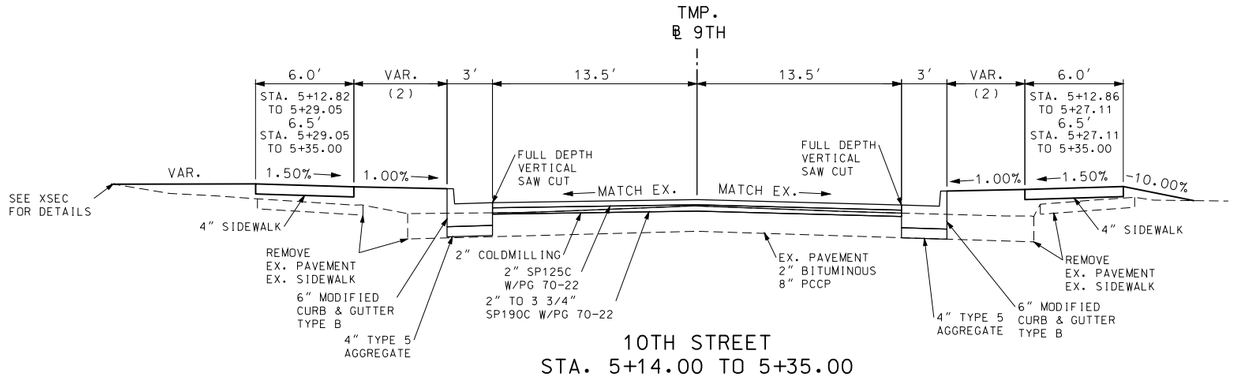
ASPHALT ESTIMATE FACTORS

SP125C = 1.97 TONS/CY
SP190C = 1.98 TONS/CY
TACK COAT = 0.1 GALS/SY
(COLDMILLING)
TACK COAT = 0.8 GALS/SY
(BETWEEN LAYERS)



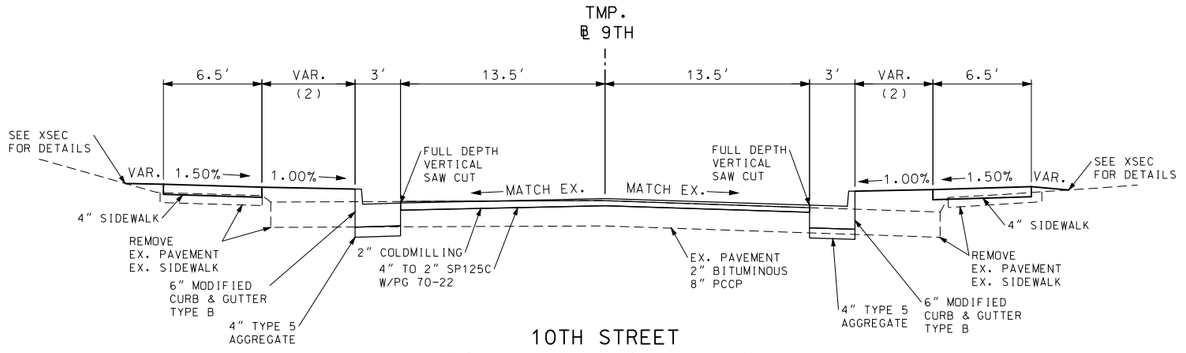
10TH STREET
STA. 4+94.00 TO 5+14.00

NOTES:
(2) - SEE SPECIAL SHEETS
FOR DETAILS



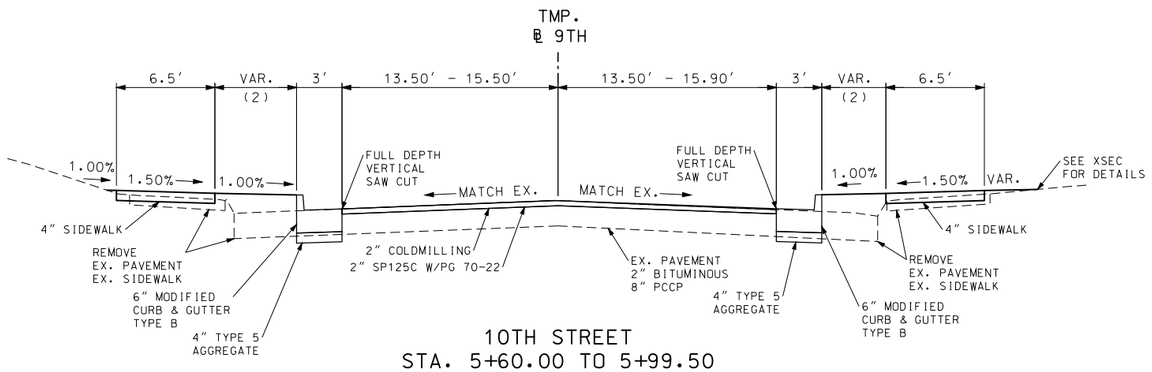
10TH STREET
STA. 5+14.00 TO 5+35.00

NOTES:
(2) - SEE SPECIAL SHEETS
FOR DETAILS



10TH STREET
STA. 5+35.00 TO 5+60.00

NOTES:
(2) - SEE SPECIAL SHEETS
FOR DETAILS



10TH STREET
STA. 5+60.00 TO 5+99.50

NOTES:
(2) - SEE SPECIAL SHEETS
FOR DETAILS

10TH STREET
TYPICAL SECTIONS
SHEET 8 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
1/8/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	2

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

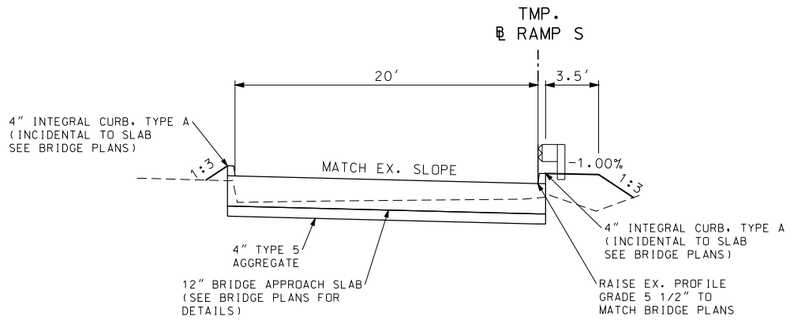
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

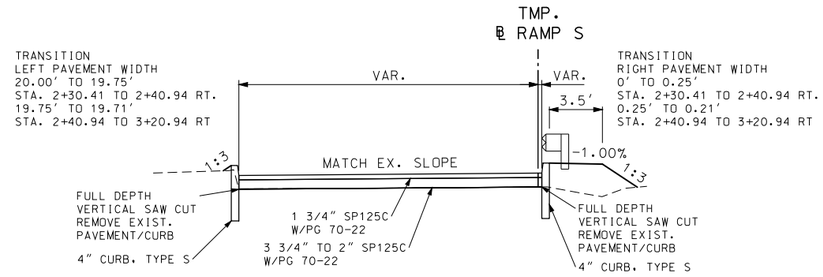
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

ASPHALT ESTIMATE FACTORS

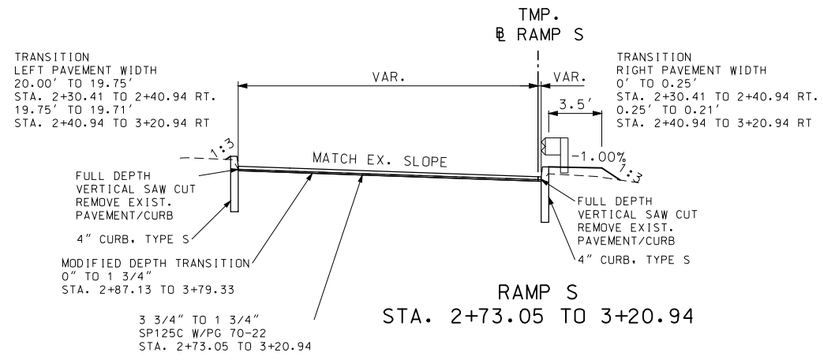
SP125C = 1.97 TONS/CY
SP190C = 1.98 TONS/CY
TACK COAT = 0.1 GALS/SY
(COLDMILLING)
TACK COAT = 0.8 GALS/SY
(BETWEEN LAYERS)



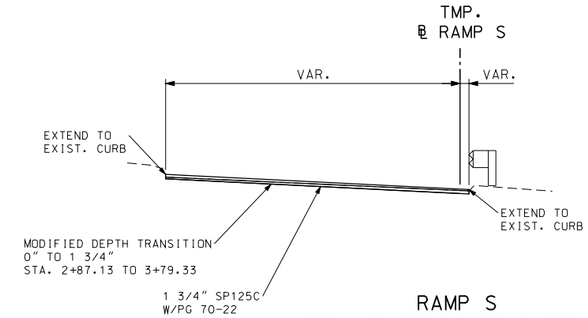
RAMP S
STA. 2+20.99 TO 2+40.94



RAMP S
STA. 2+40.94 TO 2+73.05



RAMP S
STA. 2+73.05 TO 3+20.94



RAMP S
STA. 3+20.94 TO 3+79.33

RAMP S
TYPICAL SECTIONS
SHEET 9 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

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

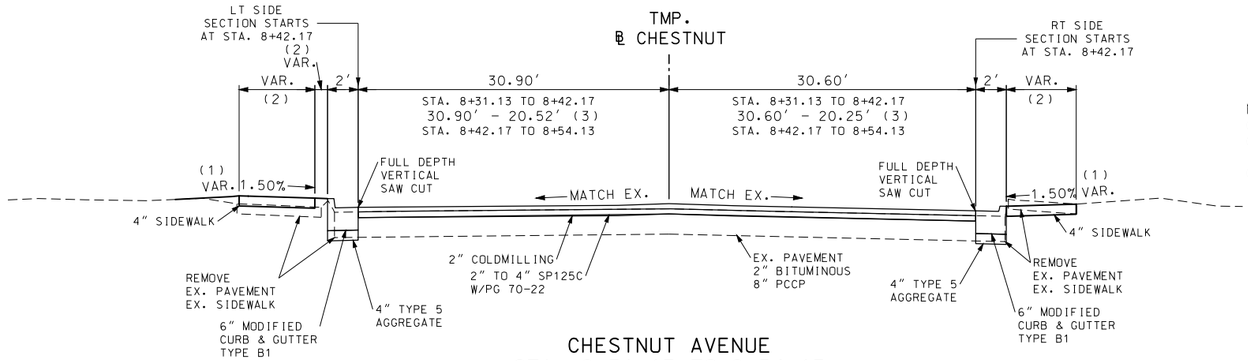
DATE PREPARED: 1/8/2018
ROUTE: 70 | STATE: MO
DISTRICT: KC | SHEET NO.: 2
COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

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

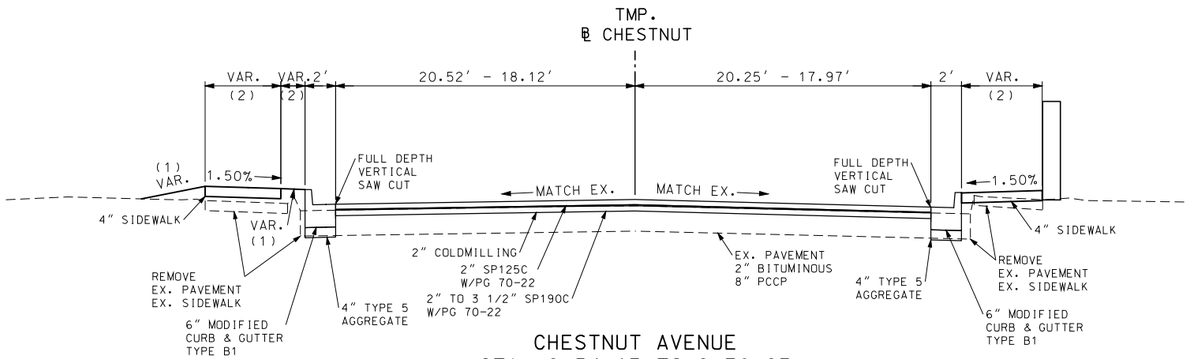
ASPHALT ESTIMATE FACTORS

SP125C = 1.97 TONS/CY
SP190C = 1.98 TONS/CY
TACK COAT = 0.1 GALS/SY
(COLDMILLING)
TACK COAT = 0.8 GALS/SY
(BETWEEN LAYERS)



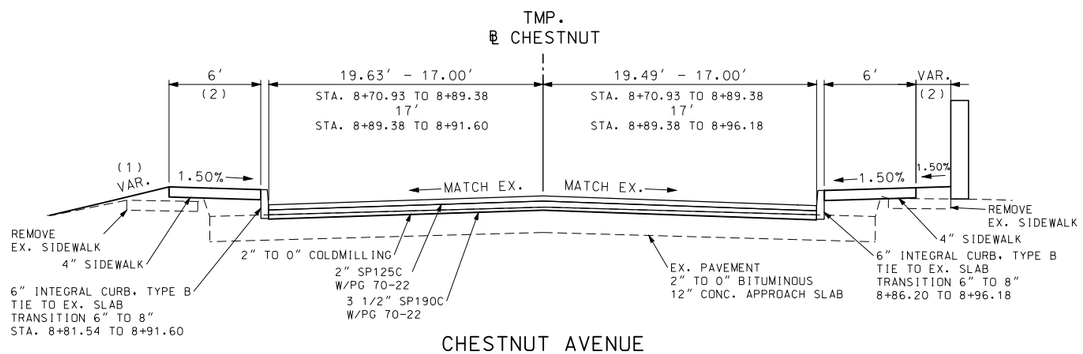
CHESTNUT AVENUE
STA. 8+31.13 TO 8+54.13

NOTES:
(1) - SEE XSEC FOR DETAILS
(2) - SEE SPECIAL SHEETS
FOR DETAILS
(3) - SEE SAW CUT TABLE FOR
DETAILS



CHESTNUT AVENUE
STA. 8+54.13 TO 8+70.93

NOTES:
(1) - SEE XSEC FOR DETAILS
(2) - SEE SPECIAL SHEETS
FOR DETAILS



CHESTNUT AVENUE
STA. 8+70.93 TO 8+93.89

NOTES:
(1) - SEE XSEC FOR DETAILS
(2) - SEE SPECIAL SHEETS
FOR DETAILS

CHESTNUT AVENUE
TYPICAL SECTIONS
SHEET 10 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
1/8/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	2

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

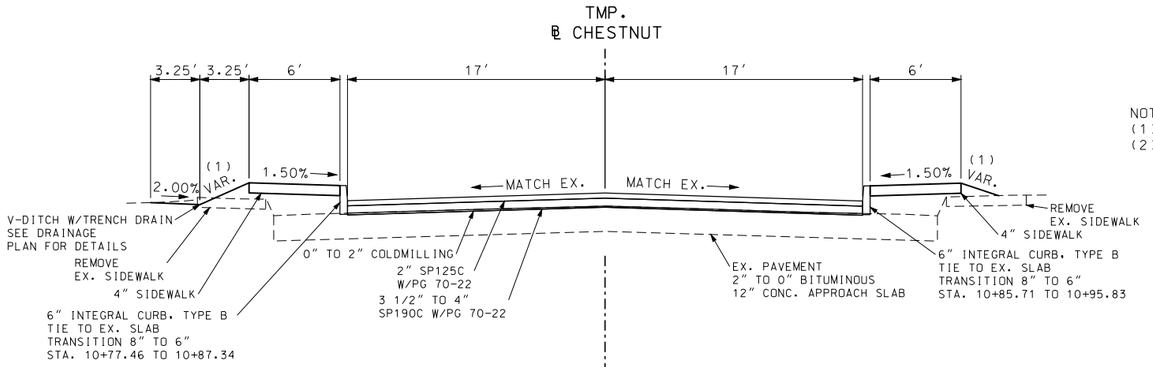
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

ASPHALT ESTIMATE FACTORS

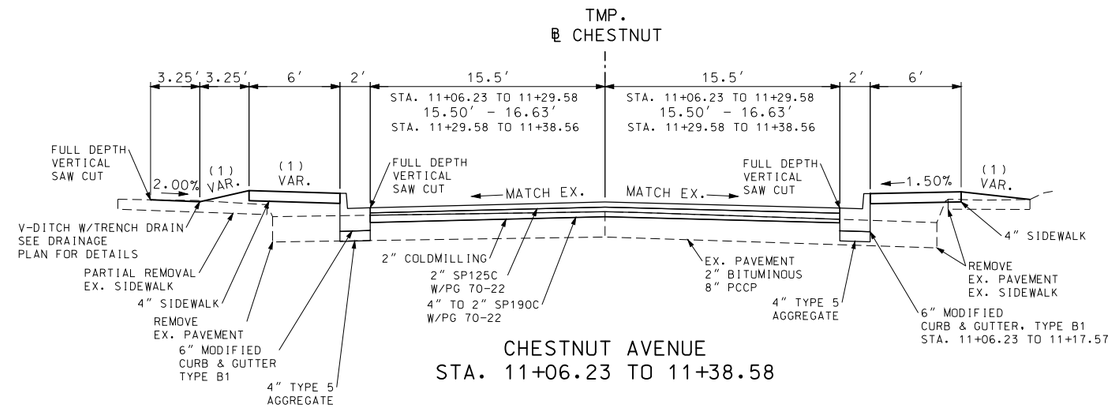
SP125C = 1.97 TONS/CY
SP190C = 1.98 TONS/CY
TACK COAT = 0.1 GALS/SY
(COLDMILLING)
TACK COAT = 0.8 GALS/SY
(BETWEEN LAYERS)



NOTES:
(1) - SEE XSEC FOR DETAILS
(2) - SEE SPECIAL SHEETS FOR DETAILS

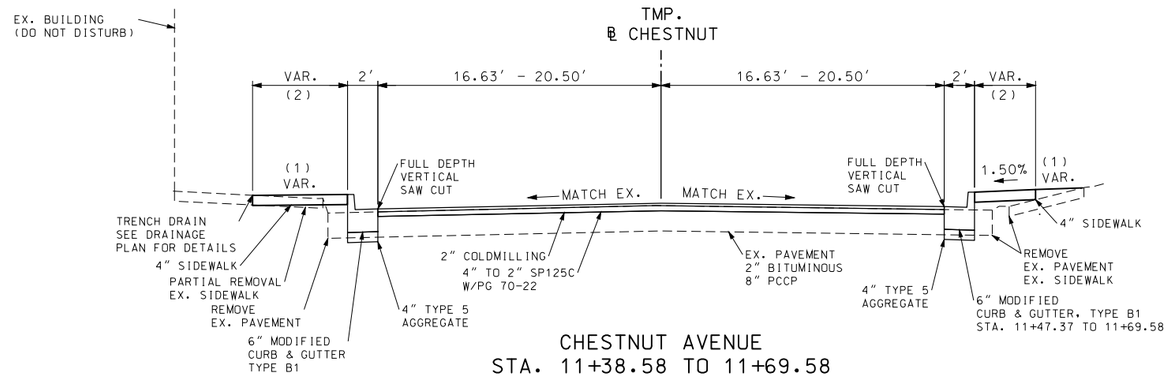
CHESTNUT AVENUE
STA. 10+77.46 TO 11+06.23 LT.

CHESTNUT AVENUE
STA. 10+85.71 TO 11+06.23 RT.



NOTES:
(1) - SEE XSEC FOR DETAILS
(2) - SEE SPECIAL SHEETS FOR DETAILS

CHESTNUT AVENUE
STA. 11+06.23 TO 11+38.58



NOTES:
(1) - SEE XSEC FOR DETAILS
(2) - SEE SPECIAL SHEETS FOR DETAILS

CHESTNUT AVENUE
STA. 11+38.58 TO 11+69.58

CHESTNUT AVENUE
TYPICAL SECTIONS
SHEET 11 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
1/8/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	2

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

REMOVAL OF IMPROVEMENTS

STA	STA	LOCATION	SIDE	UNITS	QUANTITIES	ITEM	STA	STA	LOCATION	SIDE	UNITS	QUANTITIES	ITEM
2+35.42		TEMP. ℄ 8TH	LT	EACH	1	PLANTER	1+30.96	2+21.00	TEMP. ℄ 10TH ST	RT	SY	79	EX. PAVEMENT / ENTRANCE
2+65.47		TEMP. ℄ 8TH	LT	EACH	1	PLANTER	1+30.96	1+92.25	TEMP. ℄ 10TH ST	RT	SY	45	EX. SIDEWALK
2+24.00	3+29.00	TEMP. ℄ 8TH	LT	SY	93	EX. SIDEWALK	1+30.96	1+88.74	TEMP. ℄ 10TH ST	RT	LF	58	EX. CURB
2+24.00	3+09.00	TEMP. ℄ 8TH	LT	SY	66	EX. PAVEMENTT	1+65.37		TEMP. ℄ 10TH ST	RT	EACH	1	EX. SIGN FOOTING
2+24.00	3+29.00	TEMP. ℄ 8TH	LT	LF	105	EX. CURB	1+69.17		TEMP. ℄ 10TH ST	RT	EACH	1	EX. LIGHT POLE FOOTING
2+46.23		TEMP. ℄ 8TH	LT	EACH	1	EX. SIGN FOOTING	1+70.00	2+34.04	TEMP. ℄ 10TH ST	LT	SY	57	EX. PAVEMENT / ENTRANCE
2+50.00		TEMP. ℄ 8TH	LT	EACH	1	EX. DROP INLET	2+21.00	2+31.99	TEMP. ℄ 10TH ST	LT	SY	10	EX. CORNER BRIDGE APPROACH SLAB
3+00.87		TEMP. ℄ 8TH	LT	EACH	1	SIGN FOOTING	1+70.00	2+17.26	TEMP. ℄ 10TH ST	LT	SY	38	EX. SIDEWALK
2+84.49	2+92.49	TEMP. ℄ 8TH	CTR	SY	24	EX. PAVEMENT	1+70.00	2+17.69	TEMP. ℄ 10TH ST	LT	LF	55	EX. CURB
2+24.00	2+56.97	TEMP. ℄ 8TH	RT	SY	21	EX. SIDEWALK	5+14.00	5+99.50	TEMP. ℄ 10TH ST	RT	SY	70	EX. PAVEMENT
2+78.49	3+29.00	TEMP. ℄ 8TH	RT	SY	33	EX. SIDEWALK	4+93.78	5+99.50	TEMP. ℄ 10TH ST	RT	SY	71	EX. SIDEWALK
2+24.00	3+09.00	TEMP. ℄ 8TH	RT	SY	85	EX. PAVEMENT / ENTRANCE	4+94.00	5+99.50	TEMP. ℄ 10TH ST	RT	LF	106	EX. CURB
2+24.00	3+29.00	TEMP. ℄ 8TH	RT	LF	105	EX. CURB	5+34.08	5+64.23	TEMP. ℄ 10TH ST	RT	LF	30	EX. 12" PIPE
2+49.82		TEMP. ℄ 8TH	RT	EACH	1	EX. DROP INLET	5+33.08		TEMP. ℄ 10TH ST	RT	EACH	1	EX. DROP INLET
		TEMP. ℄ 8TH	RT	LF	7	EX. 12" RCP (P-104)	5+65.24		TEMP. ℄ 10TH ST	RT	EACH	1	EX. DROP INLET
		TEMP. ℄ 8TH	RT	LF	2.5	EX. 8" PIPE (P-105)	5+14.00	5+99.50	TEMP. ℄ 10TH ST	LT	SY	70	EX. PAVEMENT
7+78.00	8+89.03	TEMP. ℄ 8TH	LT	SY	72	EX. SIDEWALK	4+94.00	5+99.50	TEMP. ℄ 10TH ST	LT	LF	106	EX. CURB
7+98.00	8+89.03	TEMP. ℄ 8TH	LT	SY	69	EX. PAVEMENT	4+94.00	5+99.50	TEMP. ℄ 10TH ST	LT	SY	81	EX. SIDEWALK
8+16.10		TEMP. ℄ 8TH	LT	EACH	1	EX. SIGN FOOTING	5+34.04	5+63.98	TEMP. ℄ 10TH ST	LT	LF	30	EX. 12" PIPE
8+34.84		TEMP. ℄ 8TH	LT	EACH	1	EX. DROP INLET	5+33.03		TEMP. ℄ 10TH ST	LT	EACH	1	EX. DROP INLET
8+14.68	8+91.40	TEMP. ℄ 8TH	LT	LF	77	EX. FENCE	5+64.98		TEMP. ℄ 10TH ST	LT	EACH	1	EX. DROP INLET
7+78.00	8+89.03	TEMP. ℄ 8TH	LT	LF	112	EX. CURB	5+65.99	5+93.77	TEMP. ℄ 10TH ST	LT	LF	28	EX. 15" PIPE
7+78.00	0+01.67	TEMP. ℄ 8TH ST TEMP. ℄ HARRISON	RT / LT	LF	37	EX. CURB	5+94.76		TEMP. ℄ 10TH ST	LT	EACH	1	EX. DROP INLET
							5+10.38		TEMP. ℄ 10TH ST	LT	EACH	1	EX. SIGN FOOTING
7+77.74	0+01.67	TEMP. ℄ 8TH TEMP. ℄ HARRISON	RT / LT	SY	20	EX. SIDEWALK			TEMP. ℄ 10TH ST	LT	LF	3.6	EX. 15" RCP (P-402)
									TEMP. ℄ 10TH ST	RT	LF	3.4	EX. 15" RCP (P-402)
7+92.65	7+98.00	TEMP. ℄ 8TH ST	RT	SY	2	EX. CORNER BRIDGE APPROACH SLAB			TEMP. ℄ 10TH ST	RT	LT	2.0	EX. 15" RCP (P-407)
0+01.67	0+25.50	TEMP. ℄ HARRISON	LT	SY	8	EX. PAVEMENT	2+20.94	2+40.94	TEMP ℄ RAMP S		SY	46	EX. BRIDGE APPROACH SLAB
0+14.65		TEMP. ℄ HARRISON	LT	EACH	1	EX. DROP INLET	2+40.94	3+20.94	TEMP ℄ RAMP S	RT	LF	81	EX. INTEGRAL CURB & PAVEMENT UNDERNEATH
0+14.34		TEMP. ℄ HARRISON	RT	EACH	1	EX. DROP INLET	2+40.94	3+20.94	TEMP ℄ RAMP S	LT	LF	81	EX. INTEGRAL CURB & PAVEMENT UNDERNEATH
0+04.29		TEMP. ℄ HARRISON	RT	EACH	1	EX. SIGN FOOTING	2+23.23	3+69.11	TEMP ℄ RAMP S	RT	LF	146	EX. GUARDRAIL
0+15.51	0+22.23	TEMP. ℄ HARRISON	RT	LF	11	EX. 12" PIPE	8+43.55	8+90.88	TEMP ℄ CHESNUT	LT	SY	27	EX. SIDEWALK
8+44.50		TEMP. ℄ 8TH ST	RT	EACH	1	EX. DROP INLET	8+43.69	8+90.92	TEMP ℄ CHESNUT	LT	LF	52	EX. CURB
0+02.40	8+89.03	TEMP. ℄ HARRISON TEMP. ℄ 8TH ST	RT / RT	LF	67	EX. CURB	8+42.17	8+70.93	TEMP ℄ CHESNUT	LT	SY	8	EX. PAVEMENT
							8+43.61	8+96.85	TEMP ℄ CHESNUT	RT	LF	59	EX. CURB
0+02.40	8+89.03	TEMP. ℄ HARRISON TEMP. ℄ 8TH ST	RT / RT	SY	53	EX. SIDEWALK	8+43.82	8+97.50	TEMP ℄ CHESNUT	RT	SY	26	EX. SIDEWALK
							8+42.17	8+70.93	TEMP ℄ CHESNUT	RT	SY	8	EX. PAVEMENT
0+02.40	8+89.03	TEMP. ℄ HARRISON TEMP. ℄ 8TH ST	RT / RT	SY	41	EX. PAVEMENT	10+75.04	11+69.58	TEMP ℄ CHESNUT	LT	SY	68	EX. SIDEWALK
							11+06.23	11+69.58	TEMP ℄ CHESNUT	LT	SY	34	EX. PAVEMENT
		TEMP. ℄ 8TH ST	LT	LF	5.1	EX. 12" RCP (P-201)	10+76.25	11+69.58	TEMP ℄ CHESNUT	LT	LF	94	EX. CURB
2+09.90	3+06.00	TEMP. ℄ 9TH ST	LT	LF	96	EX. CURB	11+17.64	11+18.92	TEMP ℄ CHESNUT	LT	LF	8	EX. GRATE & CHANNEL
2+09.90	2+86.00	TEMP. ℄ 9TH ST	LT	SY	36	EX. SIDEWALK	10+79.75	10+80.72	TEMP ℄ CHESNUT	LT	LF	4	EX. FENCE
2+09.90	2+86.00	TEMP. ℄ 9TH ST	LT	SY	55	EX. PAVEMENT	10+72.08	10+48.67	TEMP ℄ CHESNUT	LT	LF	287	EX. GUTTER BEHIND RETAINING WALL
2+57.27	2+79.27	TEMP. ℄ 9TH ST	LT	SY	25	EX. ENTRANCE	10+87.07	11+23.04	TEMP ℄ CHESNUT	RT	SY	20	EX. SIDEWALK
2+79.27	3+06.00	TEMP. ℄ 9TH ST	LT	SY	19	EX. SIDEWALK	11+06.23	11+69.58	TEMP ℄ CHESNUT	RT	SY	34	EX. PAVEMENT
2+11.75	2+33.36	TEMP. ℄ 9TH ST	RT	SY	23	EX. ENTRANCE	11+22.57	11+41.58	TEMP ℄ CHESNUT	RT	SY	14	EX. ENTRANCE
2+11.75	2+86.00	TEMP. ℄ 9TH ST	RT	SY	52	EX. PAVEMENT	11+41.54	11+69.58	TEMP ℄ CHESNUT	RT	SY	17	EX. SIDEWALK
2+33.25	3+06.45	TEMP. ℄ 9TH ST	RT	SY	51	EX. SIDEWALK	10+86.93	11+69.58	TEMP ℄ CHESNUT	RT	LF	83	EX. CURB
2+11.75	3+06.00	TEMP. ℄ 9TH ST	RT	LF	94	EX. CURB							
5+78.46		TEMP. ℄ 9TH ST	LT	EACH	1	EX. SIGN FOOTING							
5+77.15	0+00.00	TEMP. ℄ 9TH ST ℄ ENTLTO2	LT / RT	LF	41	EX. CURB							
6+00.23		TEMP. ℄ 9TH ST	LT	EACH	1	EX. DROP INLET							
5+77.60	6+12.72	TEMP. ℄ 9TH ST	LT	SY	22	EX. SIDEWALK							
5+97.15	6+65.48	TEMP. ℄ 9TH ST	LT	SY	61	EX. ENTRANCE / PAVEMENT							
6+28.02	6+65.48	TEMP. ℄ 9TH ST	LT	SY	30	EX. SIDEWALK							
0+00.00	6+65.48	℄ ENTLTO2 TEMP. ℄ 9TH ST	LT / LT	LF	43	EX. CURB							
6+00.09		TEMP. ℄ 9TH ST	RT	EACH	1	EX. DROP INLET							
5+61.51	6+65.48	TEMP. ℄ 9TH ST	RT	SY	66	EX. SIDEWALK							
5+97.15	6+65.48	TEMP. ℄ 9TH ST	RT	SY	50	EX. PAVEMENT							
5+62.81	6+65.48	TEMP. ℄ 9TH ST	RT	LF	103	EX. CURB							
		TEMP. ℄ 9TH ST	LT	LF	1.0	EX. 12" RCP (P-303)							
		TEMP. ℄ 9TH ST	LT	LF	2.6	EX. 12" RCP (P-301)							
		TEMP. ℄ 9TH ST	RT	LF	2.9	EX. 12" RCP (P-301)							

1 LUMP SUM

QUANTITY SHEET
1 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	3

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

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

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

FULL DEPTH VERTICAL SAW CUTS *FOR INFORMATION ONLY* (NO DIRECT PAY)

STA	OFFSET	STA	OFFSET	LOCATION	LENGTH (FEET)	REMARKS	STA	OFFSET	STA	OFFSET	LOCATION	LENGTH (FEET)	REMARKS
2+24.00	32.77' LT.	2+24.00	20.00' LT.	TEMP. ℄ 8TH ST	13	EX. SIDEWALK	1+85.74	30.41' LT.	1+85.74	26.46' LT.	TEMP. ℄ 10TH ST	4	EX. SIDEWALK
2+24.00	20.00' LT.	2+24.00	17.00' LT.	TEMP. ℄ 8TH ST	3	EX. PAVEMENT / CURB	1+85.74	26.46' LT.	1+70.00	26.46' LT.	TEMP. ℄ 10TH ST	16	EX. SIDEWALK
2+24.00	17.00' LT.	2+74.00	13.50' LT.	TEMP. ℄ 8TH ST	50	EX. PAVEMENT	1+70.00	26.46' LT.	1+70.00	18.50' LT.	TEMP. ℄ 10TH ST	8	EX. SIDEWALK
2+74.00	13.50' LT.	3+09.00	13.50' LT.	TEMP. ℄ 8TH ST	35	EX. PAVEMENT	1+70.00	18.50' LT.	1+70.00	15.50' LT.	TEMP. ℄ 10TH ST	3	EX. PAVEMENT / CURB
3+09.00	13.50' LT.	3+09.00	22.60' LT	TEMP. ℄ 8TH ST	9	EX. PAVEMENT/ CURB	1+70.00	15.50' LT.	2+07.60	13.50' LT.	TEMP. ℄ 10TH ST	38	EX. PAVEMENT
2+84.49	13.50' LT.	2+84.49	13.50' RT	TEMP. ℄ 8TH ST	27	EX. PAVEMENT	2+07.60	13.50' LT.	2+31.99	13.50' LT.	TEMP. ℄ 10TH ST	24	EX. PAVEMENT
2+92.49	13.50' LT.	2+92.49	13.50' RT	TEMP. ℄ 8TH ST	27	EX. PAVEMENT	2+31.99	13.50' LT.	2+31.99	22.00' LT.	TEMP. ℄ 10TH ST	9	EX. PAVEMENT
2+24.00	26.90' RT.	2+24.00	21.25' RT	TEMP. ℄ 8TH ST	6	EX. SIDEWALK	2+31.99	22.00' LT.	2+32.74	22.00' LT.	TEMP. ℄ 10TH ST	1	EX. PAVEMENT
2+24.00	21.25' RT.	2+24.00	18.25' RT	TEMP. ℄ 8TH ST	3	EX. PAVEMENT / CURB	2+32.74	22.00' LT.	2+34.04	23.48' LT.	TEMP. ℄ 10TH ST	2	EX. PAVEMENT
2+24.00	18.25' RT.	2+74.00	13.50' RT.	TEMP. ℄ 8TH ST	50	EX. PAVEMENT	2+17.15	32.63' LT.	2+31.99	32.63' LT.	TEMP. ℄ 10TH ST	15	EX. ENTRANCE
2+74.00	13.50' RT.	3+09.00	13.50' RT.	TEMP. ℄ 8TH ST	35	EX. PAVEMENT	1+30.96	26.93' RT.	1+30.96	18.25' RT.	TEMP. ℄ 10TH ST	9	EX. SIDEWALK
3+09.00	13.50' RT.	3+09.00	22.29' RT.	TEMP. ℄ 8TH ST	9	EX. PAVEMENT / CURB	1+30.96	18.25' RT.	1+30.96	15.25' RT.	TEMP. ℄ 10TH ST	3	EX. PAVEMENT / CURB
2+56.99	30.06' RT.	2+78.99	30.08' RT.	TEMP. ℄ 8TH ST	22	EX. ENTRANCE	1+30.96	15.25' RT.	1+70.96	13.50' RT.	TEMP. ℄ 10TH ST	40	EX. PAVEMENT
7+92.03	23.21' RT.	7+98.00	16.98' RT.	TEMP. ℄ 8TH ST	9	EX. BRIDGE APPROACH SLAB / CURB	1+70.96	13.50' RT.	2+21.00	13.50' RT.	TEMP. ℄ 10TH ST	50	EX. PAVEMENT
0+25.50	18.85' LT.	0+16.53	15.00' LT.	TEMP. ℄ HARRISON	10	EX. PAVEMENT (12.5' RADIUS)	2+21.00	13.50' RT.	2+21.00	25.92' RT.	TEMP. ℄ 10TH ST	12	EX. PAVEMENT
0+16.53	15.00' LT.	0+01.67	15.00' LT.	TEMP. ℄ HARRISON	15	EX. PAVEMENT	2+21.00	25.92' RT.	2+17.20	25.92' RT.	TEMP. ℄ 10TH ST	4	EX. PAVEMENT
0+01.67	15.00' LT.	0+01.67	18.00' LT.	TEMP. ℄ HARRISON	3	EX. PAVEMENT / CURB	2+17.20	25.92' RT.	2+17.20	28.95' RT.	TEMP. ℄ 10TH ST	3	EX. PAVEMENT
0+01.67	18.00' LT.	0+01.67	24.75' LT.	TEMP. ℄ HARRISON	7	EX. SIDEWALK	2+17.20	28.95' RT.	1+93.09	28.95' RT.	TEMP. ℄ 10TH ST	24	EX. ENTRANCE
7+98.00	22.54' LT.	7+98.00	13.50' LT.	TEMP. ℄ 8TH ST	9	EX. PAVEMENT/ CURB	1+70.96	27.16' RT.	1+70.96	21.00' RT.	TEMP. ℄ 10TH ST	6	EX. SIDEWALK
7+98.00	13.50' LT.	8+44.68	13.50' LT.	TEMP. ℄ 8TH ST	47	EX. PAVEMENT	1+70.96	21.00' RT.	1+83.46	21.00' RT.	TEMP. ℄ 10TH ST	13	EX. SIDEWALK
8+44.68	13.50' LT.	8+89.03	16.75' LT.	TEMP. ℄ 8TH ST	45	EX. PAVEMENT	1+83.46	21.00' RT.	1+83.46	27.32' RT.	TEMP. ℄ 10TH ST	6	EX. SIDEWALK
8+89.03	16.75' LT.	8+89.03	19.75' LT.	TEMP. ℄ 8TH ST	3	EX. PAVEMENT / CURB	5+14.00	22.61' LT.	5+14.00	13.50' LT.	TEMP. ℄ 10TH ST	9	EX. PAVEMENT/ CURB
8+89.03	19.75' LT.	8+89.03	27.25 LT.	TEMP. ℄ 8TH ST	8	EX. SIDEWALK	5+14.00	13.50' LT.	5+60.00	13.50' LT.	TEMP ℄ 10TH ST	46	EX. PAVEMENT
0+02.40	26.21' RT.	0+02.40	18.33' RT.	TEMP. ℄ HARRISON	8	EX. SIDEWALK	5+60.00	13.50' LT.	5+99.50	15.50' LT.	TEMP ℄ 10TH ST	40	EX. PAVEMENT
0+02.40	18.33' RT.	0+02.40	15.33' RT.	TEMP. ℄ HARRISON	3	EX. PAVEMENT / CURB	5+99.50	15.50' LT.	5+99.50	18.50' LT.	TEMP ℄ 10TH ST	3	EX. PAVEMENT/ CURB
0+02.40	15.33' RT.	0+16.48	15.33' RT.	TEMP. ℄ HARRISON	14	EX. PAVEMENT	5+35.46	38.16' LT.	5+41.72	35.57' LT.	TEMP ℄ 10TH ST	7	EX. SIDEWALK
0+16.48	15.33' RT.	0+28.98	27.83' RT.	TEMP. ℄ HARRISON	20	EX. PAVEMENT (12.5' RADIUS)	5+99.50	29.03' LT.	5+99.50	22.53' LT.	TEMP ℄ 10TH ST	6	EX. SIDEWALK
8+44.68	13.50' RT.	8+89.03	17.75' RT.	TEMP. ℄ 8TH ST	45	EX. PAVEMENT	5+14.00	22.64' RT.	5+14.00	13.50' RT.	TEMP ℄ 10TH ST	9	EX. PAVEMENT / CURB
8+89.03	17.75' RT.	8+89.03	20.75' RT.	TEMP. ℄ 8TH ST	3	EX. PAVEMENT / CURB	5+14.00	13.50' RT.	5+60.00	13.50' RT.	TEMP ℄ 10TH ST	46	EX. PAVEMENT
8+89.03	20.75' RT.	8+89.03	28.36' RT.	TEMP. ℄ 8TH ST	8	EX. SIDEWALK	5+60.00	13.50' RT.	5+99.50	15.90' RT.	TEMP ℄ 10TH ST	40	EX. PAVEMENT
2+32.75	30.82' RT.	2+11.75	30.82' RT.	TEMP. ℄ 9TH ST	21	EX. ENTRANCE	5+99.50	15.90' RT.	5+99.00	18.90' RT.	TEMP ℄ 10TH ST	3	EX. PAVEMENT/ CURB
2+11.75	30.82' RT.	2+11.75	20.50' RT.	TEMP. ℄ 9TH ST	10	EX. SIDEWALK	5+99.50	21.64' RT.	5+99.50	28.14' RT.	TEMP ℄ 10TH ST	6	EX. SIDEWALK
2+11.75	20.50' RT.	2+11.75	17.50' RT.	TEMP. ℄ 9TH ST	3	EX. PAVEMENT / CURB	2+20.94	0.34' RT.	2+20.94	20.03' LT.	TEMP ℄ RAMP S	20	EX. BRIDGE APPROACH SLAB
2+11.75	17.50' RT.	2+49.90	14.50' RT.	TEMP. ℄ 9TH ST	38	EX. PAVEMENT	2+40.94	0.50' RT.	2+40.94	20.50' LT.	TEMP ℄ RAMP S	21	EX. BRIDGE APPROACH SLAB
2+49.90	14.50' RT.	2+86.00	14.50' RT.	TEMP. ℄ 9TH ST	36	EX. PAVEMENT	2+40.94	19.75' LT.	3+20.94	19.79' LT.	TEMP ℄ RAMP S	81	EX. PAVEMENT
2+86.00	14.50' RT.	2+86.00	22.17' RT.	TEMP. ℄ 9TH ST	8	EX. PAVEMENT / CURB	2+40.94	0.25'	3+20.94	0.21'	TEMP ℄ RAMP S	81	EX. PAVEMENT
2+09.90	27.00' LT.	2+09.90	20.50' LT.	TEMP. ℄ 9TH ST	7	EX. SIDEWALK	2+40.94	20.00' LT.	3+20.94	20.50' LT.	TEMP ℄ RAMP S	1	EX. CURB
2+09.90	20.50' LT.	2+09.90	17.50' LT.	TEMP. ℄ 9TH ST	3	EX. PAVEMENT / CURB	2+40.94	0.00'	3+20.94	0.50' RT.	TEMP ℄ RAMP S	1	EX. CURB
2+09.90	17.50' LT.	2+49.90	14.50' LT.	TEMP. ℄ 9TH ST	40	EX. PAVEMENT	8+44.17	30.90' LT.	8+42.17	30.90' LT.	TEMP ℄ CHESNUT	2	EX. PAVEMENT / CURB
2+49.90	14.50' LT.	2+86.00	14.50' LT.	TEMP. ℄ 9TH ST	36	EX. PAVEMENT	8+42.17	30.90' LT.	8+50.76	21.00' LT.	TEMP ℄ CHESNUT	14	EX. PAVEMENT (10' RADIUS)
2+86.00	14.50' LT.	2+86.00	22.35' LT.	TEMP. ℄ 9TH ST	8	EX. PAVEMENT / CURB	8+50.76	21.00' LT.	8+70.93	18.12' LT.	TEMP ℄ CHESNUT	20	EX. PAVEMENT
2+57.77	32.62' LT.	2+78.77	32.63' LT.	TEMP. ℄ 9TH ST	21	EX. ENTRANCE	8+70.93	18.12' LT.	8+70.93	22.44' LT.	TEMP ℄ CHESNUT	4	EX. PAVEMENT / CURB
5+97.15	22.37' LT.	5+97.15	14.50' LT.	TEMP. ℄ 9TH ST	8	EX. PAVEMENT/ CURB	8+44.17	30.60' RT.	8+42.17	30.60' RT.	TEMP ℄ CHESNUT	2	EX. PAVEMENT / CURB
5+97.15	14.50' LT.	6+32.53	14.50' LT.	TEMP. ℄ 9TH ST	35	EX. PAVEMENT	8+42.17	30.60' RT.	8+50.83	20.69' RT.	TEMP ℄ CHESNUT	14	EX. PAVEMENT
6+32.53	14.50' LT.	6+65.48	17.25' LT.	TEMP. ℄ 9TH ST	33	EX. PAVEMENT	8+50.83	20.69' RT.	8+70.93	17.98' RT.	TEMP ℄ CHESNUT	20	EX. PAVEMENT
6+65.48	17.25' LT.	6+65.48	20.25' LT.	TEMP. ℄ 9TH ST	3	EX. PAVEMENT / CURB	8+70.93	17.98' RT.	8+70.93	22.35' RT.	TEMP ℄ CHESNUT	4	EX. PAVEMENT / CURB
6+65.48	20.25' LT.	6+65.48	28.98 LT	TEMP. ℄ 9TH ST	9	EX. SIDEWALK	10+80.58	30.00' LT.	11+24.38	30.00' LT.	TEMP ℄ CHESNUT	44	EX. SIDEWALK
6+12.53	29.05' LT	6+28.03	29.05' LT.	TEMP. ℄ 9TH ST	16	EX. ENTRANCE	11+24.38	30.00' LT.	11+24.38	27.97' LT.	TEMP ℄ CHESNUT	2	EX. SIDEWALK
5+95.15	22.69' RT.	5+95.15	14.50' RT.	TEMP. ℄ 9TH ST	8	EX. PAVEMENT / CURB	11+24.38	27.97' LT.	11+69.58	28.08' LT.	TEMP ℄ CHESNUT	45	EX. SIDEWALK
5+95.15	14.50' RT.	6+32.53	14.50' RT.	TEMP. ℄ 9TH ST	35	EX. PAVEMENT	11+69.58	28.08' LT.	11+69.58	22.50' LT.	TEMP ℄ CHESNUT	6	EX. SIDEWALK
6+32.53	14.50' RT.	6+65.48	17.90' RT.	TEMP. ℄ 9TH ST	33	EX. PAVEMENT	11+69.58	22.50' LT.	11+69.58	20.50' LT.	TEMP ℄ CHESNUT	2	EX. PAVEMENT / CURB
6+65.48	17.90' RT.	6+65.48	20.90' RT.	TEMP. ℄ 9TH ST	3	EX. PAVEMENT / CURB	11+69.58	20.50' LT.	11+29.58	15.50' LT.	TEMP ℄ CHESNUT	40	EX. PAVEMENT
6+65.48	20.90' RT.	6+65.48	26.90' RT.	TEMP ℄ 9TH ST	6	EX. SIDEWALK	11+29.58	15.50' LT.	11+06.23	15.50' LT.	TEMP ℄ CHESNUT	23	EX. PAVEMENT
							11+06.23	15.50' LT.	11+06.23	22.31' LT.	TEMP ℄ CHESNUT	7	EX. PAVEMENT / CURB
							11+06.23	22.50' RT.	11+06.23	15.50' RT.	TEMP ℄ CHESNUT	7	EX. PAVEMENT/ CURB
							11+06.23	15.50' RT.	11+29.58	15.50' RT.	TEMP ℄ CHESNUT	23	EX. PAVEMENT
							11+29.58	15.50' RT.	11+69.58	20.50' RT.	TEMP ℄ CHESNUT	40	EX. PAVEMENT
							11+69.58	20.50' RT.	11+69.58	22.50' RT.	TEMP ℄ CHESNUT	2	EX. PAVEMENT / CURB
							11+69.58	22.50' RT.	11+69.58	28.00' RT.	TEMP ℄ CHESNUT	6	EX. SIDEWALK
							11+22.07	28.49' RT.	11+42.07	28.49' RT.	TEMP ℄ CHESNUT	20	EX. ENTRANCE
TOTAL = 2023' (NO DIRECT PAY)													

QUANTITY SHEET
2 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
1/7/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	3

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

PAVEMENT

STA	STA	LOCATION	SIDE	BITUMINOUS PAVE. MIX. PG 70-22 BP-1 TONS	ASPHALTIC CONC. MIX. PG 70-22 SP125C TONS	ASPHALTIC CONC. MIX. PG 70-22 SP190C TONS	TACK COAT GAL	8" CONCRETE PAVEMENT SY	4" TYPE 5 AGGREGATE BASE SY	6" SUBGRADE COMPACTION 100FT	REMARKS
2+24.00	2+64.00	TEMP @ 8TH ST			15.5		14				2" SP125C
2+64.00	2+89.00	TEMP @ 8TH ST			12.5		8				2" TO 4" SP125C
2+89.00	3+09.00	TEMP @ 8TH ST			6.6	9.6	11				2" SP125C; 2" TO 3 3/4" SP190C
3+09.00	3+29.00	TEMP @ 8TH ST			7.8	14.3	13				2" SP125C; 3 3/4" TO 3 1/2" SP190C
2+84.49	2+92.49	TEMP @ 8TH ST						24.0	24	0.1	STORM SEWER PIPE
7+78.00	7+98.00	TEMP @ 8TH ST			7.9	14.5	13				2" SP125C; 3 1/2" TO 3 3/4" SP190C
7+98.00	8+19.68	TEMP @ 8TH ST			7.9	11.6	13				2" SP125C; 3 3/4" TO 2" SP190C
8+19.68	8+44.68	TEMP @ 8TH ST			12.3		8				4" TO 2" SP125C
8+44.68	8+89.03	TEMP @ 8TH ST			16.6		15				2" SP125C
0+02.40	0+25.50	TEMP @ HARRISON	LT.		6.5		4				4" TO 2" SP125C
0+02.40	0+28.98	TEMP @ HARRISON	RT.		8.0		5				4" TO 2" SP125C
2+09.90	2+38.00	TEMP @ 9TH ST			11.3		10				2" SP125C
2+38.00	2+63.00	TEMP @ 9TH ST			13.4		8				2" TO 4" SP125C
2+63.00	2+86.00	TEMP @ 9TH ST			8.1	11.8	13				2" SP125C; 2" TO 3 3/4" SP190C
2+86.00	3+06.00	TEMP @ 9TH ST			8.3	15.2	14				2" SP125C; 3 3/4" TO 3 1/2" SP190C
5+70.00	5+97.15	TEMP @ 9TH ST			11.2	20.7	18				2" SP125C; 3 1/2" TO 3 3/4" SP190C
5+97.15	6+18.15	TEMP @ 9TH ST			7.4	10.8	12				2" SP125C; 3 3/4" TO 2" SP190C
6+18.15	6+45.15	TEMP @ 9TH ST			14.6		9				4" TO 2" SP125C
6+45.15	6+65.48	TEMP @ 9TH ST			8.2		8				2" SP125C
1+30.96	1+75.00	TEMP @ 10TH ST			17.1		16				2" SP125C
1+75.00	2+00.00	TEMP @ 10TH ST			12.8		8				2" TO 4" SP125C
2+00.00	2+21.00	TEMP @ 10TH ST			6.9	10.1	11				2" SP125C; 2" TO 3 3/4" SP190C
2+21.00	2+41.00	TEMP @ 10TH ST			10.0	18.4	16				2" SP125C; 3 3/4" TO 3 1/2" SP190C
4+94.00	5+14.00	TEMP @ 10TH ST			7.8	14.3	13				2" SP125C; 3 1/2" TO 3 3/4" SP190C
5+14.00	5+35.00	TEMP @ 10TH ST			6.9	10.1	11				2" SP125C; 3 3/4" TO 2" SP190C
5+35.00	5+60.00	TEMP @ 10TH ST			12.3		8				4" TO 2" SP125C
5+60.00	5+99.50	TEMP @ 10TH ST			14.0		13				2" SP125C
0+17.62	0+31.89	℄ ENTRT04		3.7			2				5 3/4" TO 1 3/4" BP-1
2+40.94	2+73.05	TEMP @ RAMP S			6.9	11.5	13				1 3/4" SP125C; 3 3/4" TO 2" SP190C
2+73.05	3+20.94	TEMP @ RAMP S			16.1		11				3 3/4" TO 1 3/4" SP125C
3+20.94	3+79.33	TEMP @ RAMP S			12.5		13				1 3/4" SP125C
8+31.13	8+54.13	TEMP @ CHESNUT			22.2		14				2' TO 4" SP125C
8+54.13	8+70.93	TEMP @ CHESNUT			7.8	11.0	13				2" SP125C; 2" TO 3 1/2" SP190C
8+70.93	8+93.89	TEMP @ CHESNUT			10.1	17.9	17				2" SP125C; 3 1/2" SP190C
10+81.59	11+06.23	TEMP @ CHESNUT			10.2	19.4	17				2" SP125C; 3 1/2' TO 4" SP190C
11+06.23	11+38.58	TEMP @ CHESNUT			12.3	18.8	20				2" SP125C; 4" TO 2" SP190C
11+38.58	11+69.58	TEMP @ CHESNUT			21.0		13				4" TO 2" SP125C
			SUB-TOTAL	3.7	391.0	240.0	425.0	24.0	24.0	0.1	
			PAY-TOTAL	3.7	391.0	240.0	425.0	24.0	(1)	(1)	

(1) - SEE SUMMARY TABLE FOR PAY-TOTALS

ENTRANCES

STA	STA	LOCATION	SIDE	8" PAVED APPROACH SY	4" TYPE 5 AGGREGATE BASE SY	6" SUBGRADE COMPACTION 100FT	6" CONCRETE MEDIAN STRIP SY	REMARKS
0+00.00	0+16.01	℄ ENTRT01		43.3	43	0.2		8TH STREET
0+00.00	0+11.16	℄ ENTRT02		23.8	24	0.1		9TH STREET
0+00.00	0+18.13	℄ ENTLT01		48.3	48	0.2		9TH STREET
0+00.00	0+14.55	℄ ENTLT02		29.0	29	0.1		9TH STREET
0+00.38	0+15.83	℄ ENTRT03		52.2	52	0.2		10TH STREET
0+00.38	0+03.89	℄ ENTRT03	RT				1.6	10TH STREET
0+00.00	0+13.12	℄ ENTLT04		20.4	20	0.1		10TH STREET
0+00.00	0+19.13	℄ ENTLT03		37.4	37	0.2		10TH STREET
0+00.00	0+12.68	℄ ENTRT05		31.1	31	0.1		CHESTNUT AVENUE
			SUB-TOTALS	285.5	284	1.2	1.6	
			PAY-TOTALS	285.5	(1)	(1)	1.6	

(1) - SEE SUMMARY TABLE FOR PAY-TOTALS

QUANTITY SHEET
3 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 1/10/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	3

COUNTY JACKSON
JOB NO. J4I3198
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)

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

COLD MILLING

STA	STA	LOCATION	SIDE	MODIFIED COLDMILLING DEPTH TRANSITION SY	COLDMILLING BIT. PAVE. FOR REMOVAL OF SURFACING (3" OR LESS) SY	REMARKS
2+24.00	3+09.00	TEMP ℄ 8TH ST			278	2"
3+09.00	3+29.00	TEMP ℄ 8TH ST		98		2" TO 0"
7+78.00	7+98.00	TEMP ℄ 8TH ST		97		0" TO 2"
7+98.00	8+89.03	TEMP ℄ 8TH ST			299	2"
0+02.40	0+25.50	TEMP ℄ HARRISON	LT		40	2"
0+02.48	0+28.98	TEMP ℄ HARRISON	RT		49	2"
2+09.90	2+86.00	TEMP ℄ 9TH ST			259	2"
2+86.00	3+06.00	TEMP ℄ 9TH ST		98		2" TO 0"
5+70.00	5+97.15	TEMP ℄ 9TH ST		133		0" TO 2"
5+97.15	6+65.48	TEMP ℄ 9TH ST			232	2"
1+30.96	2+21.00	TEMP ℄ 10TH ST			298	2"
2+21.00	2+41.00	TEMP ℄ 10TH ST		96		2" TO 0"
4+94.00	5+14.00	TEMP ℄ 10TH ST		98		0" TO 2"
5+14.00	5+99.50	TEMP ℄ 10TH ST			266	2"
0+17.62	0+27.62	℄ ENTRT04		17		1" TO 0"
2+87.13	3+79.33	TEMP ℄ RAMP S		206		0" TO 1 3/4"
8+31.13	8+70.93	TEMP ℄ CHESNUT			207	2"
8+70.93	8+93.89	TEMP ℄ CHESNUT		112		2" TO 0"
10+81.59	11+06.23	TEMP ℄ CHESNUT		120		0" TO 2"
11+06.23	11+69.58	TEMP ℄ CHESNUT			240	2"
			PAY-TOTALS	1075	2168	

SUMMARY OF 4" TYPE 5 AGGREGATE

PAVEMENT	24	SY
ENTRANCES	284	SY
CURB & GUTTER	363	SY
PAY-TOTAL	671	

MOBILIZATION

1 LUMP SUM

CONTRACTOR FURNISHED SURVEYING AND STAKING

1 LUMP SUM

SUMMARY OF 6" SUBGRADE COMPACTION

PAVEMENT	0.1	100LF
ENTRANCES	1.2	100LF
PAY-TOTAL	1	

FENCE

STA	STA	LOCATION	SIDE	60" CHAIN-LINK FENCE LF	72" ORNAMENTAL STEEL FENCE LF	84" BLACK VINYL CHAIN-LINK FENCE LF	REMARKS
		AREA A		10			ATTACH TO EX. FENCE POST
8+06.74	8+91.40	TEMP. ℄ 8TH	LT		89		
10+79.75	10+80.72	TEMP. ℄ EHESTNUT	LT			4	ATTACH TO EX. FENCE POST
			PAY-TOTALS	10	89	4	

MGS GUARDRAIL

STA	STA	LOCATION	SIDE	MGS BRIDGE APPROACH TRANSITION SECTION (EXTENDED CURB) EACH	MGS GUARDRAIL 6FT. POSTS 1' - 6 3/4" SPACING LF	REMARKS
2+30.43	2+67.30	TEMP ℄ RAMP S	RT	1		
2+67.30	3+20.72	TEMP ℄ RAMP S	RT		65	
3+20.72	3+24.44	TEMP ℄ RAMP S	RT	1		
			PAY-TOTALS	2	65	

DECORATIVE ROCK

STA	STA	LOCATION	SIDE	DECORATIVE ROCK SY	REMARKS
10+84.25	11+24.38	TEMP. ℄ CHESTNUT	LT.	29	
			PAY-TOTALS	29	

ADJUSTING WATER VALVE AND MANHOLES

STATION	OFFSET	LOCATION	SIDE	ADJUSTING WATER VALVES AND MANHOLES EACH	REMARKS
2+50.52	25.64'	TEMP. ℄ 8TH	LT.	1	WATER METER
8+15.85	7.36'	TEMP. ℄ 8TH	RT.	1	SANITARY MANHOLE
8+18.79	11.60'	TEMP. ℄ 8TH	RT.	1	WATER VALVE
8+22.92	8.12'	TEMP. ℄ 8TH	RT.	1	WATER VALVE
2+53.50	10.40'	TEMP. ℄ 9TH	RT.	1	WATER VALVE
6+15.45	9.95'	TEMP. ℄ 9TH	RT.	1	WATER VALVE
2+24.75	0.05'	TEMP. ℄ 10TH	RT.	1	SANITARY MANHOLE
11+45.86	9.30'	TEMP. ℄ CHESTNUT	RT.	1	WATER VALVE
			PAY-TOTAL	8	

NON-CONTRACTUAL

STATION	OFFSET	LOCATION	SIDE	ELECTRIC SERVICE CONNECTION EACH	REMARKS
2+83.52	27.81'	TEMP. ℄ 8TH	RT.	1	LIGHITNG CONTROLLER #1
2+45.24	27.05'	TEMP. ℄ 9TH	RT.	1	LIGHITNG CONTROLLER #2
1+65.89	24.03'	TEMP. ℄ 10TH	RT.	1	LIGHITNG CONTROLLER #3
			PAY-TOTAL	3	

REMOVABLE STEEL CURB

STATION	OFFSET	LOCATION	SIDE	REMOVABLE STEEL CURB EACH	REMARKS
11+10.32	17.53'	TEMP. ℄ CHESTNUT	RT.	1	KCP&L MANHOLE
			PAY-TOTAL	1	

QUANTITY SHEET
4 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 1/10/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	3

COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

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

CURB, CURB & GUTTER, AND GUTTER

STA	STA	LOCATION	SIDE	6" MOD. CURB & GUTTER TYPE B LF	4" MOUNTABLE CURB & GUTTER LF	6" MOD. CURB & GUTTER TYPE B-1 LF	4" MOD. CURB & GUTTER TYPE B-2 LF	6" INTEGRAL CURB (6" AND UNDER) TYPE B LF	4" CONCRETE CURB TYPE S LF	CONCRETE GUTTER TYPE B LF	4" TYPE 5 AGGREGATE BASE SY	REMARKS
2+24.00	3+09.00	TEMP ℄ 8TH ST	LT	85							28	
2+24.00	2+51.79	TEMP ℄ 8TH ST	RT	28							9	
2+83.49	3+09.00	TEMP ℄ 8TH ST	RT	26							9	
3+09.00	3+29.00	TEMP ℄ 8TH ST	LT					20				VARIABLE DEPTH / VARIABLE HIEGHT
3+09.00	3+29.00	TEMP ℄ 8TH ST	RT					20				VARIABLE DEPTH / VARIABLE HIEGHT
7+78.00	7+98.00	TEMP ℄ 8TH ST	LT					20				VARIABLE DEPTH / VARIABLE HIEGHT
7+78.00	7+96.27	TEMP ℄ 8TH ST	RT					19				VARIABLE DEPTH / VARIABLE HIEGHT
7+98.00	8+89.03	TEMP ℄ 8TH ST	LT	91							30	
7+98.00	0+01.67	TEMP ℄ 8TH ST / TEMP ℄ HARRISON	RT / LT	25							8	
0+02.40	8+44.68	TEMP ℄ HARRISON / TEMP ℄ 8TH ST	RT / RT	34							11	
8+44.68	8+89.03	TEMP ℄ 8TH ST	RT	45							15	
2+09.90	2+52.77	TEMP ℄ 9TH ST	LT	43							14	
2+83.77	2+86.00	TEMP ℄ 9TH ST	LT	2							1	
2+11.75	2+40.15	TEMP ℄ 9TH ST	RT		29						10	
2+40.15	2+86.00	TEMP ℄ 9TH ST	RT	49							16	
2+86.00	3+06.00	TEMP ℄ 9TH ST	LT					20				VARIABLE DEPTH / VARIABLE HIEGHT
2+86.00	3+06.00	TEMP ℄ 9TH ST	RT					20				VARIABLE DEPTH / VARIABLE HIEGHT
5+75.52	5+97.15	TEMP ℄ 9TH ST	LT					22				VARIABLE DEPTH / VARIABLE HIEGHT
5+64.48	5+97.15	TEMP ℄ 9TH ST	RT					33				VARIABLE DEPTH / VARIABLE HIEGHT
5+97.15	6+08.03	TEMP ℄ 9TH ST	LT	11							4	
6+32.53	6+65.48	TEMP ℄ 9TH ST	LT	33							11	
5+97.15	6+65.48	TEMP ℄ 9TH ST	RT	69							23	
1+70.00	1+85.74	TEMP ℄ 10TH ST	LT				16				5	
1+85.74	1+99.74	TEMP ℄ 10TH ST	LT		14						5	
1+99.74	2+07.60	TEMP ℄ 10TH ST	LT				8				3	
1+30.96	1+83.46	TEMP ℄ 10TH ST	RT				53				18	
2+31.99	2+41.00	TEMP ℄ 10TH ST	LT					13				VARIABLE DEPTH / VARIABLE HIEGHT
4+94.00	5+14.00	TEMP ℄ 10TH ST	LT					20				VARIABLE DEPTH / VARIABLE HIEGHT
4+94.00	5+14.00	TEMP ℄ 10TH ST	RT					20				VARIABLE DEPTH / VARIABLE HIEGHT
5+14.00	5+99.50	TEMP ℄ 10TH ST	LT	86							29	
5+14.00	5+99.50	TEMP ℄ 10TH ST	RT	86							29	
2+40.94	3+20.94	TEMP ℄ RAMP S	LT						80			
2+40.94	3+20.94	TEMP ℄ RAMP S	RT						80			
8+42.17	8+70.93	TEMP ℄ CHESNUT	LT			35					8	
8+42.17	8+70.93	TEMP ℄ CHESNUT	RT			35					8	
8+70.93	8+91.60	TEMP ℄ CHESNUT	LT					21				VARIABLE DEPTH / VARIABLE HIEGHT
8+70.93	8+96.18	TEMP ℄ CHESNUT	RT					25				VARIABLE DEPTH / VARIABLE HIEGHT
10+77.46	11+06.23	TEMP ℄ CHESNUT	LT					29				VARIABLE DEPTH / VARIABLE HIEGHT
10+85.71	11+06.23	TEMP ℄ CHESNUT	RT					21				VARIABLE DEPTH / VARIABLE HIEGHT
11+06.23	11+69.58	TEMP ℄ CHESNUT	LT			64					14	
11+06.23	11+17.57	TEMP ℄ CHESNUT	RT			11					2	
11+47.37	11+69.58	TEMP ℄ CHESNUT	RT			22					5	
10+72.08	10+48.67	TEMP ℄ CHESNUT	LT							287	48	BEHIND EX. RETAINING WALL A-292-4
			SUB-TOTAL	713	43	167	77	323	160	287	363	
			PAY-TOTAL	713	43	167	77	323	160	287	(1)	

(1) - SEE SUMMARY TABLE FOR PAY-TOTAL

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
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DATE PREPARED 1/10/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	3

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE | DESCRIPTION

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

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SIDEWALK, CURB RAMP, TRUNCATED DOMES, AND CONCRETE MEDIAN

STA	STA	LOCATION	SIDE	4" CONCRETE SIDEWALK SY	INTEGRAL CURB (6" AND UNDER) TYPE A LF	CONCRETE CURB RAMP SY	TRUNCATED DOMES SF	4" TINTED & STAMPED CONC. MEDIAN SY	REMARKS
2+24.00	3+29.00	TEMP ℄ 8TH ST	LT	118.5					
3+19.68	3+29.00	TEMP ℄ 8TH ST	LT					4.6	
2+24.00	2+44.11	TEMP ℄ 8TH ST	RT	13.6					
2+44.11	2+56.99	TEMP ℄ 8TH ST	RT			7.8			
2+78.99	2+91.49	TEMP ℄ 8TH ST	RT			7.9			
2+91.49	3+29.00	TEMP ℄ 8TH ST	RT	25.0					
3+19.74	3+29.00	TEMP ℄ 8TH ST	RT					4.5	
7+78.00	8+89.03	TEMP ℄ 8TH ST	LT	77.7					
7+78.00	8+14.47	TEMP ℄ 8TH ST	LT					18.0	
7+78.00	7+85.38	TEMP ℄ 8TH ST	RT	4.1					
7+85.38	7+98.85	TEMP ℄ 8TH ST	RT			8.5	10		
7+78.00	7+85.90	TEMP ℄ 8TH ST	RT					2.7	
7+82.18	7+97.71	TEMP ℄ 8TH ST	RT					5.7	
0+01.67	0+07.98	TEMP ℄ HARRISON	LT	4.6					
0+07.98	0+15.98	TEMP ℄ HARRISON	LT			5.6			
0+02.40	0+04.23	TEMP ℄ HARRISON	RT	1.6					
0+04.23	0+15.98	TEMP ℄ HARRISON	RT			7.6			
0+04.23	0+15.98	TEMP ℄ HARRISON	RT					3.7	
8+35.19	8+41.31	TEMP ℄ 8TH ST	RT			3.2	10		
8+41.31	8+52.43	TEMP ℄ 8TH ST	RT	9.6					
8+45.64	8+52.43	TEMP ℄ 8TH ST	RT		8				2" CURB IN SIDEWALK
8+52.43	8+60.43	TEMP ℄ 8TH ST	RT			6.6			
8+60.43	8+89.03	TEMP ℄ 8TH ST	RT	24.4					
8+36.31	8+47.83	TEMP ℄ 8TH ST	RT					4.5	
2+09.90	2+44.31	TEMP ℄ 9TH ST	LT	24.2					
2+44.31	2+57.27	TEMP ℄ 9TH ST	LT			8.0			
2+79.27	2+91.79	TEMP ℄ 9TH ST	LT			7.9			
2+91.79	3+06.00	TEMP ℄ 9TH ST	LT	9.5					
2+96.69	3+06.00	TEMP ℄ 9TH ST	LT					3.6	
2+11.75	2+14.75	TEMP ℄ 9TH ST	RT			3.5	21		
2+33.25	2+42.56	TEMP ℄ 9TH ST	RT			6.1	10		
2+33.25	2+42.56	TEMP ℄ 9TH ST	RT					3.2	
2+42.40	3+06.00	TEMP ℄ 9TH ST	RT	42.1					
2+96.71	3+06.00	TEMP ℄ 9TH ST	RT					3.6	
5+75.69	6+00.03	TEMP ℄ 9TH ST	LT	15.6					
6+00.03	6+12.53	TEMP ℄ 9TH ST	LT			7.9			
5+77.64	5+94.45	TEMP ℄ 9TH ST	LT					6.0	
6+28.03	6+41.00	TEMP ℄ 9TH ST	LT			13.1			
6+32.53	6+65.48	TEMP ℄ 9TH ST	LT	29.0					
5+64.31	6+65.48	TEMP ℄ 9TH ST	RT	67.9					
5+61.20	5+73.71	TEMP ℄ 9TH ST	RT					4.7	
1+70.00	1+85.74	TEMP ℄ 10TH ST	LT	14.7					
1+99.74	2+17.15	TEMP ℄ 10TH ST	LT	19.0					
1+99.74	2+17.15	TEMP ℄ 10TH ST	LT			5.6	12		
2+32.49	2+41.00	TEMP ℄ 10TH ST	LT			4.8	10		
0+00.00	0+08.34	℄ SIDEWALK01		7.6					
1+30.96	1+75.46	TEMP ℄ 10TH ST	RT	34.0					
1+75.46	1+91.54	TEMP ℄ 10TH ST	RT			6.9	15		
4+94.00	5+99.50	TEMP ℄ 10TH ST	LT	75.2					
4+94.00	5+03.49	TEMP ℄ 10TH ST	LT					4.7	
4+94.00	5+99.50	TEMP ℄ 10TH ST	RT	75.2					
4+94.00	5+03.49	TEMP ℄ 10TH ST	RT					4.7	
8+44.58	8+57.45	TEMP ℄ CHESNUT	LT			6.2	10		
8+57.45	8+91.53	TEMP ℄ CHESNUT	LT	22.2					
8+49.45	8+70.12	TEMP ℄ CHESNUT	LT					3.0	
8+82.30	8+90.74	TEMP ℄ CHESNUT	LT					2.6	
8+45.09	8+59.43	TEMP ℄ CHESNUT	RT			5.8	13		
8+59.43	8+97.05	TEMP ℄ CHESNUT	RT	24.1					
8+51.43	8+69.56	TEMP ℄ CHESNUT	RT					2.0	
8+75.96	8+97.50	TEMP ℄ CHESNUT	RT					6.3	
10+75.88	11+69.58	TEMP ℄ CHESNUT	LT	68.2					
10+75.07	10+84.25	TEMP ℄ CHESNUT	LT					3.3	
11+21.38	11+35.00	TEMP ℄ CHESNUT	LT					0.8	
10+85.83	11+09.07	TEMP ℄ CHESNUT	RT	15.0					
11+09.07	11+22.07	TEMP ℄ CHESNUT	RT			8.2			
10+87.29	10+96.55	TEMP ℄ CHESNUT	RT					3.3	
11+42.19	11+55.06	TEMP ℄ CHESNUT	RT			5.1			
11+54.57	11+69.58	TEMP ℄ CHESNUT	RT	8.7					
			PAY-TOTALS	831.3	8	136.3	111	95.5	

QUANTITY SHEET
6 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
1/10/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	3

COUNTY
JACKSON

JOB NO.
J4I3198

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)

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

SIGNING

SIGN NUMBER	STA	LOCATION	SIDE	RELOCATION OF EXISTING SIGNING ASSEMBLES EACH	REMARKS
1	2+46.23	TEMP ℄ 8TH ST	LT	1	ONE WAY RIGHT, NO PARKING ANYTIME
2	3+00.87	TEMP ℄ 8TH ST	LT	1	NO PARKING ANYTIME
6	8+16.08	TEMP ℄ 8TH ST	LT	1	ONE WAY RIGHT, NO PARKING ANYTIME
9	0+04.30	TEMP ℄ 8TH ST	RT	1	STOP, ONE WAY RIGHT, E 8TH ST, HARRISON ST
11	6+60.00	TEMP ℄ 9TH ST	LT	1	NO PARKING ANYTIME LEFT NO PARKING 7AM-9AM MON THRU FRI RIGHT ARROW
13	5+10.38	TEMP ℄ 10TH ST	LT	1	NO PARKING ANYTIME LEFT ARROW NO STOPPING STANDING OR PARKING RIGHT ARROW
			PAY-TOTAL	6	

PAVEMENT MARKING

STA	STA	LOCATION	SIDE	4″ WHITE STD. WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS LF	4″ YELLOW STD. WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS LF	6″ WHITE HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS LF	6″ YELLOW HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS LF	REMARKS
2+24.00	7+98.00	TMP.℄ 8TH	LT & RT	290				I.W.
7+98.00	889+.03	TMP.℄ 8TH	LT	30				I.W.
2+09.90	6+65.48	TMP.℄ 9TH	LT & RT	230				I.W.
1+30.96	5+99.50	TMP.℄ 10TH	LT & RT	240				I.W.
0+47.08	3+79.33	TMP.℄ RAMP S	LT				340	EDGELINE
0+47.08	3+79.33	TMP.℄ RAMP S	CTR			340		EDGELINE
8+51.28	11+69.58	TMP.℄ CHESTNUT	CTR		640			D.Y
			PAY-TOTALS	790	640	340	340	

QUANTITY SHEET
7 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 1/9/2018
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 3
COUNTY JACKSON
JOB NO. J4I3198
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)

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TEMPORARY EROSION CONTROL

STA	STA	LOCATION	SIDE	CURB INLET CHECK EACH	SILT FENCE LF	SEDIMENT REMOVAL CY	REMARKS
2+20.49		TEMP. ℄ 8TH	LT	1		1	BEFORE CONSTRUCTION
2+20.49		TEMP. ℄ 8TH	RT	1		1	BEFORE CONSTRUCTION
8+00.30		TEMP. ℄ 8TH	RT	1		1	BEFORE CONSTRUCTION
8+33.93		TEMP. ℄ 8TH	RT	1		1	BEFORE CONSTRUCTION
8+34.84		TEMP. ℄ 8TH	LT	1		1	BEFORE CONSTRUCTION
8+44.50		TEMP. ℄ 8TH	RT	1		1	BEFORE CONSTRUCTION
1+90.01		TEMP. ℄ 9TH	LT	1		1	BEFORE CONSTRUCTION
1+90.01		TEMP. ℄ 9TH	RT	1		1	BEFORE CONSTRUCTION
6+00.23		TEMP. ℄ 9TH	LT	1		1	BEFORE CONSTRUCTION
6+00.09		TEMP. ℄ 9TH	RT	1		1	BEFORE CONSTRUCTION
1+26.56		TEMP. ℄ 10TH	LT	1		1	BEFORE CONSTRUCTION
1+26.56		TEMP. ℄ 10TH	RT	1		1	BEFORE CONSTRUCTION
5+33.03		TEMP. ℄ 10TH	LT	1		1	BEFORE CONSTRUCTION
5+33.08		TEMP. ℄ 10TH	RT	1		1	BEFORE CONSTRUCTION
5+64.98		TEMP. ℄ 10TH	LT	1		1	BEFORE CONSTRUCTION
5+65.23		TEMP. ℄ 10TH	RT	1		1	BEFORE CONSTRUCTION
5+94.76		TEMP. ℄ 10TH	LT	1		1	BEFORE CONSTRUCTION
2+05.03	3+87.61	TEMP. ℄ RAMP S	RT		203	2	BEFORE CONSTRUCTION
8+46.07		TEMP. ℄ CHESTNUT	LT	1		1	BEFORE CONSTRUCTION
8+45.94		TEMP. ℄ CHESTNUT	RT	1		1	BEFORE CONSTRUCTION
11+69.58		TEMP. ℄ CHESTNUT	LT	1		1	BEFORE CONSTRUCTION
11+69.58		TEMP. ℄ CHESTNUT	RT	1		1	BEFORE CONSTRUCTION
2+46.69		TEMP. ℄ 8TH	RT	1		1	DURING CONSTRUCTION
2+80.49		TEMP. ℄ 8TH	LT	1		1	DURING CONSTRUCTION
2+88.49		TEMP. ℄ 8TH	LT	1		1	DURING CONSTRUCTION
2+88.49		TEMP. ℄ 8TH	RT	1		1	DURING CONSTRUCTION
2+89.12		TEMP. ℄ 8TH	RT	1		1	DURING CONSTRUCTION
0+05.67		TEMP. ℄ HARRISON	LT	1		1	DURING CONSTRUCTION
0+09.40		TEMP. ℄ HARRISON	RT	1		1	DURING CONSTRUCTION
0+10.67		TEMP. ℄ HARRISON	LT	1		1	DURING CONSTRUCTION
8+35.93		TEMP. ℄ 8TH	RT	1		1	DURING CONSTRUCTION
8+36.95		TEMP. ℄ 8TH	LT	1		1	DURING CONSTRUCTION
8+42.95		TEMP. ℄ 8TH	LT	1		1	DURING CONSTRUCTION
8+46.16		TEMP. ℄ 8TH	RT	1		1	DURING CONSTRUCTION
8+54.13		TEMP. ℄ 8TH	RT	1		1	DURING CONSTRUCTION
6+00.22		TEMP. ℄ 9TH	LT	1		1	DURING CONSTRUCTION
6+05.22		TEMP. ℄ 9TH	LT	1		1	DURING CONSTRUCTION
6+00.09		TEMP. ℄ 9TH	RT	1		1	DURING CONSTRUCTION
6+05.09		TEMP. ℄ 9TH	RT	1		1	DURING CONSTRUCTION
5+33.03		TEMP. ℄ 10TH	LT	1		1	DURING CONSTRUCTION
5+33.03		TEMP. ℄ 10TH	RT	1		1	DURING CONSTRUCTION
5+41.03		TEMP. ℄ 10TH	LT	1		1	DURING CONSTRUCTION
5+41.03		TEMP. ℄ 10TH	RT	1		1	DURING CONSTRUCTION
5+64.93		TEMP. ℄ 10TH	LT	1		1	DURING CONSTRUCTION
5+65.11		TEMP. ℄ 10TH	RT	1		1	DURING CONSTRUCTION
5+86.59		TEMP. ℄ 10TH	RT	1		1	DURING CONSTRUCTION
5+86.68		TEMP. ℄ 10TH	LT	1		1	DURING CONSTRUCTION
5+94.68		TEMP. ℄ 10TH	LT	1		1	DURING CONSTRUCTION
11+18.20		TEMP. ℄ CHESTNUT	LT	1		1	DURING CONSTRUCTION
10+48.67	10+72.80	TEMP. ℄ CHESTNUT	LT		287	3	BEFORE CONSTRUCTION
			PAY-TOTALS	48	490	53	

SEEDING

STA	STA	LOCATION	SIDE	SEEDING COOL SEASON MIXTURES ACRE	REMARKS
2+75.14	3+19.68	TEMP. ℄ 8TH	LT	0.01	DURING CONSTRCTION
2+24.00	2+56.99	TEMP. ℄ 8TH	RT	0.01	DURING CONSTRCTION
2+78.99	3+19.71	TEMP. ℄ 8TH	RT	0.01	DURING CONSTRCTION
0+01.67	0+16.86	TEMP. ℄ HARRISON	LT	0.01	DURING CONSTRCTION
8+14.68	8+89.13	TEMP. ℄ 8TH	LT	0.02	DURING CONSTRCTION
8+45.82	8+78.64	TEMP. ℄ 8TH	RT	0.01	DURING CONSTRCTION
2+09.90	2+57.27	TEMP. ℄ 9TH	LT	0.01	DURING CONSTRCTION
2+33.25	2+96.71	TEMP. ℄ 9TH	RT	0.01	DURING CONSTRCTION
2+79.27	2+96.69	TEMP. ℄ 9TH	LT	0.01	DURING CONSTRCTION
5+94.45	6+12.53	TEMP. ℄ 9TH	LT	0.01	DURING CONSTRCTION
5+73.71	6+65.49	TEMP. ℄ 9TH	RT	0.02	DURING CONSTRCTION
1+30.96	1+70.96	TEMP. ℄ 10TH	RT	0.01	DURING CONSTRCTION
1+83.46	1+91.54	TEMP. ℄ 10TH	RT	0.01	DURING CONSTRCTION
5+03.49	5+99.50	TEMP. ℄ 10TH	LT	0.03	DURING CONSTRCTION
5+03.49	5+99.50	TEMP. ℄ 10TH	LT	0.03	DURING CONSTRCTION
2+29.90	3+70.97	TEMP. ℄ RAMP S	RT	0.04	DURING CONSTRCTION
8+44.58	8+82.63	TEMP. ℄ CHESTNUT	LT	0.01	DURING CONSTRCTION
10+48.67	10+72.08	TEMP. ℄ CHESTNUT	LT	0.07	DURING CONSTRCTION
10+96.55	11+22.07	TEMP. ℄ CHESTNUT	RT	0.01	DURING CONSTRCTION
11+42.19	11+62.23	TEMP. ℄ CHESTNUT	RT	0.01	DURING CONSTRCTION
			SUB-TOTALS	0.35	
			PAY-TOTALS	0.4	

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	3

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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

DESCRIPTION | DATE

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

PRECAST CONCRETE DROP INLETS

STRUCTURE NO.	STA	OFFSET	LOCATION	BUILD DEPTH FEET	PIPE OPENINGS	PC DI TYPE D 2′ X 2′ FEET	PC DI TYPE S-2 3′ X 2′ FEET	CURVED VANE GRATE AND GRAME 2′ X 2′ EACH	GRATE AND BEARING PLATE 3′-1″ X 2′-1″ EACH	CLASS 3 EXCAVATION CY
DI-100	2+80.49	15.00′ LT.	TEMP. ℄ 8TH	3.50	1-12″	4		1		6
DI-101	2+88.49	15.00′ LT.	TEMP. ℄ 8TH	4.25	2-12″	4		1		7
DI-102	2+88.49	15.00′ RT.	TEMP. ℄ 8TH	4.75	3-12″	5		1		7
DI-103	2+89.12	25.44′ RT.	TEMP. ℄ 8TH	4.00	1-12″		4		1	8
DI-104	2+46.69	17.59′ RT.	TEMP. ℄ 8TH	3.64	2-12″, 1-8″	4		1		6
DI-200	8+42.95	15.00′ LT.	TEMP. ℄ 8TH	3.50	1-12″	4		1		6
DI-201	8+36.95	15.00′ LT.	TEMP. ℄ 8TH	3.95	2-12″	4		1		7
DI-202	8+54.13	15.91′ RT.	TEMP. ℄ 8TH	3.50	1-12″	4		1		6
DI-203	8+46.16	15.17′ RT.	TEMP. ℄ 8TH	4.00	2-12″, 1-15″	4		1		7
DI-204	8+35.93	19.32′ RT.	TEMP. ℄ 8TH	3.50	1-12″	4		1		6
DI-205	0+09.40	16.83′ RT.	TEMP. ℄ HARRISON	3.75	1-15″	4		1		6
DI-206	0+05.67	16.50′ LT.	TEMP. ℄ HARRISON	4.75	1-12″	5		1		7
DI-207	0+10.67	16.50′ LT.	TEMP. ℄ HARRISON	4.88	2-12″	5		1		7
DI-300	6+05.09	16.00′ RT.	TEMP. ℄ 9TH	3.75	1-12″	4		1		6
DI-301	6+00.09	16.00′ RT.	TEMP. ℄ 9TH	3.79	2-12″	4		1		6
DI-302	6+05.22	16.00′ LT.	TEMP. ℄ 9TH	4.25	1-12″	4		1		6
DI-303	6+00.22	16.00′ LT.	TEMP. ℄ 9TH	4.70	3-12″	5		1		7
DI-400	5+33.03	15.00′ LT.	TEMP. ℄ 10TH	3.50	1-12″	4		1		6
DI-401	5+41.03	15.00′ LT.	TEMP. ℄ 10TH	3.75	2-12″	4		1		6
DI-402	5+64.93	15.25′ LT.	TEMP. ℄ 10TH	4.85	1-12″, 2-15″	5		1		8
DI-403	5+86.68	16.35′ LT.	TEMP. ℄ 10TH	3.50	2-15″	4		1		6
DI-404	5+94.68	16.76′ LT.	TEMP. ℄ 10TH	3.50	1-15″	4		1		6
DI-405	5+33.03	15.00′ RT.	TEMP. ℄ 10TH	3.50	1-15″	4		1		6
DI-406	5+41.03	15.00′ RT.	TEMP. ℄ 10TH	3.75	2-12″	4		1		6
DI-407	5+65.11	15.31′ RT.	TEMP. ℄ 10TH	5.54	1-12″, 3-15″	6		1		9
DI-408	5+86.59	16.62′ RT.	TEMP. ℄ 10TH	3.50	1-15″	4		1		6
					SUB-TOTALS	107	4	25	1	170
					PAY-TOTALS	107	4	25	1	(1)

(1) – SEE SUMMARY TABLE FOR PAY-TOTAL

PRECAST CONCRETE MANHOLES

STRUCTURE NO.	STA	OFFSET	LOCATION	BUILD DEPTH FEET	PIPE OPENINGS	PC MH 48″ DIA. FEET	MANHOLE FRAME & COVER TYPE 4 EACH	CLASS 3 EXCAVATION CY
MH-210	8+37.94	28.99′ RT.	TEMP. ℄ 8TH	6.37	3-12″	6	1	15
					SUB-TOTALS	6	1	15
					PAY-TOTALS	6	1	(1)

(1) – SEE SUMMARY TABLE FOR PAY-TOTAL

REINFORCED CONCRETE PIPE

PIPE NO.	STR. NO. TO STR. NO.	LOCATION	CLASS III RCP 12″ LF	CLASS III RCP 15″ LF	PIPE COLLAR TYPE A EACH	CLASS 3 EXCAVATION CY
P-100	DI-100 TO DI-101	TEMP. ℄ 8TH	6			2
P-101	DI-101 TO DI-102	TEMP. ℄ 8TH	28			16
P-102	DI-102 TO DI-104	TEMP. ℄ 8TH	40			26
P-103	DI-103 TO DI-102	TEMP. ℄ 8TH	8			4
P-104	DI-104 TO EX. 12″ RCP	TEMP. ℄ 8TH	3		1	1
P-200	DI-200 TO DI-201	TEMP. ℄ 8TH	4			1
P-201	DI-201 TO EX. 12″ RCP	TEMP. ℄ 8TH	4		1	2
P-202	DI-202 TO DI-203	TEMP. ℄ 8TH	6			2
P-203	DI-203 TO MH-210	TEMP. ℄ 8TH		14		9
P-204	DI-204 TO DI-203	TEMP. ℄ 8TH	10			5
P-205	DI-205 TO MH-210	TEMP. ℄ HARRISON		4		1
P-206	DI-206 TO DI-207	TEMP. ℄ HARRISON	3			1
P-207	DI-207 TO EX. 12″ RCP	TEMP. ℄ HARRISON	4		1	2
P-210	MH-210 TO EX. 15″ RCP	TEMP. ℄ 8TH		4	1	3
P-300	DI-300 TO DI-301	TEMP. ℄ 9TH	3			1
P-302	DI-302 TO DI-303	TEMP. ℄ 9TH	3			1
P-303	DI-303 TO EX. 12″ RCP	TEMP. ℄ 9TH	6		1	4
P-400	DI-400 TO DI-401	TEMP. ℄ 10TH	6			2
P-401	DI-401 TO DI-402	TEMP. ℄ 10TH	22			14
P-403	DI-403 TO DI-402	TEMP. ℄ 10TH		20		13
P-404	DI-404 TO DI-403	TEMP. ℄ 10TH		6		2
P-405	DI-405 TO DI-406	TEMP. ℄ 10TH	6			2
P-406	DI-406 TO DI-407	TEMP. ℄ 10TH	22			14
P-407	DI-407 TO EX. 15″ RCP	TEMP. ℄ 10TH		7	1	5
P-408	DI-408 TO DI-DI-407	TEMP. ℄ 10TH		20		13
		SUB-TOTALS	184	75	6	146
		PAY-TOTALS	184	75	6	(1)

(1) – SEE SUMMARY TABLE FOR PAY-TOTAL

TRENCH DRAIN SYSTEM

STA	STA	LOCATION	SIDE	4″ TRENCH DRAIN (ESTIMATED) LF	REMARKS
10+85.02	11+68.66	TEMP. ℄ CHESTNUT	LT	83.64	
11+18.20		TEMP. ℄ CHESTNUT	LT	2.36	TEE-IN
11+68.45		TEMP. ℄ CHESTNUT	LT	4.92	90° BEND
1 LUMP SUM					

GROUP B PIPE

PIPE NO.	STR. NO. TO STR. NO.	LOCATION	8″ LF	PIPE COLLAR TYPE B EACH	CLASS 3 EXCAVATION CY
P-105	EX. 8″ PIPE TO DI-104	TEMP. ℄ 8TH	7	1	3
		SUB-TOTALS	7	1	3
		PAY-TOTALS	7	1	(1)

(1) – SEE SUMMARY TABLE FOR PAY-TOTAL

CULVERT CLEANOUT

PIPE NO.	LOCATION	CULVERT CLEANOUT EACH	REMARKS
P-104	TEMP. ℄ 8TH	1	EX. 12″ RCP, 22′
P-201	TEMP. ℄ 8TH	1	EX. 12″ RCP, 30′
P-207	TEMP. ℄ 8TH	1	EX. 12″ RCP, 22′
P-210	TEMP. ℄ 8TH	1	EX. 15″ RCP, 24′
P-301	TEMP. ℄ 9TH	1	EX. 12″ RCP, 40′
P-301	TEMP. ℄ 9TH	1	EX. 12″ RCP, 40′
P-303	TEMP. ℄ 9TH	1	EX. 12″ RCP, 92′
P-402	TEMP. ℄ 10TH	1	EX. 15″ RCP, 36′
P-407	TEMP. ℄ 10TH	1	EX. 15″ RCP, 54′
	PAY-TOTALS	9	

CLASS 3 EXCAVATION SUMMARY

TABLE	CY
PRECAST CONCRETE DROP INLETS	170
PRECAST CONCRETE MANHOLES	15
GROUP B PIPE	3
REINFORCED CONCRETE PIPE	146
PAY-TOTALS	334

QUANTITY SHEET
9 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	3

COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION

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

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

LINEAR GRADING FOR IMPROVEMENTS

STA	OFFSET	STA	OFFSET	LOCATION	LENGTH (STA)	REMARKS
2+24.00	LT.	3+29.00	LT.	TEMP ℄ 8TH	1.1	
2+24.00	RT.	3+29.00	RT.	TEMP ℄ 8TH	1.1	INCLUDES ℄ ENTRTO1
7+78.00	LT.	8+89.03	LT.	TEMP ℄ 8TH	1.1	
7+78.00	RT.	7+89.35	RT.	TEMP ℄ 8TH	0.1	
8+44.68	RT.	8+89.03	RT.	TEMP ℄ 8TH	0.4	
0+01.67	LT.	0+26.48	LT.	TEMP ℄ HARRISON	0.2	
0+02.40	RT.	0+28.98	RT.	TEMP ℄ HARRISON	0.3	
2+09.90	LT.	3+06.00	LT.	TEMP ℄ 9TH	1.0	INCLUDES ℄ ENTLTO1
2+09.90	RT.	3+06.00	RT.	TEMP ℄ 9TH	1.0	INCLUDES ℄ ENTRTO2
5+75.52	LT.	6+65.48	LT.	TEMP ℄ 9TH	0.9	INCLUDES ℄ ENTLTO2
5+64.48	RT.	6+65.48	RT.	TEMP ℄ 9TH	1.0	
1+70.00	LT.	2+41.00	LT.	TEMP ℄ 10TH	0.7	INCLUDES ℄ ENTLTO4 & ℄ ENTLTO3
1+30.96	RT.	2+41.00	RT.	TEMP ℄ 10TH	1.1	INCLUDES ℄ ENTRTO3 & ℄ ENTLTO4
4+94.00	LT.	5+99.50	LT.	TEMP ℄ 10TH	1.1	INCLUDES ℄ SIDEWALKO1
4+94.00	RT.	5+99.50	RT.	TEMP ℄ 10TH	1.1	
2+20.94		2+40.94		TEMP ℄ RAMP S	0.2	
2+40.94	LT.	3+20.94	LT.	TEMP ℄ RAMP S	0.8	
2+40.94	RT.	3+20.94	RT.	TEMP ℄ RAMP S	0.8	
8+31.13	LT.	8+91.60	LT.	TEMP ℄ CHESNUT	0.6	
8+31.13	RT.	8+96.18	RT.	TEMP ℄ CHESNUT	0.7	
10+77.46	LT.	11+69.58	LT.	TEMP ℄ CHESNUT	0.9	
10+85.71	RT.	11+69.58	RT.	TEMP ℄ CHESNUT	0.8	INCLUDES ℄ ENTRTO5
10+72.08	28.21′ LT	10+48.67	313.82′ LT	TEMP ℄ CHESNUT	2.9	LINEAR GRADING FOR GUTTER BEHIND RETAINING WALL
				PAY-TOTAL	19.9	

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
1/9/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	3

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

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

SIGN	SIZE (IN.)	AREA (SQ. FT.)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION
WARNING SIGNS							
W01-1L	48X48	16.00					TURN (SYMBOL LEFT ARROW)
W01-1R	48X48	16.00					TURN (SYMBOL RIGHT ARROW)
W01-2L	48X48	16.00					CURVE (SYMBOL LEFT ARROW)
W01-2R	48X48	16.00					CURVE (SYMBOL RIGHT ARROW)
W01-3L	48X48	16.00					REVERSE TURN (SYMBOL LEFT ARROW)
W01-3R	48X48	16.00					REVERSE TURN (SYMBOL RIGHT ARROW)
W01-4L	48X48	16.00	1	16			REVERSE CURVE (SYMBOL LEFT ARROW)
W01-4R	48X48	16.00					REVERSE CURVE (SYMBOL RIGHT ARROW)
W01-4bL	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS)
W01-bR	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS)
W01-4cL	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS)
W01-4cR	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS)
W01-6	60X30	12.50					HORIZONTAL ARROW (SYMBOL)
W01-6a	72X36	18.00					HORIZONTAL ARROW (SYMBOL ON PERMANENT BARRICADE)
W01-7	60X30	12.50					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
W01-7a	72X36	18.00					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL ON BARRICADE)
W01-8	18X24	3.00					CHEVRON (SYMBOL)
W01-8a	30X36	7.50					CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
W03-1	48X49	16.00					STOP AHEAD (SYMBOL)
W03-2	48X48	16.00	1	16			YIELD AHEAD (SYMBOL)
W03-3	48X48	16.00					SIGNAL AHEAD (SYMBOL)
W03-4	48X48	16.00					BE PREPARED TO STOP
W03-5	48X48	16.00					SPEED LIMIT AHEAD
W04-1AL	48X48	16.00	2	32			MERGE LEFT
W04-1AR	48X48	16.00	2	32			MERGE RIGHT
W04-1L	48X48	16.00					MERGE (SYMBOL FROM LEFT)
W04-1R	48X48	16.00					MERGE (SYMBOL FROM RIGHT)
W05-1	48X48	16.00	1	16			ROAD/BRIDGE/RAMP NARROWS
W05-3	48X48	16.00					ONE LANE BRIDGE
W05-5	48X48	16.00	2	32			NARROW LANES
W06-1	48X48	16.00					DIVIDED HIGHWAY (SYMBOL)
W06-2	48X48	16.00					DIVIDED HIGHWAY END (SYMBOL)
W06-3	48X48	16.00					TWO WAY TRAFFIC (SYMBOL)
W07-3a	30X24	5.00					NEXT XX MILES (PLAQUE)
W08-1	48X48	16.00					BUMP
W08-2	48X48	16.00					DIP
W08-3	48X48	16.00					PAVEMENT ENDS
W08-4	48X48	16.00					SOFT SHOULDER
W08-5	48X48	16.00					SLIPPERY WHEN WET (SYMBOL)
W08-6	48X48	16.00					TRUCK CROSSING WITH FLAGS
W08-6c	48X48	16.00					TRUCK ENTRANCE
W08-7	36X36	9.00					LOOSE GRAVEL
W08-9	48X48	16.00					LOW SHOULDER
W08-11	48X48	16.00					UNEVEN LANES
W08-12	48X48	16.00					NO CENTER LINE
W10-1	42 RND.	9.62					RAILROAD CROSSING
W012-1	24X24	4.00					DOUBLE DOWN ARROW (SYMBOL)
W012-2	48X48	16.00					LOW CLEARANCE (SYMBOL)
W012-2x	24X18	3.00					LOW CLEARANCE (PLAQUE)
W012-2a	84X24	14.00					OVERHEAD LOW CLEARANCE (FEET AND INCHES)
W08-15	48X48	16.00					GROOVED PAVEMENT
W08-15p	30X24	5.00					MOTORCYCLE (PLAQUE)
W08-17	48X48	16.00					SHOULDER DROP-OFF (SYMBOL)
W08-17p	30X24	5.00					SHOULDER DROP-OFF (PLAQUE)
SPECIAL	120X60	50.00					LOW CLEARANCE XX FT XX IN XX MILES AHEAD
SPECIAL	120X60	50.00					WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD
W013-1	30X30	6.25					ADVISORY SPEED (PLAQUE)
W016-2	30X24	5.00					XXX FEET (PLAQUE)
W016-3	30X24	5.00					X MILE (PLAQUE)
W020-1	48X48	16.00	16	256			ROAD/BRIDGE/RAMP WORK AHEAD
W020-2	48X48	16.00	5	80			DETOUR AHEAD
W020-3	48X48	16.00	6	96			ROAD CLOSED AHEAD
W020-4	48X48	16.00	1	16			ONE LANE ROAD AHEAD
W020-5	48X48	16.00	2	32			RIGHT/CENTER/LEFT LANE CLOSED AHEAD

SIGN	SIZE (IN.)	AREA (SQ. FT.)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION
W020-5a	48X48	16.00	2	32			2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
W020-6a	48X48	16.00	2	32			RIGHT/CENTER/LEFT LANE CLOSED
W020-7a	48X48	16.00					FLAGGER (SYMBOL)
W021-2	36X36	9.00					FRESH OIL
W021-5b	48X48	16.00	2	32			SHOULDER WORK AHEAD
W022-1	48X48	16.00					BLASTING ZONE AHEAD
W022-2	42X36	10.50					TURN OFF 2-WAY RADIO AND PHONE
W022-3	42X36	10.50					END BLASTING ZONE
W022-6e	21X15	2.19	2	4.38			WET PAINT (ARROW PIVOTS)
GUIDE SIGNS							
SPECIAL	36X36	9.00					FRESH OIL / LOOSE GRAVEL
E05-1	36X48	12.00	1	12			GORE EXIT
E05-2	48X36	12.00					EXIT OPEN
E05-2a	48X36	12.00					EXIT CLOSED
G020-1	60X24	10.00					ROAD WORK NEXT XX MILES
G020-2	48X24	8.00	4	32			END ROAD WORK
G020-4	36X18	4.50					PILOT CAR FOLLOW ME
SPECIAL	42X30	8.75					PLEASE WAIT FOR PILOT CAR
G020-5aP	36X24	6.00	8	48			WORK ZONE (PLAQUE)
M04-8a	24X18	3.00	4	12			END DETOUR
M04-9L	48X36	12.00					DETOUR (LEFT ARROW)
M04-9R	48X36	12.00					DETOUR (RIGHT ARROW)
M04-10L	48X18	6.00					DETOUR (ARROW LEFT)
M04-10R	48X18	6.00					DETOUR (ARROW RIGHT)
REGULATORY SIGNS							
R1-1	48X48	13.25					STOP
R1-2	48 TRI.	6.93	1	6.93			YIELD
R1-2a	36X36	9.00					TO ONCOMING TRAFFIC (PLAQUE)
R1-3	30X9	1.25					X-WAY (PLAQUE)
R2-1	36X48	12.00	12	144			SPEED LIMIT 4-35 MPH; 4-45 MPH; 4-55 MPH
R3-1	36X36	9.00	1	9			NO RIGHT TURN (SYMBOL)
R3-2	36X36	9.00	1	9			NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00					NO TURNS
R3-4	48X48	16.00					NO U-TURN (SYMBOL)
R3-7L	30X30	6.25					LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25					RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00					DO NOT PASS
R4-2	36X48	12.00					PASS WITH CARE
R4-7aL	36X48	12.00					KEEP LEFT (HORIZONTAL ARROW)
R4-7a	36X48	12.00					KEEP RIGHT (HORIZONTAL ARROW)
R5-1	30X30	6.25					DO NOT ENTER
R5-1a	36X24	6.00					WRONG WAY
R6-1L	48X18	6.00					ONE WAY ARROW (LEFT)
R6-1R	48X18	6.00					ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00					ONE WAY (LEFT)
R6-2R	24X30	5.00					ONE WAY (RIGHT)
R10-6	24X36	6.00					STOP HERE ON RED (45° ARROW)
R11-2	48X30	10.00	10	200			ROAD CLOSED
R11-3a	60X30	12.50					ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50	3	37.5			ROAD CLOSED TO THRU TRAFFIC
S4-4	36X15	3.75					WHEN FLASHING
50 SERIES	48X48	16.00	34	544			DETOUR SIGNS
	57X12	4.67					SPEEDING/PASSING (PLATE)
MISCELLANEOUS SIGNS							
SPECIAL	36X48	12.00					POINT OF PRESENCE
SPECIAL	96X48	32.00					POINT OF PRESENCE
CONST 5-96	96X48	32.00	4	128			BRIDGE IMPROVEMENTS
SPECIAL2	30X24	5.00					TAKE TURNS AT MERGE
SPECIAL3	30X24	5.00					TAKE TURNS
CONST-7-48	48X24	8.00	4	32			RATE OUR WORK ZONE
CONST-7-72	72X36	18.00					RATE OUR WORK ZONE
SPECIAL	48X36	12.00	4	48			WORK ZONE NO PHONE ZONE
616-10.05 CONSTRUCTION SIGNS TOTAL				1887			
616-10.10 RELOCATED SIGNS TOTAL							

EFFECTIVE: 04-01-2016

ITEM NUMBER	TOTAL QTY	DESCRIPTION
6122008		IMPACT ATTENUATOR (8 SAND BARRELS)
6122009		IMPACT ATTENUATOR (9 SAND BARRELS)
6122010		IMPACT ATTENUATOR (10 SAND BARRELS)
6122012		IMPACT ATTENUATOR (12 SAND BARRELS)
6122014		IMPACT ATTENUATOR (14 SAND BARRELS)
6122017		IMPACT ATTENUATOR (17 SAND BARRELS)
6122019		IMPACT ATTENUATOR (19 SAND BARRELS)
6122020		REPLACEMENT SAND BARREL
6122030		IMPACT ATTENUATOR ARRAY (RELOCATION)
6123000A	2	TRUCK MOUNTED ATTENUATOR (TMA)
6161007		SPEED LIMIT & STROBE LIGHT ASSEMBLY
6161008	8	ADVANCED WARNING RAIL SYSTEM
6161009	22	FLAG ASSEMBLY
6121020		CHANNELIZER (DRUM-LIKE)
6161022		CHANNELIZER (CONES)
6161024		CHANNELIZER (TRIM-LINE) WITH LIGHT
6161025	160	CHANNELIZER (TRIM-LINE)
6161026		CHANNELIZER (VERTICAL PANEL)
6161027		CHANNELIZER (VERTICAL PANEL) WITH LIGHT
6161028		CHANNELIZER
6161030		TYPE III MOVEABLE BARRICADE
6161031	36	TYPE III MOVEABLE BARRICADE WITH LIGHT
6161033	42	DIRECTION INDICATOR BARRICADE
6161034		DIRECTION INDICATOR BARRICADE, WITH LIGHT
6161040	3	FLASHING ARROW PANEL
6161047		TYPE III OBJECT MARKER
6161051		WARNING LIGHT, TYPE A
6161052		WARNING LIGHT, TYPE B
6161053		WARNING LIGHT, TYPE C
6161055	42	SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A	4	CHANGEABLE MESSAGE SIGN, W/O COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
6169902	12	ADA COMPLIANT MOVEABLE BARRICADE
6162010		WORK ZONE LIGHTING
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6173600D		CONTRACTOR FURNISHED/RETAINED TEMPORARY CONCRETE TRAFFIC BARRIER, TYPE F
6173602B		CONTRACTOR FURNISHED/COMMISSION RETAINED TEMPORARY CONCRETE TRAFFIC BARRIER, TYPE F
6174000A		TEMPORARY CONCRETE BARRIER HEIGHT TRANSITION
6175010A		RELOCATING TEMPORARY CONCRETE TRAFFIC BARRIER
6176000B		COMMISSION FURNISHED/RETAINED TEMPORARY CONCRETE TRAFFIC BARRIER, TYPE F
6177000B		COMMISSION FURNISHED/RETAINED PRECAST BARRIER HEIGHT TRANSITION
6208065		TEMPORARY RAISED PAVEMENT MARKER
9019400		TEMPORARY LIGHTING
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING
6169901		WORK ZONE INTELLIGENT TRANSPORTATION SYSTEM
6207001		PAVEMENT MARKING REMOVAL
6205301B		PREFORMED REMOVABLE MARKING TAPE / WHITE
6205303B		PREFORMED REMOVABLE MARKING TAPE / YELLOW
6162003		TEMPORARY LONG-TERM RUMBLE STRIPS
6162004		TEMPORARY SHORT-TERM RUMBLE STRIPS

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/26/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	3

COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

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

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

QUANTITY SHEET
11 OF 11

NOTES:
-SEE COORDINATE SHEET FOR ADDITIONAL DETAILS
-SEE SPECIAL SHEETS FOR INTERSECTION/ENTRANCE/ADA DETAILS
-SEE SPECIAL SHEETS FOR PAVEMENT DEPTH TRANSITION DETAILS
-SEE DRAINAGE SHEETS FOR ADDITIONAL DETAILS
-SEE CULVERT SHEETS FOR ADDITIONAL DETAILS
-SEE LIGHTING SHEETS FOR ADDITIONAL DETAILS
-SC – FULL DEPTH VERTICAL SAWCUT

REMOVAL AREA

COLDMILLING AREA

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.

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

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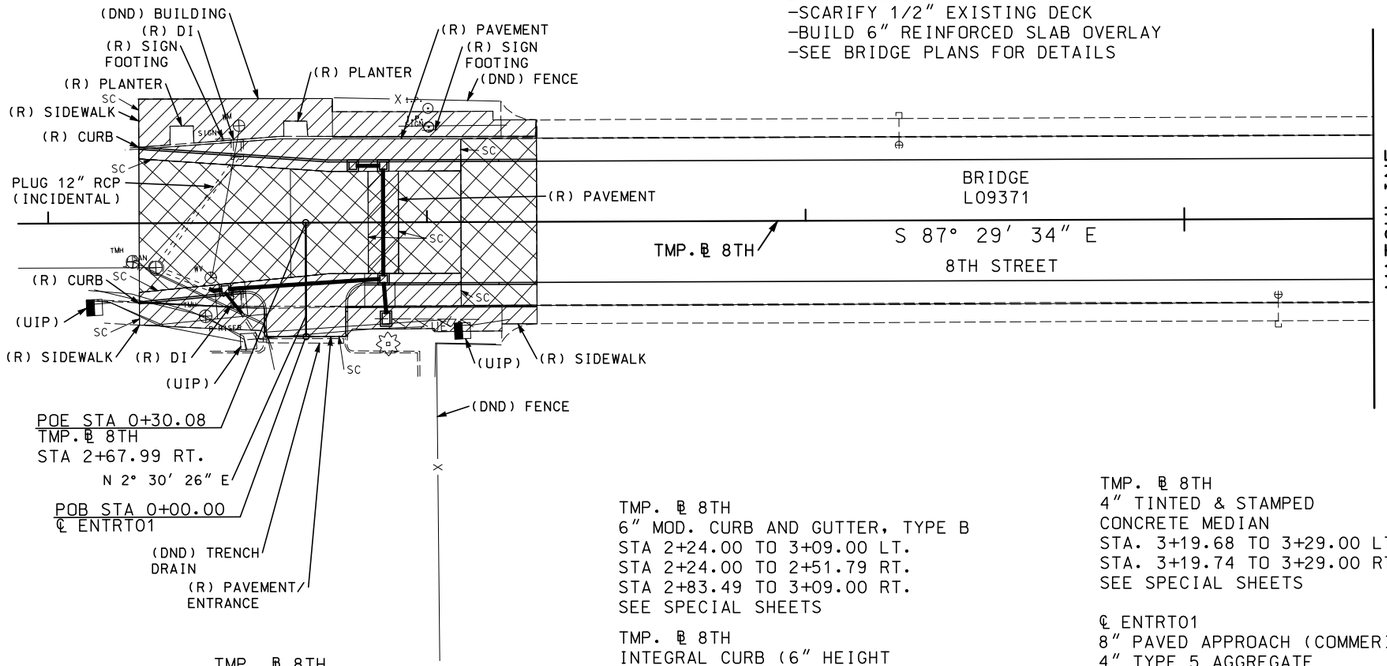


BRIDGE L09371
-SCARIFY 1/2" EXISTING DECK
-BUILD 6" REINFORCED SLAB OVERLAY
-SEE BRIDGE PLANS FOR DETAILS

TMP. ℄ 8TH
8" CONCRETE PAVEMENT
4" TYPE 5 AGGREGATE
6" SUBGRADE COMPACTION
STA 2+84.49 TO 2+92.49
SEQUENCE OF CONSTRUCTION
-2" COLDMILLING
-REMOVE EXISTING CONCRETE PAVEMENT
-PLACE DRAINAGE PIPE
-PLACE CONCRETE PAVEMENT AT SAME GRADE AS EXISTING CONCRETE PAVEMENT
-SUPERPAVE WEDGE

TMP. ℄ 8TH
6" MOD. CURB AND GUTTER, TYPE B
STA 2+24.00 TO 3+09.00 LT.
STA 2+24.00 TO 2+51.79 RT.
STA 2+83.49 TO 3+09.00 RT.
SEE SPECIAL SHEETS

TMP. ℄ 8TH
INTEGRAL CURB (6" HEIGHT AND UNDER), TYPE B
STA 3+09.00 TO 3+29.00 LT.& RT.
SEE SPECIAL SHEETS

TMP. ℄ 8TH
4" CONCRETE SIDEWALK
STA 2+24.00 TO 3+29.00 LT.
STA 2+24.00 TO 2+44.11 RT.
STA 2+91.49 TO 3+29.00 RT.
SEE SPECIAL SHEETS

TMP. ℄ 8TH
CONCRETE CURB RAMP
STA 2+44.11 TO 2+56.99 RT.
STA 2+78.99 TO 2+91.49 RT.
SEE SPECIAL SHEETS

TMP. ℄ 8TH
4" TINTED & STAMPED CONCRETE MEDIAN
STA. 3+19.68 TO 3+29.00 LT.
STA. 3+19.74 TO 3+29.00 RT.
SEE SPECIAL SHEETS

℄ ENTRTO1
8" PAVED APPROACH (COMMERICAL)
4" TYPE 5 AGGREGATE
STA 0+00.00 TO 0+16.01
TMP. ℄ 8TH STA 2+67.99 RT. (NO SKEW)
SEE SPECIAL SHEETS

TMP. ℄ 8TH
MODIFIED COLDMILLING (DEPTH TRANSITION)
STA. 3+09.00 TO 3+29.00
SEE SPECIAL SHEETS

TMP. ℄ 8TH
2" COLDMILLING BIT. PAVE. FOR REMOVAL OF SURFACING
STA. 2+24.00 TO 3+09.00
SEE SPECIAL SHEETS

TMP. ℄ 8TH
ASPHALTIC CONC. MIX.
SP125C PG70-22
STA. 2+24.00 TO 3+29.00
ASPHALTIC CONC. MIX.
SP190C PG70-22
STA. 2+89.00 TO 3+29.00
SEE SPECIAL SHEETS

SCALE
0 20 40 60

8TH STREET
PLAN SHEET
1 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2017
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 004
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

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

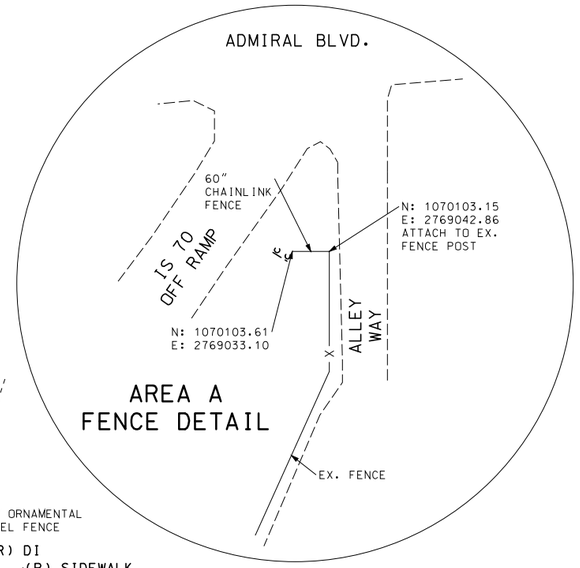
NOTES:
-SEE COORDINATE SHEET FOR ADDITIONAL DETAILS
-SEE SPECIAL SHEETS FOR INTERSECTION/ENTRANCE/ADA DETAILS
-SEE SPECIAL SHEETS FOR PAVEMENT DEPTH TRANSITION DETAILS
-SEE DRAINAGE SHEETS FOR ADDITIONAL DETAILS
-SEE CULVERT SHEETS FOR ADDITIONAL DETAILS
-SEE LIGHTING SHEETS FOR ADDITIONAL DETAILS
-SC – FULL DEPTH VERTICAL SAWCUT

REMOVAL AREA

COLDMILLING AREA

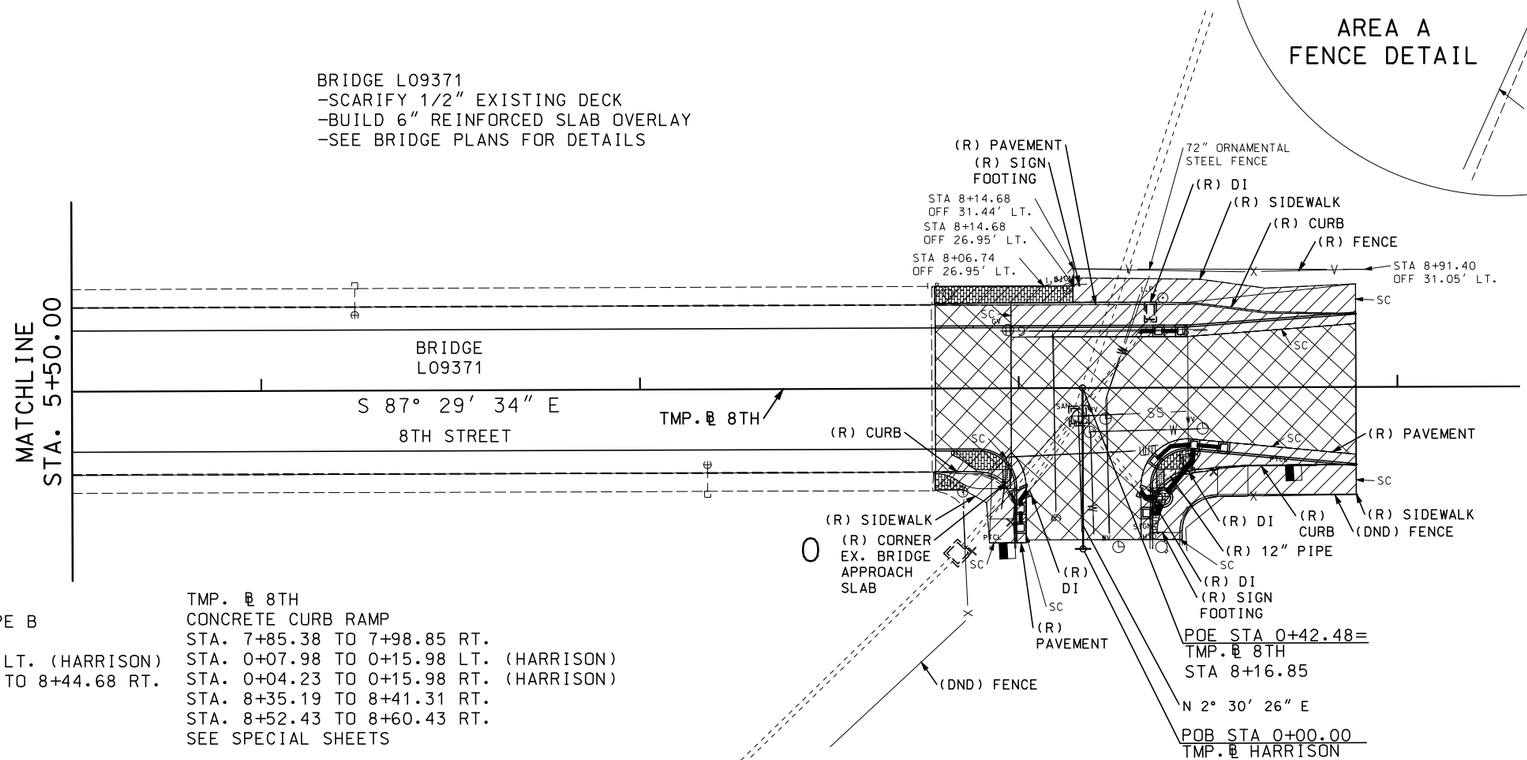
TMP.℄ 8TH
72" ORNAMENTAL STEEL FENCE
STA 8+06.74 TO 8+91.40 LT.

AREA A
60" CHAINLINK FENCE
SEE DETAIL



AREA A
FENCE DETAIL

BRIDGE L09371
-SCARIFY 1/2" EXISTING DECK
-BUILD 6" REINFORCED SLAB OVERLAY
-SEE BRIDGE PLANS FOR DETAILS



TMP. ℄ 8TH
6" MOD. CURB AND GUTTER, TYPE B
STA. 7+98.00 TO 8+89.03 LT.
STA. 7+98.00 RT. TO 0+01.67 LT. (HARRISON)
STA. 0+02.40 RT. (HARRISON) TO 8+44.68 RT.
STA. 8+44.68 TO 8+89.03 RT.
SEE SPECIAL SHEETS

TMP. ℄ 8TH
6" INTEGRAL CURB (6" HEIGHT AND UNDER), TYPE B
STA. 7+78.00 TO 7+98.00 LT.
STA. 7+78.00 TO 7+96.27 RT.
SEE SPECIAL SHEETS

TMP. ℄ 8TH
4" CONCRETE SIDEWALK
STA. 7+78.00 TO 8+89.03 LT.
STA. 7+78.00 TO 7+85.38 RT.
STA. 0+01.67 TO 0+07.98 LT. (HARRISON)
STA. 0+02.40 TO 0+04.23 RT. (HARRISON)
STA. 8+41.31 TO 8+52.43 RT.
STA. 8+60.43 TO 8+89.03 RT.
SEE SPECIAL SHEETS

SCALE
0 20 40 60

TMP. ℄ 8TH
CONCRETE CURB RAMP
STA. 7+85.38 TO 7+98.85 RT.
STA. 0+07.98 TO 0+15.98 LT. (HARRISON)
STA. 0+04.23 TO 0+15.98 RT. (HARRISON)
STA. 8+35.19 TO 8+41.31 RT.
STA. 8+52.43 TO 8+60.43 RT.
SEE SPECIAL SHEETS

TMP. ℄ 8TH
2" COLDMILLING BIT. PAVE.
FOR REMOVAL OF SURFACING
STA. 7+98.00 TO 8+89.03
STA. 0+02.40 TO 0+25.50 LT. (HARRISON)
STA. 0+02.40 TO 0+28.98 RT. (HARRISON)
SEE SPECIAL SHEETS

TMP. ℄ 8TH
ASPHALTIC CONC. MIX.
SP125C PG70-22
STA. 7+78.00 TO 8+89.03
STA. 0+02.40 TO 0+25.50 LT. (HARRISON)
STA. 0+02.40 TO 0+28.98 RT. (HARRISON)
ASPHALTIC CONC. MIX.
SP190C PG70-22
STA. 7+78.00 TO 8+19.68
SEE SPECIAL SHEETS

TMP. ℄ 8TH
MODIFIED COLDMILLING
(DEPTH TRANSITION)
STA. 7+78.00 TO 7+98.00
SEE SPECIAL SHEETS

TMP. ℄ 8TH
4" TINTED & STAMPED
CONCRETE MEDIAN
STA. 7+78.00 TO 8+14.47 LT.
STA. 7+78.00 TO 7+85.90 RT.
STA. 7+82.18 TO 7+97.71 RT.
STA. 0+04.23 TO 0+15.98 RT. (HARRISON)
STA. 8+36.31 TO 8+47.83 RT.
SEE SPECIAL SHEETS

TMP. ℄ 8TH
6" INTEGRAL CURB (6" HEIGHT AND UNDER), TYPE A
STA. 8+45.64 TO 8+52.43 RT.
SEE SPECIAL SHEETS

8TH STREET
PLAN SHEET
2 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2017
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 005
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

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

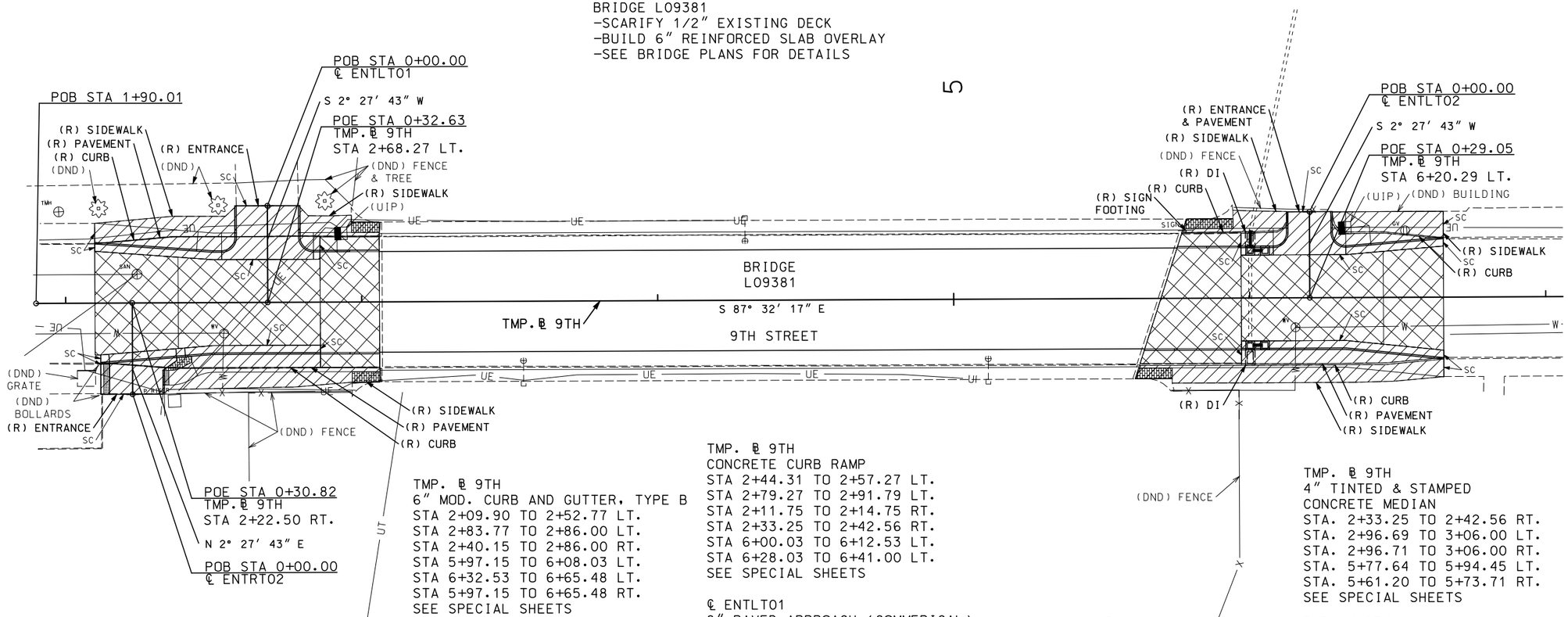
NOTES:
-SEE COORDINATE SHEET FOR ADDITIONAL DETAILS
-SEE SPECIAL SHEETS FOR INTERSECTION/ENTRANCE/ADA DETAILS
-SEE SPECIAL SHEETS FOR PAVEMENT DEPTH TRANSITION DETAILS
-SEE DRAINAGE SHEETS FOR ADDITIONAL DETAILS
-SEE CULVERT SHEETS FOR ADDITIONAL DETAILS
-SEE LIGHTING SHEETS FOR ADDITIONAL DETAILS
-SC – FULL DEPTH VERTICAL SAWCUT

REMOVAL AREA

COLDMILLING AREA

BRIDGE L09381
-SCARIFY 1/2" EXISTING DECK
-BUILD 6" REINFORCED SLAB OVERLAY
-SEE BRIDGE PLANS FOR DETAILS

5



TMP. ℄ 9TH
4" MOUNTABLE CURB AND GUTTER
STA 2+11.45 TO 2+40.15 RT.
SEE SPECIAL SHEETS

TMP. ℄ 9TH
6" MOD. CURB AND GUTTER, TYPE B
STA 2+09.90 TO 2+52.77 LT.
STA 2+83.77 TO 2+86.00 LT.
STA 2+40.15 TO 2+86.00 RT.
STA 5+97.15 TO 6+08.03 LT.
STA 6+32.53 TO 6+65.48 LT.
STA 5+97.15 TO 6+65.48 RT.
SEE SPECIAL SHEETS

TMP. ℄ 9TH
6" INTEGRAL CURB (6" HEIGHT AND UNDER), TYPE B
STA 2+86.00 TO 3+06.00 LT.& RT.
STA 5+75.52 TO 5+97.15 LT.
STA 5+64.48 TO 5+97.15 RT.
SEE SPECIAL SHEETS

TMP. ℄ 9TH
4" CONCRETE SIDEWALK
STA 2+09.90 TO 2+44.31 LT.
STA 2+91.79 TO 3+06.00 LT.
STA 2+42.40 TO 3+06.00 RT.
STA 5+75.69 TO 6+00.03 LT.
STA 6+32.53 TO 6+65.48 LT.
STA 5+64.31 TO 6+65.48 RT.
SEE SPECIAL SHEETS

TMP. ℄ 9TH
CONCRETE CURB RAMP
STA 2+44.31 TO 2+57.27 LT.
STA 2+79.27 TO 2+91.79 LT.
STA 2+11.75 TO 2+14.75 RT.
STA 2+33.25 TO 2+42.56 RT.
STA 6+00.03 TO 6+12.53 LT.
STA 6+28.03 TO 6+41.00 LT.
SEE SPECIAL SHEETS

℄ ENTLT01
8" PAVED APPROACH (COMMERICAL)
4" TYPE 5 AGGREGATE
STA 0+00.00 TO 0+18.13
TMP. ℄ 9TH STA 2+68.27 LT. (NO SKEW)
SEE SPECIAL SHEETS

℄ ENTLT02
8" PAVED APPROACH (COMMERICAL)
4" TYPE 5 AGGREGATE
STA 0+00.00 TO 0+14.55
TMP. ℄ 9TH STA 6+20.29 LT. (NO SKEW)
SEE SPECIAL SHEETS

℄ ENTRT02
8" PAVED APPROACH (COMMERICAL)
4" TYPE 5 AGGREGATE
STA 0+00.00 TO 0+11.16
TMP. ℄ 9TH STA 2+22.50 RT. (NO SKEW)
SEE SPECIAL SHEETS

TMP. ℄ 9TH
MODIFIED COLDMILLING
(DEPTH TRANSITION)
STA. 2+86.00 TO 3+06.00
STA. 5+70.00 TO 5+97.15
SEE SPECIAL SHEETS

TMP. ℄ 9TH
2" COLDMILLING BIT. PAVE.
FOR REMOVAL OF SURFACING
STA. 2+09.90 TO 2+86.00
STA. 5+97.15 TO 6+65.48
SEE SPECIAL SHEETS

TMP. ℄ 9TH
4" TINTED & STAMPED
CONCRETE MEDIAN
STA. 2+33.25 TO 2+42.56 RT.
STA. 2+96.69 TO 3+06.00 LT.
STA. 2+96.71 TO 3+06.00 RT.
STA. 5+77.64 TO 5+94.45 LT.
STA. 5+61.20 TO 5+73.71 RT.
SEE SPECIAL SHEETS

TMP. ℄ 9TH
ASPHALTIC CONC. MIX.
SP125C PG70-22
STA. 2+09.90 TO 3+06.00
STA. 5+70.00 TO 6+65.48
ASPHALTIC CONC. MIX.
SP190C PG70-22
STA. 2+63.00 TO 3+06.00
STA. 5+70.00 TO 6+18.15
SEE SPECIAL SHEETS

SCALE
0 20 40 60

9TH STREET
PLAN SHEET
3 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 1/8/2018
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 006
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION
DATE

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

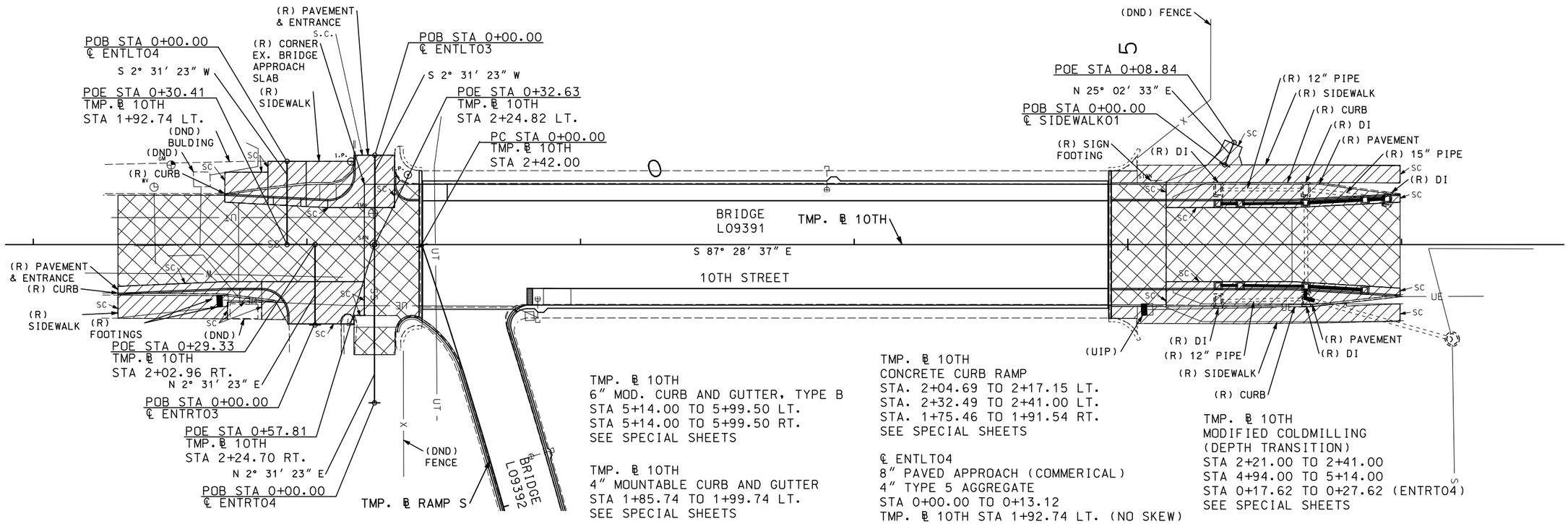
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

NOTES:
-SEE COORDINATE SHEET FOR ADDITIONAL DETAILS
-SEE SPECIAL SHEETS FOR INTERSECTION/ENTRANCE/ADA DETAILS
-SEE SPECIAL SHEETS FOR PAVEMENT DEPTH TRANSITION DETAILS
-SEE DRAINAGE SHEETS FOR ADDITIONAL DETAILS
-SEE CULVERT SHEETS FOR ADDITIONAL DETAILS
-SEE LIGHTING SHEETS FOR ADDITIONAL DETAILS
-SC – FULL DEPTH VERTICAL SAWCUT

REMOVAL AREA

COLDMILLING AREA

BRIDGE L09391
-SCARIFY 1/2" EXISTING DECK
-BUILD 6" REINFORCED SLAB OVERLAY
-SEE BRIDGE PLANS FOR DETAILS



℄ ENTRT03
6" CONCRETE MEDIAN STRIP
STA 0+00.38 TO 0+03.89 RT.
SEE SPECIAL SHEETS

TMP. ℄ 10TH
4" TINTED & STAMPED
CONCRETE MEDIAN
STA. 4+94.00 TO 5+03.49 LT.
STA. 4+94.00 TO 5+03.49 RT.
SEE SPECIAL SHEETS

TMP. ℄ 10TH
4" MOD. CURB AND GUTTER, TYPE B2
STA 1+70.00 TO 1+85.74 LT.
STA 1+99.74 TO 2+07.60 LT.
STA 1+30.96 TO 1+83.46 RT.
SEE SPECIAL SHEETS

SCALE
0 20 40 60

TMP. ℄ 10TH
6" MOD. CURB AND GUTTER, TYPE B
STA 5+14.00 TO 5+99.50 LT.
STA 5+14.00 TO 5+99.50 RT.
SEE SPECIAL SHEETS

TMP. ℄ 10TH
4" MOUNTABLE CURB AND GUTTER
STA 1+85.74 TO 1+99.74 LT.
SEE SPECIAL SHEETS

TMP. ℄ 10TH
6" INTEGRAL CURB (6" HEIGHT AND UNDER), TYPE B
STA 2+31.99 TO 2+41.00 LT.
STA 4+94.00 TO 5+14.00 LT.
STA 4+94.00 TO 5+14.00 RT.
SEE SPECIAL SHEETS

TMP. ℄ 8TH
4" CONCRETE SIDEWALK
STA 1+70.00 TO 1+85.74 LT.
STA 1+99.74 TO 2+17.15 LT.
STA 1+30.96 TO 1+75.46 RT.
STA 4+94.00 TO 5+99.50 LT.
STA 4+94.00 TO 5+99.50 RT.
STA 0+00.00 TO 0+08.34 (SIDEWALK01)
SEE SPECIAL SHEETS

TMP. ℄ 10TH
CONCRETE CURB RAMP
STA. 2+04.69 TO 2+17.15 LT.
STA. 2+32.49 TO 2+41.00 LT.
STA. 1+75.46 TO 1+91.54 RT.
SEE SPECIAL SHEETS

℄ ENTLT04
8" PAVED APPROACH (COMMERICAL)
4" TYPE 5 AGGREGATE
STA 0+00.00 TO 0+13.12
TMP. ℄ 10TH STA 1+92.74 LT. (NO SKEW)
SEE SPECIAL SHEETS

℄ ENTRT03
8" PAVED APPROACH (COMMERICAL)
4" TYPE 5 AGGREGATE
STA 0+00.38 TO 0+15.83
TMP. ℄ 10TH STA 2+02.96 RT. (NO SKEW)
SEE SPECIAL SHEETS

℄ ENTRT04
ASPHALT WEDGE (BP-1)
STA 0+17.62 TO 0+31.89
SEE SPECIAL SHEETS

℄ ENTLT03
8" PAVED APPROACH (COMMERICAL)
4" TYPE 5 AGGREGATE
STA 0+00.00 TO 0+19.13
TMP. ℄ 10TH STA 2+24.82 LT. (NO SKEW)
SEE SPECIAL SHEETS

TMP. ℄ 10TH
MODIFIED COLDMILLING
(DEPTH TRANSITION)
STA 2+21.00 TO 2+41.00
STA 4+94.00 TO 5+14.00
STA 0+17.62 TO 0+27.62 (ENTRT04)
SEE SPECIAL SHEETS

TMP. ℄ 10TH
2" COLDMILLING BIT. PAVE.
FOR REMOVAL OF SURFACING
STA. 1+30.96 TO 2+21.00
STA. 5+14.00 TO 5+99.50
SEE SPECIAL SHEETS

TMP. ℄ 10TH
ASPHALTIC CONC. MIX.
SP125C PG70-22
STA. 1+30.96 TO 2+41.00
STA. 4+94.00 TO 5+99.50
ASPHALTIC CONC. MIX.
SP190C PG70-22
STA. 2+00.00 TO 2+41.00
STA. 4+94.00 TO 5+35.00
SEE SPECIAL SHEETS

10TH STREET
PLAN SHEET
4 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
1/10/2018	
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	007
COUNTY	
JACKSON	
JOB NO.	
J4I3198	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

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

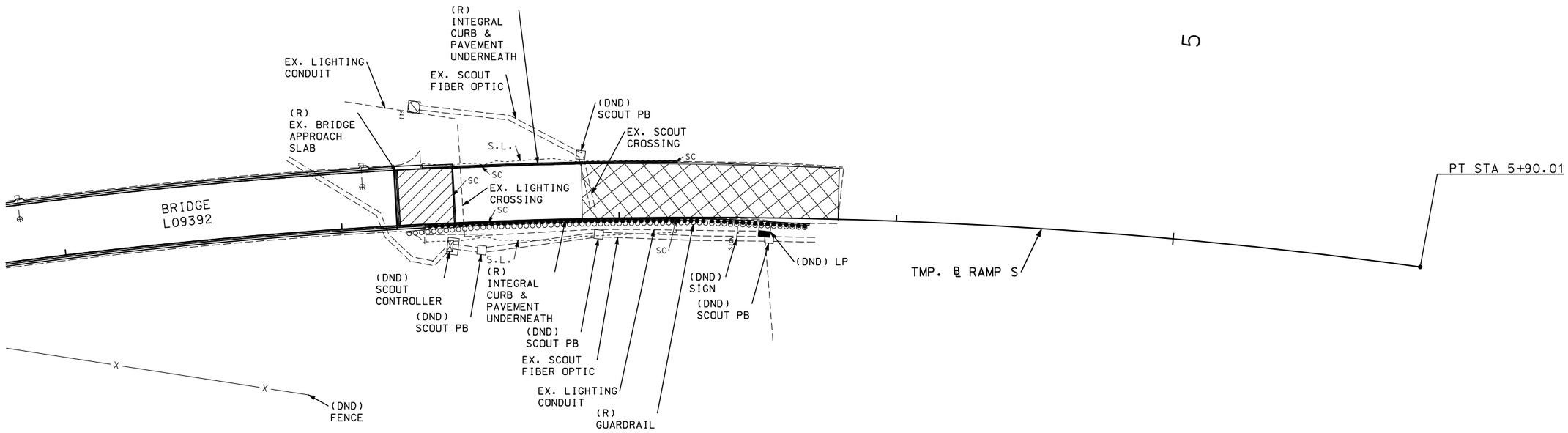
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

NOTES:
-SEE COORDINATE SHEET FOR ADDITIONAL DETAILS
-SEE SPECIAL SHEETS FOR PAVEMENT DEPTH TRANSITION DETAILS
-SEE LIGHTING SHEETS FOR ADDITIONAL DETAILS
-SC – FULL DEPTH VERTICAL SAWCUT

REMOVAL AREA

COLDMILLING AREA

CURVE BL_RAMPSC1
PI 2+97.37
PC 0+00.00
PT 5+90.01
Δ 17° 42' 01.3" (RT)
D 3° 00' 00.1"
L 590.01'
T 297.37'
R 1,909.84'



TMP. ℄ RAMP S
4" CONCRETE CURB, TYPE S
STA. 2+40.94 TO 3+20.94
LT.& RT.

TMP. ℄ RAMP S
MGS BRIDGE APPROACH TRANSITION
SECTION (EXTENDED CURB)
STA. 2+30.43 TO 2+67.30 RT.
STA. 3+20.72 TO 3+24.44 RT.
MGS GUARDRAIL, 6FT. POSTS
1FT. – 6.75IN SPACING
STA. 2+67.30 TO 3+20.72 RT.

TMP. ℄ RAMP S
MODIFIED COLDMILLING
(DEPTH TRANSITION)
STA. 2+87.13 TO 3+79.33
SEE SPECIAL SHEETS

TMP. ℄ RAMP S
ASPHALTIC CONC. MIX.
SP125C PG70-22
STA. 2+40.94 TO 3+79.33
ASPHALTIC CONC. MIX.
SP190C PG70-22
STA. 2+40.94 TO 2+73.05
SEE SPECIAL SHEETS

SCALE
0 20 40 60

RAMP S
PLAN SHEET
5 OF 11

5

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 1/7/2018
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 008
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DATE | DESCRIPTION

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

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

NOTES:
-SEE COORDINATE SHEET FOR ADDITIONAL DETAILS
-SEE SPECIAL SHEETS FOR INTERSECTION/ENTRANCE/ADA DETAILS
-SEE SPECIAL SHEETS FOR PAVEMENT DEPTH TRANSITION DETAILS
-SEE DRAINAGE SHEETS FOR ADDITIONAL DETAILS
-SEE CULVERT SHEETS FOR ADDITIONAL DETAILS
-SEE LIGHTING SHEETS FOR ADDITIONAL DETAILS
-SC – FULL DEPTH VERTICAL SAWCUT

REMOVAL AREA

COLDMILLING AREA

TMP. ℄ CHESTNUT
6" MOD. CURB AND GUTTER, TYPE B-1
STA. 8+42.17 TO 8+70.93 LT.
STA. 8+42.17 TO 8+70.93 RT.
STA. 11+06.23 TO 11+69.58 LT.
STA. 11+06.23 TO 11+17.57 RT.
STA. 11+47.37 TO 11+69.58 RT.
SEE SPECIAL SHEETS

TMP. ℄ CHESTNUT
6" INTEGRAL CURB (6" HEIGHT AND UNDER), TYPE B
STA. 8+70.93 TO 8+91.60 LT.
STA. 8+70.93 TO 8+96.18 RT.
STA. 10+77.46 TO 11+06.23 LT.
STA. 10+85.71 TO 11+06.23 RT.
SEE SPECIAL SHEETS

TMP. ℄ CHESTNUT
4" CONCRETE SIDEWALK
STA. 8+57.45 TO 8+91.53 LT.
STA. 8+59.43 TO 8+97.05 RT.
STA. 10+75.88 TO 11+69.58 LT.
STA. 10+85.83 TO 11+09.07 RT.
STA. 11+54.57 TO 11+69.58 RT.
SEE SPECIAL SHEETS

TMP. ℄ CHESTNUT
CONCRETE CURB RAMP
STA. 8+44.58 TO 8+57.45 LT.
STA. 8+45.09 TO 8+59.43 RT.
STA. 11+09.07 TO 11+22.07 RT.
STA. 11+42.19 TO 11+55.06 RT.
SEE SPECIAL SHEETS

TMP. ℄ CHESTNUT
REMOVABLE STEEL CURB
STA. 11+10.32 LT.
SEE SPECIAL SHEETS

TMP. ℄ CHESTNUT
4" TINTED & STAMPED CONCRETE MEDIAN
STA. 8+49.45 TO 8+70.12 LT.
STA. 8+82.30 TO 8+90.74 LT.
STA. 8+51.43 TO 8+69.56 RT.
STA. 8+75.96 TO 8+97.50 RT.
STA. 10+75.07 TO 10+84.25 LT.
STA. 10+87.29 TO 10+96.55 RT.
STA. 11+21.38 TO 11+35.00 LT.
SEE SPECIAL SHEETS

℄ ENTRTO5
8" PAVED APPROACH (COMMERICAL)
4" TYPE 5 AGGREGATE
STA 0+00.00 TO 0+12.68
TMP. ℄ CHESTNUT STA 11+32.07 RT. (NO SKEW)
SEE SPECIAL SHEETS

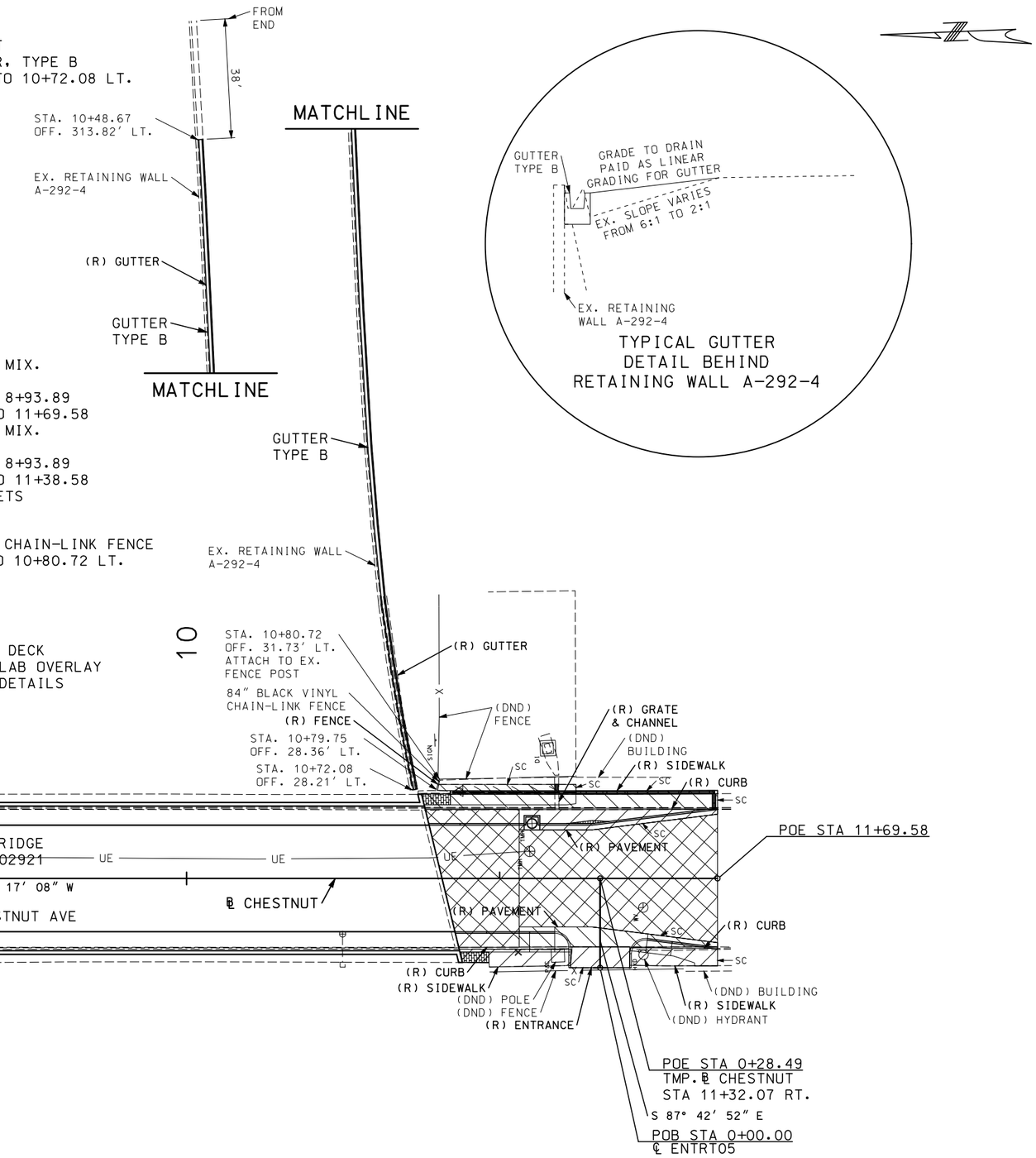
TMP. ℄ CHESTNUT
MODIFIED COLDMILLING
(DEPTH TRANSITION)
STA. 8+70.93 TO 8+93.89
STA. 10+81.59 TO 11+06.23
SEE SPECIAL SHEETS

TMP. ℄ CHESTNUT
2" COLDMILLING BIT. PAVE.
FOR REMOVAL OF SURFACING
STA. 8+31.13 TO 8+70.93
STA. 11+06.23 TO 11+69.58
SEE SPECIAL SHEETS

TMP. ℄ CHESTNUT
CONCRETE GUTTER, TYPE B
STA. 10+48.67 TO 10+72.08 LT.

TMP. ℄ CHESTNUT
ASPHALTIC CONC. MIX.
SP125C PG70-22
STA. 8+31.13 TO 8+93.89
STA. 10+81.59 TO 11+69.58
ASPHALTIC CONC. MIX.
SP190C PG70-22
STA. 8+54.13 TO 8+93.89
STA. 10+81.59 TO 11+38.58
SEE SPECIAL SHEETS

TMP. ℄ CHESTNUT
84" BLACK VINYL CHAIN-LINK FENCE
STA. 10+79.75 TO 10+80.72 LT.



TYPICAL GUTTER DETAIL BEHIND RETAINING WALL A-292-4

SCALE
0 20 40 60

CHESTNUT AVE.
PLAN SHEET
6 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

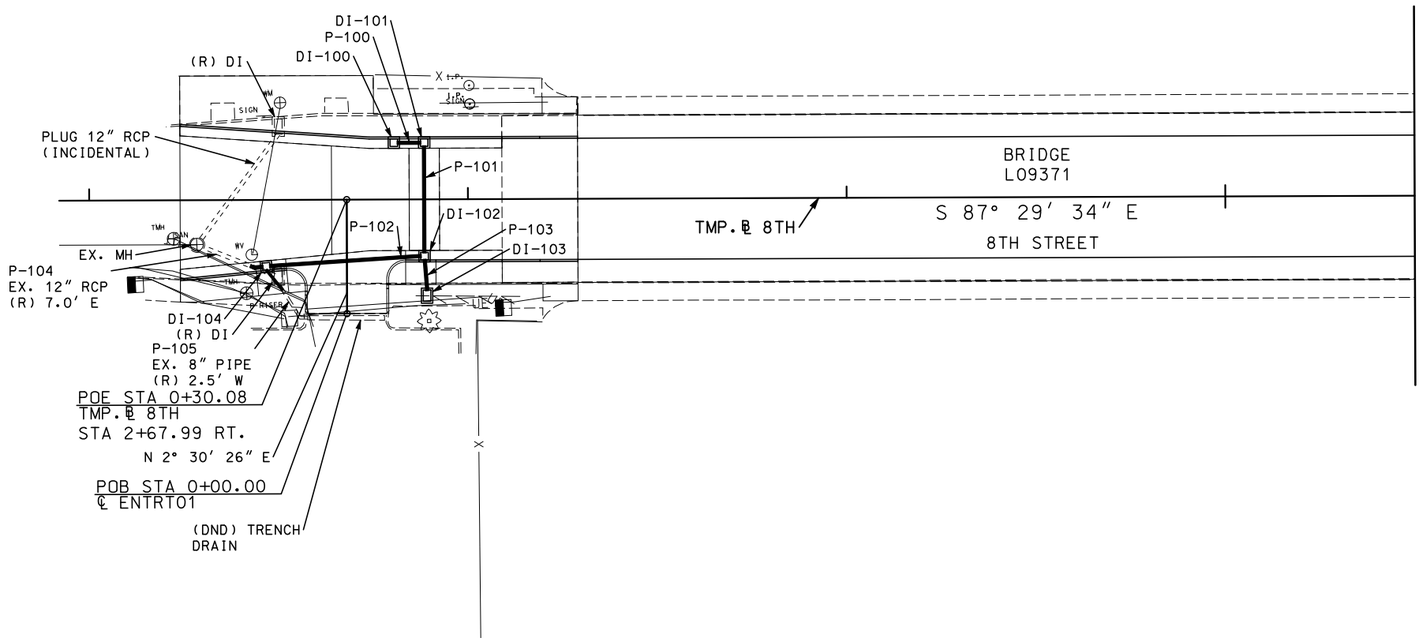
DATE PREPARED 12/11/2017
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 009
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

DATE	DESCRIPTION

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

NOTES:
-SEE CULVERT SHEETS FOR ADDITIONAL DETAILS



SCALE
0 20 40 60

8TH STREET
DRAINAGE SHEET
7 OF 11

5

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO

DISTRICT	SHEET NO.
KC	010

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

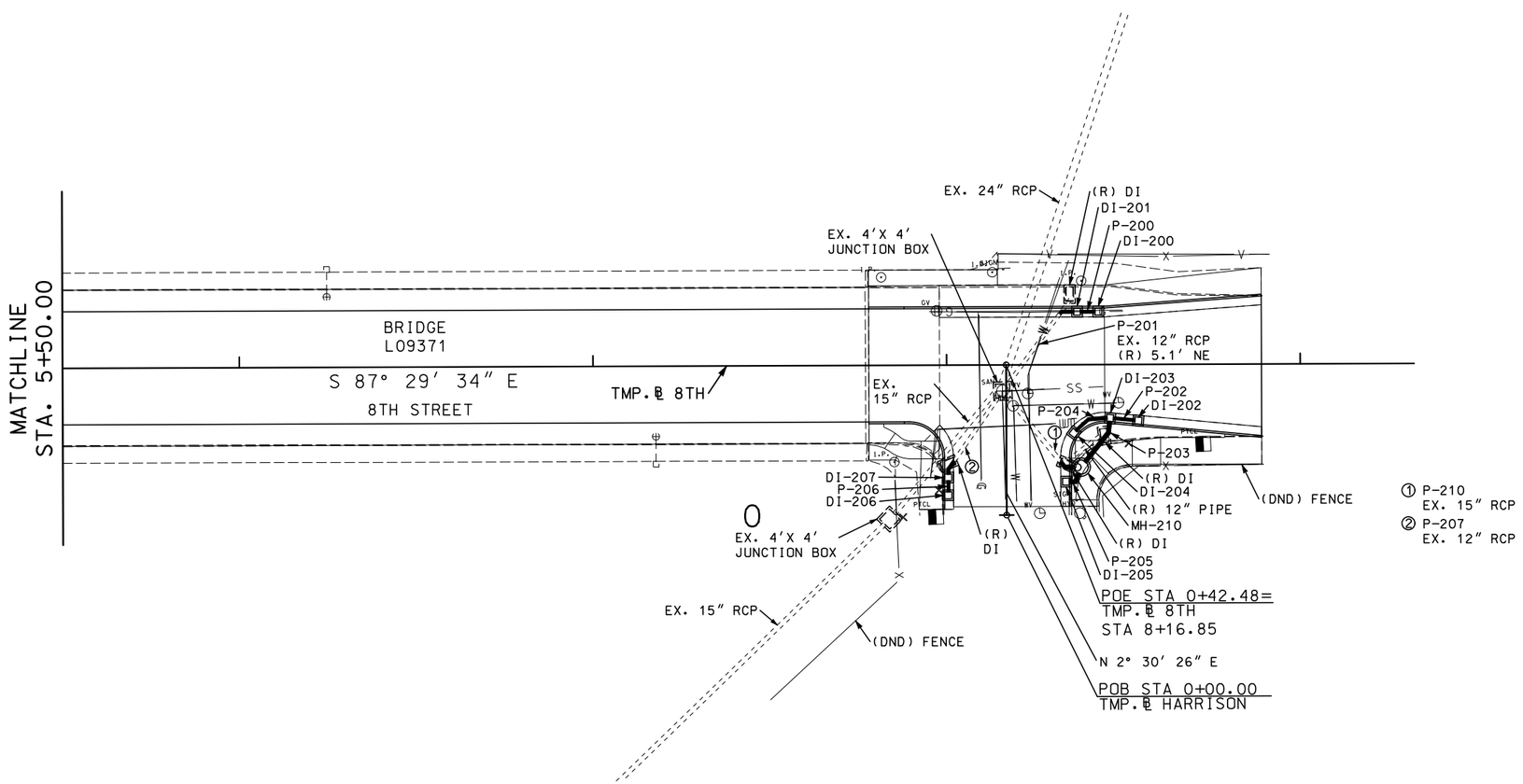
DATE	DESCRIPTION

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

NOTES:
-SEE CULVERT SHEETS FOR ADDITIONAL DETAILS



SCALE
0 20 40 60

8TH STREET
DRAINAGE SHEET
8 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	011

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

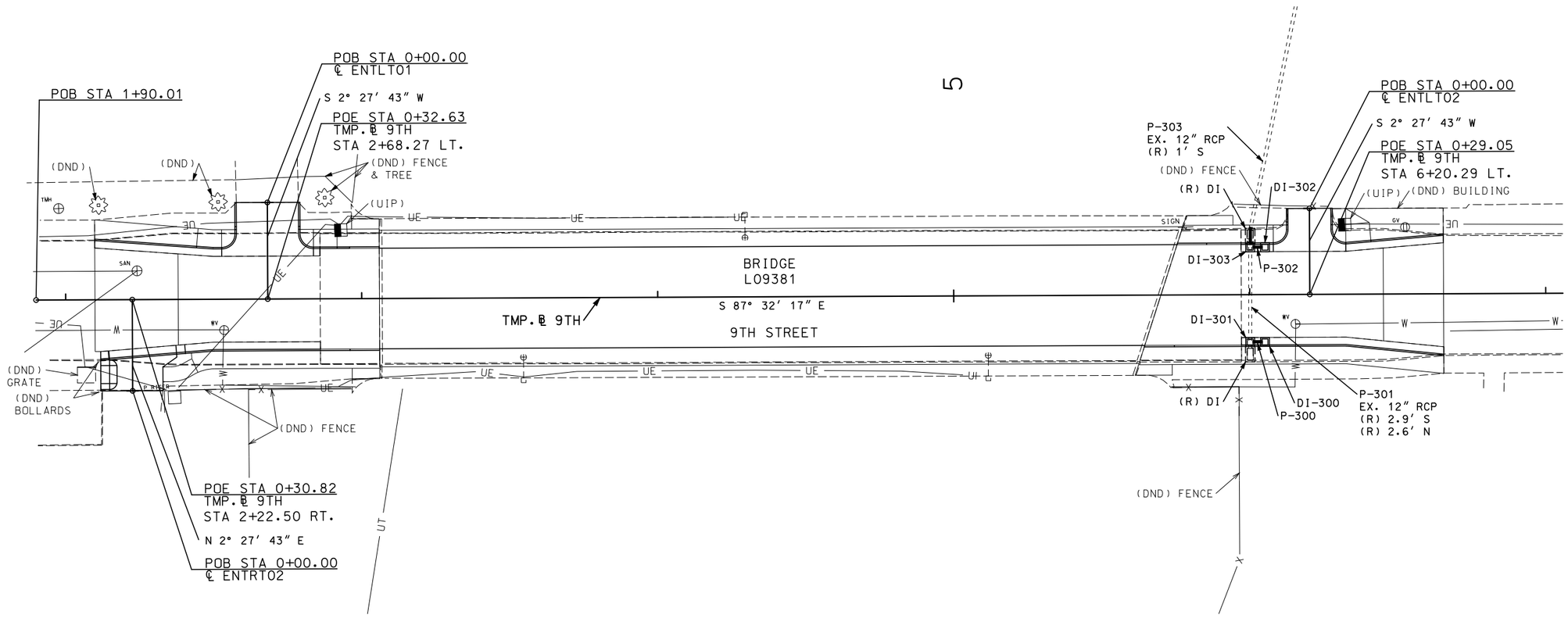
BRIDGE NO.

DATE	DESCRIPTION

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

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

NOTES:
-SEE CULVERT SHEETS FOR ADDITIONAL DETAILS



SCALE
0 20 40 60

9TH STREET
DRAINAGE SHEET
9 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	012

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

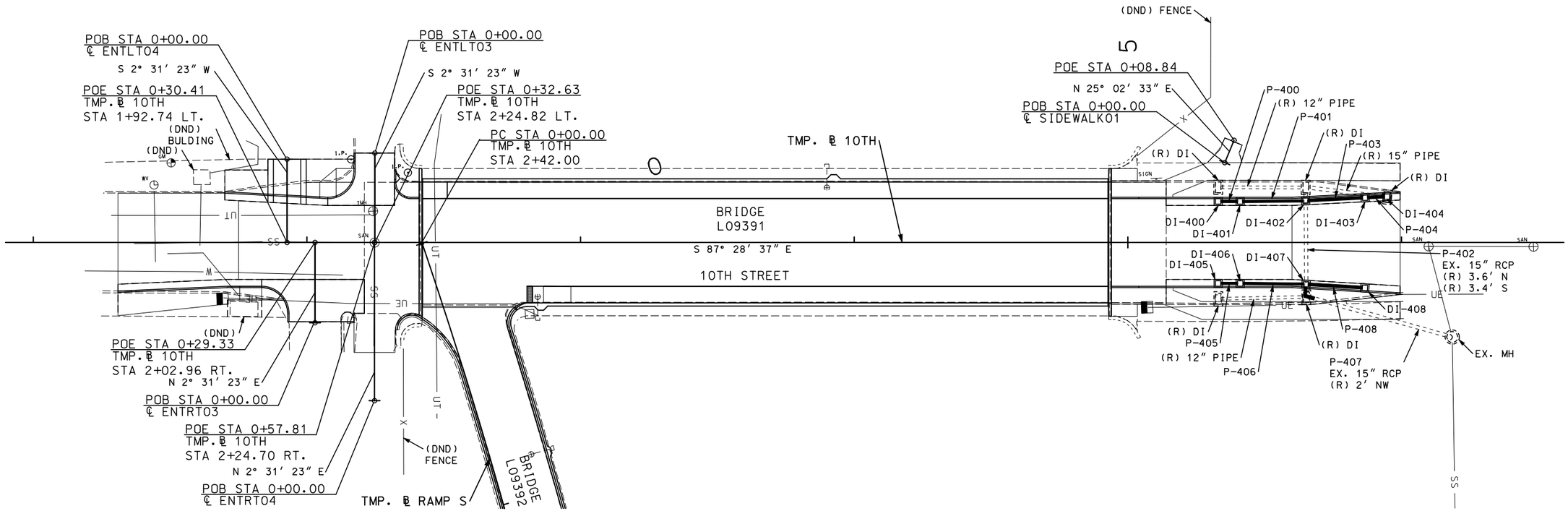
DESCRIPTION	DATE

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

NOTES:
-SEE CULVERT SHEETS FOR ADDITIONAL DETAILS



SCALE
0 20 40 60

10TH STREET
DRAINAGE SHEET
10 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	013

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

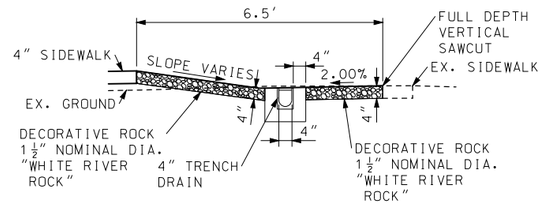
DESCRIPTION	DATE

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

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

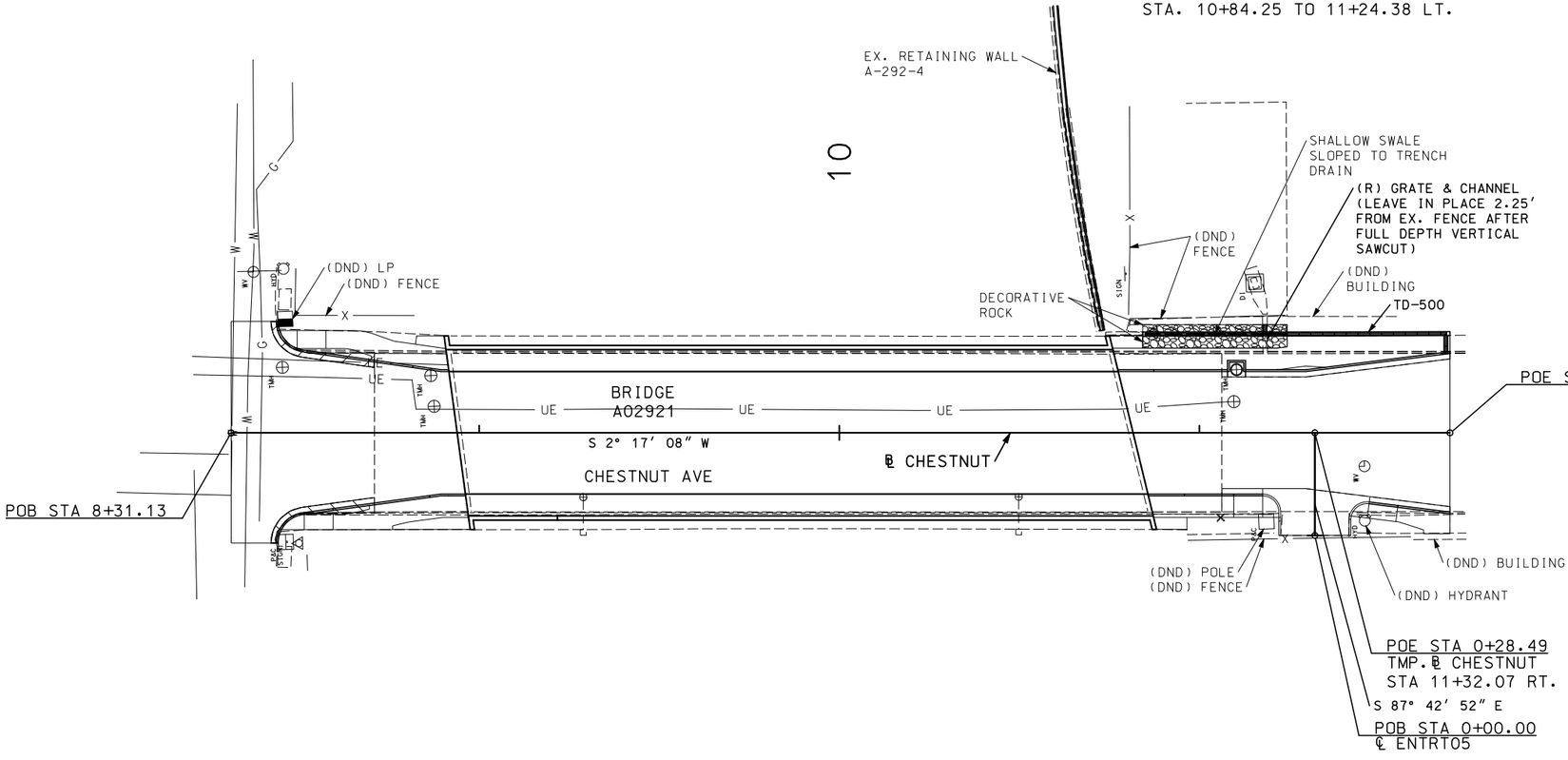
NOTES:
-SEE CULVERT SHEETS FOR ADDITIONAL DETAILS

4" TRENCH DRAIN / DECORATIVE ROCK DETAIL



NOTES:
-TRENCH DRAIN HAS A 4" INTERNAL WIDTH
-TRENCH DRAIN HAS A 4" CONCRETE ENCASEMENT OF 3 SIDES MIN.
-CONCRETE IS A 4000 PSI COMMERCIAL MIX.
-CONCRETE BEYOND 4" ENCASEMENT IS INCEDENTAL TO THE 4" TRENCH DRAIN
-SEE JSP'S FOR ADDITIONAL DETAILS

TMP. ℄ CHESTNUT
DECORATIVE ROCK
STA. 10+84.25 TO 11+24.38 LT.



SCALE
0 20 40 60

CHESTNUT AVE.
DRAINAGE PLAN
11 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

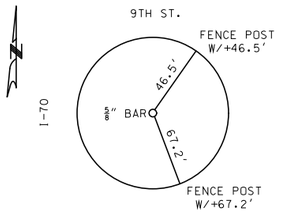
DATE PREPARED 12/11/2017
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 014
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

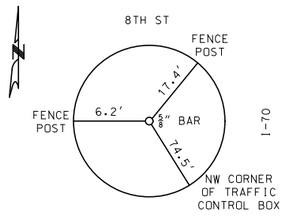
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CP#1 I-70 & 9TH ST. JACKSON CO.



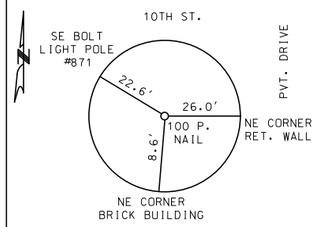
STATE PLANE	MOD. STATE PLANE
N:1069127.180	N:1069233.451
E:2768307.309	E:2768582.479
EL.:959.668	EL.:959.668

CP#2 I-70 & 8TH ST. JACKSON CO.



STATE PLANE	MOD. STATE PLANE
N:1069555.136	N:1069661.450
E:2768069.616	E:2768344.762
EL.: 929.207	EL.: 929.207

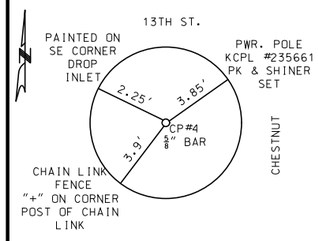
CP#3 I-70 & 10TH ST. JACKSON CO.



STATE PLANE	MOD. STATE PLANE
N:1068790.889	N:1068897.127
E:2767919.099	E:2768194.230
EL.:941.270	EL.:941.270

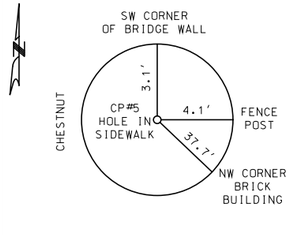
COORDINATES ARE IN MODIFIED
MISSOURI STATE PLANE (WEST) NAD83
PROJECT FACTOR: 1.0000994
GRID FACTOR: 0.9999006
VERICAL DATUM - NAVD88

CP#4 I-70 & CHESTNUT JACKSON CO.



STATE PLANE	MOD. STATE PLANE
N:1067130.661	N:1067232.572
E:2774679.834	E:2774944.816
EL.:872.994	EL.:872.994

CP#5 I-70 & CHESTNUT JACKSON CO.



STATE PLANE	STATE PLANE
N:1066891.256	N:1066993.144
E:2774728.843	E:2774993.830
EL.:867.630	EL.:867.630

COORDINATES ARE IN MODIFIED
MISSOURI STATE PLANE (WEST) NAD83
PROJECT FACTOR: 1.0000955
GRID FACTOR: 0.9999045
VERICAL DATUM - NAVD88

REFERENCE POINTS
SHEET 1 OF 1

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	015

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

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

MISSOURI COORDINATE
SYSTEM OF 1983 (ZONE WEST)
PROJECT FACTOR: 1.0000994
GRID FACTOR: 0.9999006
VERICAL DATUM - NAVD88

CONSTRUCTION BASELINE ALIGNMENTS 1

CURVE NUMBER	STATION	STATE PLANE NORTH COORDINATE (FEET)	STATE PLANE EAST COORDINATE (FEET)	MODIFIED STATE PLANE NORTH COORDINATE (FEET)	MODIFIED STATE PLANE EAST COORDINATE (FEET)	TAN. BEARING	Δ	L (FT.)	T (FT.)	R (FT.)	D	THETA	LS	TS	XS	YS	LC	S.E. %
					TEMP. ℄ EIGHTH													
	POB 0+26.67	1,069,613.85	2,767,789.55	1,069,720.17	2,768,064.67													
	POE 10+52.78	1,069,568.97	2,768,814.58	1,069,675.29	2,769,089.80	S 87° 29′ 34″ E		1,026.11										
					℄ ENTRT01													
	POB 0+00.00	1,069,573.24	2,768,029.31	1,069,679.56	2,768,304.45													
	POE 0+30.08	1,069,603.30	2,768,030.62	1,069,709.62	2,768,305.76	N 2° 30′ 26″ E		30.08										
					TEMP. ℄ HARRISON													
	POB 0+00.00	1,069,536.86	2,768,577.03	1,069,643.17	2,768,852.23													
	POE 0+42.48	1,069,579.29	2,768,578.89	1,069,685.61	2,768,854.09	N 2° 30′ 26″ E		42.48										
					TEMP. ℄ NINTH													
	POB 1+90.01	1,069,266.34	2,767,938.80	1,069,372.63	2,768,213.93													
	POE 8+18.94	1,069,239.33	2,768,567.07	1,069,345.61	2,768,842.27	S 87° 32′ 17″ E		628.93										
					℄ ENTRT02													
	POB 0+00.00	1,069,234.17	2,767,969.92	1,069,340.45	2,768,245.06													
	POE 0+30.82	1,069,264.95	2,767,971.24	1,069,371.23	2,768,246.38	N 2° 27′ 43″ E		30.82										
					℄ ENTLT01													
	POB 0+00.00	1,069,295.58	2,768,018.38	1,069,401.87	2,768,293.52													
	POE 0+32.63	1,069,262.99	2,768,016.98	1,069,369.27	2,768,292.12	S 2° 27′ 43″ W		32.63										
					℄ ENTLT02													
	POB 0+00.00	1,069,276.88	2,768,369.88	1,069,383.17	2,768,645.06													
	POE 0+29.05	1,069,247.87	2,768,368.63	1,069,354.15	2,768,643.81	S 2° 27′ 43″ W		29.05										
					TEMP. ℄ TENTH													
	POB 0+41.00	1,068,828.16	2,767,772.51	1,068,934.40	2,768,047.63													
	POE 7+94.00	1,068,795.01	2,768,524.71	1,068,901.25	2,768,799.90	S 87° 28′ 37″ E		753.00										
					TEMP. ℄ RAMP S													
	PC 0+00.00	1,068,819.31	2,767,973.29	1,068,925.55	2,768,248.43	S 16° 15′ 21″ E												
BL_RAMPSC1	PI 2+97.37	1,068,533.85	2,768,056.53	1,068,640.06	2,768,331.67		17° 42′ 01″ (RT)	590.01	297.37	1909.84	3° 00′ 00″							
	PT 5+90.01	1,068,236.97	2,768,049.05	1,068,343.15	2,768,324.19	S 1° 26′ 41″ W												
					℄ ENTLT04													
	POB 0+00.00	1,068,851.86	2,767,925.43	1,068,958.10	2,768,200.56													
	POE 0+30.41	1,068,821.48	2,767,924.09	1,068,927.72	2,768,199.22	S 2° 31′ 23″ W		30.41										
					℄ ENTRT03													
	POB 0+00.00	1,068,791.72	2,767,933.01	1,068,897.96	2,768,208.14													
	POE 0+29.33	#VALUE!	2,767,934.30	1,068,927.27	2,768,209.43	N 2° 31′ 23″ E		29.33										
					℄ ENTRT04													
	POB 0+00.00	1,068,762.33	2,767,953.47	1,068,868.56	2,768,228.60													
	POE 0+57.81	1,068,820.07	2,767,956.02	1,068,926.31	2,768,231.15	N 2° 31′ 23″ E		57.81										
					℄ ENTLT03													
	POB 0+00.00	1,068,852.66	2,767,957.57	1,068,958.90	2,768,232.70													
	POE 0+32.63	1,068,820.06	2,767,956.14	1,068,926.30	2,768,231.27	S 2° 31′ 23″ W		32.63										
					℄ SIDEWALK01													
	POB 0+00.00	1,068,835.51	2,768,267.68	1,068,941.75	2,768,542.85													
	POE 0+08.84	1,068,843.52	2,768,271.42	1,068,949.76	2,768,546.59	N 25° 02′ 33″ E		8.84										

NOTE : The reciprocal of the average grid factor is used as a multiplier from state plane distance to ground distance.

COORDINATE POINTS
SHEET 1 OF 2

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 1/9/2018
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 016
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

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

MISSOURI COORDINATE
SYSTEM OF 1983 (ZONE WEST)
PROJECT FACTOR: 1.0000955
GRID FACTOR: 0.9999045
VERICAL DATUM - NAVD88

CONSTRUCTION BASELINE ALIGNMENTS 2

CURVE NUMBER	STATION	STATE PLANE NORTH COORDINATE (FEET)	STATE PLANE EAST COORDINATE (FEET)	MODIFIED STATE PLANE NORTH COORDINATE (FEET)	MODIFIED STATE PLANE EAST COORDINATE (FEET)	TAN. BEARING	Δ	L (FT.)	T (FT.)	R (FT.)	D	THETA	LS	TS	XS	YS	LC	S.E. %
TEMP ℄ CHESNUT																		
	POB 8+31.13	1,067,148.26	2,774,711.21	1,067,250.17	2,774,976.19													
	POE 11+69.58	1,066,810.10	2,774,697.72	1,066,911.98	2,774,962.70	S 2° 17′ 08″ W		338.45										
℄ ENTRTO5																		
	POB 0+00.00	1,066,848.72	2,774,670.74	1,066,950.60	2,774,935.72													
	POE 0+28.49	1,066,847.59	2,774,699.21	1,066,949.47	2,774,964.19	S 87° 42′ 52″ E		28.49										

NOTE : The reciprocal of the average grid factor is used as a multiplier from state plane distance to ground distance.

COORDINATE POINTS
SHEET 2 OF 2

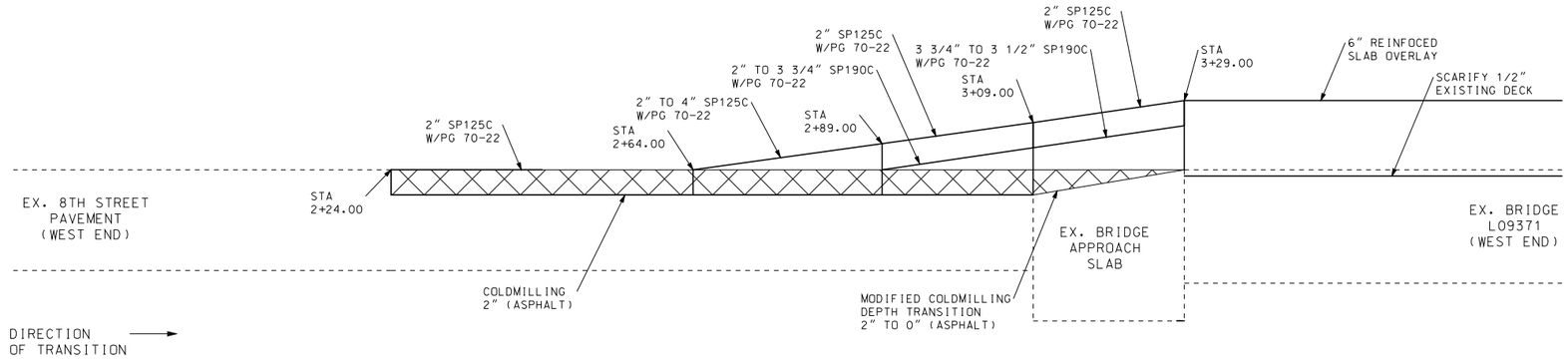
STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

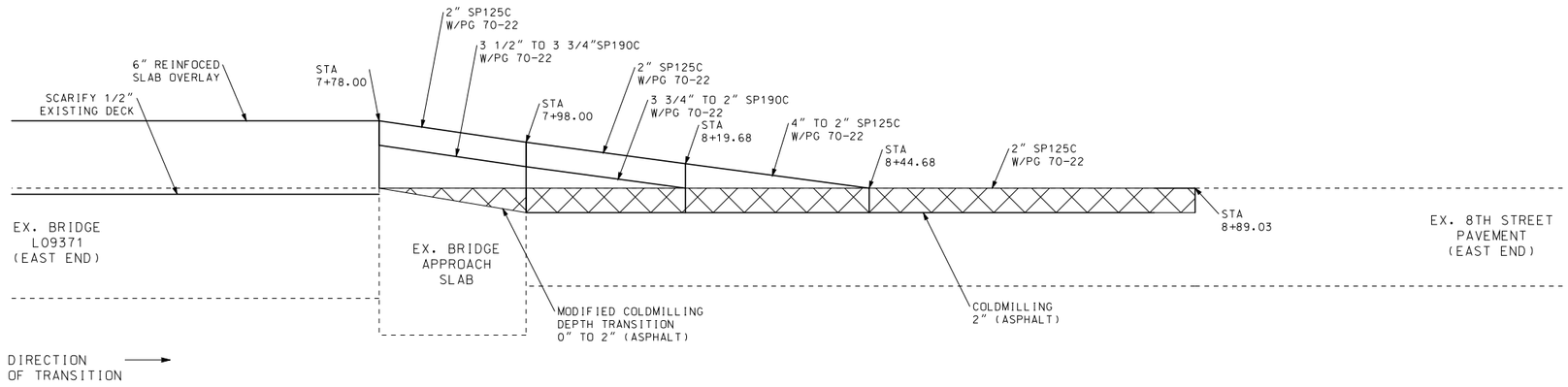
DATE PREPARED 1/9/2018
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 017
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

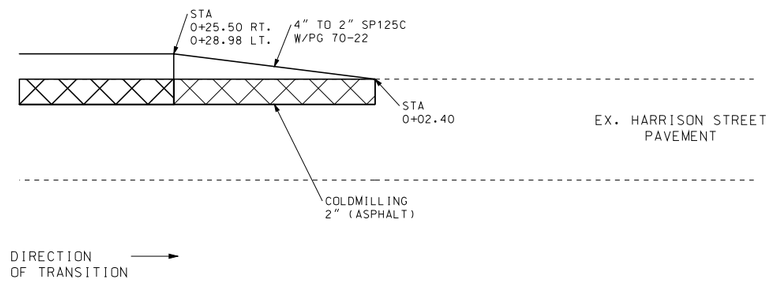
DESCRIPTION | DATE

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

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







8TH STREET PAVEMENT DEPTH TRANSITION SPECIAL SHEET 1 OF 15

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

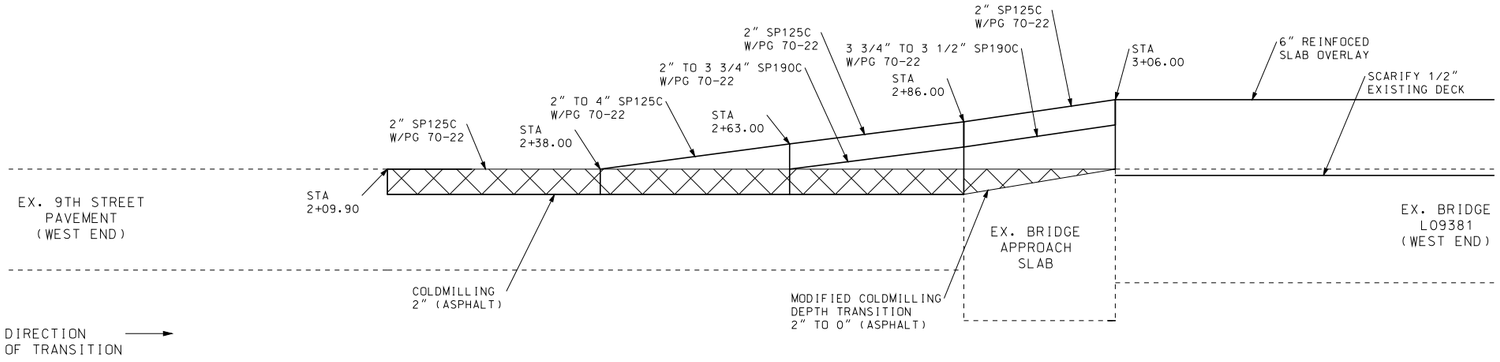
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

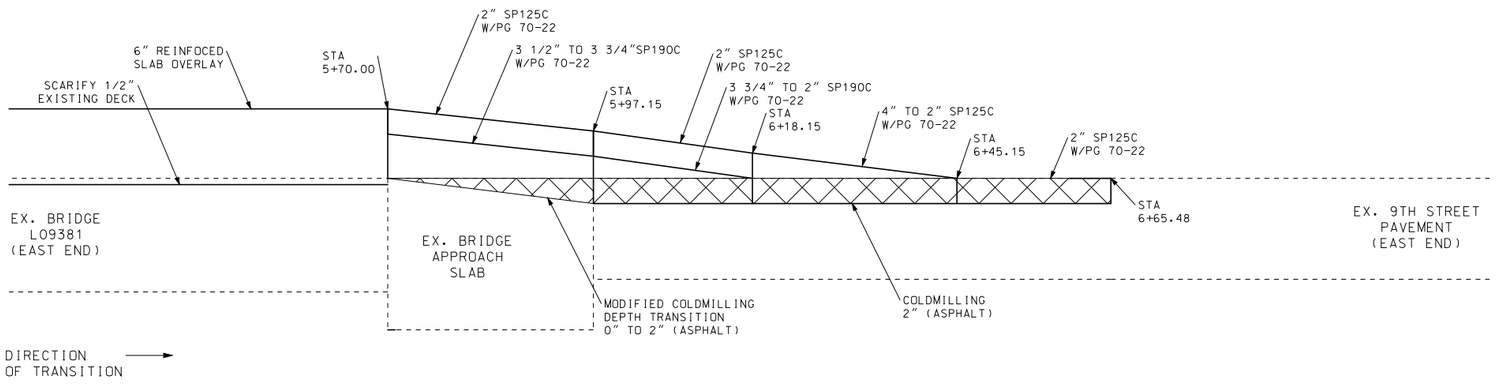
DATE PREPARED	
12/11/2017	
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	018

COUNTY: JACKSON
JOB NO.: J4I3198
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)





9TH STREET PAVEMENT DEPTH TRANSITION SPECIAL SHEET 2 OF 15

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	019

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

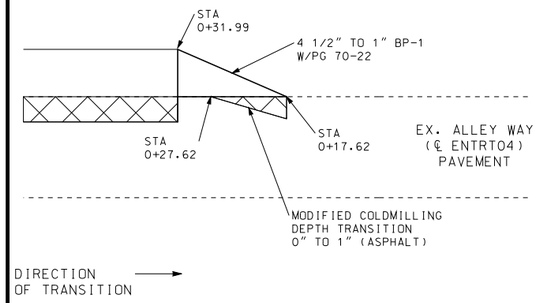
PROJECT NO.

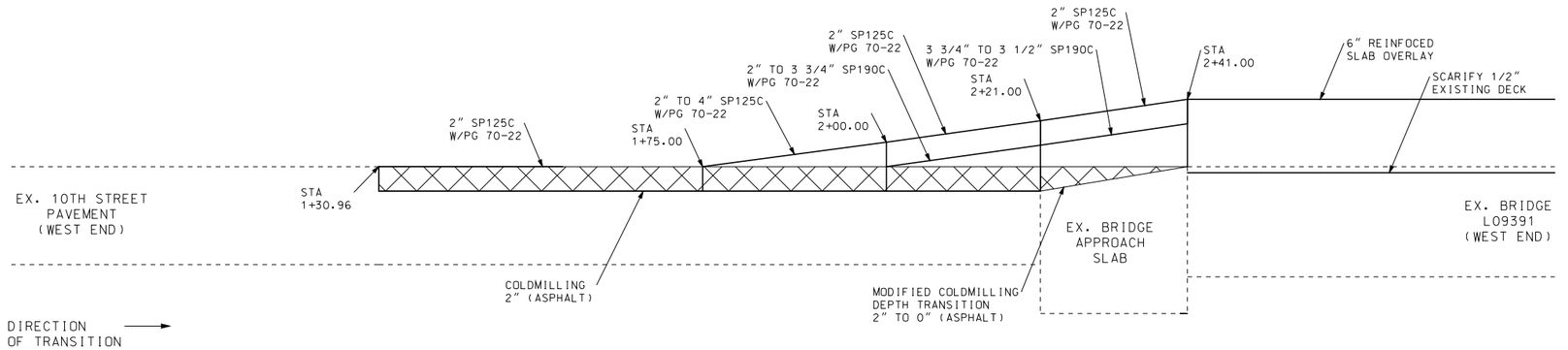
BRIDGE NO.

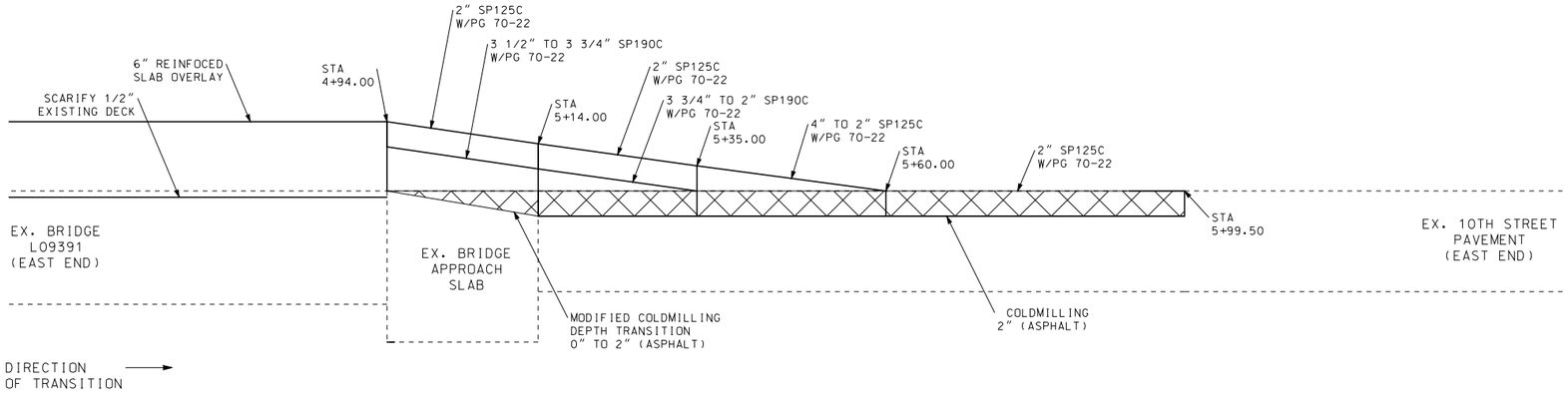
DESCRIPTION	DATE

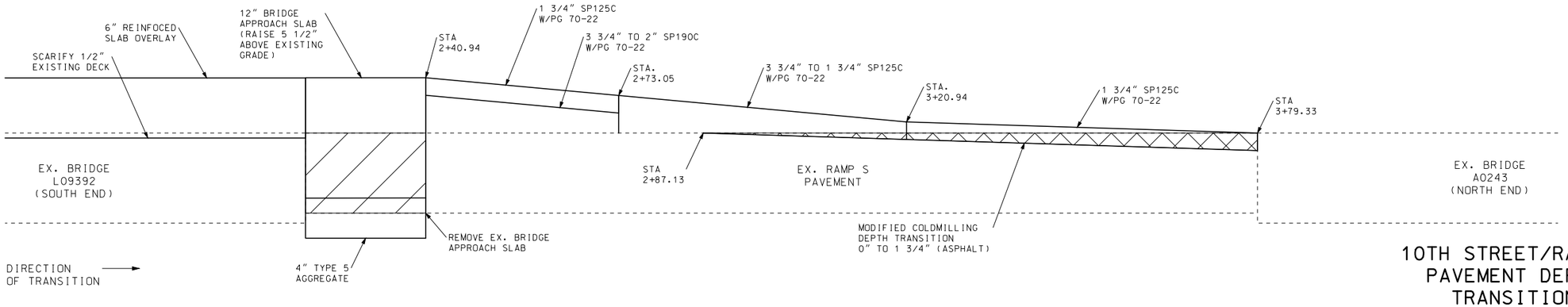
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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









10TH STREET/RAMP S PAVEMENT DEPTH TRANSITION SPECIAL SHEET 3 OF 15

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 1/10/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	020

COUNTY: JACKSON

JOB NO.: J4I3198

CONTRACT ID.:

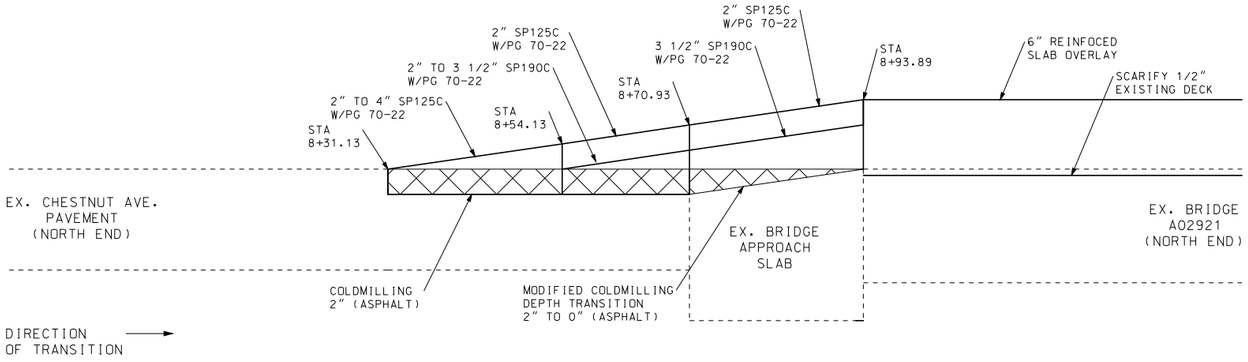
PROJECT NO.:

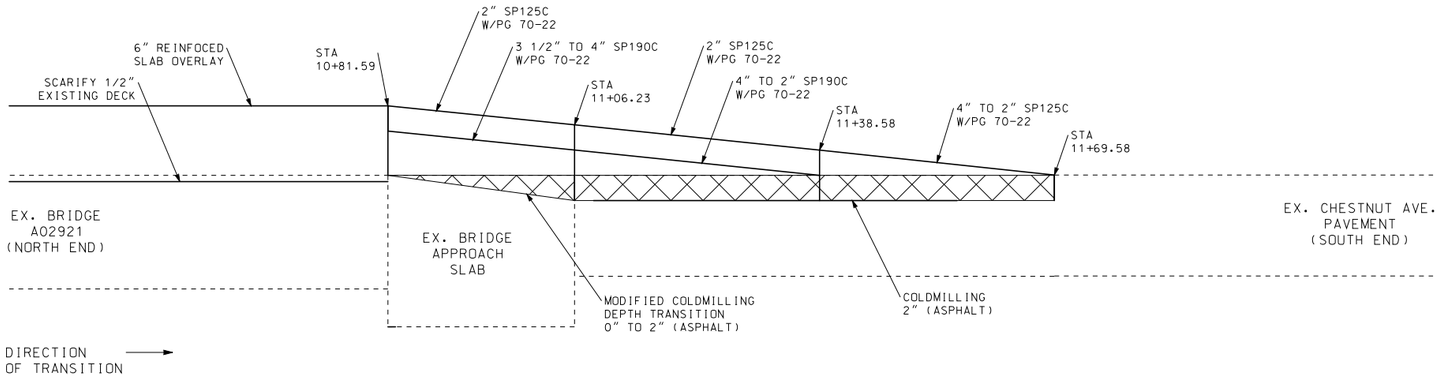
BRIDGE NO.:

DESCRIPTION	DATE

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

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





CHESTNUT AVENUE PAVEMENT DEPTH TRANSITION SPECIAL SHEET 4 OF 15

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	12/11/2017
ROUTE	70
STATE	MO
DISTRICT	KC
SHEET NO.	021
COUNTY	JACKSON
JOB NO.	J4I3198
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION | DATE

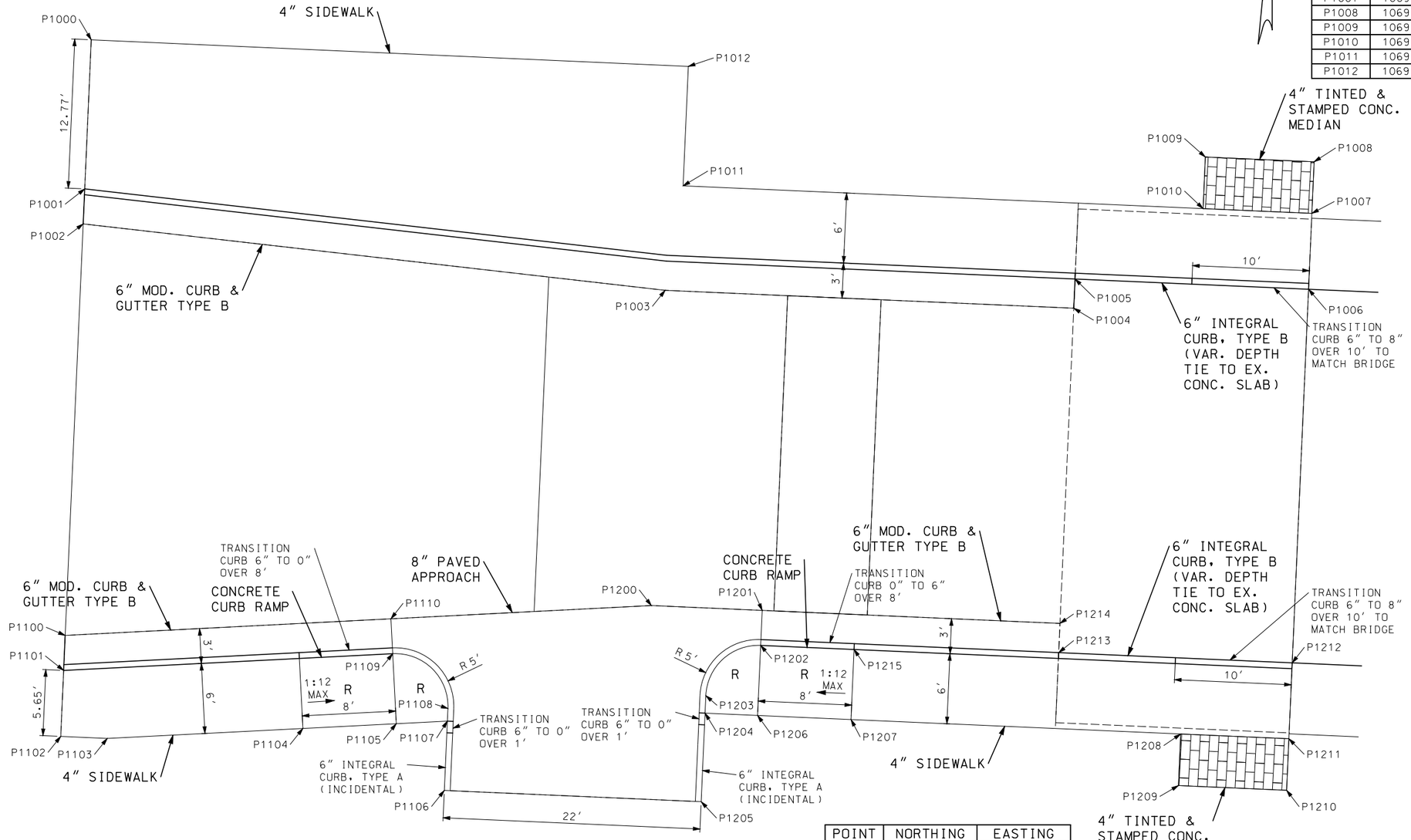
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

NOTES:
R – RAMP
L – LANDING

POINT	NORTHING	EASTING
P1000	1069744.28	2768263.25
P1001	1069731.52	2768262.69
P1002	1069728.53	2768262.56
P1003	1069722.84	2768312.35
P1004	1069721.31	2768347.32
P1005	1069723.81	2768347.43
P1006	1069722.93	2768367.41
P1007	1069729.43	2768367.70
P1008	1069733.84	2768367.89
P1009	1069734.25	2768358.58
P1010	1069729.83	2768358.39
P1011	1069731.78	2768313.89
P1012	1069742.00	2768314.34



POINT	NORTHING	EASTING
P1100	1069693.31	2768261.01
P1101	1069690.31	2768260.88
P1102	1069684.67	2768260.64
P1103	1069684.49	2768264.61
P1104	1069685.35	2768281.36
P1105	1069685.75	2768289.35
P1106	1069680.04	2768293.46
P1107	1069685.98	2768293.72
P1108	1069687.06	2768293.77
P1109	1069691.75	2768289.04
P1110	1069694.73	2768288.89

POINT	NORTHING	EASTING
P1200	1069695.87	2768311.17
P1201	1069695.45	2768320.66
P1202	1069692.46	2768320.53
P1203	1069688.16	2768315.84
P1204	1069686.66	2768315.77
P1205	1069679.08	2768315.44
P1206	1069686.46	2768320.27
P1207	1069686.11	2768328.26
P1208	1069684.88	2768356.47
P1209	1069680.46	2768356.28
P1210	1069680.06	2768365.53
P1211	1069684.47	2768365.73
P1212	1069690.96	2768366.01
P1213	1069691.84	2768346.03
P1214	1069694.34	2768346.14

8TH STREET (WEST)
DETAILS
SPECIAL SHEET
5 OF 15

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/11/2017
ROUTE: 70 | STATE: MO
DISTRICT: KC | SHEET NO.: 022
COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

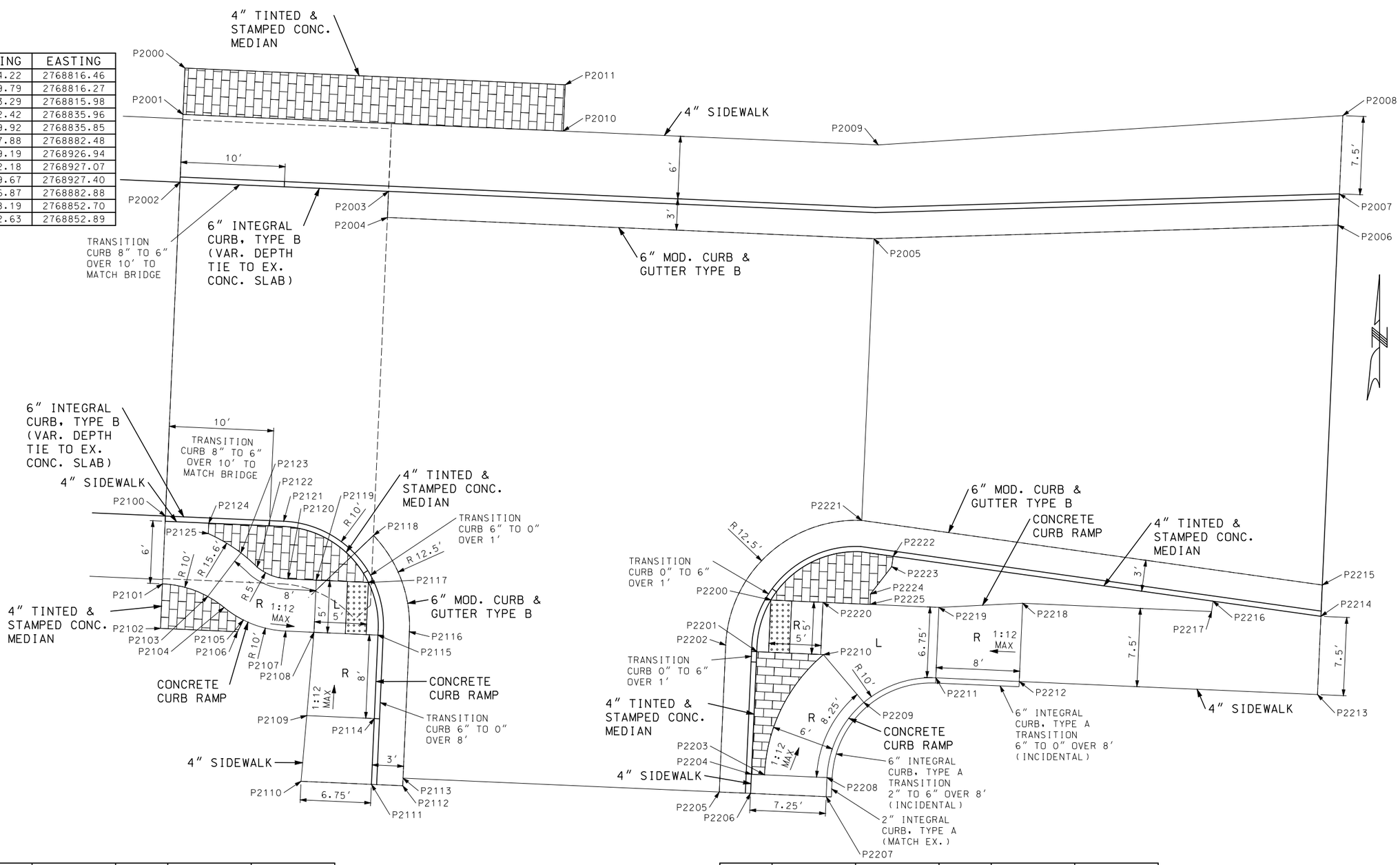
DESCRIPTION | DATE

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

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

NOTES:
R – RAMP
L – LANDING

POINT	NORTHING	EASTING
P2000	1069714.22	2768816.46
P2001	1069709.79	2768816.27
P2002	1069703.29	2768815.98
P2003	1069702.42	2768835.96
P2004	1069699.92	2768835.85
P2005	1069697.88	2768882.48
P2006	1069699.19	2768926.94
P2007	1069702.18	2768927.07
P2008	1069709.67	2768927.40
P2009	1069706.87	2768882.88
P2010	1069708.19	2768852.70
P2011	1069712.63	2768852.89



POINT	NORTHING	EASTING	POINT	NORTHING	EASTING
P2100	1069671.32	2768814.58	P2113	1069646.22	2768837.35
P2101	1069664.83	2768814.30	P2114	1069651.93	2768834.60
P2102	1069660.57	2768814.11	P2115	1069659.92	2768834.95
P2103	1069663.62	2768818.64	P2116	1069660.24	2768837.96
P2104	1069662.57	2768820.20	P2117	1069664.97	2768834.03
P2105	1069661.37	2768822.05	P2118	1069669.47	2768834.52
P2106	1069660.24	2768821.49	P2119	1069665.19	2768829.04
P2107	1069660.31	2768826.11	P2120	1069665.30	2768826.33
P2108	1069660.19	2768828.82	P2121	1069670.83	2768825.92
P2109	1069652.21	2768828.13	P2122	1069666.43	2768823.38
P2110	1069645.92	2768827.58	P2123	1069667.79	2768821.82
P2111	1069645.63	2768834.19	P2124	1069670.64	2768818.73
P2112	1069645.50	2768837.32	P2125	1069669.64	2768818.69

POINT	NORTHING	EASTING	POINT	NORTHING	EASTING
P2200	1069663.28	2768872.59	P2213	1069654.23	2768924.97
P2201	1069658.33	2768871.27	P2214	1069661.72	2768925.30
P2202	1069658.96	2768868.27	P2215	1069664.72	2768925.43
P2203	1069646.54	2768872.00	P2216	1069663.17	2768914.96
P2204	1069646.59	2768870.73	P2217	1069662.18	2768914.83
P2205	1069644.90	2768867.65	P2218	1069662.97	2768896.72
P2206	1069644.76	2768870.65	P2219	1069662.57	2768888.70
P2207	1069644.45	2768877.89	P2220	1069663.06	2768877.59
P2208	1069646.28	2768877.97	P2221	1069670.90	2768881.30
P2209	1069653.47	2768881.50	P2222	1069667.47	2768884.31
P2210	1069658.05	2768877.63	P2223	1069666.48	2768884.17
P2211	1069655.83	2768888.40	P2224	1069663.86	2768882.14
P2212	1069655.48	2768896.39	P2225	1069662.86	2768882.10

8TH STREET (EAST) DETAILS
SPECIAL SHEET
6 OF 15

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2017
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 023
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

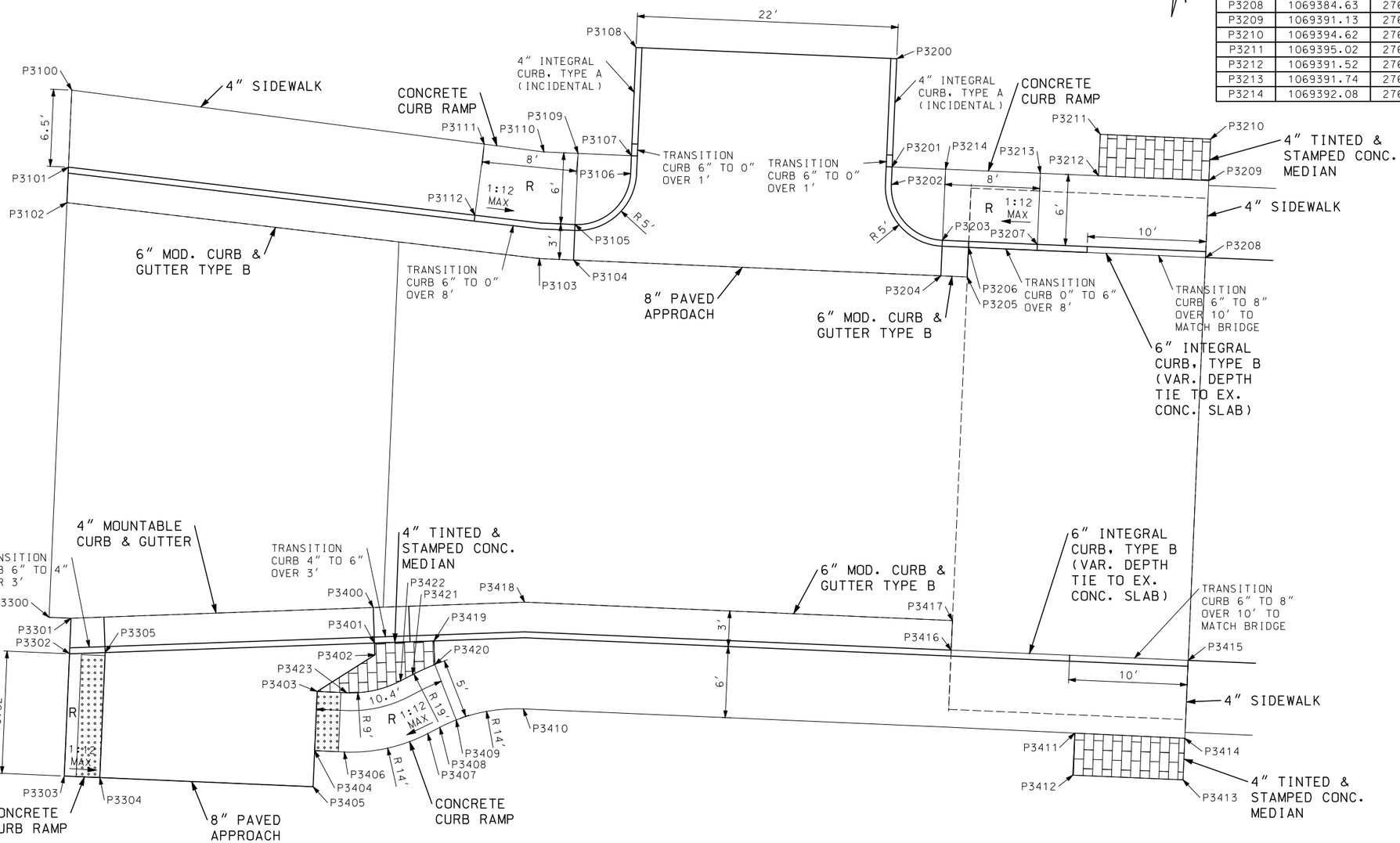
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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

NOTES:
R – RAMP
L – LANDING

POINT	NORTHING	EASTING
P3100	1069398.75	2768234.95
P3101	1069392.26	2768234.67
P3102	1069389.26	2768234.54
P3103	1069384.54	2768274.38
P3104	1069384.42	2768277.25
P3105	1069387.42	2768277.38
P3106	1069391.72	2768282.07
P3107	1069393.22	2768282.14
P3108	1069402.34	2768282.53
P3109	1069393.41	2768277.64
P3110	1069393.54	2768274.76
P3111	1069394.19	2768269.73
P3112	1069388.2	2768268.94

POINT	NORTHING	EASTING
P3200	1069401.40	2768304.51
P3201	1069392.27	2768304.12
P3202	1069390.77	2768304.05
P3203	1069386.09	2768308.35
P3204	1069383.09	2768308.23
P3205	1069382.99	2768310.45
P3206	1069385.49	2768310.56
P3207	1069385.74	2768316.36
P3208	1069384.63	2768330.54
P3209	1069391.13	2768330.82
P3210	1069394.62	2768330.97
P3211	1069395.02	2768321.67
P3212	1069391.52	2768321.52
P3213	1069391.74	2768316.62
P3214	1069392.08	2768308.62



POINT	NORTHING	EASTING
P3300	1069354.29	2768233.04
P3301	1069354.21	2768234.89
P3302	1069351.21	2768234.76
P3303	1069340.91	2768234.32
P3304	1069340.78	2768237.32
P3305	1069351.32	2768237.77

POINT	NORTHING	EASTING	POINT	NORTHING	EASTING
P3400	1069355.12	2768260.37	P3412	1069340.98	2768319.35
P3401	1069352.12	2768260.47	P3413	1069340.58	2768328.64
P3402	1069351.12	2768260.51	P3414	1069344.09	2768328.79
P3403	1069348.04	2768255.64	P3415	1069350.66	2768329.08
P3404	1069343.04	2768255.43	P3416	1069351.52	2768309.1
P3405	1069340.00	2768255.30	P3417	1069354.02	2768309.2
P3406	1069342.93	2768257.93	P3418	1069355.57	2768273.13
P3407	1069344.49	2768264.97	P3419	1069352.3	2768265.49
P3408	1069345.01	2768265.98	P3420	1069350.3	2768265.56
P3409	1069345.64	2768267.36	P3421	1069349.45	2768263.68
P3410	1069346.57	2768273.02	P3422	1069348.93	2768262.67
P3411	1069344.52	2768319.52	P3423	1069347.93	2768258.14

9TH STREET (WEST)
DETAILS
SPECIAL SHEET
7 OF 15

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 1/8/2018
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 024
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

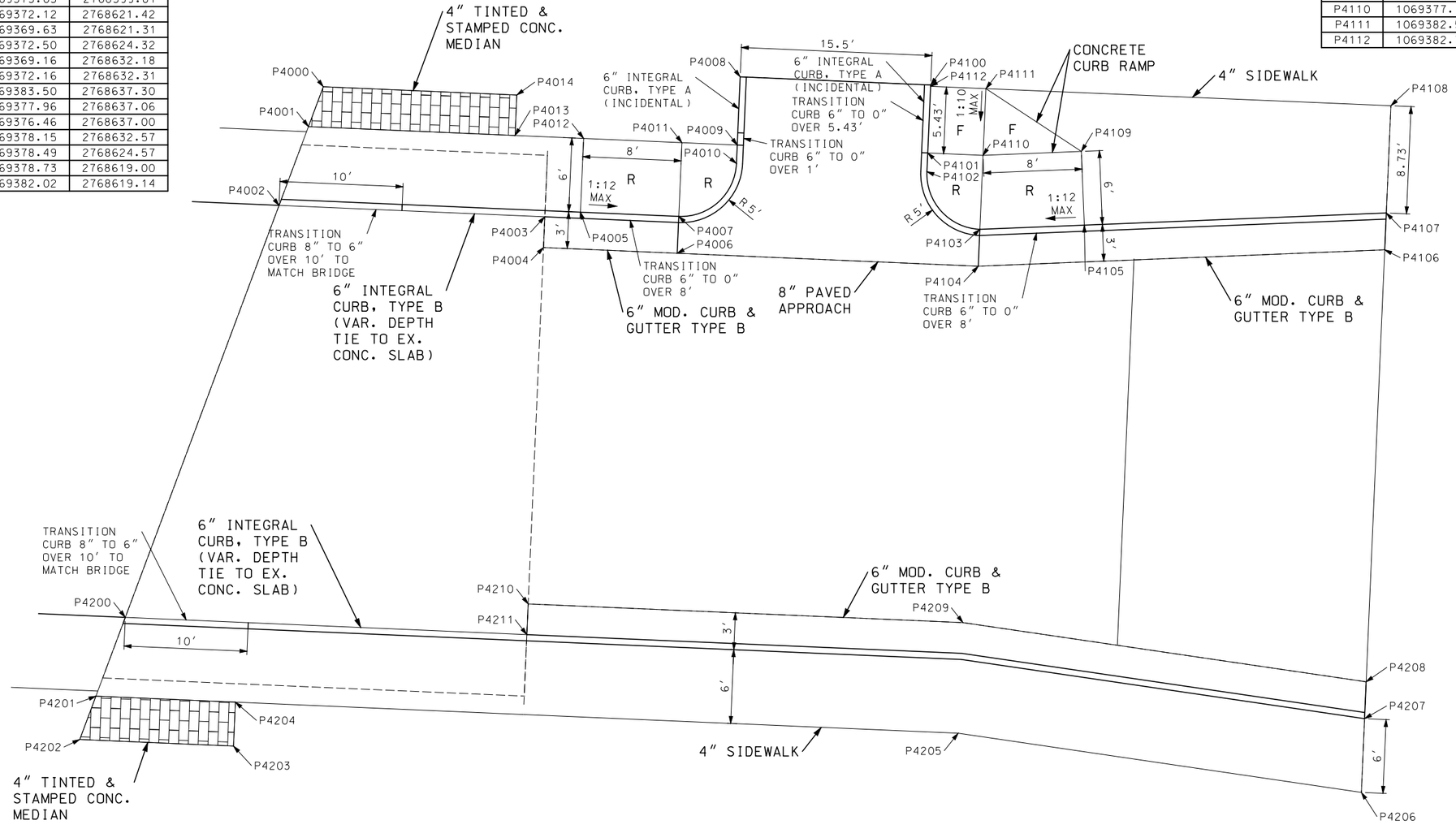
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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

NOTES:
R – RAMP
L – LANDING
F – FLARE

POINT	NORTHING	EASTING
P4000	1069382.70	2768603.41
P4001	1069379.46	2768602.20
P4002	1069373.05	2768599.81
P4003	1069372.12	2768621.42
P4004	1069369.63	2768621.31
P4005	1069372.50	2768624.32
P4006	1069369.16	2768632.18
P4007	1069372.16	2768632.31
P4008	1069383.50	2768637.30
P4009	1069377.96	2768637.06
P4010	1069376.46	2768637.00
P4011	1069378.15	2768632.57
P4012	1069378.49	2768624.57
P4013	1069378.73	2768619.00
P4014	1069382.02	2768619.14

POINT	NORTHING	EASTING
P4100	1069382.84	2768652.79
P4101	1069377.31	2768652.55
P4102	1069375.79	2768652.48
P4103	1069371.10	2768656.79
P4104	1069368.11	2768656.66
P4105	1069371.45	2768665.28
P4106	1069369.44	2768689.70
P4107	1069372.44	2768689.83
P4108	1069381.15	2768690.20
P4109	1069377.44	2768665.03
P4110	1069377.12	2768657.04
P4111	1069382.54	2768657.28
P4112	1069382.73	2768652.78



POINT	NORTHING	EASTING
P4200	1069339.56	2768587.32
P4201	1069333.16	2768584.93
P4202	1069329.63	2768583.61
P4203	1069329.09	2768596.11
P4204	1069332.67	2768596.27
P4205	1069330.14	2768655.02
P4206	1069325.33	2768687.80
P4207	1069331.32	2768688.06
P4208	1069334.32	2768688.19
P4209	1069339.13	2768655.41
P4210	1069340.65	2768620.06
P4211	1069338.16	2768619.96

9TH STREET (EAST)
DETAILS
SPECIAL SHEET
8 OF 15

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2017
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 025
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

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

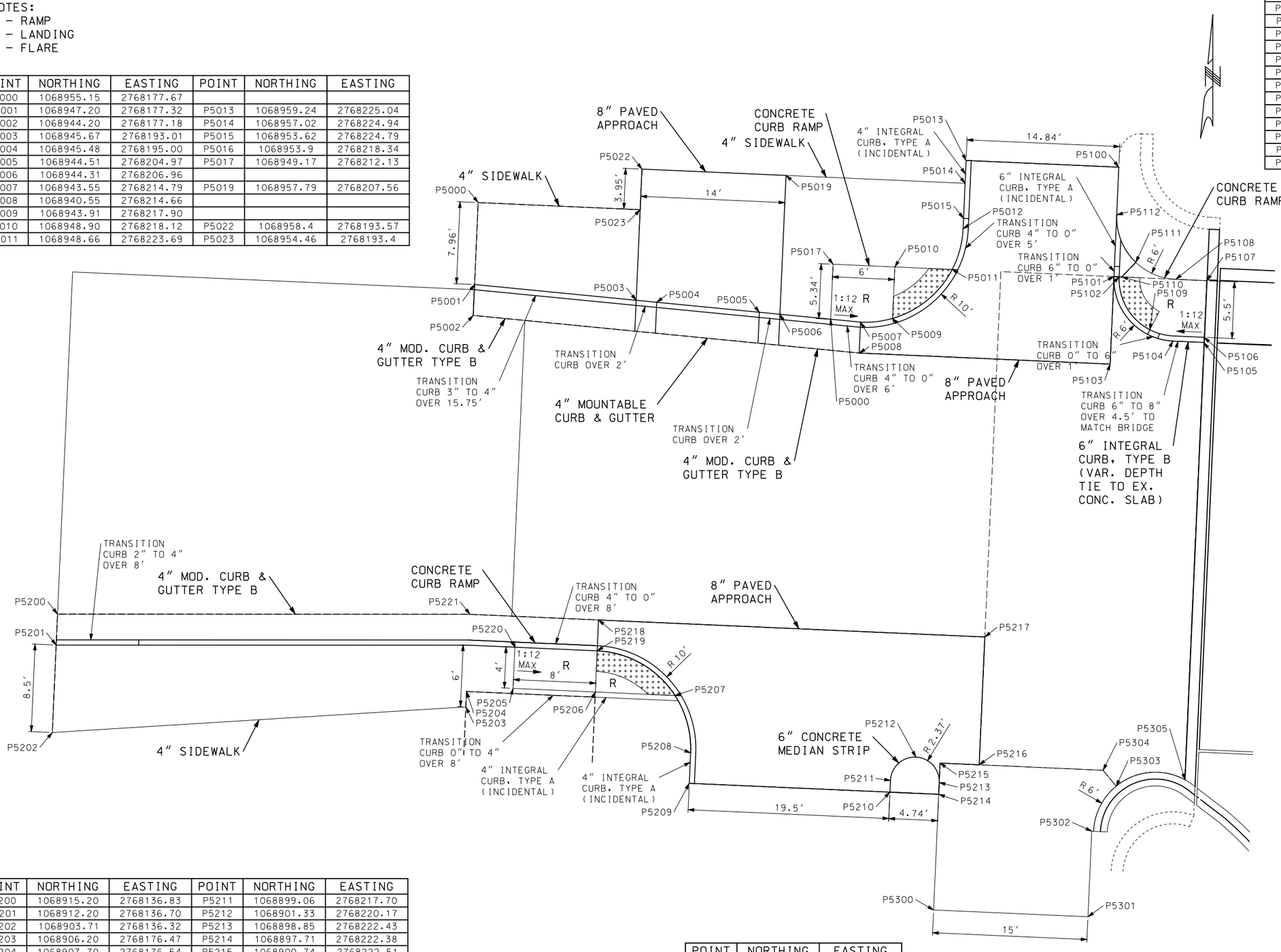
NO.	DESCRIPTION	DATE

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

NOTES:
R – RAMP
L – LANDING
F – FLARE

POINT	NORTHING	EASTING	POINT	NORTHING	EASTING
P5000	1068955.15	2768177.67			
P5001	1068947.20	2768177.32	P5013	1068959.24	2768225.04
P5002	1068944.20	2768177.18	P5014	1068957.02	2768224.94
P5003	1068945.67	2768193.01	P5015	1068953.62	2768224.79
P5004	1068945.48	2768195.00	P5016	1068953.9	2768218.34
P5005	1068944.51	2768204.97	P5017	1068949.17	2768212.13
P5006	1068944.31	2768206.96			
P5007	1068943.55	2768214.79	P5019	1068957.79	2768207.56
P5008	1068940.55	2768214.66			
P5009	1068943.91	2768217.90			
P5010	1068948.90	2768218.12	P5022	1068958.4	2768193.57
P5011	1068948.66	2768223.69	P5023	1068954.46	2768193.4

POINT	NORTHING	EASTING
P5100	1068958.59	2768239.87
P5101	1068947.97	2768239.40
P5102	1068947.94	2768239.90
P5103	1068939.47	2768239.02
P5104	1068941.71	2768245.13
P5105	1068941.58	2768248.14
P5106	1068942.08	2768248.16
P5107	1068947.57	2768248.40
P5108	1068947.70	2768245.39
P5109	1068942.81	2768242.88
P5110	1068947.93	2768240.15
P5111	1068949.35	2768241.52
P5112	1068953.96	2768239.66



POINT	NORTHING	EASTING	POINT	NORTHING	EASTING
P5200	1068915.20	2768136.83	P5211	1068899.06	2768217.70
P5201	1068912.20	2768136.70	P5212	1068901.33	2768220.17
P5202	1068903.71	2768136.32	P5213	1068898.85	2768222.43
P5203	1068906.20	2768176.47	P5214	1068897.71	2768222.38
P5204	1068907.70	2768176.54	P5215	1068900.74	2768222.51
P5205	1068908.00	2768181.05	P5216	1068900.58	2768226.31
P5206	1068907.64	2768189.05	P5217	1068912.98	2768226.86
P5207	1068907.30	2768196.78	P5218	1068914.64	2768189.35
P5208	1068901.73	2768198.29	P5219	1068911.64	2768189.22
P5209	1068898.78	2768198.16	P5220	1068911.99	2768181.23
P5210	1068897.92	2768217.65	P5221	1068915.19	2768176.87

POINT	NORTHING	EASTING
P5300	1068886.49	2768221.89
P5301	1068885.83	2768236.87
P5302	1068894.13	2768237.24
P5303	1068898.50	2768239.61
P5304	1068900.05	2768238.34
P5305	1068899.14	2768246.27

10TH STREET (WEST)
DETAILS
SPECIAL SHEET
9 OF 15

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 1/10/2018
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 026
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

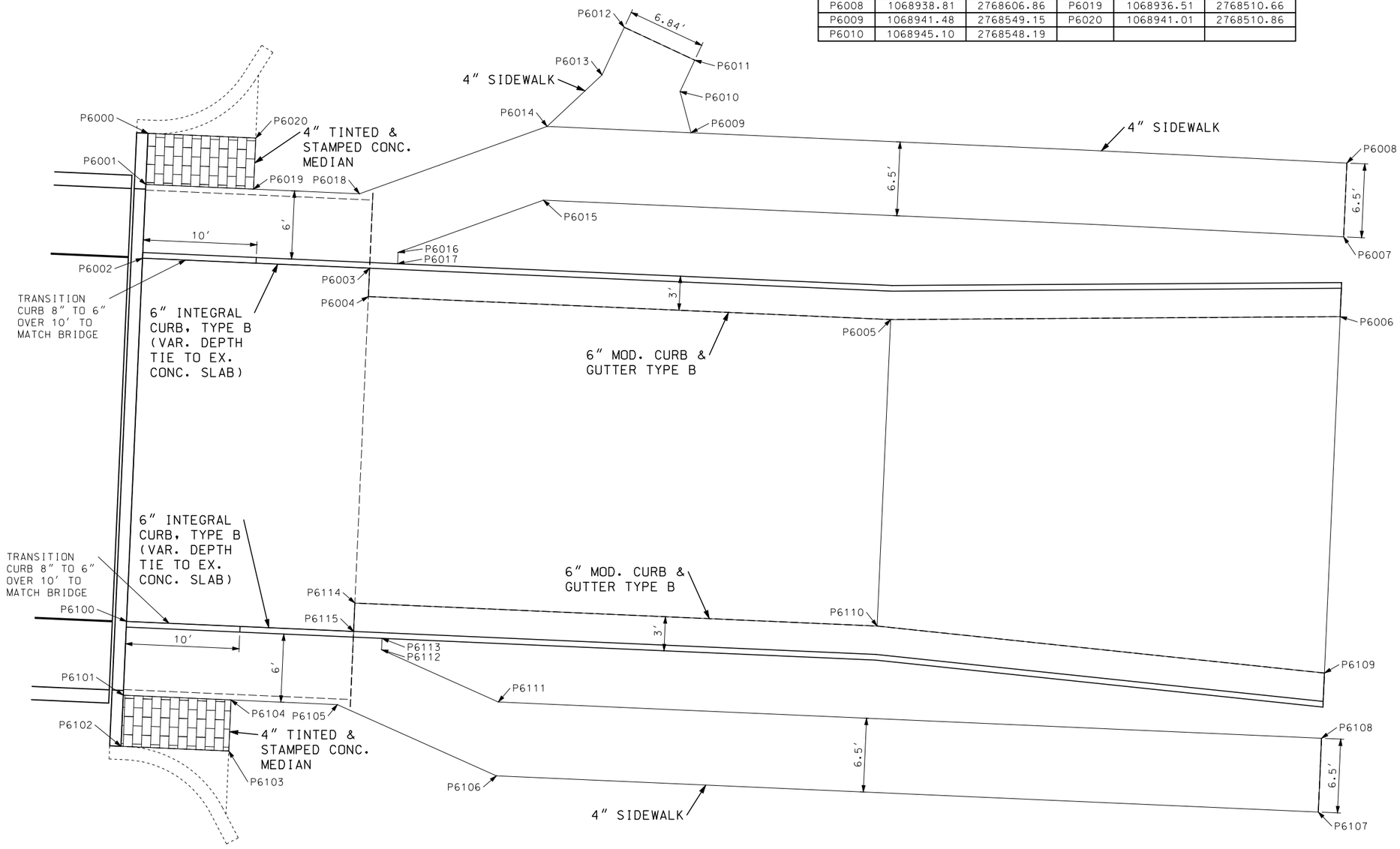
DESCRIPTION | DATE

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

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

NOTES:
R – RAMP
L – LANDING
F – FLARE

POINT	NORTHING	EASTING	POINT	NORTHING	EASTING
P6000	1068941.43	2768501.38	P6011	1068947.86	2768549.48
P6001	1068936.93	2768501.18	P6012	1068950.76	2768543.28
P6002	1068930.44	2768500.89	P6013	1068946.56	2768541.32
P6003	1068929.56	2768520.87	P6014	1068942.03	2768536.49
P6004	1068927.06	2768520.76	P6015	1068935.54	2768536.16
P6005	1068925.04	2768566.72	P6016	1068930.95	2768523.38
P6006	1068925.29	2768606.27	P6017	1068929.95	2768523.33
P6007	1068932.31	2768606.58	P6018	1068936.1	2768519.98
P6008	1068938.81	2768606.86	P6019	1068936.51	2768510.66
P6009	1068941.48	2768549.15	P6020	1068941.01	2768510.86
P6010	1068945.10	2768548.19			



POINT	NORTHING	EASTING	POINT	NORTHING	EASTING
P6100	1068898.47	2768499.48	P6108	1068888.19	2768604.63
P6101	1068891.98	2768499.20	P6109	1068893.92	2768604.89
P6102	1068887.48	2768499.00	P6110	1068898.06	2768565.53
P6103	1068887.06	2768508.48	P6111	1068891.38	2768532.20
P6104	1068891.56	2768508.68	P6112	1068895.98	2768521.92
P6105	1068891.15	2768518.03	P6113	1068896.98	2768521.96
P6106	1068884.88	2768532.03	P6114	1068900.09	2768519.57
P6107	1068881.69	2768604.35	P6115	1068897.59	2768519.46

10TH STREET (EAST)
DETAILS
SPECIAL SHEET
10 OF 15

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2017
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 027
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

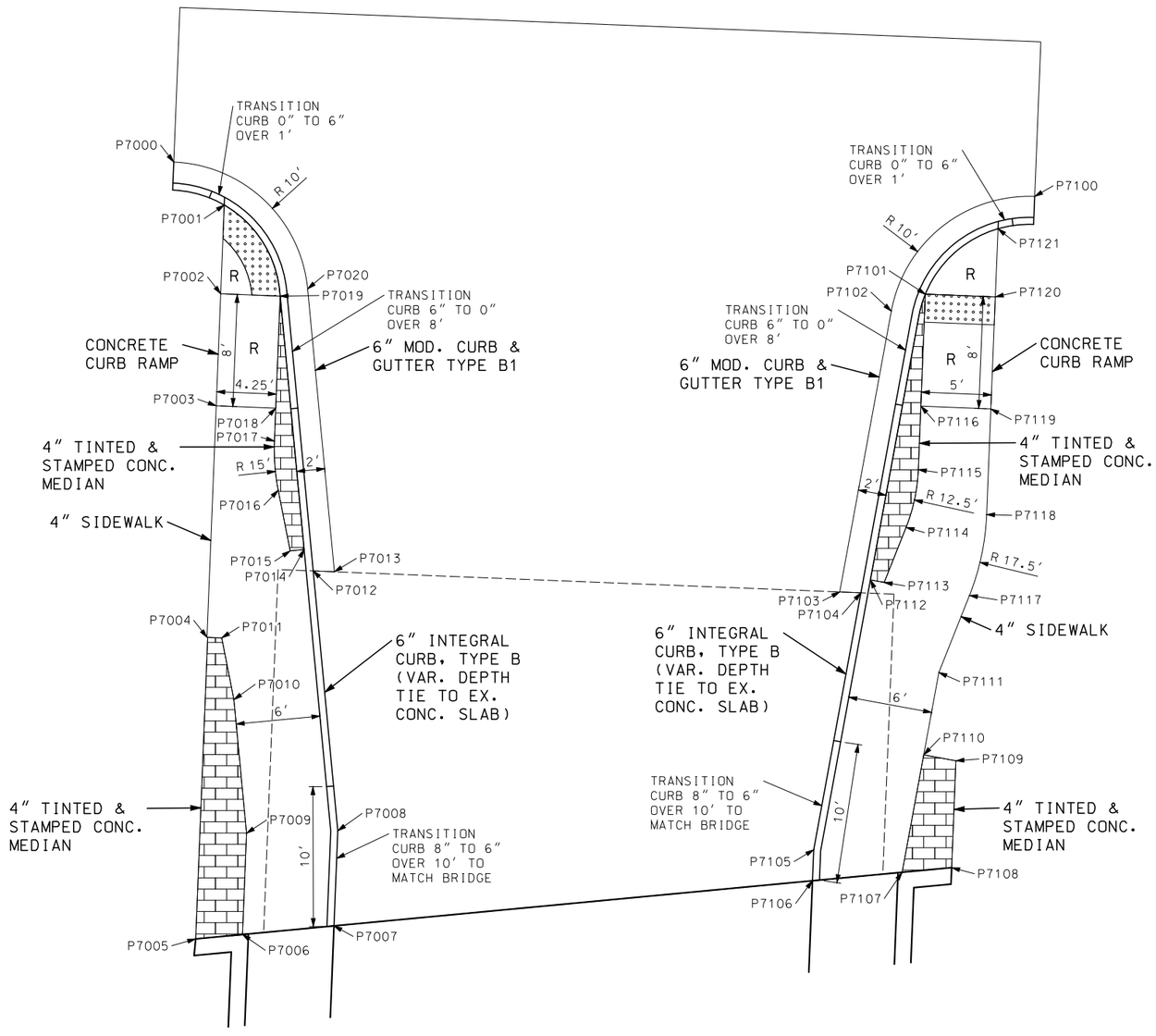
DESCRIPTION | DATE

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

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

NOTES:
R – RAMP
L – LANDING

POINT	NORTHING	EASTING
P7000	1067240.36	2774945.18
P7001	1067237.29	2774948.78
P7002	1067230.96	2774948.53
P7003	1067222.96	2774948.21
P7004	1067206.44	2774947.55
P7005	1067184.92	2774946.74
P7006	1067185.24	2774950.08
P7007	1067185.85	2774956.61
P7008	1067192.64	2774956.88
P7009	1067192.46	2774950.37
P7010	1067201.99	2774949.47
P7011	1067206.40	2774948.60
P7012	1067211.18	2774955.13
P7013	1067211.12	2774956.64
P7014	1067212.70	2774954.48
P7015	1067212.61	2774953.49
P7016	1067216.94	2774952.63
P7017	1067220.44	2774952.36
P7018	1067222.79	2774952.45
P7019	1067230.79	2774952.77
P7020	1067231.31	2774954.73



POINT	NORTHING	EASTING
P7100	1067237.90	2775006.63
P7101	1067230.93	2774998.82
P7102	1067229.72	2774996.40
P7103	1067209.68	2774992.71
P7104	1067209.62	2774994.23
P7105	1067191.28	2774990.86
P7106	1067189.07	2774990.77
P7107	1067189.68	2774997.17
P7108	1067190.01	2775000.70
P7109	1067197.63	2775001.01
P7110	1067198.05	2774998.71
P7111	1067203.93	2774999.79
P7112	1067210.54	2774994.90
P7113	1067210.36	2774995.89
P7114	1067214.29	2774997.45
P7115	1067218.41	2774998.32
P7116	1067222.94	2774998.5
P7117	1067209.43	2775001.98
P7118	1067215.2	2775003.2
P7119	1067222.74	2775003.5
P7120	1067230.73	2775003.82
P7121	1067235.6	2775004.01

CHESTNUT AVENUE
(NORTH)
DETAILS
SPECIAL SHEET
11 OF 15

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/12/2017
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 028
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

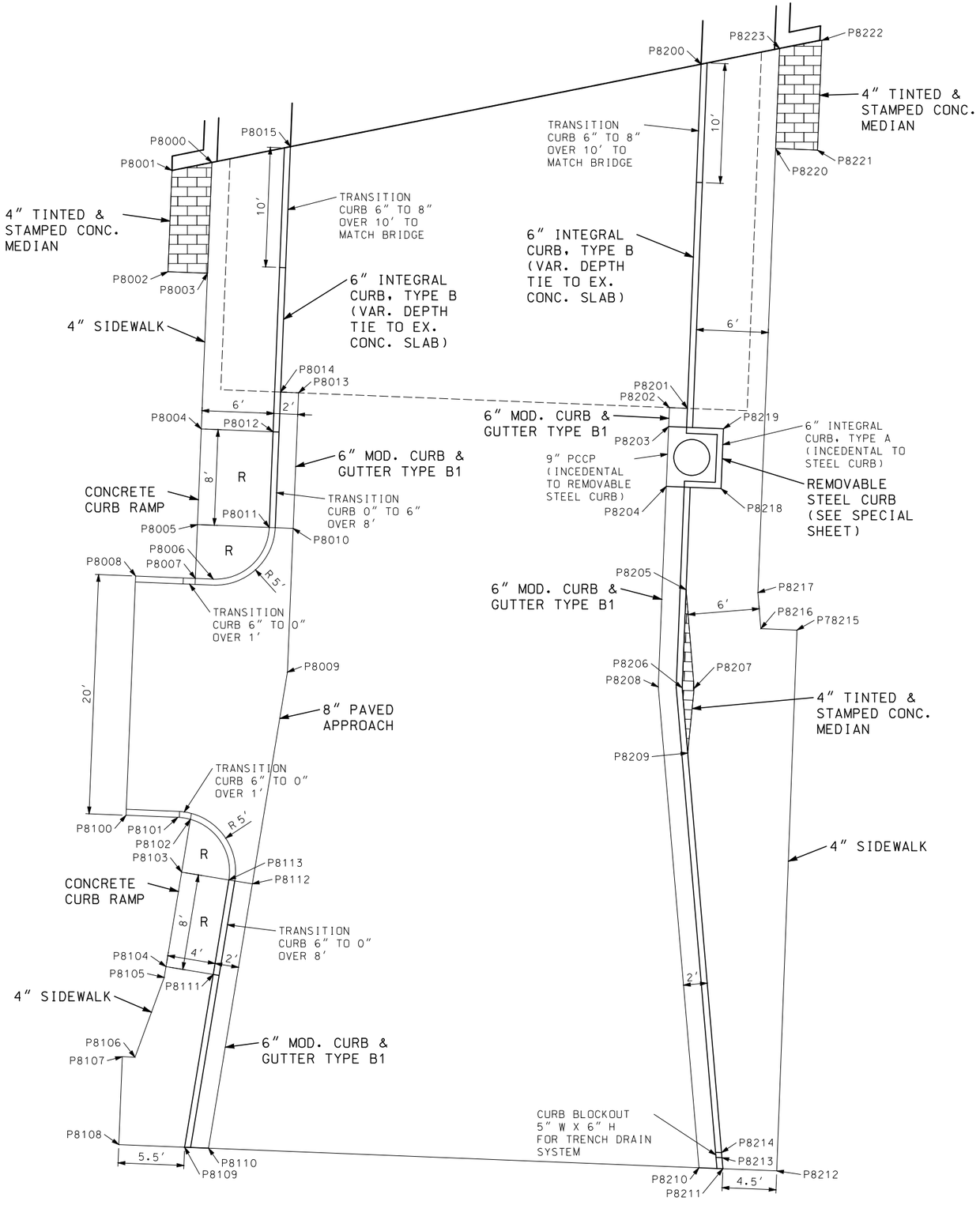
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

NOTES:
R – RAMP
L – LANDING

POINT	NORTHING	EASTING
P8000	1066995.15	2774942.50
P8001	1066994.48	2774939.16
P8002	1066986.02	2774938.82
P8003	1066985.89	2774942.13
P8004	1066972.89	2774941.61
P8005	1066964.89	2774941.29
P8006	1066960.34	2774942.61
P8007	1066960.40	2774941.11
P8008	1066960.60	2774936.12
P8009	1066952.57	2774948.80
P8010	1066964.57	2774949.28
P8011	1066964.65	2774947.28
P8012	1066972.65	2774947.60
P8013	1066975.90	2774949.73
P8014	1066975.96	2774948.24
P8015	1066996.47	2774949.05

POINT	NORTHING	EASTING
P8100	1066940.61	2774935.32
P8101	1066940.44	2774939.65
P8102	1066940.27	2774940.70
P8103	1066935.86	2774939.97
P8104	1066927.97	2774938.66
P8105	1066927.06	2774938.51
P8106	1066920.40	2774936.07
P8107	1066920.44	2774935.01
P8108	1066913.10	2774934.72
P8109	1066912.88	2774940.21
P8110	1066912.80	2774942.21
P8111	1066927.31	2774942.61
P8112	1066934.88	2774945.87
P8113	1066935.21	2774943.91



POINT	NORTHING	EASTING
P8200	1067003.36	2774983.36
P8201	1066974.61	2774982.21
P8202	1066974.67	2774980.71
P8203	1066973.08	2774980.65
P8204	1066968.09	2774980.45
P8205	1066959.45	2774982.10
P8206	1066951.25	2774981.78
P8207	1066951.21	2774982.78
P8208	1066951.33	2774979.78
P8209	1066945.81	2774982.24
P8210	1066911.17	2774983.18
P8211	1066911.09	2774985.18
P8212	1066910.91	2774989.67
P8213	1066912.01	2774985.10
P8214	1066912.43	2774985.06
P8215	1066956.08	2774991.36
P8216	1066956.20	2774988.34
P8217	1066959.21	2774988.10
P8218	1066967.90	2774985.02
P8219	1066972.90	2774985.22
P8220	1066996.31	2774989.58
P8221	1066996.17	2774993.08
P8222	1067005.34	2774993.44
P8223	1067004.67	2774989.91

CHESTNUT AVENUE
(SOUTH)
DETAILS
SPECIAL SHEET
12 OF 15

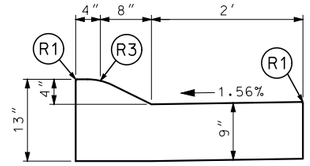
STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/12/2017
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 029
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

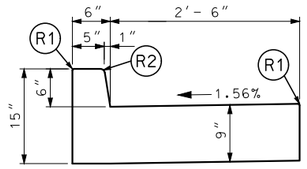
DESCRIPTION | DATE

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

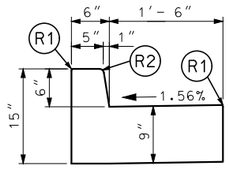
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



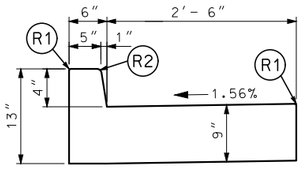
4″ MOUNTABLE
CURB & GUTTER



6″ MODIFIED
CURB & GUTTER
TYPE B



6″ MODIFIED
CURB & GUTTER
TYPE B1



4″ MODIFIED
CURB & GUTTER
TYPE B2

NOTES:

SEE STANDARD DRAWING 609.00P 1 OF 2 FOR ADDITIONAL DETAILS.

(R1) ROUND TO 1/4″ RADIUS. (EXCEPT FOR SAWED JOINTS)

(R2) ROUND TO 3/4″ RADIUS.

(R3) CONSTRUCT TO 9″ RADIUS

CURB AND GUTTER
SPECIAL SHEET
13 OF 15

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
1/10/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	030

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

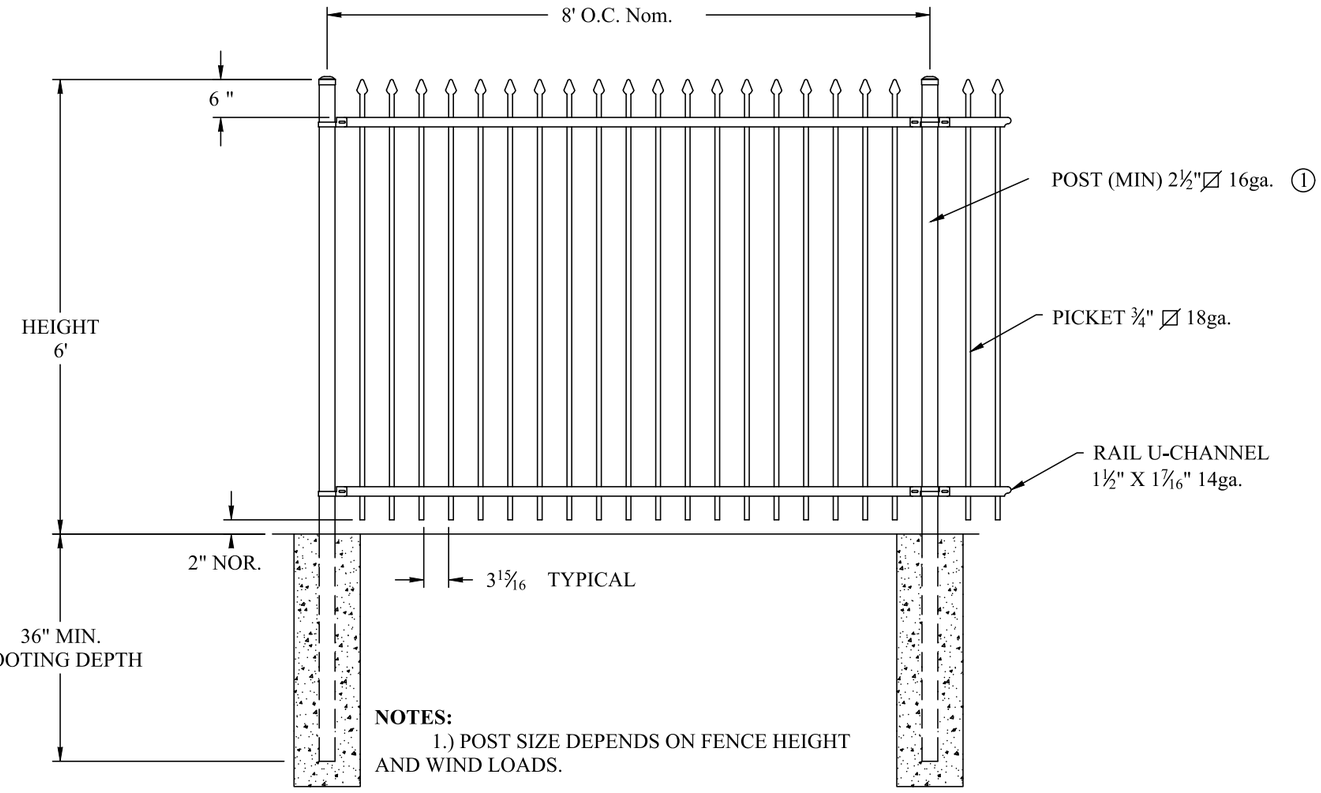
BRIDGE NO.

DESCRIPTION	DATE

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



NOTES:

1.) POST SIZE DEPENDS ON FENCE HEIGHT AND WIND LOADS.

72" ORNAMENTAL STEEL FENCE DETAIL

NOTES:

THE CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MISSOURI PRIOR TO ORDERING AND INSTALLATION FOR APPROVAL OF THE ENGINEER. MEMBER SIZES AND CONNECTION DETAILS OF THE FENCE SHALL BE INDICATED ON THE SHOP DRAWINGS.

THE CONTRACT UNIT PRICE PER LINEAR FOOT 72" ORNAMENTAL STEEL FENCE SHALL INCLUDE FURNISHING, FINISHING, AND ERECTING THE FENCE PER MANUFACTURE'S RECOMMENDATIONS.

ORNAMENTAL STEEL FENCE SHALL BE AMERISTAR FENCE "MONTAGE PLUS, 2 RAIL CLASSIC PANEL" OR APPROVED EQUAL.

STEEL MATERIAL FOR FENCE PANELS AND POSTS SHALL BE ASTM A653/A653M WITH A MINIMUM YIELD STRENGTH OF 45 KSI AND A MIN. ZINC (HOT-DIP GALVANIZED) COATING WEIGHT OF 0.60 OZ/FT², COATING DESIGNATION G-60.

MATERIAL FOR PICKETS SHALL BE $\frac{3}{4}$" SQUARE 18 Ga. STEEL TUBING. THE RAILS SHALL BE STEEL CHANNEL $1\frac{1}{2}$" X $1\frac{7}{16}$" 14 Ga.

THE MANUFACTURED FENCE SYSTEM SHALL BE CAPABLE OF MEETING THE VERTICAL LOAD, HORIZONTAL LOAD, AND INFILL PERFORMANCE REQUIREMENTS FOR COMMERCIAL WEIGHT FENCES UNDER ASTM F2408.

ALL FENCE COMPONENTS SHALL BE COATED WITH PRIMER, INTERMEDIATE & FINAL COATS IN THE SHOP. PAINT SHALL CONFORM TO THE REQUIREMENTS OF SECTIONS 1045 AND 1081. PAINT SHALL BE SYSTEM G (BLACK). COLOR SHALL MATCH FEDERAL STANDARD 595B 17038.

DIMENSIONS FOR ORNAMENTAL STEEL FENCE ARE MEASURED ALONG GRADE.

ORNAMENTAL STEEL FENCE SPECIAL SHEET 14 OF 15

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/13/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	031

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

PROJECT NO.

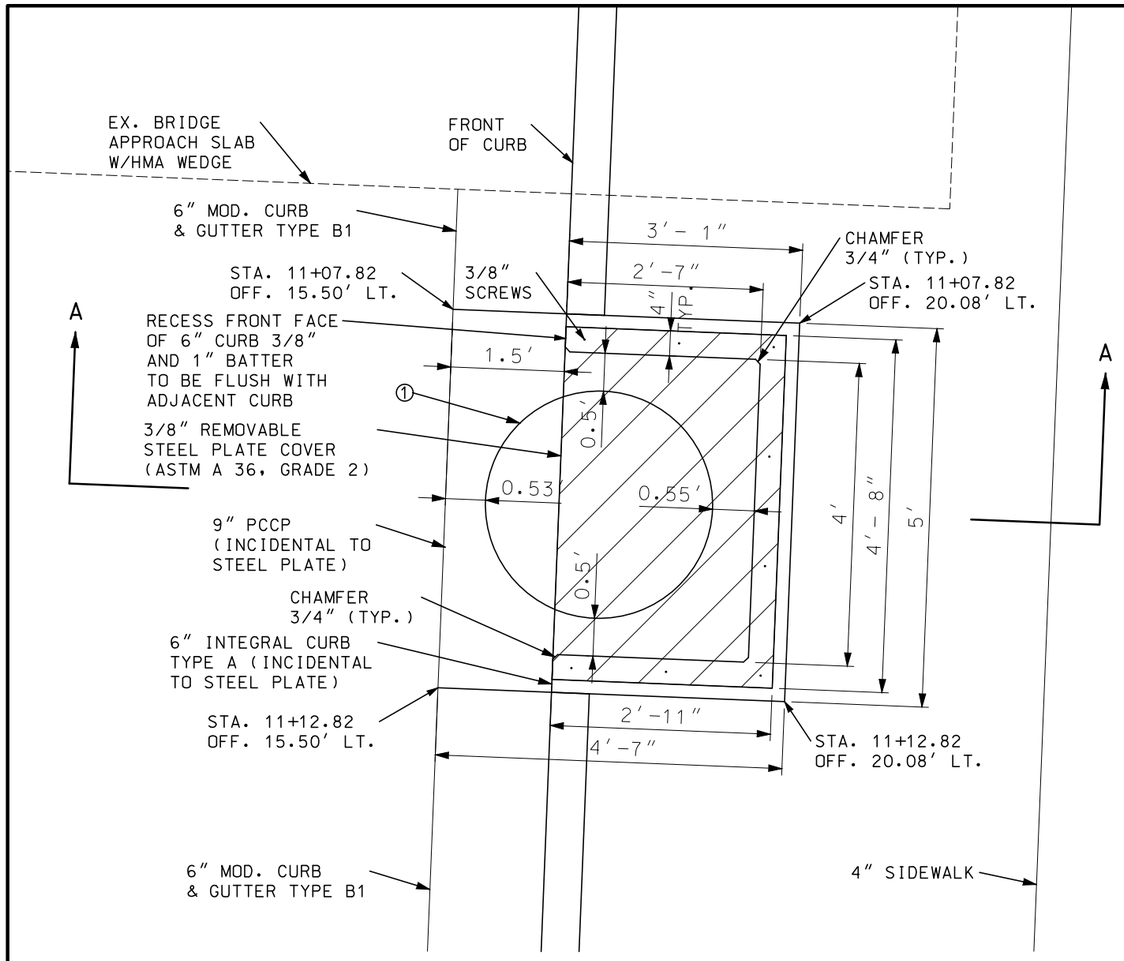
BRIDGE NO.

DESCRIPTION	DATE

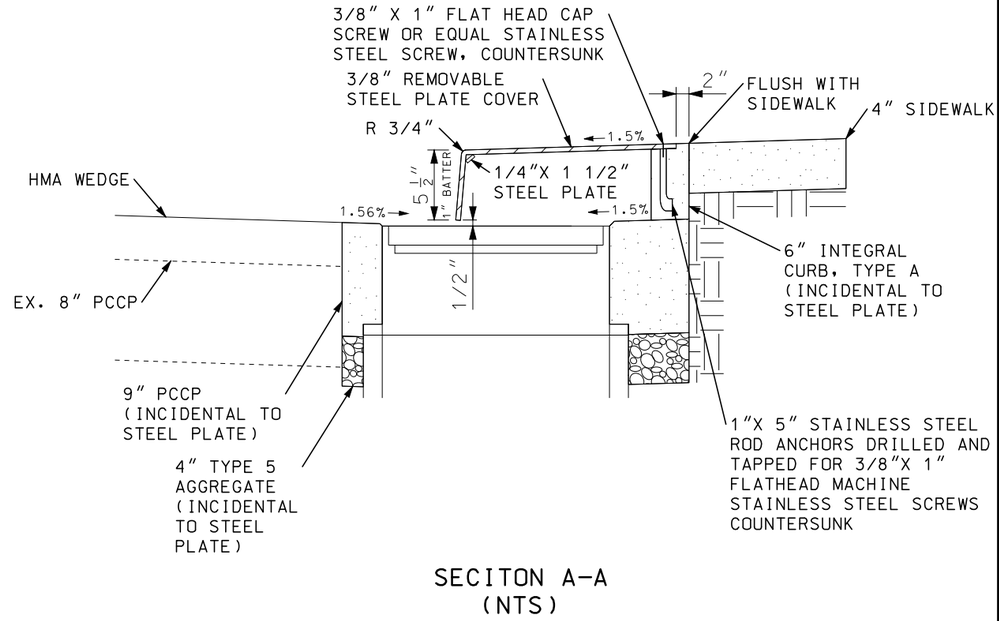
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

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



REMOVABLE STEEL CURB (PLAN VIEW) 1"= 1'



SECITON A-A (NTS)

NOTES:

1. KCP&L EX. MANHOLE (30" DIA.) REPLACED WITH NEW MANHOLE (36" DIA.) ADJUST MANHOLE TO GRADE (FLOWLINE OF CURB & GUTTER) PRIOR TO STEEL CURB PLACEMENT (ADJUSTED BY OTHERS)
2. TOP OF STEEL PLATE SHALL HAVE A MINIMUM COEFFICIENT OF STATIC FRICTION OF 0.5 FOR EITHER WET OR DRY CONDITION, WHEN TESTED FOR ANY SHOE SOLE MATERIAL.
3. STAINLESS STEEL SCREWS SHALL BE EQUALLY SPACED AS SHOWN IN PLAN VIEW.
4. ALL STEEL PARTS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
5. 6" INTEGRAL CURB SHALL CONFORM TO STANDARD PLAN 609.00P AND SPEC. 609.20.
6. 9" PCCP SHALL CONFORM TO SPEC. 502.
7. 4" TYPE 5 AGGREGATE SHALL CONFORM TO SPEC. 304.

REMOVABLE STEEL CURB SPECIAL SHEET 15 OF 15

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/16/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	032

COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

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

SPACING AND TAPER LENGTHS FOR WORK ZONE SIGNS, CHANNELIZERS AND CONCRETE BARRIER

SIGN SPACING FOR ADVANCE SIGN SERIES (1) (2)		
PERMANENT POSTED SPEED MPH	UNDIVIDED HIGHWAYS	DIVIDED HIGHWAYS
0-35	200′	200′
40-45	350′	500′
50-55	500′	1000′
60-70	1000′	SA - 1000′ SB - 1500′ SC - 2640′

TAPER LENGTHS AND END TREATEMENTS FOR CONCRETE BARRIER				
PERMANENT POSTED SPEED	MINIMUM LANE TAPER LENGTH (3)			
MPH	10′	11′	12′	END TREATMENT (4)
LT 40	160′	168′	176′	BARRIER HEIGHT TRANSITION
GT 40	160′	168′	176′	APPROVED CRASH CUSHION

NOTE:

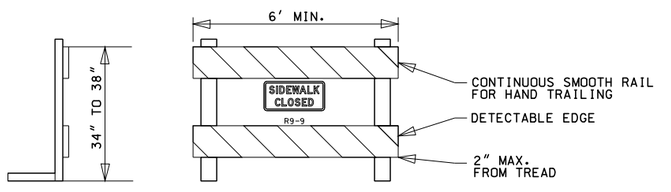
(1) SPACING BETWEEN SIGNS AND SPACING BETWEEN LAST SIGN AND FLAGGER, BEGINNING OF TAPER, OF SIGNED CONDITION.

(2) SPACING MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.

(3) TAPER LENGTHS SHOWN INCLUDE LENGTH REQUIRED FOR LANE AND 10' SHOULDER

(4) CONCRETE BARRIER MAY BE INSTALLED AT 8:1 FLARE RATE FROM THE SHOULDER POINT OF THE LIMITS OF THE CLEAR ZONE WHERE THE SIDE SLOPE IS 6:1 OR FLATTER

TAPER LENGTHS AND SPACING FOR CHANNELIZERS							
PERMANENT POSTED SPEED	MINIMUM LANE TAPER LENGTH (3)			MINIMUM SHOULDER TAPER LENGTH	BUFFER LENGTH	MAXIMUM CHANNELIZER SPACING	
						THROUGH	THROUGH
MPH	10′	11′	12′	BASED ON 10′ SHOULDER	FT	TAPER	WORK AREA
0-35	205′	225′	245′	70′	280′	35′	40′
40-45	450′	495′	540′	150′	400′	40′	80′
50-55	550′	605′	660′	185′	560′	50′	80′
60-70	700′	770′	840′	235′	840′	60′	120′



(1). WARINING LIGHTS SHALL NOT BE ATTACHED TO ADA COMPLINT BARRICADES.

(2). CHEVRON RAILS ON THE ADA COMPLIANT BARRICADES MUST BE 8″ WIDE MIN. AND MEET TYPE 3 RETRO-REFLECTIVE SHEETING AND COLOR CONTRAST BARRICADE RAILS AS SHOWN. THE TOP RAIL MUST PROVIDE A SMOOTH CONTINUOUS RAIL SURFACE SUITABLE FOR HAND TRAILING WITH NO SPLINTERS, BURRS OR SHARP EDGES. A MINIMUM OF TWO 8″ WIDE RAILS REQUIRED.

(3). NO TRIPPING HAZARDS FROM THE BARRICADES ARE ALLOWED WITHIN THE PEDESTRIAN SPACE. THIS MEANS NO FEET OR BARS USED TO HOLD THE RAILS OR SUPPORT THE DEVICE ARE ALLOWED WITHIN THE WALKWAY, ALL FEET AND BALLASTS WILL NEED TO BE BEHIND THE DEVICE.

(4). THE BARRICADE MUST BE THE FULL WIDTH OF THE CLOSED SIDEWALK.

TEMPORARY
TRAFFIC CONTROL
SHEET 1 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	033

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

PROJECT NO.

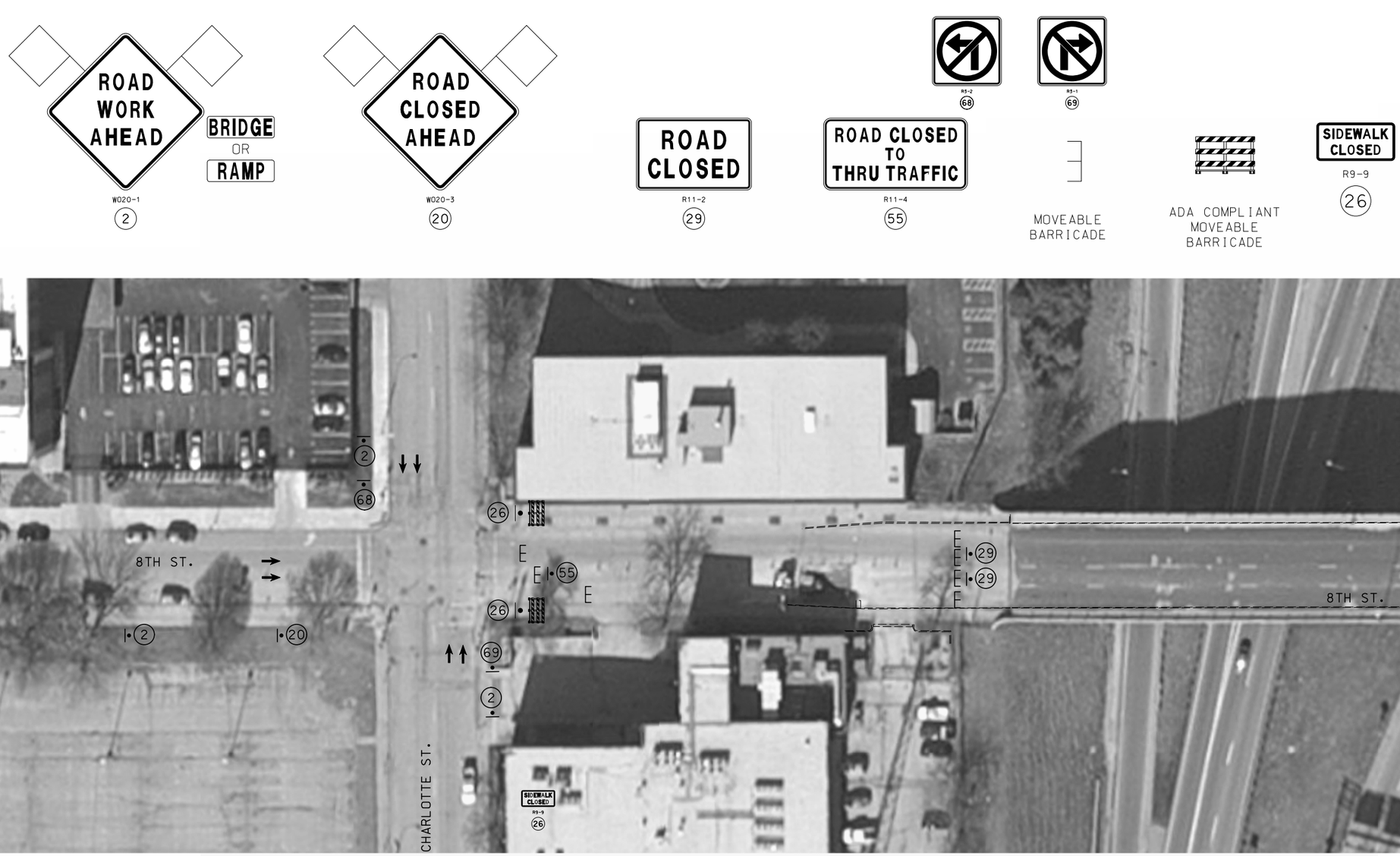
BRIDGE NO.

DESCRIPTION	DATE

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

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

REV.



NOTE: SEE DETOUR SHEETS

NOT TO SCALE

SCALE
0 30 60 90

8TH STREET
TRAFFIC CONTROL
SHEET 2 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/27/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	034

COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

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

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

W020-1

(2)

W020-3

(20)

R11-2

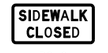
(29)

R11-4

(55)

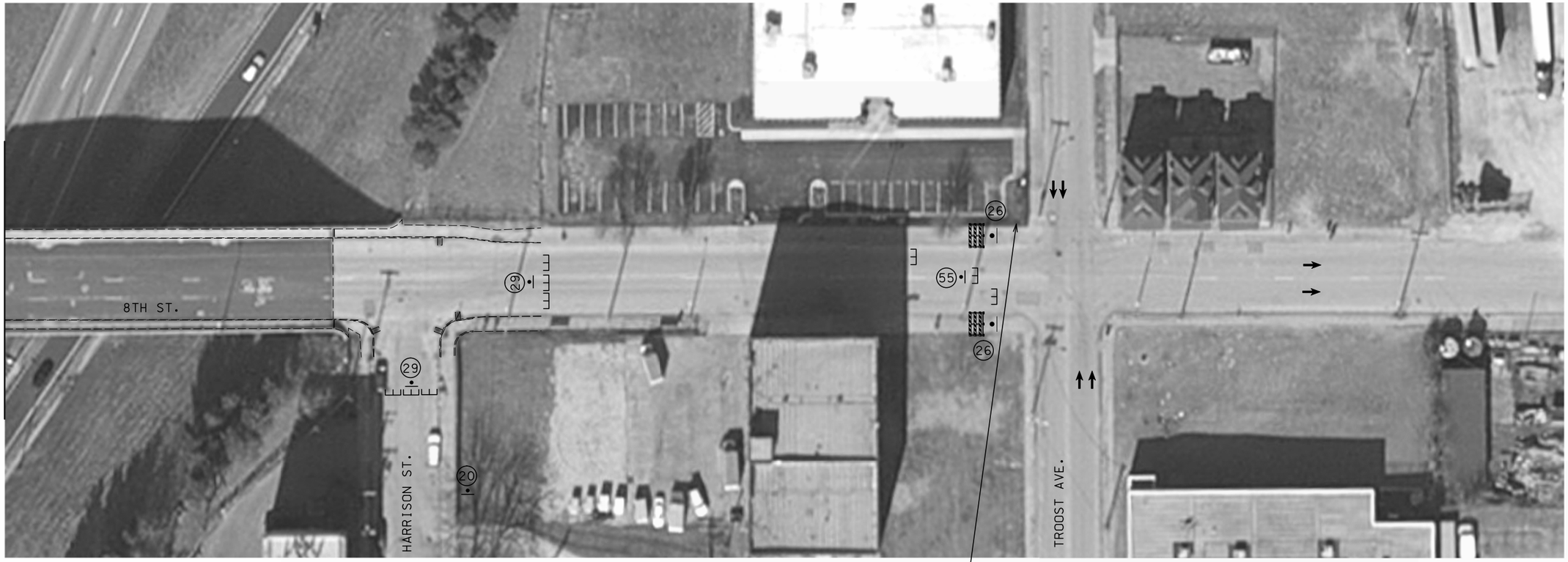
MOVEABLE
BARRICADE

ADA COMPLIANT
MOVEABLE
BARRICADE



R9-9

(26)



NOTE: SEE DETOUR SHEETS

SCALE

0 30 60 90

NOT TO SCALE

8TH STREET
TRAFFIC CONTROL
SHEET 3 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

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

DATE PREPARED	
12/11/2017	
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	035
COUNTY	
JACKSON	
JOB NO.	
J4I3198	
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)

W020-1

(2)

W020-3

(20)

R11-2

(29)

R11-4

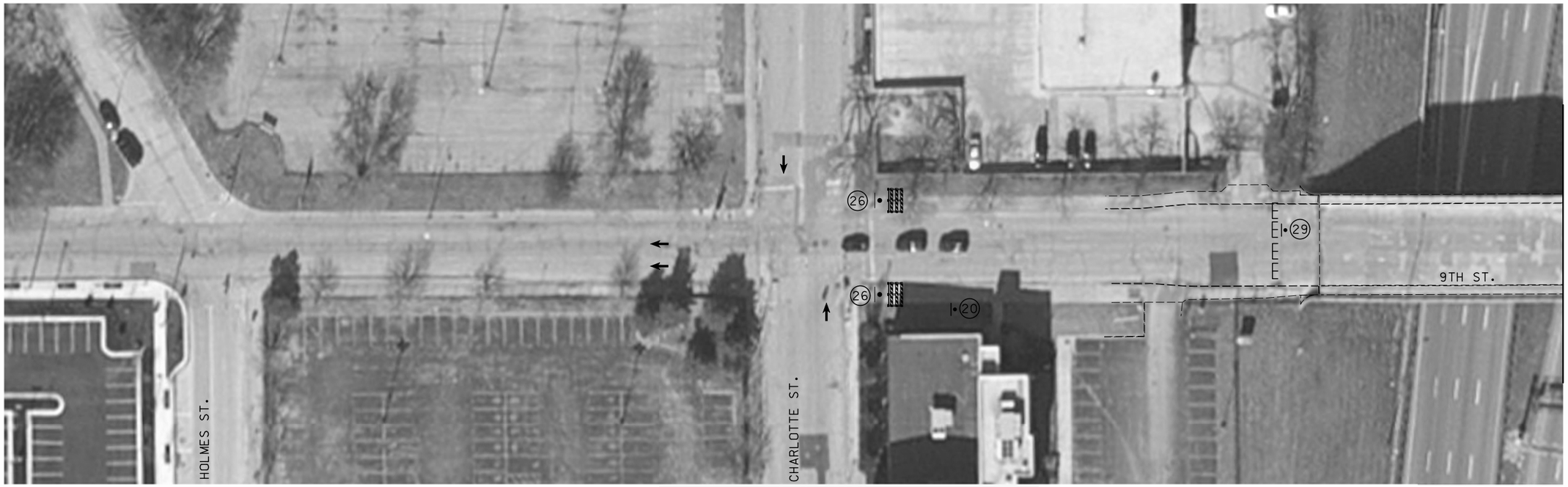
(55)

MOVEABLE
BARRICADE

ADA COMPLIANT
MOVEABLE
BARRICADE

R9-9

(26)



NOTE: SEE DETOUR SHEETS

NOT TO SCALE

SCALE

0 30 60 90

9TH STREET
TRAFFIC CONTROL
SHEET 4 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

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DATE PREPARED	
12/27/2017	
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	036

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

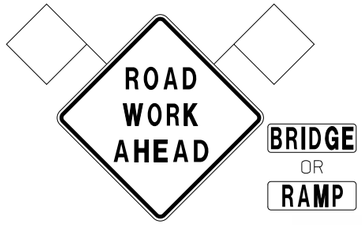
PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



W020-1

2

W020-3

20

R11-2

29

R11-4

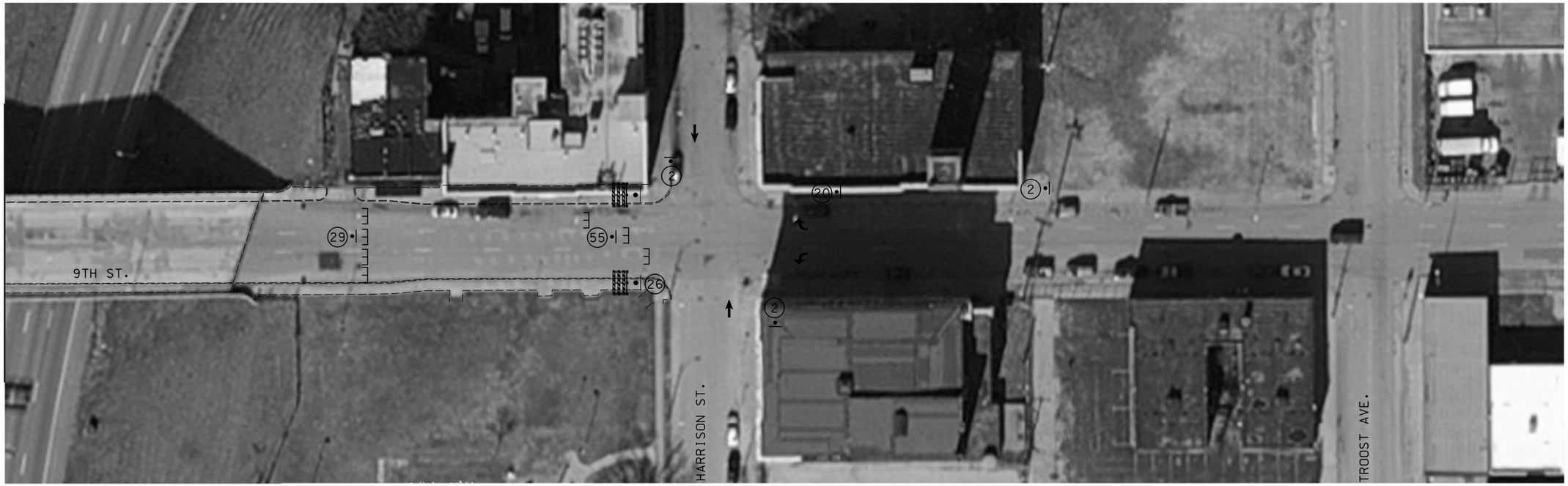
55

MOVEABLE
BARRICADE

ADA COMPLIANT
MOVEABLE
BARRICADE

R9-9

26



NOTE: SEE DETOUR SHEETS

NOT TO SCALE

SCALE
0 30 60 90

9TH STREET
TRAFFIC CONTROL
SHEET 5 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	037

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

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

NOTE: SEE DETOUR SHEETS

R3-2 (68)

R3-1 (69)

ADA COMPLIANT MOVEABLE BARRICADE

SIDEWALK CLOSED

R9-9

26

ROAD WORK AHEAD

BRIDGE OR RAMP

W020-1

2

ROAD CLOSED AHEAD

W020-3

20

ROAD CLOSED

R11-2

29

ROAD CLOSED TO THRU TRAFFIC

R11-4

55

MOVEABLE BARRICADE

SCALE

0 30 60 90

NOT TO SCALE

10TH STREET
TRAFFIC CONTROL
SHEET 6 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

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DATE PREPARED
12/27/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	038

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

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

W020-1

2

W020-3

20

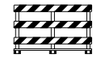
R11-2

29

R11-4

55

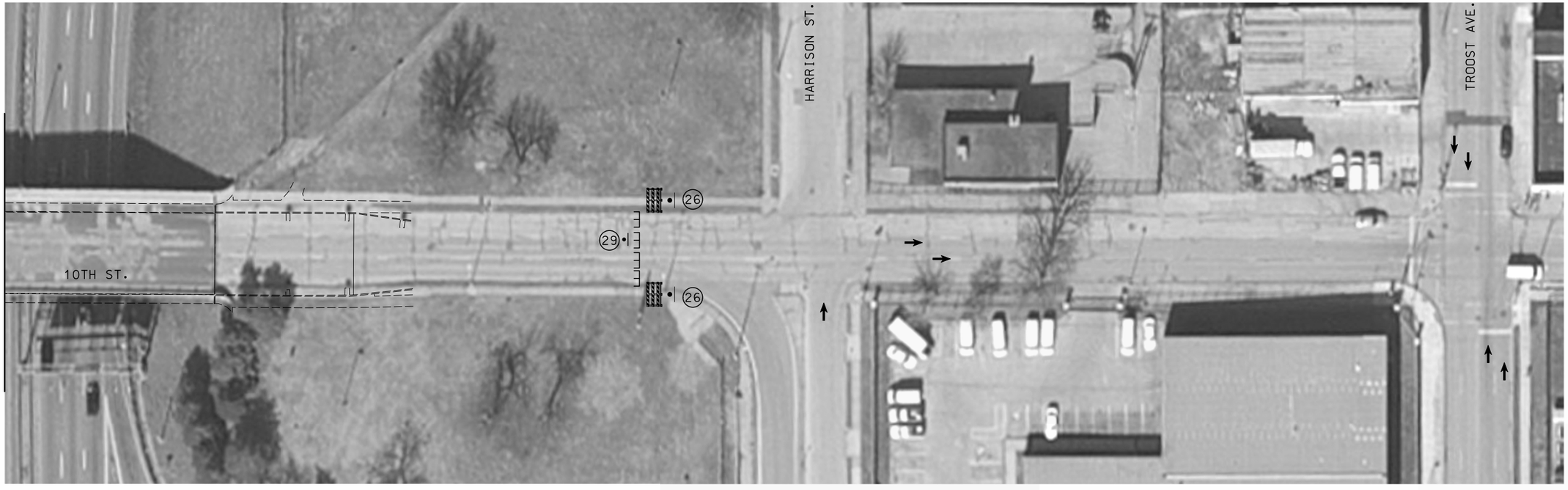
MOVEABLE
BARRICADE



ADA COMPLIANT
MOVEABLE
BARRICADE

R9-9

26



NOTE: SEE DETOUR SHEETS

NOT TO SCALE

SCALE

0 30 60 90

10TH STREET
TRAFFIC CONTROL
SHEET 7 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

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DATE PREPARED	
12/11/2017	
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	039

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

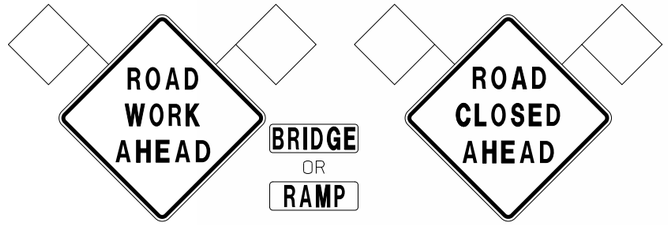
PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



W020-1

2

W020-3

20

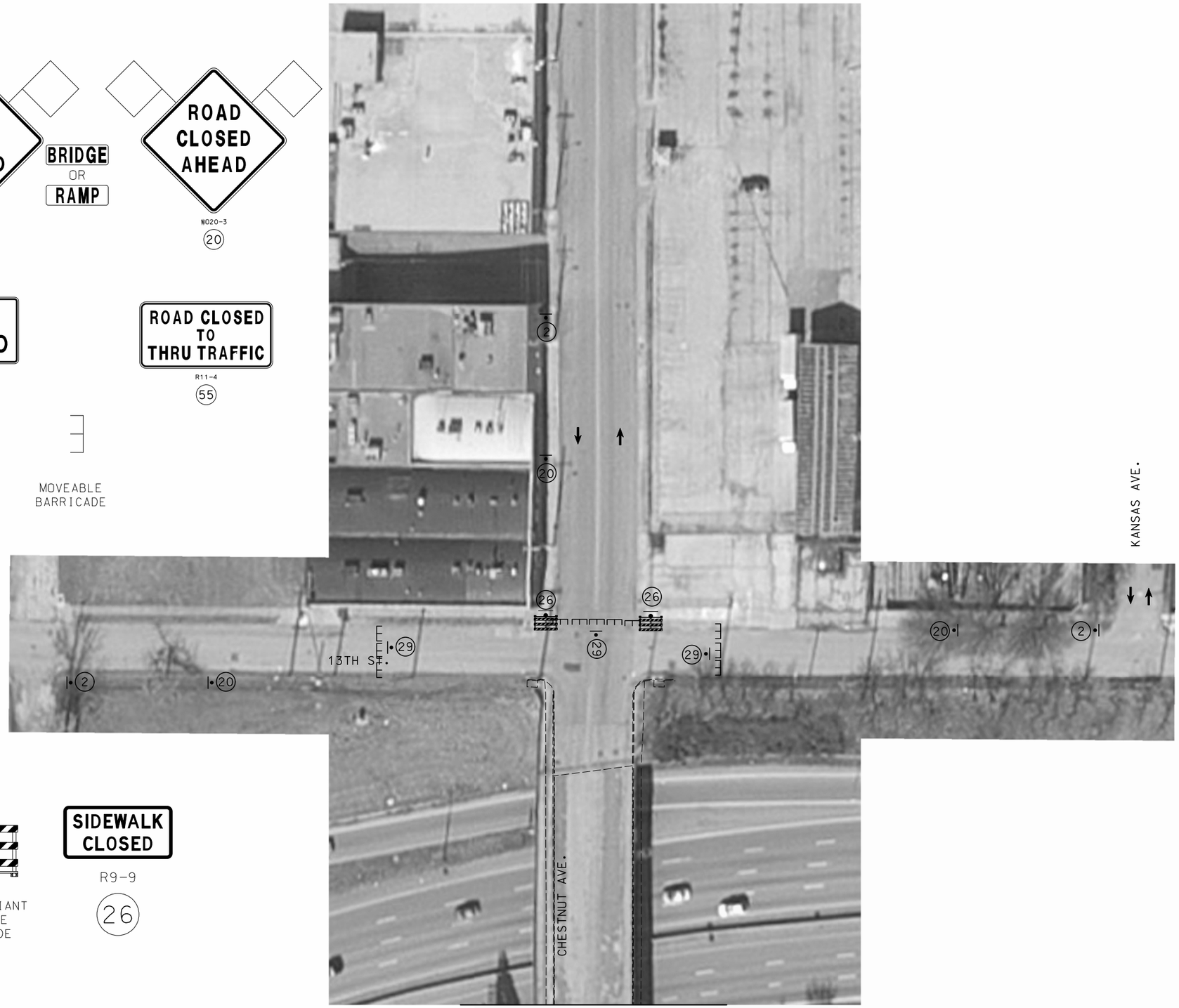
R11-2

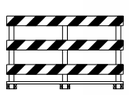
29

R11-4

55

MOVEABLE
BARRICADE





ADA COMPLIANT
MOVEABLE
BARRICADE

R9-9

26

SCALE

0 30 60 90

MATCHLINE D

CHESTNUT AVENUE
TRAFFIC CONTROL
SHEET 8 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

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DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	040

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

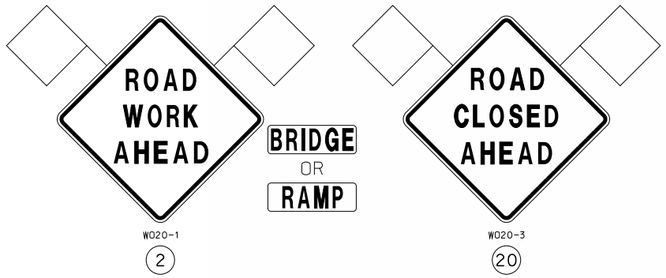
PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



W020-1

2

BRIDGE
OR
RAMP

W020-3

20

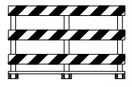
R11-2

29

R11-4

55

MOVEABLE
BARRICADE



ADA COMPLIANT
MOVEABLE
BARRICADE

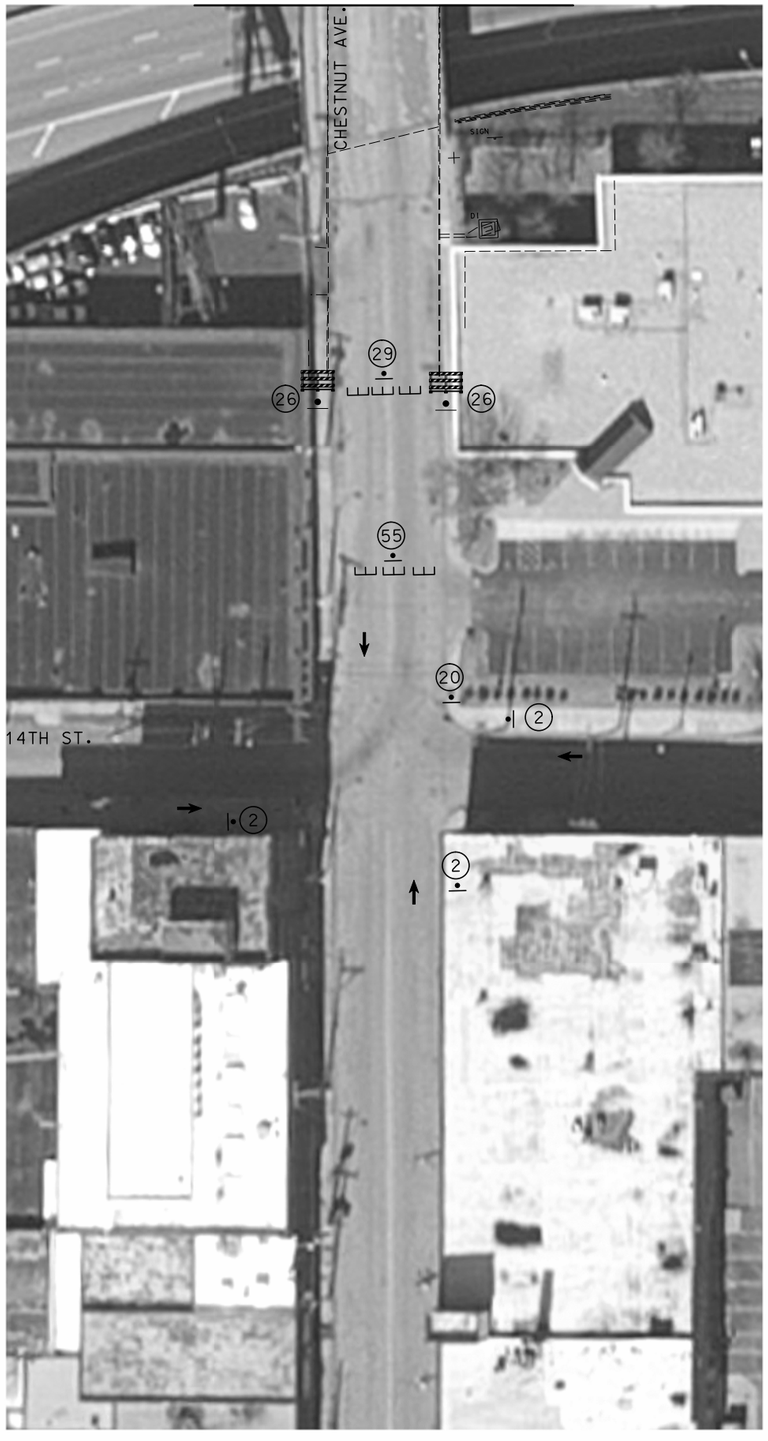
R9-9

26

SCALE

0 30 60 90

MATCHLINE D



CHESTNUT AVENUE
TRAFFIC CONTROL
SHEET 9 OF 25

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

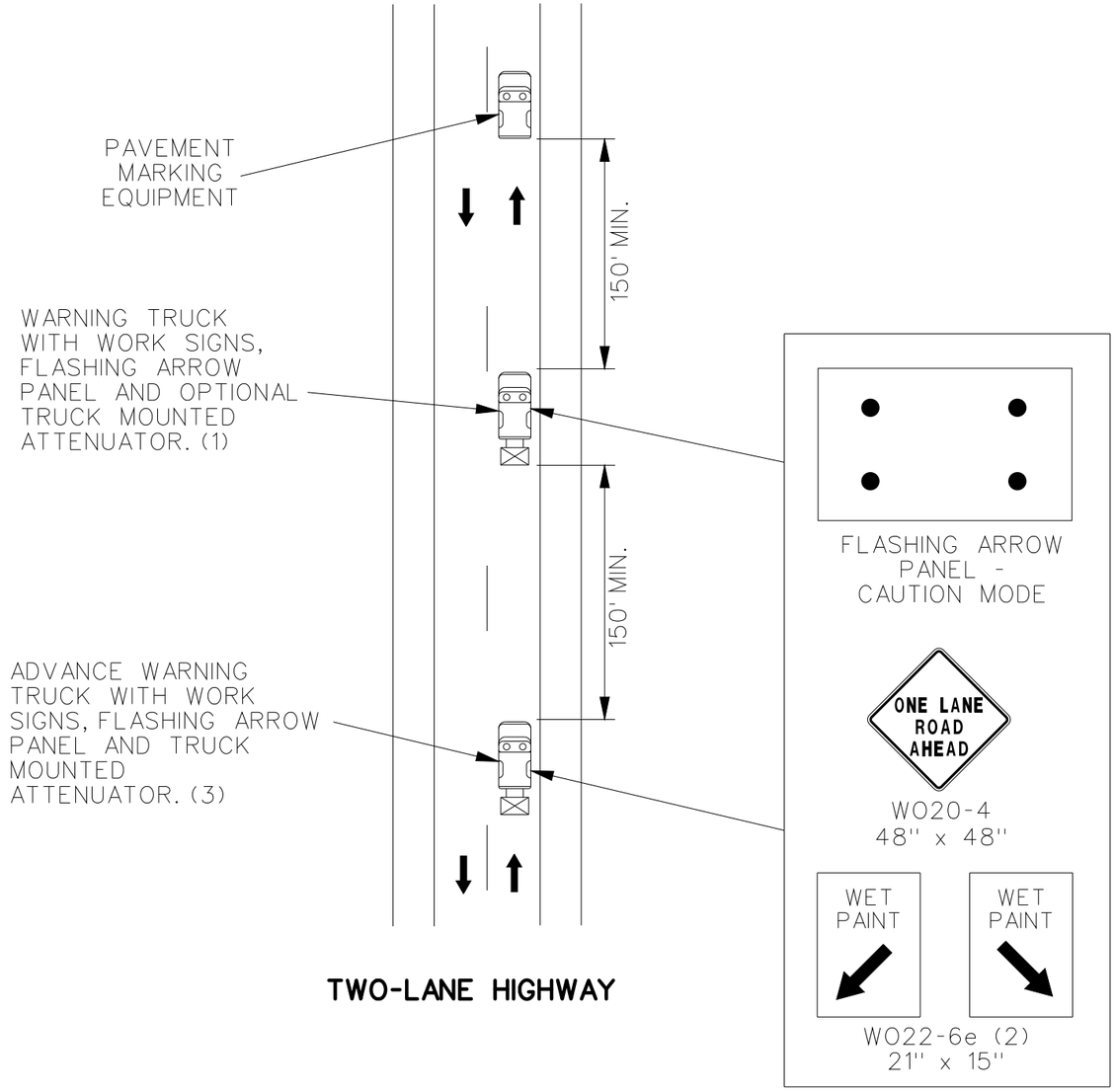
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED	
12/11/2017	
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	041
COUNTY	
JACKSON	
JOB NO.	
J4I3198	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

NO	DESCRIPTION	DATE
1	REVISED PER MODOT COMMENTS	12/19/2017
2	REVISED PER MODOT COMMENTS	01/02/2018

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



TWO-LANE HIGHWAY

MOVING OPERATION ON HIGHWAY OPEN TO TRAFFIC

NOTES:

ALL SIGNS HAVE TYPE 3 FLUORESCENT ORANGE RETROFLECTIVE SHEETING.

UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCKS EQUIPPED WITH PROPER WARNING DEVICES.

PROTECTIVE TRUCK AND WORK VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING OR STROBE LIGHTS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH -INTENSITY ROTATING FLASHING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

(1). TRUCK IS OPTIONAL ON TWO-LANE UNDIVIDED HIGHWAYS IF SIGNING AND ARROW BOARD IS MOUNTED ON THE PAVEMENT MARKING EQUIPMENT.

(2). WET PAINT SIGNS ARE INSTALLED TO INDICATE THE SIDE IN WHICH THE PAVEMENT MARKING MATERIAL IS BEING APPLIED. AT THE CONTRACTOR'S OPTION. A FRONT FACING WET PAINT SIGN MAY BE INSTALLED ON THE LEFT SIDE OF THE PAVEMENT MARKING EQUIPMENT.

(3). ADVANCE WARNING TRUCK IS POSITIONED AT THE NO TRACK POINT OF THE PAVEMENT MARKING MATERIAL OR SPACING SHOWN, WHICHEVER IS GREATER.

MOVING OPERATION
OPEN TO TRAFFIC
TEMPORARY
TRAFFIC CONTROL
SHEET 10 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2017

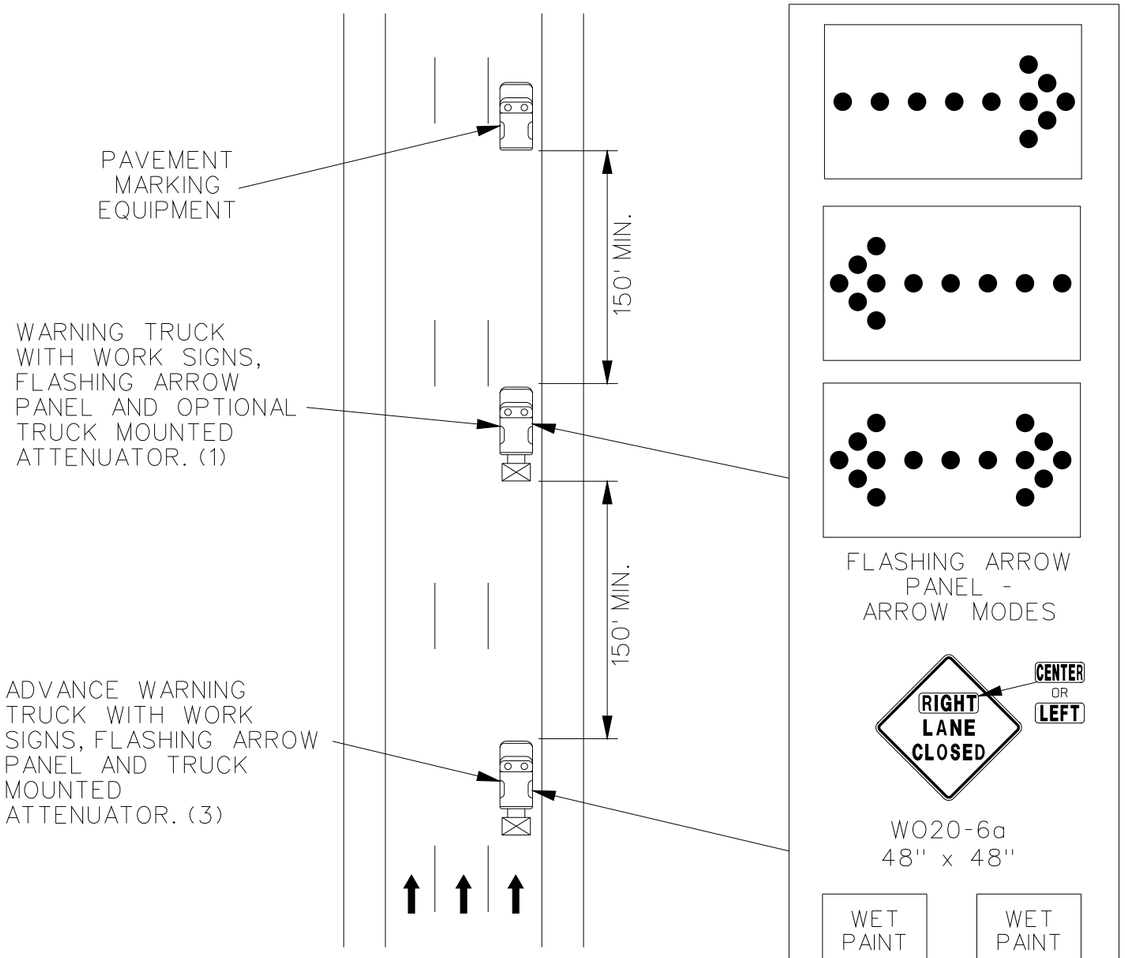
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	042

COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

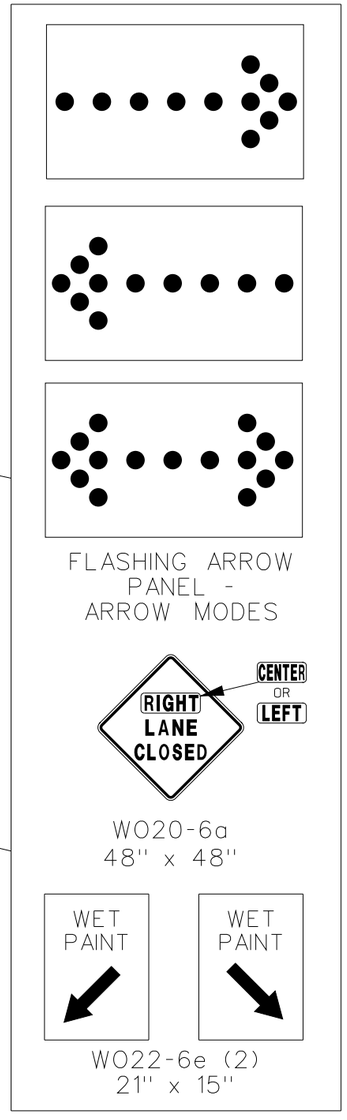
DESCRIPTION	DATE

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

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



MULTI-LANE DIVIDED HIGHWAY



MOVING OPERATION ON HIGHWAY OPEN TO TRAFFIC

NOTES:

ALL SIGNS HAVE TYPE 3 FLUORESCENT ORANGE RETROFLECTIVE SHEETING.

UPON APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY PROVIDE ADDITIONAL PROTECTIVE TRUCKS EQUIPPED WITH PROPER WARNING DEVICES.

PROTECTIVE TRUCK AND WORK VEHICLES SHALL DISPLAY HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING OR STROBE LIGHTS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH -INTENSITY ROTATING FLASHING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

(1). TRUCK IS OPTIONAL ON TWO-LANE UNDIVIDED HIGHWAYS IF SIGNING AND ARROW BOARD IS MOUNTED ON THE PAVEMENT MARKING EQUIPMENT.

(2). WET PAINT SIGNS ARE INSTALLED TO INDICATE THE SIDE IN WHICH THE PAVEMENT MARKING MATERIAL IS BEING APPLIED. AT THE CONTRACTOR'S OPTION. A FRONT FACING WET PAINT SIGN MAY BE INSTALLED ON THE LEFT SIDE OF THE PAVEMENT MARKING EQUIPMENT.

(3). ADVANCE WARNING TRUCK IS POSITIONED AT THE NO TRACK POINT OF THE PAVEMENT MARKING MATERIAL OR SPACING SHOWN, WHICHEVER IS GREATER.

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	043

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

PROJECT NO.

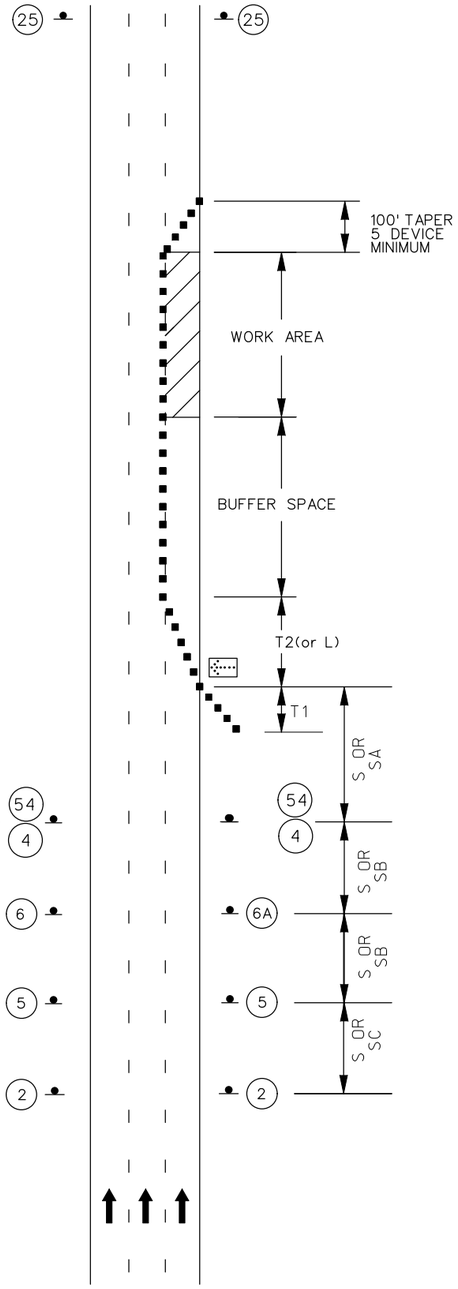
BRIDGE NO.

DESCRIPTION	DATE

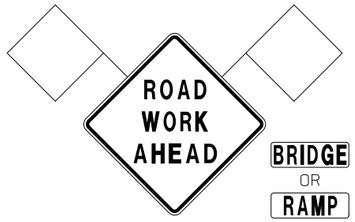
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

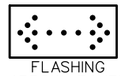
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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



TYPICAL LEFT OR RIGHT LANE CLOSURE
MULTI-LANE DIVIDED HIGHWAY





NOTES:

SEE TRAFFIC CONTROL SHEET 1 FOR SIGN SPACING, DEVICE SPACING AND CHANNELIZING TAPER LENGTHS.

REMOVE AND/OR MODIFY ANY EXISTING PAVEMENT MARKING AS NEEDED.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM CLOSURES.

ALTERNATIVE TEMPORARY TRAFFIC CONTROL SET-UPS SHOULD BE CONSIDERED WHEN REDUCTION IN CAPACITY CANNOT BE TOLERATED.

FOR NIGHT TIME OPERATIONS THE SEQUENTIAL FLASHING WARNING LIGHTS SHALL ON BE USED ON LANE TAPERS.

A FLASHING ARROW BOARD SHALL BE USED WHEN A FREEWAY LANE IS CLOSED. WHEN MORE THAN ONE FREEWAY LANE IS CLOSED, A SEPARATE ARROW BOARD SHALL BE USED FOR EACH CLOSED LANE.

LANE CLOSURE
MULTI LANE
TEMPORARY
TRAFFIC CONTROL
SHEET 12 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	044

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

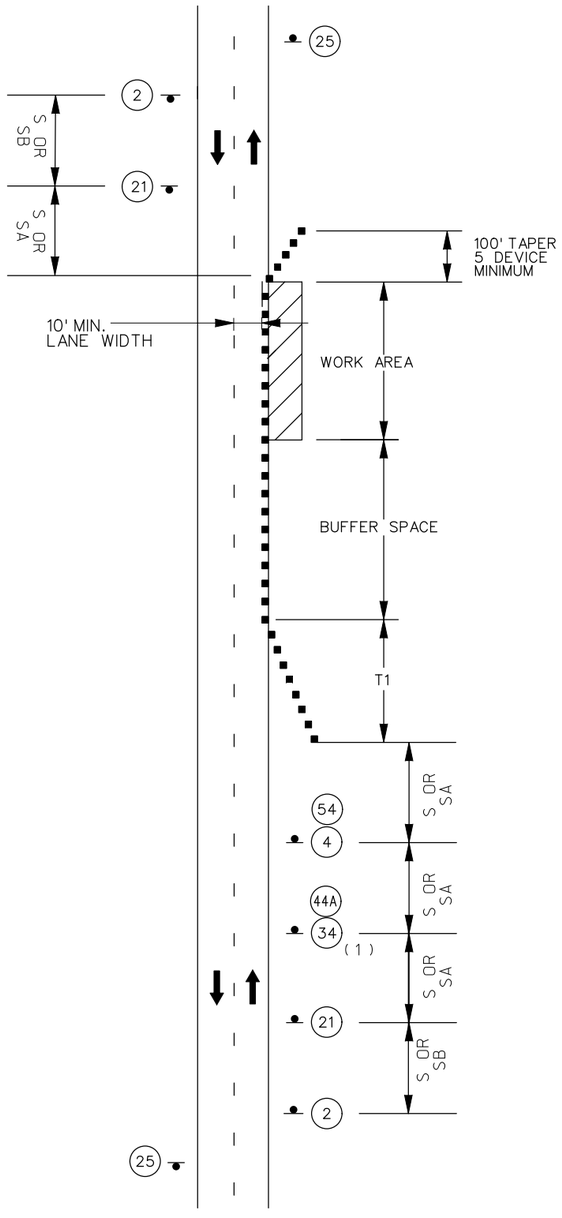
PROJECT NO.

BRIDGE NO.

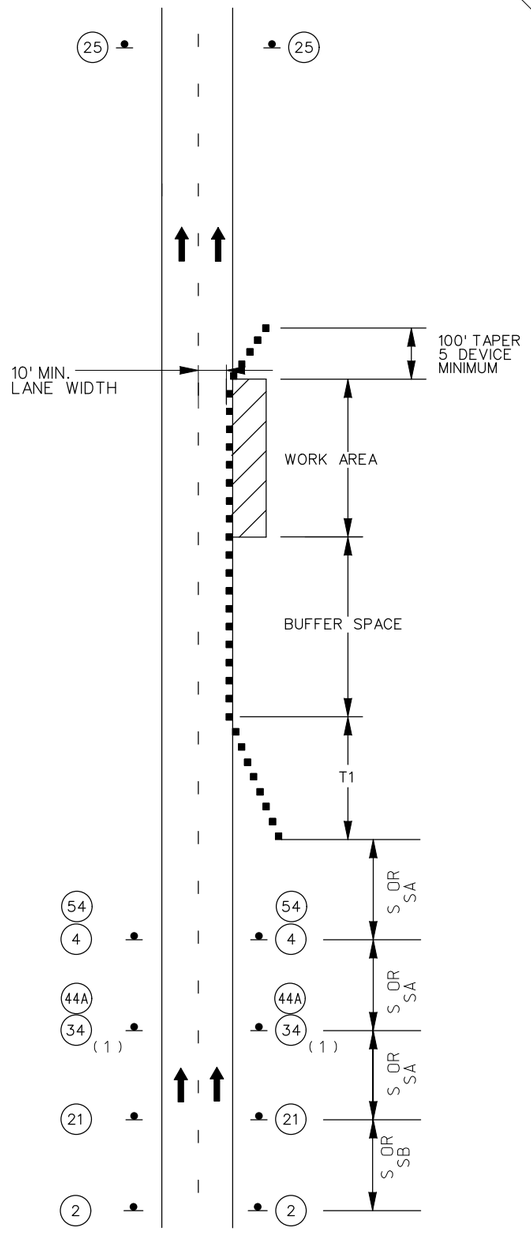
DATE	DESCRIPTION

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

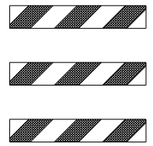
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



TWO LANE UNDIVIDED
SHOULDER WORK
MINOR TRAVELWAY ENCROACHMENT



MULTI-LANE DIVIDED
SHOULDER WORK
MINOR TRAVELWAY ENCROACHMENT



NOTES:

SEE TRAFFIC CONTROL SHEET 1 FOR SIGN SPACING, DEVICE SPACING AND CHANNELIZING TAPER LENGTHS.

SIGN 2 NOT REQUIRED IF SHOULDER WORK IS LOCATED WITHIN THE LIMITS OF AN ACTIVITY AREA WHERE ANOTHER SIGN 2 IS ALREADY USED.

THE PROTECTIVE VEHICLE MAY BE OMITTED IF A TAPER AND CHANNELIZING DEVICES ARE USED.

VEHICLE- MOUNTED SIGNS SHALL BE MOUNTED IN A MANNER SUCH THAT THEY ARE NOT OBSCURED BY EQUIPMENT OR SUPPLIES. SIGN LEGEND ON VEHICLE-MOUNTED SIGNS SHALL BE COVERED OR TURNED FROM VIEW WHEN WORK IS NOT IN PROGRESS.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH -INTENSITY ROTATING FLASHING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

SHADOW AND WORK VEHICLES SHALL DISPLAY HIGH-DENSITY ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS.

(1). SIGN 44A NOT REQUIRED FOR NARROW LANE SECTIONS LESS THAN ONE MILE.

SHOULDER WORK
MINOR ENCROACHMENT
TEMPORARY
TRAFFIC CONTROL
SHEET 13 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	045

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

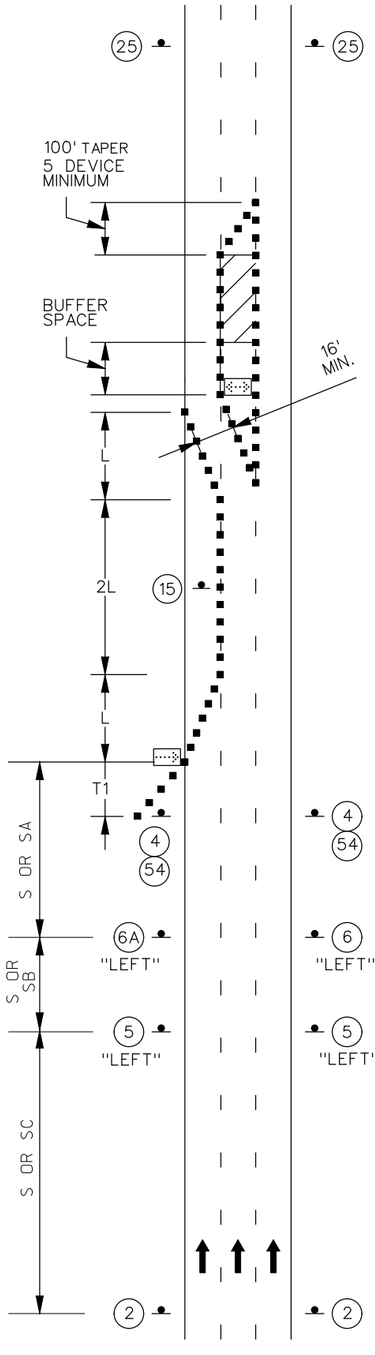
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

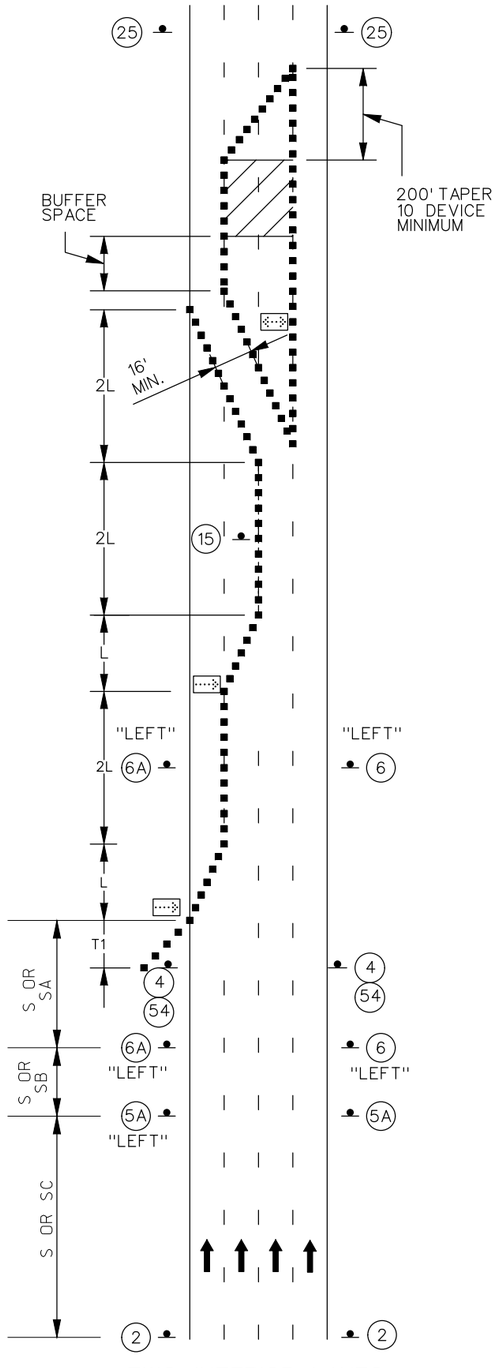
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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

REV.

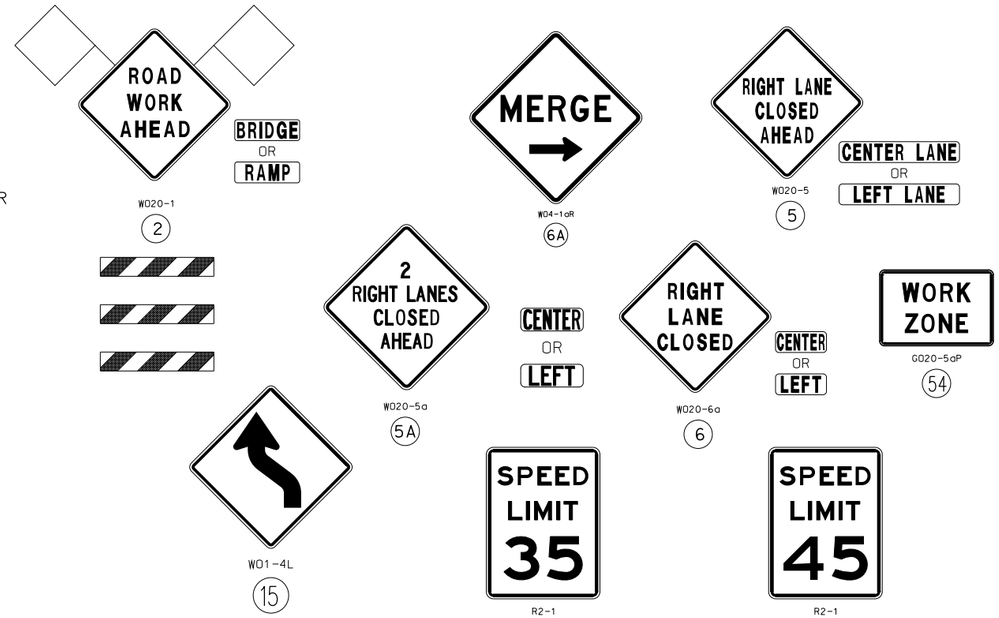


INTERIOR LANE



TWO INTERIOR LANES

LANE CLOSURE
INTERIOR LANE CLOSURES OF MULTI-LANE DIVIDED HIGHWAY



NOTES:

SEE TRAFFIC CONTROL SHEET 1 FOR SIGN SPACING, DEVICE SPACING AND CHANNELIZING TAPER LENGTHS.

REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKING AS NEEDED.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES.

ALTERNATIVE TEMPORARY TRAFFIC CONTROL SET-UPS SHOULD BE CONSIDERED WHEN REDUCTION IN CAPACITY CANNOT BE TOLERATED.

FOR NIGHT TIME OPERATIONS THE SEQUENTIAL FLASHING WARNING LIGHTS SHALL ON BE USED ON LANE TAPERS.

INTERIOR LANE
CLOSURE ON FREEWAY
TEMPORARY
TRAFFIC CONTROL
SHEET 14 OF 25

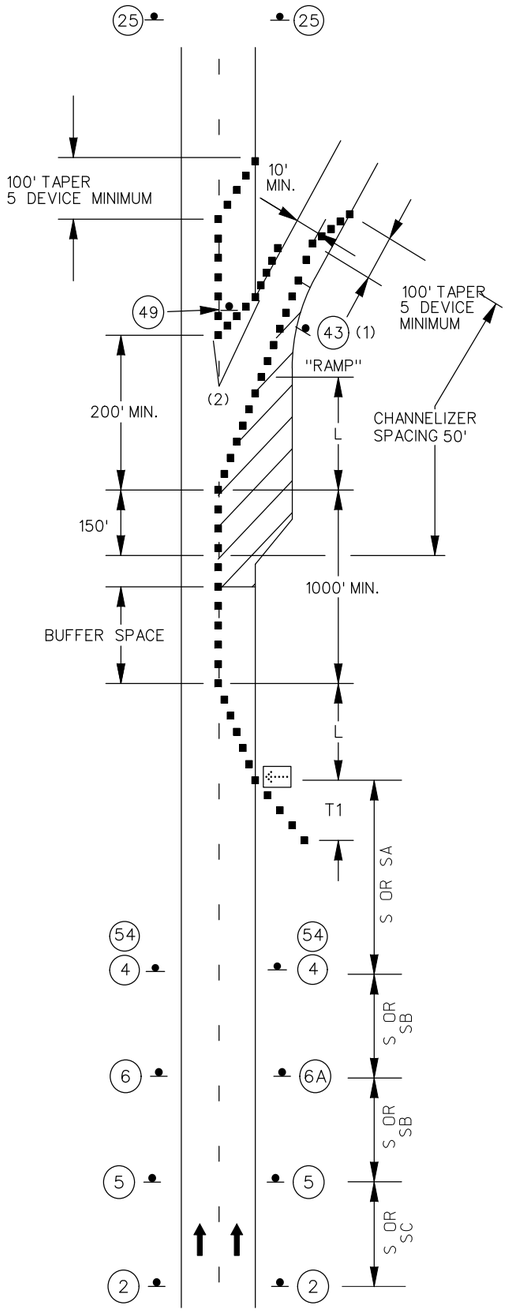
STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

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

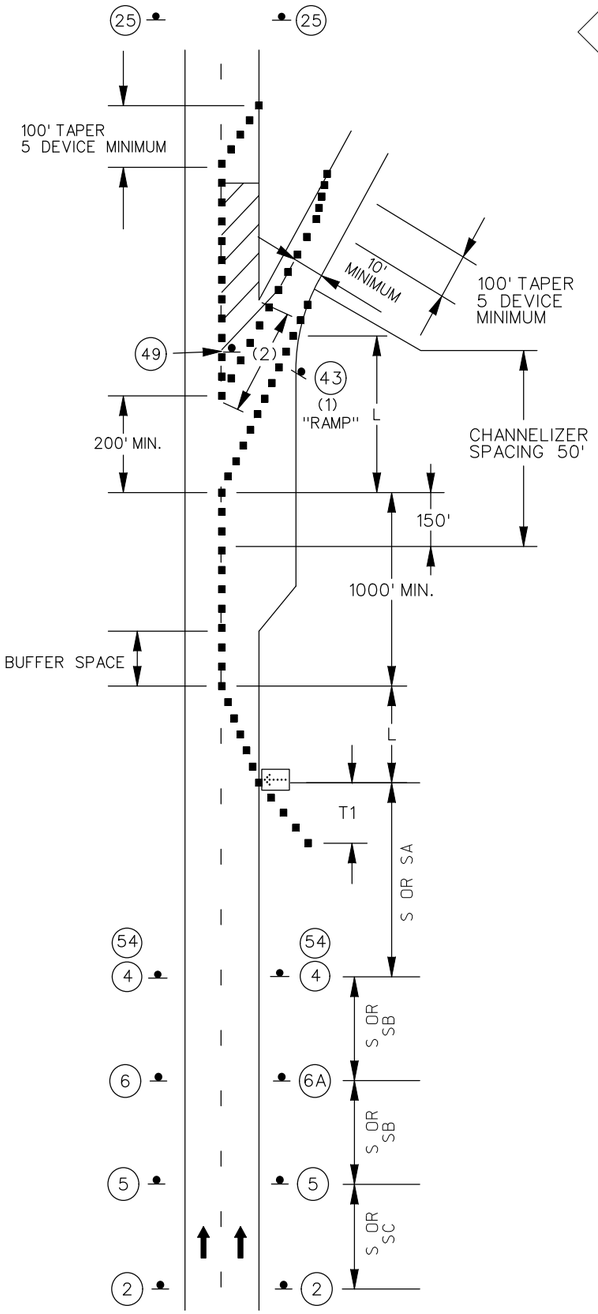
DATE PREPARED	12/11/2017
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	046
COUNTY	JACKSON
JOB NO.	J4I3198
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

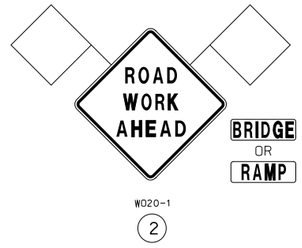
NO.	DESCRIPTION	DATE

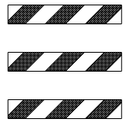
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

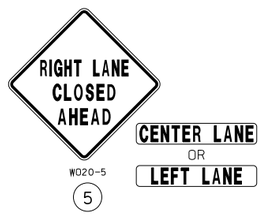


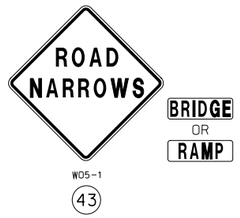
WORK IN THE VICINITY
OF A EXIT RAMP AREAS

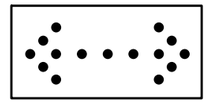












NOTES:

SEE TRAFFIC CONTROL SHEET 1 FOR SIGN SPACING, DEVICE SPACING AND CHANNELIZING TAPER LENGTHS.

REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKING AS NEEDED.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES.

FOR NIGHT TIME OPERATIONS THE SEQUENTIAL FLASHING WARNING LIGHTS SHALL ON BE USED ON LANE TAPERS.

(1). SIGN 43 REQUIRED WHEN RAMP WIDTH IS REDUCED.

(2). FIVE CHANNELIZER DEVICE MINIMUM.

WORK IN VICINITY
OF EXIT RAMP
TEMPORARY
TRAFFIC CONTROL
SHEET 15 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	047

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

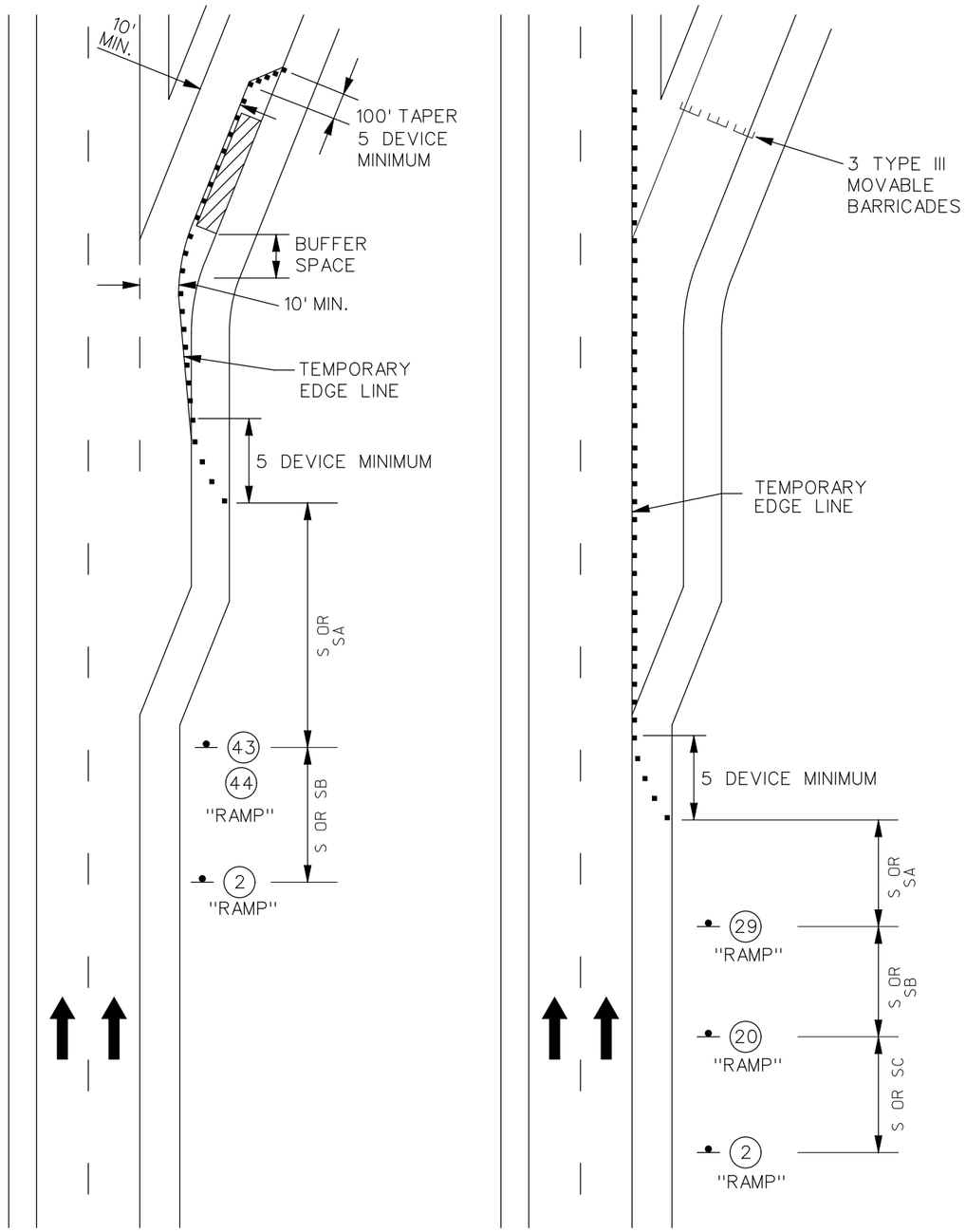
PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

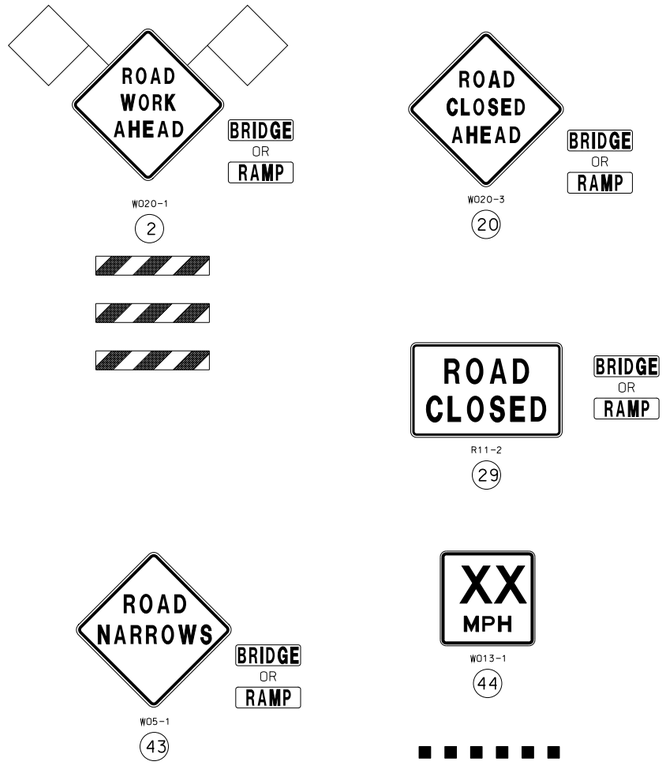
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



PARTIAL LANE

ENTIRE RAMP

LANE CLOSURE
PARTIAL AND TOTAL RAMP CLOSURE



NOTES:

SEE TRAFFIC CONTROL SHEET 1 FOR SIGN SPACING, DEVICE SPACING AND CHANNELIZING TAPER LENGTHS.

TEMPORARY PAVEMENT MARKING OPTIONAL FOR SHORT TERM OPERATIONS

PARTIAL OR TOTAL
EXIT RAMP CLOSURE
TEMPORARY
TRAFFIC CONTROL
SHEET 16 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	048

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

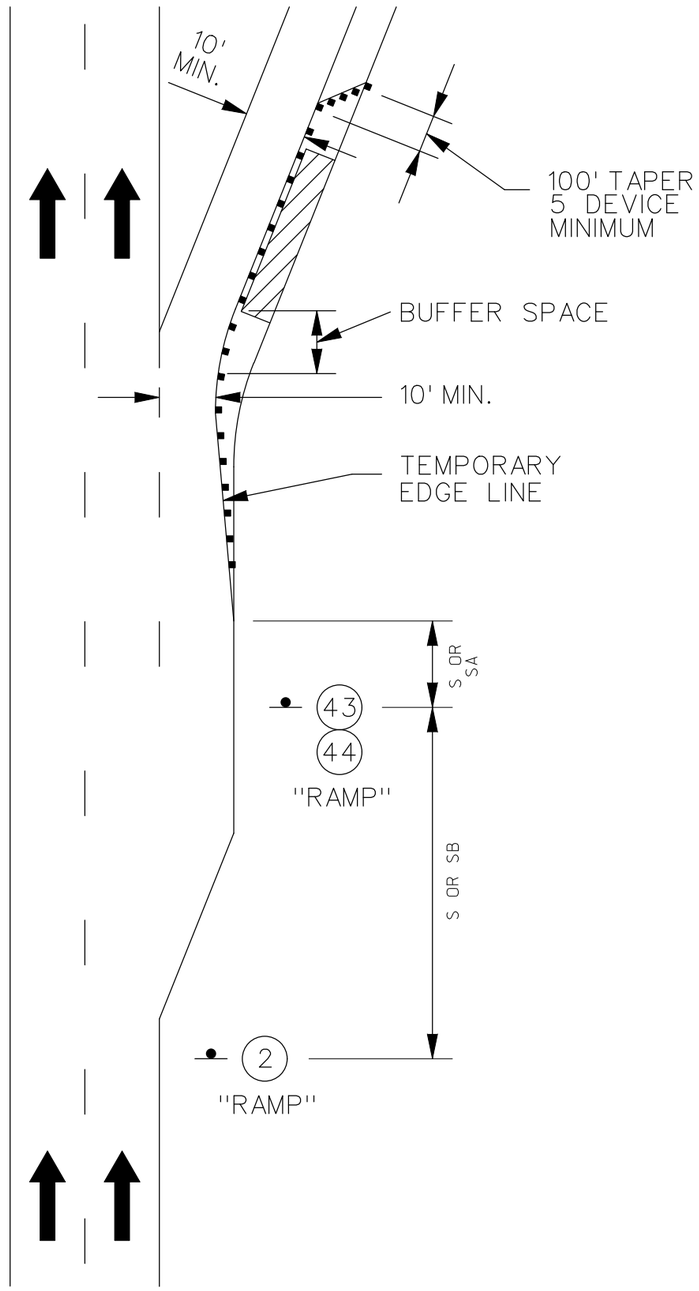
BRIDGE NO.

DESCRIPTION	DATE

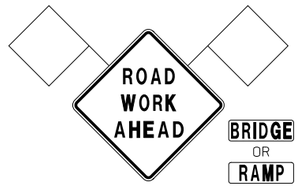
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

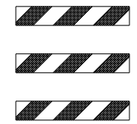
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



LANE CLOSURE
PARTIAL RAMP LANE



W020-1
(2)



CHANNELIZERS

W05-1
(43)

W013-1
(44)

NOTES:

SEE TRAFFIC CONTROL SHEET 1 FOR SIGN SPACING, DEVICE SPACING AND CHANNELIZING TAPER LENGTHS.

TEMPORARY PAVEMENT MARKING OPTIONAL FOR SHORT TERM OPERATIONS.

PARTIAL EXIT RAMP
CLOSURE
TEMPORARY
TRAFFIC CONTROL
SHEET 17 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	049

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

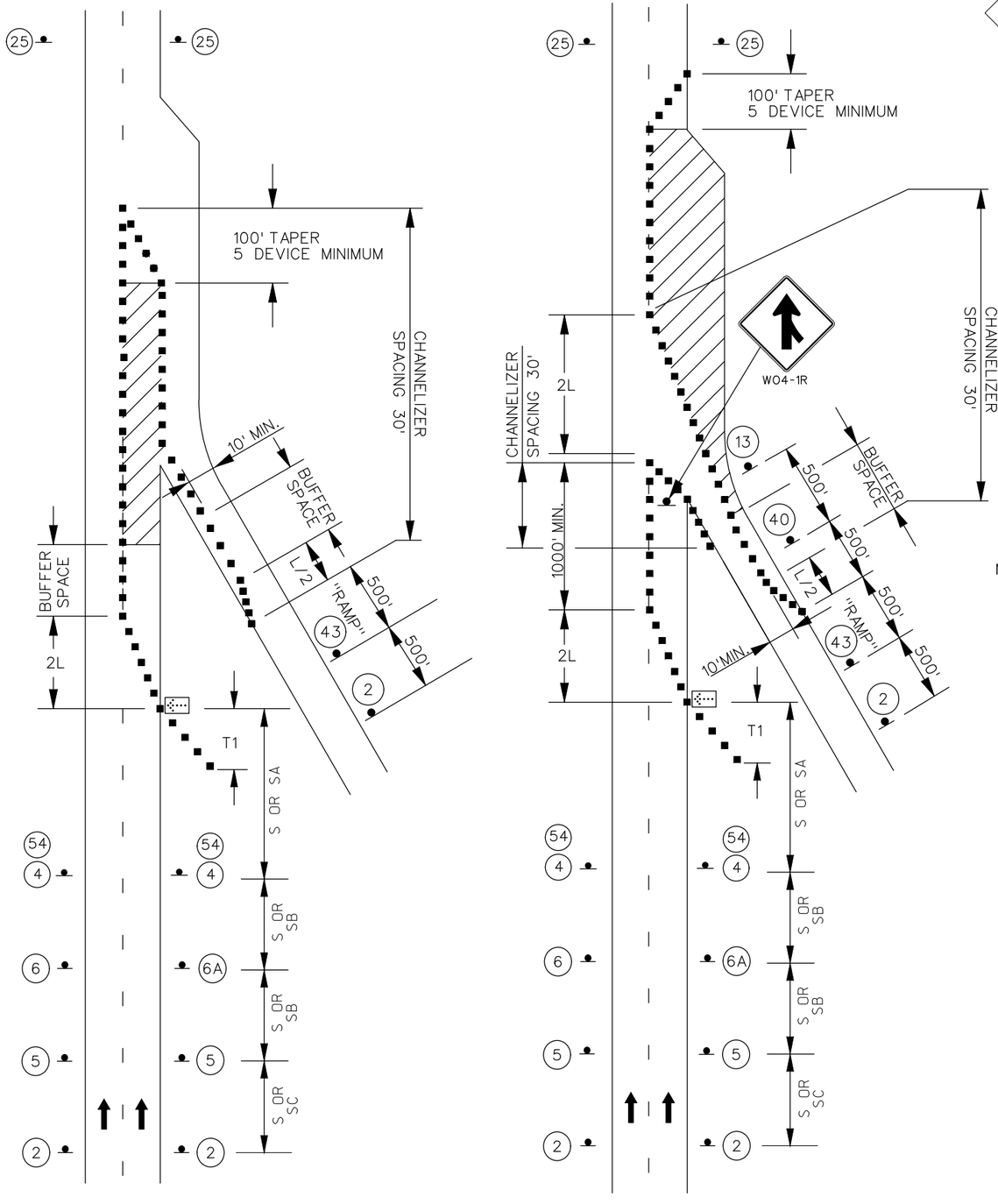
BRIDGE NO.

DESCRIPTION	DATE

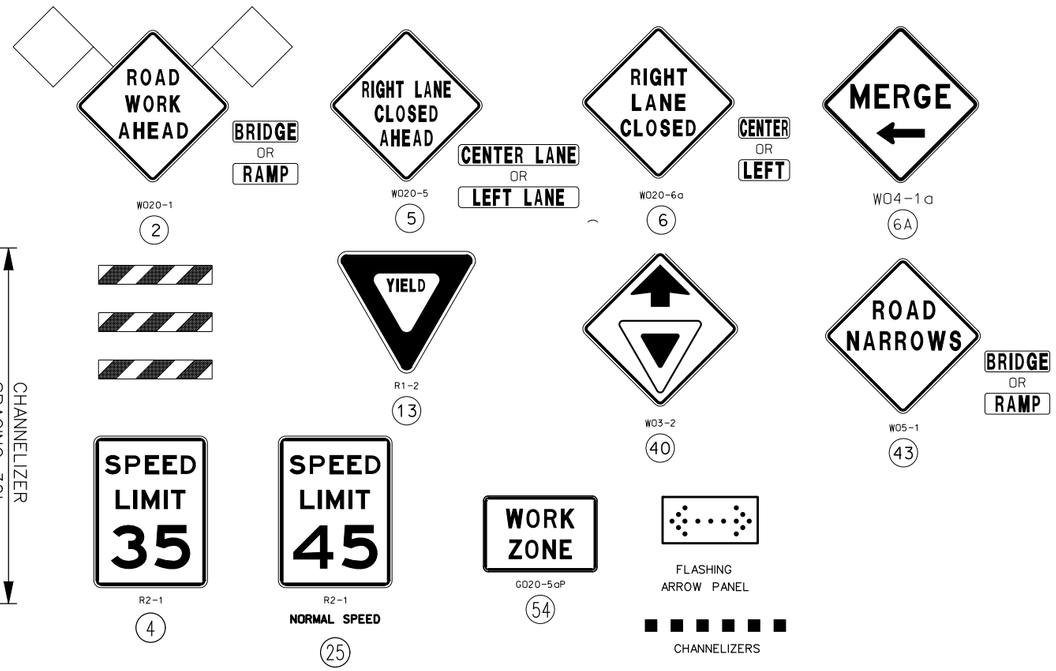
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



LANE CLOSURE
ENTRANCE RAMP AREAS



NOTES:

SEE TRAFFIC CONTROL SHEET 1 FOR SIGN SPACING, DEVICE SPACING AND CHANNELIZING TAPER LENGTHS.

REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKING AS NEEDED.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES.

FOR NIGHT TIME OPERATIONS THE SEQUENTIAL FLASHING WARNING LIGHTS SHALL ON BE USED ON LANE TAPERS.

RAMP NARROWS SIGN IS REQUIRED WHEN RAMP WIDTH IS REDUCED.

YEILD SIGN SHOULD BE PLACED ON THE RAMP TO PROVIDE ADEQUATE VISIBILITY OF MAINLINE TRAFFIC. WHERE INADEQUATE ACCELERATION DISTANCE EXISTS FOR THE TEMPORARY ENTRANCE, THE YIELD SIGN SHALL BE REPLACED WITH STOP SIGNS (ONE EACH SIDE OF THE APPROACH).

THE LOCATION OF THE SIGN SEQUENCE AND MERGE TAPER SHOULD BE ADJUSTED SO THAT THE ARROW PANEL LOCATION IS NOT CONFUSING TO MOTORISTS ON THE RAMP.

THE YEILD SIGN SHOULD BE PLACED ON THE RAMP TO PROVIDE ADEQUATE VISIBILITY OF MAINLINE TRAFFIC.

WORK IN VICINITY
OF ENTRANCE RAMP
TEMPORARY
TRAFFIC CONTROL
SHEET 18 OF 25

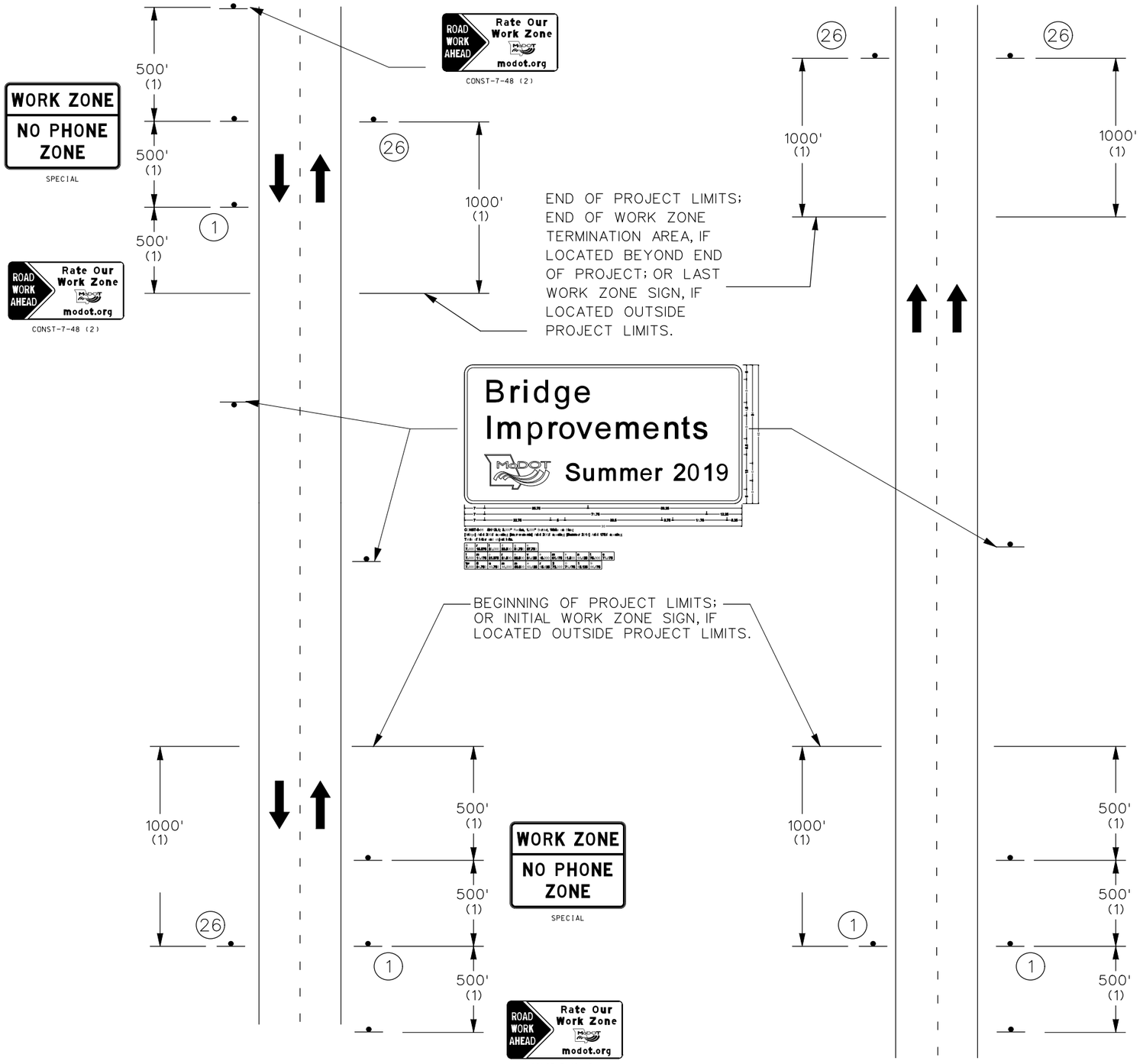
STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2017
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 050
COUNTY JACKSON
JOB NO. J4I3198
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)

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



NOTES:

SIGN G020-1 IS REQUIRED

SIGN G020-2 IS USED ON ALL PROJECTS WHERE SIGN G020-1 IS USED.

OTHER SIGNS SUCH AS DETOUR OR ALTERNATE ROUTE SIGNING MAY BE USED OUTSIDE THE PROJECT LIMITS.

ANY EXISTING SIGNING THAT CONFLICTS WITH THE TRAFFIC CONTROL SIGNING SHALL BE COMPLETELY COVERED OR REMOVED.

(1) DISTANCE MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS. WHERE TRAFFIC BACKUPS ARE EXPECTED BEYOND THE ADVANCE WARNING AREA, ADDITIONAL SIGNING MAY BE NEEDED.

(2) SIGN CONST-7-48 OR CONST-7-72 IS PLACED 500 FEET BEFORE THE BEGINNING OF PROJECT LIMITS OR THE ROAD WORK AHEAD SIGN OR ROAD WORK NEXT XX MILES SIGN, IF USED, WHEN THESE SIGNS ARE LOCATED OUTSIDE THE PROJECT LIMITS.

(3) SIGN CONST-5-96 OR CONST-5-48 IS PLACED IN A VISIBLE AREA WITHIN THE PROJECT LIMITS PROVIDED ITS PLACEMENT DOES NOT DISRUPT A SEQUENCE OF SIGNS. IF A VISIBLE LOCATION WITHIN THE PROJECT IS NOT AVAILABLE, THE SIGN MAY BE PLACED 500 FEET BEFORE SIGN CONST-7-48 OR CONST-7-72.

(4) THE "RATE OUR WORK ZONE" SIGN IS AVAILABLE IN TWO SIZES DEPENDING ON ROADWAY CONDITIONS. THE 48 IN. X 24 IN. SIGN IS USED ON LOW VOLUME ROUTES THAT CARRY 400 AADT OR LESS,ON PROJECTS THAT HAVE A DURATION OF 4 WEEKS OR LESS OR IN URBAN AREAS WHERE THERE IS INSUFFICIENT RIGHT OF WAY FOR A SIX FOOT WIDE SIGN. THE 72 IN. X 36 IN. VERSION OF THE SIGN IS USED IN ALL OTHER APPLICATIONS. BUT CAN ALSO BE USED IN PLACE OF THE 48 IN. X 24 IN. SIGN IF ADDED EMPHASIS IS DEEMED NECESSARY.

(5) THE "POINT OF PRESENCE" SIGN IS AVAILABLE IN TWO SIZES DEPENDING ON ROADWAY CONDITION. THE 48 IN. X 36 IN. SIGN IS USED ON LOW VOLUME ROUTES THAT CARRY 400 AADT OR LESS, ON PROJECTS THAT HAVE A DURATION OF 4 WEEKS OR LESS OR IN URBAN AREAS WHERE THERE IS INSUFFICIENT RIGHT OF WAY FOR AN EIGHT FOOT WIDE SIGN. THE 96IN. X 48 IN. VERSION OF THE SIGN IS USED IN ALL OTHER APPLICATIONS. BUT CAN ALSO BE USED IN PLACE OF THE 48 IN. X 36 IN. SIGN IF ADDED EMPHASIS IS DEEMED NECESSARY.

WORK ZONE
NO PHONE ZONE
SPECIAL

WHEN THE "ROAD WORK NEXT XX MILES" IS NOT USED THE "NO PHONE ZONE" SIGN IS TO BE PLACED A MINIMUM OF 500'BEFORE THE "ROAD WORK AHEAD" SIGN

ROAD WORK NEXT XX MILES
G020-1
1

END ROAD WORK
G020-2
26

BEGIN/END TEMPORARY TRAFFIC CONTROL
SHEET 19 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	051

COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION

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

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

DETOUR
8TH ST

50A

DETOUR
8TH ST

50B

DETOUR
8TH ST

50C

DETOUR
AHEAD

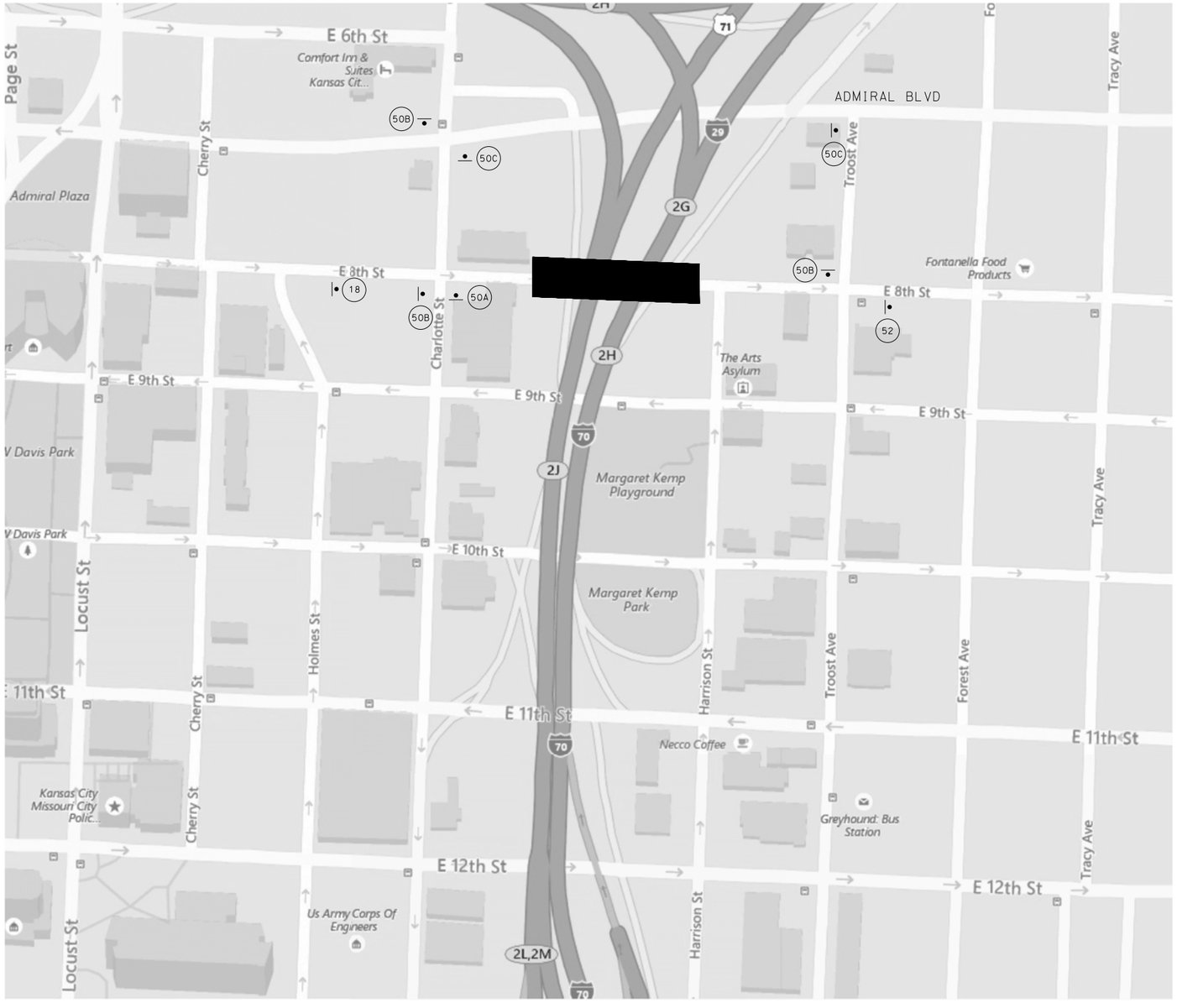
W020-2

18

END
DETOUR

M04-8a

52



NOT TO SCALE

8TH STREET DETOUR
TRAFFIC CONTROL
SHEET 20 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

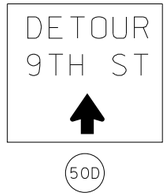
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DATE PREPARED	
12/27/2017	
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	052
COUNTY	
JACKSON	
JOB NO.	
J4I3198	
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)



50D

50E

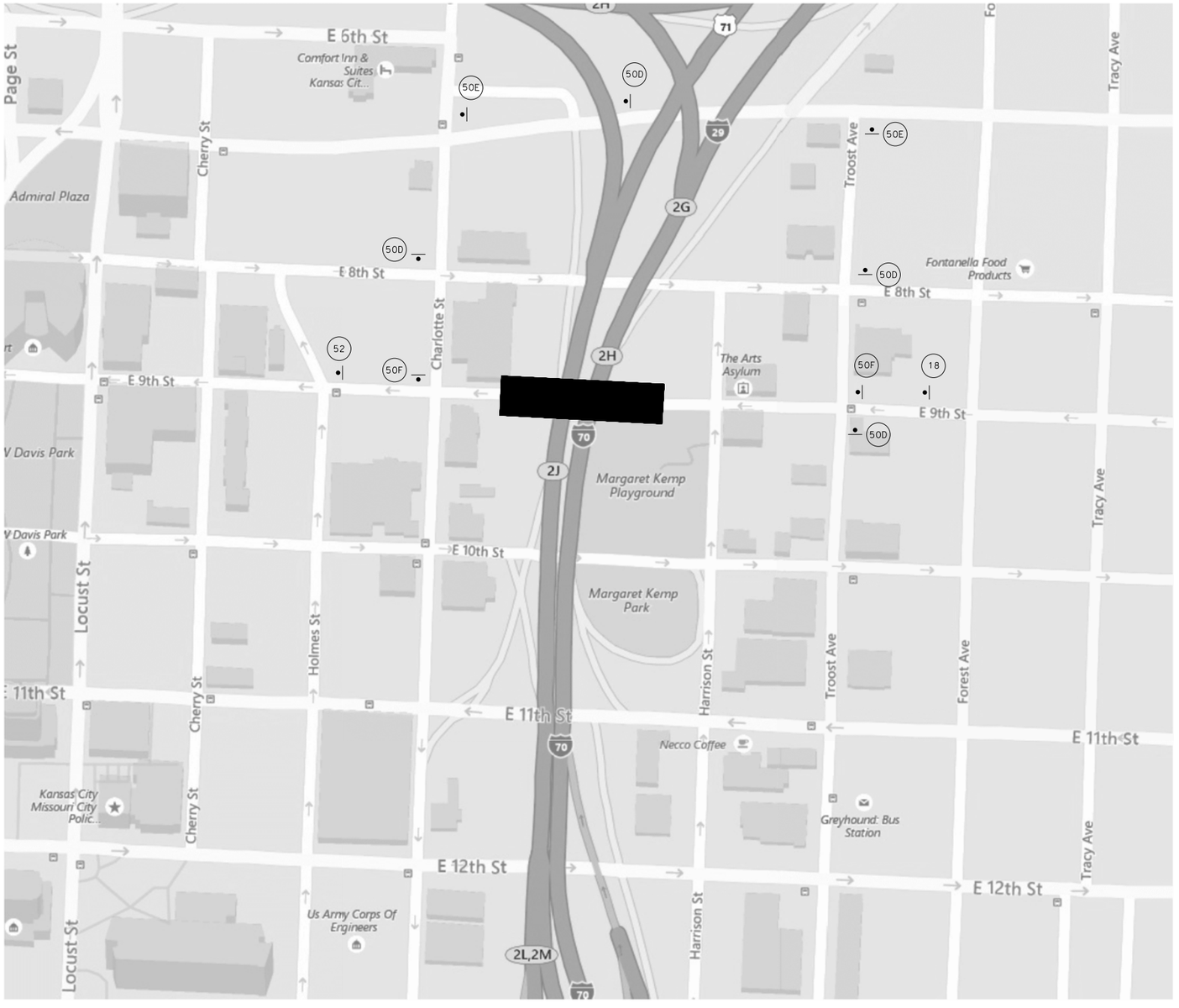
50F

W020-2

18

M04-8a

52



NOT TO SCALE

9TH STREET DETOUR
TRAFFIC CONTROL
SHEET 21 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

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DATE PREPARED
12/27/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	053

COUNTY
JACKSON

JOB NO.
J4I3198

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)

50G

50H

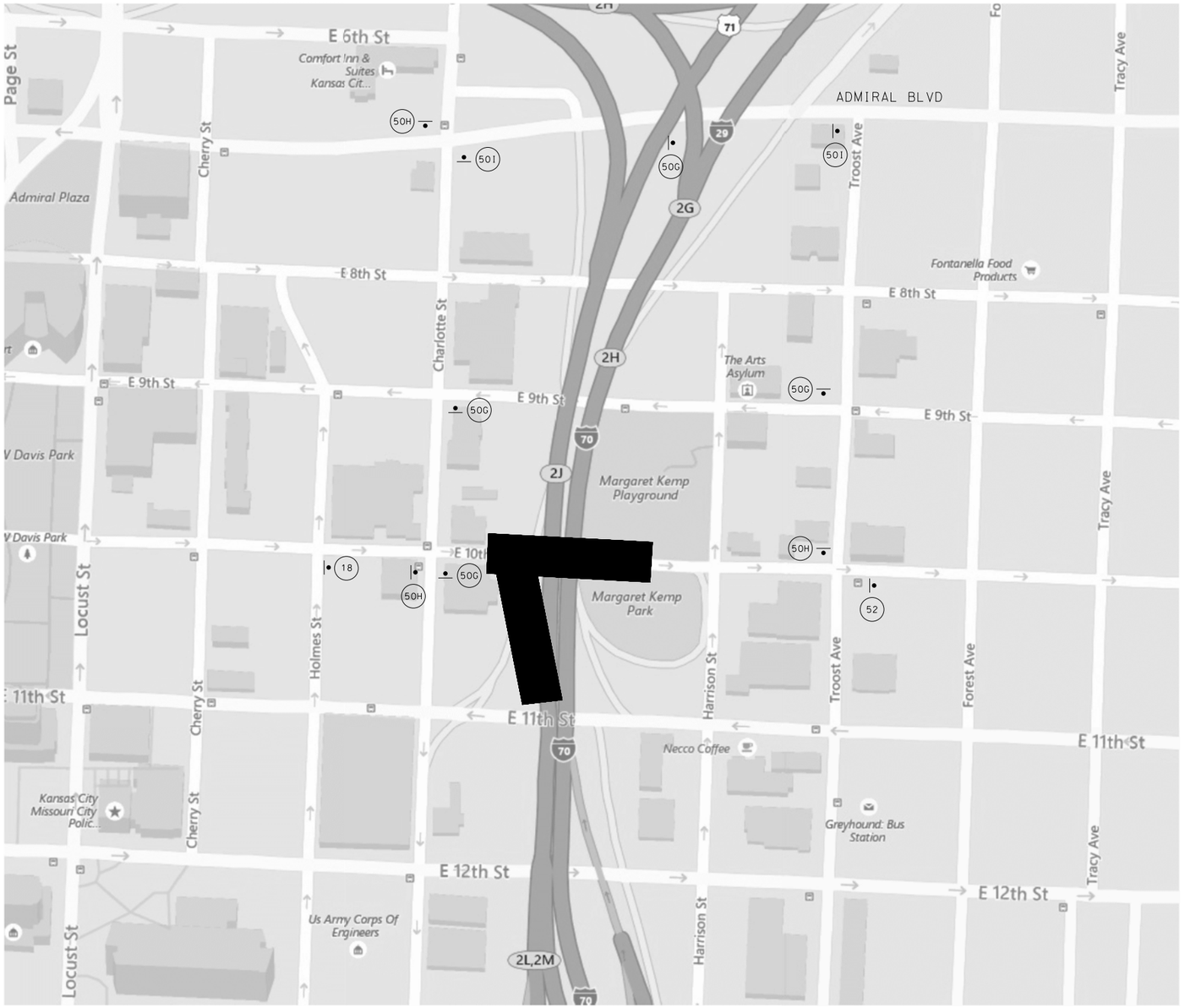
50I

W020-2

18

M04-8a

52



NOT TO SCALE

10TH STREET DETOUR
TRAFFIC CONTROL
SHEET 22 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

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

DATE PREPARED	
12/27/2017	
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	054
COUNTY	
JACKSON	
JOB NO.	
J4I3198	
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)

DETOUR
CHESTNUT AVE

50J

DETOUR
CHESTNUT AVE

50K

DETOUR
CHESTNUT AVE

50L

DETOUR
AHEAD

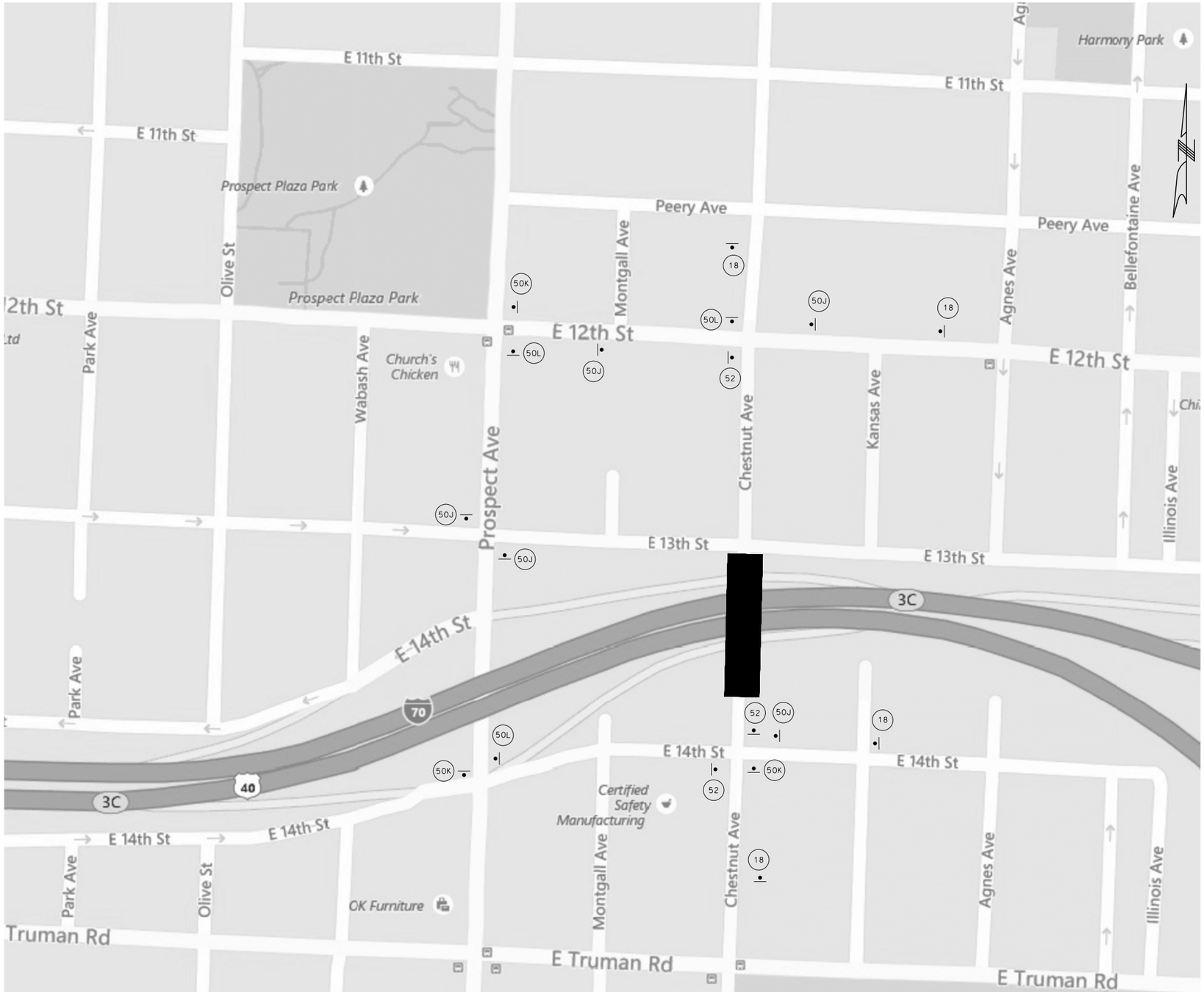
W020-2

18

END
DETOUR

M04-8a

52



NOT TO SCALE

CHESTNUT DETOUR
TRAFFIC CONTROL
SHEET 23 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/27/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	055

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

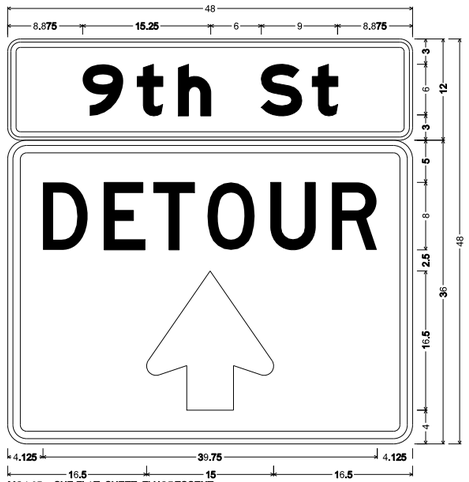
BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

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

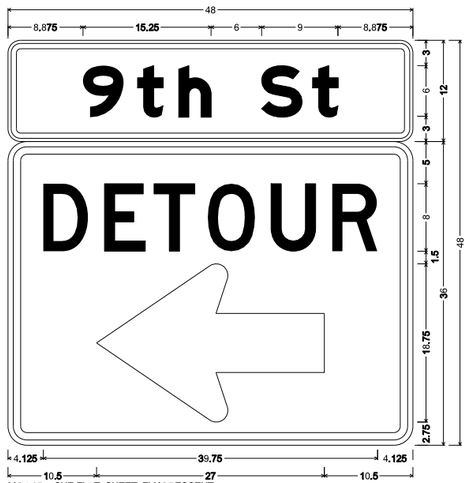


MO4-9P **SHF-FLAT SHEET FLUORESCENT;**
1.500" Radius, 0.625" Border, 0.375" Indent, Black on Orange;
[9th St] E Mod;
MO4-9-48 **SHF-FLAT SHEET FLUORESCENT;**
2.250" Radius, 0.875" Border, 0.625" Indent, Black on Orange;
[DETOUR] D;
Table of letter and object **lefts.**

9	t	h	S	t
8.875	15.375	20.250	30.125	36.125

D	E	T	O	U	R
4.125	11.375	17.250	23.625	31.250	38.500

◇ 16.500

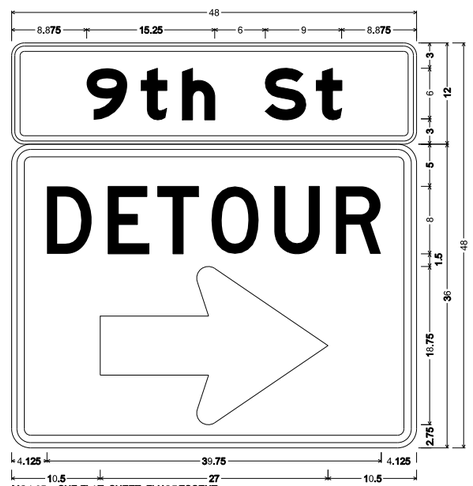


MO4-9P **SHF-FLAT SHEET FLUORESCENT;**
1.500" Radius, 0.625" Border, 0.375" Indent, Black on Orange;
[9th St] E Mod;
MO4-9L-48 **SHF-FLAT SHEET FLUORESCENT;**
2.250" Radius, 0.875" Border, 0.625" Indent, Black on Orange;
[DETOUR] D; Standard Arrow **Custom 27.000" X 18.750"** 180°;
Table of letter and object **lefts.**

9	t	h	S	t
8.875	15.375	20.250	30.125	36.125

D	E	T	O	U	R
4.125	11.375	17.250	23.625	31.250	38.500

◇ 10.500



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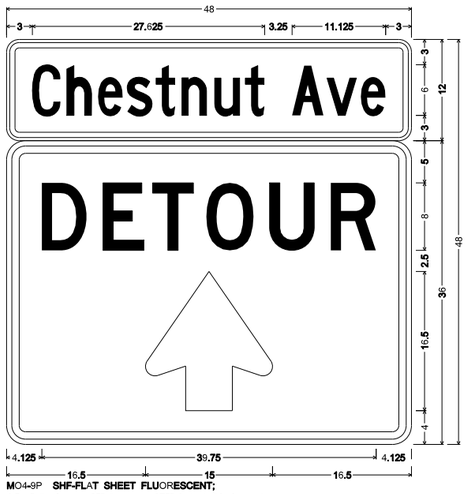
1.500" Radius, 0.625" Border, 0.375" Indent, Black on Orange;
[9th St] E Mod;
MO4-9R-48 **SHF-FLAT SHEET FLUORESCENT;**
2.250" Radius, 0.875" Border, 0.625" Indent, Black on Orange;
[DETOUR] D; Standard Arrow **Custom 27.000" X 18.750"** 0°;
Table of letter and object **lefts.**

9	t	h	S	t
8.875	15.375	20.250	30.125	36.125

D	E	T	O	U	R
4.125	11.375	17.250	23.625	31.250	38.500

◇ 10.500

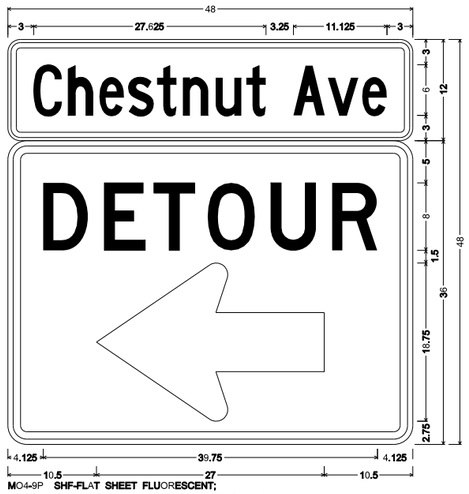


MO4-9P **SHF-FLAT SHEET FLUORESCENT;**
1.500" Radius, 0.625" Border, 0.375" Indent, Black on Orange;
[Chestnut Ave**] C** 50% spacing;
MO4-9-48 **SHF-FLAT SHEET FLUORESCENT;**
2.250" Radius, 0.875" Border, 0.625" Indent, Black on Orange;
[DETOUR] D;
Table of letter and object **lefts.**

C	h	e	s	t	n	u	t	A	v	e
3.000	7.125	10.875	14.250	17.750	20.750	24.625	28.250	33.875	38.000	42.000

D	E	T	O	U	R
4.125	11.375	17.250	23.625	31.250	38.500

◇ 16.500



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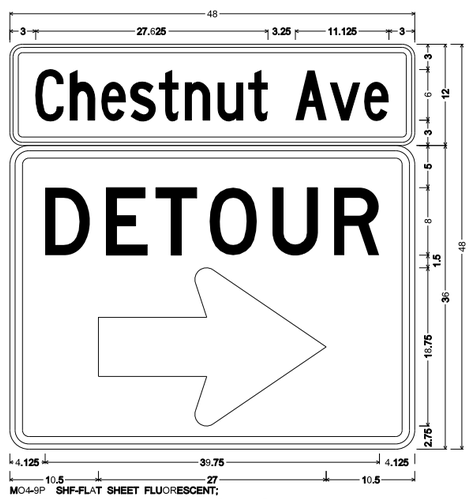
1.500" Radius, 0.625" Border, 0.375" Indent, Black on Orange;
[Chestnut Ave**] C** 50% spacing;
MO4-9L-48 **SHF-FLAT SHEET FLUORESCENT;**
2.250" Radius, 0.875" Border, 0.625" Indent, Black on Orange;
[DETOUR] D; Standard Arrow **Custom 27.000" X 18.750"** 180°;
Table of letter and object **lefts.**

C	h	e	s	t	n	u	t	A	v	e
3.000	7.125	10.875	14.250	17.750	20.750	24.625	28.250	33.875	38.000	42.000

D	E	T	O	U	R
4.125	11.375	17.250	23.625	31.250	38.500

◇ 10.500



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2.250" Radius, 0.875" Border, 0.625" Indent, Black on Orange;
[DETOUR] D; Standard Arrow **Custom 27.000" X 18.750"** 0°;
Table of letter and object **lefts.**

C	h	e	s	t	n	u	t	A	v	e
3.000	7.125	10.875	14.250	17.750	20.750	24.625	28.250	33.875	38.000	42.000

D	E	T	O	U	R
4.125	11.375	17.250	23.625	31.250	38.500

◇ 10.500

DETOUR SIGNS
TRAFFIC CONTROL
SHEET 25 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	056

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

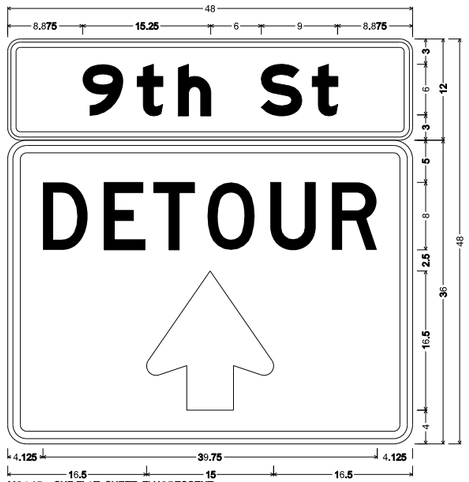
PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

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



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1.500" Radius, 0.625" Border, **0.375"** Indent, Black on Orange;
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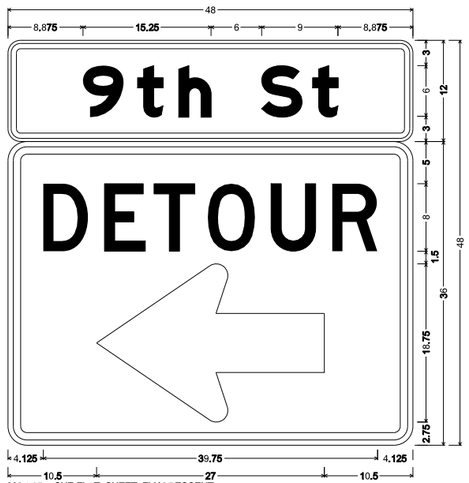
MO4-9-48 **SHF-FLAT SHEET FLUORESCENT;**
2.250" Radius, 0.875" Border, **0.625"** Indent, Black on Orange;
[DETOUR] D;
Table of letter and object **lefts.**

9	t	h	S	t
8.875	15.375	20.250	30.125	36.125

D	E	T	O	U	R
4.125	11.375	17.250	23.625	31.250	38.500

◇ 16.500

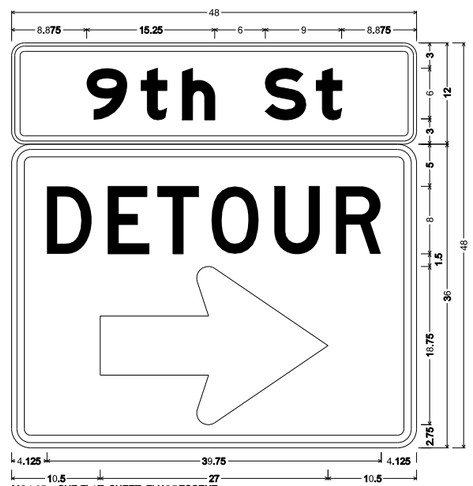


MO4-9P **SHF-FLAT SHEET FLUORESCENT;**
1.500" Radius, 0.625" Border, **0.375"** Indent, Black on Orange;
[9th St] E Mod;
MO4-9L-48 **SHF-FLAT SHEET FLUORESCENT;**
2.250" Radius, 0.875" Border, 0.625" Indent, Black on Orange;
[DETOUR] D; Standard Arrow **Custom 27.000" X 18.750"** 180°;
Table of letter and object **lefts.**

9	t	h	S	t
8.875	15.375	20.250	30.125	36.125

D	E	T	O	U	R
4.125	11.375	17.250	23.625	31.250	38.500

◇ 10.500



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1.500" Radius, 0.625" Border, **0.375"** Indent, Black on Orange;
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MO4-9R-48 **SHF-FLAT SHEET FLUORESCENT;**
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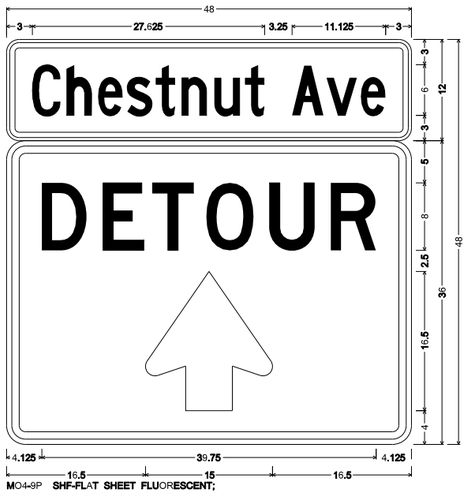
8.875	15.375	20.250	30.125	36.125

D	E	T	O	U	R
4.125	11.375	17.250	23.625	31.250	38.500

◇ 10.500

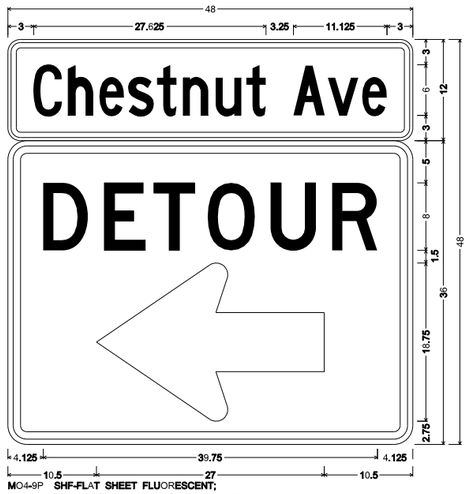


MO4-9P **SHF-FLAT SHEET FLUORESCENT;**
1.500" Radius, 0.625" Border, **0.375"** Indent, Black on Orange;
[**Chestnut** Ave] **C** 50% spacing;
MO4-9-48 **SHF-FLAT SHEET FLUORESCENT;**
2.250" Radius, 0.875" Border, **0.625"** Indent, Black on Orange;
[DETOUR] D;
Table of letter and object **lefts.**

C	h	e	s	t	n	u	t	A	v	e
3.000	7.125	10.875	14.250	17.750	20.750	24.625	28.250	33.875	38.000	42.000

D	E	T	O	U	R
4.125	11.375	17.250	23.625	31.250	38.500

◇ 16.500



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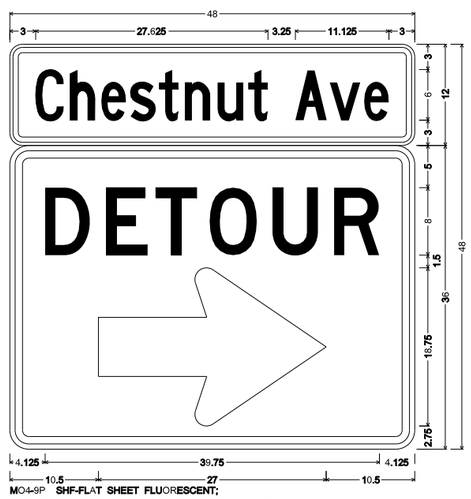
2.250" Radius, 0.875" Border, 0.625" Indent, Black on Orange;
[DETOUR] D; Standard Arrow **Custom 27.000" X 18.750"** 180°;
Table of letter and object **lefts.**

C	h	e	s	t	n	u	t	A	v	e
3.000	7.125	10.875	14.250	17.750	20.750	24.625	28.250	33.875	38.000	42.000

D	E	T	O	U	R
4.125	11.375	17.250	23.625	31.250	38.500

◇ 10.500



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2.250" Radius, 0.875" Border, 0.625" Indent, Black on Orange;
[DETOUR] D; Standard Arrow **Custom 27.000" X 18.750"** 0°;
Table of letter and object **lefts.**

C	h	e	s	t	n	u	t	A	v	e
3.000	7.125	10.875	14.250	17.750	20.750	24.625	28.250	33.875	38.000	42.000

D	E	T	O	U	R
4.125	11.375	17.250	23.625	31.250	38.500

◇ 10.500

DETOUR SIGNS
TRAFFIC CONTROL
SHEET 25 OF 25

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 1/10/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	057

COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

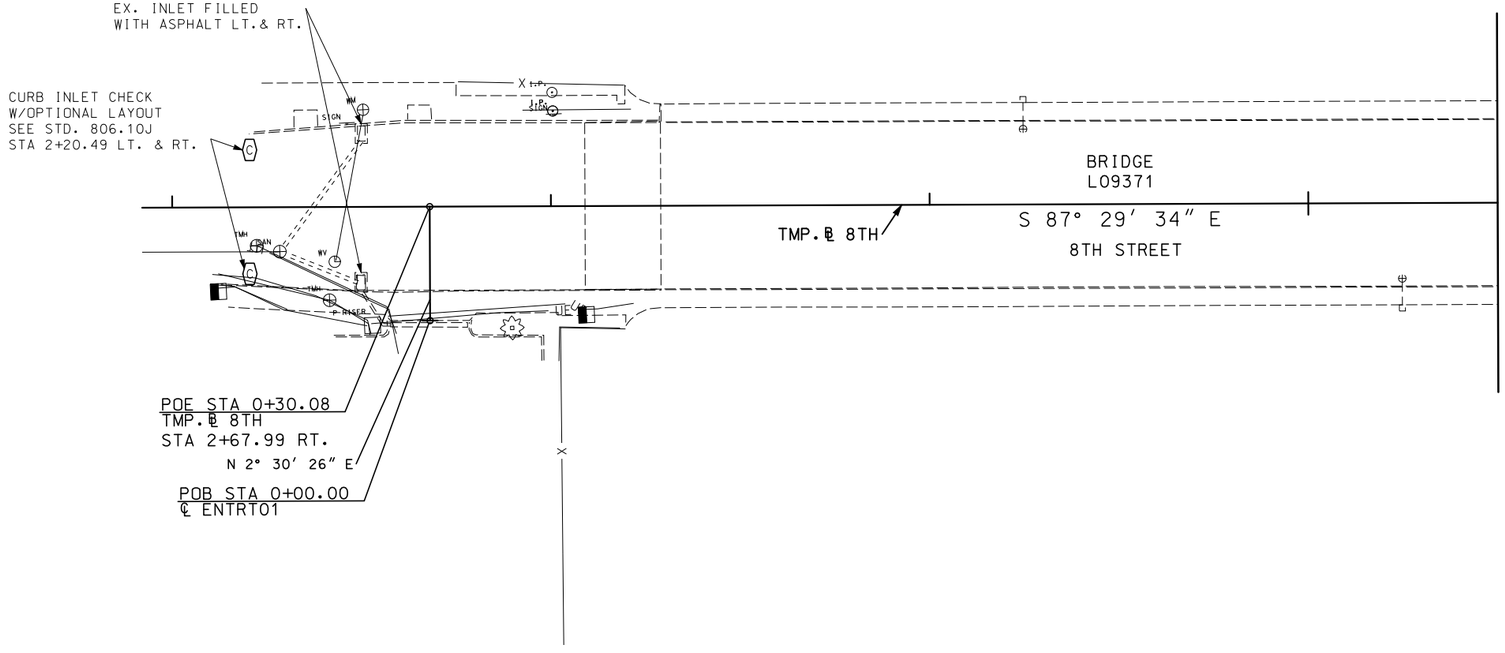
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

TEMPORARY EROSION CONTROL LEGEND

- (A) ALTERNATE DITCH CHECK
- (C) CURB INLET CHECK
- (R) ROCK DITCH CHECK
- (S) SEDIMENT TRAP
- SILT FENCE

5



SCALE
0 20 40 60

8TH STREET
BEFORE CONSTRUCTION
EROSION CONTROL
1 OF 12

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

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

DATE PREPARED	
12/11/2017	
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	058

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

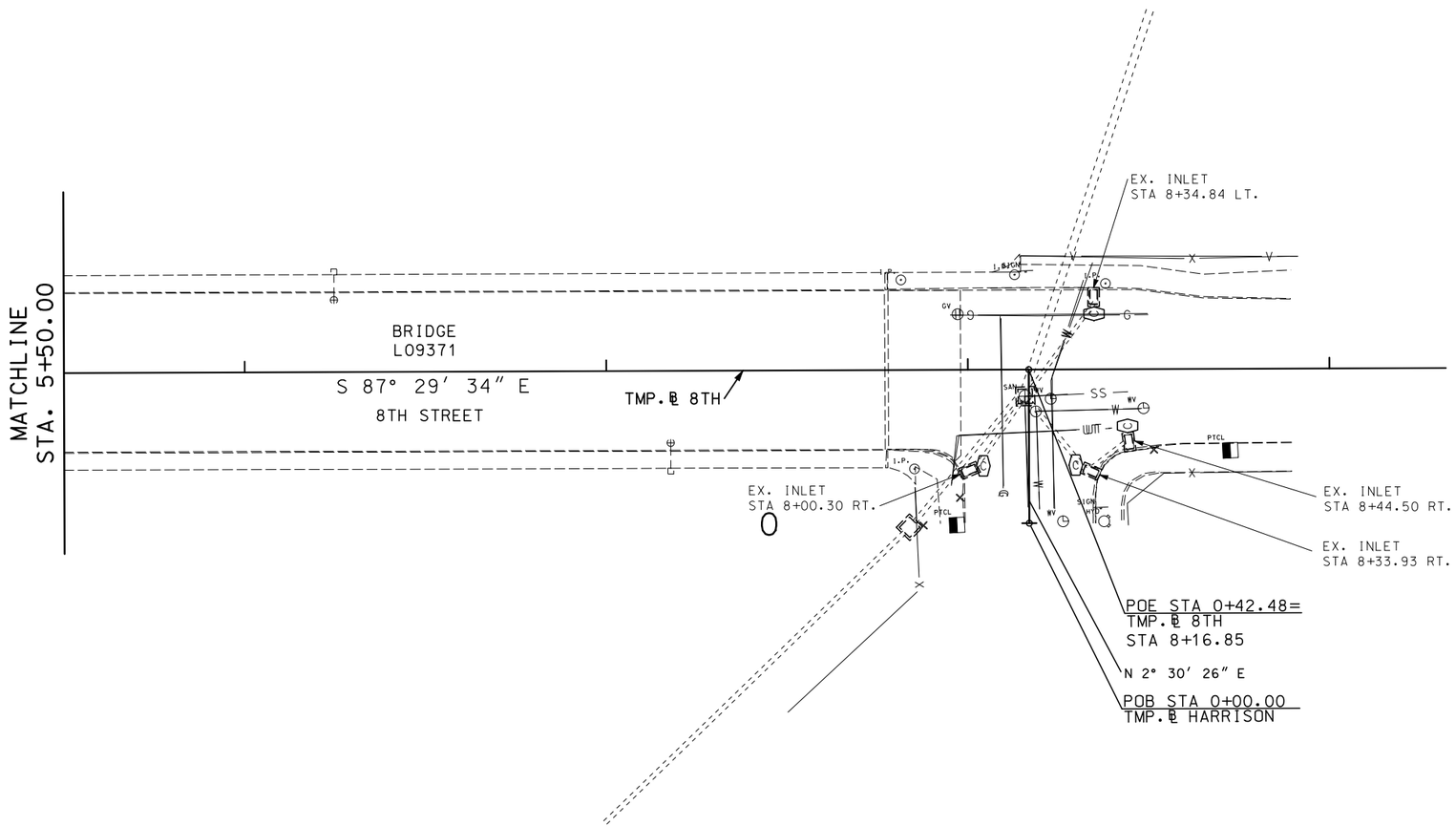
PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



SCALE

0 20 40 60

8TH STREET
BEFORE CONSTRUCTION
EROSION CONTROL
2 OF 12

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	059

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

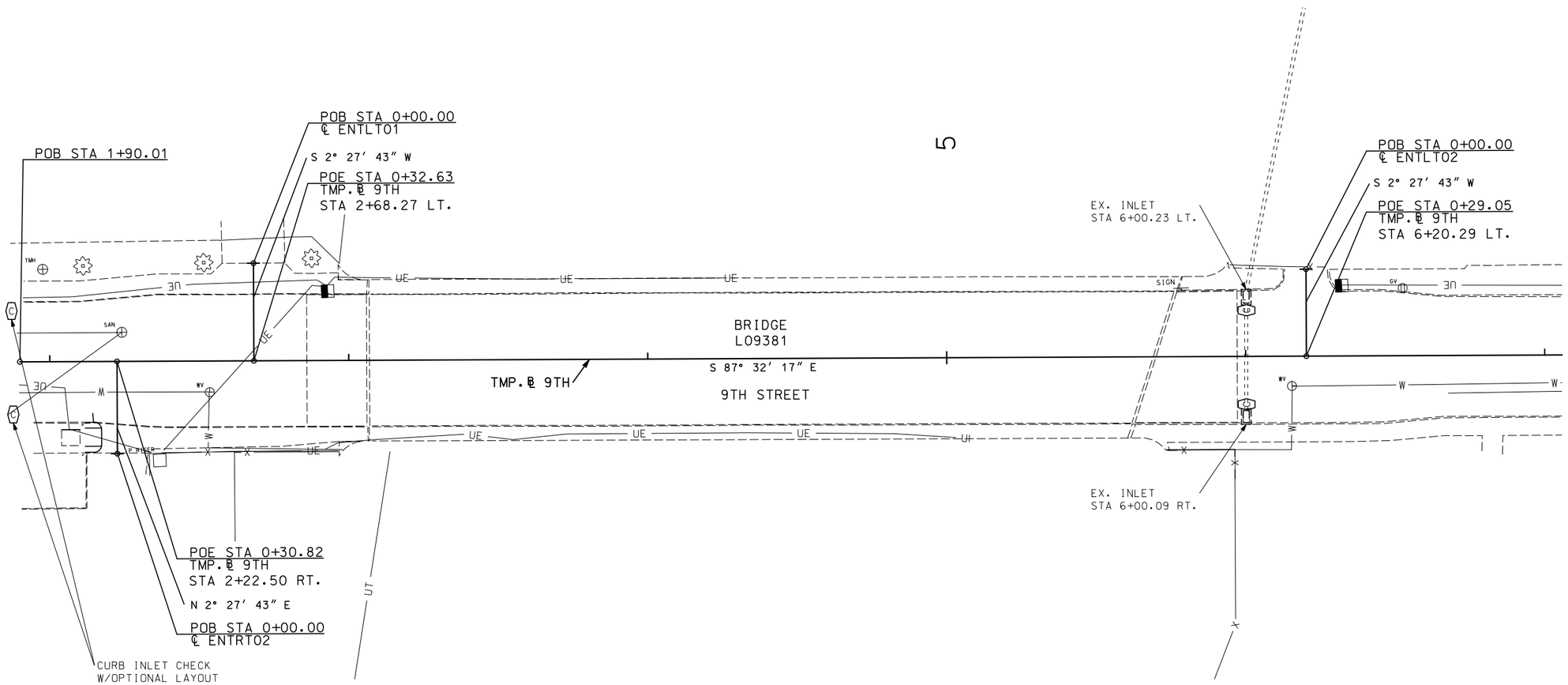
PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

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

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



SCALE

0 20 40 60

9TH STREET
BEFORE CONSTRUCTION
EROSION CONTROL
3 OF 12

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	060

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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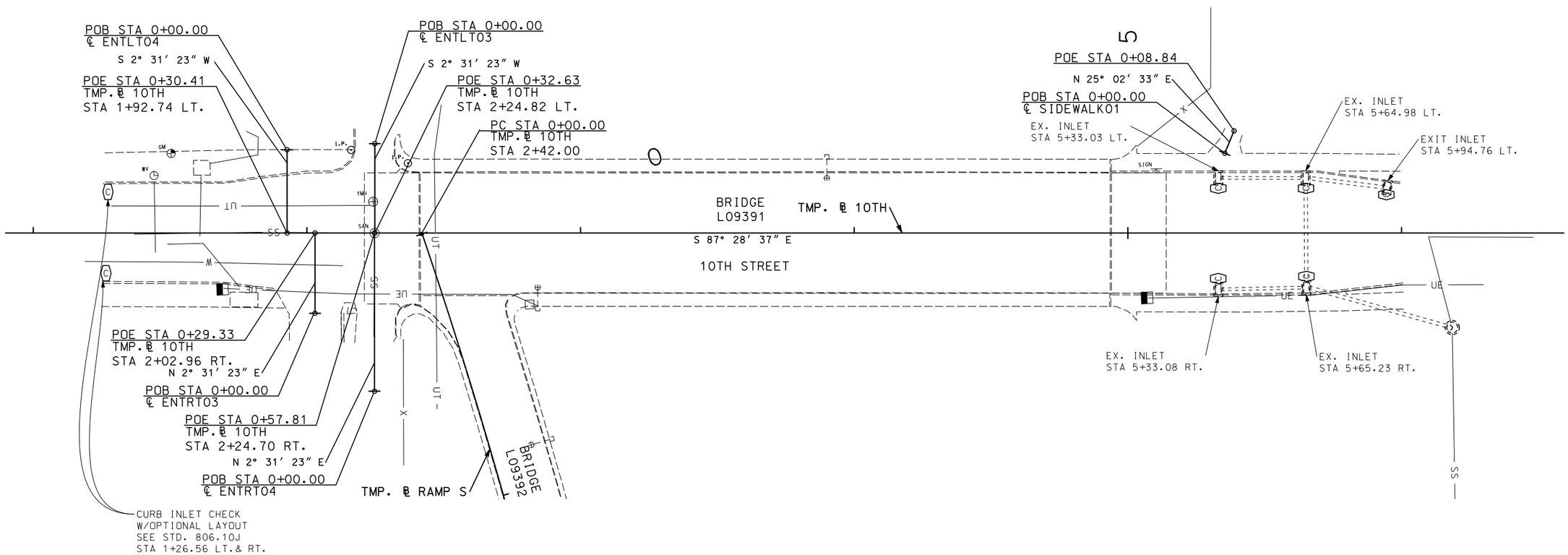
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



10TH STREET
BEFORE CONSTRUCTION
EROSION CONTROL
4 OF 12

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

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

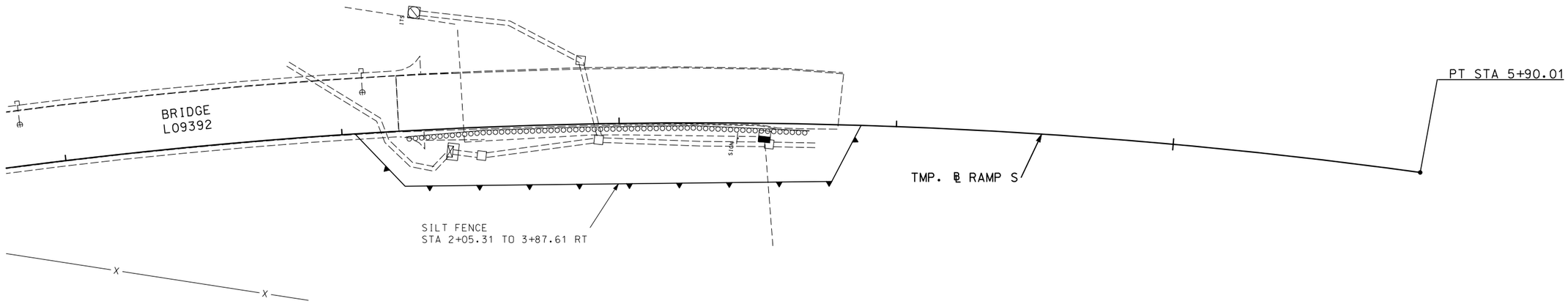
DATE PREPARED	
12/11/2017	
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	061
COUNTY	
JACKSON	
JOB NO.	
J4I3198	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

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

CURVE BL_RAMPSC1
PI 2+97.37
PC 0+00.00
PT 5+90.01
Δ 17° 42' 01.3" (RT)
D 3° 00' 00.1"
L 590.01'
T 297.37'
R 1,909.84'

5



SCALE
0 20 40 60

RAMP S
BEFORE CONSTRUCTION
EROSION CONTROL
5 OF 12

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO

DISTRICT	SHEET NO.
KC	062

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

MATCHLINE

EX. RETAINING WALL
A-292-4

MATCHLINE

EX. RETAINING WALL
A-292-4

10

EX. INLET
STA 8+46.07 LT.

BRIDGE
A02921

S 2° 17′ 08″ W

CHESTNUT AVE

℄ CHESTNUT

POB STA 8+31.13

EX. INLET
STA 8+45.94 RT.

CURB INLET CHECK
W/OPTIONAL LAYOUT
SEE STD. 806.10J
STA 11+69.58 LT.& RT.

POE STA 11+69.58

POE STA 0+28.49
TMP. ℄ CHESTNUT
STA 11+32.07 RT.

S 87° 42′ 52″ E

POB STA 0+00.00
℄ ENTRTO5

SCALE
0 20 40 60

CHESTNUT AVE.
BEFORE CONSTRUCTION
EROSION CONTROL
6 OF 11

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED	
12/11/2017	
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	063
COUNTY	
JACKSON	
JOB NO.	
J4I3198	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

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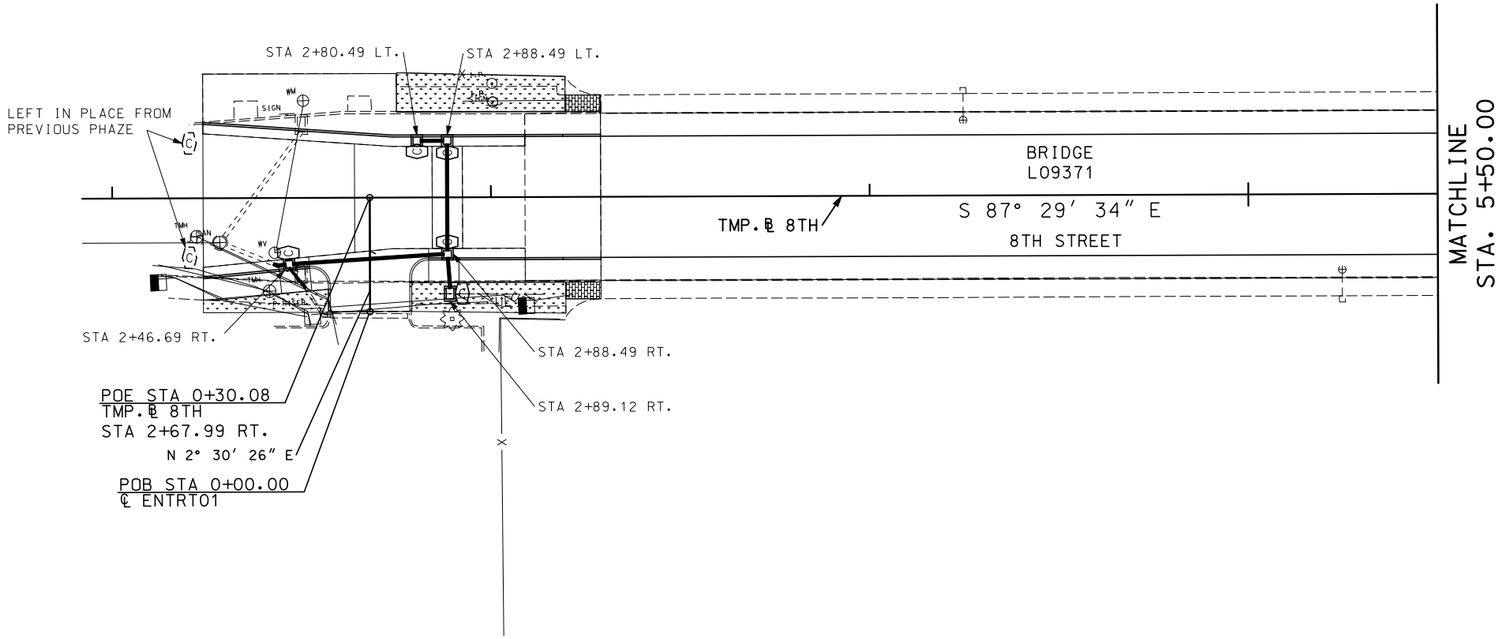
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



SCALE

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8TH STREET
DURING CONSTRCTION
EROSION CONTROL
7 OF 12

5

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

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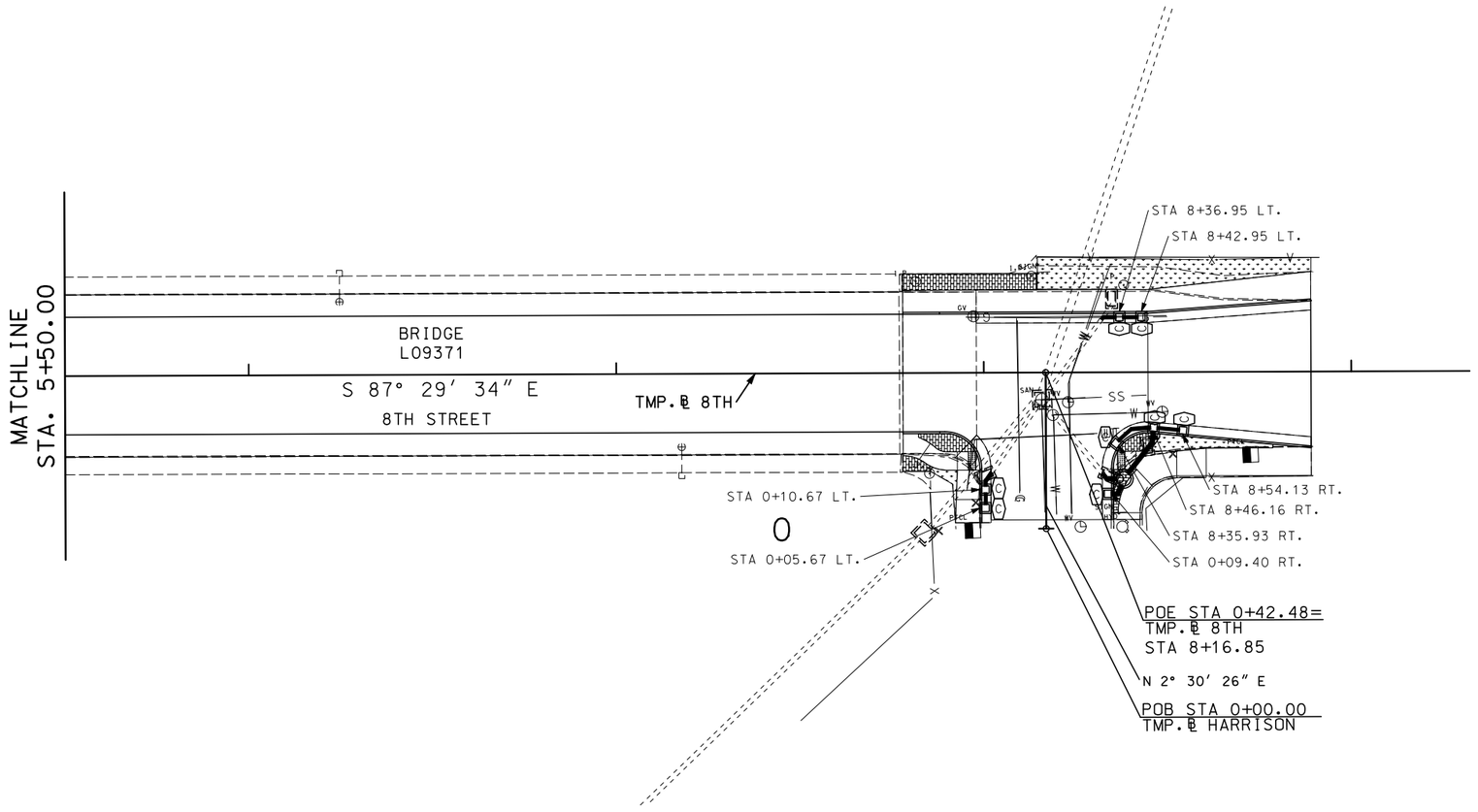
DATE PREPARED	
12/11/2017	
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	064
COUNTY	
JACKSON	
JOB NO.	
J4I3198	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



SCALE

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8TH STREET
DURING CONSTRUCTION
EROSION CONTROL
8 OF 12

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	065

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

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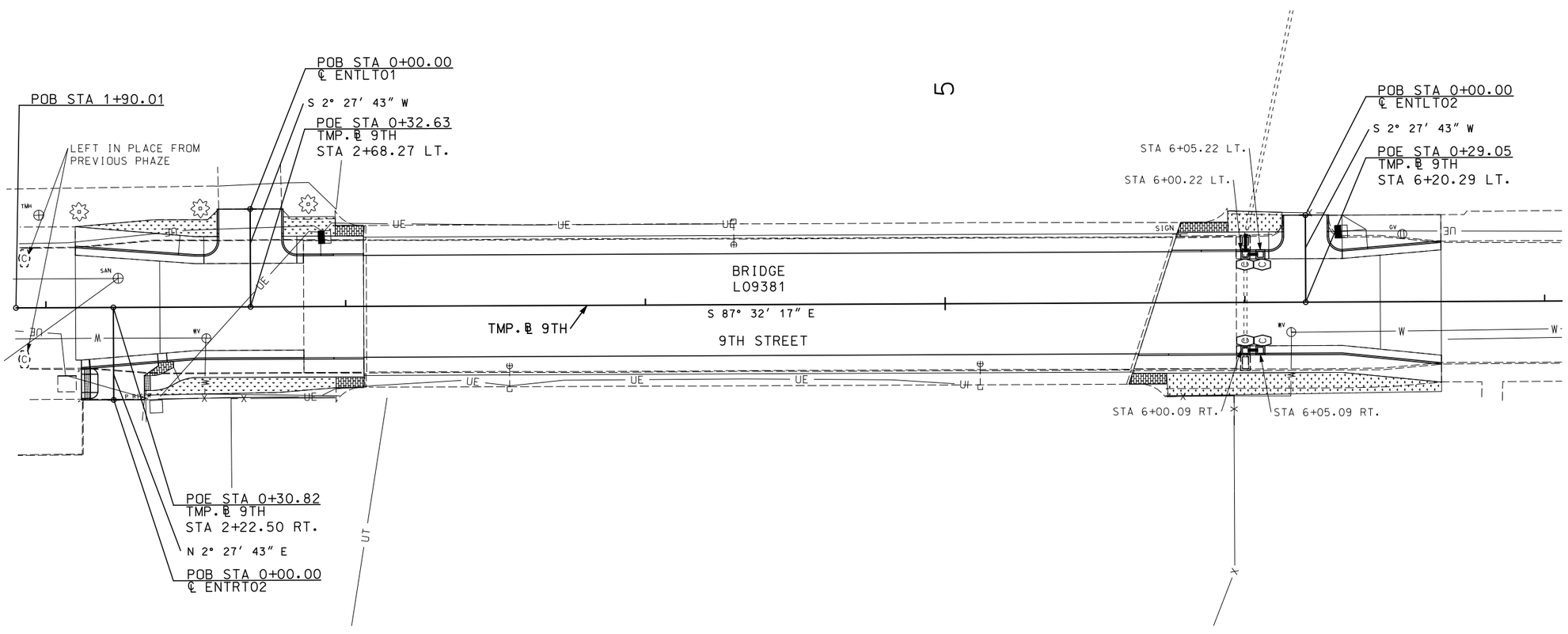
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



SCALE

0 20 40 60

9TH STREET
DURING CONSTRUCTION
EROSION CONTROL
9 OF 12

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

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

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DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	066

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

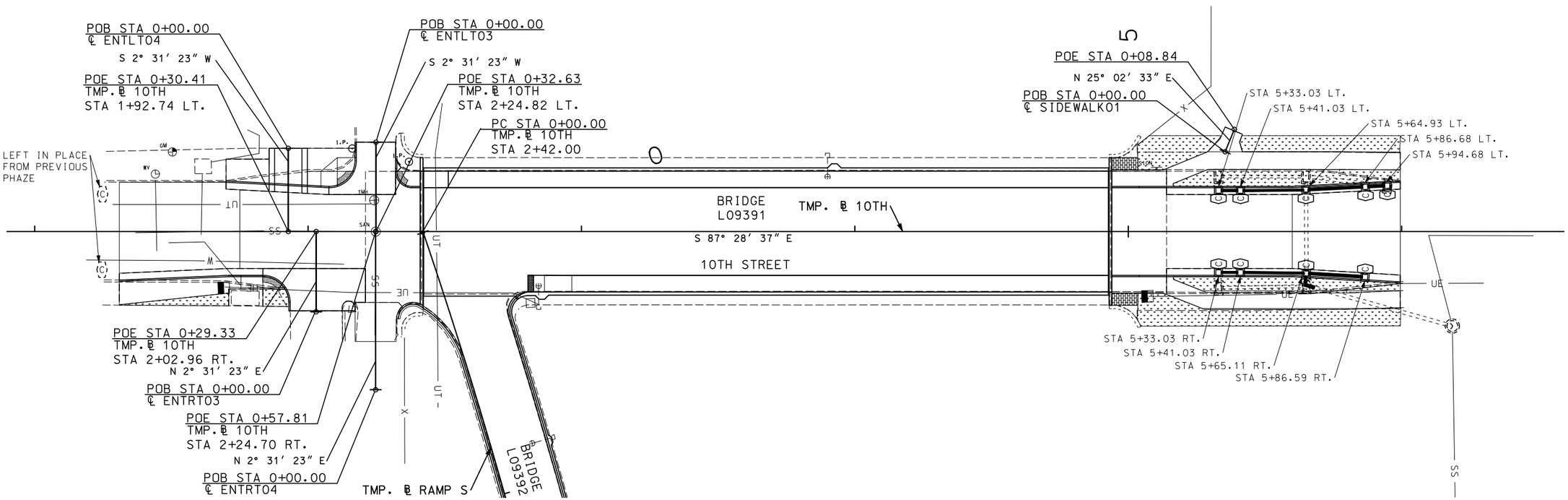
PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



SCALE

0 20 40 60

10TH STREET
DURING CONSTRUCTION
EROSION CONTROL
10 OF 12

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

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DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	067

COUNTY
JACKSON

JOB NO.
J4I3198

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)

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

CURVE BL_RAMPSC1
PI 2+97.37
PC 0+00.00
PT 5+90.01
Δ 17° 42' 01.3" (RT)
D 3° 00' 00.1"
L 590.01'
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R 1,909.84'

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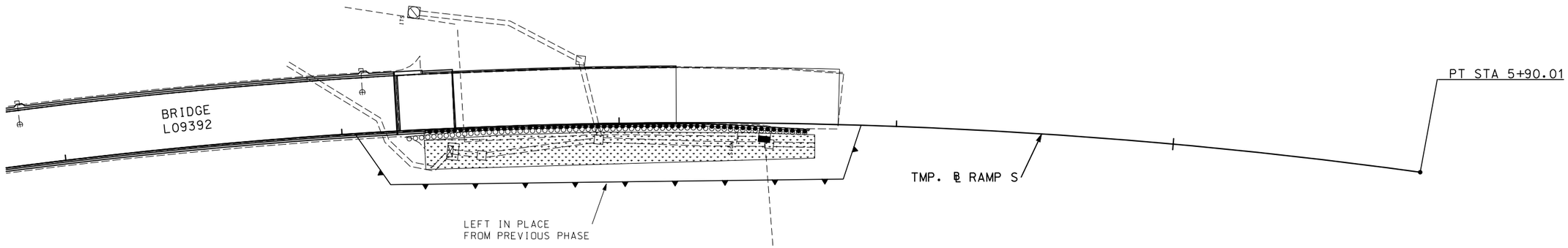

SCALE
0 20 40 60

RAMP S
DURING CONSTRUCTION
EROSION CONTROL
11 OF 12

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	068

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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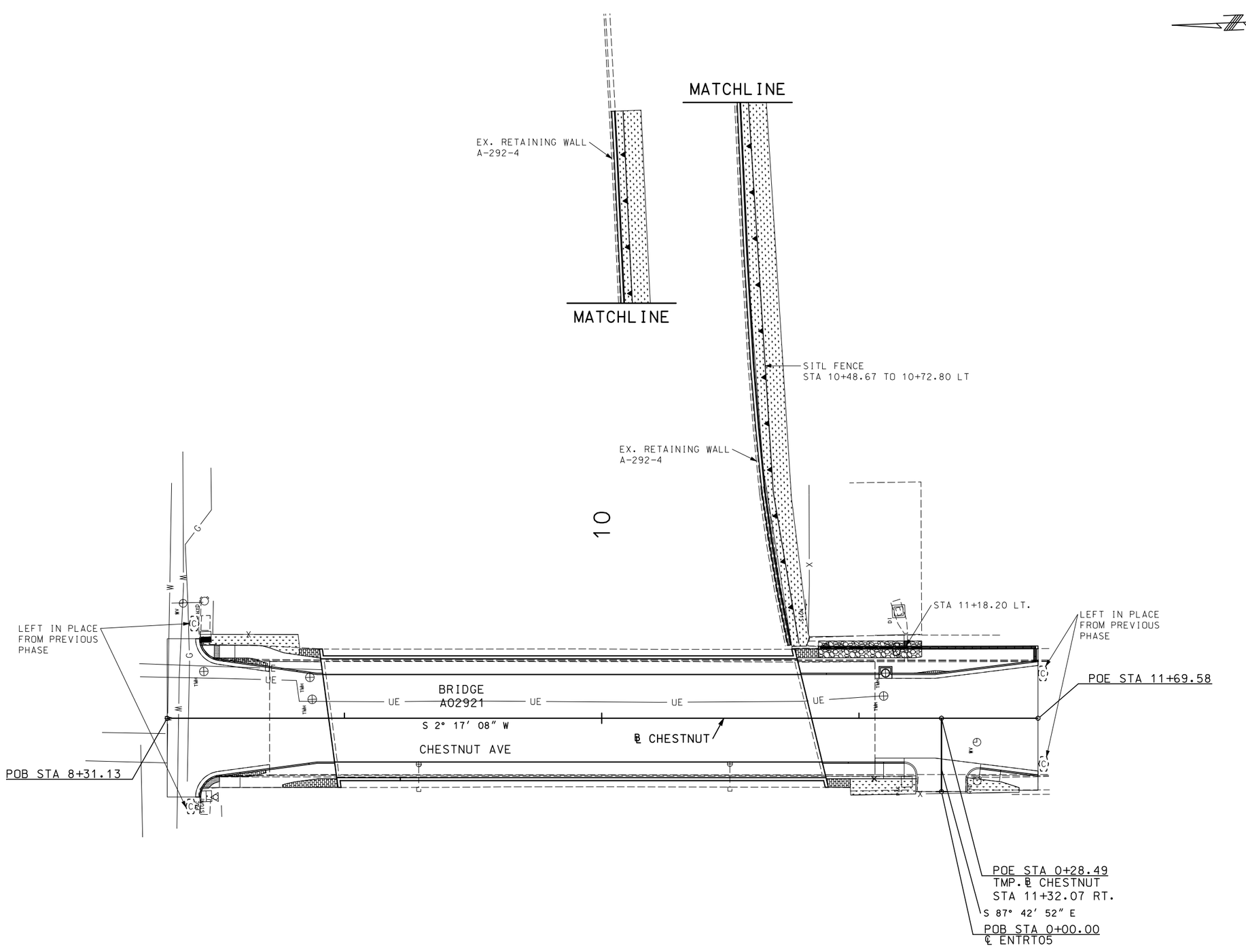
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



SCALE

0 20 40 60

CHESTNUT AVE.
DURING CONSTRUCTION
EROSION CONTROL
12 OF 12

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

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DATE PREPARED	
12/11/2017	
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	069
COUNTY	
JACKSON	
JOB NO.	
J4I3198	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

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

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

GENERAL NOTES:

ALL WORK SHALL COMPLY WITH THE KANSAS CITY, MO, DEPARTMENT OF PUBLIC WORKS STANDARD CONSTRUCTION AND MATERIALS SPECIFICATION, DIVISION II SECTION 2800, DIVISION V SECTION 5800, SUPPLEMENTAL CHANGES AND OTHER APWA SECTIONS REQUIRED TO RESTORE THE CITY'S "RIGHT-OF-WAY" TO ITS ORIGINAL CONDITION.

1. GENERAL: THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE REMOVAL OF ALL EXISTING STREET LIGHTING EQUIPMENT. COORDINATE THE DISCONNECTION OF THE EXISTING LIGHTING CIRCUIT TO ANY ADJACENT POLES WITH THE PUBLIC WORKS, STREETLIGHT, MAINTENANCE SUPERVISOR, CAROLYN ADKINS AT (816) 513-9874. REMOVAL AND INSTALLATION MUST ALSO BE COORDINATED WITH THE KCMO STREETLIGHT INSPECTOR.

2. UTILITIES LOCATES & REPAIRS: ALL UTILITY LOCATES SHALL BE ORDERED BY THE CONTRACTOR. PRIOR TO ANY CONSTRUCTION, THE ENGINEER SHALL APPROVE ANY CHANGES TO THE PLANS DUE TO UTILITY OR OTHER CONFLICTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING ALL STREET LIGHTING EQUIPMENT AND UTILITIES DAMAGED DURING THE CONSTRUCTION OF THE PROJECT. ANY DAMAGE CAUSED BY THE CONTRACTOS'S CONSTRUCTION OPERATION TO EXISTING LIGHTING EQUIPMENT AND UTILITIES SHALL BE REPAIRED BY THE APPROPRIATE UTILITY AT THE CONTRACTOR'S EXPENSE.

3. POLE RELOCATION: THE CONTRACTOR SHALL INSTALL RELOCATED POLES AND EQUIPMENT PER PLANS. PRIOR TO ANY CONSTRUCTION, THE CITY INSPECTOR SHALL VERIFY THE POLE LOCATION. THE POLE MUST BE INSTALLED PERPENDICULAR TO THE STREET, 3FT BEHIND BACK OF CURB OR PER PLANS. THE MOUNTING HEIGHT AND POLE ALIGNMENT SHALL MATCH EXISTING INSTALLATION. THE ENGINEER WILL DETERMINE EXCEPTIONS. MINIMUM ADA SIDEWALK CLEARANCES SHALL BE MAINTAINED.

4. POLE SBD2028 REINSTALLATION: COORDINATE A FIELD INSPECTION WITH CAROLYN ADKINS AND THE CITY'S MAINTENANCE CONTRACTOR AT (816) 513-9874 TO VERIFY SBD2028 DOESN'T FEED ANY ADDITIONAL POLES TO THE WEST. ANY EXISTING WESTERN FEEDS WILL HAVE TO BE MAINTAINED BY REESTABLISHING THE KCPL FEED THROUGH THE REINSTALLED POLE OR A NEW PULL BOX.

5. POLE AND CONSTRUCTION: POLE AND HARDWARE CAN BE RE-USED WHERE THEY ARE PROPERLY SIZED, EXCEPT IF DAMAGED OR DETERMINED TO BE UNFIT FOR INSTALLATION. WORK SHALL INCLUDE REMOVING AND RESETTING THE POLE. ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE STREETLIGHTING, PUBLIC WORKS DEPARTMENT. COORDINATE A FINAL JOINT INSPECTION WITH OUR MAINTENANCE SUPERVISOR, CAROLYN ADKINS AT (816) 513-9874.

6. CONDUIT AND CABLE: ALL DISTRIBUTION CABLE SHALL BE INSTALLED IN SCHEDULE 40, 2" PVC CONDUIT, PREASSEMBLED "CABLE-IN-DUCT" OR STATED OTHERWISE FOR BRIDGE INSTALLATION. ALL CONDUIT RUNS SHALL BE PLACED 2FT FROM BACK OF CUB WHERE POSSIBLE AND AT A MINIMUM DEPTH OF 24" OR STATED OTHERWISE FOR BRIDGE INSTALLATION. ALL SPLICES MUST BE DONE IN THE POLE BASE OR PULL BOX. NO MID-SPAN SPLICES OR BURIED SPLICES ARE ALLOWED.

DISTRIBUTION CABLE: SIZED PER PLANS. CABLE TYPE RHH/RHW/USE, 600 VOLT, COPPER STRANDED AND COLOR CODED BLACK, WHITE AND GREEN (APWA 2802.8) FOR A GROUNDED 120VOLT SYSTEM.

CHESTNUT / DISTRIBUTION CABLE: CABLE SIZE #6-2C-CU TYPE RHH/RHW/USE, 600 VOLT, COPPER STRANDED AND COLOR CODED BLACK AND WHITE FOR AN UNGROUNDED 120VOLT, NESC EXISTING SYSTEM.

7. GROUNDING: INDIVIDUAL AND SYSTEM GROUNDS SHALL BE INSTALLED ON ALL CIRCUITS (POLE GROUNDING RODS AND BOND GROUNDING TO POLE). GROUNDING SHALL COMPLY WITH SECTION 2808 OF STANDARDS NOTED ABOVE.

8. FUSING: PROVIDE AND INSTALL IN EACH POLE BASE, 3 SINGLE-POLE, SET-SCREW, IN-LINE, BREAKAWAY, FUSEHOLDERS. FOR THE "HOT" BREAKAWAY CONDUCTOR, PLACE A 10 AMP FAST ACTING FUSE IN THE FUSEHOLDER AND A COPPER SLUG IN 3 THE SYSTEM AND/OR NEUTRAL FUSEHOLDERS.

9. ANTI-THEFT DEVICE: APPROVED KCMO CABLE RETAINER SHALL BE INSTALLED ON NEW AND RELOCATED POLE.

10. STORAGE: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TEMPORARY STORAGE OF MATERIALS, MAINTAINING, AND REPLACING MATERIALS (IN LIKE KIND) DAMAGED DURING THE CONSTRUCTION CONTRACT.

11. CLEARANCE AND RIGHT OF WAY: ALL STREETLIGHTING EQUIPMENT SHALL MEET OR EXCEED THE LATEST REVISION OF NATIONAL ELECTRICAL CODE (NEC) AND NATIONAL ELECTRICAL SAFETY CODE (NESC) STANDARDS FOR LINE AND EQUIPMENT CLEARANCE. ALL POLES AND DISTRIBUTION CABLE MUST BE INSTALLED IN THE CITY'S "RIGHT-OF-WAY."

12. SITE RESTORATION: THE CONTRACTOR IS RESPONSIBLE FOR ALL RESTORATION OF THE CONSTRUCTION SITE TO CITY SPECIFICATIONS AT NO ADDITIONAL COST. CONTRACTOR IS ALSO RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ANY DAMAGE, INCLUDING BUT NOT LIMITED TO LANDSCAPING, SPRINKLER SYSTEMS, WATER, SEWER, CURB AND SIDEWALK, GAS MAIN, ETC., CAUSED BY THE CONSTRUCTION.

KCMO
LIGHTING SHEET
1 OF 13

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	070

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

LIGHTING LEGEND

	CONTROLLER, LIGHTING		150 W LUMINAIRE
	CONTROLLER, LIGHTING (EXISTING)		250 W LUMINAIRE
	WOOD POST		400 W LUMINAIRE
	POWER SOURCE	P.S.	POWER SUPPLY
JCT	JUNCTION BOX ON BRIDGE		PULL BOX (EXISTING)
	JUNCTION BOX TYPE II		
	CONDUIT, RIGID (TRENCH)		CONDUIT, RIGID (PUSHED)
M M M	CONDUIT, RIGID (MEDIAN)	B B B	CONDUIT, RIGID (BRIDGE)
	CONDUIT, RIGID (EXISTING)		CABLE-CONDUIT (EXISTING)
			CABLE-CONDUIT

① ℄ 8TH
JUNCTION BOX
TYPE II (KCMO)
STA. 3+08.21
OFF. 27.34 LT.

② 3" RIGID CONDUIT
IN TRENCH (MODOT)
2-1c & 1BARE NEUTRAL
#6 A.W.G.

③ TIE 3" RIGID CONDUIT
EXTERNAL ON STRUCTURE
TO 3" STUB OUT (MODOT)

④ JUNCTION BOX
CONDUIT SYSTEM
ON STRUCTURE
SEE BRIDGE PLANS
(MODOT)

⑤ 3" RIGED CONDUIT (BARRIER)
CONDUIT SYSTEM ON STRUCTURE
2-1c & 1BARE NEUTRAL #6 A.W.G.
SEE BRIDGE PLANS (MODOT)

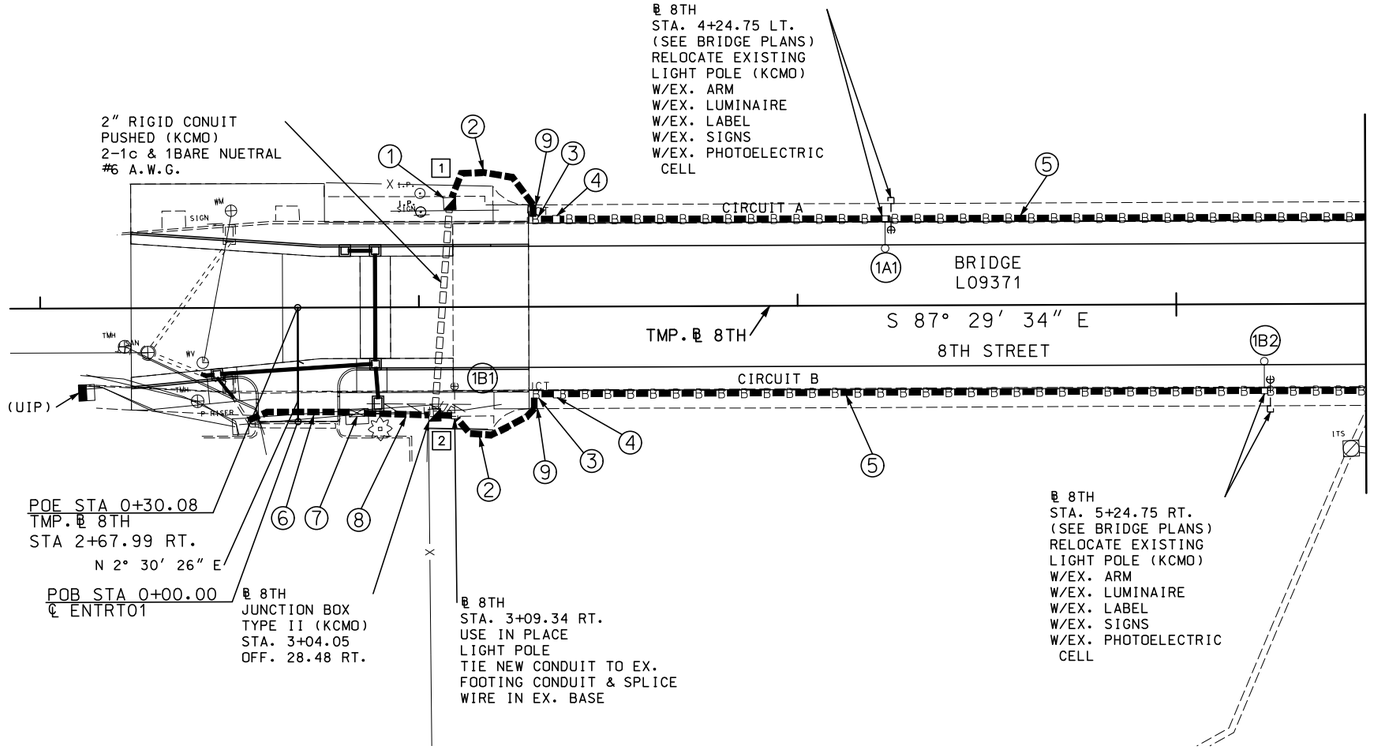
⑥ 2" RIGID CONUIT
IN TRENCH (KCMO)

⑦ ℄ 8TH
LIGHTING CONTROLLER #1 (KCMO)
120/240 VOLT, 2 CIRCUIT
STA. 2+83.52
OFF. 27.81 RT.

⑧ 2" RIGID CONDUIT
IN TRENCH (KCMO)
4-1c & 2BARE NEUTRAL
#6 A.W.G.

⑨ 3" RIGID CONDUIT
EXTERNAL ON STRUCTURE
(BRIDGE) (MODOT)
2-1c & 1BARE NEUTRAL
#6 A.W.G.

5



SCALE
0 20 40 60

KCMO
8TH STREET
LIGHTING SHEET
2 OF 13

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	071

COUNTY
JACKSON
JOB NO.
J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION
DATE

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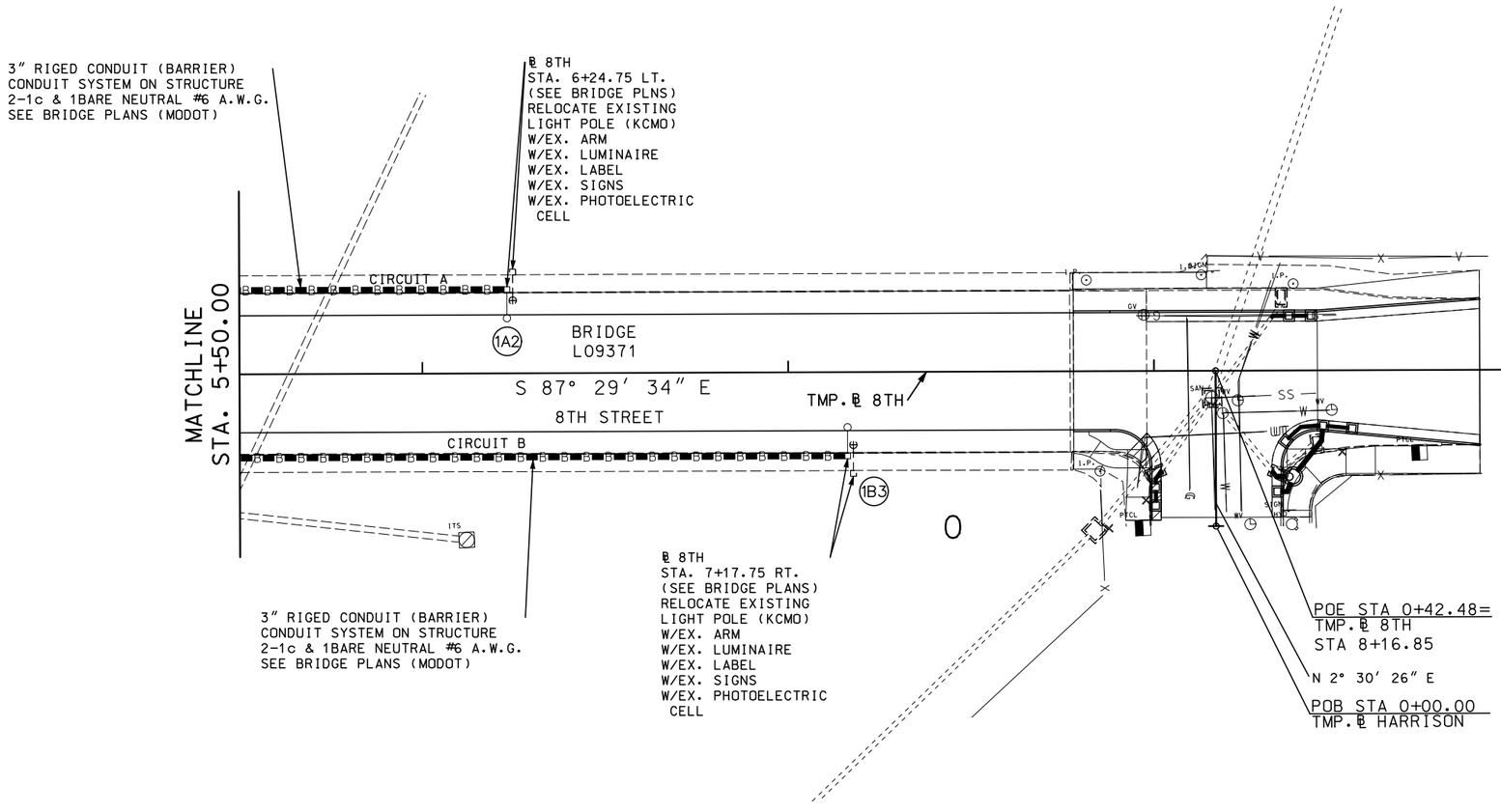
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



SCALE

0 20 40 60

KCMO
8TH STREET
LIGHTING SHEET
3 OF 13

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

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DATE PREPARED	
12/11/2017	
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	072
COUNTY	
JACKSON	
JOB NO.	
J4I3198	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

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

(1) ℄ 9TH
JUNCTION BOX
TYPE II (KCMO)
STA. 2+85.29
OFF. 26.72 LT.
LOCATE EX. LIGHTING
CONDUIT IN FIELD
ADJUST AS NECESSARY JB #3

(2) 3" RIGID CONDUIT
IN TRENCH (MODOT)
2-1c & 1BARE NEUTRAL
#6 A.W.G.

(3) TIE 3" RIGID CONDUIT
EXTERNAL ON STRUCTURE
TO 3" STUB OUT (MODOT)

(4) JUNCTION BOX
CONDUIT SYSTEM
ON STRUCTURE (MODOT)
SEE BRIDGE PLANS

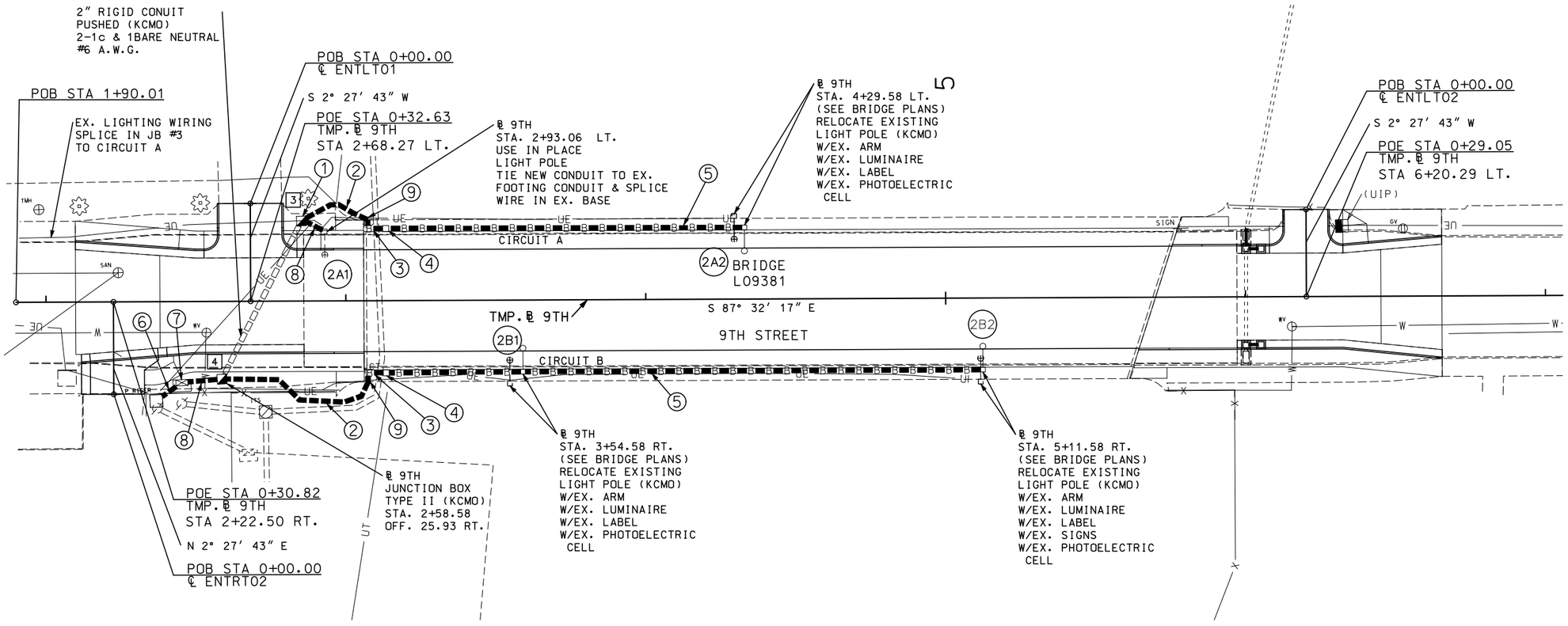
(5) 3" RIGED CONDUIT (BARRIER)
CONDUIT SYSTEM ON STRUCTURE
2-1c & 1BARE NEUTRAL #6 A.W.G.
SEE BRIDGE PLANS (MODOT)

(6) 2" RIGID CONUIT
IN TRENCH (KCMO)

(7) ℄ 9TH
LIGHTING CONTROLLER #2 (KCMO)
120/240 VOLT, 2 CIRCUIT
STA. 2+45.24
OFF. 27.05 RT.

(8) 2" RIGID CONDUIT
IN TRENCH (KCMO)
4-1c & 2BARE NEUTRAL
#6 A.W.G.

(9) 3" RIGID CONDUIT
EXTERNAL ON STRUCTURE
(BRIDGE) (MODOT)
2-1c & 1BARE NEUTRAL
#6 A.W.G.



KCMO
9TH STREET
LIGHTING SHEET
4 OF 13

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
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DATE PREPARED
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ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	073

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

① ℄ 10TH
JUNCTION BOX
TYPE II (KCMO)
STA. 2+33.17
OFF. 37.69 LT.

② 3" RIGID CONDUIT
IN TRENCH (MODOT)
4-1c & 2BARE NEUTRAL
#6 A.W.G.

③ TIE 3" RIGID CONDUIT
EXTERNAL ON STRUCTURE
TO 3" STUB OUT (MODOT)

④ JUNCTION BOX
CONDUIT SYSTEM
ON STRUCTURE
SEE BRIDGE PLANS
(MODOT)

⑤ 3" RIGED CONDUIT (BARRIER)
CONDUIT SYSTEM ON STRUCTURE
2-1c & 1BARE NEUTRAL #6 A.W.G.
SEE BRIDGE PLANS (MODOT)

⑥ 2" RIGID CONUIT
IN TRENCH (KCMO)

⑦ ℄ 10TH
LIGHTING CONTROLLER #3 (KCMO)
120/240 VOLT, 2 CIRCUIT
STA. 1+65.89
OFF. 24.03 RT.

⑧ 2" RIGID CONDUIT
IN TRENCH (KCMO)
4-1c & 2BARE NEUTRAL
#6 A.W.G.

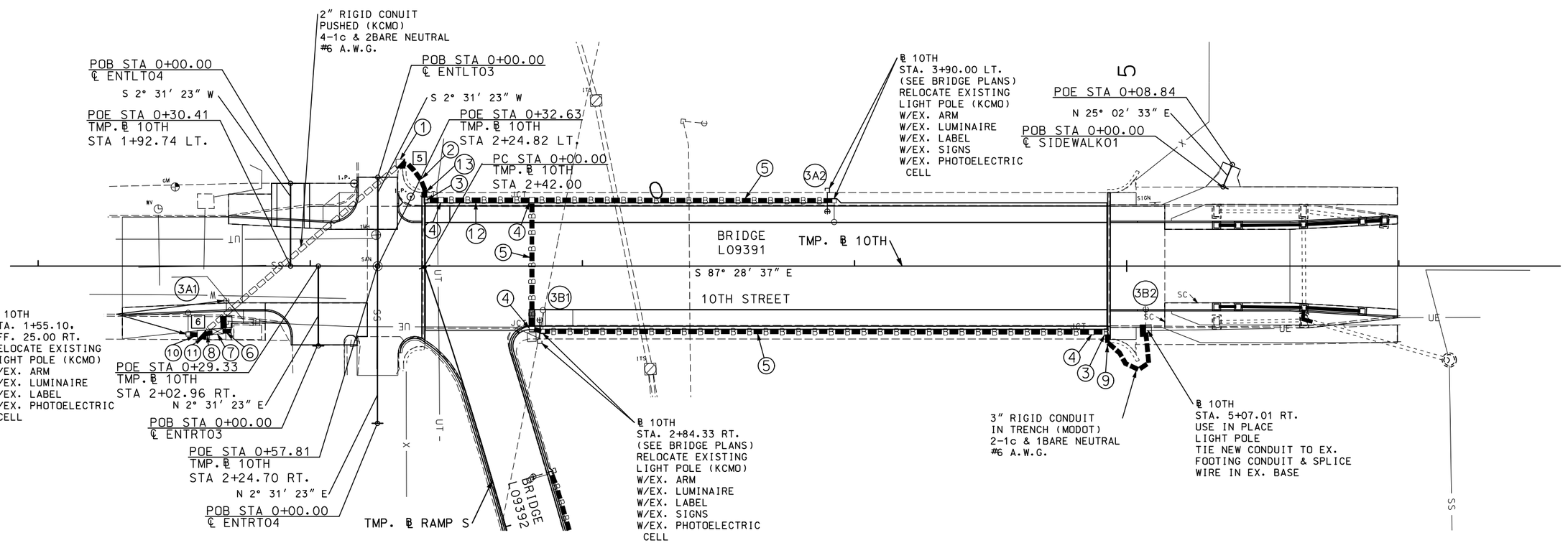
⑨ 3" RIGID CONDUIT
EXTERNAL ON STRUCTURE
(BRIDGE) (MODOT)
2-1c & 1BARE NEUTRAL
#6 A.W.G.

⑩ 2" RIGID CONDUIT
IN TRENCH (KCMO)
4-1c & 2BARE NEUTRAL
#6 A.W.G.

⑪ ℄ 10TH
JUNCTION BOX
TYPE II (KCMO)
STA. 1+60.09
OFF. 25.23 RT.

⑫ 3" RIGED CONDUIT (BARRIER)
CONDUIT SYSTEM ON STRUCTURE
2-1c & 1BARE NEUTRAL #6 A.W.G.
SEE BRIDGE PLANS (MODOT)

⑬ 3" RIGID CONDUIT
EXTERNAL ON STRUCTURE
(BRIDGE) (MODOT)
4-1c & 2BARE NEUTRAL
#6 A.W.G.



SCALE
0 20 40 60

KCMO
10TH STREET
LIGHTING SHEET
5 OF 13

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	074

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

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

(1) ℄ CHESTNUT
JUNCTION BOX
TYPE II (KCMO)
STA. 8+50.00
OFF. 33.96 RT.

(2) 3" RIGID CONDUIT
IN TRENCH (MODOT)
2-1c & 1BARE NEUTRAL
#6 A.W.G.

(3) TIE 3" RIGID CONDUIT
EXTERNAL ON STRUCTURE
TO 3" STUB OUT (MODOT)

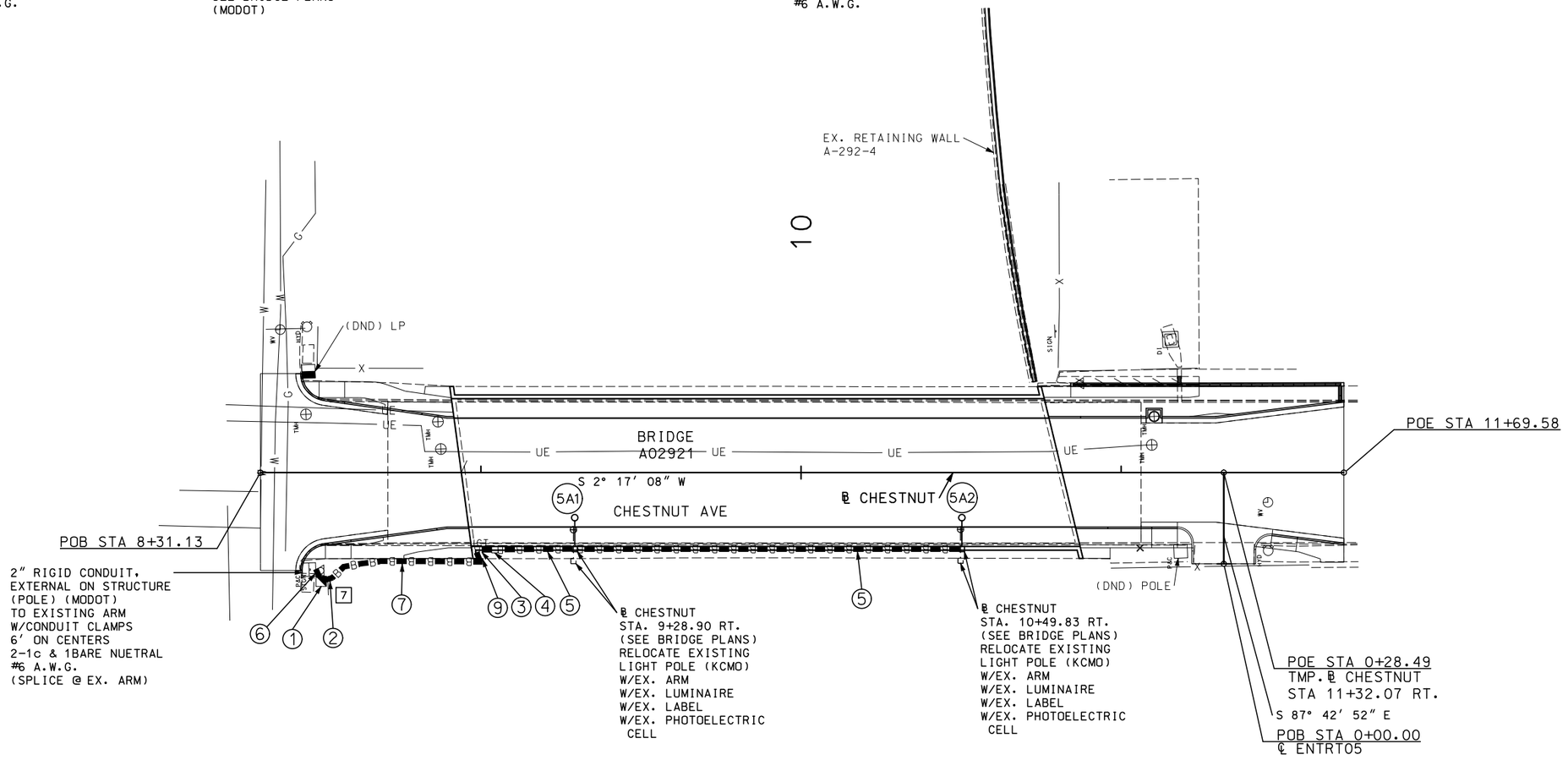
(4) JUNCTION BOX
CONDUIT SYSTEM
ON STRUCTURE
SEE BRIDGE PLANS
(MODOT)

(5) 3" RIGED CONDUIT (BARRIER)
CONDUIT SYSTEM ON STRUCTURE
2-1c & 1BARE NEUTRAL #6 A.W.G.
SEE BRIDGE PLANS (MODOT)

(6) 2" RIGID CONUIT
IN TRENCH (KCMO)

(7) 3" RIGID CONDUIT
EXTERNAL ON STRUCTURE
(RETAINING WALL) (MODOT)
2-1c & 1BARE NEUTRAL
#6 A.W.G.

(9) 3" RIGID CONDUIT
EXTERNAL ON STRUCTURE
(BRIDGE) (MODOT)
2-1c & 1BARE NEUTRAL
#6 A.W.G.



SCALE
0 20 40 60

KCMO
CHESTNUT AVE.
LIGHTING SHEET
6 OF 13

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
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DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	075

COUNTY
JACKSON
JOB NO.
J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

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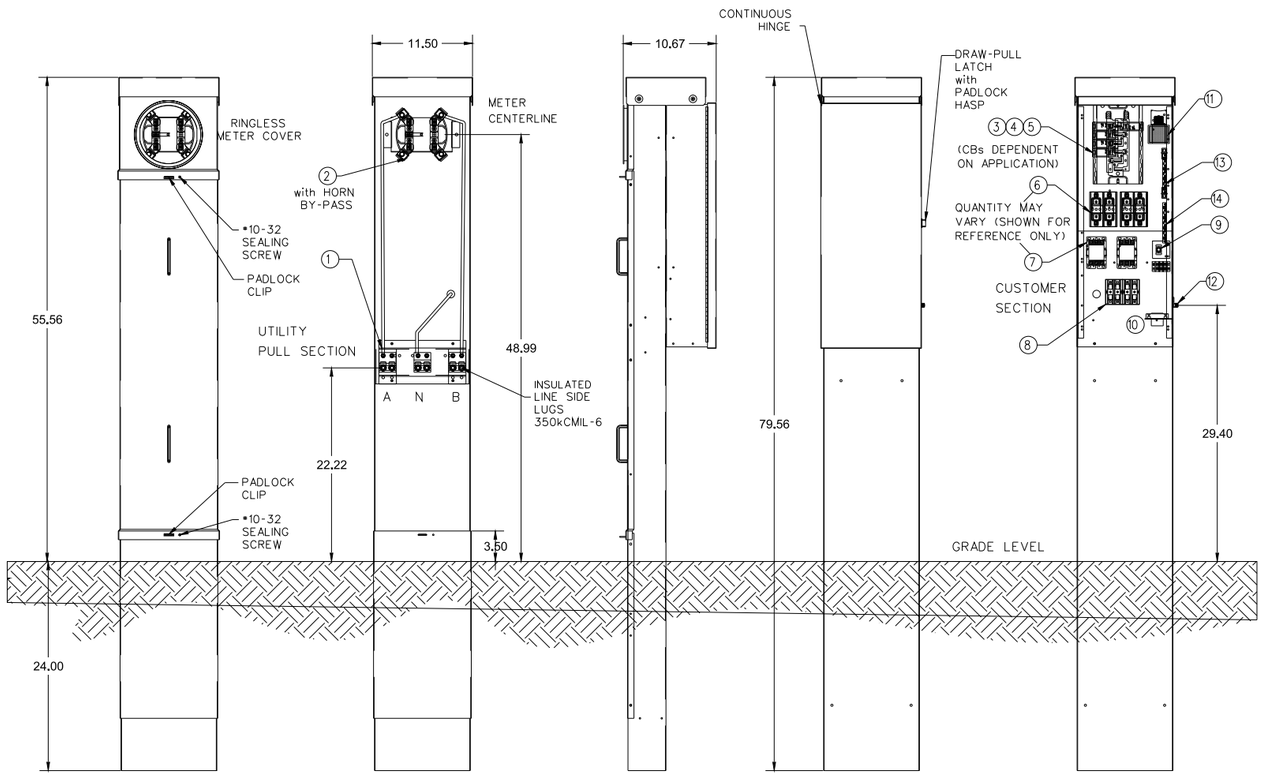
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



SPECIFICATIONS

* NEMA 3R CONSTRUCTION
* FABRICATED FROM CORROSION-RESISTANT ZINC COATED STEEL
* FACTORY WIRING 600 VOLT RATED COPPER
* COLOR FORREST / DARK GREEN UNLESS OTHERWISE SPECIFIED
* POLYESTER POWDER-COATED FINISH EXCEEDS ASTM B-117 SPECIFICATIONS
* ALL EXTERIOR HINGES CONTINUOUS PIANO TYPE STAINLESS STEEL
* ALL COMPONENTS ARE U.L. LISTED.

COMPONENT DIRECTORY	
	CAT. NO. MHPDR-KCMO-xx
No.	120/240 VAC 1 PH 3W 100AMPS
1	LANDING LUGS DUAL 350kCMIL - 6
2	MTR SKT 4JAW 200AMPS with 5TH CLIP
3	LOADCENTER 125A 1PH 12-CKT
4	(2) CB 30A 2P 120/240VAC 10kAIC
5	(1) CB 15A 1P 120/240VAC 10kAIC
6	(4) FUSE 60A CLASS 'J' 600V BUSSMAN or EQUAL
7	(2) CONTACTOR EH 30A SIEMENS '3RT1033'
8	(2) TERM BLK 115A 2P MARATHON or EQUAL
9	SWITCH TOGGLE SPST 20A
10	PE RECEPTACLE
11	(1) SURGE ARRESTER 650VAC
12	GROUND LUG (OUTSIDE)
13	INSULATED NEUTRAL (CUSTOMER SECT.)
14	GROUND BUS (CUSTOMER SECT.)

RESIDENTIAL
SERVICE PEDESTAL
0 - 200 AMPERES
0 - 600 VOLTS

KCMO
LIGHTING SHEET
7 OF 13

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
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DATE PREPARED 12/11/2017
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 076
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

WIRING DIAGRAM

PACIFIC UTILITY PRODUCTS
2430 RAILROAD ST. CORONA, CA. 92880

FSC571180

INDUSTRIAL CONTROL
SUITABLE ONLY FOR USE AS SERVICE EQUIPMENT
BONDED NEUTRAL REMOVE BONDING MEANS FOR TEST PURPOSES ONLY

CAT. NO. MHPDR-KCMO-33-PD
120/240VAC 1PH 3W 100 AMPS

INSTALL NO MORE THAN 6 (ONE OR TWO POLE) DISCONNECTING MEANS

RAINPROOF TYPE 3R ENCLOSURE

*SHORT CIRCUIT RATING: 10,000 RMS SYM. AMPS @ 240 VAC MAXIMUM.

*CIRCUIT BREAKERS 100-15 AMPS: CUTLER HAMMER BR, BQ, GFCB

REPLACEMENT BREAKER MUST BE SAME TYPE AND RATING

*AUTOMATIC TRIP IS INDICATED BY HANDLE POSITION MIDWAY BETWEEN (ON) AND (OFF). TO RESTORE POWER MOVE HANDLE TO (OFF), THEN ON.

*METER SOCKET : MS24; 200 AMPS WATT-HOUR METER NOT INCLUDED IN SHORT CIRCUIT RATING.

*THE MAXIMUM SIZE CIRCUIT BREAKER TO BE INSTALLED ON THE LOAD CENTER IS 50 AMPS WHEN COPPER WIRE IS USED AND 40 AMPS WHEN ALUMINUM WIRE IS USED

*MOISTURE KIT AVAILABLE-CONTACT FACTORY. CAT.NO. MSK-1

*SHIPPING TENDS TO LOOSEN ELECTRICAL CONNECTIONS-TIGHTEN ALL CONNECTIONS BEFORE ENERGIZING UNIT.

NO.	AMP.	POLE	DESCRIPTION
2-4	30	2	LIGHTING 1
6-8	30	2	LIGHTING 2
10	15	1	PEC

*** TORQUE INFORMATION

□	350MCM - 6	CU/AL		275 IN.LB.
□	250MCM - 6	CU/AL		275 IN.LB.
△	#14-1/0	CU/AL		50 IN.LB.

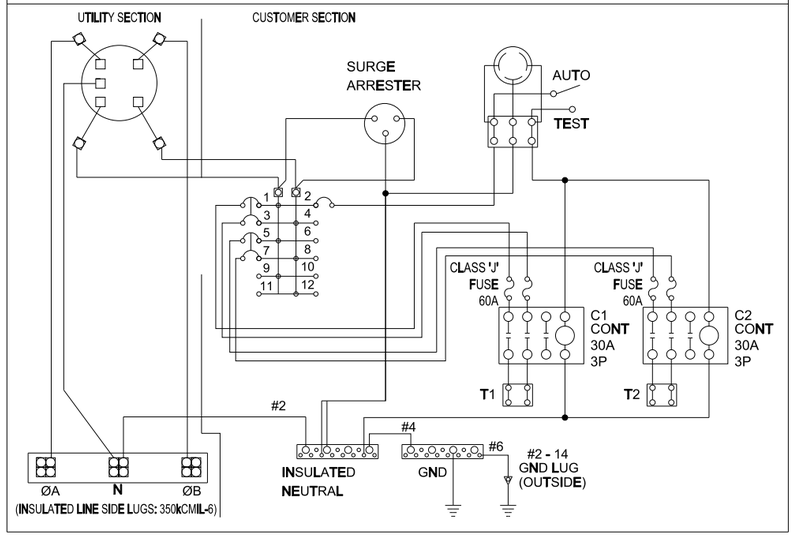
*** NEUTRAL & EQUIPMENT GROUND-SINGLE CONDUCTOR

○	#14-1/0	CU/AL	#3-1/0	50 IN.LB.
			#6-4	45 IN.LB.
			#8	40 IN.LB.
			#14-10	25 IN.LB.
◦	#14-6	CU/AL	#6	35 IN.LB.
			#8	25 IN.LB.
			#14-10	20 IN.LB.

*** EQUIPMENT GROUND-MULTIPLE CONDUCTOR

○	(2 OR 3)	#10,12,14	CU/AL	45 IN.LB.
◦	(2)	#12,14	CU/AL	20 IN.LB.

*** FIELD INSTALLED DEVICES-TORQUE TO VALUES INDICATED ON OR WITH DEVICE



KCMO
LIGHTING SHEET
8 OF 13

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
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DATE PREPARED 12/11/2017
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 077
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DATE | DESCRIPTION

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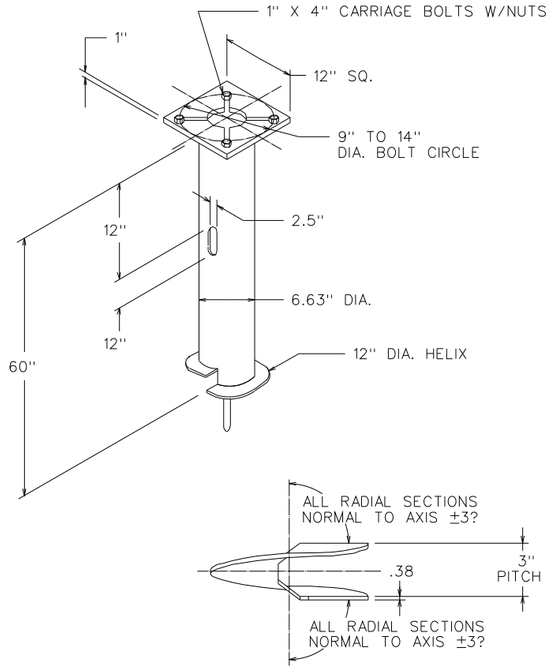
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



HELIX MUST BE FORMED BY MATCHING METAL DIE
(SIDE VIEW OF TRUE HELICAL FORM)

-NOTES-

1. FINISH: HOT DIP GALVANIZE PER ASTM-A153 (LATEST REVISION).
2. BASEPLATE TO BE PERPENDICULAR TO SHAFT AXIS (±1?) AND HOLE CENTERLINE CONCENTRIC (±.188) TO SHAFT AXIS.
3. STENCIL MIN. 1/2 IN. LETTERS MANUFACTURER'S NUMBER AFTER GALVANIZING.
4. PILOT POINT AND SHAFT AXES TO BE CONCENTRIC (±.125 FIM) AND IN LINE (±2?).
5. FLAME CUT SLOT PERPENDICULAR TO THE BASEPLATE.
6. PREHEAT, TUMBLEBLAST, HANDGRIND, AND CLEAN BASEPLATE, HELIX, AND PILOT POINT ON ALL WELDED AREAS.
7. FLAMECUT IRREGULARITIES PERMISSIBLE: (1) VALLEYS NOT TO EXCEED 3/32 IN. BELOW NOMINAL SURFACE LEVEL, (2) PEAKS OR POSITIVE IRREGULARITIES NOT TO EXCEED 1/32 IN. ABOVE NOMINAL SURFACE LEVEL OR INTERSECTIONS OF NOMINAL SURFACES.
8. MANUFACTURER TO HAVE IN EFFECT INDUSTRY RECOGNIZED WRITTEN QUALITY CONTROL FOR ALL MATERIALS AND MANUFACTURING PROCESSES.
9. ALL MATERIAL IS TO BE NEW, UNUSED AND MILL TRACEABLE MEETING THE FOLLOWING SPECIFICATIONS:

BASEPLATE: ASTM A36-(LATEST REVISION) HOT ROLLED STEEL PLATE, (CONFORM TO AASHTO TECH. BUL. •270)

SHAFT: STEEL PIPE PILES, SEAMLESS OR STRAIGHT WELDED, GRADE-2 PER ASTM A252. ALT. MATERIAL: STEEL PIPE TYPE E OR S, GRADE-B PER ASTM A53.

HELIX: ASTM A635 (LATEST REVISION) HOT ROLLED STEEL.

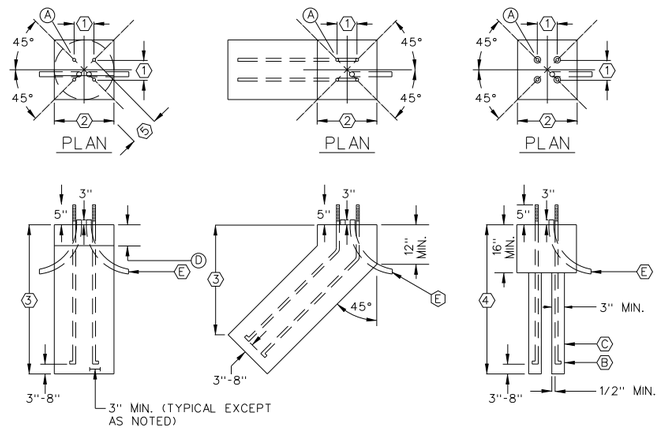
PILOT POINT: ASTM A575 (LATEST REVISION) STEEL BAR.

BOLTS: CARR BOLT PER ANSI B-18.2.1,SAE J429 GRADE-5.

10. BASEPLATE IS PERMANENTLY STAMPED WITH MANUFACTURER'S IDENTIFICATION "ABC" IN 1/2" LETTERS AND DATE CODE IN 1/4" LETTERS.

STREETLIGHT FOUNDATION
CAT. NO. C11232JG4VL

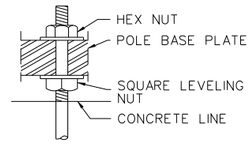
25' & 30' Pole



DIMENSIONS

DIMENSIONS BY MOUNTING HEIGHTS

NO.	ITEM	25'	30'	35'	40'
①	BOLT SPACING	7-3/8"	7-3/4"	8-1/8"	8-1/2"
②	MIN. DIAMETER OF FOUNDATION	21"	22"	23"	24"
③	DEPTH OF FOUNDATION	5'-0"	6'-0"	7'-0"	8'-0"
④	DEPTH OF FOUNDATION TYPE C	3'-6"	3'-6"	4'-0"	4'-0"
⑤	BOLT CIRCLE DIAMETER	10-1/2"	11"	11-1/2"	12"



STREET LIGHT FOUNDATIONS

Ⓐ 1" DIAMETER ANCHOR BOLTS EXTENDED WITH 6" REBAR AS REQUIRED.
Ⓑ CUT ANCHOR BOLTS AS REQUIRED & DEFORM BOTTOM ENDS TO LOCK POSITIVELY.
Ⓒ WITH MODIFIED ANCHOR RODS IN PLACE, FILL DRILLED HOLES WITH EPOXY RESIN SIKADUR HI-MOD CARTER WATERS 202 TYPE II OR EQUIVALENT.
Ⓓ 6" DEEP SQUARE TOP (ROUND TOP ACCEPTABLE IN EARTH SURFACE). THIS 6" CAP TO BE POURED AFTER POLE IS ERECTED AND PLUMBED. EXPANSION JOINT TO BE USED WHERE PAVING ADJOINS FOUNDATION.
Ⓔ PLUG ALL CONDUIT OPENINGS WITH DUXSEAL OR EQUIVALENT BEFORE PLACING CONCRETE & AFTER CABLE INSTALLATION. SEE PLANS FOR NUMBER AND DIRECTION OF BENDS.

FOUNDATION NOTES

1) TOP 8" OF ANCHOR BOLT TO BE HOT-DIP GALVANIZED
2) BOTTOM ENDS OF ANCHOR BOLTS MUST HAVE 3" MINIMUM CONCRETE COVER.
3) USE BOLT POSITIONING JIF OF SUFFICIENT WEIGHT & STRENGTH TO MAINTAIN ACCURATE ANCHOR BOLT LOCATION DURING CONCRETE PLACEMENT.
4) CITY-AUTHORIZED INSPECTOR MUST INSPECT EACH EXCAVATION, WITH ALL FORMS, ANCHOR BOLTS, REINFORCING STEEL, CONDUIT, & CONDUIT PLUGS IN PLACE IMMEDIATELY PRIOR TO PLACING CONCRETE.
5) CONCRETE FOR FOUNDATIONS OUTSIDE THE C.B.D. SHALL BE MCIB MIX NO. A558-1-2 OR MCIB MIX NO. A618-1-4. CONCRETE FOR FOUNDATIONS IN THE C.B.D. SHALL BE PER OFFICAL DOCUMENT NO. 85199 DATED 8/20/69 & ANY REVISION OR REPLACEMENT THERETO.
6) CONCRETE TO BE VIBRATED DURING PLACEMENT.
7) FOUNDATIONS IN EARTH TO BE 1" ABOVE ANY ADJACENT EARTH & HAVE EDGES BEVELED.
8) TIE ANCHOR BOLTS NEAR THE BOTTOM. USE TWO •3 REBAR HOOPS SPACED 12", TWO •3 REBAR "U" 'S SPACED 12", OR TWO TURNS OF •3 REBAR SPIRAL WITH 12" PITCH.

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
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DATE PREPARED 12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	078

COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

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

pelco PELCO PRODUCTS, INC.
www.pelcoinc.com
EDMOND, OK 73013
405-340-3434
FAX: 405-340-3435

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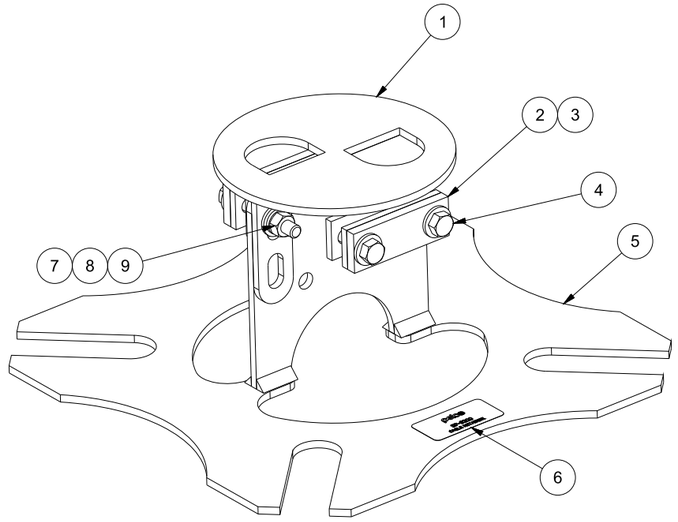
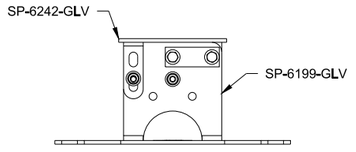
ASSEMBLY SHEET

REF:

TITLE: Cable Retainer Assy, w/ Conductor Guide, for 6" Foundation Anchor, Galv

PART NO.: SP-6200-GLV



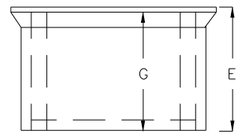


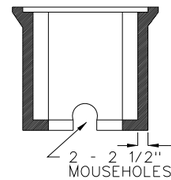
SP-6242-GLV
STRADDLES
SP-6199-GLV

NOTE: INCLUDE Z-2057 INSTALLATION INSTRUCTIONS

ITEM	PART NUMBER	DESCRIPTION	QTY
1	SP-6242-GLV	Weldment, Conductor Guide, for 6" Cable Retainer Assy, Steel, Galv	1
2	SP-6199-3-GLV	Bar, Cable Retainer Assembly, Steel	2
3	SP-6199-4	Pad, Cable Retainer, 3/16" Thick, 90 Duro, Red Urethane	4
4	FS-2016-SS	Bolt, Hex Hd Tap, 5/16"-18 x 2-1/4" , Type 304 Stainless	4
5	SP-6199-GLV	Weldment, Cable Retainer Assembly, for 6" Foundation Anchor, Steel, Galv	1
6	O-3140	Label, 1" x 2", Cable Retainer	1
7	FS-4101-SS	Washer, Flat, 5/16" x 3/4" OD, Type 304 Stainless	8
8	FS-4201-SS	Lock Washer, Split, 5/16", Type 304 Stainless	4
9	FS-1001-SS	Nut, Hex 5/16"-18, Type 304 Stainless	4

DRAWN: Kennith.George DATE: 2/17/2009 | CHK'D: R WOODS DATE: 2/17/2009 | REV: J-06/22/10 GMB | REV CHK'D: KAK DATE: 6/23/2010 | SHEET 1 OF 1



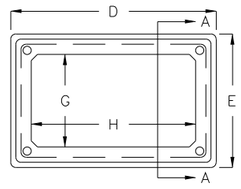


GENERAL NOTE: JUNCTION BOX SHALL MEET ANSI/SCTE77-2002, TIER 8

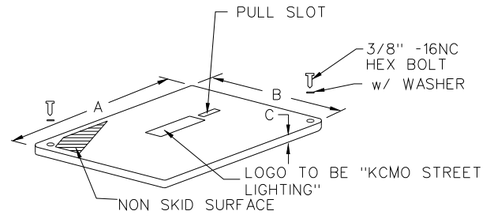
MATERIAL TO BE USED: PRECAST POLYMER CONCRETE

2 - 2 1/2" X 2 1/2" MOUSEHOLES TYPE 11 ONLY

SECTION A-A



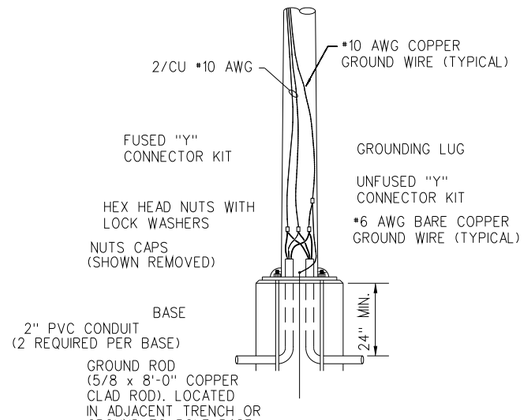
BOX



COVER

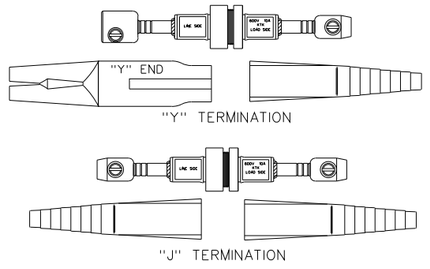
TYPE	DIMENSIONS (IN.)									
	A	B	C	D	E	F	G	H	J	K
II	18 1/2	11 1/2	3/4	20 1/2	13 1/2	12	10 1/4	17 1/4	3/8	11 1/4

PULL BOX



CAUTION!
CONTRACTOR SHALL REFER TO UTILITY NOTE (ON PLAN) WHEN INSTALLING LIGHT PEDESTAL IN VICINITY OF UTILITIES.

POLE TO BASE CONNECTIONS
NOT TO SCALE



BREAK AWAY FUSE KITS

KCMO
LIGHTING SHEET
10 OF 13

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/11/2017
ROUTE: 70 | STATE: MO
DISTRICT: KC | SHEET NO.: 079
COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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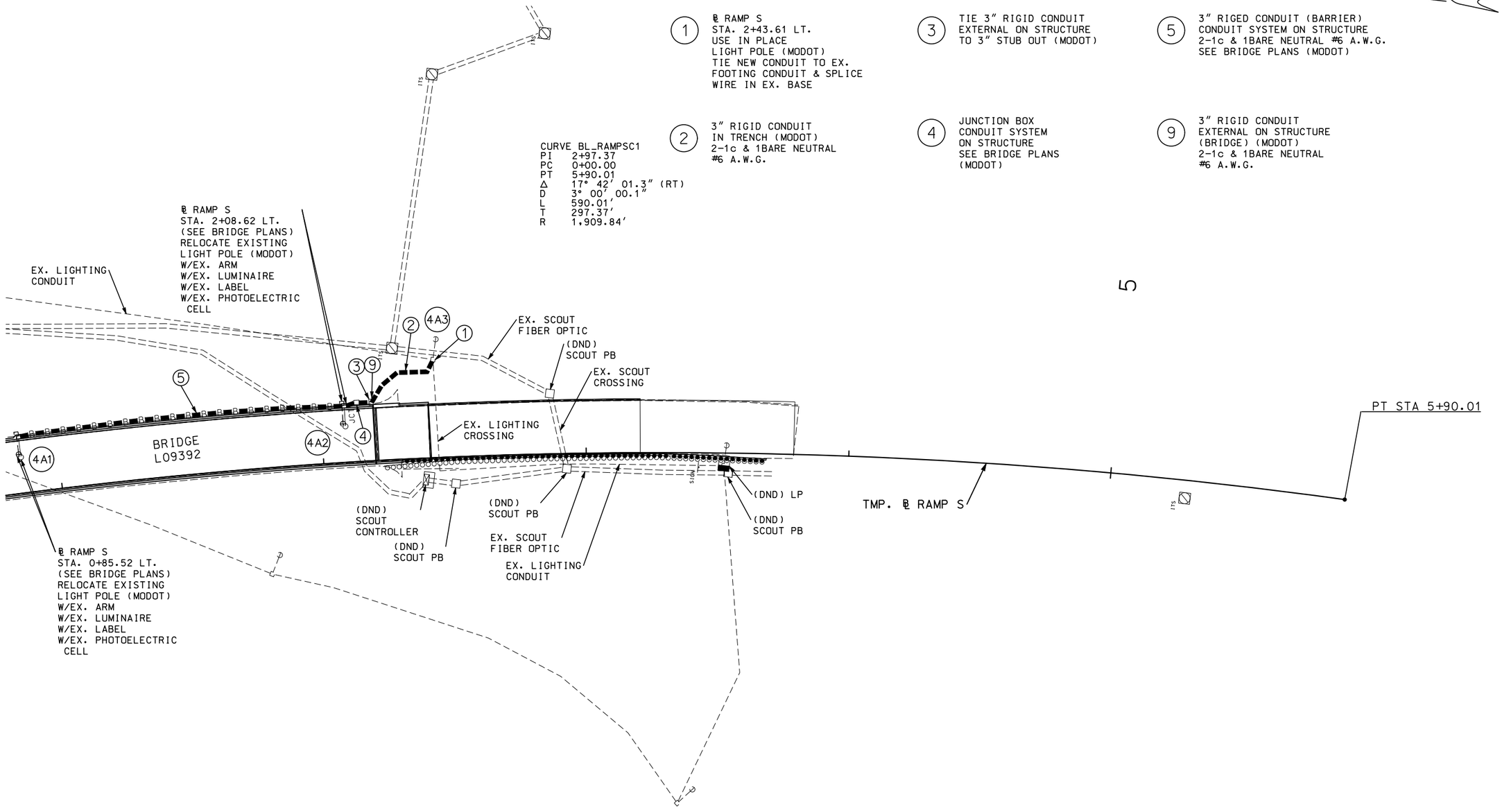

5

STATE OF MISSOURI
JUAN YIN
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DATE PREPARED	
12/11/2017	
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	080
COUNTY	
JACKSON	
JOB NO.	
J4I3198	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

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

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

MODOT
RAMP S
LIGHTING SHEET
11 OF 13

EFFECTIVE: 10-01-2015

LIGHTING SHEET
12 OF 13

CONDUIT (WITH #14 TRACER WIRE)

FROM	TO	CENTER TO CENTER DISTANCE	LOOP DET. 1"	TRENCH KCMO 2"	TRENCH 3"	TRENCH 4"	PUSHED KCMO 2"	PUSHED 3"	PUSHED 4"	MEDIAN 2"	MEDIAN 3"	MEDIAN 4"	ON STRUCTURE 2"	ON STRUCTURE 3"	REMARKS
P.S.	LC#1	32		40											
LC#1	2	21		24											
2	LP 1B1	6		9											
LP 1B1	BR.	26			30										CONNECT TO 3" ON STRUCTURE
2	1	56					54								
1	BR.	31			30										CONNECT TO 3" ON STRUCTURE
P.S.	LC#2	11		19											
LC#2	4	14		17											
4	BR.	55			54										CONNECT TO 3" ON STRUCTURE
4	3	60					58								
3	LP 2A1	9		12											
3	BR.	25			24										CONNECT TO 3" ON STRUCTURE
P.S.	LC#3	12		20											
LC#3	6	6		9											
6	LP 3A2	5		8											
6	5	97					95								
5	BR.	14			13										CONNECT TO 3" ON STRUCTURE
BR.	LP 3B2	32			36										
LP 4A3	BR.	32			36										
PP	7	6		9									10		CONNECT TO 2" ON STRUCTURE
7	BR.	4			3										CONNECT TO 3" ON STRUCTURE
SUBTOTALS				167	226		207						10		
TOTALS				170	230		210						10		

CABLE

FROM	TO	CENTER TO CENTER DISTANCE	POWER		LUMINAIRE CONTROL KCMO 3c #6	CONTROL 1c #6	CONTROL BARE 1c #6	POLE & BRACKET KCMO 3c #10	POLE & BRACKET 1c #10	REMARKS
LC#1	LP 1B1	27			46			36		
LP 1B1	LP 1B2	222			260			36		
LP 1B2	LP 1B3	193			198			36		
LC#1	LP 1A1	204			232			36		
LP 1A1	LP 1A2	200			205			36		
LC#2	LP 2B1	123			175			36		
LP 2B1	LP 2B2	154			159			36		
LC#2	LP 2A1	81			106			36		
LP 2A1	LP 2A2	162			206			36		
LC#3	LP 3A1	11			30			36		
LP 3A1	LP 3A2	271			324			36		
LC#3	LP 3B1	211			284			36		
LP 3B1	LP 3B2	244			282			36		
LP 4A1	LP 4A2	125				270	135		80	
LP 4A2	LP 4A3	44				164	82		80	
PP	LP 5A1	92			126			36		
LP 5A1	LP 5A2	121			126			36		
SUBTOTALS					2759	434	217	540	160	
TOTALS					2760	430	220	540	160	

INTERSECTION _____ D-37B

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 1/9/2018

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	081

COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

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

LIGHT POLES

STATION	OFFSET	LOCATION	SIDE	RELOCATE LIGHT POLE EACH	KCMO RELOCATE LIGHT POLE EACH	KCMO FUSE KIT EACH	KCMO CABLE RETAINER ASSEMBLY EACH	KCMO POLE FOUNDATION EACH	REMARKS
4+24.75		TMP. ℄ 8TH	LT.		1	1	1		1A1
5+24.75		TMP. ℄ 8TH	RT.		1	1	1		1B2
6+24.75		TMP. ℄ 8TH	LT.		1	1	1		1A2
7+17.75		TMP. ℄ 8TH	RT.		1	1	1		1B3
3+54.58		TMP. ℄ 9TH	RT.		1	1	1		2B1
4+29.58		TMP. ℄ 9TH	LT.		1	1	1		2A2
5+11.58		TMP. ℄ 9TH	RT.		1	1	1		2B2
1+55.10	25.00′	TMP. ℄ 10TH	RT.		1	1	1	1	3A1
2+84.33		TMP. ℄ 10TH	RT.		1	1	1		3B1
3+90.00		TMP. ℄ 10TH	LT.		1	1	1		3A2
0+85.52		TMP. ℄ RAMP S	LT.	1					4A1
2+08.62		TMP. ℄ RAMP S	LT.	1					4A2
9+28.90		TMP. ℄ CHESTNUT	RT.		1	1	1		5A1
10+49.83		TMP. ℄ CHESTNUT	RT.		1	1	1		5A2
			PAY-TOTALS	2	12	12	12	1	

JUNCTION BOXES

STATION	OFFSET	LOCATION	SIDE	KCMO JUNCTION BOX TYPE II EACH	REMARKS
3+08.21	27.34′	TMP. ℄ 8TH	LT.	1	1
3+04.05	28.48′	TMP. ℄ 8TH	RT.	1	2
2+85.29	26.72′	TMP. ℄ 9TH	LT	1	3
2+58.58	25.93′	TMP. ℄ 9TH	RT	1	4
2+33.17	37.69′	TMP. ℄ 10TH	LT	1	5
1+60.09	25.23′	TMP. ℄ 10TH	RT	1	6
8+50.00	33.96′	TMP. ℄ CHESTNUT	RT	1	7
			PAY-TOTALS	7	

LIGHTING CONTROLLERS

STATION	OFFSET	LOCATION	SIDE	KCMO LIGHTING CONTROLLER 120/240V / 2 CIRCUIT EACH	REMARKS
2+83.52	27.81′	TMP. ℄ 8TH	RT.	1	1
2+45.24	27.05′	TMP. ℄ 9TH	RT.	1	2
1+65.89	24.03′	TMP. ℄ 10TH	RT.	1	3
			PAY-TOTALS	3	

CONDUIT, 3 IN. RIGID, EXTERNAL ON STRUCTURE

LOCATION	STRUCTURES	REMARKS
TEMP. ℄ 8TH	BRIDGE L09371	NW CORNER CONNECT 3 IN. CONDUIT STUB OUT IN BRIDGE SAFETY BARRIER TO 3 IN. CONDUIT IN TRENCH
TEMP. ℄ 8TH	BRIDGE L09371	SW CORNER CONNECT 3 IN. CONDUIT STUB OUT IN BRIDGE SAFETY BARRIER TO 3 IN. CONDUIT IN TRENCH
TEMP. ℄ 9TH	BRIDGE L09381	NW CORNER CONNECT 3 IN. CONDUIT STUB OUT IN BRIDGE SAFETY BARRIER TO 3 IN. CONDUIT IN TRENCH
TEMP. ℄ 9TH	BRIDGE L09381	SW CORNER CONNECT 3 IN. CONDUIT STUB OUT IN BRIDGE SAFETY BARRIER TO 3 IN. CONDUIT IN TRENCH
TEMP. ℄ 10TH	BRIDGE L09391	NW CORNER CONNECT 3 IN. CONDUIT STUB OUT IN BRIDGE SAFETY BARRIER TO 3 IN. CONDUIT IN TRENCH
TEMP. ℄ 10TH	BRIDGE L09391	SE CORNER CONNECT 3 IN. CONDUIT STUB OUT IN BRIDGE SAFETY BARRIER TO 3 IN. CONDUIT IN TRENCH
TEMP. ℄ RAMP S	BRIDGE L09392	SE CORNER CONNECT 3 IN. CONDUIT STUB OUT IN BRIDGE SAFETY BARRIER TO 3 IN. CONDUIT IN TRENCH
TEMP. ℄ CHESTNUT	BRIDGE A0291 & ADJACENT RETAINING WALL	NW CORNER CONNECT 3 IN. CONDUIT STUB OUT IN BRIDGE SAFETY BARRIER TO 3 IN. CONDUIT IN TRENCH
1 LUMP SUM		

LIGHTING SHEET
13 OF 13

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	082

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

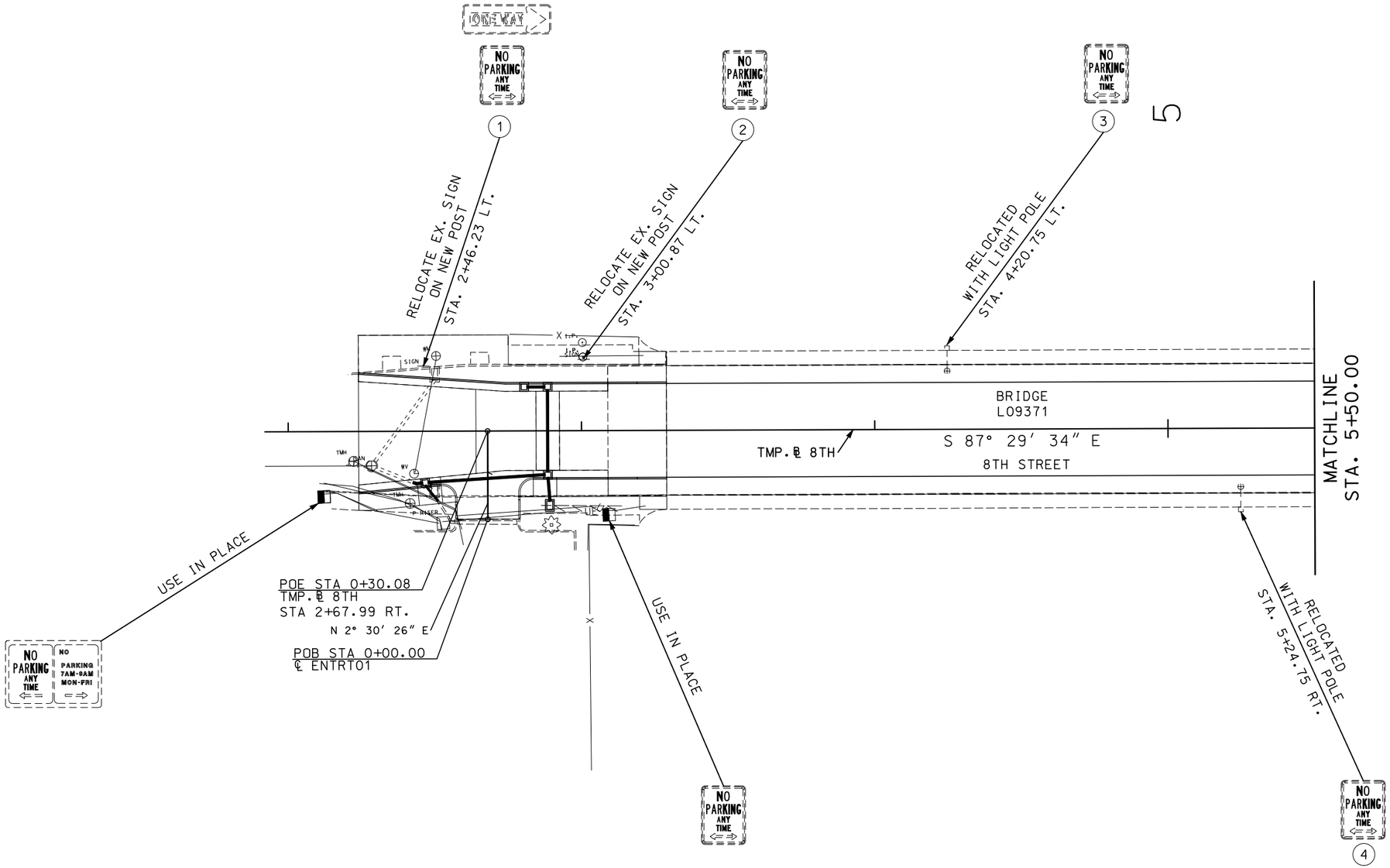
BRIDGE NO.

DESCRIPTION	DATE

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



8TH STREET
SIGNING SHEET
1 OF 7

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	083

COUNTY
JACKSON

JOB NO.
J4I3198

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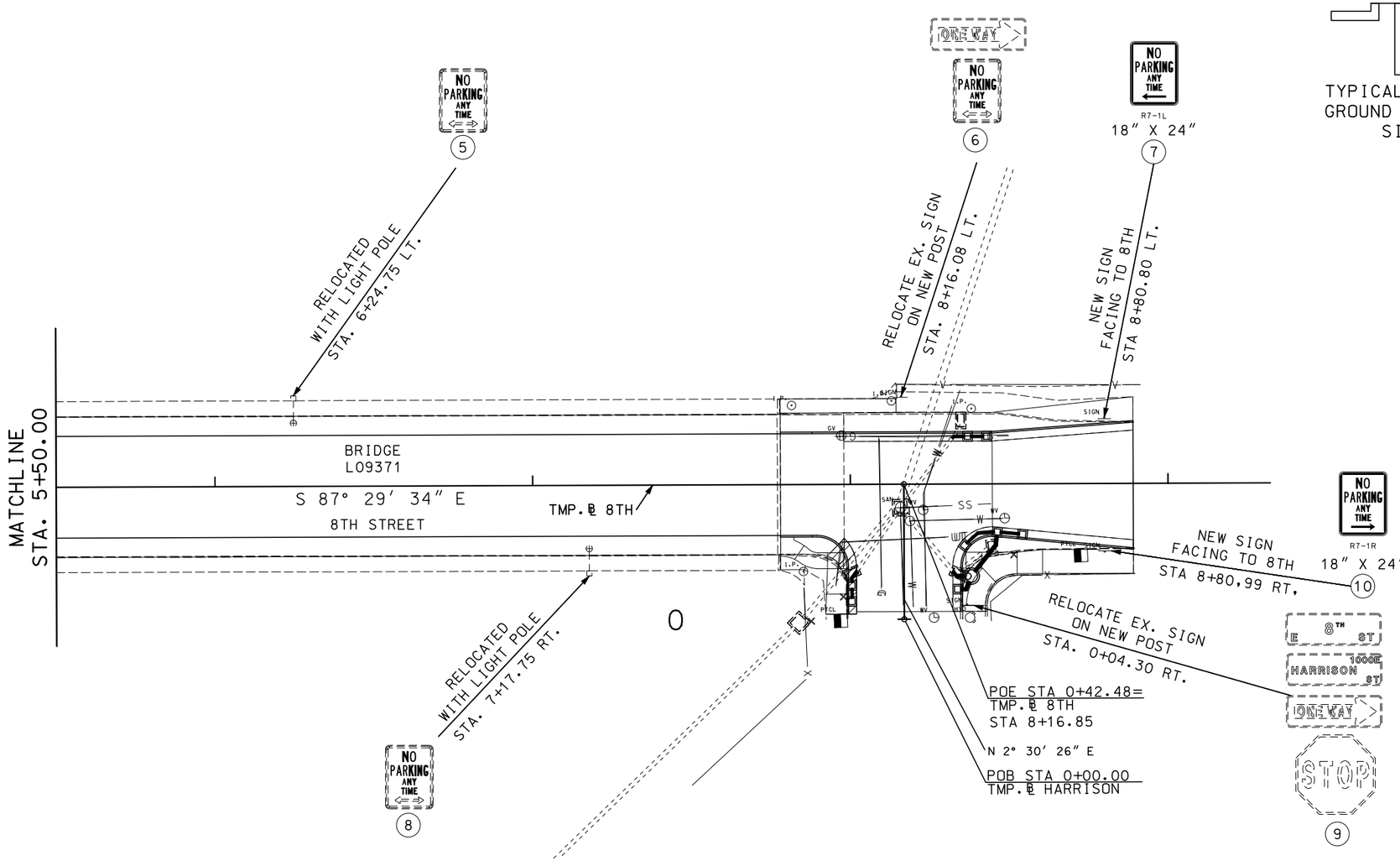
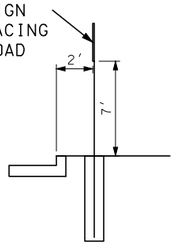
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



SIGN FACING ROAD



TYPICAL DETAIL
GROUND MOUNTED
SIGN

SCALE

0 20 40 60

8TH STREET
SIGNING SHEET
2 OF 7

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

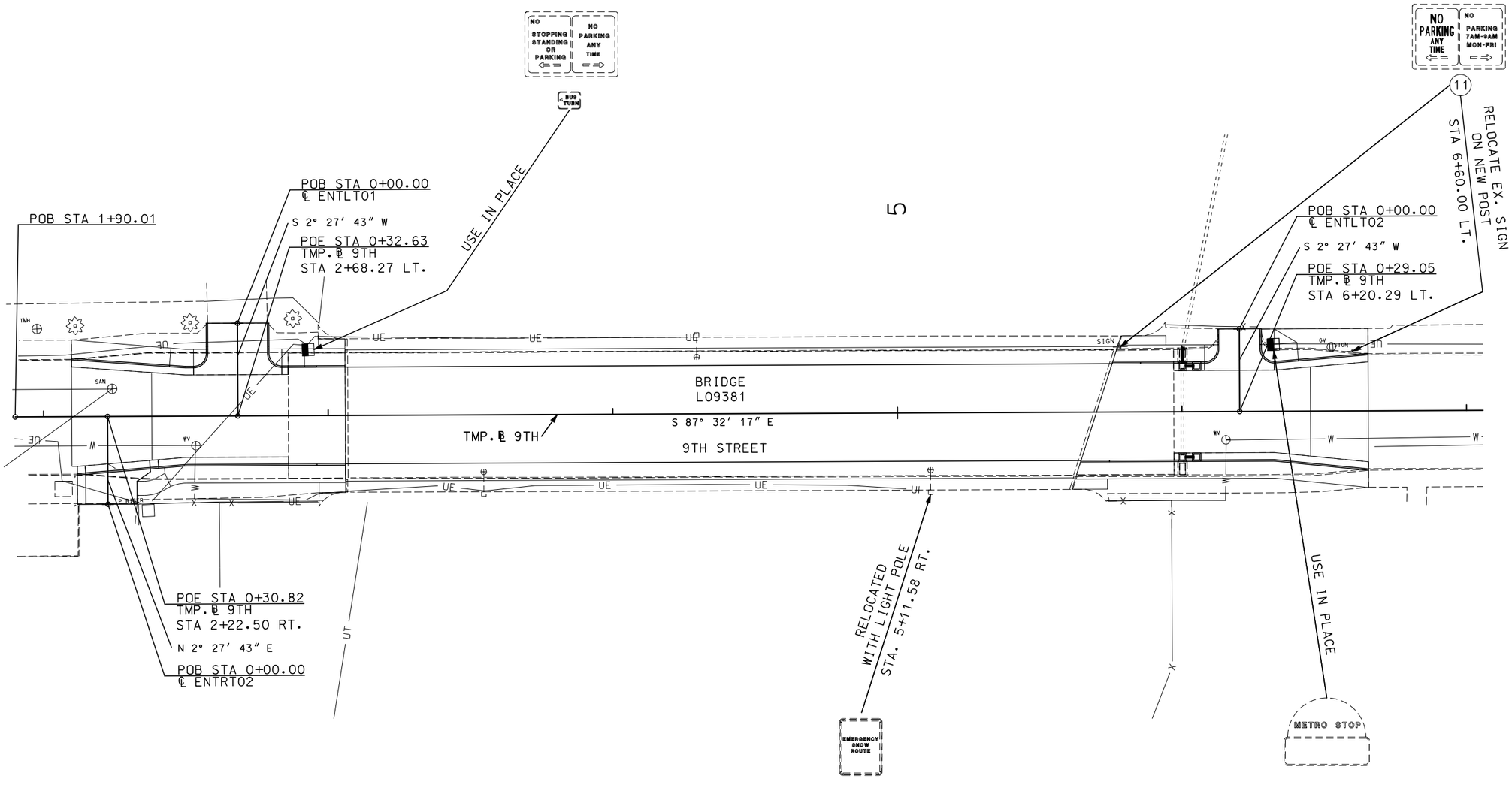
DATE PREPARED	
12/11/2017	
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	084
COUNTY	
JACKSON	
JOB NO.	
J4I3198	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



5

9TH STREET
SIGNING SHEET
3 OF 7

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	085

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

NO PARKING ANY TIME →
R7-1R
18" X 24"
(12)
NEW SIGN FACING TO 10TH STA 7+75.00 LT.

POB STA 0+00.00
℄ ENTLT04
S 2° 31' 23" W
POE STA 0+30.41
TMP. ℄ 10TH
STA 1+92.74 LT.

POB STA 0+00.00
℄ ENTLT03
S 2° 31' 23" W
POE STA 0+32.63
TMP. ℄ 10TH
STA 2+24.82 LT.
PC STA 0+00.00
TMP. ℄ 10TH
STA 2+42.00

NO PARKING ANY TIME | NO STOPPING STANDING OR PARKING ⇐ ⇒
(13)
RELOCATE EX. SIGN ON NEW POST STA. 5+10.38 LT.

POE STA 0+08.84
N 25° 02' 33" E
POB STA 0+00.00
℄ SIDEWALK01

BRIDGE L09391
TMP. ℄ 10TH
S 87° 28' 37" E
10TH STREET

POE STA 0+29.33
TMP. ℄ 10TH
STA 2+02.96 RT.
N 2° 31' 23" E
POB STA 0+00.00
℄ ENTRT03
POE STA 0+57.81
TMP. ℄ 10TH
STA 2+24.70 RT.
N 2° 31' 23" E
POB STA 0+00.00
℄ ENTRT04
TMP. ℄ RAMP S

℄ BRIDGE L09392
RELOCATED WITH LIGHT POLE STA. 2+81.32 RT.

NO PARKING ANY TIME ⇐ ⇒

USE IN PLACE

NO PARKING ANY TIME ⇐ ⇒

SCALE
0 20 40 60

10TH STREET
SIGNING SHEET
4 OF 7

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

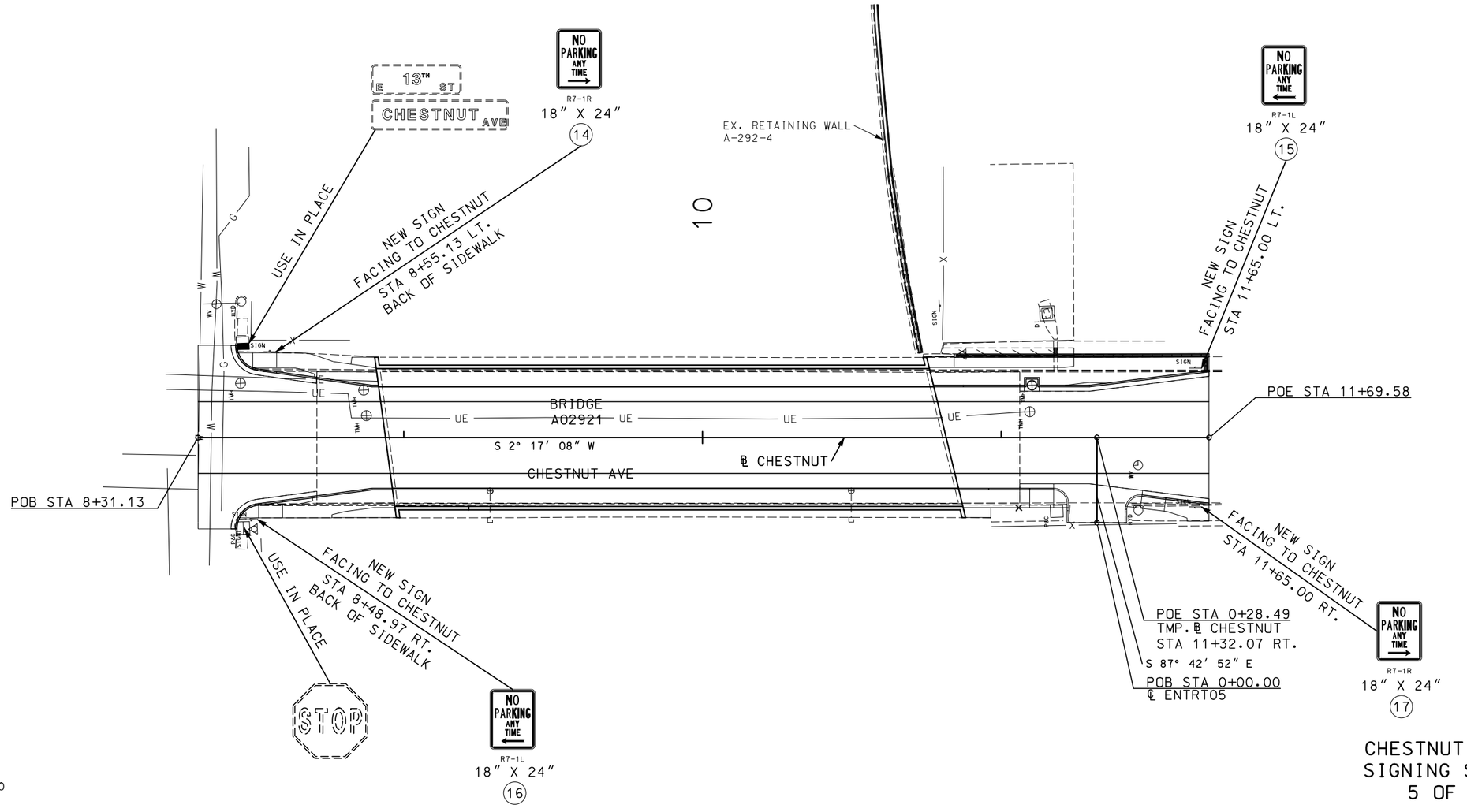
ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	086

COUNTY
JACKSON
JOB NO.
J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

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

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



CHESTNUT AVE.
SIGNING SHEET
5 OF 7

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	087

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

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

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

EFFECTIVE 12-01-2017

SIGNS (902 SIGNAL SIGNS TABULATED ON D-37A SHEET)						PIPE POST ✳					STRUCTURAL STEEL: POSTS ✳						BACKING BARS 2" X 3/8" BARS @ 2.55 LBS PER LIN FT				TOTAL	U CHANNEL POST	PERFORATED SQUARE STEEL TUBE POST: 2 IN							2.5 IN						BREAK-AWAY ASSEMBLY	FOOTINGS		REMARKS AND OTHER REQUIRED ITEMS.
SIGN NO.	SIGN SIZE	STATION	HORZ CLEAR IF NOT STD	LOCATION	SIGN DTL. SHT. NO.	PIPE SIZE	POST NO.1	POST NO.2	LBS PER FT	TOTAL ITEM NO. 9031220	POST DES NO.	POST NO.1	POST NO.2	POST NO.3	LBS PER FT	TOTAL	NO. EACH	LGTH IN.	TOTAL LF	TOTAL LBS	ITEM NO. 9031210	ITEM NO. 9031250	POST NO.1	POST NO.2	TOTAL ITEM NO. 9031270A	ANCHOR 7 GA. ITEM NO. 9031273	OMNI 7 GA. ITEM NO. 9031279	ANCHOR 12 GA. ITEM NO. 9031271	OMNI 12 GA. ITEM NO. 9031278	POST NO.1	POST NO.2	TOTAL ITEM NO. 9031280	2.25" INSERT ITEM NO. 9031272	ANCHOR 7 GA. ITEM NO. 9031281	OMNI 7 GA. ITEM NO. 9031282	ITEM NO. 9031241	EMBD ITEM NO. 9031010	BOLT DOWN ITEM NO. 9031020	
						IN.	LF	LF		LBS		LF	LF	LF		LBS		IN.	LF	LBS	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EACH	CU YDS	CU YDS	
7	18"X24"	8+80.00		8TH LT.		2½"	13.3'		5.79	77																											0.13		
10	18"X24"	8+80.00		8TH RT.		2½"	13.3'		5.79	77																											0.13		
12	18"X24"	7+75.00		10TH LT.		2½"	13.3'		5.79	77																											0.13		
14	18"X24"	8+55.13		CHESTNUT LT.		2½"	13.3'		5.79	77																											0.13		
15	18"X24"	11+65.00		CHESTNUT LT.		2½"	13.3'		5.79	77																											0.13		
16	18"X24"	8+48.97		CHESTNUT RT.		2½"	13.3'		5.79	77																											0.13		
17	18"X24"	11+65.00		CHESTNUT RT.		2½"	13.3'		5.79	77																											0.13		
SUBTOTAL							539																													0.91		
TOTAL							540																													0.9		

✳ BREAKAWAY ASSEMBLY IS INCIDENTAL FOR PIPE AND STRUCTURAL STEEL POSTS

ROUND PIPE POST AND FOOTING DATA TABLE

NOM. SIZE (IN.)	WEIGHT LBS/FT	WEIGHT LBS/IN	STUB LENGTH	FOOTING DIA.	FOOTING DEPTH	CONCRETE C.Y.
2½	5.79	0.48	4'- 3½"	12"	4'-6"	0.13
3	7.58	0.63	4'- 3½"	12"	4'-6"	0.13
4	10.79	0.90	5'- 3½"	18"	5'-6"	0.36

POST AND FOOTING DATA TABLE

POST DES. NO.	NOM. SIZE	POST WEIGHT LBS/FT	POST WEIGHT LBS/IN	POST STUB LENGTH	FOOTING DIA.	FOOTING LEVEL GROUND DEPTH	FOOTING LEVEL GROUND C.Y.	FOOTING 6:1 GRADE DEPTH	FOOTING 6:1 GRADE C.Y.	FOOTING 4:1 GRADE DEPTH	FOOTING 4:1 GRADE C.Y.	FOOTING 3:1 OR 2:1 GRADE DEPTH	FOOTING 3:1 OR 2:1 GRADE C.Y.
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

SIGNING SHEET 6 OF 7

D-29

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2017
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 088
COUNTY JACKSON
JOB NO. J4I3198
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)

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

EFFECTIVE 10-01-2016

STANDARD SIGN ASSEMBLIES

SIGN NUMBER	STATION	LOCATION	TYPE — SIGN DESCRIPTION, SIZES & NUMBER OF EACH	
			NO PARKING ANYTIME LEFT ARROW R7-1L 18"X24"	NO PARKING ANYTIME RIGHT ARROW R7-1R 18"X24"
7	8+80.00	8TH LT.	1	
10	8+80.00	8TH RT.		1
11	7+75.00	10TH LT.		1
14	8+55.13	CHESTNUT LT.		1
15	11+65.00	CHESTNUT LT.	1	
16	7+75.00	CHESTNUT RT.	1	
17	7+75.00	CHESTNUT RT.		1

SIGN SUMMARY

STANDARD SIGN OR SPECIAL SIGN NUMBER	SIGN DETAIL SHEET NO.	NO. EACH	SIZE, TYPE & SQUARE FEET — SIZE	FLAT SHEET SH ITEM NO. 9035004A	FLAT SHEET FLUORESCENT SHF * ITEM NO. 9035069A	STRUCTURAL ST ITEM NO. 9035011A	STRUCTURAL FLUORESCENT STF * ITEM NO. 9035071A
NO PARKING ANYTIME LEFT ARROW	STD	3	18"X24"	9			
NO PARKING ANYTIME RIGHT ARROW	STD	4	18"X24"	12			
			TOTAL	30			

* ORANGE, YELLOW & YELLOW/GREEN

SIGNING SHEET
7 OF 7

D-30

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	089

COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE

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

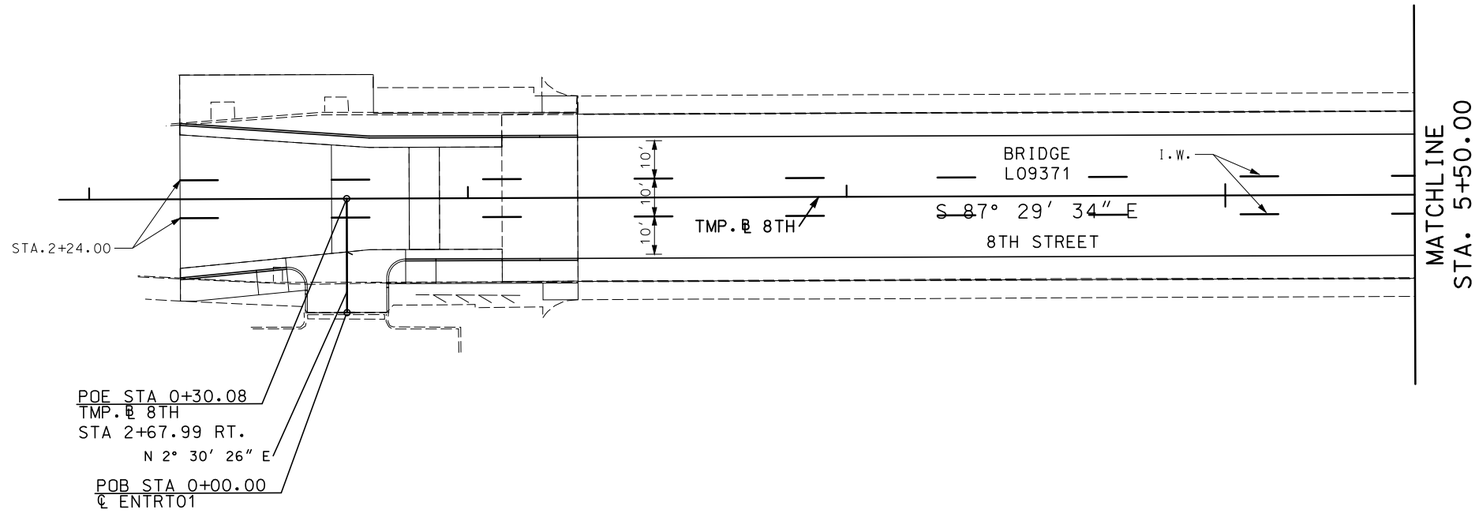
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

PAVEMENT MARKING LEGEND

I.W. – 4″ INTERMITTENT WHITE WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS
D.Y. – 4″ DOUBLE SOLID YELLOW WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS
S.Y.H – 6″ SOLID YELLOW HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS
S.W.H – 6″ SOLID WHITE HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS

5



SCALE
0 20 40 60

8TH STREET
PAVEMENT MARKING
1 OF 6

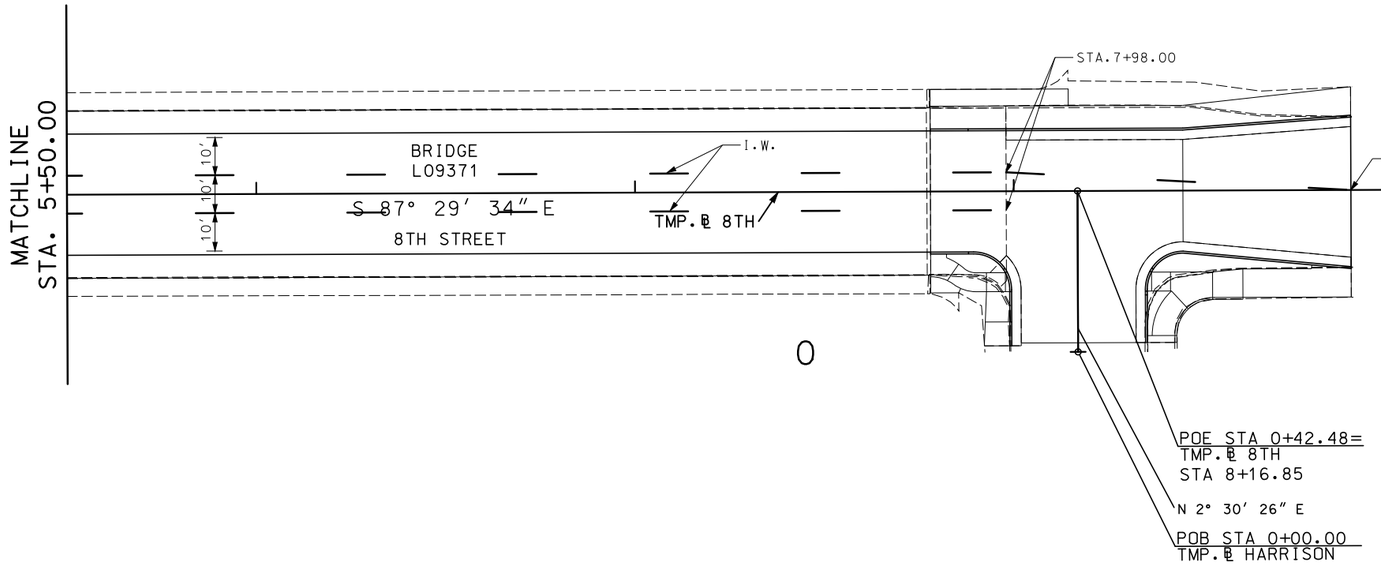
STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2017
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 090
COUNTY JACKSON
JOB NO. J4I3198
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)

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



SCALE

0 20 40 60

8TH STREET
PAVEMENT MARKING
2 OF 6

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

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DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	091

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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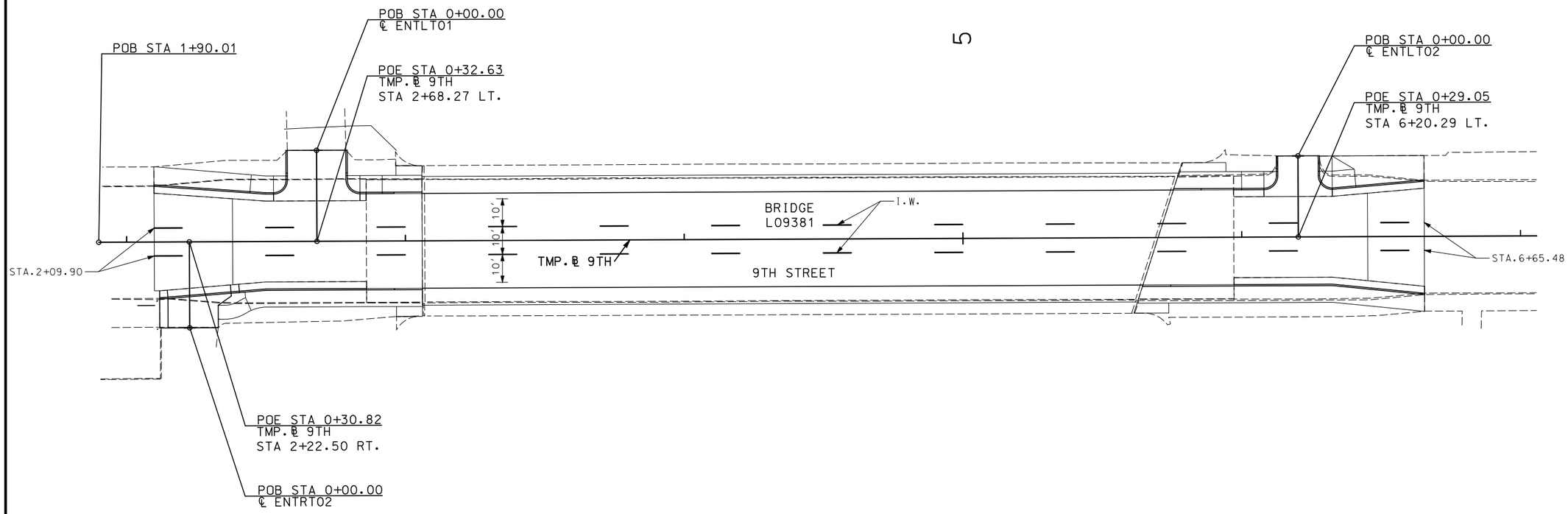
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



SCALE

0 20 40 60

9TH STREET
PAVEMENT MARKING
3 OF 6

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
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DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	092

COUNTY
JACKSON

JOB NO.
J4I3198

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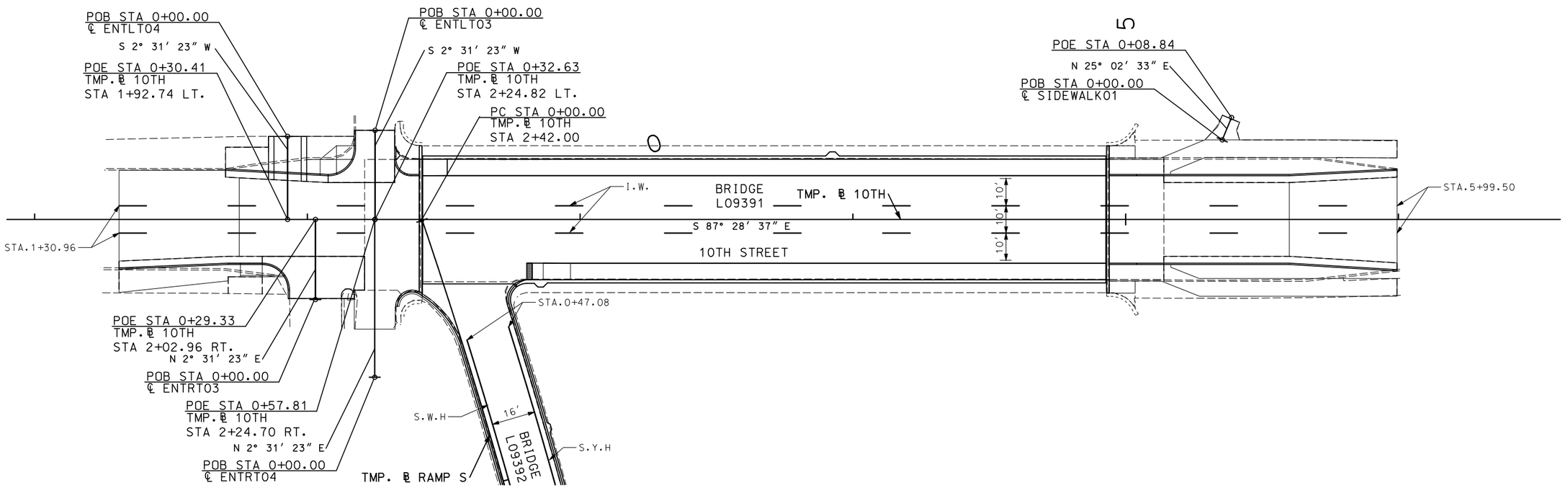
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



SCALE

0 20 40 60

10TH STREET
PAVEMENT MARKING
4 OF 6

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

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DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	093

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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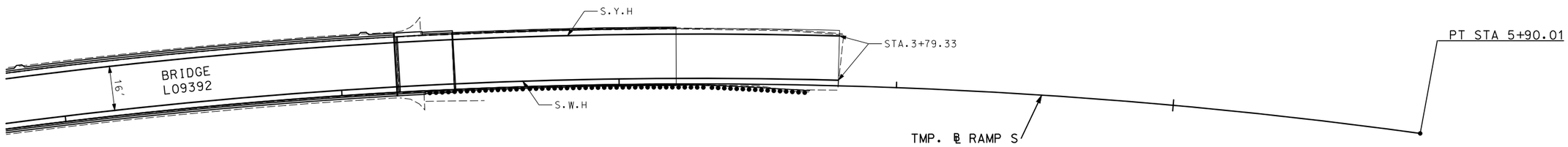
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CURVE BL_RAMPSC1
PI 2+97.37
PC 0+00.00
PT 5+90.01
Δ 17° 42' 01.3" (RT)
D 3° 00' 00.1"
L 590.01'
T 297.37'
R 1,909.84'

5



SCALE
0 20 40 60

RAMP S
PAVEMENT MARKING
5 OF 6

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
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DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	094

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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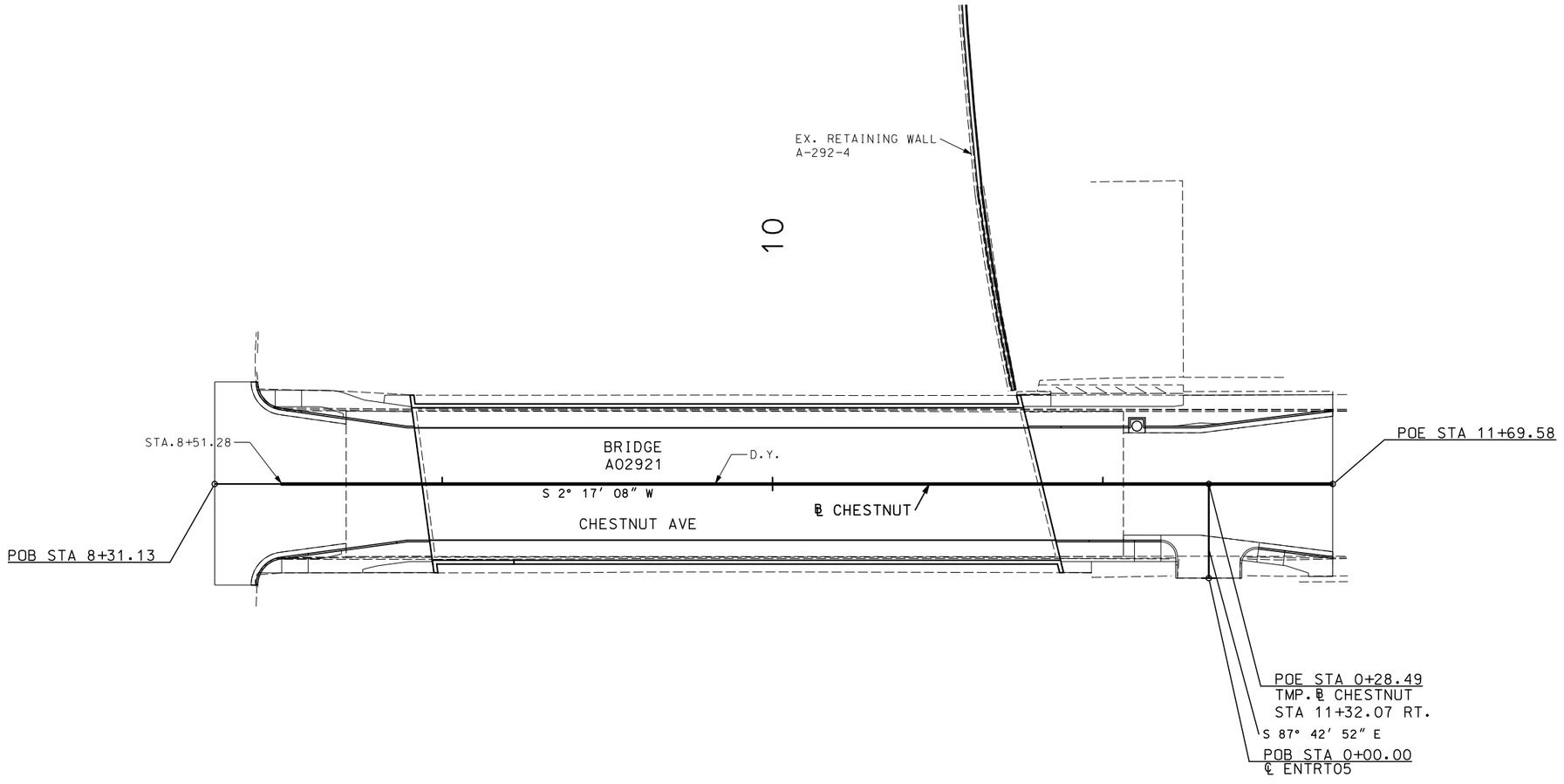
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



SCALE

0 20 40 60

CHESTNUT AVE.
PAVEMENT MARKING
6 OF 6

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	095

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

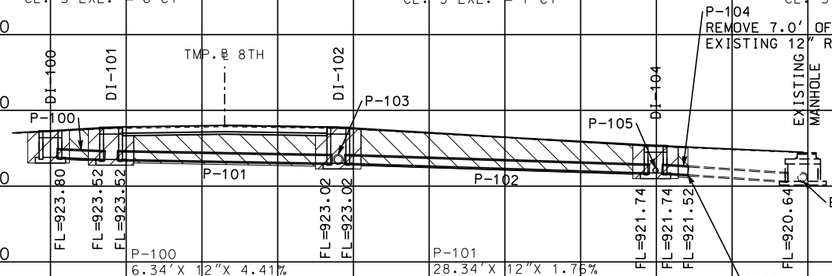
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

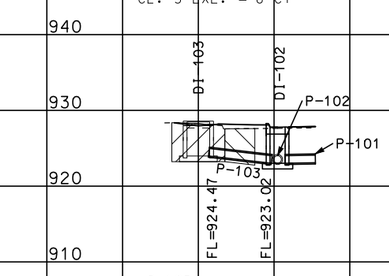
DI-100
TMP.@ 8TH STA. 2+80.49, OFF. 15.00' LT.
P.C. DI. 2'X 2'X 3.50' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 927.30
CL. 3 EXE. = 6 CY

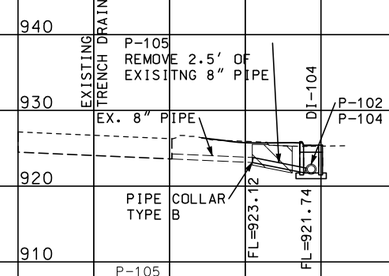
DI-102
TMP.@ 8TH STA. 2+88.49, OFF. 15.00' RT.
P.C. DI. 2'X 2'X 4.75' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 927.77
CL. 3 EXE. = 7 CY

DI-104
TMP.@ 8TH STA. 2+46.69, OFF. 17.59' RT.
P.C. DI. 2'X 2'X 3.64' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 925.38
CL. 3 EXE. = 6 CY

DI-103
TMP.@ 8TH STA. 2+89.12, OFF. 25.44' RT.
P.C. DI. 3'X 2'X 4.00' D (TYPE S-2)
GRATE AND FRAME (3'-1"X 2'-1")
DITCH F.L. = 927.98
CL. 3 EXE. = 8 CY







P-100
6.34'X 12"X 4.41%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 2 CY

P-101
28.34'X 12"X 1.76%
REINFORCED CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 16 CY

P-102
40.23'X 12"X 3.18%
REINFORCED CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 26 CY

P-104
3.45'X 12"X 6.38%
REINFORCED CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 1 CY

P-103
8.30'X 12"X 11.57%
REINFORCED CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 4 CY

P-105
6.94'X 8"X 19.88%
GROUP B PIPE
CL. 3 EXE. = 3 CY
(CUT FL AND GRADE
ARE ASSUMED ADJUST
TO FIELD CONDITIONS)

DI-101
TMP.@ 8TH STA. 2+88.49, OFF. 15.00' LT.
P.C. DI. 2'X 2'X 4.25' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 927.77
CL. 3 EXE. = 7 CY

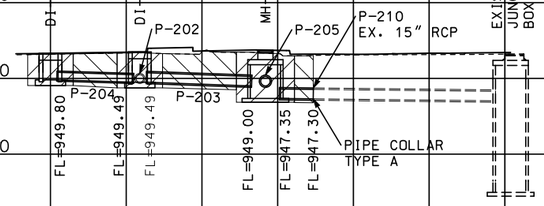
DI-204
TMP.@ 8TH STA. 8+35.93, OFF. 19.32' RT.
P.C. DI. 2'X 2'X 3.50' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 953.30
CL. 3 EXE. = 6 CY

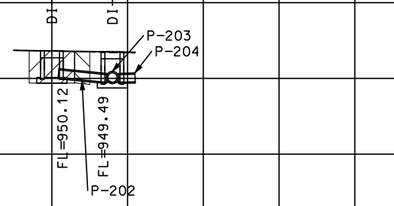
DI-203
TMP.@ 8TH STA. 8+46.16, OFF. 15.17' RT.
P.C. DI. 2'X 2'X 4.00' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 953.49
CL. 3 EXE. = 7 CY

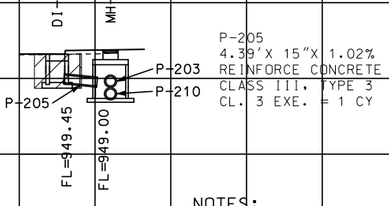
MH-210
TMP.@ 8TH STA. 8+37.94, OFF. 28.99' RT.
P.C. MH, 48" X 6.37' D
W/ALTERNATE MANHOLE TOP, (STD 731.00U)
& 2' DIA. OPENING 1.25' DEEP
MANHOLE FRAME AND COVER (TYPE 4)
TOP ELEV. = 953.72
CL. 3 EXE. = 15 CY

DI-202
TMP.@ 8TH STA. 8+54.13, OFF. 15.91' RT.
P.C. DI. 2'X 2'X 3.50' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 953.62
CL. 3 EXE. = 6 CY

DI-205
TMP.@ HARRISON STA. 0+09.40, OFF. 16.83' RT.
P.C. DI. 2'X 2'X 3.75' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 953.20
CL. 3 EXE. = 6 CY







P-205
4.39'X 15"X 1.02%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 1 CY

P-204
10.14'X 12"X 3.04%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 5 CY

P-203
13.92'X 15"X 3.55%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 9 CY

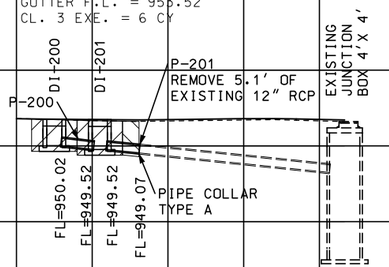
P-210
4.48'X 15"X 1.11%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 3 CY

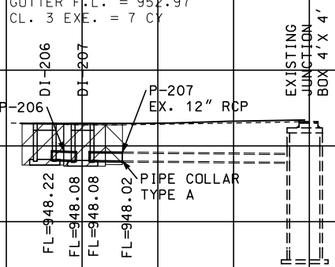
P-202
6.34'X 12"X 9.94%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 2 CY

DI-200
TMP.@ 8TH STA. 8+42.95, OFF. 15.00' LT.
P.C. DI. 2'X 2'X 3.50' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 953.52
CL. 3 EXE. = 6 CY

DI-201
TMP.@ 8TH STA. 8+36.95, OFF. 15.00' LT.
P.C. DI. 2'X 2'X 3.95' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 953.47
CL. 3 EXE. = 7 CY

DI-206
TMP.@ HARRISON STA. 0+05.67, OFF. 16.50' LT.
P.C. DI. 2'X 2'X 4.75' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 952.97
CL. 3 EXE. = 7 CY





DI-207
TMP.@ HARRISON STA. 0+10.67, OFF. 16.50' LT.
P.C. DI. 2'X 2'X 4.88' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 952.96
CL. 3 EXE. = 7 CY

P-200
4.34'X 12"X 11.62%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 1 CY

P-201
4.37'X 12"X 10.27%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 2 CY

P-206
3.34'X 12"X 4.19%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 1 CY

P-207
4.41'X 12"X 1.13%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 2 CY

NOTES:

ACTIVE EX. PIPES NOT SHOWN IN PLANS CONNECTED TO EX. DROP INLETS TO BE REMOVED SHALL BE EXTENDED TO AND CONNECTED TO THE CLOSEST PROPOSED DROP INLET OR MANHOLE USING THE SAME SIZE PIPE AND SIMILAR MATERIAL AND SHALL BE INCIDENTAL TO PROPOSED DROP INLET CONSTRUCTION

ADDITINAL PAVEMENT THAT HAS TO BE REMOVED TO REMOVE EX. DROP INLETS WILL BE REPLACED WITH 8" PCCP FLUSH WITH EXISTING PAVEMENT PRIOR TO HMA WEDGE PLACEMENT AND SHALL BE INCIDENTAL TO REMOVAL OF EX. DROP INLETS.

STORM SEWER CULVERT SECTION 1 OF 4

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2017
ROUTE 70 | STATE MO
DISTRICT KC | SHEET NO. 096
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DATE | DESCRIPTION

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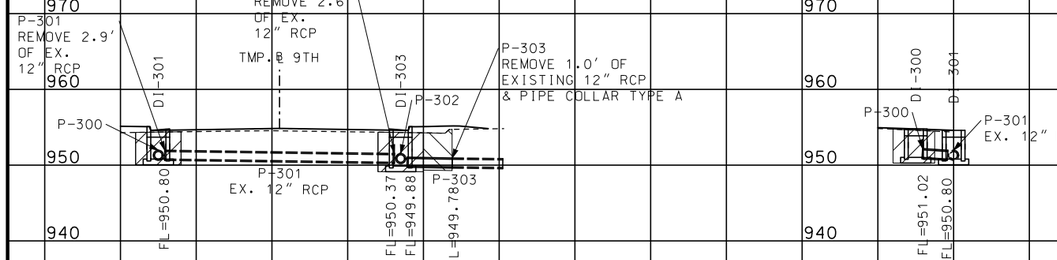
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

DI-301
TMP.@ 9TH STA. 6+00.09, OFF. 16.00' RT.
P.C. DI. 2'X 2'X 3.79' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 954.59
CL. 3 EXE. = 6 CY

DI-303
TMP.@ 9TH STA. 6+00.22, OFF. 16.00' LT.
P.C. DI. 2'X 2'X 4.70' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 954.58
CL. 3 EXE. = 7 CY

DI-300
TMP.@ 9TH STA. 6+05.09, OFF. 16.00' RT.
P.C. DI. 2'X 2'X 3.75' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 954.77
CL. 3 EXE. = 6 CY

DI-302
TMP.@ 9TH STA. 6+05.22, OFF. 16.00' LT.
P.C. DI. 2'X 2'X 4.25' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 954.78
CL. 3 EXE. = 6 CY



DI-400
TMP.@ 10TH STA. 5+33.03, OFF. 15.00' LT.
P.C. DI. 2'X 2'X 3.50' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 946.79
CL. 3 EXE. = 6 CY

DI-401
TMP.@ 10TH STA. 5+41.03, OFF. 15.00' LT.
P.C. DI. 2'X 2'X 3.75' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 946.77
CL. 3 EXE. = 6 CY

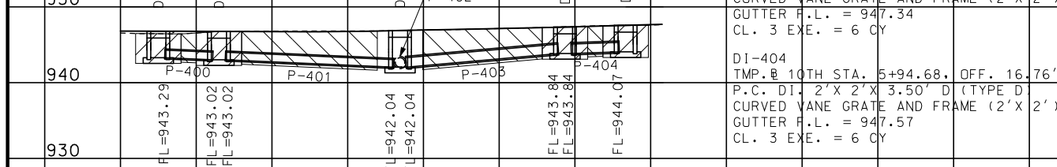
DI-403
TMP.@ 10TH STA. 5+86.68, OFF. 16.35' LT.
P.C. DI. 2'X 2'X 3.50' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 947.34
CL. 3 EXE. = 6 CY

DI-404
TMP.@ 10TH STA. 5+94.68, OFF. 16.76' LT.
P.C. DI. 2'X 2'X 3.50' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 947.57
CL. 3 EXE. = 6 CY

DI-405
TMP.@ 10TH STA. 5+33.03, OFF. 15.00' RT.
P.C. DI. 2'X 2'X 3.50' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 946.79
CL. 3 EXE. = 6 CY

DI-406
TMP.@ 10TH STA. 5+41.03, OFF. 15.00' RT.
P.C. DI. 2'X 2'X 3.75' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 946.77
CL. 3 EXE. = 6 CY

DI-408
TMP.@ 10TH STA. 5+86.59, OFF. 16.62' RT.
P.C. DI. 2'X 2'X 3.50' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 947.34
CL. 3 EXE. = 6 CY

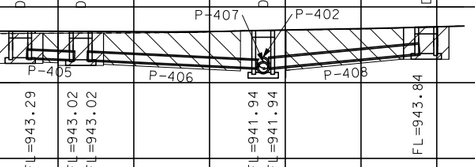


P-400
6.34'X 12"X 4.26%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 2 CY

P-401
22.25'X 12"X 4.40%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 14 CY

P-403
20.12'X 15"X 8.95%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 13 CY

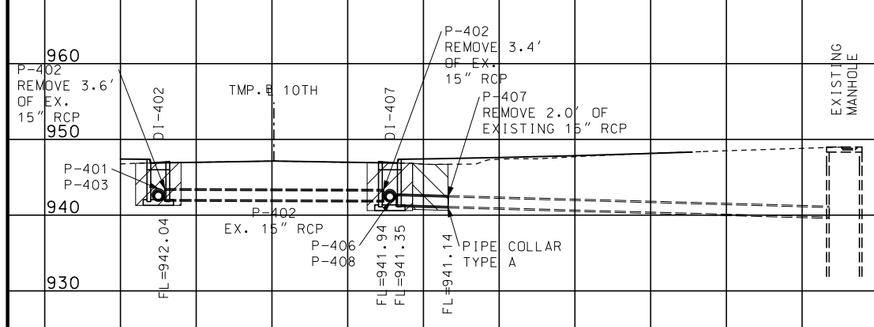
P-404
6.35'X 15"X 3.46%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 2 CY



P-405
6.34'X 12"X 4.28%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 2 CY

P-406
22.42'X 12"X 4.81%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 14 CY

P-408
19.86'X 15"X 9.54%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 13 CY



DI-402
TMP.@ 10TH STA. 5+64.93, OFF. 15.25' LT.
P.C. DI. 2'X 2'X 4.85' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 946.89
CL. 3 EXE. = 8 CY

DI-407
TMP.@ 10TH STA. 5+65.11, OFF. 15.31' RT.
P.C. DI. 2'X 2'X 5.54' D (TYPE D)
CURVED VANE GRATE AND FRAME (2'X 2')
GUTTER F.L. = 946.89
CL. 3 EXE. = 9 CY

P-407
6.85'X 15"X 3.04%
REINFORCE CONCRETE PIPE
CLASS III, TYPE 3
CL. 3 EXE. = 5 CY

NOTES:

ACTIVE EX. PIPES NOT SHOWN IN PLANS CONNECTED TO EX. DROP INLETS TO BE REMOVED SHALL BE EXTENDED TO AND CONNECTED TO THE CLOSEST PROPOSED DROP INLET OR MANHOLE USING THE SAME SIZE PIPE AND SIMILAR MATERIAL AND SHALL BE INCIDENTAL TO PROPOSED DROP INLET CONSTRUCTION

ADDITINAL PAVEMENT THAT HAS TO BE REMOVED TO REMOVE EX. DROP INLETS WILL BE REPLACED WITH 8" PCCP FLUSH WITH EXISTING PAVEMENT PRIOR TO HMA WEDGE PLACEMENT AND SHALL BE INCIDENTAL TO REMOVAL OF EX. DROP INLETS.

STORM SEWER
CULVERT SECTION
2 OF 4

10'

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	097

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

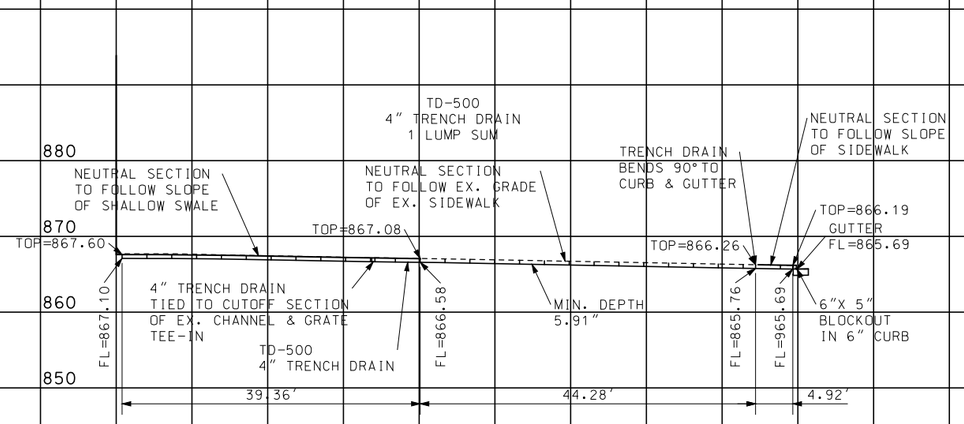
BRIDGE NO.

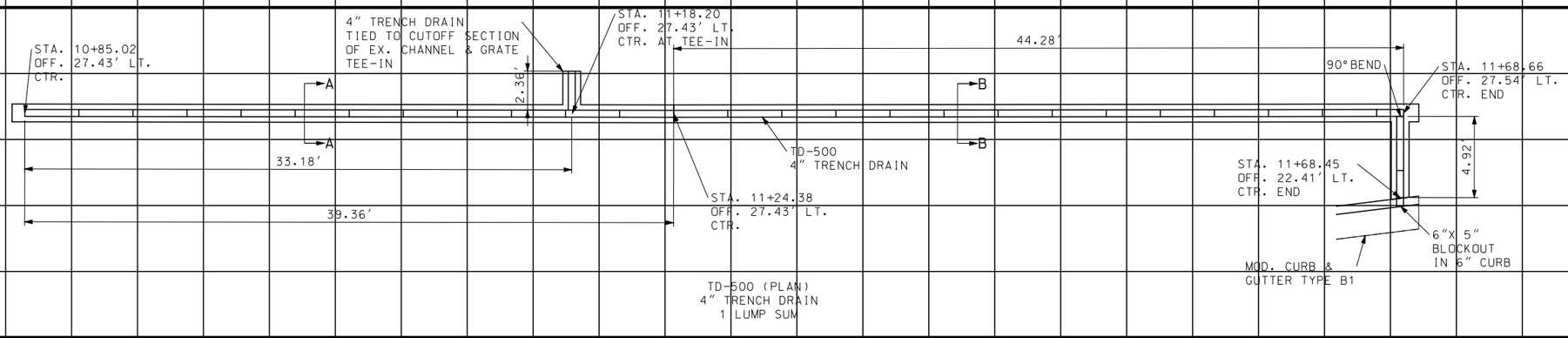
DATE	DESCRIPTION

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

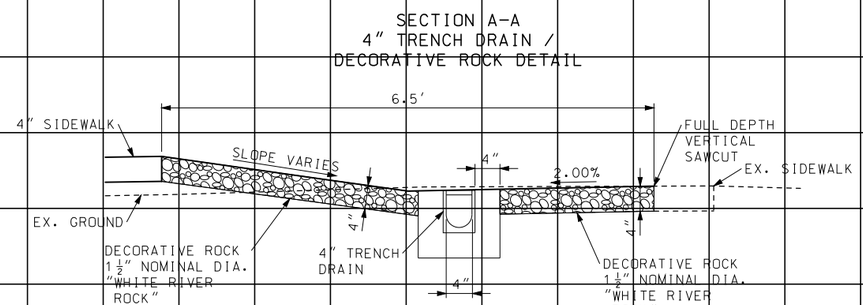
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

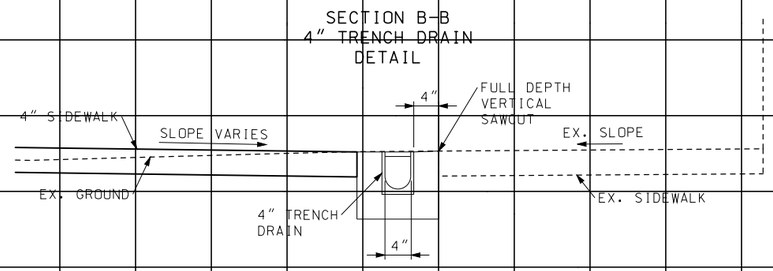




TD-500 (PLAN)
4" TRENCH DRAIN
1 LUMP SUM



NOTES:
-TRENCH DRAIN HAS A 4" INTERNAL WIDTH
-TRENCH DRAIN HAS A 4" CONCRETE
ENCASEMENT OF 3 SIDES MIN.
-CONCRETE IS A 4000 PSI COMMERCIAL MIX.
-CONCRETE BEYOND 4" ENCASEMENT
IS INCEDENTAL TO THE 4" TRENCH DRAIN
-SEE JSP'S FOR ADDITIONAL DETAILS



NOTES:
-TRENCH DRAIN HAS A 4" INTERNAL WIDTH
-TRENCH DRAIN HAS A 4" CONCRETE
ENCASEMENT OF 3 SIDES MIN.
-CONCRETE IS A 4000 PSI COMMERCIAL MIX.
-CONCRETE BEYOND 4" ENCASEMENT
IS INCEDENTAL TO THE 4" TRENCH DRAIN
-SEE JSP'S FOR ADDITIONAL DETAILS

STORM SEWER CULVERT SECTION 3 OF 4

10'

STATE OF MISSOURI
JUAN YIN
NUMBER
PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	098

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

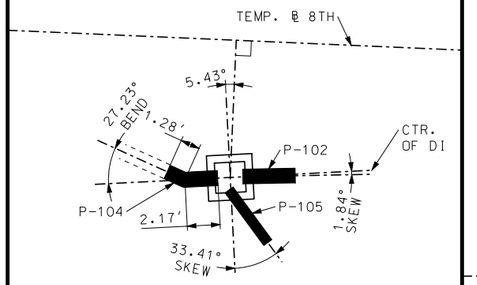
BRIDGE NO.

DESCRIPTION	DATE

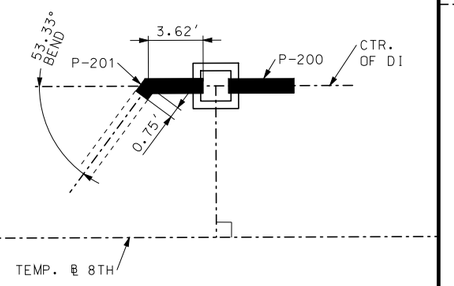
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

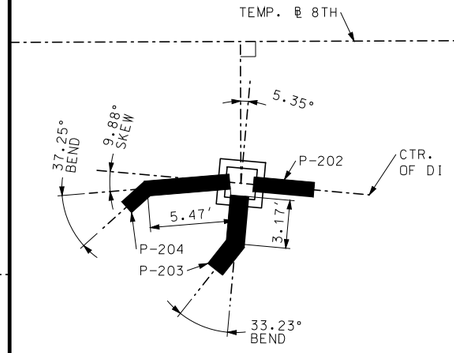
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



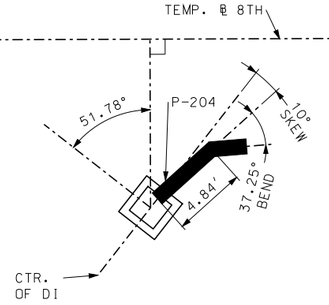
DI-104
STA. 2+46.69, OFF. 17.59' RT.
P.C. DI. 2'X 2' TYPE D



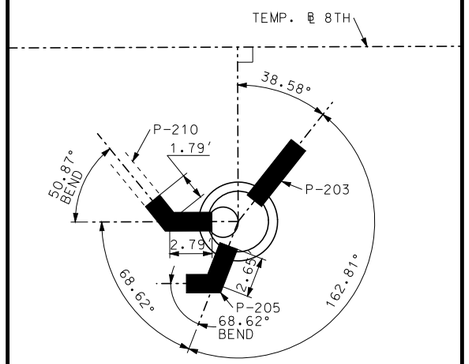
DI-201
STA. 8+36.95, OFF. 15.00' LT.
P.C. DI. 2'X 2' TYPE D



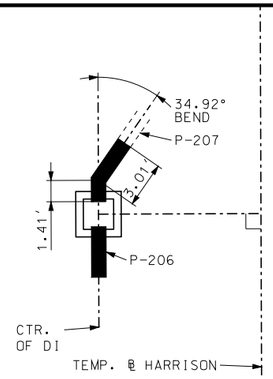
DI-203
STA. 8+46.16, OFF. 15.17' RT.
P.C. DI. 2'X 2' TYPE D



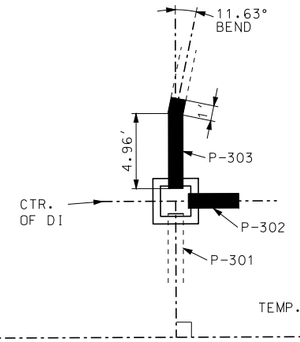
DI-204
STA. 8+35.93, OFF. 19.32' RT.
P.C. DI. 2'X 2' TYPE D



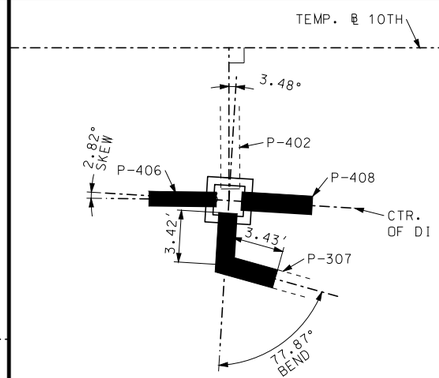
MH-210
STA. 8+37.94, OFF. 28.99' RT.
P.C. MH. 48" DIA.



DI-207
STA. 0+10.67, OFF. 16.50' LT.
P.C. DI. 2'X 2' TYPE D



DI-303
STA. 6+00.22, OFF. 16.00' LT.
P.C. DI. 2'X 2' TYPE D



DI-407
STA. 5+65.11, OFF. 15.31' RT.
P.C. DI. 2'X 2' TYPE D

5'

STORM SEWER
CULVERT SECTION
4 OF 4

STATE OF MISSOURI
JUAN YIN
NUMBER PE-2011000967
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2017

ROUTE	STATE
70	MO
DISTRICT	SHEET NO.
KC	099

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

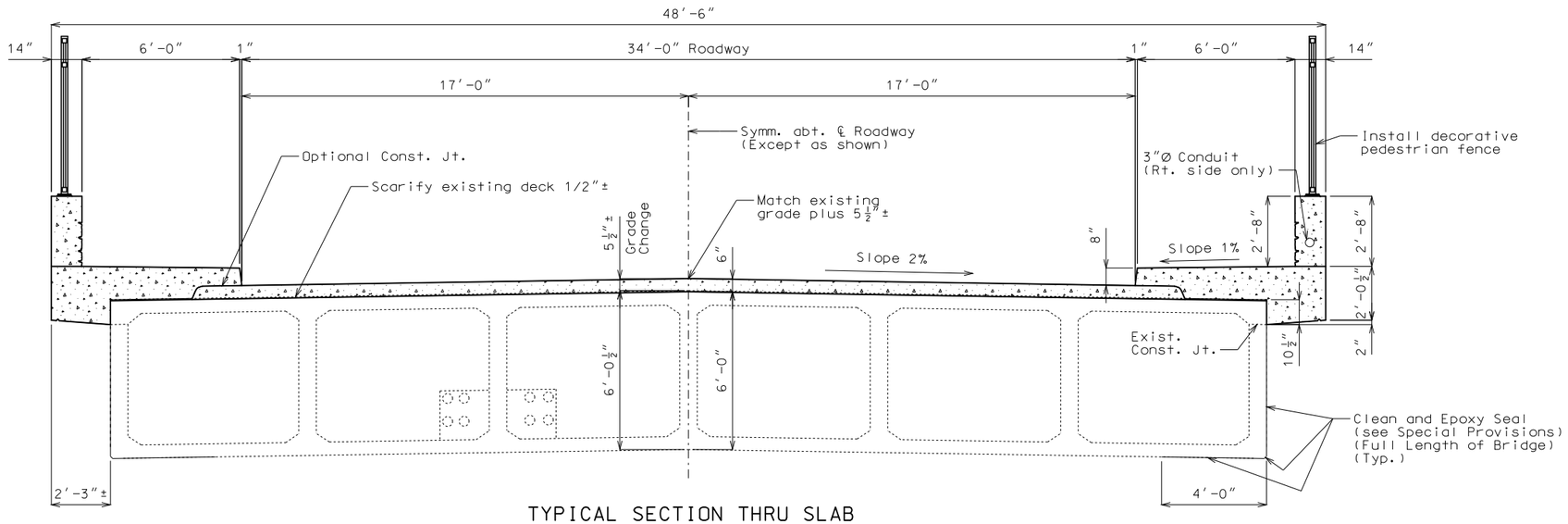
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

SEC/SUR 3 TWP 49N RGE 33W

U.I.P. & REHAB EXISTING (104′-79′) CONTINUOUS CONCRETE BOX GIRDER SPANS (SKEW VARIES)



TYPICAL SECTION THRU SLAB

General Notes:

Design Specifications:

2002 - AASHTO (17th Edition) Standard Specifications
Load Factor Design
Seismic Performance Category A
Bridge Deck Rating = 5

Design Loading:

H20-S16-44 (1957)
HS20-44 (New Construction)
23 lb/sf Future Wearing Surface

Design Unit Stresses:

Class B-1 Concrete (Corral Curb)	f′c = 4,000 psi
Class B-2 Concrete (All rehab except for Corral Curb)	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 old concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, old bars shall extend into new concrete at least 40 diameters for smooth bars and 30 diameters for deformed bars, unless otherwise noted.

Outline of old 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.

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

Protective Coating:

Protective coating for concrete bents and piers (Epoxy) shall be applied as shown on bridge plans and in accordance with Sec 711.

Traffic Handling:

Structure to be closed during construction.

Estimated Quantities

Item		Total
Scarification of Bridge Decks	sq. yard	898
Partial Removal of Existing Bridge Deck	sq. foot	2252
Removal of Existing Expansion Joint & Adjacent Concrete	linear foot	90
(72 in.) Decorative Pedestrian Fence	linear foot	436
Reinforced Concrete Slab Overlay	sq. yard	1011
Corral Curb	linear foot	469
Form Liners	sq. yard	94
Substructure Repair (Unformed)	sq. foot	90
Repairing Concrete Deck (Half-Soling)	sq. foot	100
Clean and Epoxy Seal	sq. foot	3305
Conduit System on Structure	lump sum	1
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Strip Seal Expansion Joint System	linear foot	69

Estimated Quantities for Reinforced Concrete Slab Overlay

Item		Total
Class B-2 Concrete	cu. yard	276
Reinforcing Steel (Epoxy Coated)	pound	31,140

The table of Estimated Quantities Reinforced Concrete Slab Overlay represents the quantities used by the State in preparing the cost estimate for concrete slab overlay and sidewalks. The area of the concrete slab overlay will be measured to the nearest square yard from end of slab to end of slab and the overall width (48′-6″) shown in the Typical Section Thru Slab. Payment for conventional forms, all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab overlay. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slabs shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type I, II or III.

Class B-2 concrete quantity is based on minimum 6″ slab overlay thickness and sidewalks as shown.

The concrete and reinforcement for the new upper backwall at the end bents are included in Class B-2 Concrete and Reinforcing Steel (Epoxy Coated).

REPAIRS TO BRIDGE: CHESTNUT AVE. OVER RTE. I-70

ROUTE I-70 FROM I-71 EAST 1.2 MILES

IN KANSAS CITY

STA. 119+00.78± (Match Exist.)

STD. 901.00
STD. 706.35

Detailed Feb. 2017
Checked Apr. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	1

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

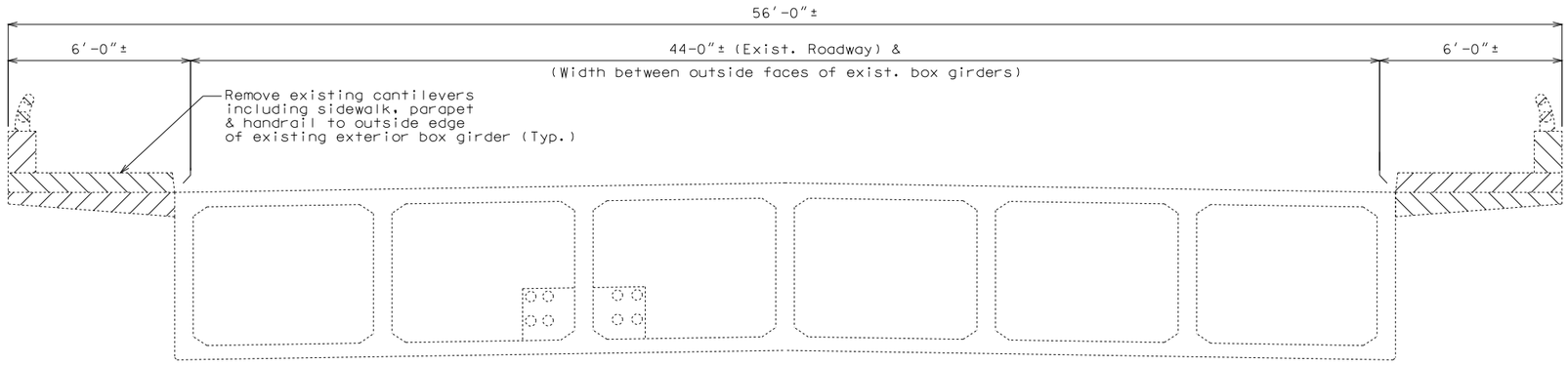
PROJECT NO.

BRIDGE NO. A02921

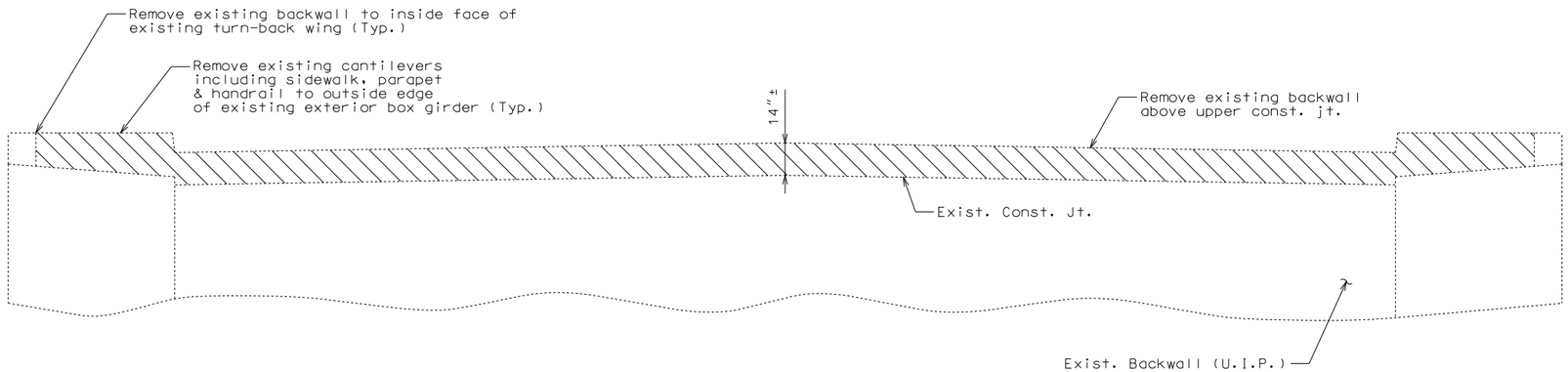
DATE	DESCRIPTION

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

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



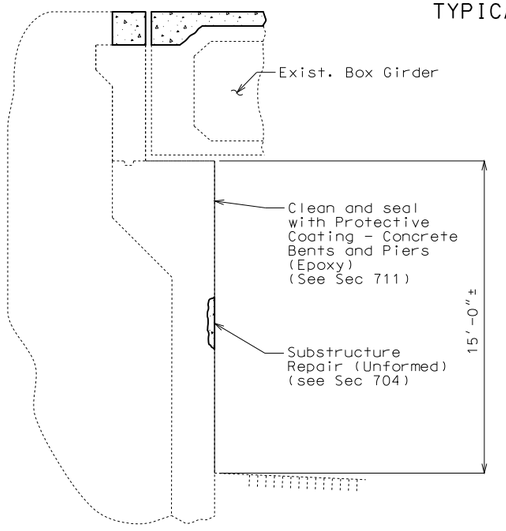
TYPICAL SECTION SHOWING CONCRETE REMOVAL AT MID SPAN



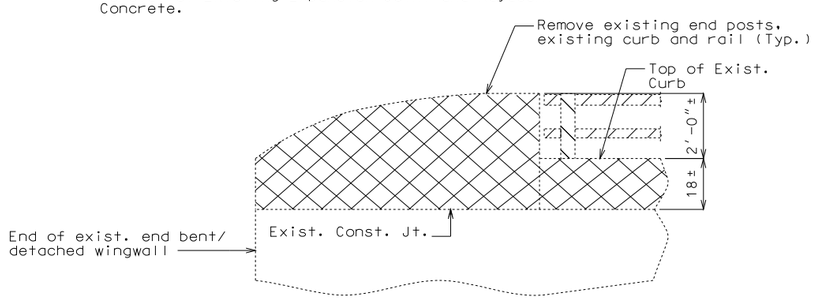
TYPICAL ELEVATION SHOWING CONCRETE REMOVAL AT END BENTS

(Note: Curb, handrail & end post not shown for clarity)

Note:
Cost of removing existing backwall above upper const. joint and end of existing box girder (as shown on Sheet No. 6 & 7) will be considered completely covered by contract unit price for Removal of Existing Expansion Joint and Adjacent Concrete.



TYPICAL SECTION THRU END BENTS SHOWING SUBSTRUCTURE REPAIR & PROTECTIVE COATING



TYPICAL ELEVATION OF EXISTING END POST & CURB SHOWING CONCRETE REMOVAL

Note:
Cost of removing existing cantilevers, sidewalks, end posts, curbs and rails will be considered completely covered by the contract unit price for Partial Removal of Existing Bridge Deck (square foot). The area of removal will be measured to the nearest square foot from fill face to fill face of end bents and the width from outside face of exist. box girder to the outside edge of exist. bridge deck.

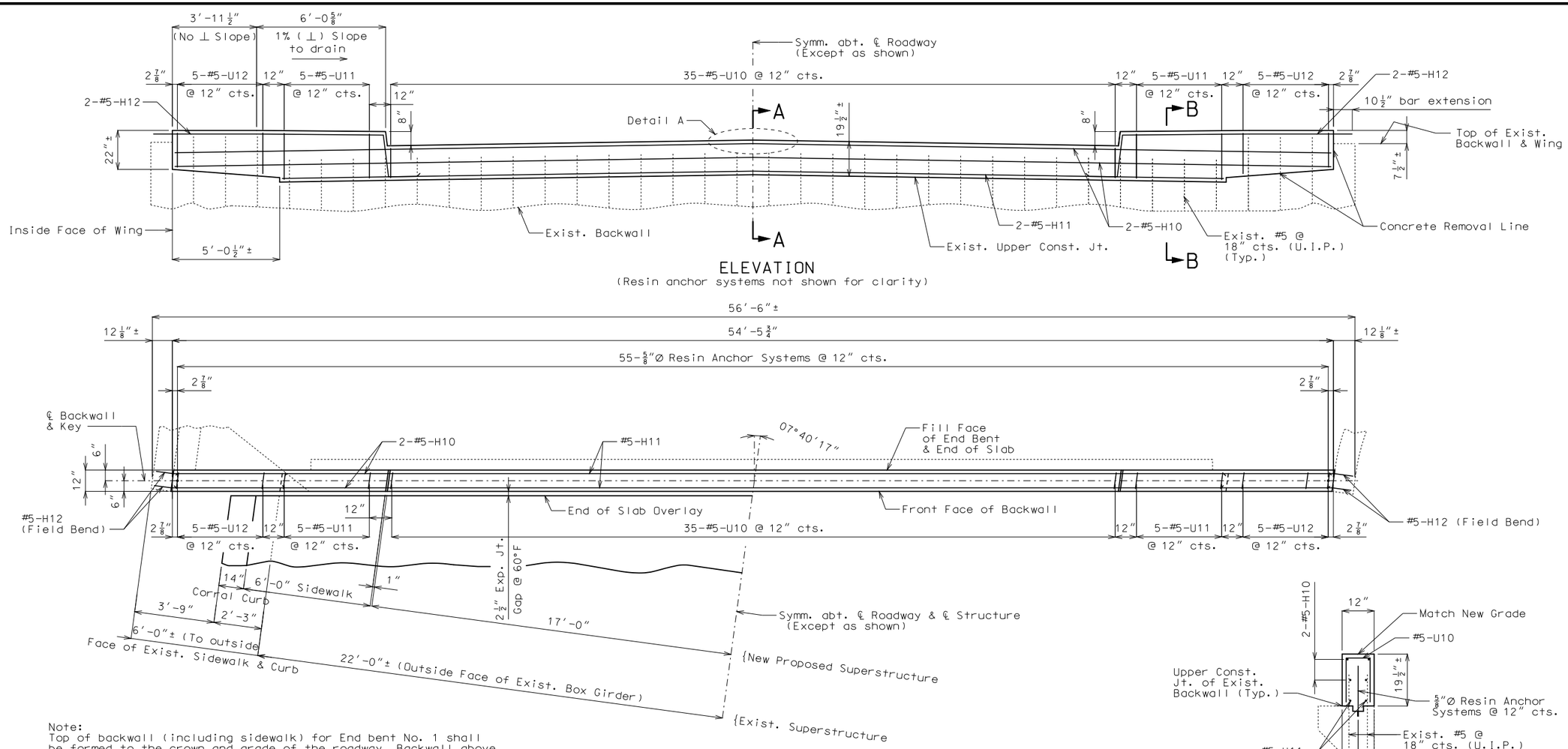
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/19/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 2
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A02921

DESCRIPTION | DATE

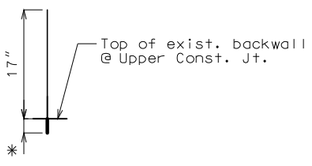
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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



Note:
Top of backwall (including sidewalk) for End bent No. 1 shall be formed to the crown and grade of the roadway. Backwall above exist. upper const. joint shall not be poured until the slab overlay & sidewalk has been poured in the adjacent span.

For location of K2 bars in corral curb at the ends of backwall, see Sht. No. 14 & 16.



✳ Manufacturer's recommended embedment length (5″ min.)

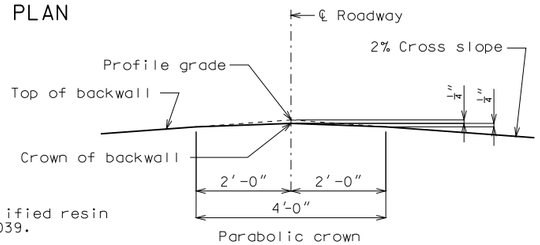
DETAIL OF RESIN ANCHOR SYSTEM

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

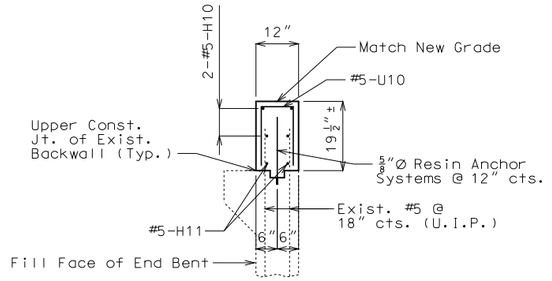
Cost of furnishing and installing the resin anchor systems, complete-in-place, will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

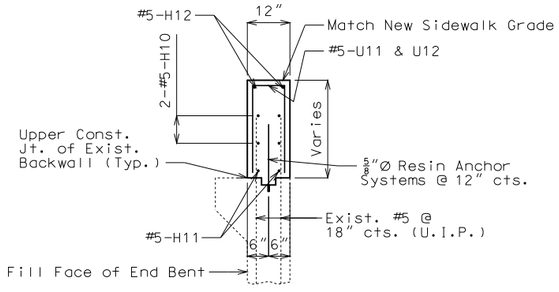
An epoxy coated #5 Grade 60 reinforcing bar shall be substituted for the 5/8″Ø threaded rod.



DETAIL A



SECTION A-A



SECTION B-B

DETAILS OF END BENT NO. 1

Detailed Aug. 2017
Checked Aug. 2017

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

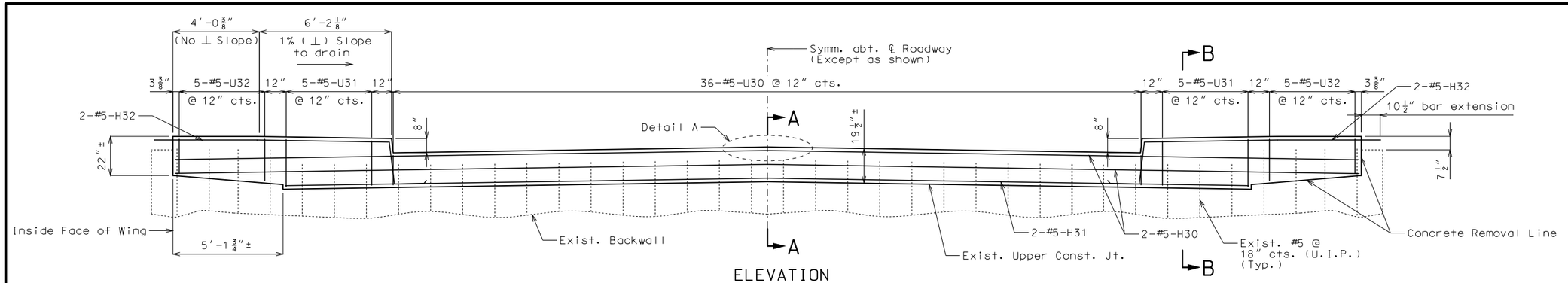
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/14/2017
ROUTE: I-70 | STATE: MO
DISTRICT: BR | SHEET NO.: 3
COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A02921

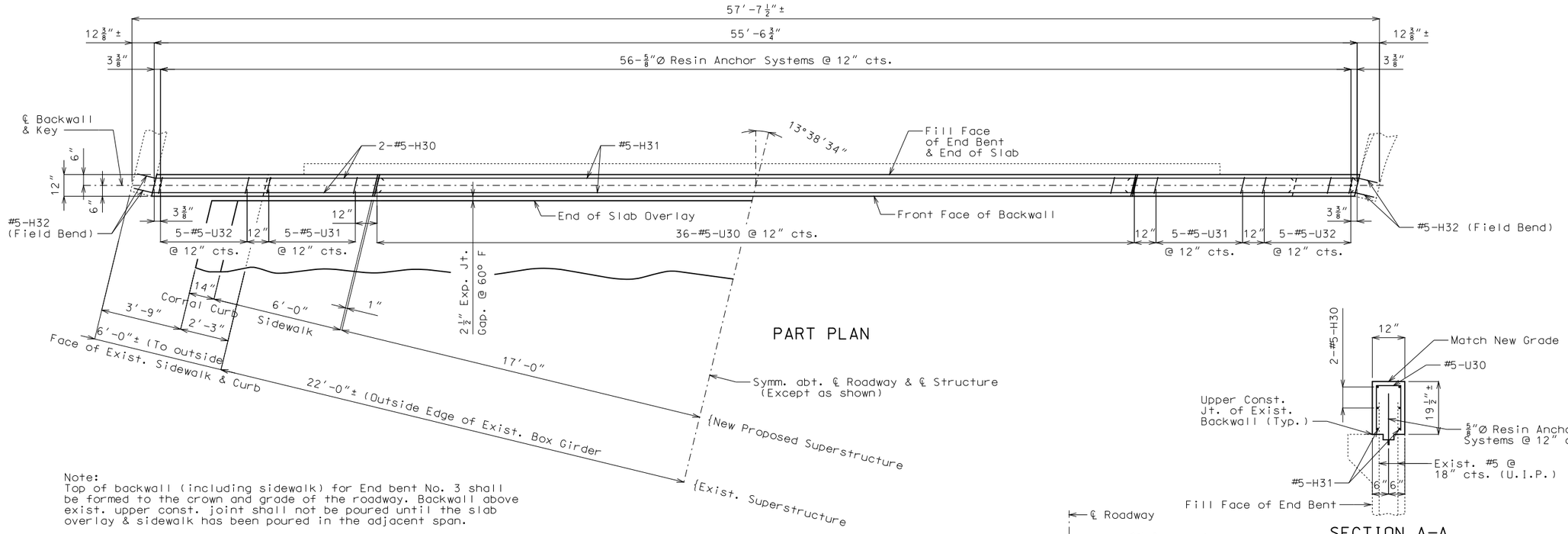
DESCRIPTION | DATE

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

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



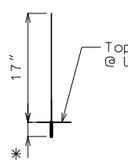
ELEVATION
(Resin anchor systems not shown for clarity)



PART PLAN

Note:
Top of backwall (including sidewalk) for End bent No. 3 shall be formed to the crown and grade of the roadway. Backwall above exist. upper const. joint shall not be poured until the slab overlay & sidewalk has been poured in the adjacent span.

For location of K2 bars in corral curb at the ends of backwall, see Sht. No. 15 & 17.



(56 req'd)

✳ Manufacturer's recommended embedment length (5″ min.)

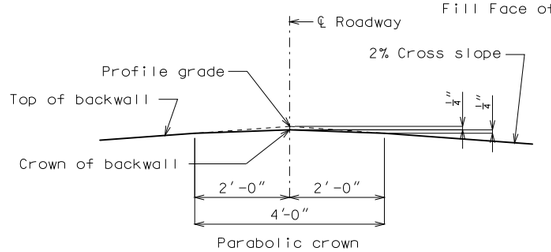
DETAIL OF RESIN ANCHOR SYSTEM

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

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

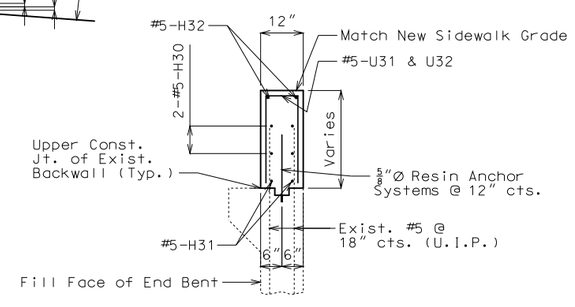
The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



DETAIL A

SECTION A-A



SECTION B-B

DETAILS OF END BENT NO. 3

Detailed Aug. 2017
Checked Aug. 2017

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

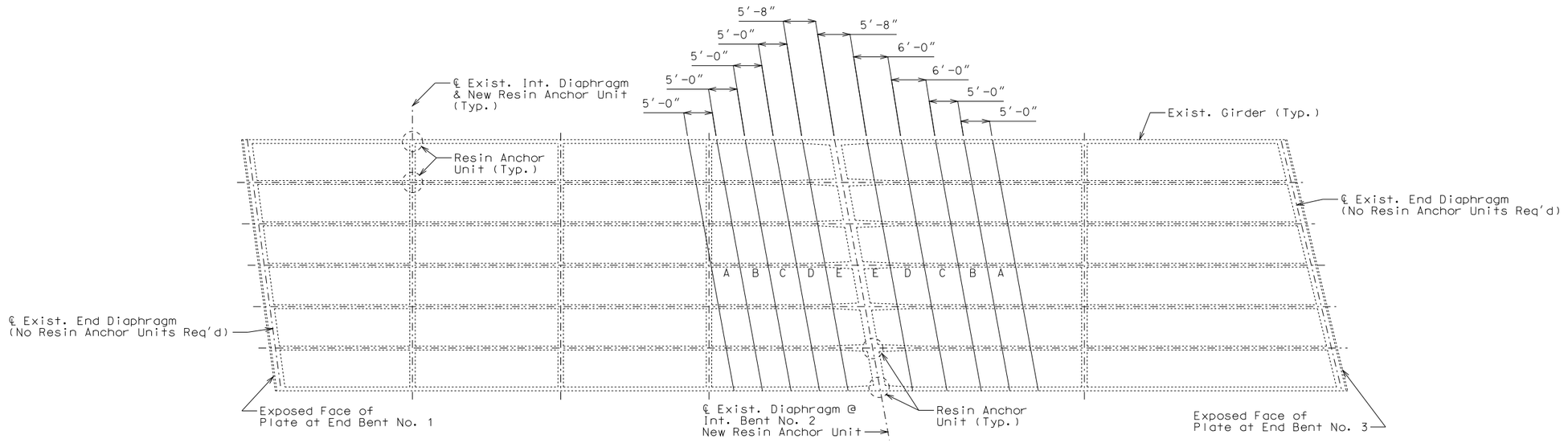
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 4
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A02921

DESCRIPTION | DATE

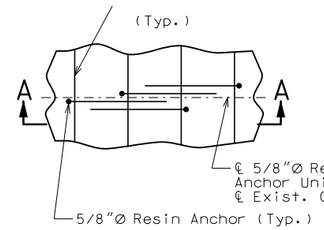
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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

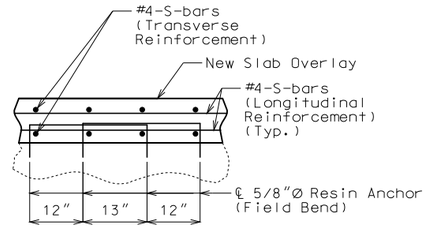


FRAMING PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES AND LOCATIONS OF RESIN ANCHOR UNITS

Note: Dimensions shown are horizontal dimensions along ℄ Roadway.



PLAN



SECTION A-A

DETAIL OF RESIN ANCHOR UNIT

(35 Units Req'd, 4 Resin Anchors per Unit)

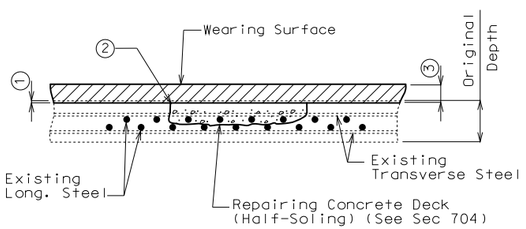
Note:
Locate Resin Anchor Units near the intersection of ℄ of existing girder & ℄ of existing int. diaphragms & ℄ of existing diaphragm @ Int. Bt. No. 2

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

Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

An epoxy coated #5 Grade 60 reinforcing bar 2′-0″ long shall be substituted for the 5/8″Ø threaded rod.



HALF-SOLED REPAIR

① Scarify existing deck ½

② One inch vertical side shall be established outside the deteriorated area. See Sec 704.

③ Installation of 6″ Reinforced Slab Overlay.

Notes:
Any half-soling required in the areas designated as special repair zones shall be completed in alphabetical sequence. Any repair in the remainder of the bridge that is adjacent to Zone A and not designated as a special repair zone shall be completed prior to work in Zone A.

Removal and repair shall be completed in one special repair zone and concrete shall have attained a compressive strength of 3200 psi before work can be started in the next special repair zone. Before placing concrete in areas adjacent to areas of subsequent repair, the concrete shall be separated with a material such as polyethylene sheets to aid in removal of old concrete.

Zones with the same letter designation may be repaired at the same time.

If any single repair area does not exceed 9 square feet in size and the total repair within a special repair zone does not exceed 27 square feet, the special repair zone requirement does not apply for that zone. Half-soling repair in the special repair zone, on either side of the intermediate bent, shall be to a depth that will not expose half the diameter of the longitudinal reinforcing bar. Full depth repair shall be made when removal of deteriorated concrete exposes half or more of the diameter of the longitudinal reinforcing bar.

Detailed Feb. 2017
Checked Apr. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

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DATE PREPARED 12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	5

COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A02921

DESCRIPTION	DATE

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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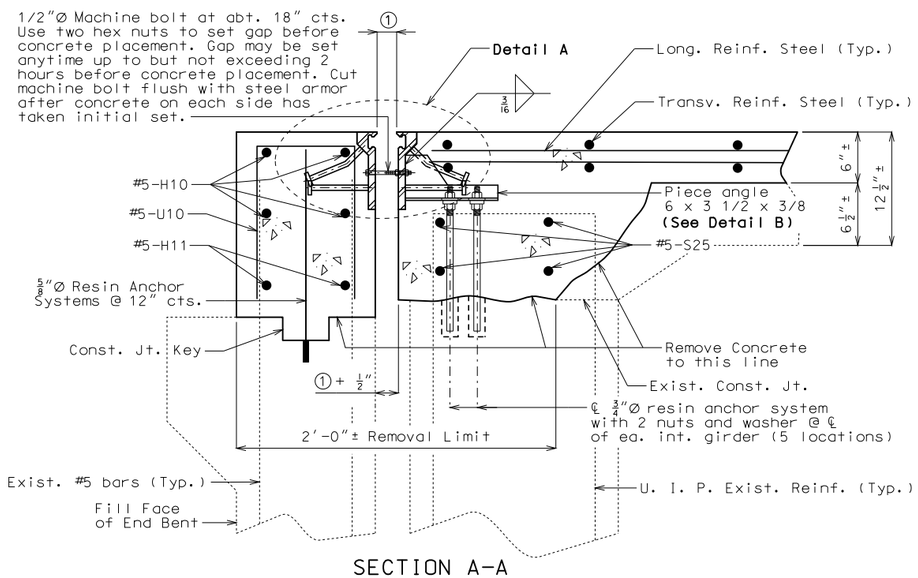
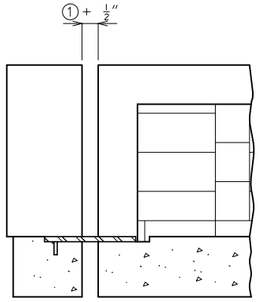


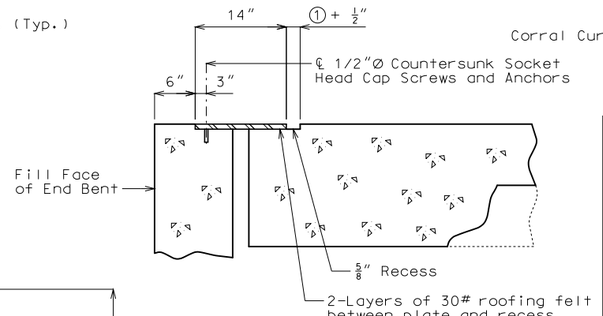
SECTION A-A

Note: Strip seal gland not shown for clarity.



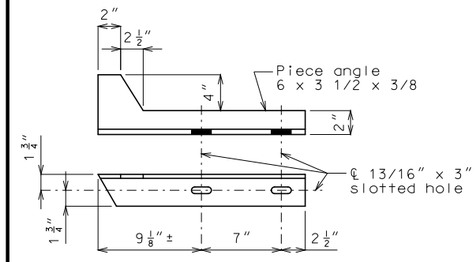
Note: Strip seal gland not shown for clarity.

PART SECTION THRU SIDEWALK NEAR CORRAL CURB

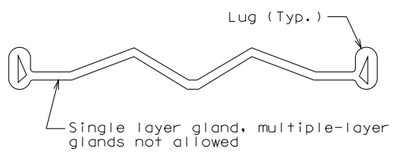


DETAIL A

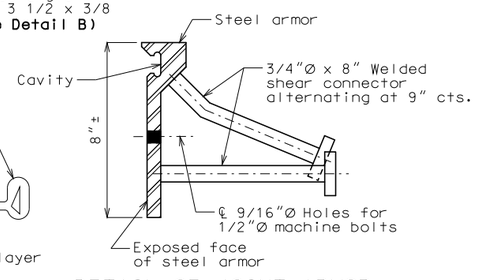
PART PLAN



DETAIL B



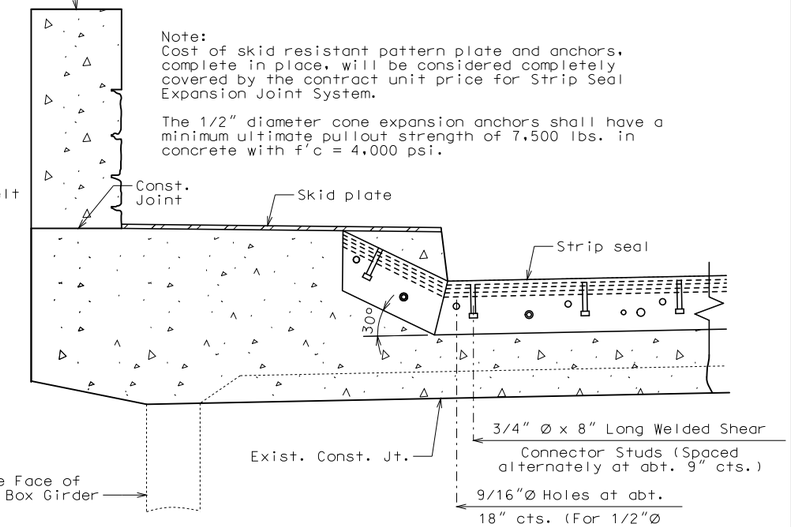
DETAIL OF GLAND



DETAIL OF JOINT ARMOR

SECTION B-B
TYPICAL SECTION OF SKID PLATE

Note: Strip seal gland not shown for clarity.



PART SECTION THRU BRIDGE DECK NEAR STRIP SEAL JOINT

GENERAL NOTES:

Expansion joint system shall be fabricated in one section, except for staged construction and when the length is over 50 feet. A complete joint penetration groove welded splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion joint system shall be fabricated and installed to the crown and grade of the roadway.

The strip seal gland shall be installed in joints in one continuous piece without field splices. Factory splicing will be permitted for joints in excess of 53 feet.

Structural steel for the expansion joint system shall be ASTM A709 Grade 36 except the steel armor may be ASTM A709 Grade 50W. Anchors for the expansion joint system shall be in accordance with Sec 1037. Strip seal expansion joint system shall be in accordance with Sec 717.

Structural steel for the expansion joint system shall be coated with a minimum of two coats of inorganic zinc primer (5 mils minimum) or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

Longitudinal reinforcing steel shall be placed so that ends shall be 1" from the vertical leg of the steel armor at the expansion joint system.

Concrete shall be forced under and around steel armor and anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

② The installation temperature shall be taken as the actual air temperature averaged over the 24-hour period immediately preceding installation.

③ MoDOT Construction personnel will indicate the strip seal expansion joint system installed.

Steel armor may also be referred to as extrusion or rail.

Table of Allowed Transverse Strip Seal Expansion Joint System

Manufacturer	Strip Seal System (Designated Name)	Movement Parallel to RDWY	① Allowed Installation Gap Normal to Joint at RDWY Surface @ Air/Surface Temerature ②						③
			@ 40°F	@ 50°F	@ 60°F	@ 70°F	@ 80°F	@ 90°F	
D S Brown	Strip Seal L2-400	1 1/16"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□
D S Brown	Strip Seal L2-500	1 1/16"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□
Watson Bowman Acme (Wabo)	Strip Seal SE-300	1 1/16"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□
Watson Bowman Acme (Wabo)	Strip Seal SE-400	1 1/16"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□
Watson Bowman Acme (Wabo)	Strip Seal SE-500	1 1/16"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/21/2017
ROUTE: I-70 | STATE: MO
DISTRICT: BR | SHEET NO.: 6
COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A02921

DESCRIPTION | DATE

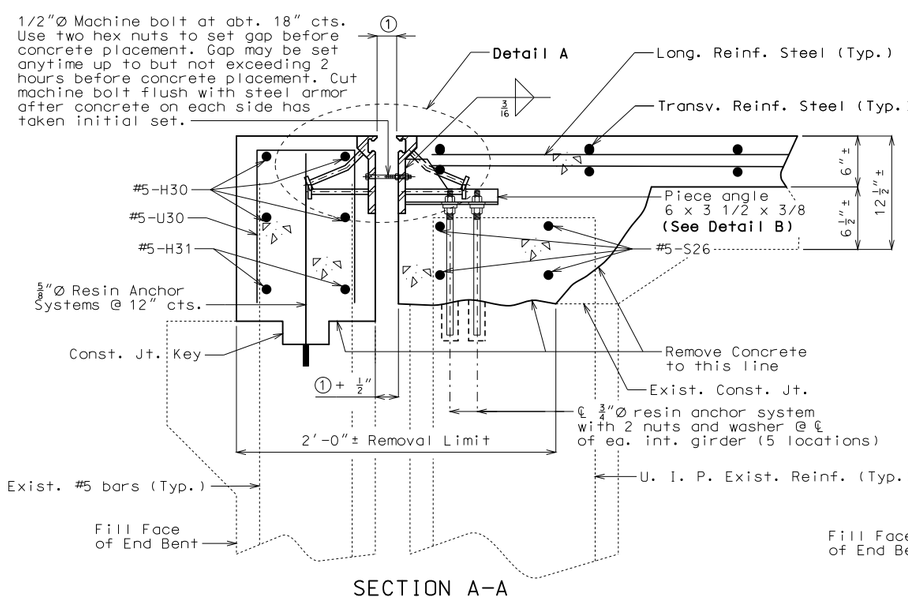
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

Detailed Feb. 2017
Checked Apr. 2017

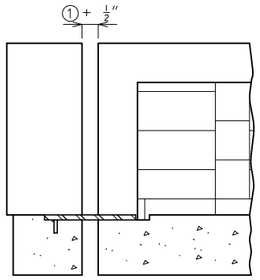
DETAILS OF STRIP SEAL AT END BENT 1 (Skew = 7°-40'-17" R.A.)

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



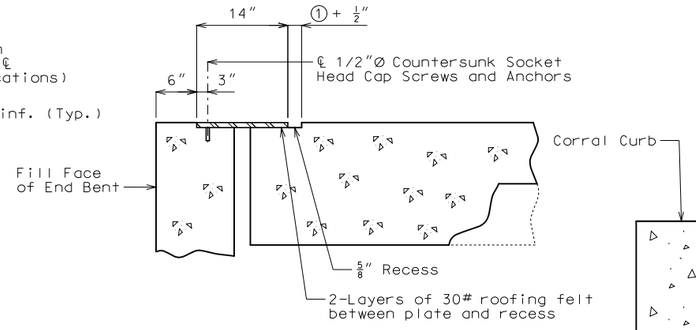
SECTION A-A

Note: Strip seal gland not shown for clarity.



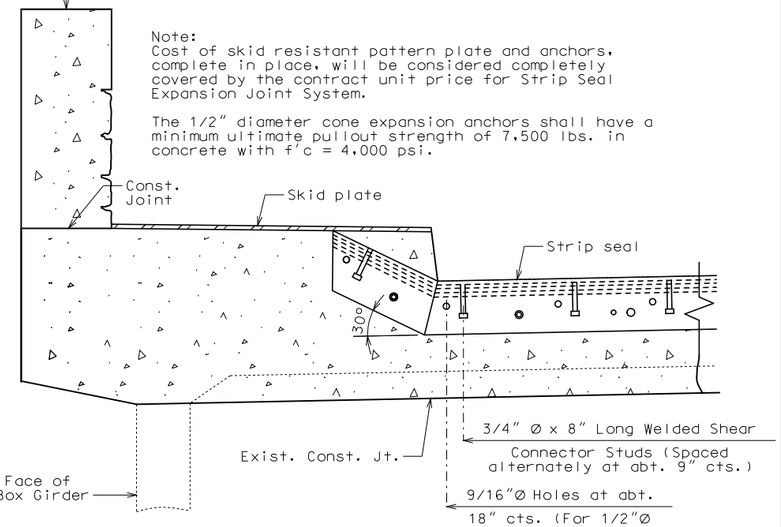
Note: Strip seal gland not shown for clarity.

PART SECTION THRU SIDEWALK NEAR CORRAL CURB

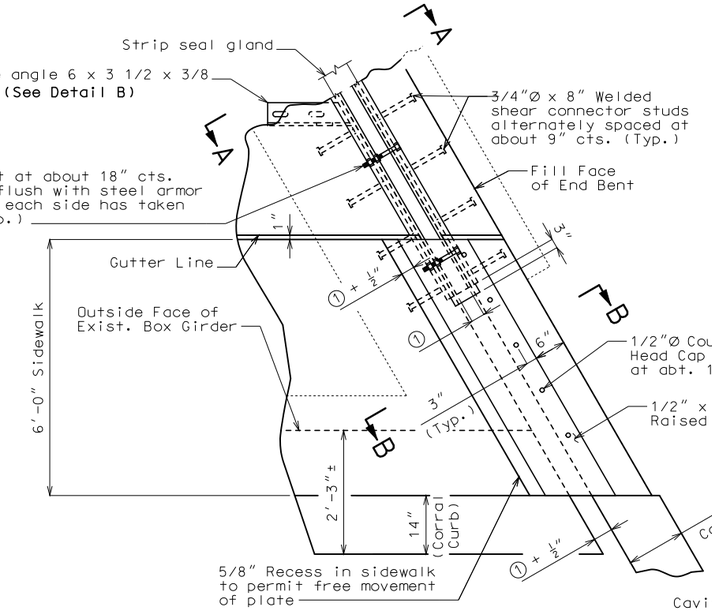


SECTION B-B
TYPICAL SECTION OF SKID PLATE

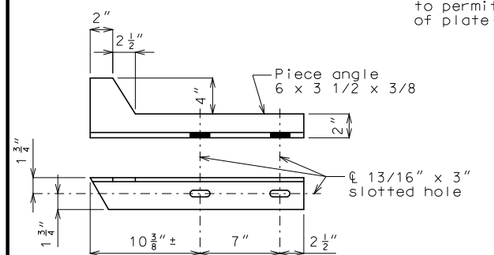
Note: Strip seal gland not shown for clarity.



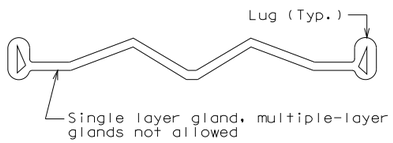
PART SECTION THRU BRIDGE DECK NEAR STRIP SEAL JOINT



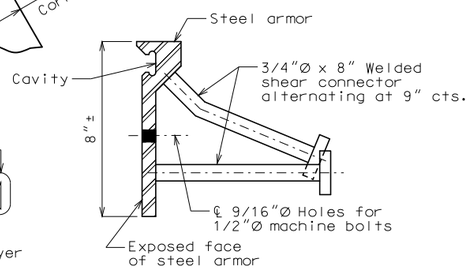
PART PLAN



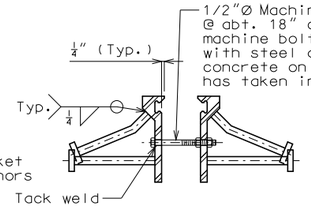
DETAIL B



DETAIL OF GLAND



DETAIL OF JOINT ARMOR



DETAIL A

DETAILS OF STRIP SEAL AT END BENT 3 (Skew = 13°-38'-34" R.A.)

GENERAL NOTES:

Expansion joint system shall be fabricated in one section, except for staged construction and when the length is over 50 feet. A complete joint penetration groove welded splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion joint system shall be fabricated and installed to the crown and grade of the roadway.

The strip seal gland shall be installed in joints in one continuous piece without field splices. Factory splicing will be permitted for joints in excess of 53 feet.

Structural steel for the expansion joint system shall be ASTM A709 Grade 36 except the steel armor may be ASTM A709 Grade 50W. Anchors for the expansion joint system shall be in accordance with Sec 1037. Strip seal expansion joint system shall be in accordance with Sec 717.

Structural steel for the expansion joint system shall be coated with a minimum of two coats of inorganic zinc primer (5 mils minimum) or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

Longitudinal reinforcing steel shall be placed so that ends shall be 1" from the vertical leg of the steel armor at the expansion joint system.

Concrete shall be forced under and around steel armor and anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

② The installation temperature shall be taken as the actual air temperature averaged over the 24-hour period immediately preceding installation.

③ MoDOT Construction personnel will indicate the strip seal expansion joint system installed.

Steel armor may also be referred to as extrusion or rail.

Table of Allowed Transverse Strip Seal Expansion Joint System

Manufacturer	Strip Seal System (Designated Name)	Movement Parallel to RDWY	Allowed Installation Gap ① Normal to Joint at RDWY Surface @ Air/Surface Temerature ②						③
			@ 40°F	@ 50°F	@ 60°F	@ 70°F	@ 80°F	@ 90°F	
D S Brown	Strip Seal L2-400	1 1/16"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□
D S Brown	Strip Seal L2-500	1 1/16"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□
Watson Bowman Acme (Wabo)	Strip Seal SE-300	1 1/16"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□
Watson Bowman Acme (Wabo)	Strip Seal SE-400	1 1/16"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□
Watson Bowman Acme (Wabo)	Strip Seal SE-500	1 1/16"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□

Detailed Feb. 2017
Checked Apr. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
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DATE PREPARED 12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	7

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A02921

DESCRIPTION	DATE

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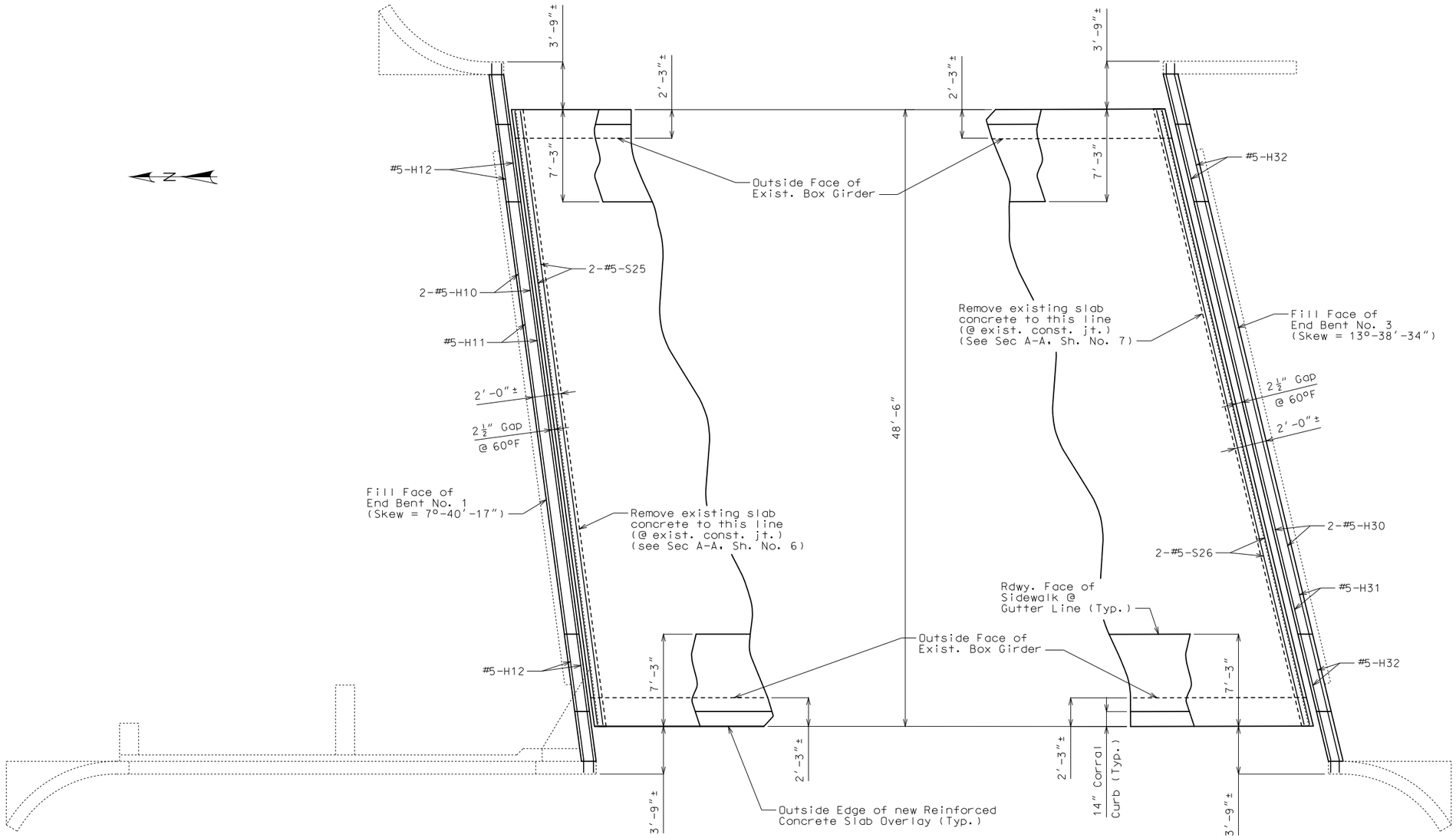
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



PART PLAN OF SLAB AT END BENTS SHOWING DIMENSIONS & REINFORCEMENT

Notes:
Shift #5-S bars where necessary to clear shear connector studs on the expansion joint system.

Payment for slab and backwall concrete, complete-in-place, for expansion joint replacement will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

Payment for furnishing and installing reinforcing steel in slab and backwall for expansion joint replacement will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

Cost of removing existing expansion joint, slab and backwall concrete within the limits shown will be considered completely covered by the contract unit price for Removal of Existing Expansion Joint & Adjacent Concrete.

For section thru Strip Seal at End Bent 1, see Sheet No. 6.

For section thru Strip Seal at End Bent 3, see Sheet No. 7.

Detailed Mar. 2017
Checked Apr. 2017

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DEAN DAVID FRANKE
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DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 8
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A02921

DESCRIPTION | DATE

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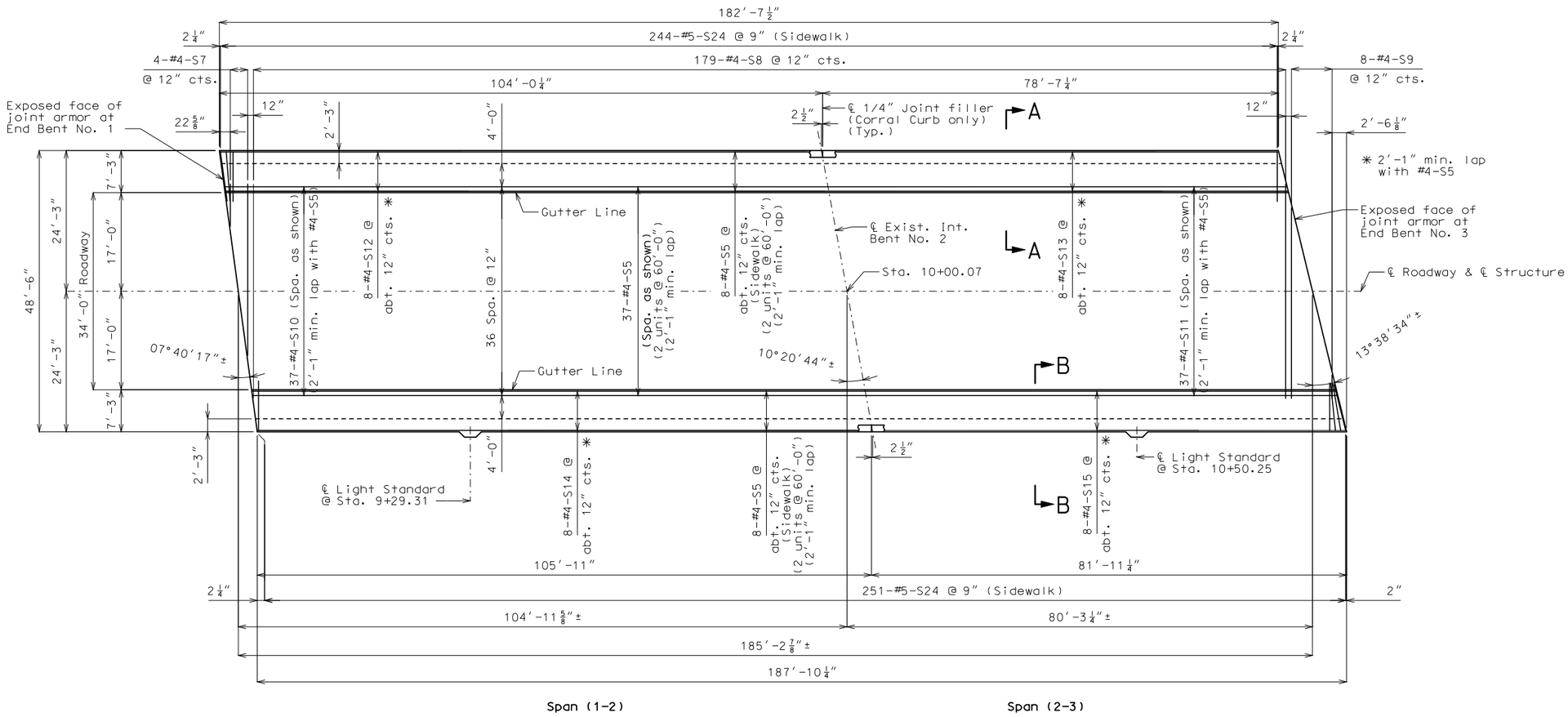

PLAN OF SLAB & SIDEWALK SHOWING TOP REINFORCEMENT

SLAB DETAILS

Note:
Work this sheet with Sheet No. 10 & 11.

For Details of Corral Curb, see Sheets No. 12-18.

For Section A-A & Section B-B, see Sheet No. 11.

Detailed Feb. 2017
Checked Apr. 2017

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STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

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DATE PREPARED
12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	9

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A02921

DATE	DESCRIPTION

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105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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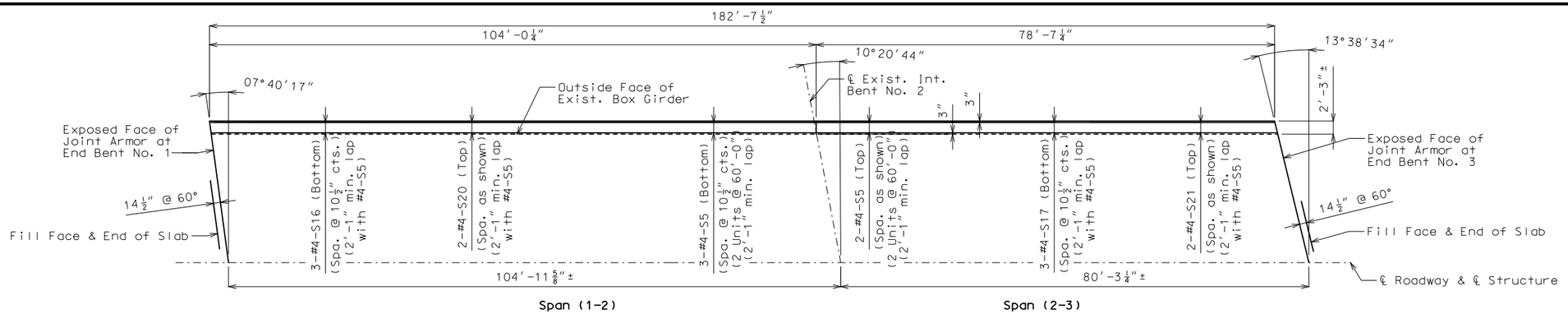
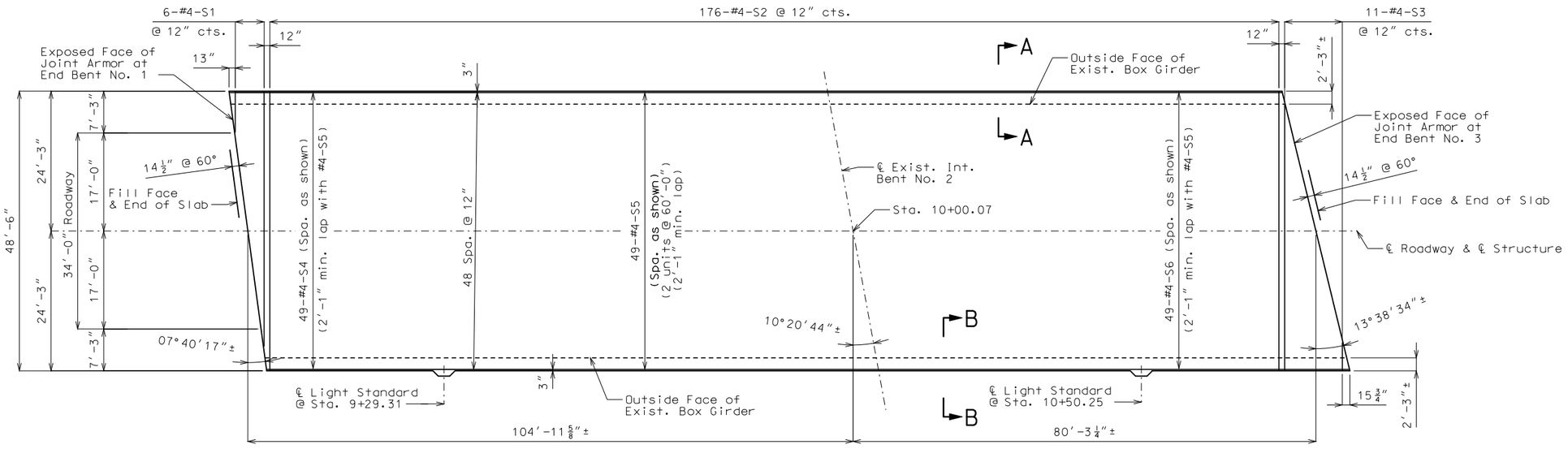


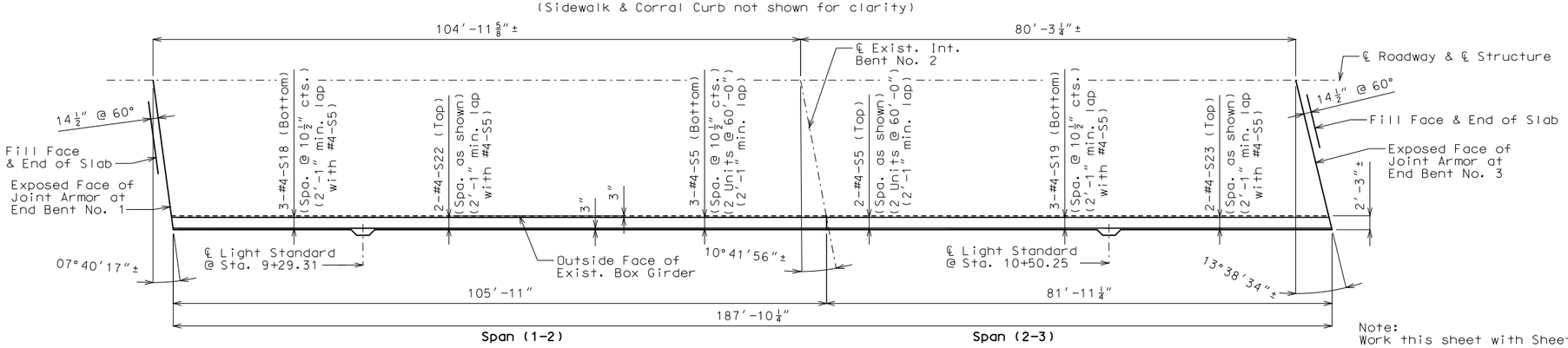
PLAN OF LEFT CANTILEVER SLAB SHOWING ADDITIONAL BOTTOM REINFORCEMENT

(Sidewalk & Corral Curb not shown for clarity)



PLAN OF SLAB SHOWING PART OF BOTTOM REINFORCEMENT

(Sidewalk & Corral Curb not shown for clarity)



PLAN OF RIGHT CANTILEVER SLAB SHOWING ADDITIONAL BOTTOM REINFORCEMENT

(Sidewalk & Corral Curb not shown for clarity)

SLAB DETAILS

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

Sheet No. 10 of 24

Note:
Work this sheet with Sheet No. 9 & 11.

For Details of Corral Curb, see Sheets No. 12-18.

For Section A-A & Section B-B, see Sheet No. 11.

Detailed Feb. 2017
Checked Apr. 2017

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

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DATE PREPARED: 12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	10

COUNTY: JACKSON

JOB NO.: J4I3198

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A02921

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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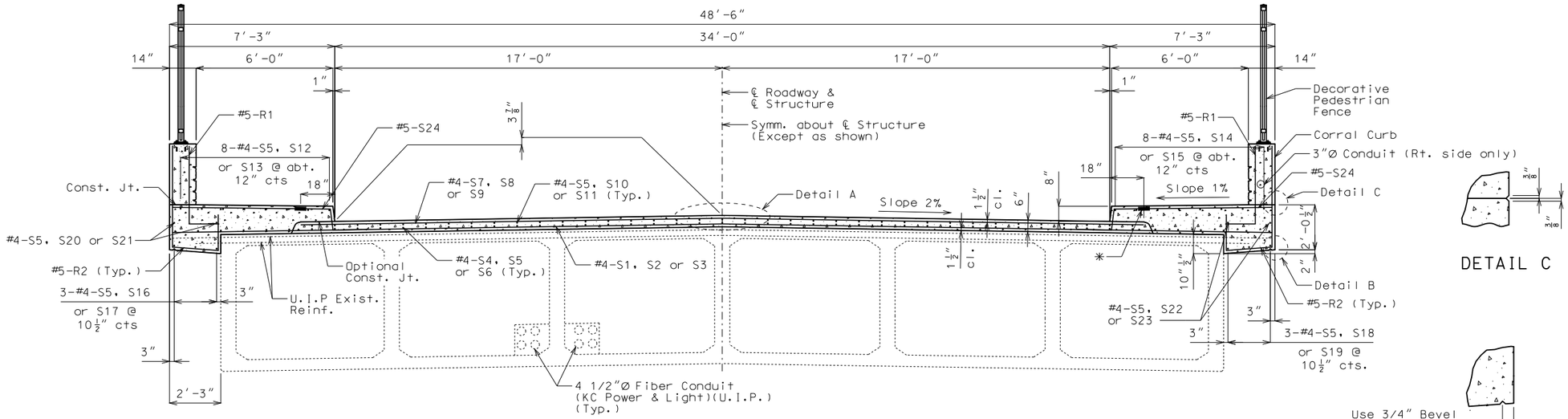
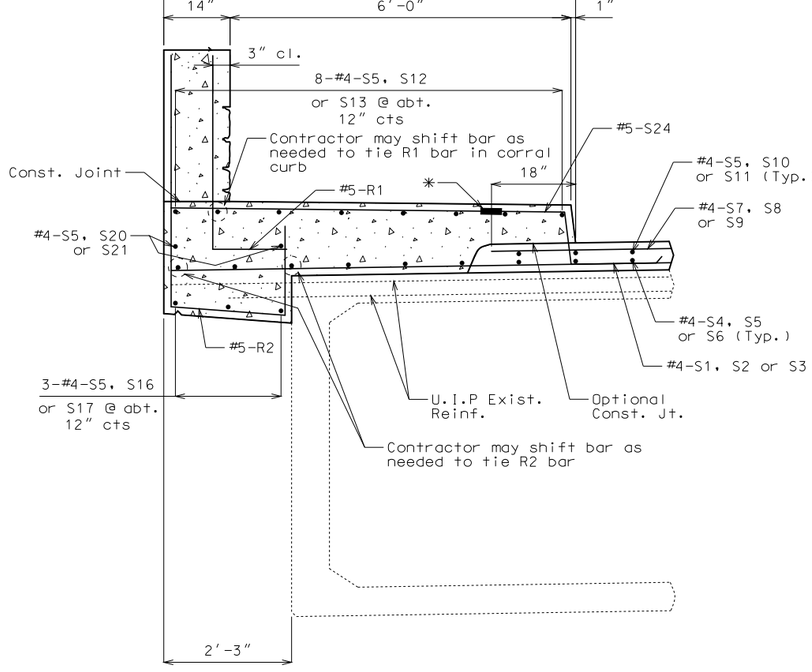
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



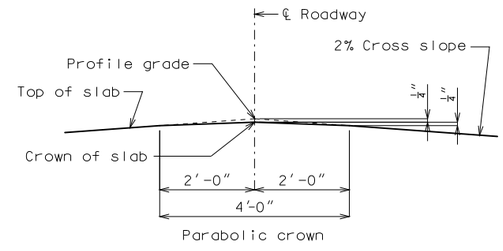
SECTION THRU SLAB SHOWING REINFORCEMENT

✳ Mechanical bar splices may be provided at no additional cost in lieu of #5-S24 bars with no splices.



SECTION A-A

(Pedestrian Fence not shown for clarity)



DETAIL A

Note:
Work this sheet with Sheets No. 8, 9 & 10.

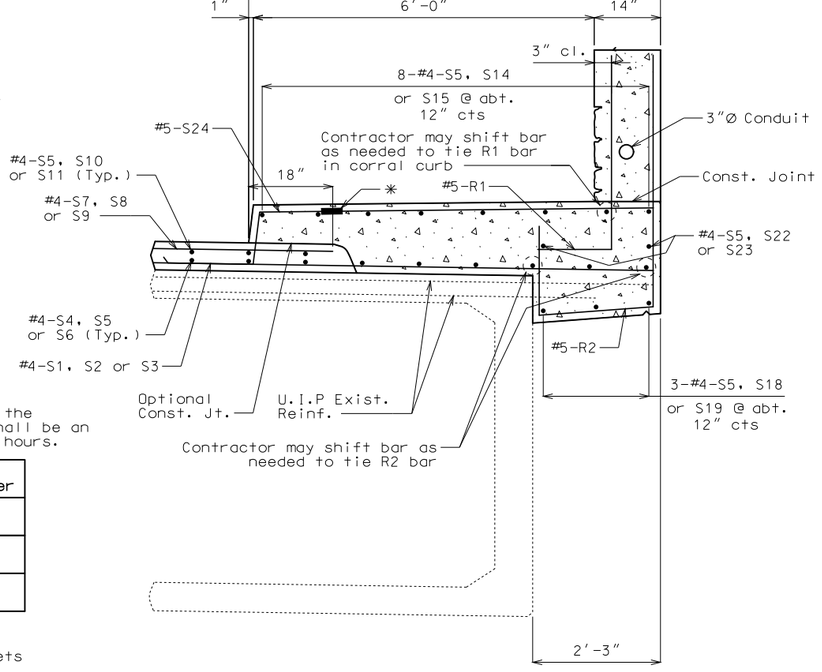
The contractor shall pour and satisfactorily finish the slab pours at the rate given. Retarder, if used, shall be an approved type and retard the set of concrete to 2.5 hours.

Min. Rate of Pour Cu. Yds./Hr.	Without Retarder	With Retarder
Slab and sidewalks (without optional consst. joint	Not allowed	46
Slab (with optional const. joint)	36	25
Sidewalk (Each)	25	25

For Details of Corral Curb, see Sheets No. 12-18.

For Details of Decorative Pedestrian Fence, see Sheets No. 19-21.

For location of Section A-A & B-B, see Sheet No. 8, 9 & 10.



SECTION B-B

(Pedestrian Fence not shown for clarity)

SLAB DETAILS

Detailed Feb. 2017
Checked Apr. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	11

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

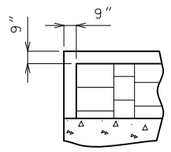
PROJECT NO.

BRIDGE NO. A02921

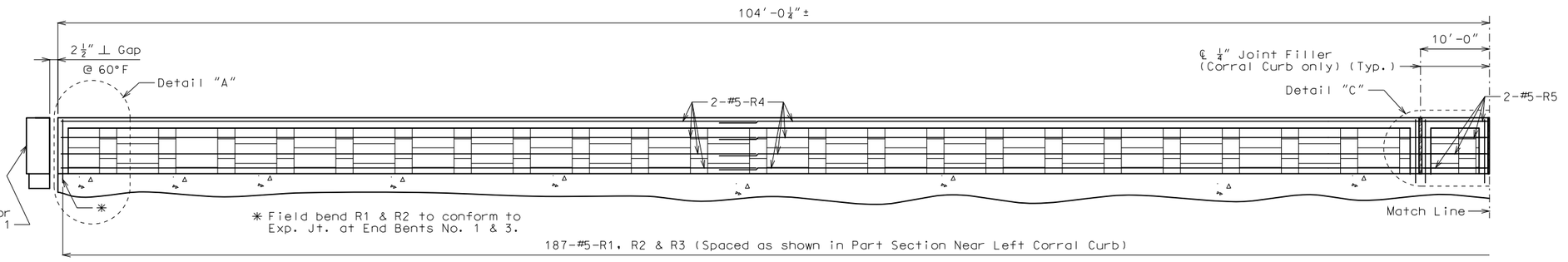
DESCRIPTION	DATE

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

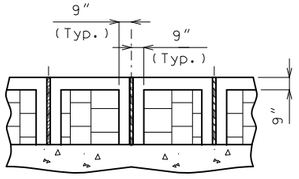
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



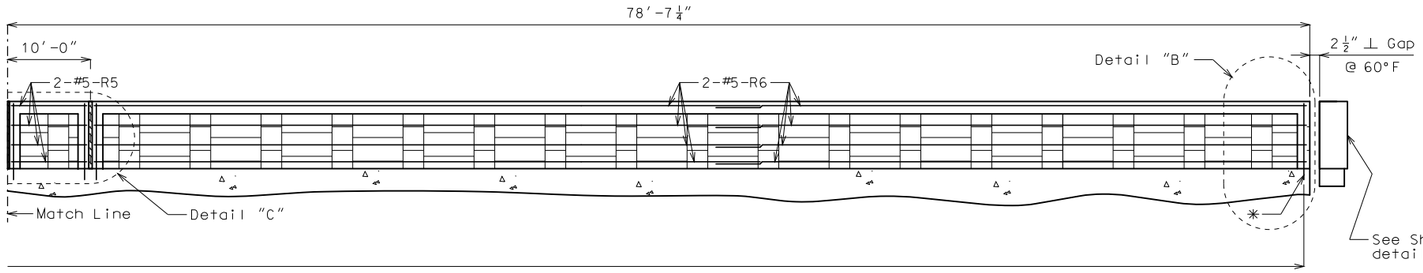
DETAIL "A"
Reinforcement not shown for clarity

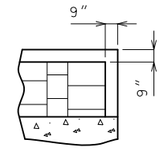


Span (1-2)



DETAIL "C"
Reinforcement not shown for clarity



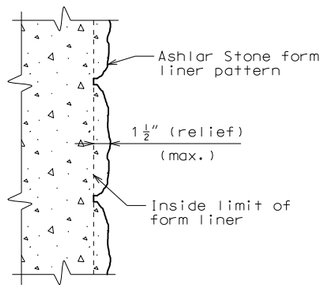


DETAIL "B"
Reinforcement not shown for clarity

Span (2-3)

SECTION NEAR LEFT CORRAL CURB

Note: Longitudinal dimensions are horizontal at outside face of Corral Curb.



TYPICAL PART SECTION AT FORM LINER

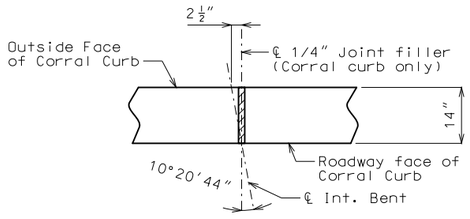
Notes:
The following is a list of form liner manufacturers and types which may be used. All form liner pattern's depth of relief shall vary up to 1 1/2". The height of any single 'stone' shall be 15" maximum.

Scott System, Inc.: Form liner pattern #167 "Ashlar Stone"

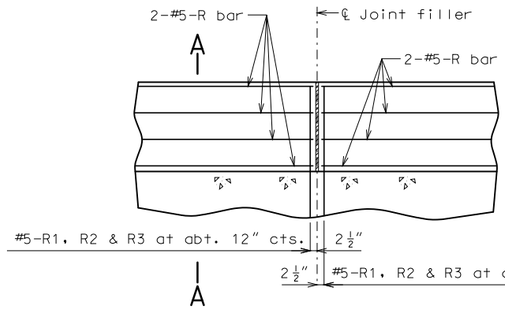
Fitzgerald formliners: Form liner pattern #16986 "Ashlar Stone"

Greenstreak: Form liner pattern #330 "Ashlar Stone"

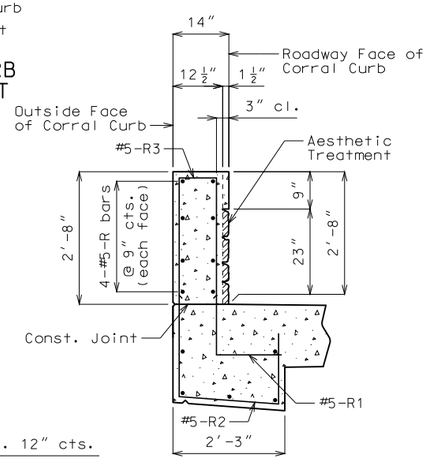
Dayton Superior/Symons: Form liner pattern #1515 "Ashlar Stone"



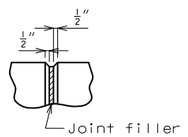
PART PLAN OF CORRAL CURB SHOWING JOINT FILLER AT INT. BENT NO. 2



PART SECTION NEAR LEFT CORRAL CURB



PART SECTION A-A
User a minimum lap of 3'-1" for #5 horizontal corral curb bars.



FILLED JOINT DETAIL

Notes:
Top of corral curb shall be built parallel to grade with corral curb joints (except at end bents) normal to grade.

All exposed edges of corral curb shall have either a 1/2" radius or a 3/8" bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for corral curb per linear foot.

Concrete in the corral curb shall be Class B-1.

Measurement of corral curb is to the nearest linear foot for each structure, measured along the outside of corral curb from end of wing to end of wing.

For Details of Corral Curb at End Bents not shown, see Sheet No. 14 & 15.

For Decorative Fence Post spacing, see Sheet No. 19.

For Details of Decorative Fencing, see Sheet No. 21.

The cross-sectional area above the slab = 2.88 sq. ft.

See Special Provisions for form liner specifications.

DETAILS OF LEFT CORRAL CURB

Detailed Feb. 2017
Checked Apr. 2017

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

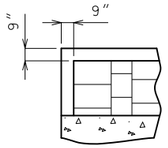
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 12
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A02921

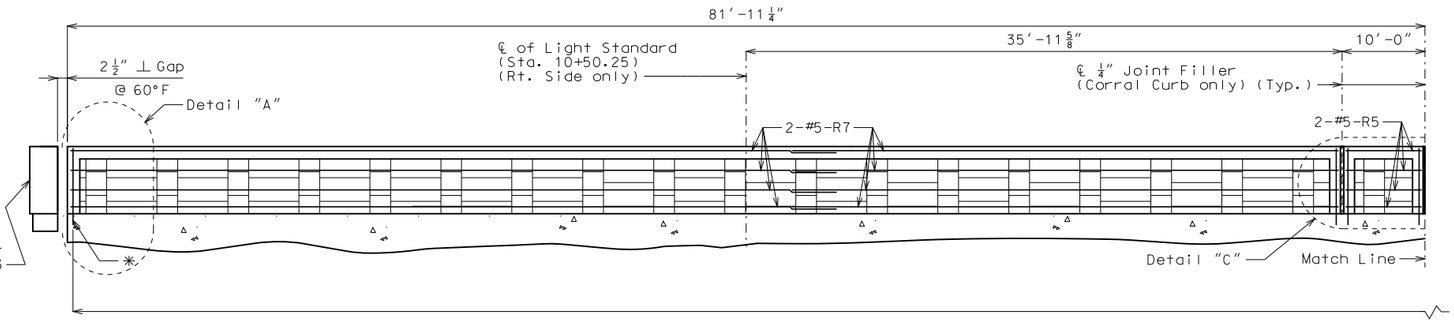
DESCRIPTION | DATE

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

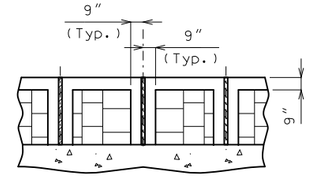
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



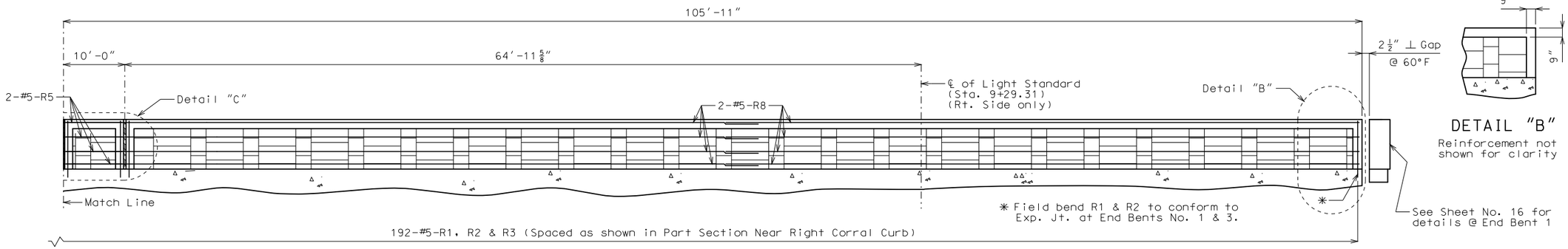
DETAIL "A"
Reinforcement not shown for clarity



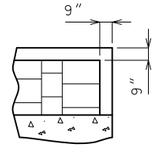
Span (3-2)



DETAIL "C"
Reinforcement not shown for clarity



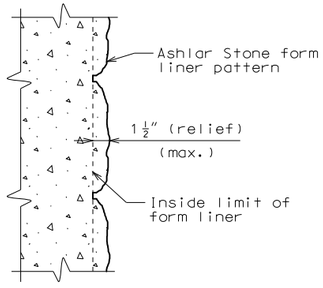
Span (2-1)



DETAIL "B"
Reinforcement not shown for clarity

SECTION NEAR RIGHT CORRAL CURB

Note: Longitudinal dimensions are horizontal at outside face of corral curb.



TYPICAL PART SECTION AT FORM LINER

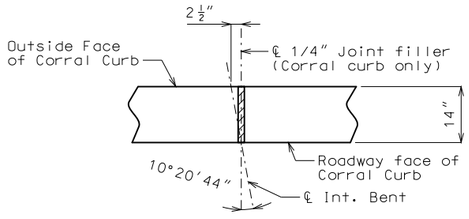
Notes:
The following is a list of form liner manufacturers and types which may be used. All form liner pattern's depth of relief shall vary up to 1 1/2". The height of any single 'stone' shall be 15" maximum.

Scott System, Inc.: Form liner pattern #167 "Ashlar Stone"

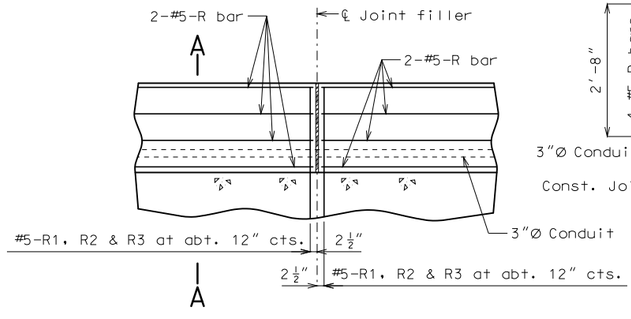
Fitzgerald formliners: Form liner pattern #16986 "Ashlar Stone"

Greenstreak: Form liner pattern #330 "Ashlar Stone"

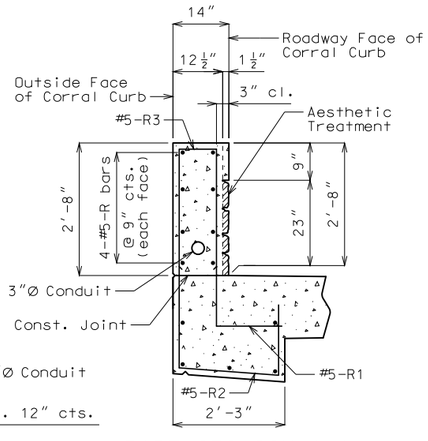
Dayton Superior/Symons: Form liner pattern #1515 "Ashlar Stone"



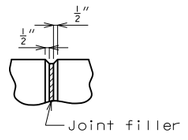
PART PLAN OF CORRAL CURB SHOWING JOINT FILLER AT INT. BENT NO. 2



PART SECTION NEAR RIGHT CORRAL CURB



PART SECTION A-A
User a minimum lap of 3'-1" for #5 horizontal corral curb bars.



FILLED JOINT DETAIL

Notes:
Top of corral curb shall be built parallel to grade with corral curb joints (except at end bents) normal to grade.

All exposed edges of corral curb shall have either a 1/2" radius or a 3/8" bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for corral curb per linear foot.

Concrete in the corral curb shall be Class B-1.

Measurement of corral curb is to the nearest linear foot for each structure, measured along the outside of corral curb from end of wing to end of wing.

For Details of Corral Curb at End Bents not shown, see Sheet No. 16 & 17.

For Light Standard mounting, see Sheet No. 18.

For Decorative Fence Post spacing, see Sheet No. 20.

For Details of Decorative Fencing, see Sheet No. 21.

For Conduit System details, see Sheet No. 22.

The cross-sectional area above the slab = 2.88 sq. ft.

See Special Provisions for form liner specifications.

DETAILS OF RIGHT CORRAL CURB

Detailed Feb. 2017
Checked Apr. 2017

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

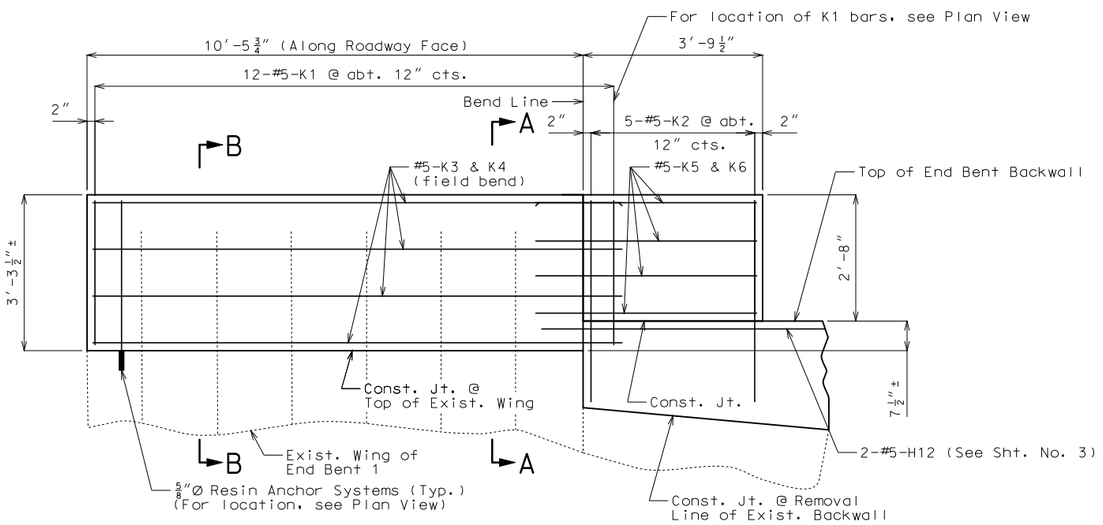
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 13
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A02921

DESCRIPTION | DATE

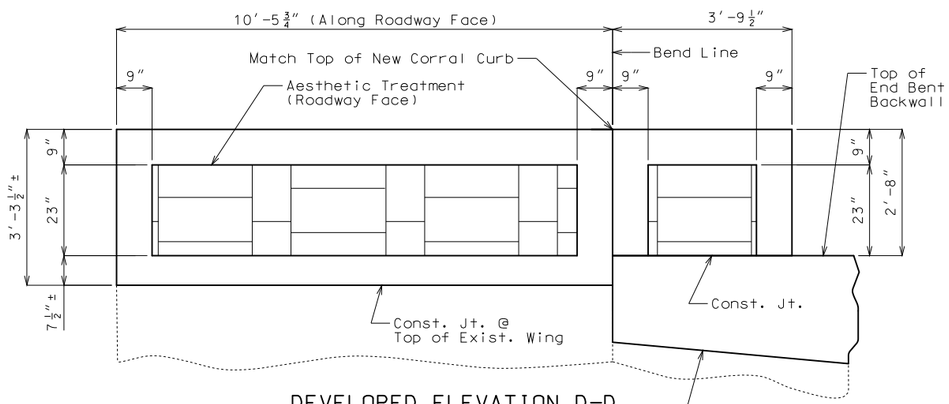
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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



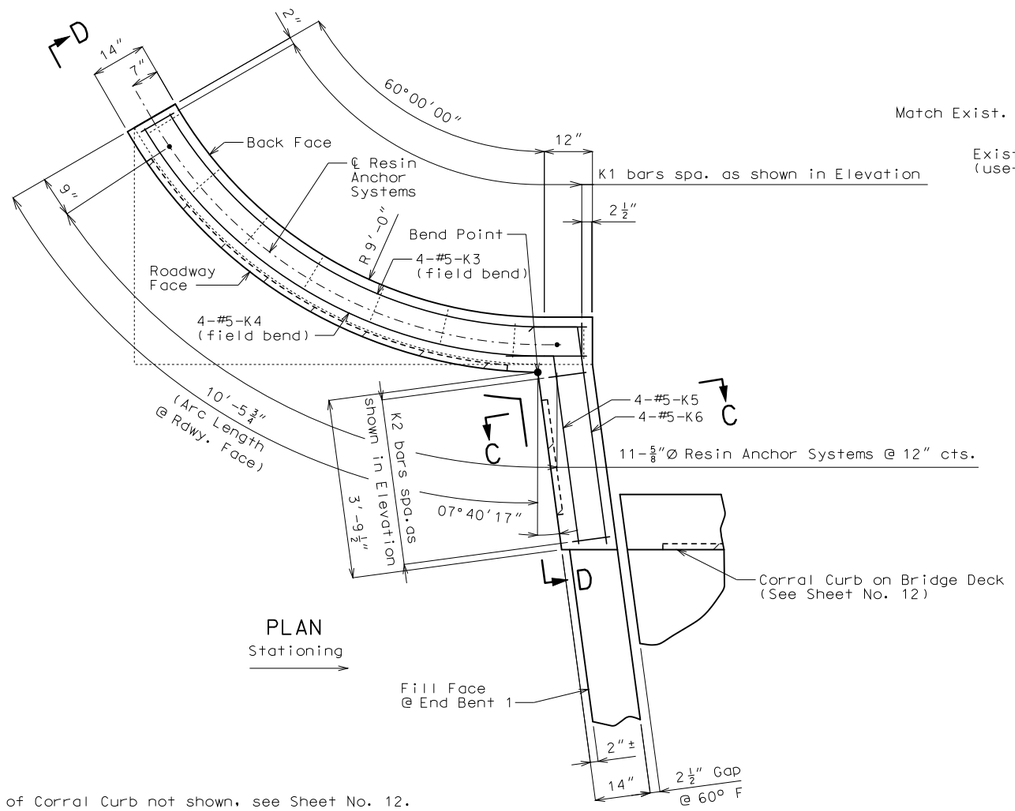
DEVELOPED ELEVATION D-D SHOWING REINFORCEMENT

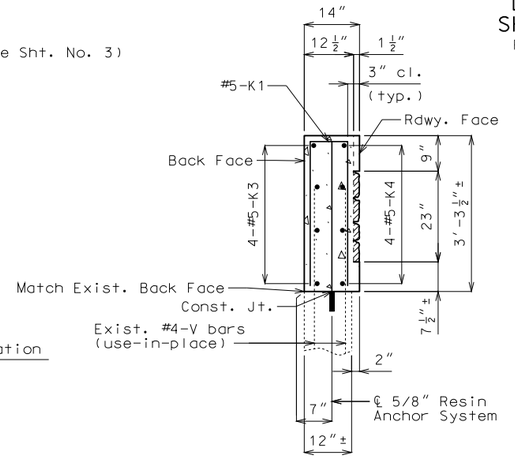
Form liner not shown for clarity.



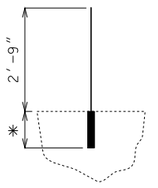
DEVELOPED ELEVATION D-D SHOWING FORM LINER DETAIL

Reinforcement not shown for clarity.





SECTION A-A



* Manufacturer's recommendaton

Total Req'd = 11 for Left Corral Curb at End Bent 1
Total Length = 2′-9″ + embedment

DETAIL OF RESIN ANCHOR SYSTEM

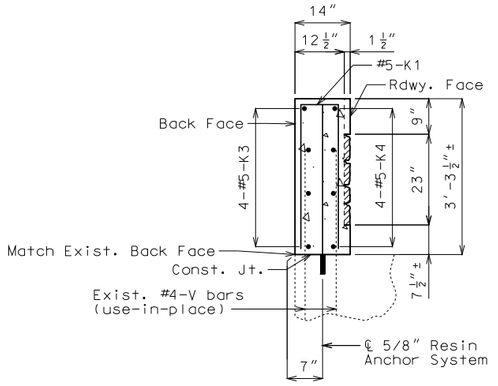
Resin Anchor Notes:

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

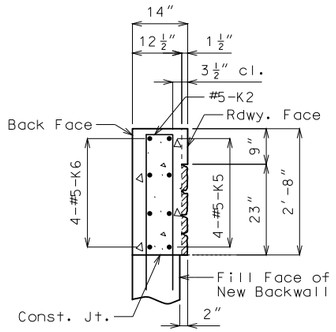
Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Corral Curb.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



SECTION B-B



SECTION C-C

Notes:

For details of Corral Curb not shown, see Sheet No. 12.

For details of Aesthetic Treatment, see Sheet No. 12.

For Decorative Fence Post spacing, see Sheet No. 19.

For details of Decorative Ornamental Pedestrian Fence, see Sheet No. 21.

Detailed Mar. 2017
Checked Apr. 2017

DETAILS OF LEFT CORRAL CURB AT END BENT NO. 1

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

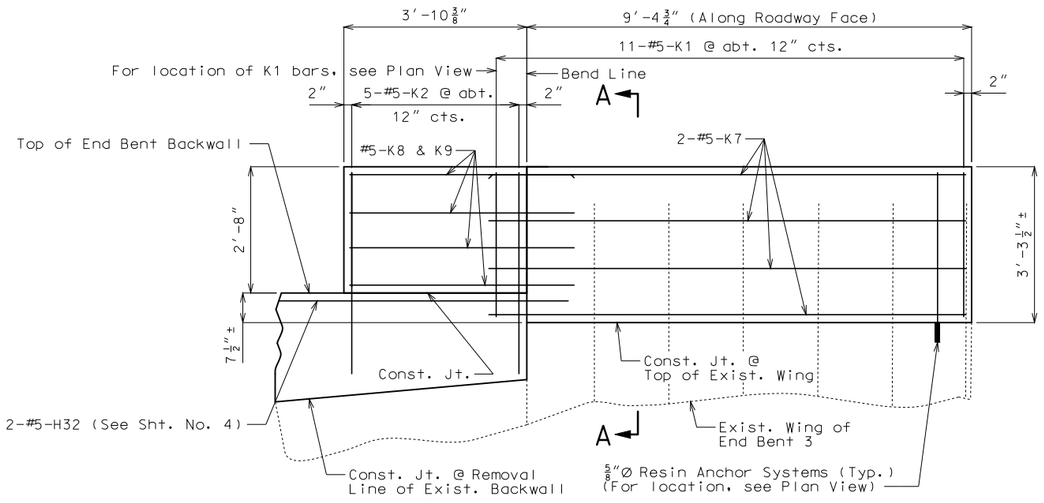
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 14
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A02921

DATE | DESCRIPTION

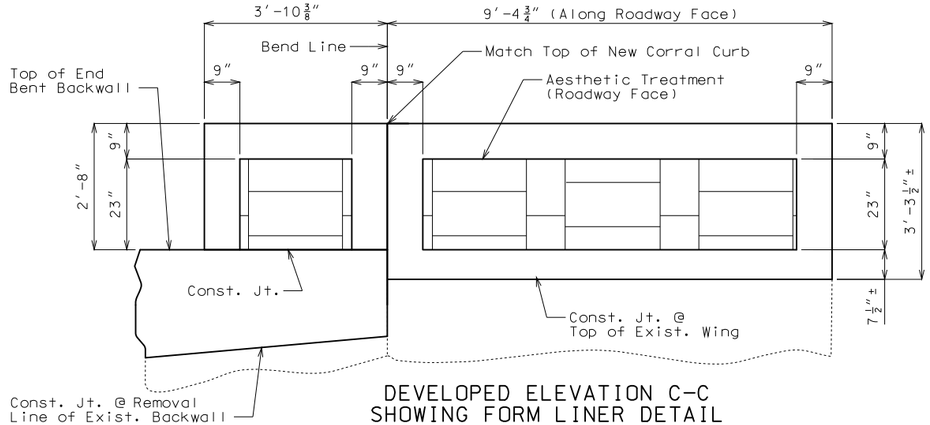
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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



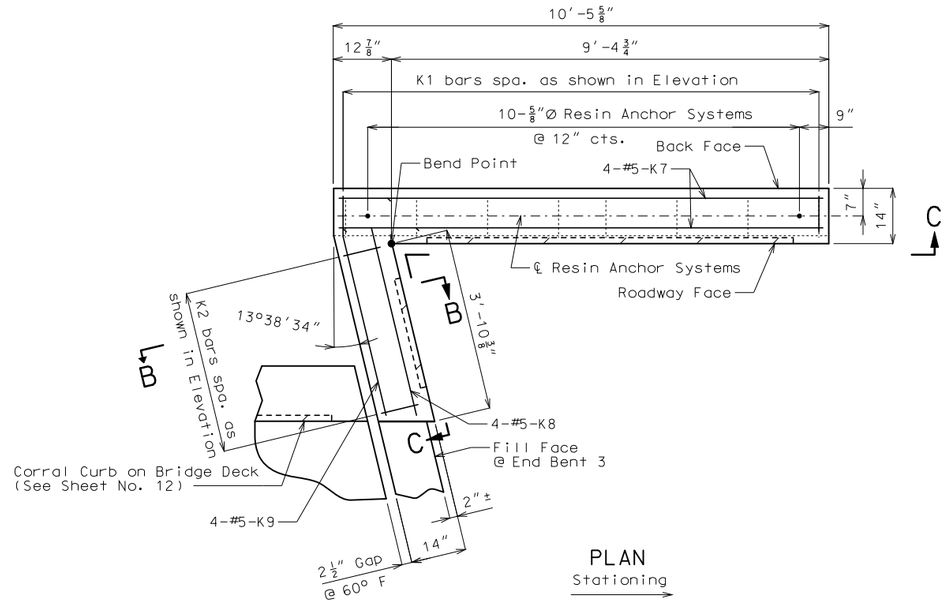
DEVELOPED ELEVATION C-C SHOWING REINFORCEMENT

Form liner not shown for clarity.



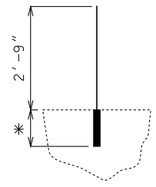
DEVELOPED ELEVATION C-C SHOWING FORM LINER DETAIL

Reinforcement not shown for clarity.



PLAN

Stationing



* Manufacturer's recommendaton

Total Req'd = 10 for Left Corral Curb at End Bent 3
Total Length = 2′-9″ + embedment

DETAIL OF RESIN ANCHOR SYSTEM

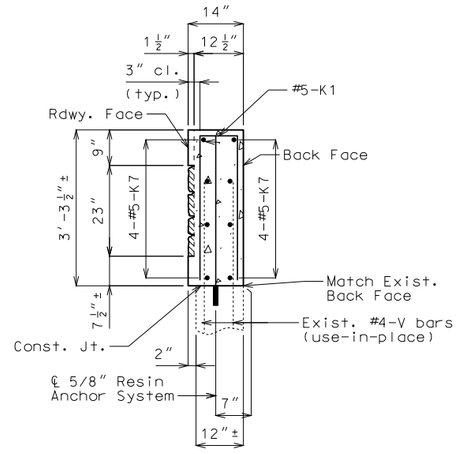
Resin Anchor Notes:

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

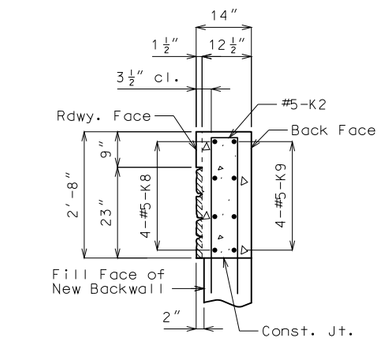
Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Corral Curb.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



SECTION A-A



SECTION B-B

Notes:
For details of Corral Curb not shown, see Sheet No. 12.

For details of Aesthetic Treatment, see Sheet No. 12.

For Decorative Fence Post spacing, see Sheet No. 19.

For details of Decorative Pedestrian Fence, see Sheet No. 21.

DETAILS OF LEFT CORRAL CURB AT END BENT NO. 3

Detailed Aug. 2017
Checked Sep. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	15

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

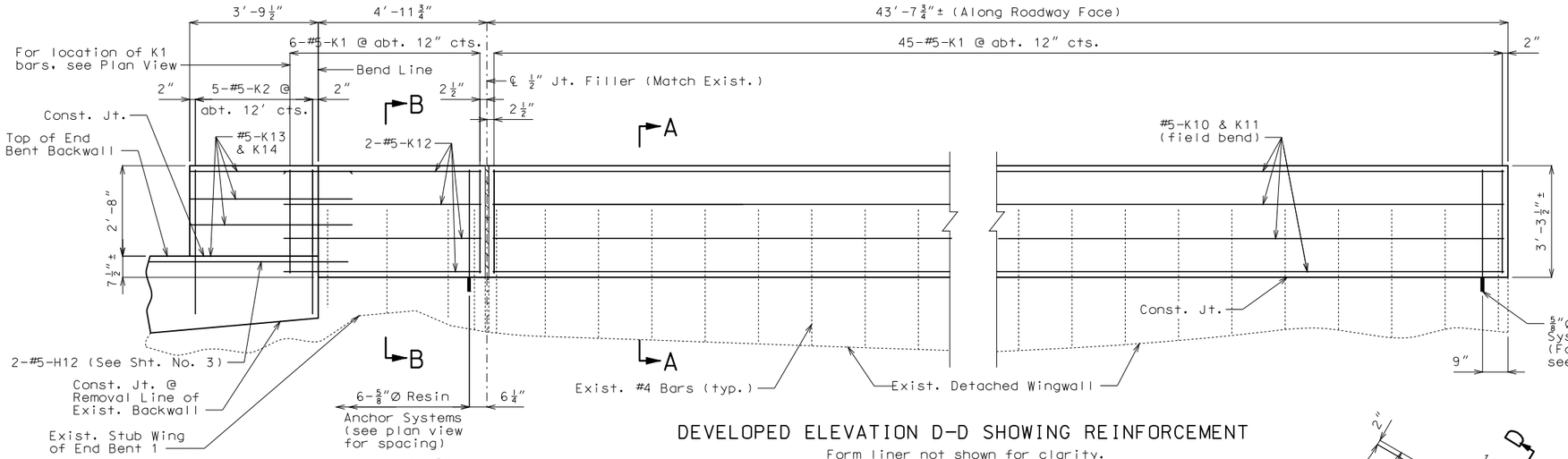
PROJECT NO.

BRIDGE NO.
A02921

DESCRIPTION	DATE

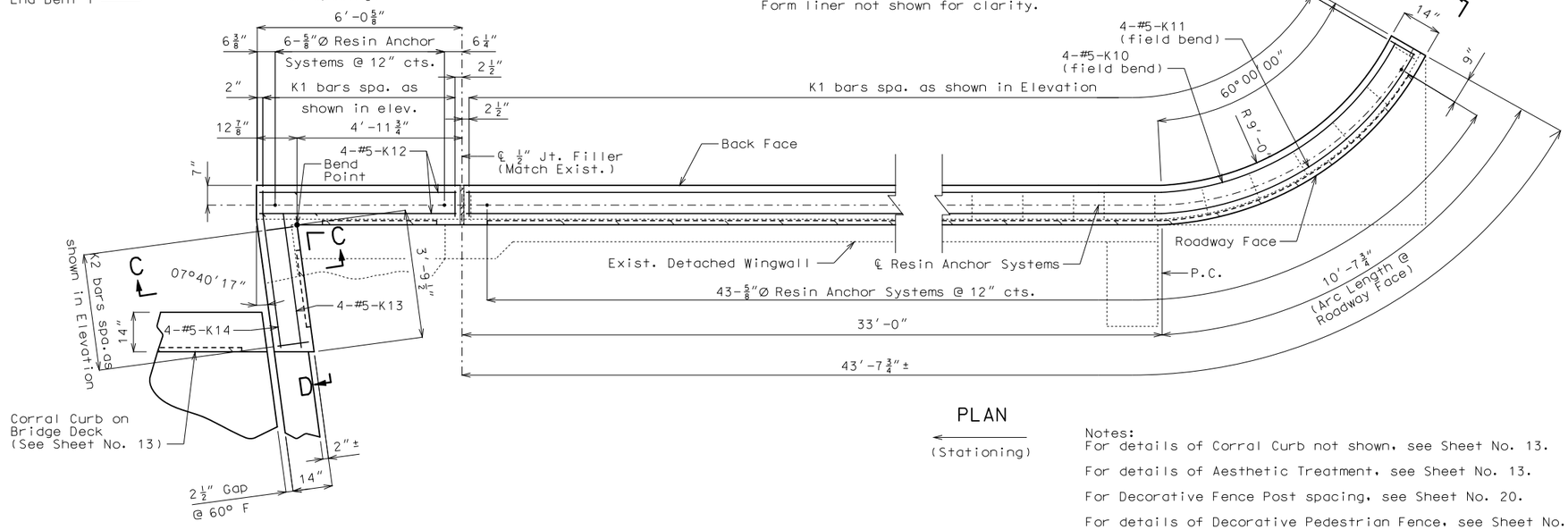
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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



DEVELOPED ELEVATION D-D SHOWING REINFORCEMENT

Form liner not shown for clarity.



PLAN

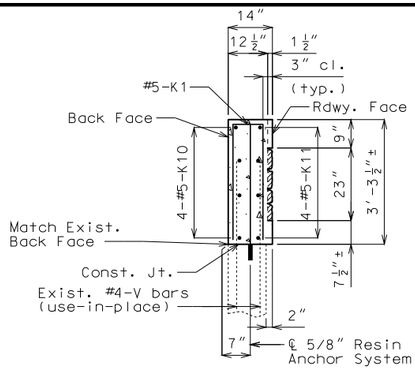
(Stationing)

Notes:
For details of Corral Curb not shown, see Sheet No. 13.

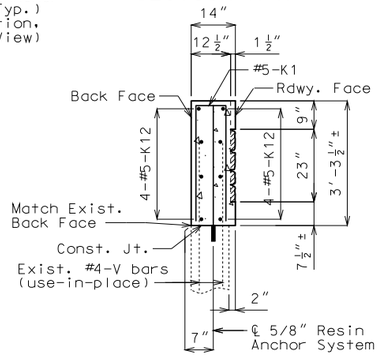
For details of Aesthetic Treatment, see Sheet No. 13.

For Decorative Fence Post spacing, see Sheet No. 20.

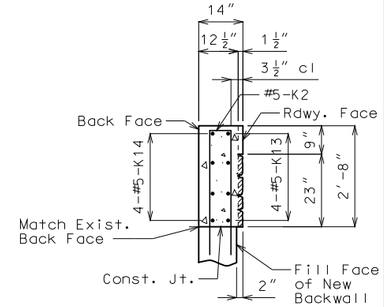
For details of Decorative Pedestrian Fence, see Sheet No. 21.



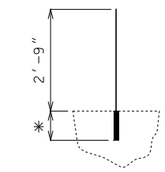
SECTION A-A



SECTION B-B



SECTION C-C



✳ Manufacturer's recommendaton

Total Req'd = 49 for Right Corral Curb at End Bent 1

Total Length = 2′-9″ + embedment

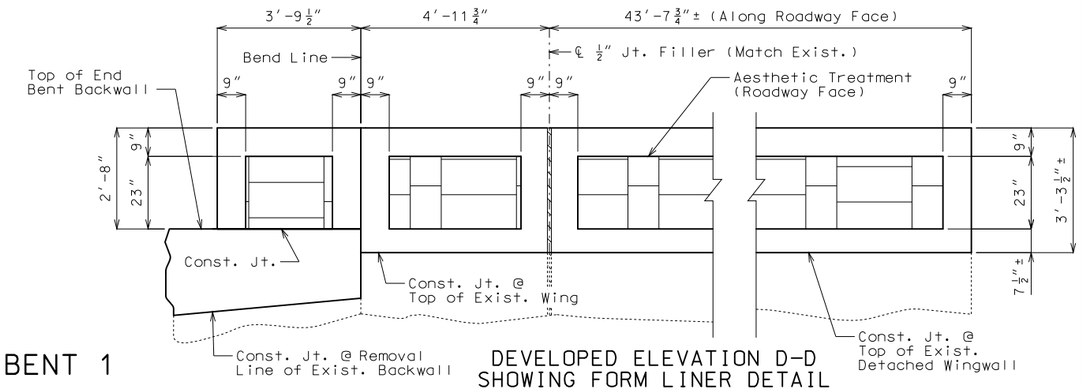
Resin Anchor Notes:

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

Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Corral Curb.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



DEVELOPED ELEVATION D-D SHOWING FORM LINER DETAIL

Reinforcement not shown for clarity.

DETAIL OF RESIN ANCHOR SYSTEM

DETAILS OF RIGHT CORRAL CURB AT END BENT 1

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

Detailed Mar. 2017
Checked Apr. 2017

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	16

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

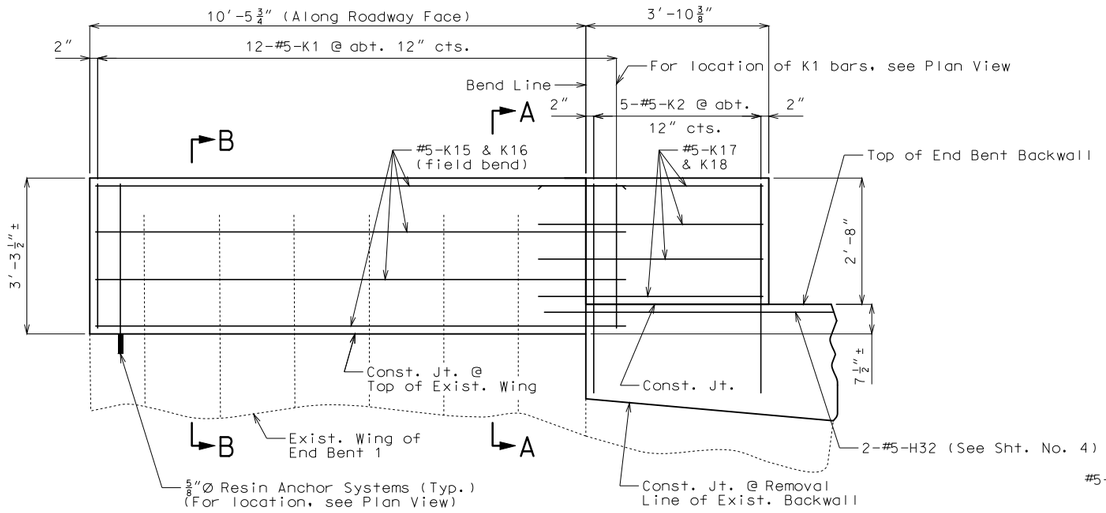
PROJECT NO.

BRIDGE NO. A02921

DESCRIPTION	DATE

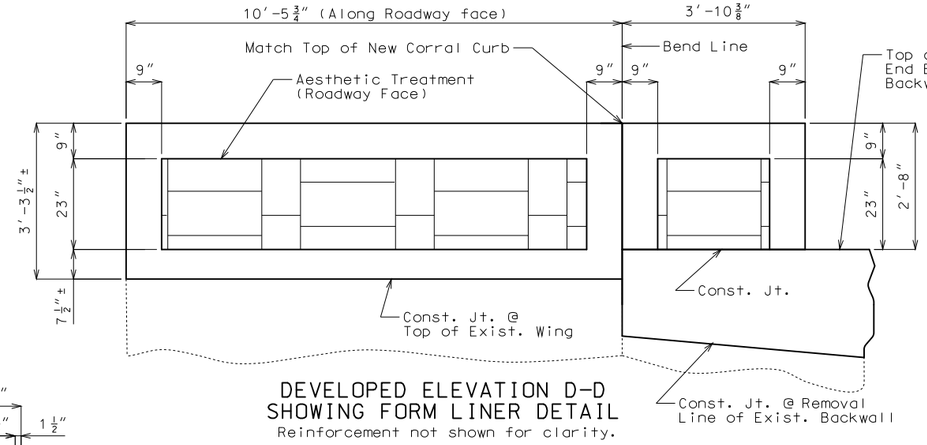
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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



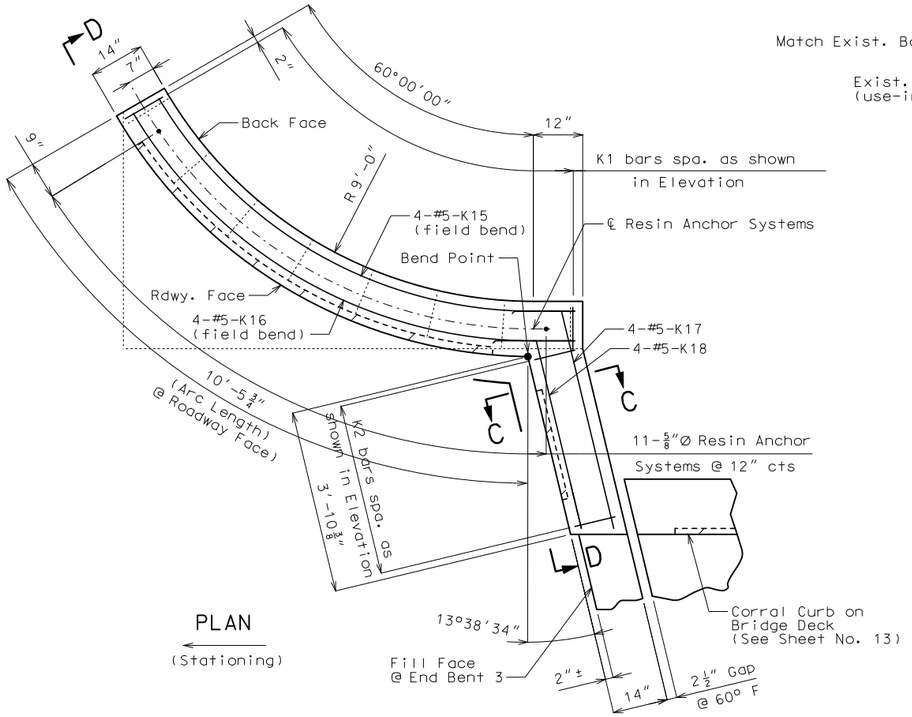
DEVELOPED ELEVATION D-D SHOWING REINFORCEMENT

Form liner not shown for clarity.



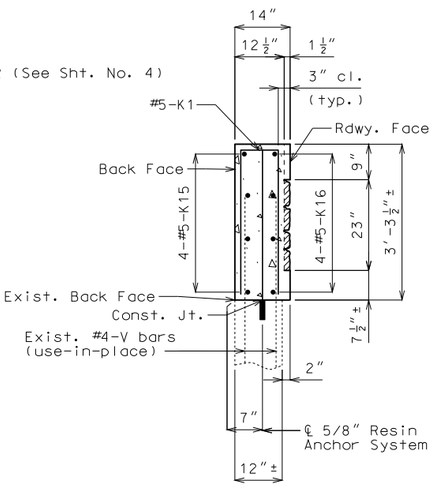
DEVELOPED ELEVATION D-D SHOWING FORM LINER DETAIL

Reinforcement not shown for clarity.

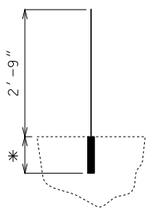


PLAN

(Stationing)



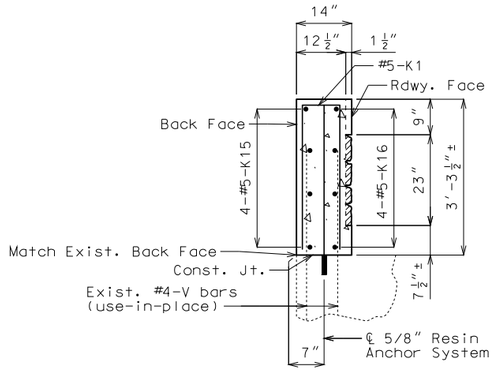
SECTION A-A



* Manufacturer's recommendaton

Total Req'd = 11 for Right Corral Curb at End Bent 3

Total Length = 2′-9″ + embedment



SECTION B-B

DETAIL OF RESIN ANCHOR SYSTEM

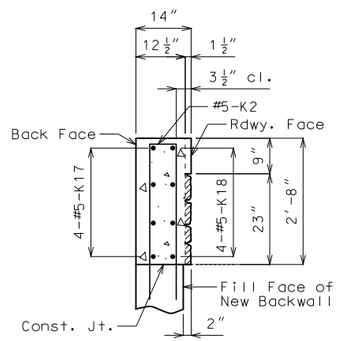
Resin Anchor Notes:

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

Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Corral Curb.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



SECTION C-C

Notes:
For details of Corral curb not shown, see Sheet No. 13.

For details of Aesthetic Treatment, see Sheet No. 13.

For Decorative Fence Post spacing, see Sheet No. 20.

For details of Decorative Pedestrian Fence, see Sheet No. 21.

DETAILS OF RIGHT CORRAL CURB AT END BENT 3

Detailed Aug. 2017
Checked Sep. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	17

COUNTY: JACKSON

JOB NO.: J4I3198

CONTRACT ID.:

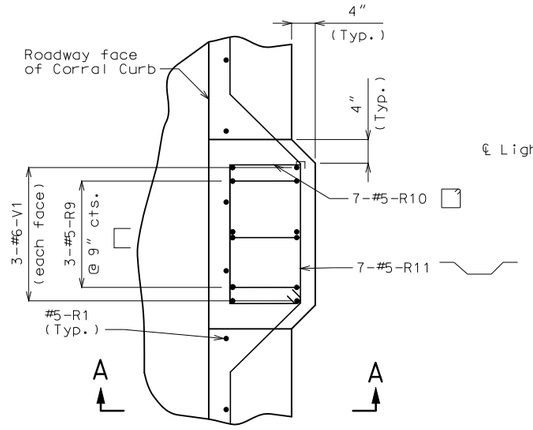
PROJECT NO.:

BRIDGE NO.: A02921

DATE	DESCRIPTION

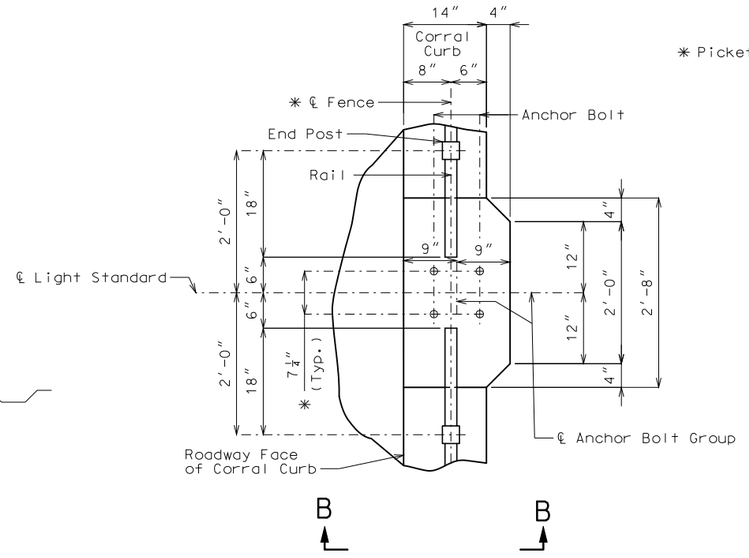
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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



PART PLAN SHOWING REINFORCEMENT

(Conduit & fence not shown for clarity)

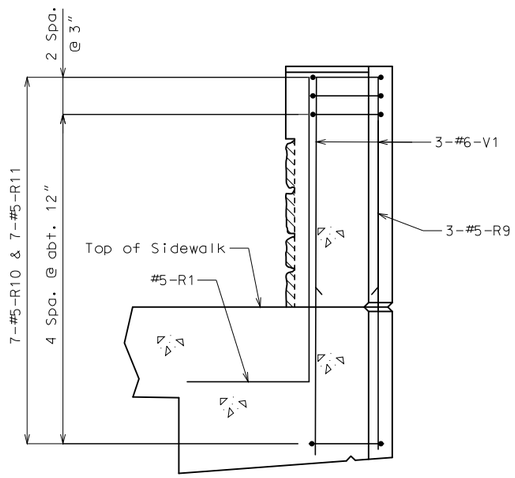


PART PLAN SHOWING ANCHOR BOLTS AND FENCE

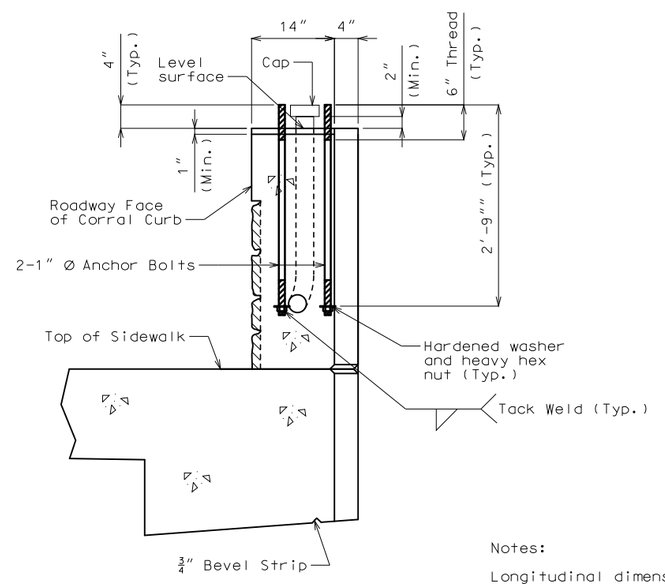
(Conduit not shown for clarity)

* match existing light pole

* Pickets not shown for clarity



SECTION A-A



SECTION B-B

Notes:

Longitudinal dimensions are horizontal.

Anchor bolts and nuts shall be ASTM A449. Anchor bolts, nuts and washers shall be fully galvanized.

Cost of furnishing and placing anchor bolts for light standard will be considered completely covered by the contract unit price for other items.

Light standards, wiring and fixtures shall be furnished and installed by others.

Top of light standard supports shall be made horizontal; anchor bolts shall be placed vertically.

For Details of Conduit System on Structure, see Sheet No. 22.

For Pedestrian Fence Post Locations, see Sheets No. 19 & 20.

For Pedestrian Fence details, see Sheet No. 21.

DETAILS OF LIGHT STANDARD MOUNTING ON RIGHT CORRAL CURB (2 Req'd)

Detailed Mar. 2017
Checked Apr. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	18

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

PROJECT NO.

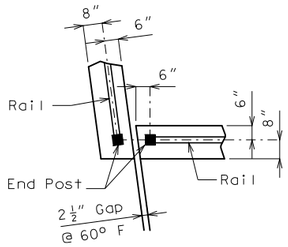
BRIDGE NO. A02921

DESCRIPTION	DATE

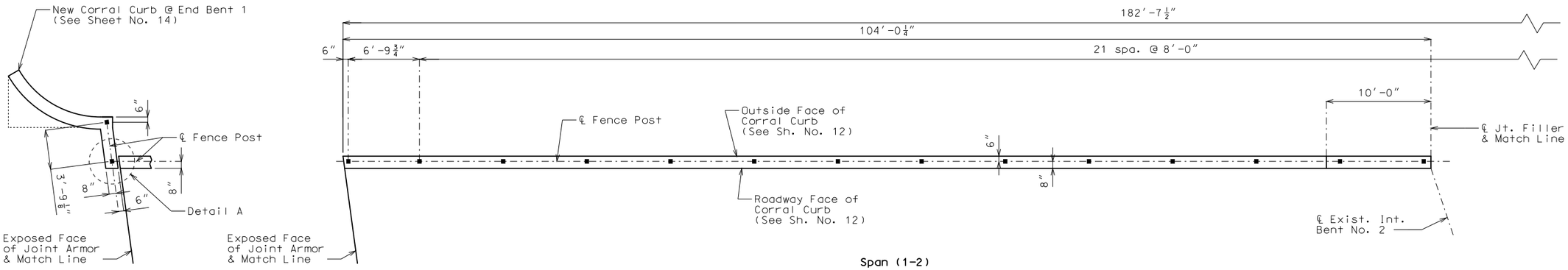
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

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



DETAIL A



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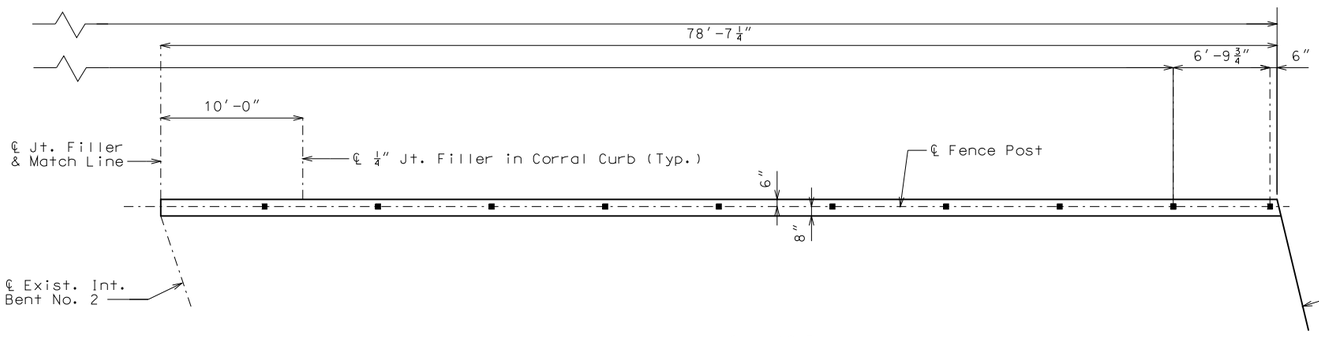

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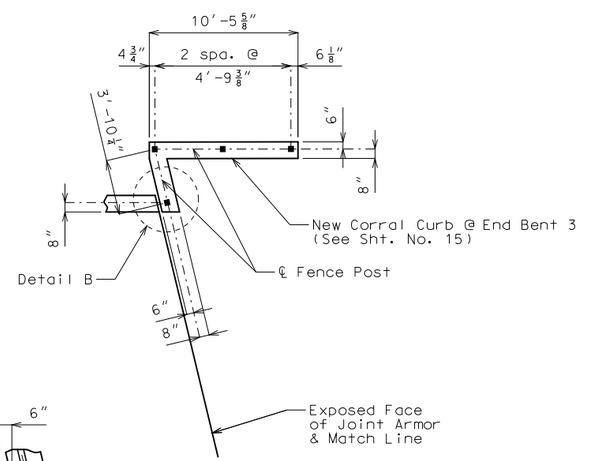
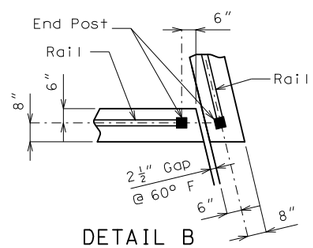


PLAN OF LEFT CORRAL CURB SHOWING FENCE POST SPACING



DETAIL B

LEFT DECORATIVE PEDESTRIAN FENCE DETAILS

Notes:
For Decorative Pedestrian Fence Details, see Sheet No. 21.

For Details of Corral Curb, see Sheets No. 12, 14 & 15.

Detailed Feb. 2017
Checked Apr. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	19

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A02921

DESCRIPTION	DATE

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

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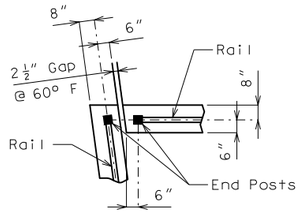
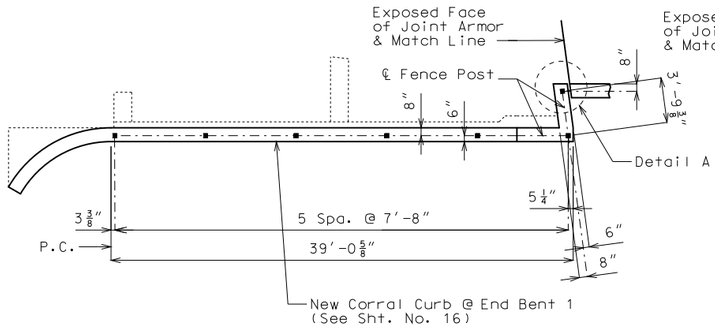
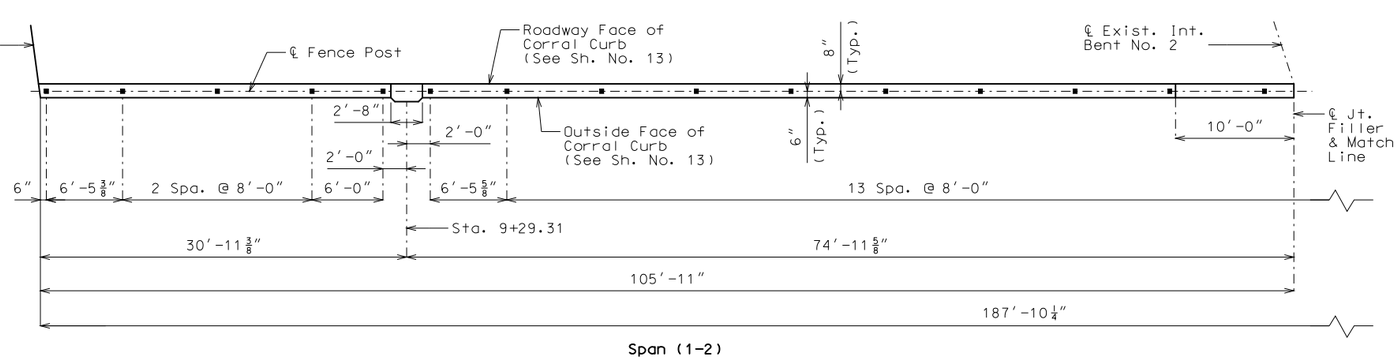
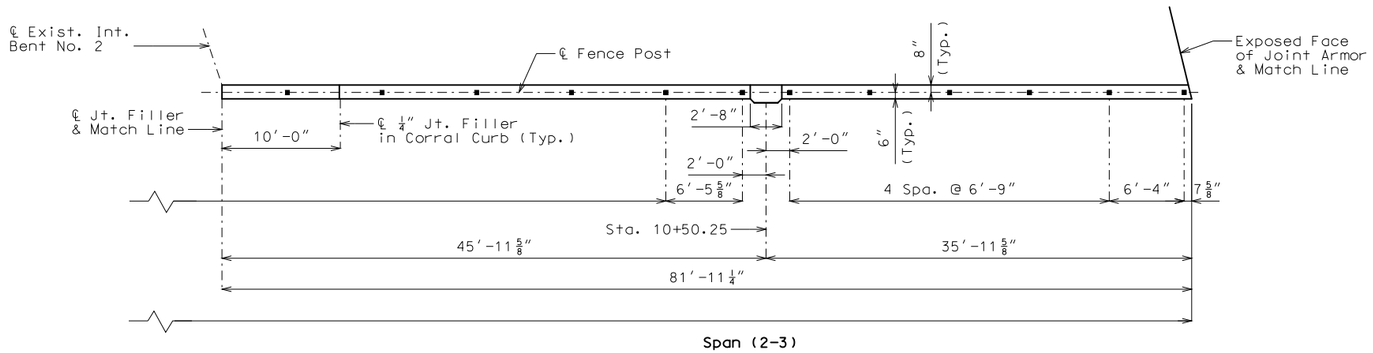


DETAIL A



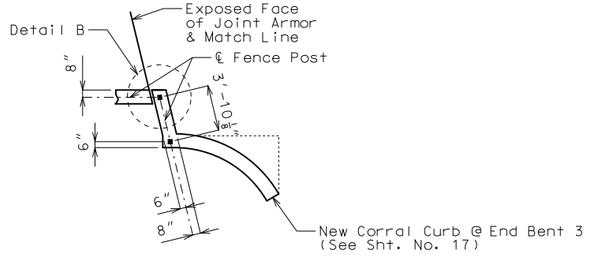


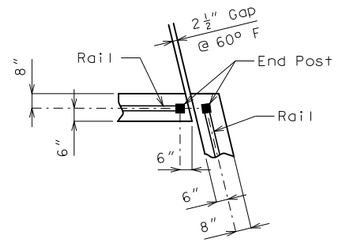
Span (1-2)



Span (2-3)

PLAN OF RIGHT CORRAL CURB SHOWING FENCE POST SPACING





DETAIL B

RIGHT DECORATIVE PEDESTRIAN FENCE DETAILS

Notes:
For Decorative Pedestrian Fence Details, see Sheet No. 21.

For Details of Corral Curb, see Sheets No. 13, 16, 17 & 18.

Detailed Sep. 2017
Checked Sep. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	20

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A02921

DESCRIPTION	DATE

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

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

Notes:

Decorative pedestrian fencing shall be in accordance with 2010 AASHTO LRFD Bridge Design Specifications and 2010 Interim Revisions. The design line load for pedestrian railings will not require a 50lb/ft and 200lb load be applied simultaneously. The posts of pedestrian railing will require both loadings applied simultaneously.

Fence shall have a gloss black finish (Federal Standard #17038) System "G" in accordance with Sec 1081.

Base plate shall be ASTM A709, Grade 36.

Dimensions of pedestrian fence are measured horizontally.

Measurement of pedestrian fence will be made to the nearest linear foot along centerline fence.

Payment for furnishing and erecting the fence, complete in place, with U-Bolts, washers and reinforcing bars will be considered completely covered by the contract unit price for 72" Decorative Pedestrian Fence (Structures).

All fence posts shall be vertical.

Substitution for the U-bolt cages on the decorative pedestrian fence will not be permitted.

Mortar shall be placed under the post base plates in accordance with Sec 1066.

Contractor shall submit complete detailed shop drawings in accordance with Sec 1080.

The contractor shall have the decorative pedestrian fencing manufacturer submit structural design computations signed and sealed by a registered professional engineer in the State of Missouri.

All materials used in fabrication and construction of the decorative pedestrian fencing shall be in accordance with the manufacturer's specifications, except as modified in the contract documents.

Decorative pedestrian fencing system shall be supplied by only one of the manufacturers. Fencing system shall include all components except the anchor bolts and #4 bars welded to the anchor bolts. The assembly of the pickets to the rails and the rails to the posts shall be the same as the style mentioned for the manufacturer.

Ameristar Fence Products, Inc.
1555 N. Mingo
Tulsa, OK. 74116
(800) 321-8724
www.ameristarfence.com

Style: AEGIS II Majestic

Betafence USA
3309 S.W. Interstate 45
Ennis, TX. 75119
(888) 650-4766
www.betafenceusa.com

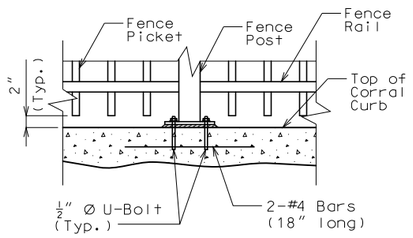
Style: UpGrade-I Landmark

Iron Eagle Industries, Inc.
1256 Cardiff Blvd.
Mississauga, Ontario Canada L5S1R1
(905) 670-2558
www.ironeagleind.com

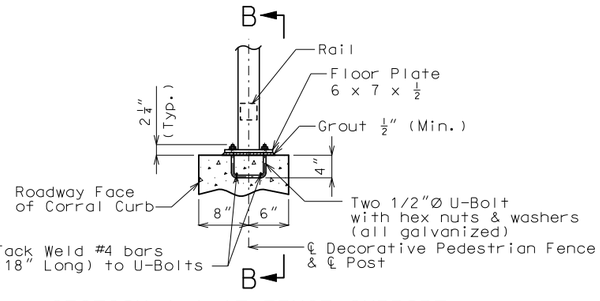
Style: Silver Eagle II

Merchants Metals
6575 Romiss Court
St. Louis, MO 63134
(800) 293-3363
www.merchantsmetals.com

Style: Guardsman Monroe



SECTION B-B AT SUPPORT

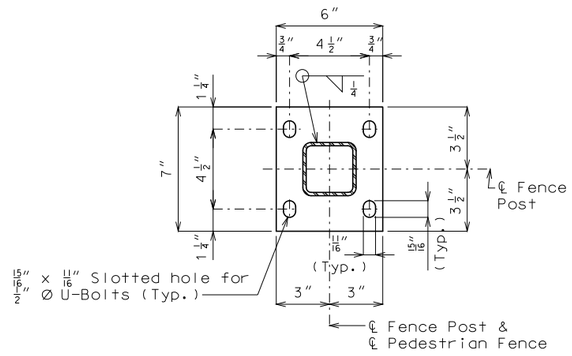


SECTION A-A AT FENCE SUPPORT

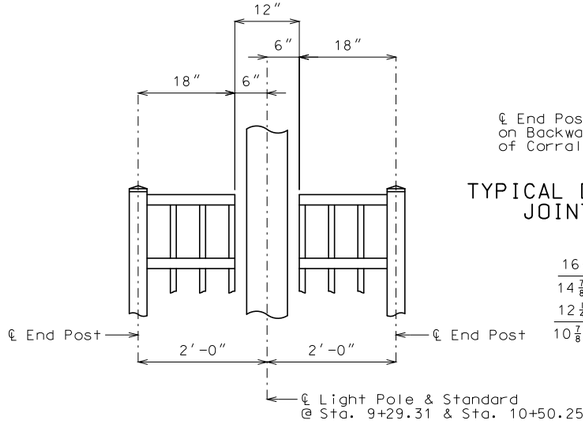
Note: Reinforcement not shown for clarity.

Notes:
For Part Plans of Corral Curb Showing Fence Post Spacing, see Sheet No. 19 & 20.

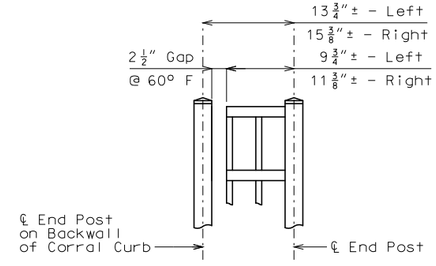
For Details of Corral Curb, see Sheets No. 12-18.



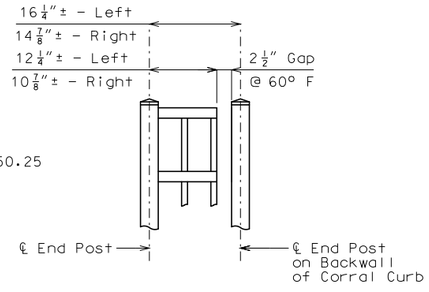
PLAN OF FLOOR PLATE



TYPICAL DETAIL OF FENCE AT LIGHT STANDARDS



TYPICAL DETAIL OF FENCE AT EXPANSION JOINTS AT END BENT NO. 1



TYPICAL DETAIL OF FENCE AT EXPANSION JOINTS AT END BENT NO. 3

DECORATIVE PEDESTRIAN FENCE DETAILS

Detailed Feb. 2017
Checked Sep. 2017

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

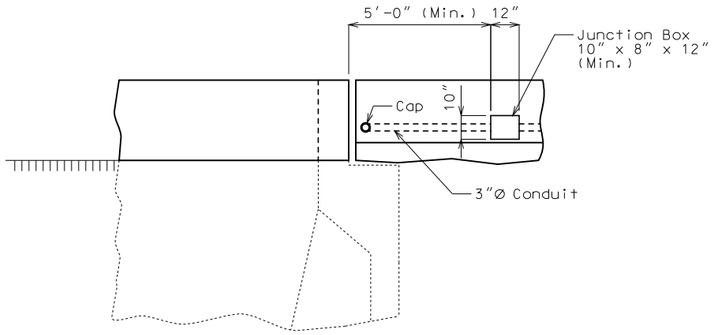
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

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

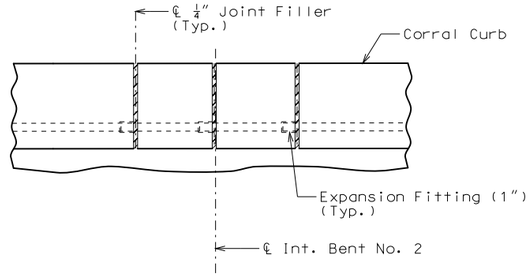
DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 21
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A02921

DESCRIPTION | DATE

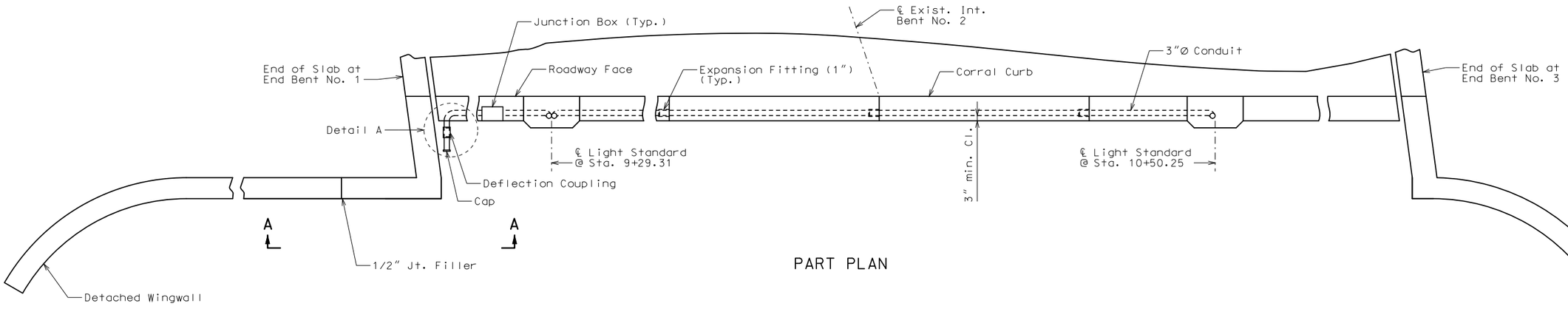
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



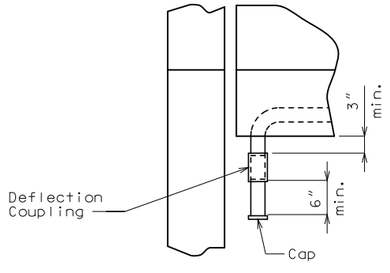
PART ELEVATION A-A AT END BENT 1



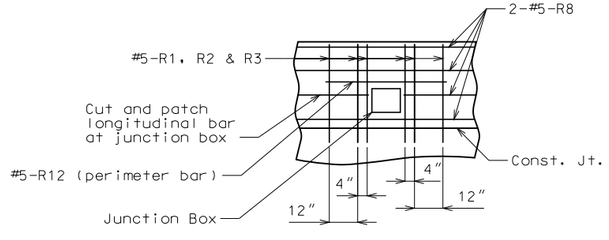
PART ELEVATION NEAR INT. BENT



PART PLAN



DETAIL A



PART ELEVATION OF CORRAL CURB
OVER SLAB SHOWING PERIMETER STEEL

Notes:

All conduits shall be rigid nonmetallic schedule 40 heavy wall polyvinyl chloride (PVC) with 3" minimum cover in concrete. Each section of conduit shall bear the Underwriters Laboratories (UL) label.

Shift reinforcing steel in field where necessary to clear conduit and junction boxes.

Expansion fittings shall be placed as shown and set in accordance with the manufacturer's requirements and based on the air temperature at the time of setting given an estimated total expansion movement of 1 inch at filled joints using a maximum temperature range of 150° F and a maximum temperature of 120° F.

All corral curb junction boxes shall be PVC molded in accordance with Sec 1062 and designed for flush surface mounting. The conduit terminations shall be permanent or separable. The terminations and covers shall be of watertight construction and shall meet requirements for NEMA 4 enclosure.

Drainage shall be provided at low points or other critical locations of all conduits and all junction boxes in accordance with Sec 707. All conduits shall be sloped to drain where possible.

Payment for furnishing and installing Conduit System, complete in place, will be considered completely covered by the contract lump sum price for Conduit System on Structure.

DETAILS OF CONDUIT SYSTEM IN RIGHT CORRAL CURB

Detailed Mar. 2017
Checked Apr. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
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DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 22
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A02921

DESCRIPTION | DATE

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

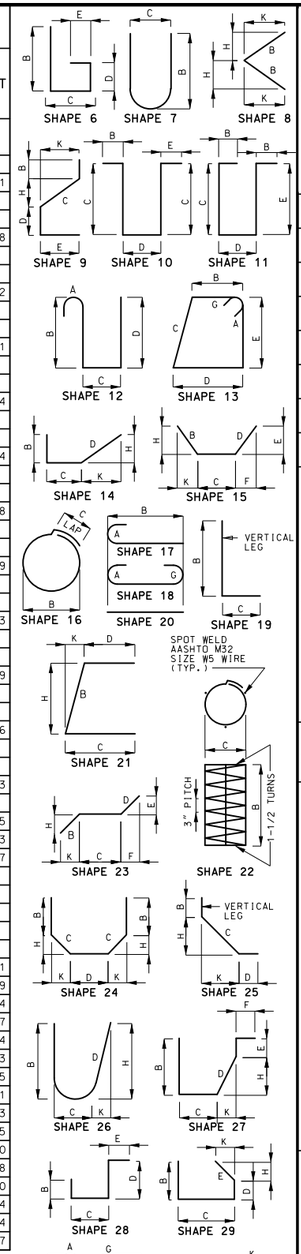
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BILL OF REINFORCING STEEL

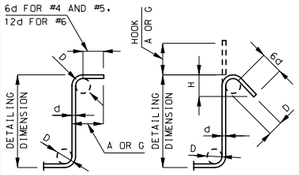
NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
			END BENT 1																									
4	5	H10	BACKWALL	E	20					54	3.000													54	3	54	3	226
2	5	H11	BACKWALL	E	20					44	2.000													44	2	44	2	92
4	5	H12	BACKWALL	E	9	S				18.000		23.750		10	9.250			3.000		23.500				14	3	14	1	59
35	5	U10	BACKWALL	E	10	S						16.500		9.125										3	6	3	4	122
10	5	U11	BACKWALL	E	10	S		V	2			2	1.875	9.125										5	1	4	10	
			INCREMENT =									2	0.750	9.125										4	11	4	8	50
			0.500 INCH																									
10	5	U12	BACKWALL	E	10	S		V	2			22.875		9.125										4	7	4	4	
			INCREMENT =									19.125		9.125										3	11	3	9	42
			1.750 INCH																									
			END BENT 3																									
4	5	H30	BACKWALL	E	20					55	4.000													55	4	55	4	231
2	5	H31	BACKWALL	E	20					45	0.000													45	0	45	0	94
4	5	H32	BACKWALL	E	9	S				18.000		23.750		11	0.000			3.000		23.500				14	6	14	4	60
36	5	U30	BACKWALL	E	10	S						16.500		9.250										3	6	3	4	125
10	5	U31	BACKWALL	E	10	S		V	2			2	1.875	9.250										5	1	4	11	
			INCREMENT =									2	0.750	9.250										4	11	4	8	50
			0.750 INCH																									
10	5	U32	BACKWALL	E	10	S		V	2			22.875		9.250										4	7	4	5	
			INCREMENT =									19.125		9.250										4	0	3	9	43
			2.000 INCH																									
			SLAB																									
6	4	S1	SLAB	E	20			V	1	44	1.000													44	1	44	1	
			INCREMENT =							7	0.000													7	0	7	0	102
			89.000 INCH																									
176	4	S2	SLAB	E	20					48	3.000													48	3	48	3	5673
11	4	S3	SLAB	E	20			V	1	45	11.000													45	11	45	11	
			INCREMENT =							4	9.000													4	9	4	9	186
			49.375 INCH																									
49	4	S4	SLAB	E	20			V	1	46	10.000													46	10	46	10	
			INCREMENT =							49	2.000													49	2	49	2	1571
			0.625 INCH																									
224	4	S5	SLAB	E	20					60	0.000													60	0	60	0	8978
49	4	S6	SLAB	E	20			V	1	21	10.000													21	10	21	10	
			INCREMENT =							24	9.000													24	9	24	9	762
			0.750 INCH																									
4	4	S7	SLAB	E	20			V	1	7	4.000													7	4	7	4	
			INCREMENT =							29	7.000													29	7	29	7	49
			89.000 INCH																									
179	4	S8	SLAB	E	20					37	0.000													37	0	37	0	4424
8	4	S9	SLAB	E	20			V	1	8	7.000													8	7	8	7	
			INCREMENT =							32	11.000													32	11	32	11	111
			41.750 INCH																									
37	4	S10	SLAB	E	20			V	1	47	1.000													47	1	47	1	
			INCREMENT =							48	10.000													48	10	48	10	1185
			0.625 INCH																									
37	4	S11	SLAB	E	20			V	1	22	2.000													22	2	22	2	
			INCREMENT =							24	4.000													24	4	24	4	575
			0.750 INCH																									

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
8	4	S12	SLAB	E	20			V	1	46	10.000													46	10	46	10	
			INCREMENT =							47	1.000													47	1	47	1	251
			0.375 INCH																									
8	4	S13	SLAB	E	20			V	1	21	10.000													21	10	21	10	
			INCREMENT =							22	5.000													22	5	22	5	118
			1.000 INCH																									
8	4	S14	SLAB	E	20			V	1	48	10.000													48	10	48	10	
			INCREMENT =							49	2.000													49	2	49	2	262
			0.625 INCH																									
8	4	S15	SLAB	E	20			V	1	24	4.000													24	4	24	4	
			INCREMENT =							24	9.000													24	9	24	9	131
			0.750 INCH																									
3	4	S16	SLAB	E	20			V	1	46	10.000													46	10	46	10	
			INCREMENT =							46	11.000													46	11	46	11	94
			0.500 INCH																									
3	4	S17	SLAB	E	20			V	1	21	10.000													21	10	21	10	
			INCREMENT =							22	0.000													22	0	22	0	44
			1.000 INCH																									
3	4	S18	SLAB	E	20			V	1	49	1.000													49	1	49	1	
			INCREMENT =							49	2.000													49	2	49	2	98
			0.500 INCH																									
3	4	S19	SLAB	E	20			V	1	24	7.000													24	7	24	7	
			INCREMENT =							24	9.000													24	9	24	9	49
			1.000 INCH																									
2	4	S20	SLAB	E	20			V	1	46	10.000													46	10	46	10	
			INCREMENT =							46	11.000													46	11	46	11	63
			1.000 INCH																									
2	4	S21	SLAB	E	20			V	1	21	10.000													21	10	21	10	
			INCREMENT =							22	0.000													22	0	22	0	29
			2.000 INCH																									
2	4	S22	SLAB	E	20			V	1	49	1.000													49	1	49	1	
			INCREMENT =							49	2.000													49	2	49	2	66
			1.000 INCH																									
2	4	S23	SLAB	E	20			V	1	24	7.000													24	7	24	7	
			INCREMENT =							24	9.000													24	9	24	9	33
			2.000 INCH																									
490	5	S24	SLAB	E	9	S				18.000		11.125		6	11.000							1.250		11.000		9	4	9	2	4685
4	5	S25	SLAB	E	20					48	8.000													48	8	48	8	203
4	5	S26	SLAB	E	20					49	8.000													49	8	49	8	207
			CORRAL CURB																									
86	5	K1	CORRAL CURB	E	10	S						3	0.000	9.500										6	10	6	7	591
20	5	K2	CORRAL CURB	E	10	S						4	3.000	9.000										9	3	9	1	189
✳ 4	5	K3	CORRAL CURB	E	20					10	6.000													10	6	10	6	44
✳ 4	5	K4	CORRAL CURB	E	20					11	3.000													11	3	11	3	47
4	5	K5	CORRAL CURB	E	23	S					12.000	4	11.000									11.875		1.625		5	11	5	10	24
4	5	K6	CORRAL CURB	E	23	S					12.000	4	7.500									11.875		1.625		5	8	5	6	23
8	5	K7	CORRAL CURB	E	20					10	2.000													10	2	10	2	85
4	5	K8	CORRAL CURB	E	21	S					12.250	4	1.000									12.000		2.750		5	1	4	11	21
4	5	K9	CORRAL CURB	E	14	S					12.000		9.750	3	10.750							11.500	3	9.375		5	9	5	7	23
✳ 4	5	K10	CORRAL CURB	E	20					42	0.000													42	0	42	0	175
✳ 4	5	K11	CORRAL CURB	E	20					43	1.000													43	1	43	1	180
8	5	K12	CORRAL CURB	E	20					5	9.000													5	9	5	9	48
4	5	K13	CORRAL CURB	E	21	S					12.125	4	0.000									12.000		1.625		5	0	4	10	20
4	5	K14	CORRAL CURB	E	14	S					12.000		9.750	3	11.875							6.625	3	11.375		5	10	5	8	24
✳ 4	5	K15	CORRAL CURB	E	20					10	6.000													10	6	10	6	44
✳ 4	5	K16	CORRAL CURB	E	20					11	3.000													11	3	11	3	47

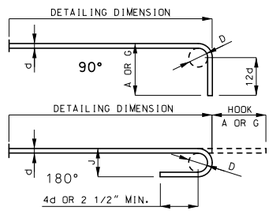


BENDING DIAGRAMS



STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK HOOK A OR G	135° HOOK HOOK A OR G	135° HOOK 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	180° HOOKS J	90° HOOKS 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"

✳ Field Bend

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.

Detailed Sep. 2017
Checked Sep. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 23
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A02921

DESCRIPTION
DATE

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

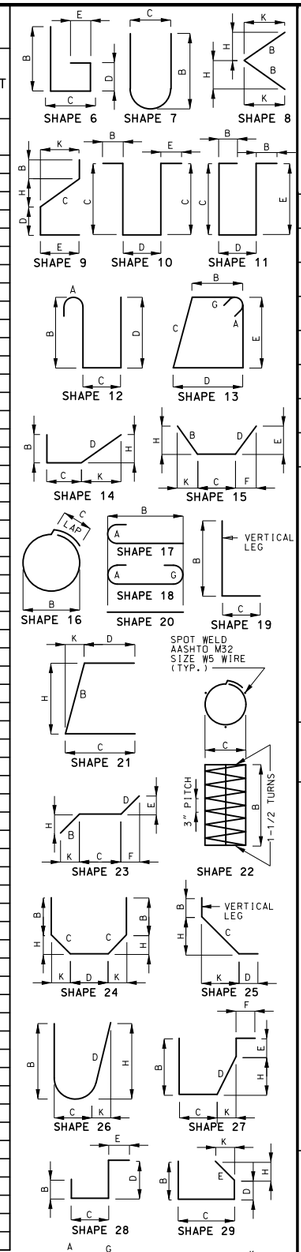
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BILL OF REINFORCING STEEL

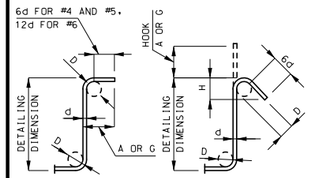
NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
4	5	K17	CORRAL CURB	E	23	S				12.	000	4	8.750							11.	875	1.	625	5	9	5	8	24
4	5	K18	CORRAL CURB	E	23	S				12.	000	4	1.000							11.	875	1.	625	5	1	5	0	21
381	5	R1	CORRAL CURB	E	19	S				3	8.000	16.	000											5	0	4	11	1954
381	5	R2	CORRAL CURB	E	21	S				2	0.125	20.	000	4	5.500					2	0.000	1.	750	8	2	7	11	3146
381	5	R3	CORRAL CURB	E	10	S						2	5.000	9.	500									5	8	5	5	2152
16	5	R4	CORRAL CURB	E	20					48	6.000													48	6	48	6	809
32	5	R5	CORRAL CURB	E	20					9	9.000													9	9	9	9	325
16	5	R6	CORRAL CURB	E	20					35	11.000													35	11	35	11	599
16	5	R7	CORRAL CURB	E	20					37	6.000													37	6	37	6	626
16	5	R8	CORRAL CURB	E	20					49	6.000													49	6	49	6	826
6	5	R9	CORRAL CURB	E	10	S						2	6.000	11.	500									6	0	5	9	36
14	5	R10	CORRAL CURB	E	13	S				12.	750	22.	500	12.	750	22.	500							6	10	6	6	95
14	5	R11	CORRAL CURB	E	30	S				18.	000	18.	000	22.	500	18.	000	19.	125	12.	750	12.	750	8	0	8	0	117
1	5	R12	CORRAL CURB	E	20					5	0.000													5	0	5	0	5
12	5	V1	CORRAL CURB	E	20					4	6.000													4	6	4	6	56
			TOTALS																									
	4			E																								24854
	5			E																								18665
			TOTAL																									0
			TOTAL	E																								43519
			Slab on Girder																									
	4			E																								24854
	5			E																								18665
			TOTAL																									43519

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.

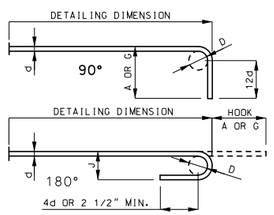


BENDING DIAGRAMS



STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK A OR G	135° HOOK A OR G	135° HOOK 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		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"	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.

Detailed Sep. 2017
Checked Sep. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 24
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A02921

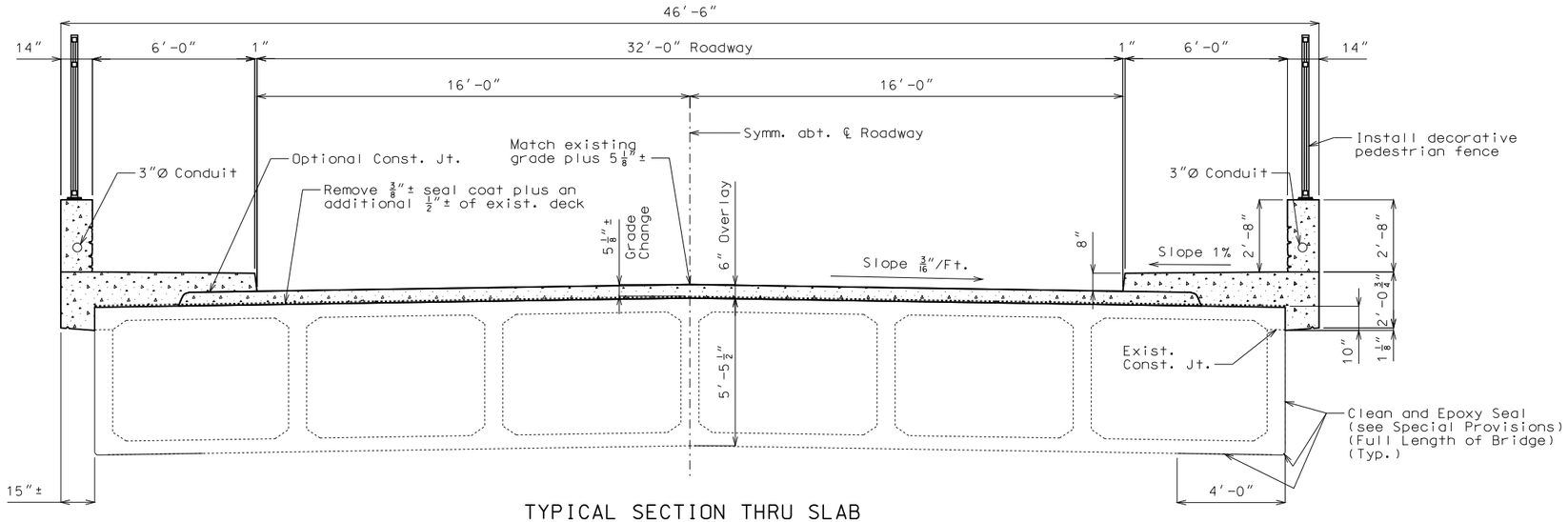
DESCRIPTION | DATE

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

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

SEC/SUR 5 TWP 49N RGE 33W

U.I.P. & REHAB EXISTING (95′-100′-100′-95′-57′) CONTINUOUS CONCRETE BOX GIRDER SPANS (SKEW: SQUARE)



TYPICAL SECTION THRU SLAB

General Notes:

Design Specifications:

2002 - AASHTO (17th Edition) Standard Specifications
Load Factor Design
Seismic Performance Category A
Bridge Deck Rating = 5

Design Loading:

H20-S16-44 (1953)
HS20-44 (New Construction)
35 lb/sf Future Wearing Surface

Design Unit Stresses:

Class B-1 Concrete (Corral Curb)	f′c = 4,000 psi
Class B-2 Concrete (All rehab except for Corral Curb)	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 old concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, old bars shall extend into new concrete at least 40 diameters for smooth bars and 30 diameters for deformed bars, unless otherwise noted.

Outline of old 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.

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

Protective Coating:

Protective coating for concrete bents and piers (Epoxy) shall be applied as shown on bridge plans and in accordance with Sec 711.

Traffic Handling:

Structure to be closed during construction.

Detailed Aug. 2017
Checked Oct. 2017

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

Estimated Quantities

	Item		Total
✳	Removal of Seal Coat	sq. foot	19756
	Partial Removal of Existing Bridge Deck	sq. foot	5538
	Removal of Existing Expansion Joint & Adjacent Concrete	linear foot	88
	(72 in.) Decorative Pedestrian Fence	linear foot	941
	Reinforced Concrete Slab Overlay	sq. yard	2320
	Corral Curb	linear foot	987
	Form Liners	sq. yard	198
	Substructure Repair (Unformed)	sq. foot	110
	Repairing Concrete Deck (Half-Soling)	sq. foot	100
	Clean and Epoxy Seal	sq. foot	7704
	Conduit System on Structure	lump sum	1
	Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
	Strip Seal Expansion Joint System	linear foot	64

✳ Includes 1/2″ removal of existing deck

Estimated Quantities for Reinforced Concrete Slab Overlay

Item		Total
Class B-2 Concrete	cu. yard	612
Reinforcing Steel (Epoxy Coated)	pound	77660

The table of Estimated Quantities Reinforced Concrete Slab Overlay represents the quantities used by the State in preparing the cost estimate for concrete slab overlay and sidewalks. The area of the concrete slab overlay will be measured to the nearest square yard from end of slab to end of slab and the overall width (46′-6″) shown in the Typical Section Thru Slab. Payment for conventional forms, all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab overlay. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slabs shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type I, II or III.

Class B-2 concrete quantity is based on minimum 6″ slab overlay thickness and sidewalks as shown.

The concrete and reinforcement for the new upper backwall at the end bents are included in Class B-2 Concrete and Reinforcing Steel (Epoxy Coated).

BRIDGE: 8TH STREET OVER RTE. I-70

ROUTE I-70 FROM RTE. I-35 SOUTH 0.3 MILE
IN KANSAS CITY
STA. 3+29.00± (Match Exist.)

STD. 901.00
STD. 706.35

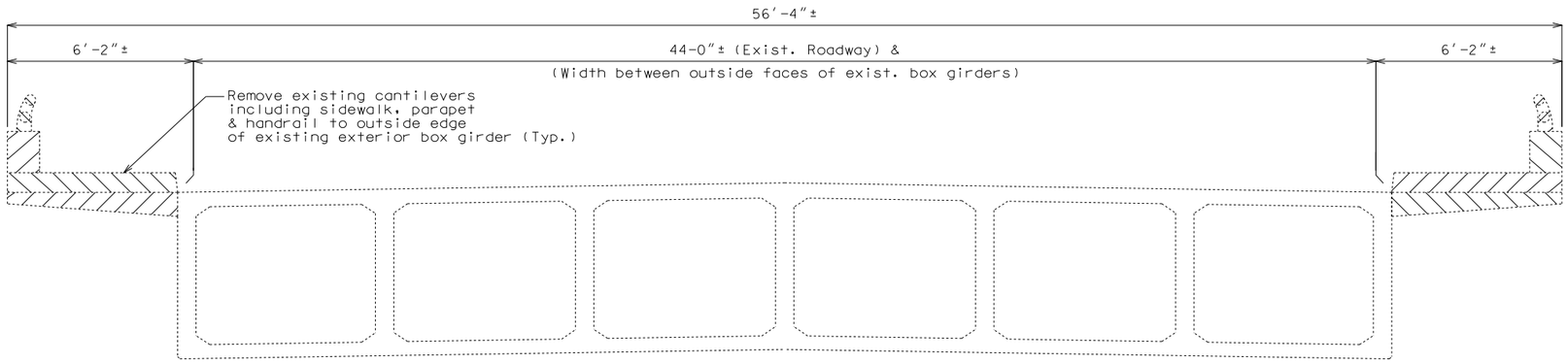
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09371

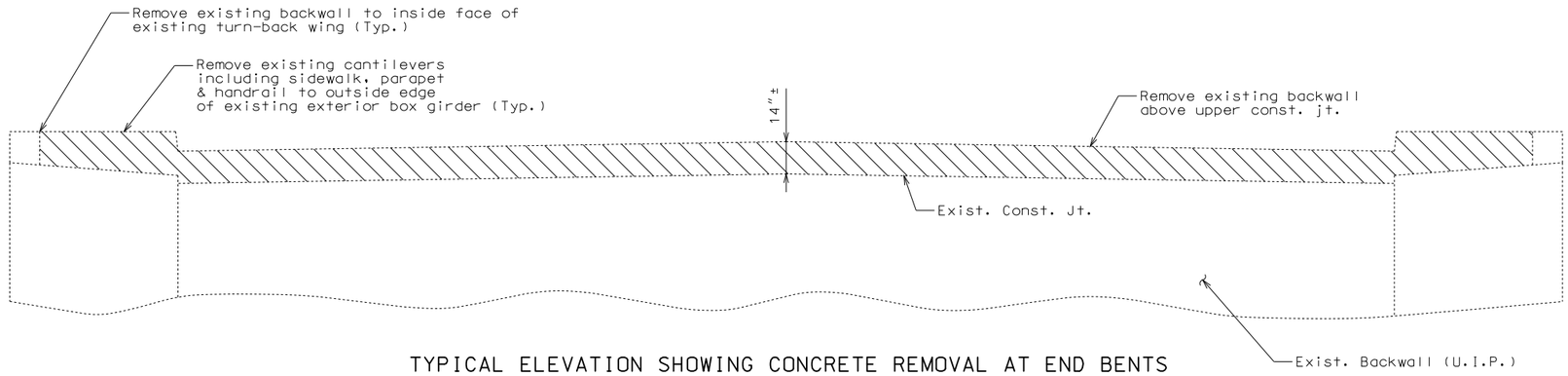
DESCRIPTION | DATE

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

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



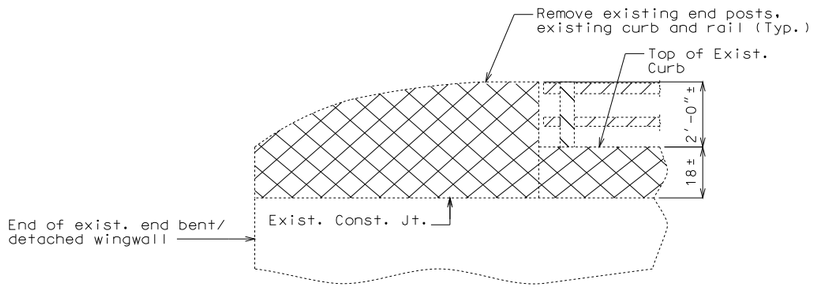
TYPICAL SECTION SHOWING CONCRETE REMOVAL AT MID SPAN



TYPICAL ELEVATION SHOWING CONCRETE REMOVAL AT END BENTS

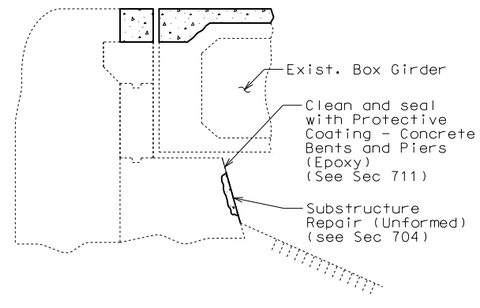
(Note: Curb, handrail & end post not shown for clarity)

Note:
Cost of removing existing backwall above upper const. joint and end of existing box girder (as shown on Sheet No. 6) will be considered completely covered by contract unit price for Removal of Existing Expansion Joint and Adjacent Concrete.



TYPICAL ELEVATION OF EXISTING END POST & CURB SHOWING CONCRETE REMOVAL

Note:
Cost of removing existing cantilevers, sidewalks, end posts, curbs and rails will be considered completely covered by the contract unit price for Partial Removal of Existing Bridge Deck (square foot). The area of removal will be measured to the nearest square foot from fill face to fill face of end bents and the width from outside face of exist. box girder to the outside edge of exist. bridge deck.



TYPICAL SECTION THRU END BENTS SHOWING SUBSTRUCTURE REPAIR & PROTECTIVE COATING

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-2132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/19/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	2

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

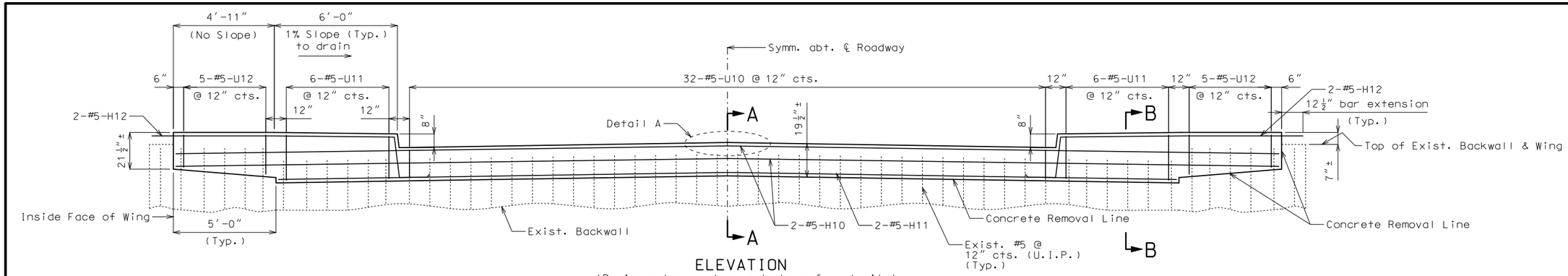
PROJECT NO.

BRIDGE NO.
L09371

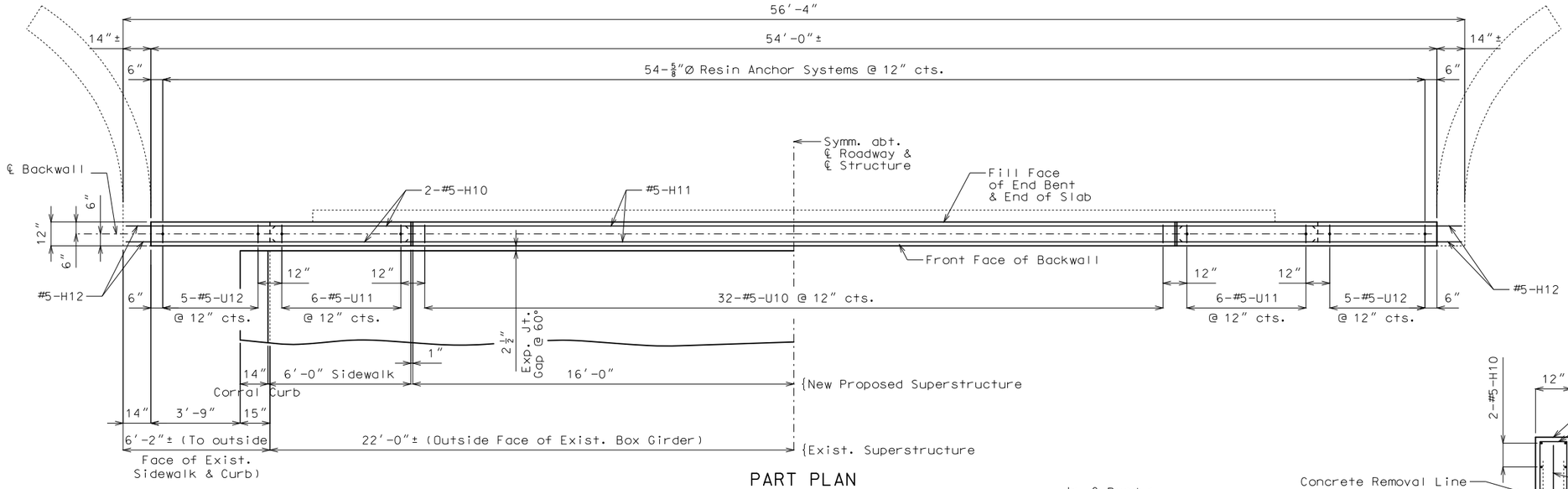
DESCRIPTION	DATE

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

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



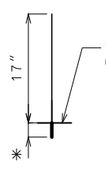
ELEVATION
(Resin anchor systems not shown for clarity)



PART PLAN

Note:
Top of backwall (including sidewalk) for End Bent No. 1 shall be formed to the crown and grade of the roadway. Backwall above concrete removal line shall not be poured until the slab overlay & sidewalk has been poured in the adjacent span.

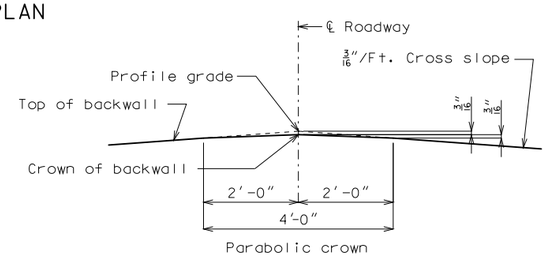
For location of K2 bars in corral curb at the ends of backwall, see Sht. No. 14 & 16.



(54 req'd)

* Manufacturer's recommended embedment length (5″ min.)

DETAIL OF RESIN ANCHOR SYSTEM



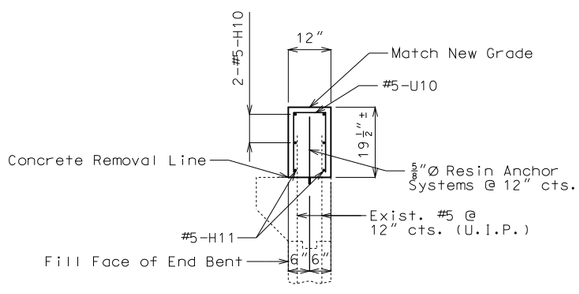
DETAIL A

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

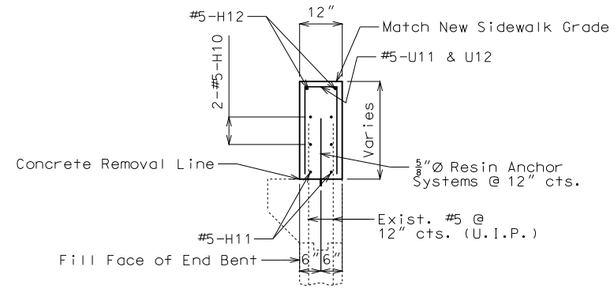
Cost of furnishing and installing the resin anchor systems, complete-in-place, will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



SECTION A-A



SECTION B-B

DEATILS OF END BENT NO. 1

Detailed Sep. 2017
Checked Oct. 2017

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

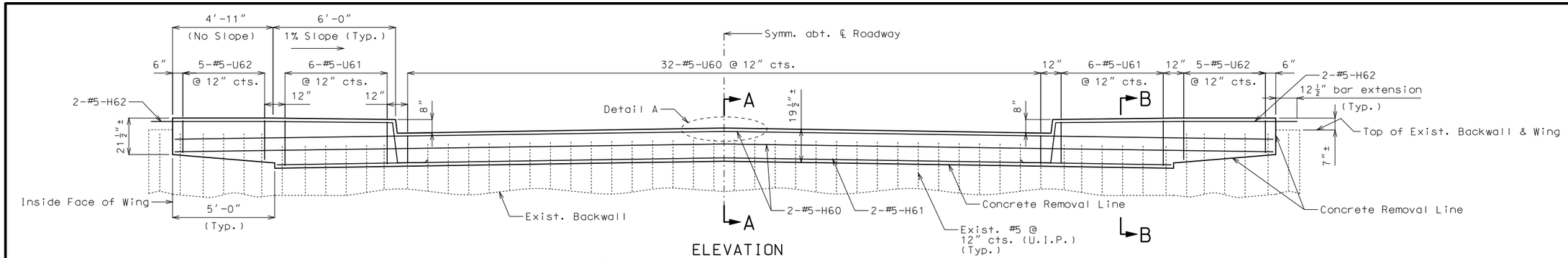
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 3
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09371

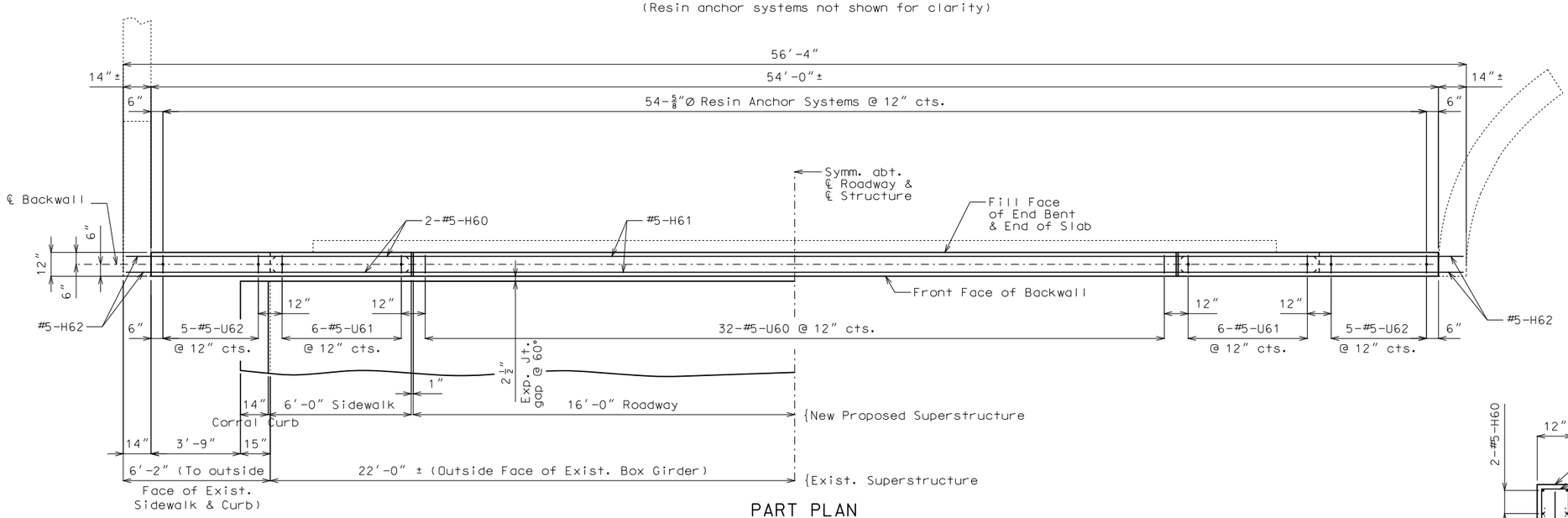
DESCRIPTION | DATE

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

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



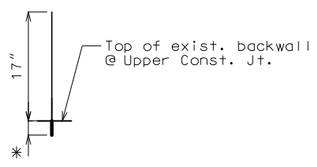
ELEVATION
(Resin anchor systems not shown for clarity)



PART PLAN

Note:
Top of backwall (including sidewalk) for End Bent No. 6 shall be formed to the crown and grade of the roadway. Backwall above concrete removal line shall not be poured until the slab overlay & sidewalk has been poured in the adjacent span.

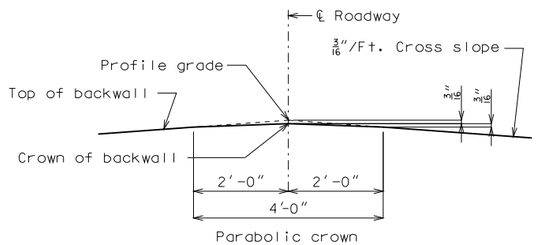
For location of K2 bars in corral curb at the ends of backwall, see Sht. No. 15 & 17.



(54 req'd)

* Manufacturer's recommended embedment length (5″ min.)

DETAIL OF RESIN ANCHOR SYSTEM



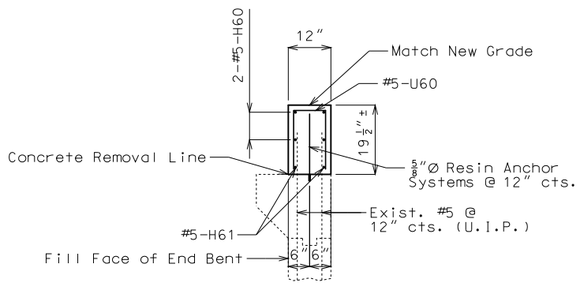
DETAIL A

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

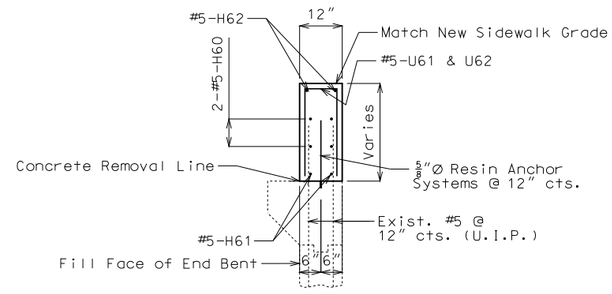
Cost of furnishing and installing the resin anchor systems, complete-in-place, will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



SECTION A-A



SECTION B-B

DEATILS OF END BENT NO. 6

Detailed Sep. 2017
Checked Oct. 2017

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

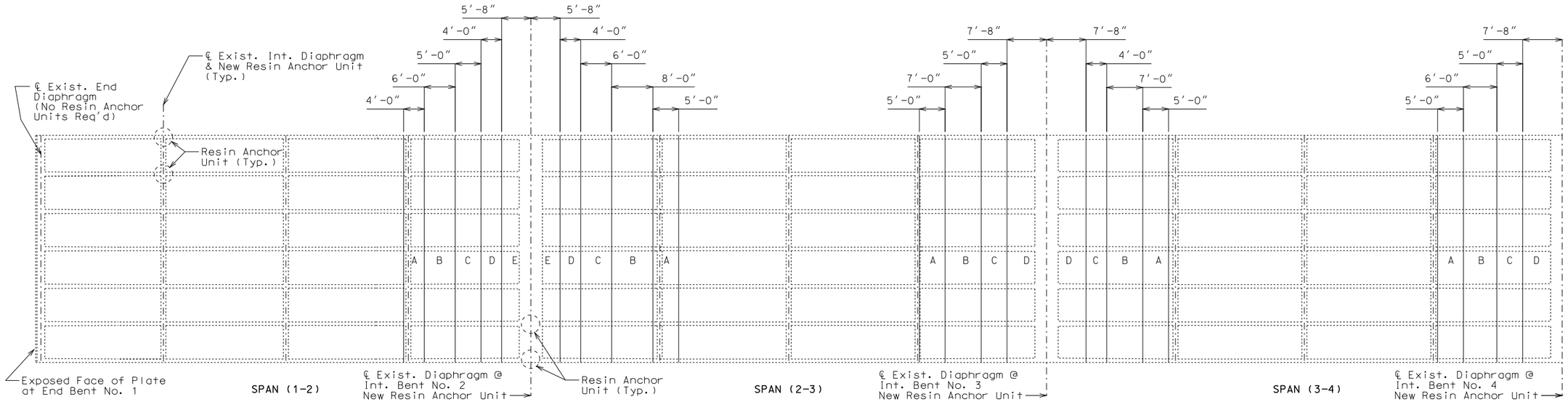
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

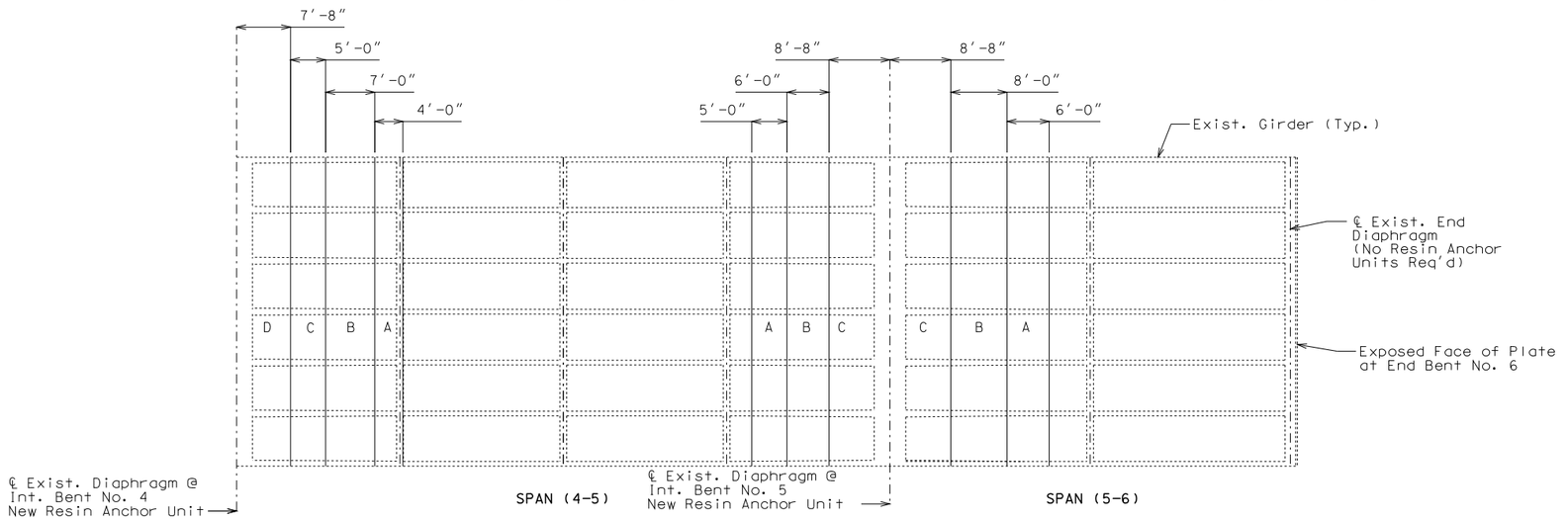
DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 4
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09371

DESCRIPTION | DATE

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

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





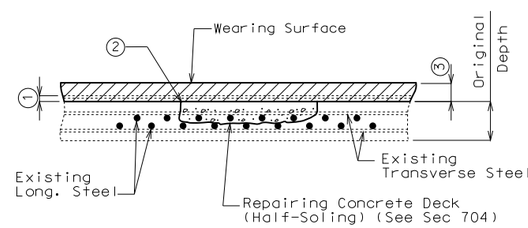
PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES AND LOCATIONS OF RESIN ANCHOR UNITS

Notes:
Any half-soling required in the areas designated as special repair zones shall be completed in alphabetical sequence. Any repair in the remainder of the bridge that is adjacent to Zone A and not designated as a special repair zone shall be completed prior to work in Zone A.

Removal and repair shall be completed in one special repair zone and concrete shall have attained a compressive strength of 3200 psi before work can be started in the next special repair zone. Before placing concrete in areas adjacent to areas of subsequent repair, the concrete shall be separated with a material such as polyethylene sheets to aid in removal of old concrete.

Zones with the same letter designation may be repaired at the same time.

If any single repair area does not exceed 9 square feet in size and the total repair within a special repair zone does not exceed 27 square feet, the special repair zone requirement does not apply for that zone. Half-soling repair in the special repair zone, on either side of the intermediate bent, shall be to a depth that will not expose half the diameter of the longitudinal reinforcing bar. Full depth repair shall be made when removal of deteriorated concrete exposes half or more of the diameter of the longitudinal reinforcing bar.

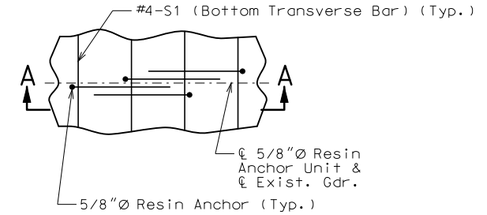


HALF-SOLED REPAIR

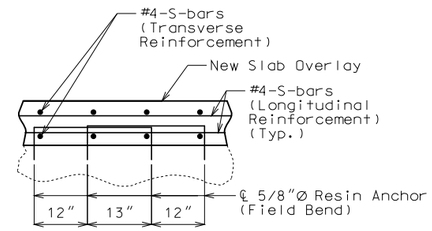
(1) Remove 3/8"± seal coat & additional 1/2"± of existing deck.

(2) One inch vertical side shall be established outside the deteriorated area. See Sec 704.

(3) 6" cast-in-place slab (Class B-2 Concrete) overlay.



PLAN



SECTION A-A

DETAIL OF RESIN ANCHOR UNIT

(119 Units Req'd, 4 Resin Anchors per Unit)

Note:
Locate Resin Anchor Units near the intersection of ℄ of existing girder & ℄ of existing int. diaphragms & ℄ of existing diaphragm @ Int. Bents.

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

Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

The minimum embedment depth in concrete with f'c = 4.000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5".

An epoxy coated #5 Grade 60 reinforcing bar 2'-0" long shall be substituted for the 5/8"Ø threaded rod.

Detailed Sep. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 5
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09371

DESCRIPTION | DATE

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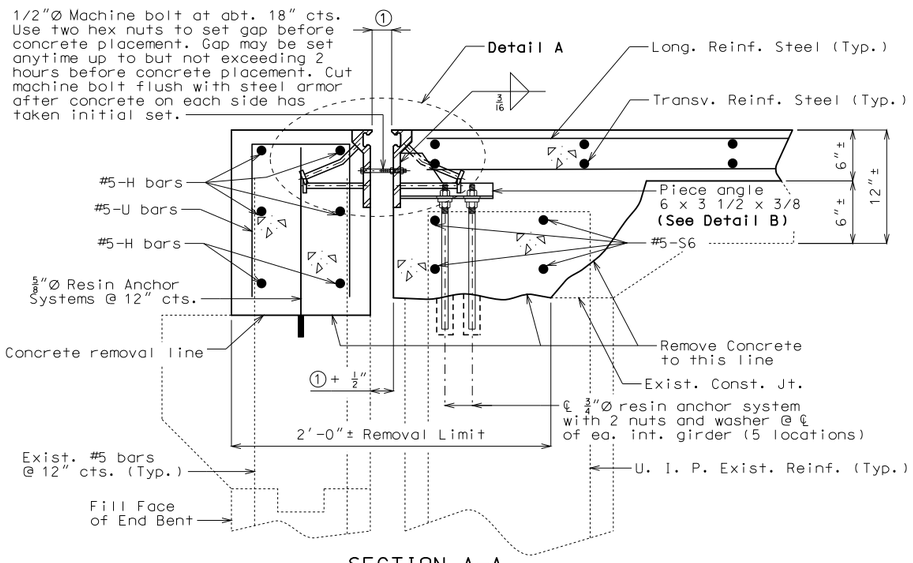
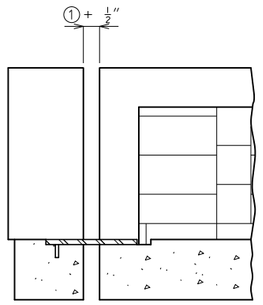
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



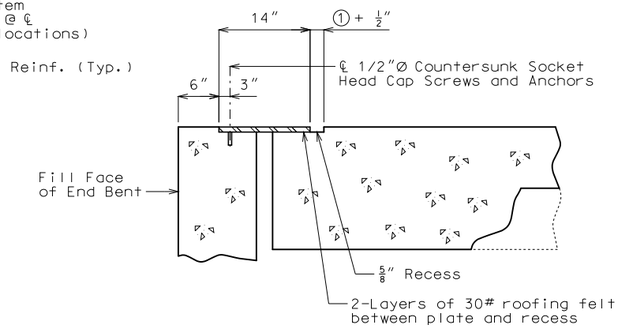
SECTION A-A

Note: Strip seal gland not shown for clarity.



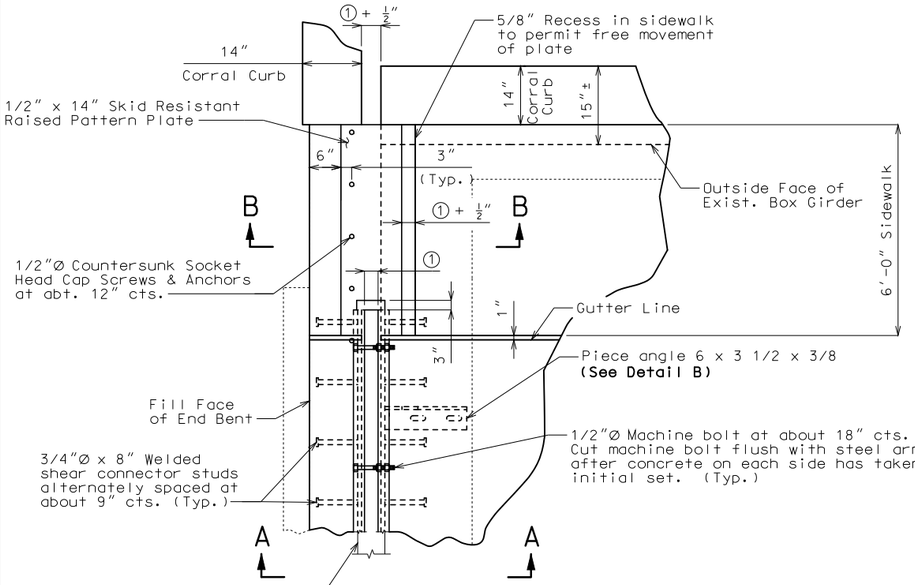
Note: Strip seal gland not shown for clarity.

PART SECTION THRU SIDEWALK NEAR CORRAL CURB

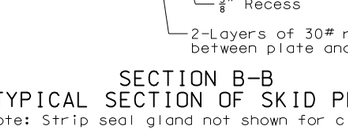


SECTION B-B
TYPICAL SECTION OF SKID PLATE

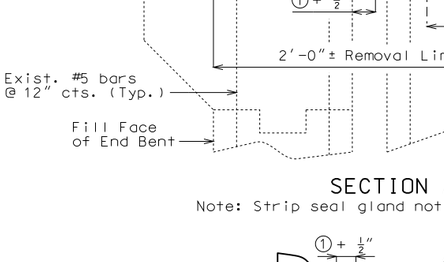
Note: Strip seal gland not shown for clarity.



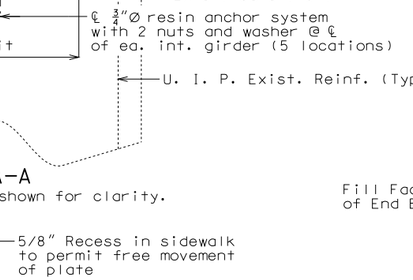
PART PLAN



DETAIL A



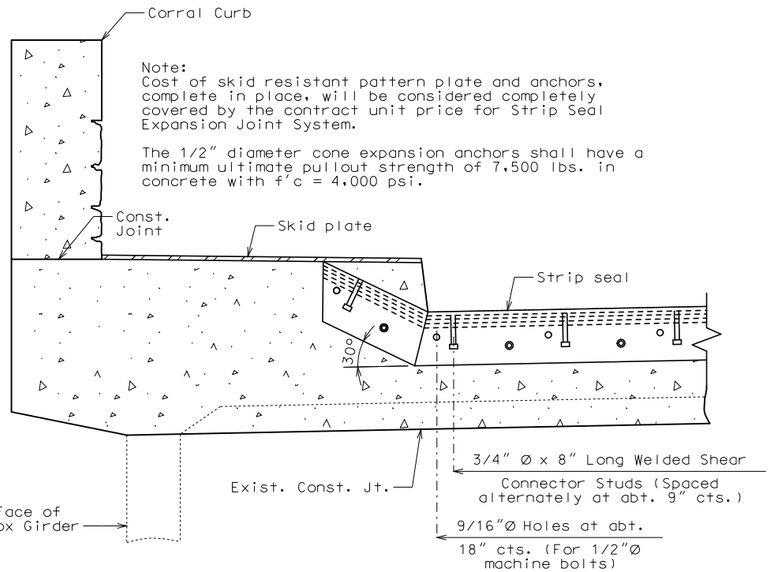
DETAIL B



DETAIL OF JOINT ARMOR

DETAIL OF GLAND

DETAILS OF STRIP SEAL AT END BENTS



PART SECTION THRU BRIDGE DECK NEAR STRIP SEAL JOINT

GENERAL NOTES:

Expansion joint system shall be fabricated in one section, except for staged construction and when the length is over 50 feet. A complete joint penetration groove welded splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion joint system shall be fabricated and installed to the crown and grade of the roadway.

The strip seal gland shall be installed in joints in one continuous piece without field splices. Factory splicing will be permitted for joints in excess of 53 feet.

Structural steel for the expansion joint system shall be ASTM A709 Grade 36 except the steel armor may be ASTM A709 Grade 50W. Anchors for the expansion joint system shall be in accordance with Sec 1037. Strip seal expansion joint system shall be in accordance with Sec 717.

Structural steel for the expansion joint system shall be coated with a minimum of two coats of inorganic zinc primer (5 mils minimum) or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

Longitudinal reinforcing steel shall be placed so that ends shall be 1" from the vertical leg of the steel armor at the expansion joint system.

Concrete shall be forced under and around steel armor and anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

② The installation temperature shall be taken as the actual air temperature averaged over the 24-hour period immediately preceding installation.

③ MoDOT Construction personnel will indicate the strip seal expansion joint system installed.

Steel armor may also be referred to as extrusion or rail.

Table of Allowed Transverse Strip Seal Expansion Joint System

Manufacturer	Strip Seal System (Designated Name)	Movement Parallel to RDWY	① Allowed Installation Gap Normal to Joint at RDWY Surface @ Air/Surface Temerature ②						③
			@ 40°F	@ 50°F	@ 60°F	@ 70°F	@ 80°F	@ 90°F	
D S Brown	Strip Seal L2-400	2 9/16"	2 11/16"	2 7/16"	2 1/4"	2 1/16"	1 13/16"	1 5/8"	□
D S Brown	Strip Seal L2-500	2 9/16"	2 11/16"	2 7/16"	2 1/4"	2 1/16"	1 13/16"	1 5/8"	□
Watson Bowman Acme (Wabo)	Strip Seal SE-400	2 9/16"	2 11/16"	2 7/16"	2 1/4"	2 1/16"	1 13/16"	1 5/8"	□
Watson Bowman Acme (Wabo)	Strip Seal SE-500	2 9/16"	2 11/16"	2 7/16"	2 1/4"	2 1/16"	1 13/16"	1 5/8"	□

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
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DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 6
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09371

DESCRIPTION | DATE

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

Detailed Nov. 2017
Checked

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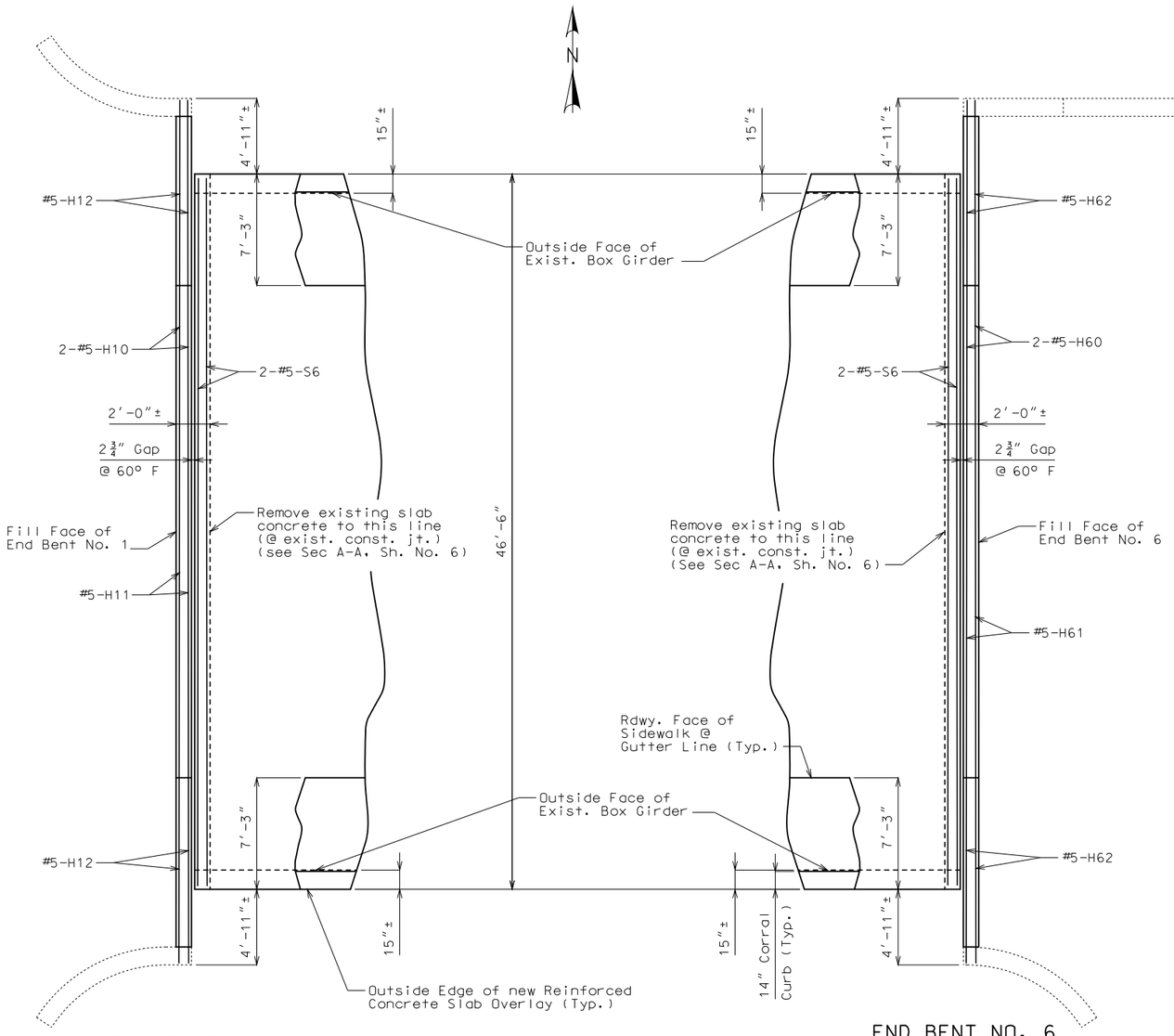

END BENT NO. 1

END BENT NO. 6

PART PLAN OF SLAB AT END BENTS SHOWING DIMENSIONS & REINFORCEMENT

Notes:
Shift #5-S bars where necessary to clear shear connector studs on the expansion joint system.

Payment for slab and backwall concrete, complete-in-place, for expansion joint replacement will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

Payment for furnishing and installing reinforcing steel in slab and backwall for expansion joint replacement will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

Cost of removing existing expansion joint, slab and backwall concrete within the limits shown will be considered completely covered by the contract unit price for Removal of Existing Expansion Joint & Adjacent Concrete.

For section thru Strip Seal at End Bents, see Sheet No. 6.

Detailed Sep. 2017
Checked Oct. 2017

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STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

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DATE PREPARED 12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	7

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO. L09371

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JEFFERSON CITY, MO 65102
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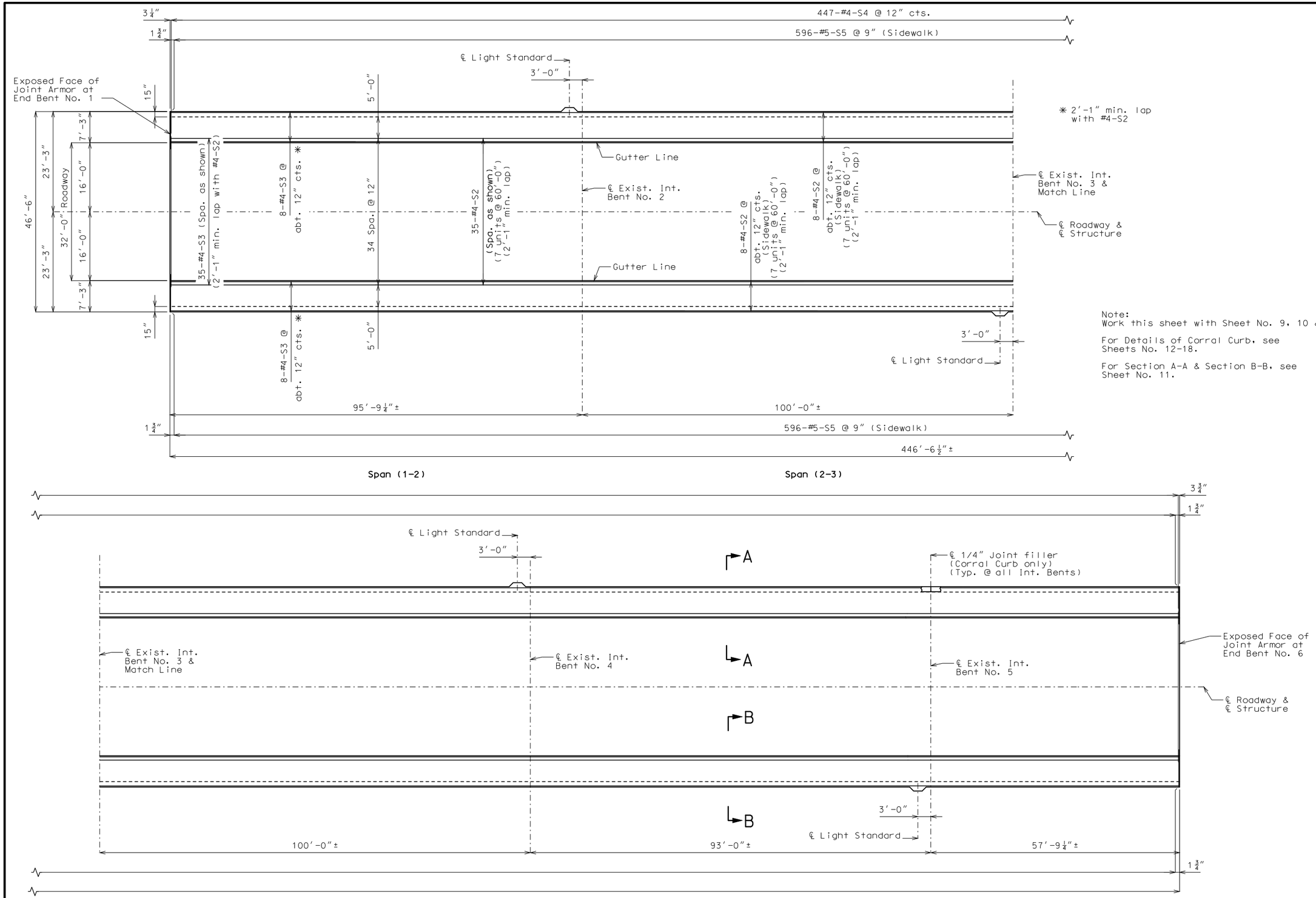

Note:
Work this sheet with Sheet No. 9, 10 & 11.

For Details of Corral Curb, see Sheets No. 12-18.

For Section A-A & Section B-B, see Sheet No. 11.

PLAN OF SLAB & SIDEWALK SHOWING TOP REINFORCEMENT

SLAB DETAILS

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

Sheet No. 8 of 23

Detailed Aug. 2017
Checked Oct. 2017

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

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DATE PREPARED
12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	8

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
L09371

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105 WEST CAPITOL
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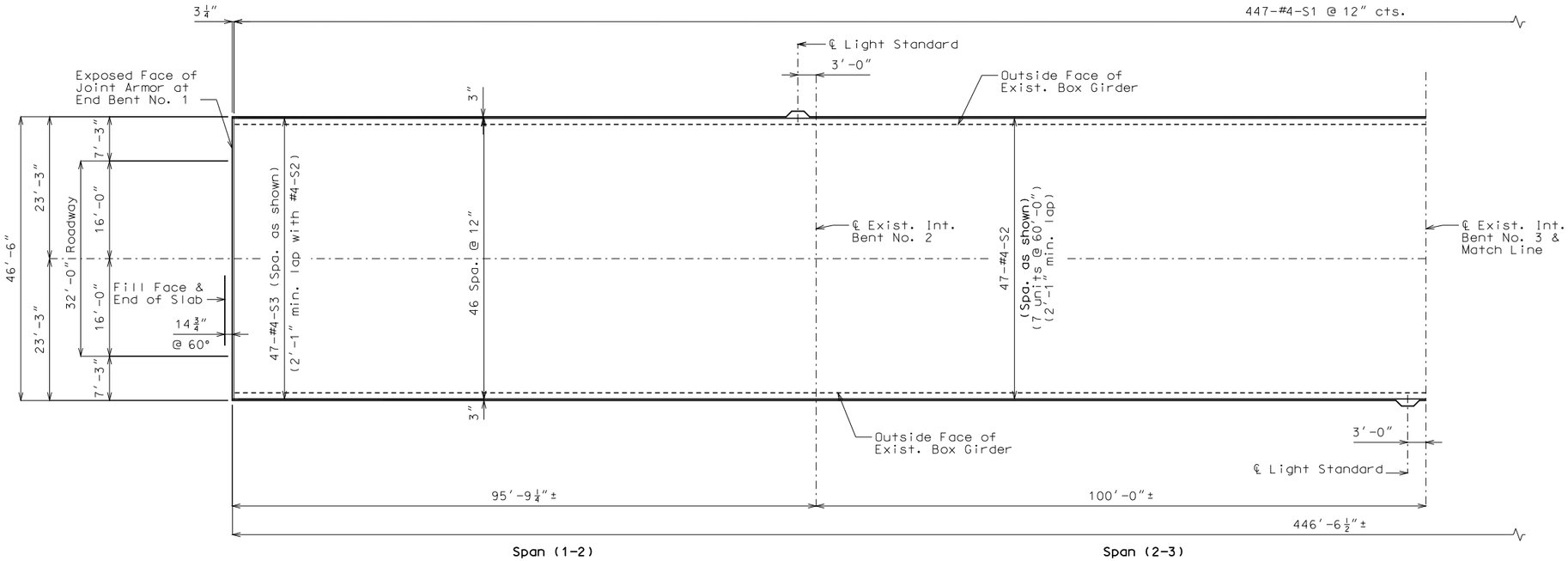

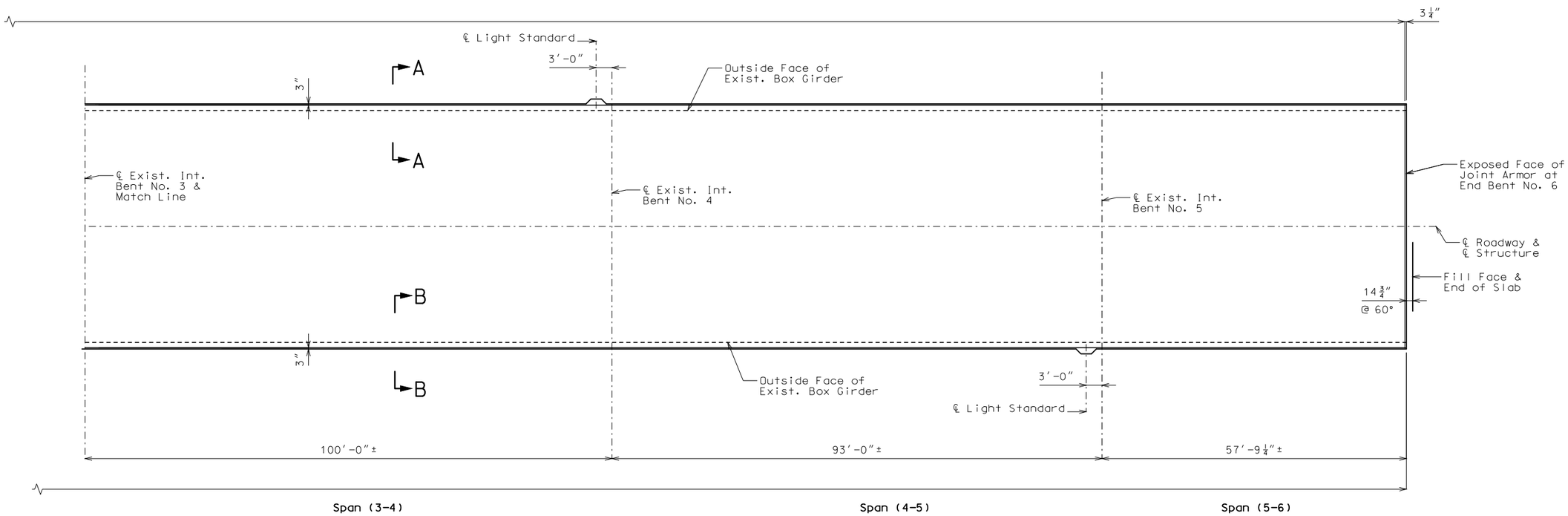

PLAN OF SLAB SHOWING BOTTOM REINFORCEMENT

Note:
Work this sheet with Sheet No. 8, 10 & 11.

For Details of Corral Curb, see Sheets No. 12-18.

For Section A-A & Section B-B, see Sheet No. 11.

SLAB DETAILS

Detailed Aug. 2017
Checked Oct. 2017

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DEAN DAVID FRANKE
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DATE PREPARED
12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	9

COUNTY
JACKSON

JOB NO.
J4I3198

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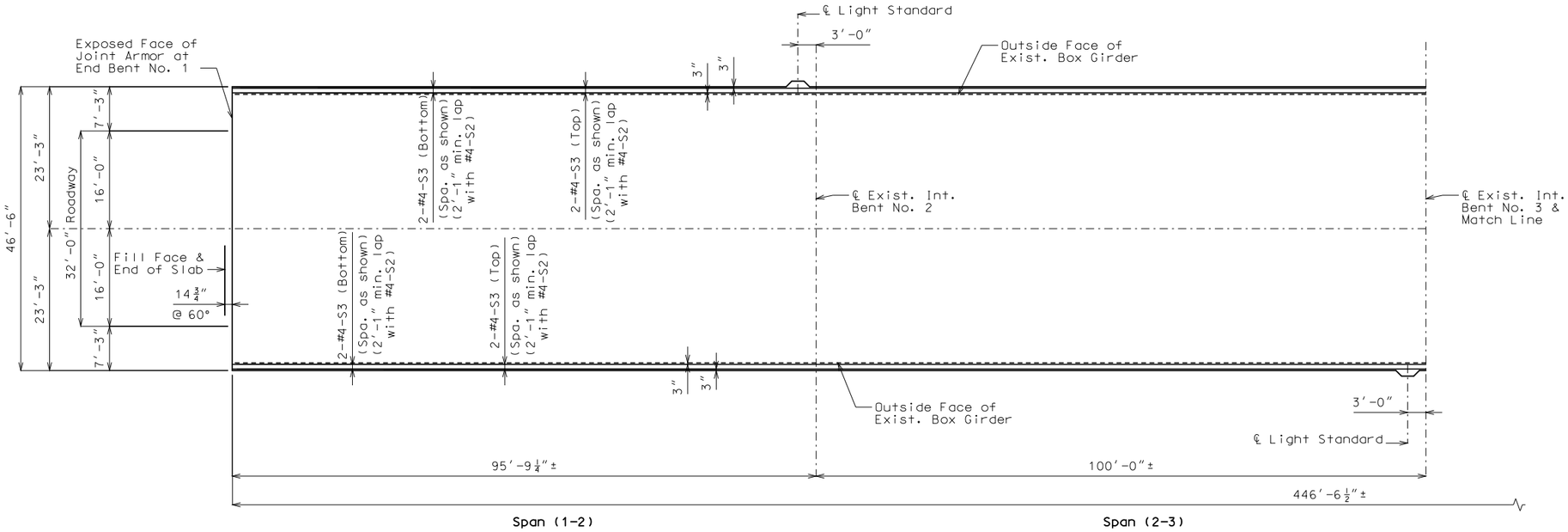

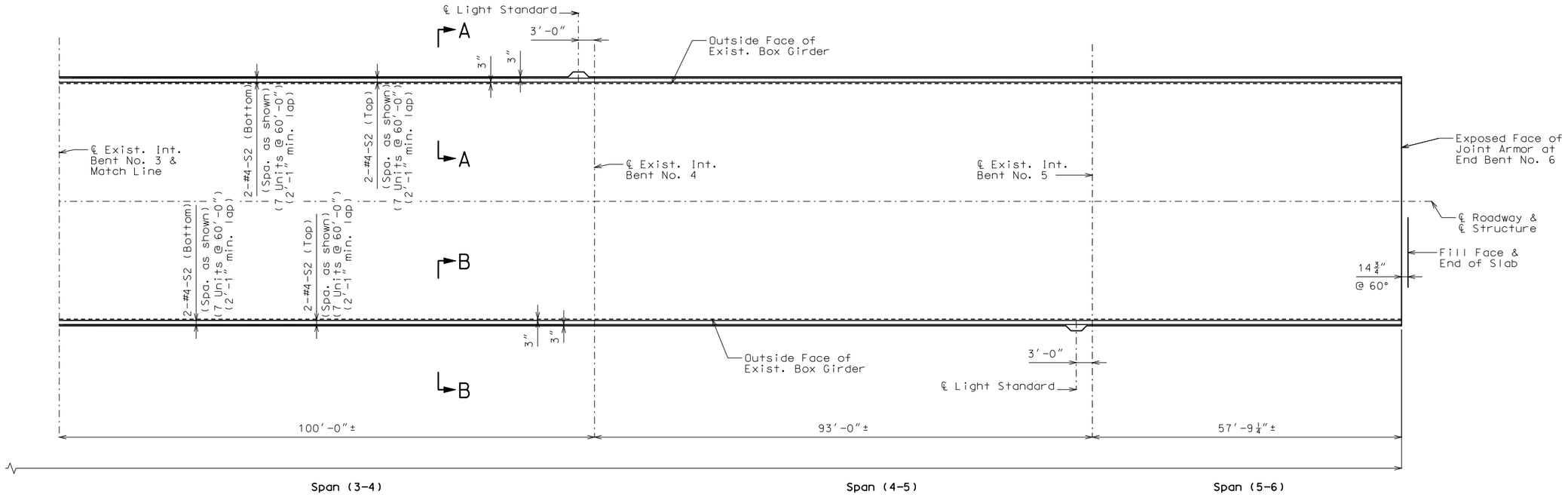

PLAN OF SLAB SHOWING BOTTOM & TOP CANTILEVER REINFORCEMENT

Note:
Work this sheet with Sheet No. 8, 9 & 11.

For Details of Corral Curb, see Sheets No. 12-18.

For Section A-A & Section B-B, see Sheet No. 11.

SLAB DETAILS

Detailed Sep. 2017
Checked Oct. 2017

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DATE PREPARED	
12/14/2017	
ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	10
COUNTY	
JACKSON	
JOB NO.	
J4I3198	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	
L09371	

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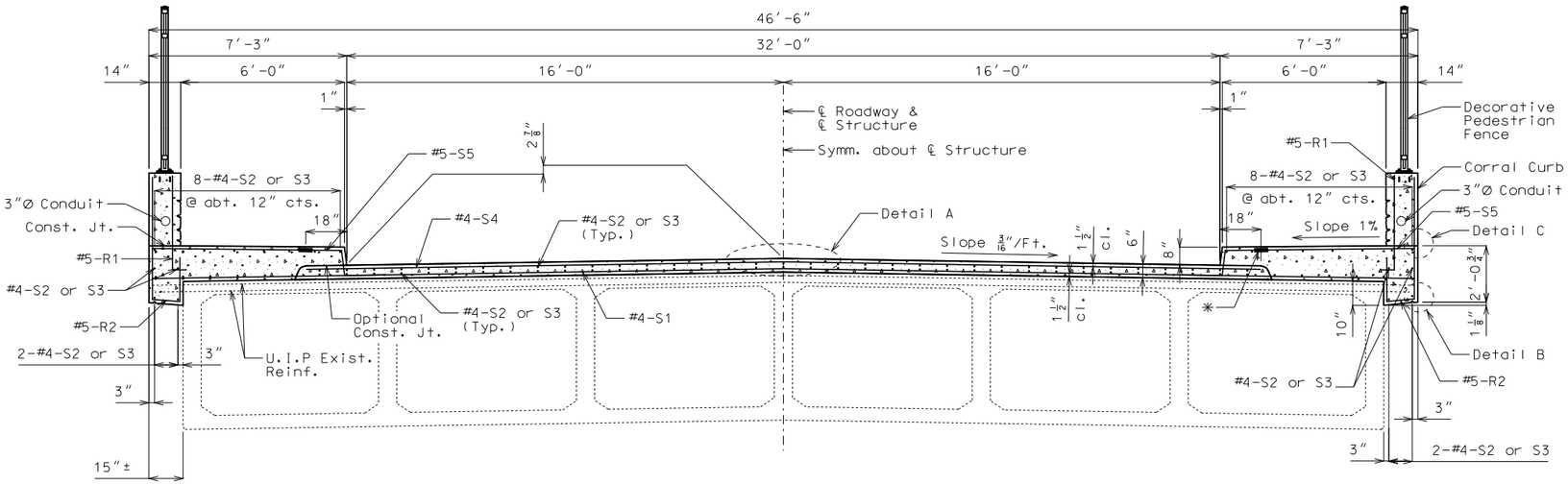
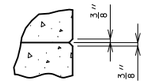
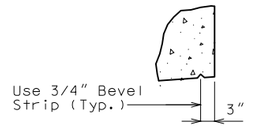


SECTION THRU SLAB SHOWING REINFORCEMENT

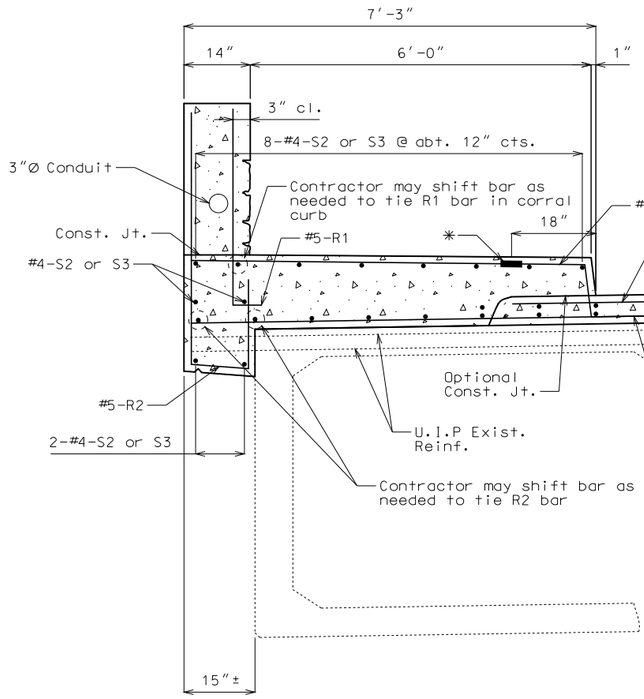
* Mechanical bar splices may be provided at no additional cost in lieu of #5-S5 bars with no splices.



DETAIL C

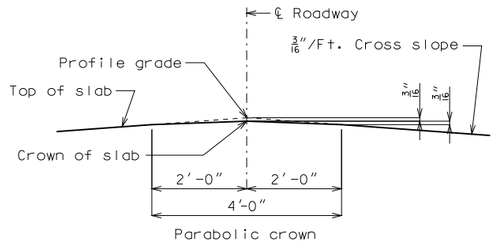


DETAIL B



SECTION A-A

(Pedestrian Fence not shown for clarity)



DETAIL A

Note:
Work this sheet with Sheets No. 8, 9 & 10.

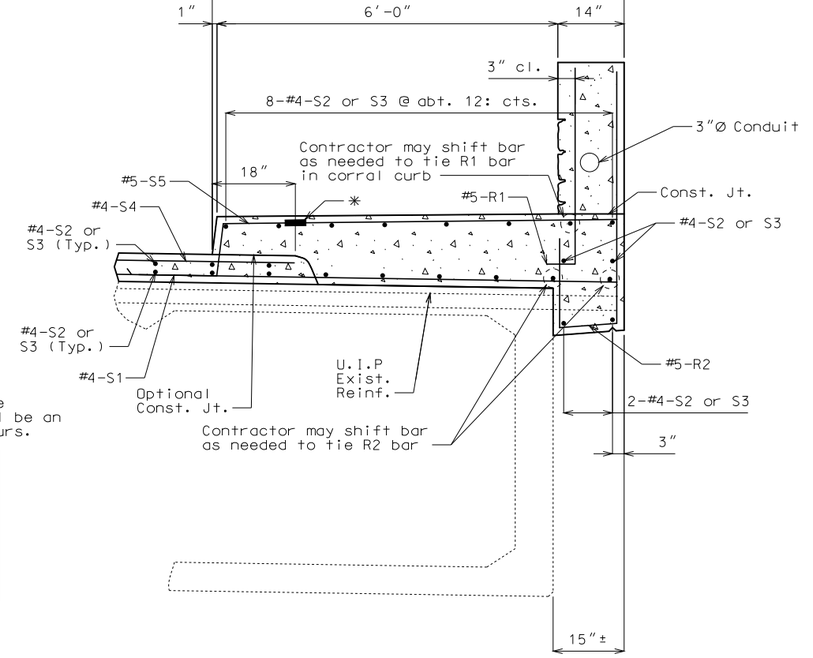
The contractor shall pour and satisfactorily finish the slab pours at the rate given. Retarder, if used, shall be an approved type and retard the set of concrete to 2.5 hours.

Min. Rate of Pour Cu. Yds./Hr.	Without Retarder	With Retarder
Slab and sidewalks (without optional consst. joint	Not allowed	41
Slab (with optional const. joint)	33	25
Sidewalk (Each)	25	25

For Details of Corral Curb, see Sheets No. 12-18.

For Details of Decorative Pedestrian Fence, see Sheets No. 19-21.

For location of Section A-A & B-B, see Sheet No. 8, 9 & 10.



SECTION B-B

(Pedestrian Fence not shown for clarity)

SLAB DETAILS

Detailed Aug. 2017
Checked Oct. 2017

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STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

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DATE PREPARED
12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	11

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
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105 WEST CAPITOL
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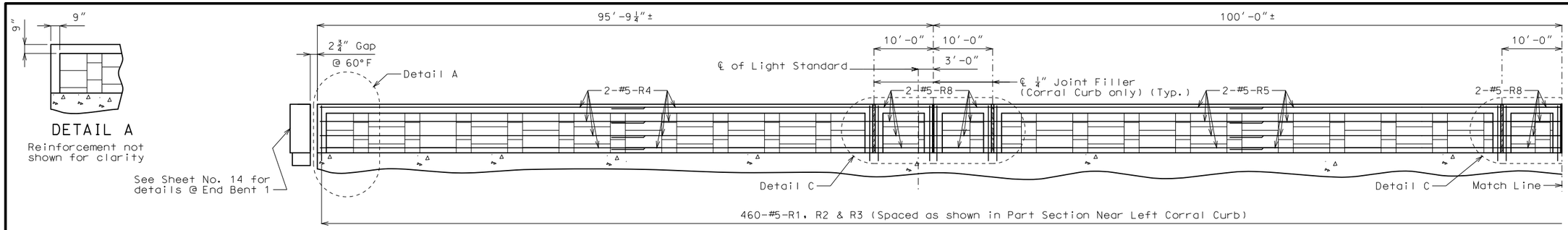
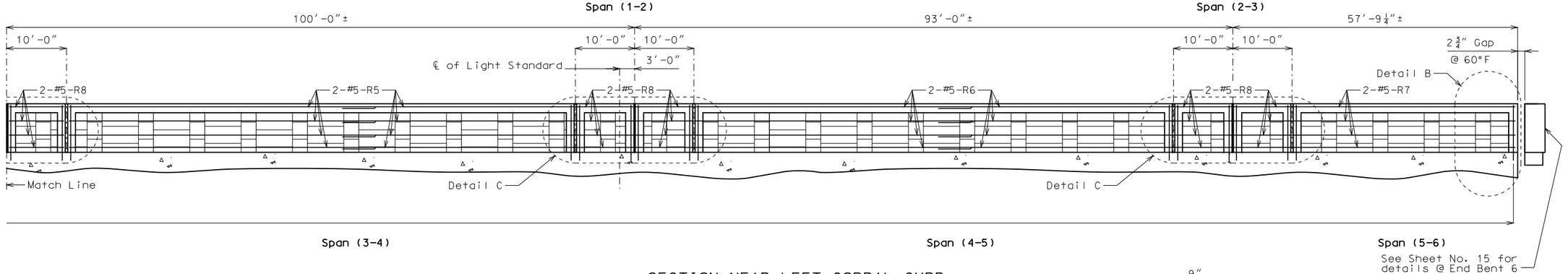
DETAIL A

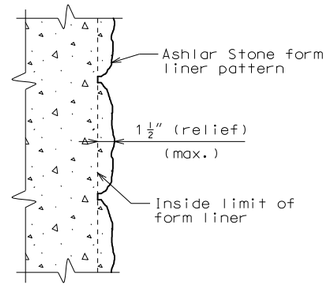
Reinforcement not shown for clarity





SECTION NEAR LEFT CORRAL CURB

Note: Longitudinal dimensions are horizontal at outside face of Corral Curb.



TYPICAL PART SECTION AT FORM LINER

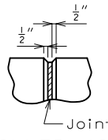
Notes:
The following is a list of form liner manufacturers and types which may be used. All form liner pattern's depth of relief shall vary up to 1 1/2". The height of any single 'stone' shall be 15" maximum.

Scott System, Inc.: Form liner pattern #167 "Ashlar Stone"

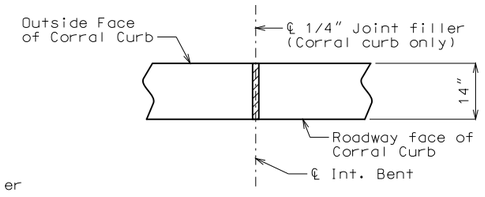
Fitzgerald formliners: Form liner pattern #16986 "Ashlar Stone"

Greenstreak: Form liner pattern #330 "Ashlar Stone"

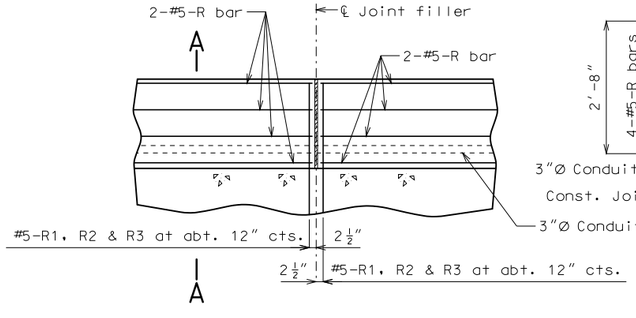
Dayton Superior/Symons: Form liner pattern #1515 "Ashlar Stone"



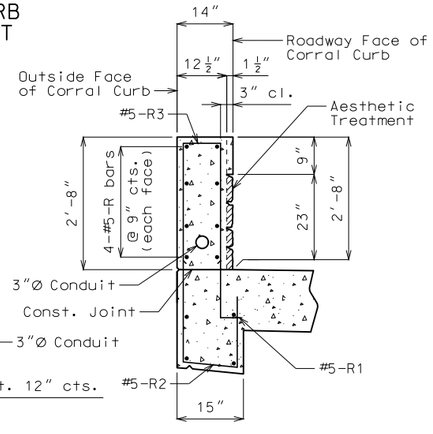
FILLED JOINT DETAIL



PART PLAN OF CORRAL CURB SHOWING JOINT FILLER AT INT. BENTS

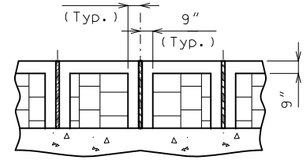


PART SECTION NEAR LEFT CORRAL CURB



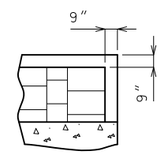
PART SECTION A-A

User a minimum lap of 3′-1" for #5 horizontal corral curb bars.



DETAIL C

Reinforcement not shown for clarity



DETAIL B

Reinforcement not shown for clarity

Notes:
Top of corral curb shall be built parallel to grade with corral curb joints (except at end bents) normal to grade.

All exposed edges of corral curb shall have either a 1/2" radius or a 3/8" bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for corral curb per linear foot.

Concrete in the corral curb shall be Class B-1.

Measurement of corral curb is to the nearest linear foot for each structure, measured along the outside of corral curb from end of wing to end of wing.

For Details of Corral Curb at End Bents not shown, see Sheet No. 14 & 15.

For Light Standard mounting, see Sheet No. 18.

For Decorative Fence Post spacing, see Sheet No. 19.

For Details of Decorative Fencing, see Sheet No. 21.

For Conduit System, see Sheet No. 22.

The cross-sectional area above the slab = 2.88 sq. ft.

See Special Provisions for form liner specifications.

DETAILS OF LEFT CORRAL CURB

Detailed Aug. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
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PROFESSIONAL ENGINEER
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ROUTE I-70 | STATE MO
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COUNTY JACKSON
JOB NO. J4I3198
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BRIDGE NO. L09371

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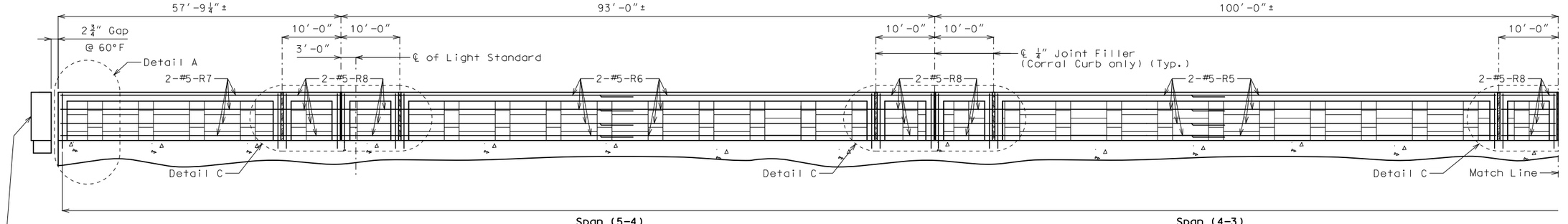
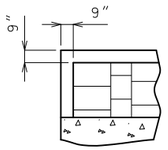
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

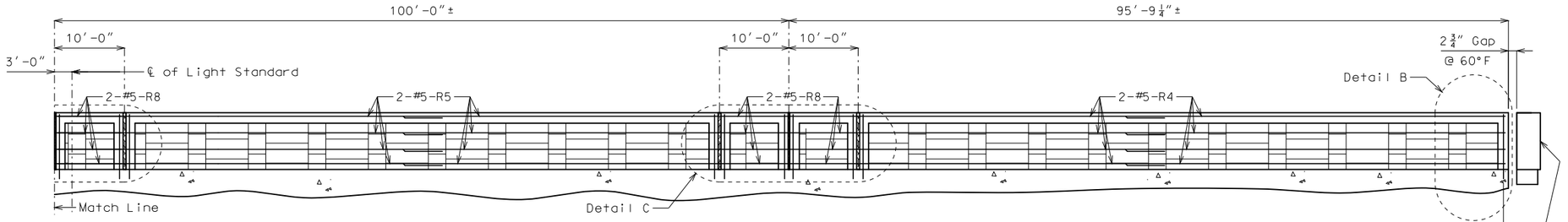


See Sheet No. 17 for details @ End Bent 6



DETAIL A

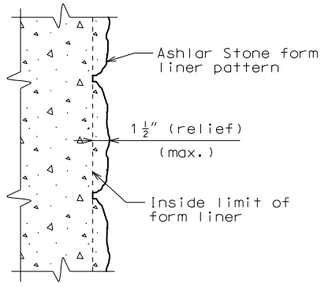
Reinforcement not shown for clarity



See Sheet No. 16 for details @ End Bent 1

SECTION NEAR RIGHT CORRAL CURB

Note: Longitudinal dimensions are horizontal at outside face of Corral Curb.



TYPICAL PART SECTION AT FORM LINER

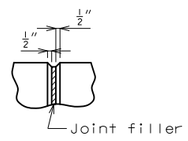
Notes:
The following is a list of form liner manufacturers and types which may be used. All form liner pattern's depth of relief shall vary up to 1 1/2". The height of any single 'stone' shall be 15" maximum.

Scott System, Inc.: Form liner pattern #167 "Ashlar Stone"

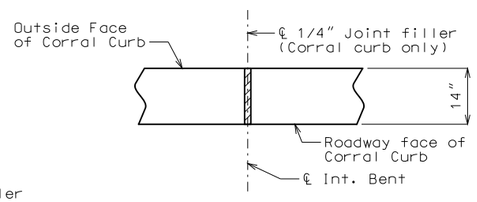
Fitzgerald formliners: Form liner pattern #16986 "Ashlar Stone"

Greenstreak: Form liner pattern #330 "Ashlar Stone"

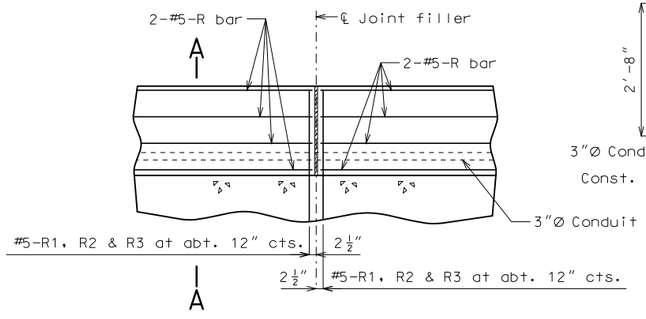
Dayton Superior/Symons: Form liner pattern #1515 "Ashlar Stone"



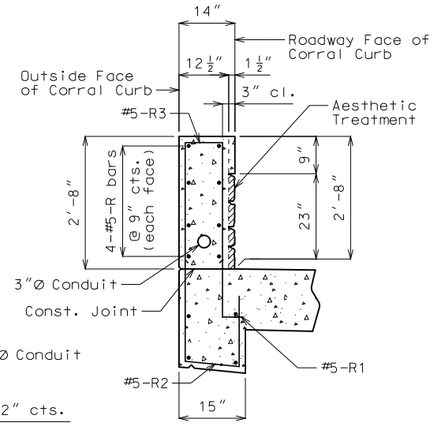
FILLED JOINT DETAIL



PART PLAN OF CORRAL CURB SHOWING JOINT FILLER AT INT. BENTS

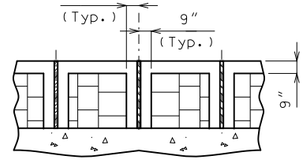


PART SECTION NEAR RIGHT CORRAL CURB



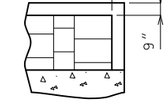
PART SECTION A-A

User a minimum lap of 3′-1″ for #5 horizontal corral curb bars.



DETAIL C

Reinforcement not shown for clarity



DETAIL B

Reinforcement not shown for clarity

Notes:
Top of corral curb shall be built parallel to grade with corral curb joints (except at end bents) normal to grade.

All exposed edges of corral curb shall have either a 1/2" radius or a 3/8" bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for corral curb per linear foot.

Concrete in the corral curb shall be Class B-1.

Measurement of corral curb is to the nearest linear foot for each structure, measured along the outside of corral curb from end of wing to end of wing.

For Details of Corral Curb at End Bents not shown, see Sheet No. 16 & 17.

For Light Standard mounting, see Sheet No. 18.

For Decorative Fence Post spacing, see Sheet No. 20.

For Details of Decorative Fencing, see Sheet No. 21.

For Conduit System, see Sheet No. 22.

The cross-sectional area above the slab = 2.88 sq. ft.

See Special Provisions for form liner specifications.

DETAILS OF RIGHT CORRAL CURB

Detailed Aug. 2017
Checked Oct. 2017

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

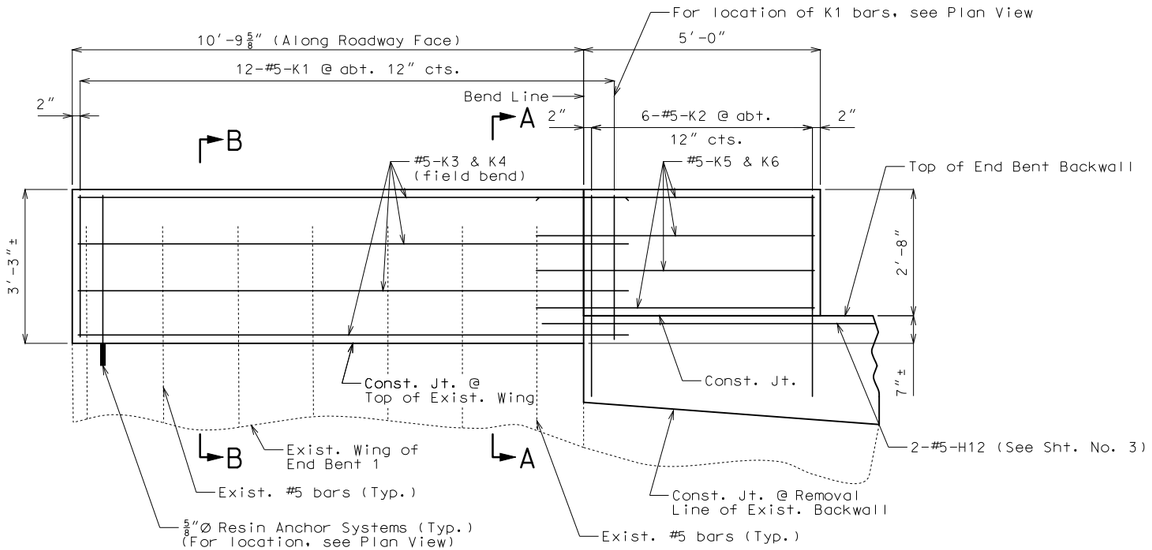
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 13
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A09371

DESCRIPTION | DATE

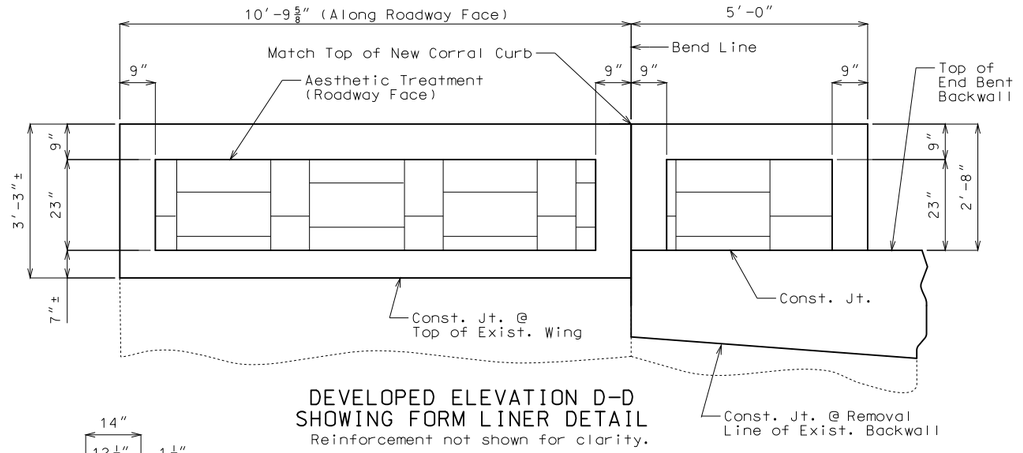
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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



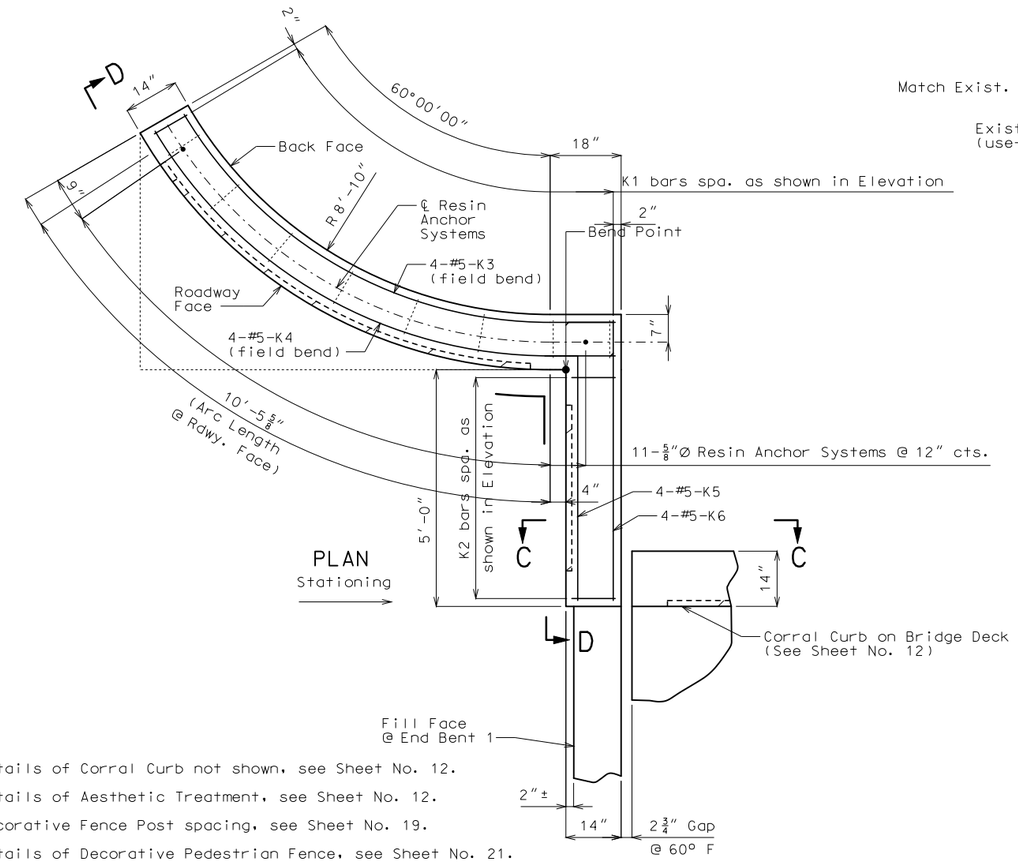
DEVELOPED ELEVATION D-D SHOWING REINFORCEMENT

Form liner not shown for clarity.



DEVELOPED ELEVATION D-D SHOWING FORM LINER DETAIL

Reinforcement not shown for clarity.



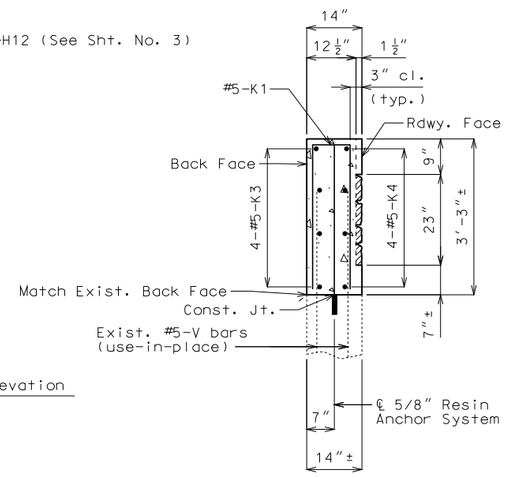
Notes:

For details of Corral Curb not shown, see Sheet No. 12.

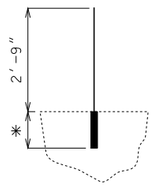
For details of Aesthetic Treatment, see Sheet No. 12.

For Decorative Fence Post spacing, see Sheet No. 19.

For details of Decorative Pedestrian Fence, see Sheet No. 21.



SECTION A-A



* Manufacturer's recommendaton

Total Req'd = 11 for Left Corral Curb at End Bent 1

Total Length = 2′-9″ + embedment

DETAIL OF RESIN ANCHOR SYSTEM

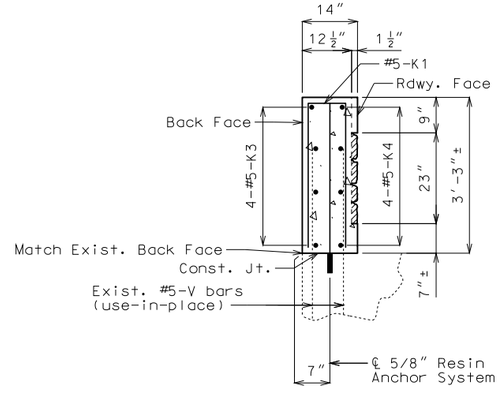
Resin Anchor Notes:

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

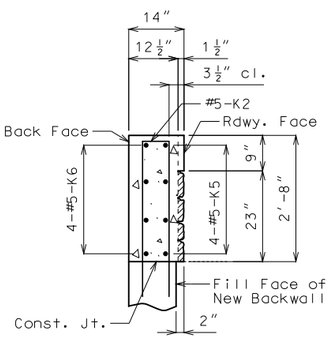
Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Corral Curb.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



SECTION B-B



SECTION C-C

DETAILS OF LEFT CORRAL CURB AT END BENT NO. 1

Detailed Sep. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	14

COUNTY: JACKSON

JOB NO.: J4I3198

CONTRACT ID.:

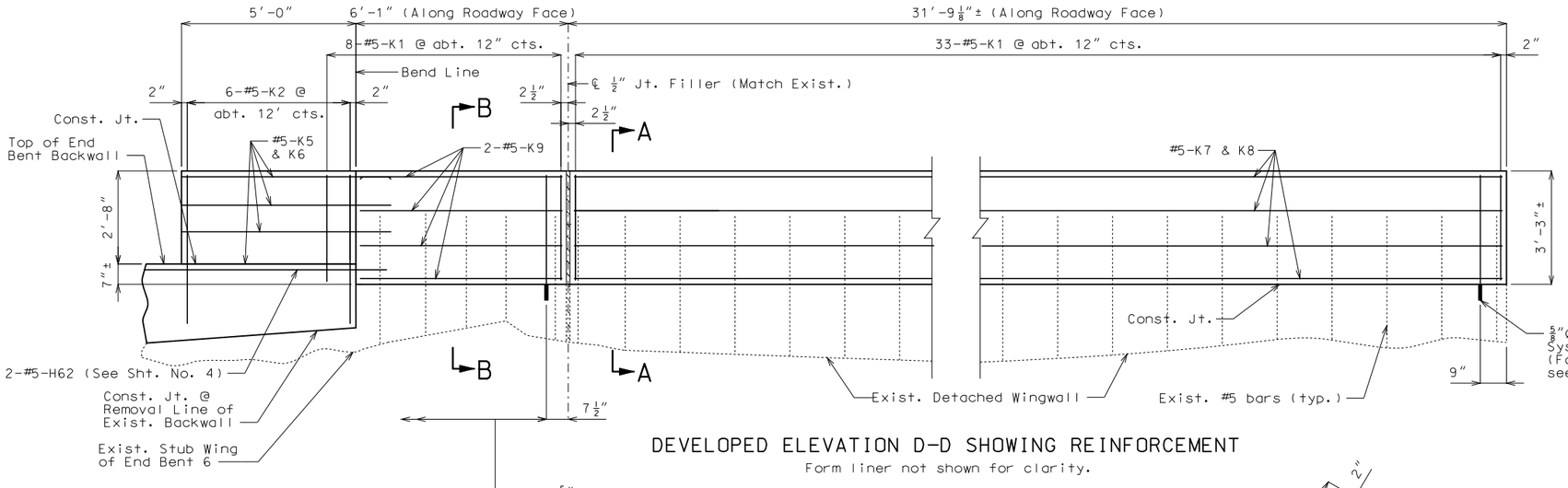
PROJECT NO.:

BRIDGE NO.: L09371

DESCRIPTION	DATE

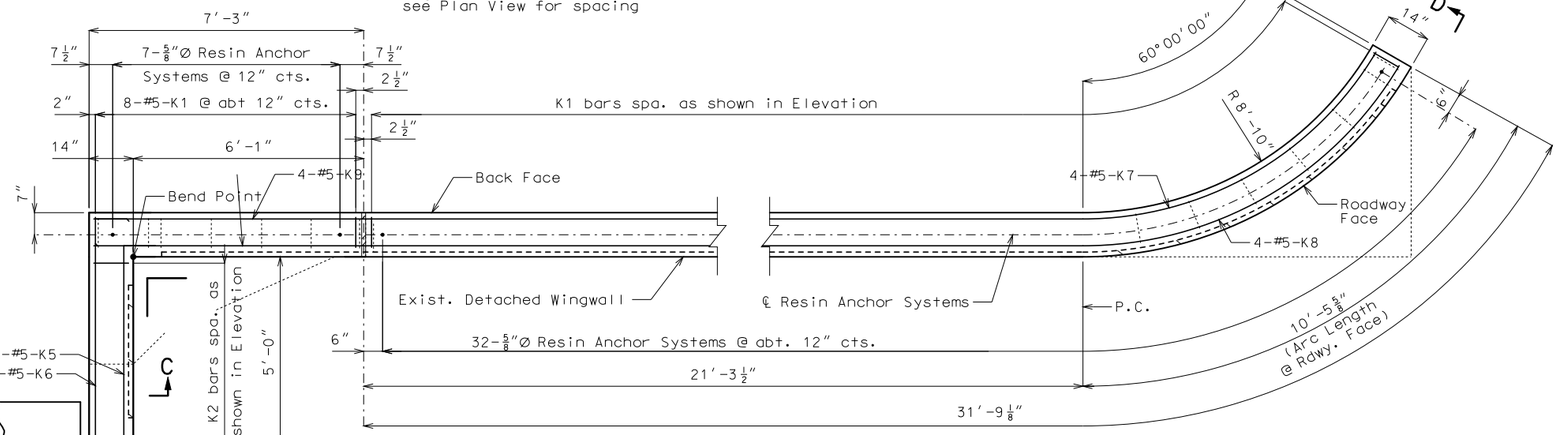
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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



DEVELOPED ELEVATION D-D SHOWING REINFORCEMENT

Form liner not shown for clarity.



PLAN

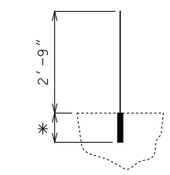
Stationing

Notes:
For details of Corral Curb not shown, see Sheet No. 12.

For details of Aesthetic Treatment, see Sheet No. 12.

For Decorative Fence Post spacing, see Sheet No. 19.

For details of Decorative Pedestrian Fence, see Sheet No. 21.



* Manufacturer's recommendaton

Total Req'd = 39 for Left Corral Curb at End Bent 6
Total Length = 2′-9″ + embedment

Resin Anchor Notes:

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

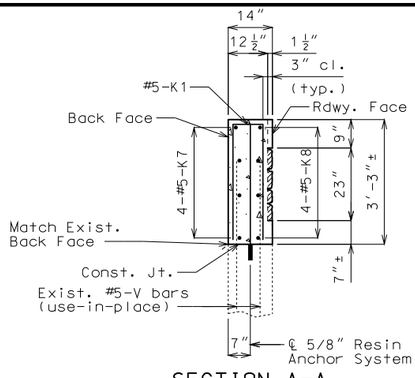
Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Corral Curb.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

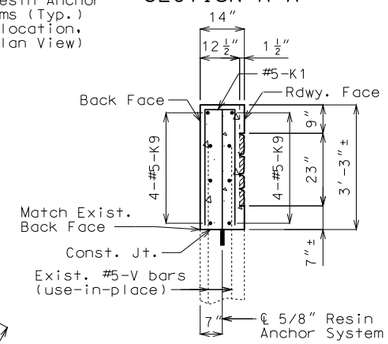
An epoxy coated #5 Grade 60 reinforcing bar shall be substituted for the 5/8″Ø threaded rod.

DETAIL OF RESIN ANCHOR SYSTEM

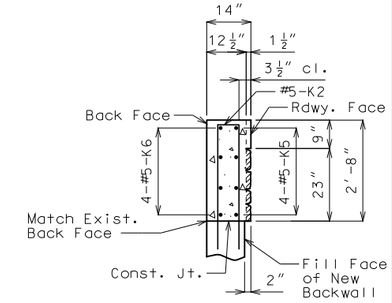
Detailed Sep. 2017
Checked Oct. 2017



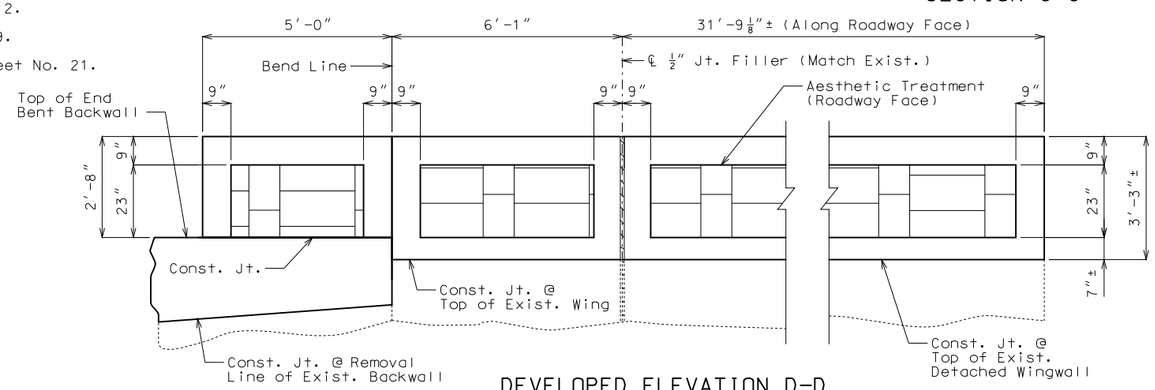
SECTION A-A



SECTION B-B



SECTION C-C



DEVELOPED ELEVATION D-D SHOWING FORM LINER DETAIL

Reinforcement not shown for clarity.

DETAILS OF LEFT CORRAL CURB AT END BENT 6

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

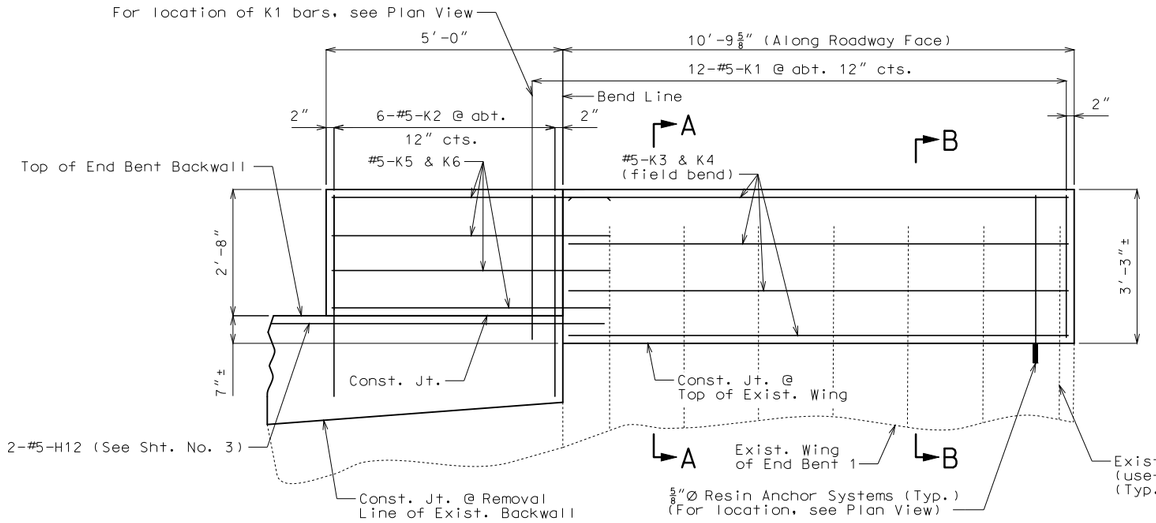
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/14/2017
ROUTE: I-70 | STATE: MO
DISTRICT: BR | SHEET NO.: 15
COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: L09371

DESCRIPTION | DATE

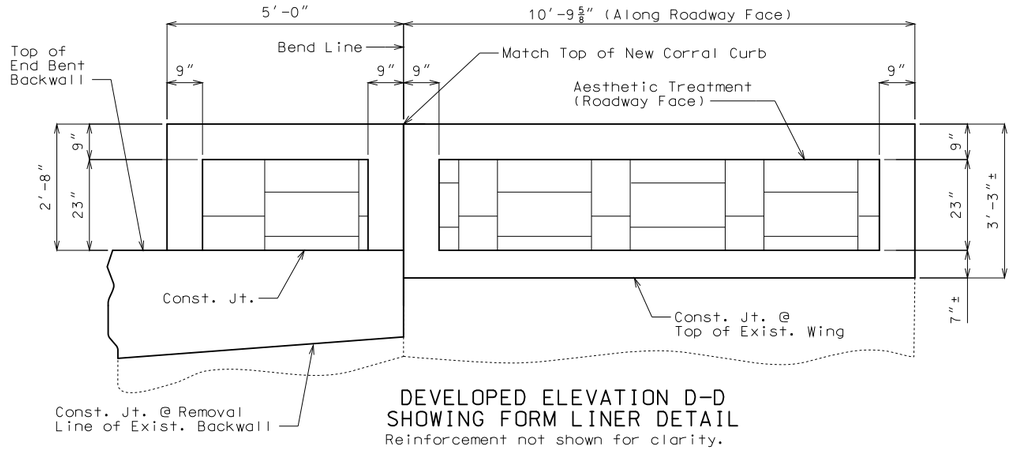
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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



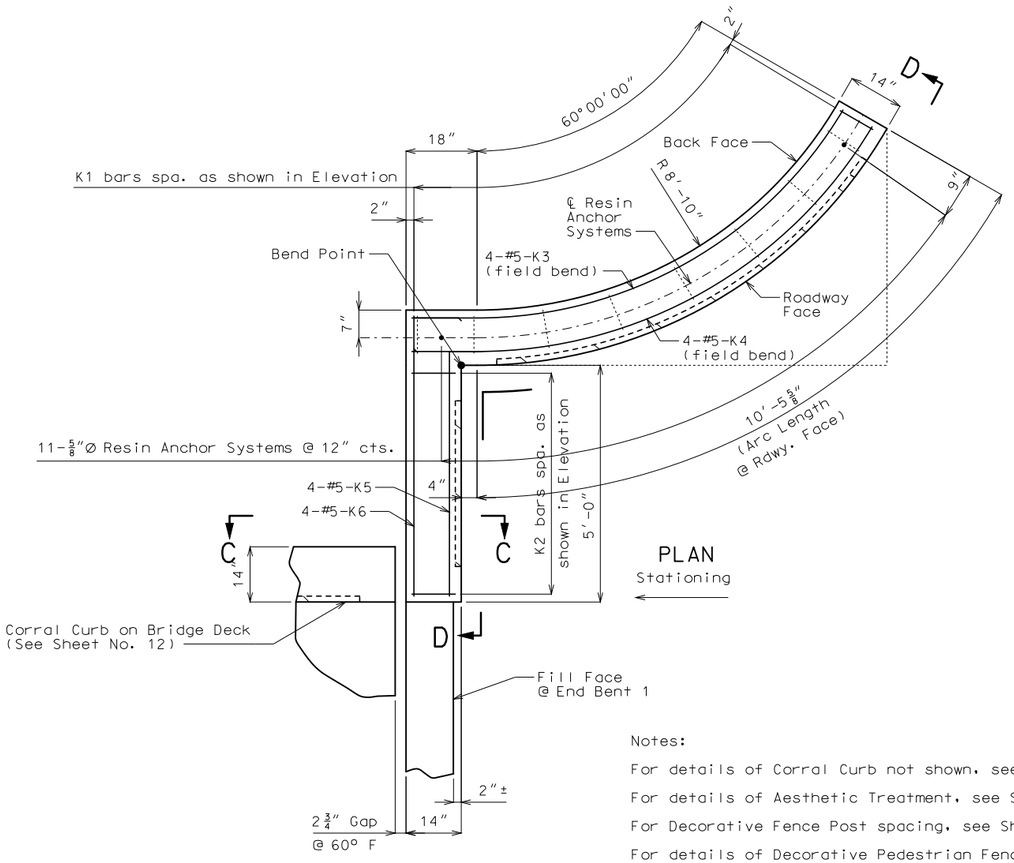
DEVELOPED ELEVATION D-D SHOWING REEINFORCEMENT

Form liner not shown for clarity.



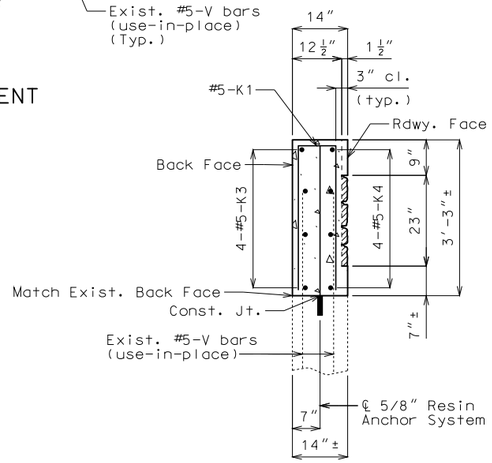
DEVELOPED ELEVATION D-D SHOWING FORM LINER DETAIL

Reinforcement not shown for clarity.

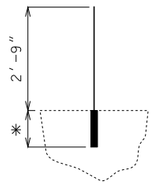


PLAN

Stationing



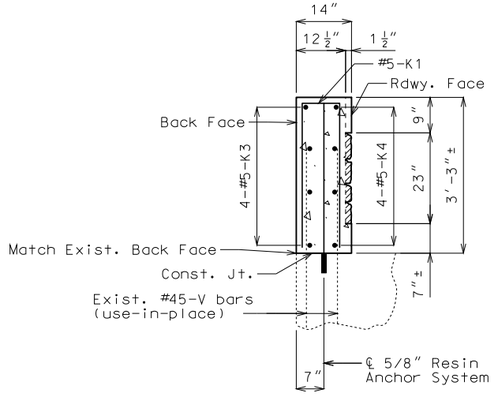
SECTION A-A



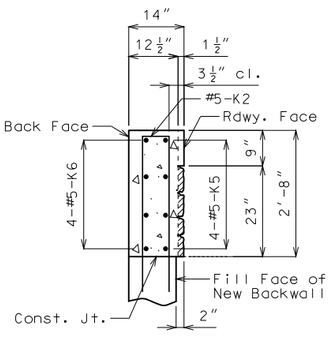
* Manufacturer's recommendaton

Total Req'd = 11 for Right Corral Curb at End Bent 1

Total Length = 2′-9″ + embedment



SECTION B-B



SECTION C-C

DETAIL OF RESIN ANCHOR SYSTEM

Resin Anchor Notes:

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

Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Corral Curb.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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

Notes:

For details of Corral Curb not shown, see Sheet No. 13.

For details of Aesthetic Treatment, see Sheet No. 13.

For Decorative Fence Post spacing, see Sheet No. 20.

For details of Decorative Pedestrian Fence, see Sheet No. 21.

DETAILS OF RIGHT CORRAL CURB AT END BENT NO. 1

Detailed Sep. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	16

COUNTY: JACKSON

JOB NO.: J4I3198

CONTRACT ID.:

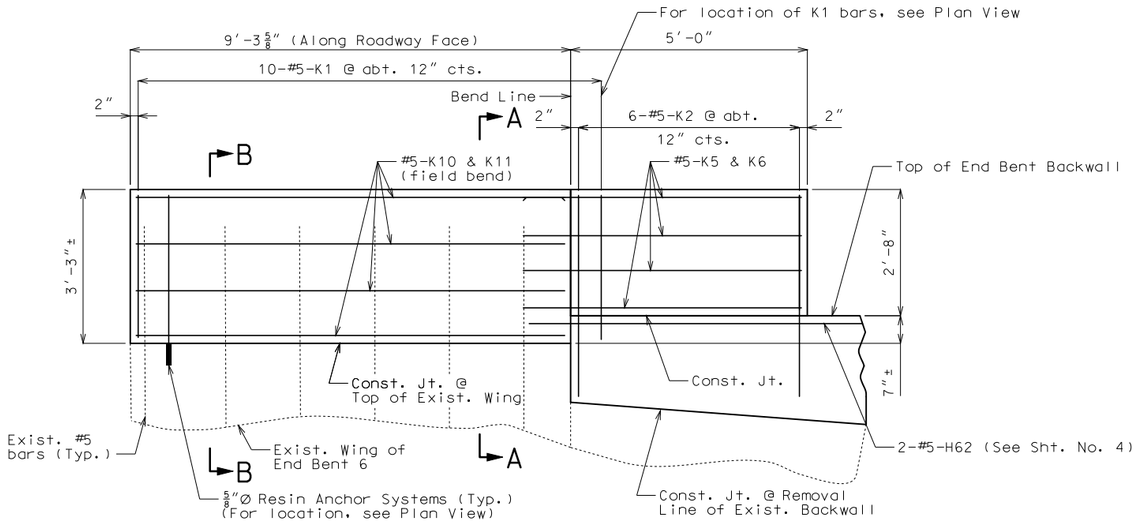
PROJECT NO.:

BRIDGE NO.: L09371

DESCRIPTION	DATE

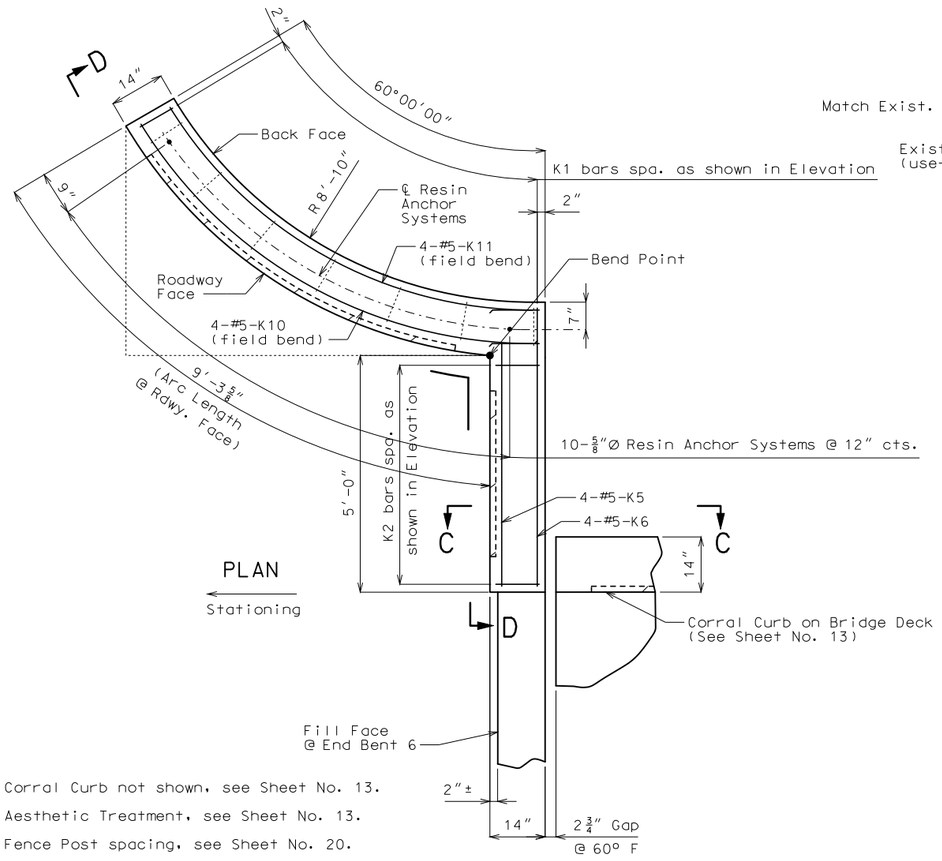
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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



DEVELOPED ELEVATION D-D SHOWING REEINFORCEMENT

Form liner not shown for clarity.



PLAN

Stationing

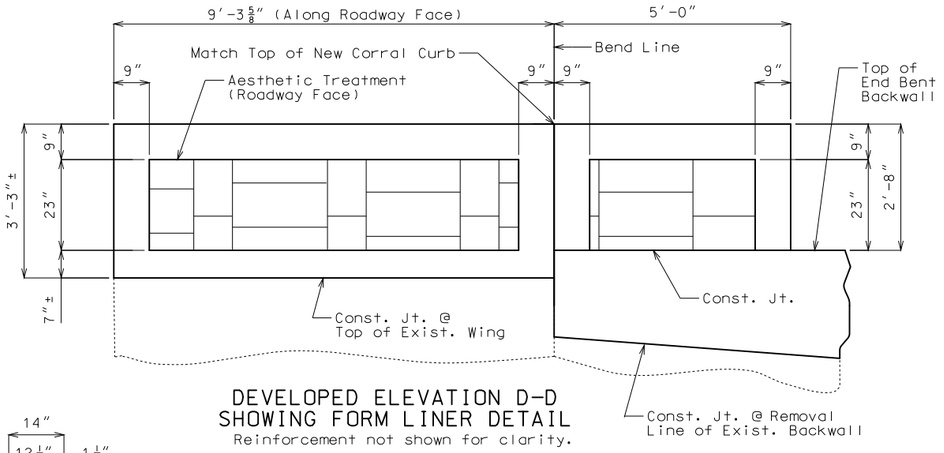
Notes:

For details of Corral Curb not shown, see Sheet No. 13.

For details of Aesthetic Treatment, see Sheet No. 13.

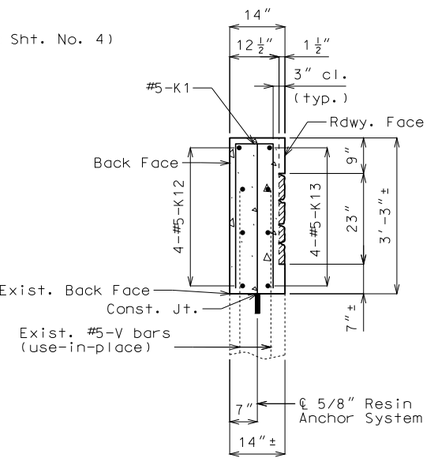
For Decorative Fence Post spacing, see Sheet No. 20.

For details of Decorative Pedestrian Fence, see Sheet No. 21.

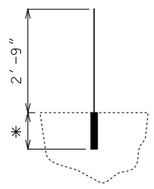


DEVELOPED ELEVATION D-D SHOWING FORM LINER DETAIL

Reinforcement not shown for clarity.



SECTION A-A



* Manufacturer's recommendaton

Total Req'd = 10 for Right Corral Curb at End Bent 6

Total Length = 2′-9″ + embedment

DETAIL OF RESIN ANCHOR SYSTEM

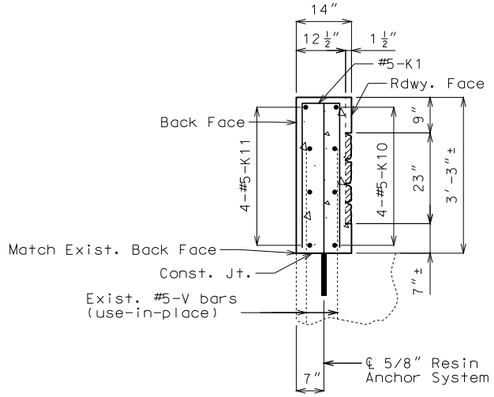
Resin Anchor Notes:

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

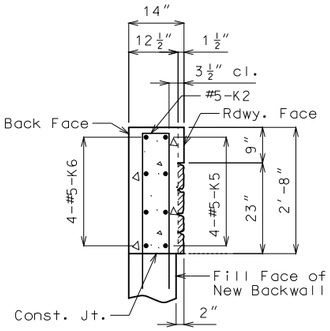
Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Corral Curb.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



SECTION B-B



SECTION C-C

DETAILS OF RIGHT CORRAL CURB AT END BENT NO. 6

Detailed Sep. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	17

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO. L09371

DESCRIPTION	DATE

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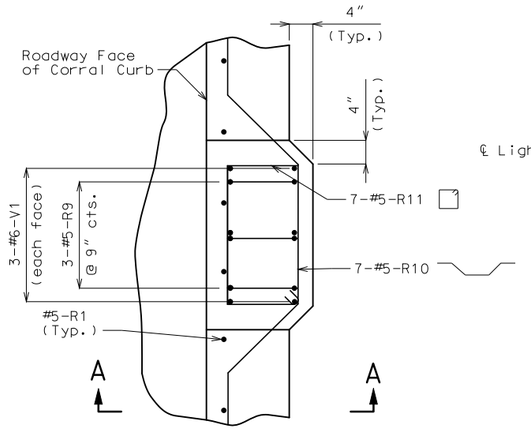
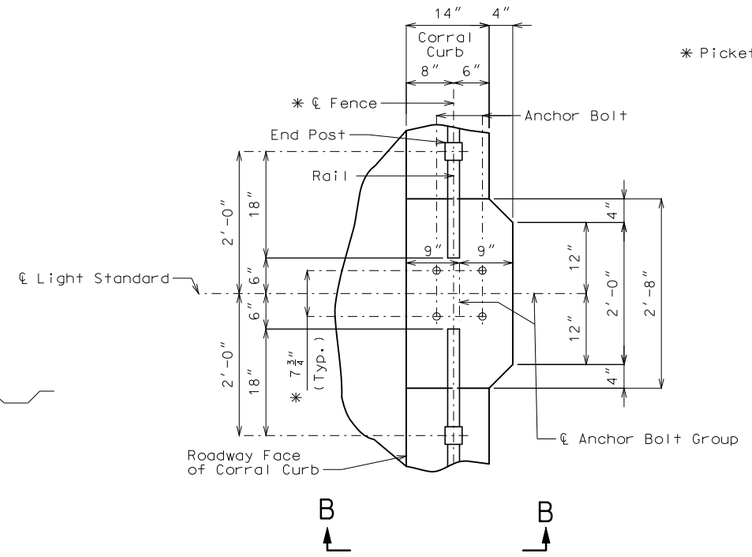
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



PART PLAN SHOWING REINFORCEMENT

(Conduit & fence not shown for clarity)

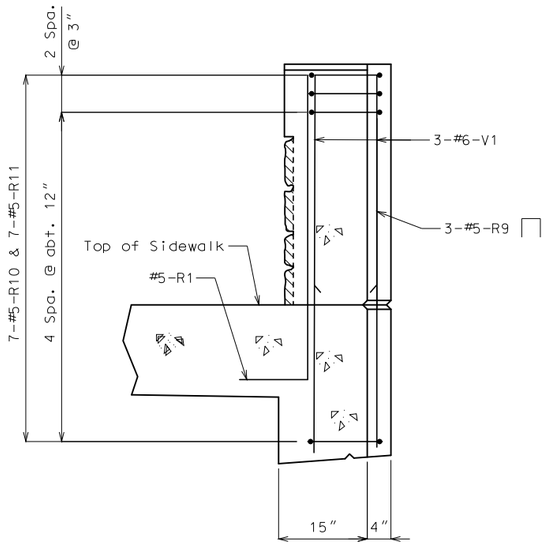


* Pickets not shown for clarity

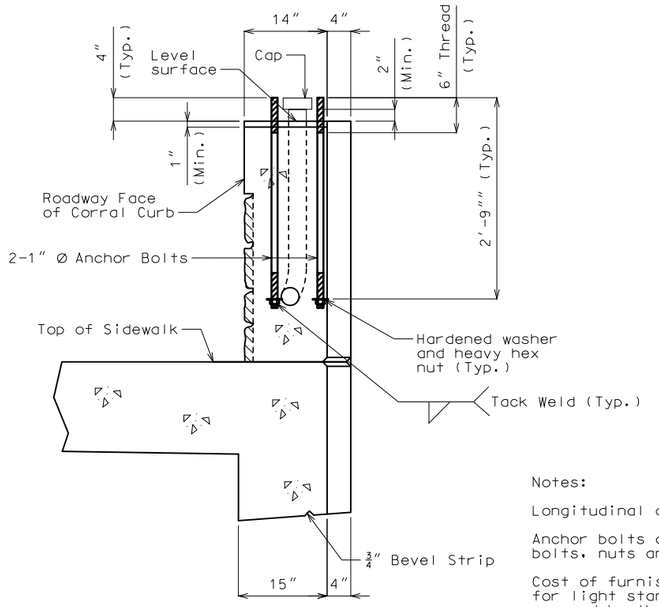
PART PLAN SHOWING ANCHOR BOLTS AND FENCE

(Conduit not shown for clarity)

* match existing light pole



SECTION A-A



SECTION B-B

Notes:

Longitudinal dimensions are horizontal.

Anchor bolts and nuts shall be ASTM A449. Anchor bolts, nuts and washers shall be fully galvanized.

Cost of furnishing and placing anchor bolts for light standard will be considered completely covered by the contract unit price for other items.

Light standards, wiring and fixtures shall be furnished and installed by others.

Top of light standard supports shall be made horizontal; anchor bolts shall be placed vertically.

For location of light standards, see Sheet No. 12 & 13.

For Details of Conduit System on Structure, see Sheet No. 22.

For Pedestrian Fence Post Locations, see Sheets No. 19 & 20.

For Pedestrian Fence details, see Sheet No. 21.

DETAILS OF LIGHT STANDARD MOUNTING ON CORRAL CURB (4 Req'd)

Detailed Aug. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	18

COUNTY: JACKSON

JOB NO.: J4I3198

CONTRACT ID.:

PROJECT NO.:

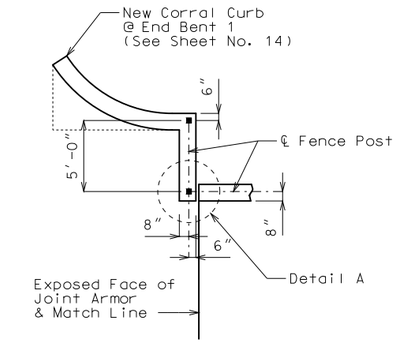
BRIDGE NO.: L09371

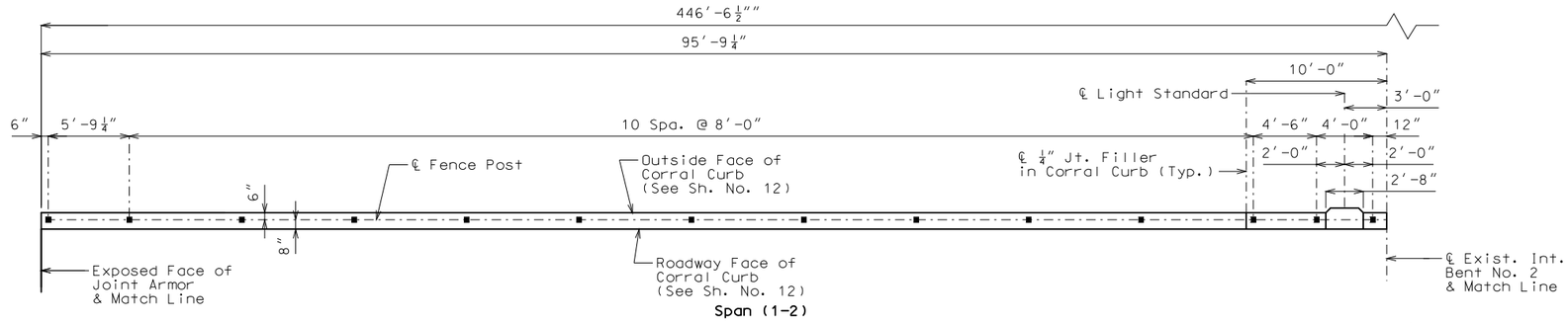
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

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





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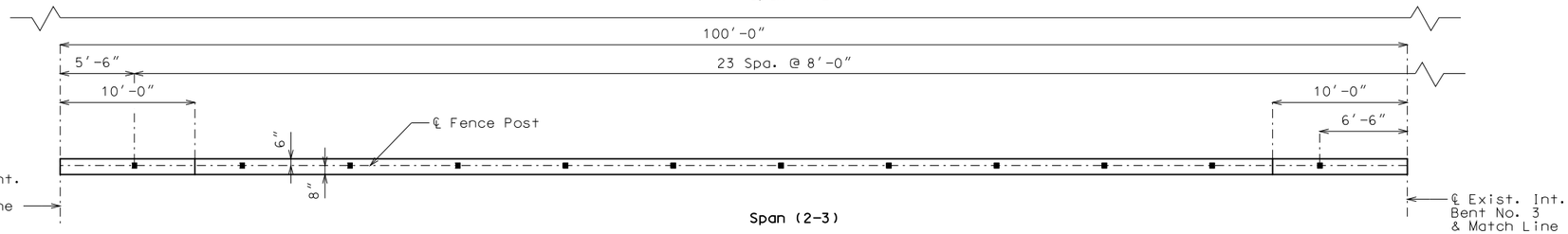

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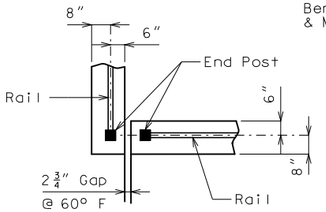
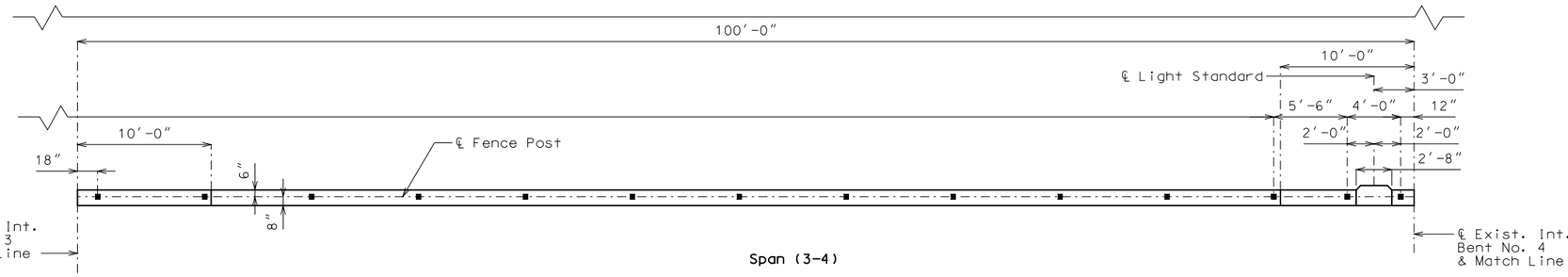


DETAIL A



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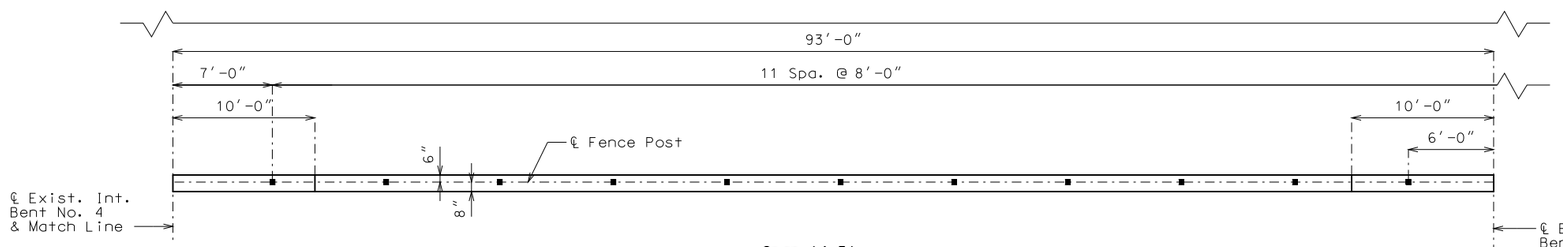

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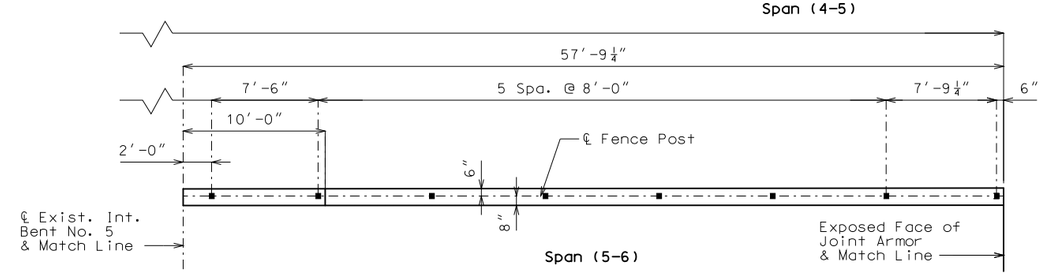

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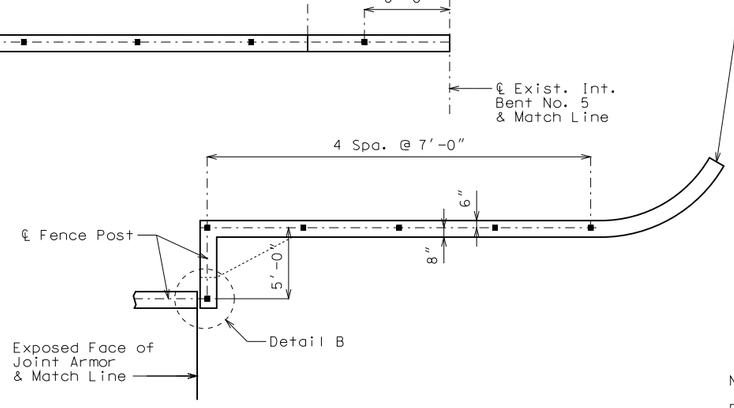

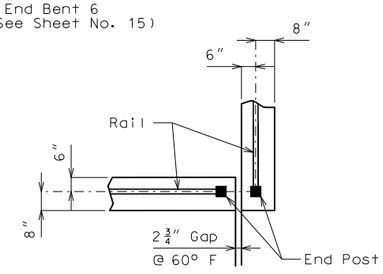

DETAIL B

PLAN OF LEFT CORRAL CURB SHOWING FENCE POST SPACING

LEFT DECORATIVE PEDESTRIAN FENCE DETAILS

Notes:

For Decorative Pedestrian Fence Details, see Sheet No. 21.

For Details of Corral Curb, see Sheets No. 12, 14, 15 & 18.

Detailed Sep. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 19
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09371

DESCRIPTION | DATE

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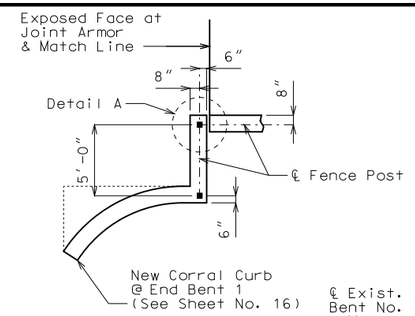
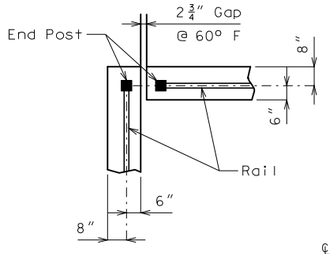
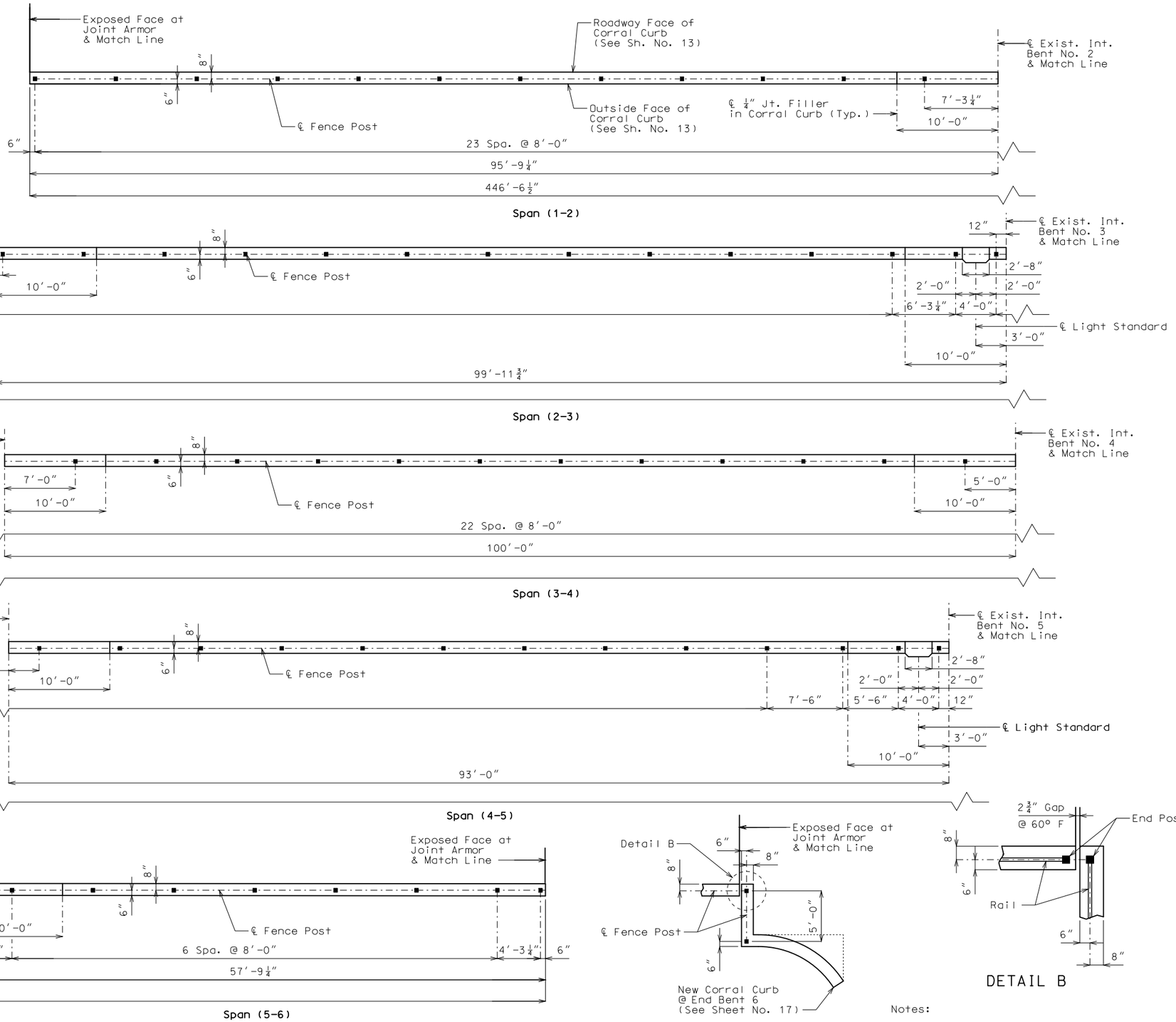
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)





DETAIL A



DETAIL B

Notes:

For Decorative Pedestrian Fence Details, see Sheet No. 21.

For Details of Corral Curb, see Sheets No. 13, 16, 17 & 18.

PLAN OF RIGHT CORRAL CURB SHOWING FENCE POST SPACING

RIGHT DECORATIVE PEDESTRIAN FENCE DETAILS

Detailed Sep. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/14/2017
ROUTE: I-70 | STATE: MO
DISTRICT: BR | SHEET NO.: 20
COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: L09371

DESCRIPTION | DATE

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

Notes:

Decorative pedestrian fencing shall be in accordance with 2010 AASHTO LRFD Bridge Design Specifications and 2010 Interim Revisions. The design line load for pedestrian railings will not require a 50lb/ft and 200lb load be applied simultaneously. The posts of pedestrian railing will require both loadings applied simultaneously.

Fence shall have a gloss black finish (Federal Standard #17038) System "G" in accordance with Sec 1081.

Base plate shall be ASTM A709, Grade 36.

Dimensions of pedestrian fence are measured horizontally.

Measurement of pedestrian fence will be made to the nearest linear foot along centerline fence.

Payment for furnishing and erecting the fence, complete in place, with U-Bolts, washers and reinforcing bars will be considered completely covered by the contract unit price for 72" Decorative Pedestrian Fence (Structures).

All fence posts shall be vertical.

Substitution for the U-bolt cages on the decorative pedestrian fence will not be permitted.

Mortar shall be placed under the post base plates in accordance with Sec 1066.

Contractor shall submit complete detailed shop drawings in accordance with Sec 1080.

The contractor shall have the decorative pedestrian fencing manufacturer submit structural design computations signed and sealed by a registered professional engineer in the State of Missouri.

All materials used in fabrication and construction of the decorative pedestrian fencing shall be in accordance with the manufacturer's specifications, except as modified in the contract documents.

Decorative pedestrian fencing system shall be supplied by only one of the manufacturers. Fencing system shall include all components except the anchor bolts and #4 bars welded to the anchor bolts. The assembly of the pickets to the rails and the rails to the posts shall be the same as the style mentioned for the manufacturer.

Ameristar Fence Products, Inc.
1555 N. Mingo
Tulsa, OK. 74116
(800) 321-8724
www.ameristarfence.com

Style: AEGIS II Majestic

Iron Eagle Industries, Inc.
1256 Cardiff Blvd.
Mississauga, Ontario Canada L5S1R1
(905) 670-2558
www.ironeagleind.com

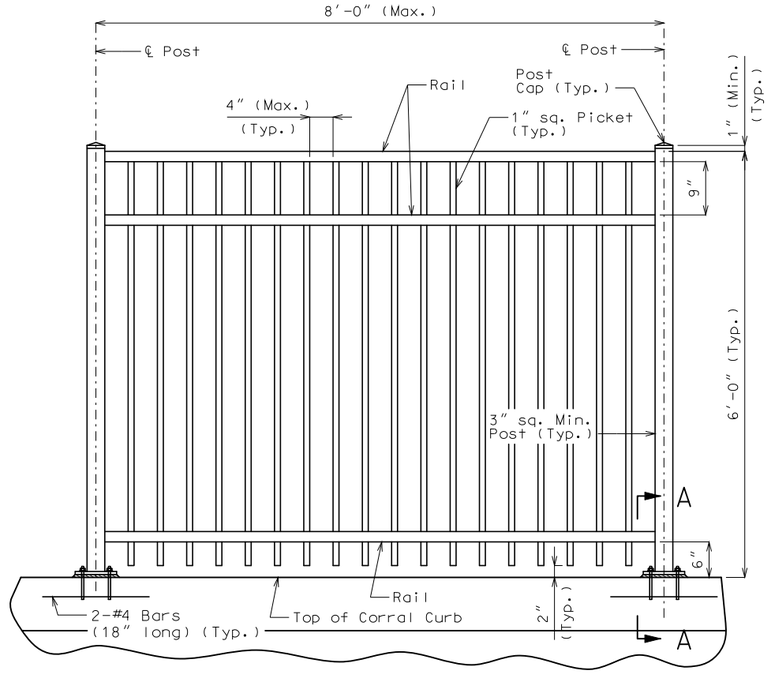
Style: Silver Eagle II

Betafence USA
3309 S.W. Interstate 45
Ennis, TX. 75119
(888) 650-4766
www.betafenceusa.com

Style: UpGrade-I Landmark

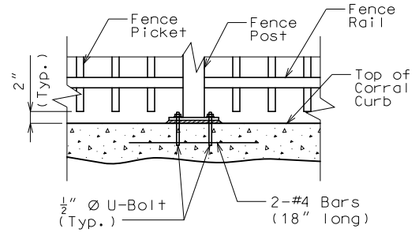
Merchants Metals
6575 Romiss Court
St. Louis, MO 63134
(800) 293-3363
www.merchantsmetals.com

Style: Guardsman Monroe

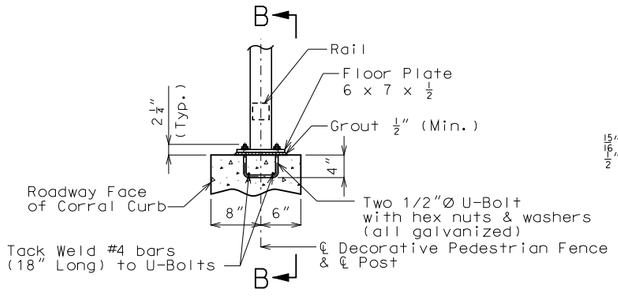


TYPICAL PART ELEVATION

Adjacent panels and Form Liner Detail not shown for clarity.



SECTION B-B AT SUPPORT

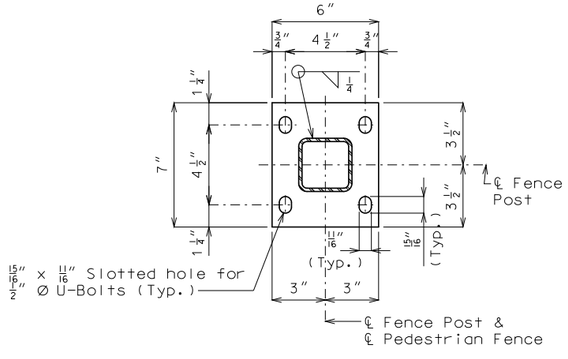


SECTION A-A AT FENCE SUPPORT

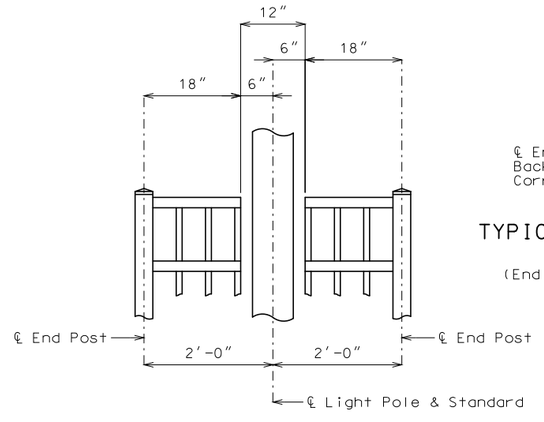
Note: Reinforcement not shown for clarity.

Notes:
For Part Plans of Corral Curb Showing Fence Post Spacing, see Sheet No. 19 & 20.

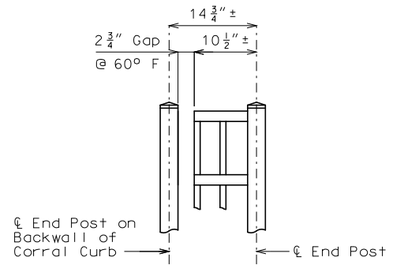
For Details of Corral Curb, see Sheets No. 12-18.



PLAN OF FLOOR PLATE



TYPICAL DETAIL OF FENCE AT LIGHT STANDARDS



TYPICAL DETAIL OF FENCE AT EXPANSION JOINTS AT END BENTS NO. 1 & 6

(End Bent No. 1 shown, End Bent No. 6 similar)

DECORATIVE PEDESTRIAN FENCE DETAILS

Detailed Aug. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	21

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

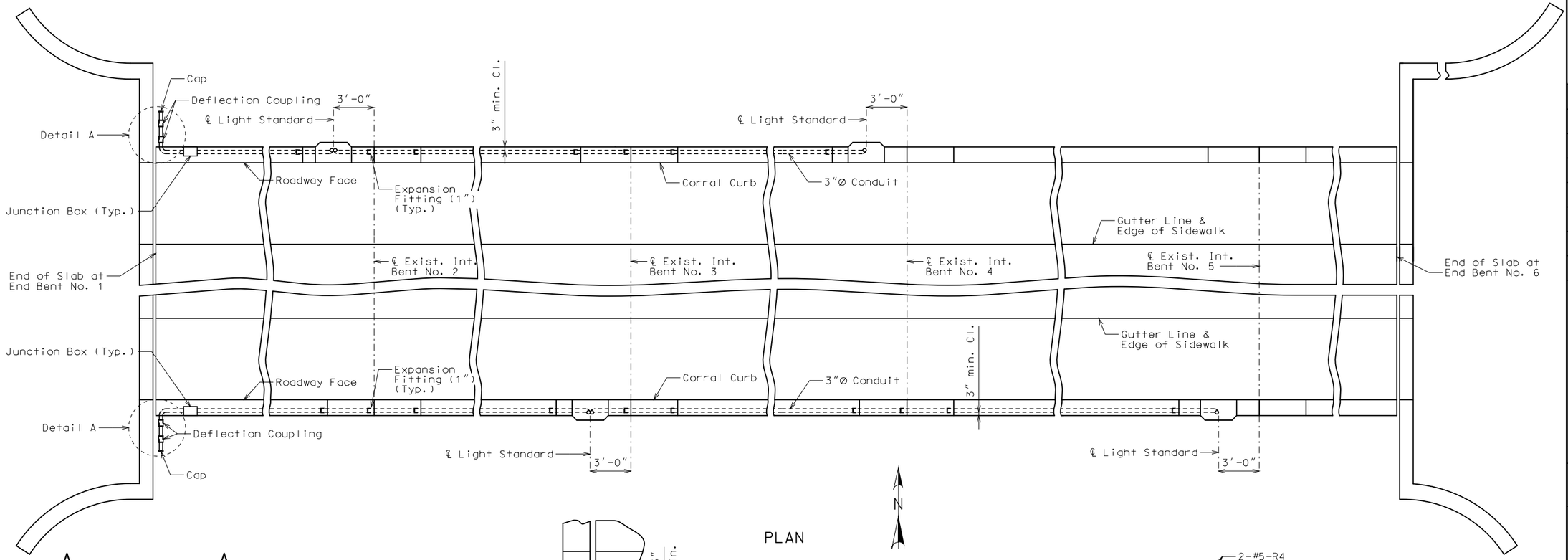
PROJECT NO.

BRIDGE NO. L09371

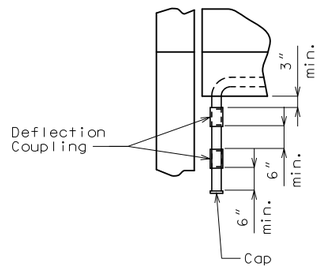
DESCRIPTION	DATE

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

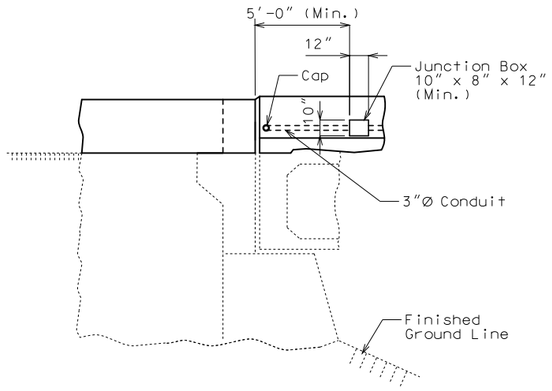
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



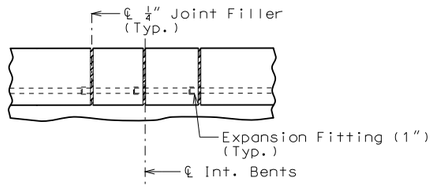
PLAN



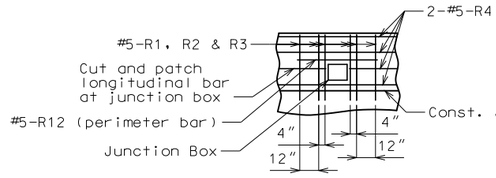
DETAIL A



PART ELEVATION A–A AT END BENT 1



PART ELEVATION NEAR INT. BENTS



PART ELEVATION OF CORRAL CURB OVER SLAB SHOWING PERIMETER STEEL

Notes:

All conduits shall be rigid nonmetallic schedule 40 heavy wall polyvinyl chloride (PVC) with 3″ minimum cover in concrete. Each section of conduit shall bear the Underwriters Laboratories (UL) label.

Shift reinforcing steel in field where necessary to clear conduit and junction boxes.

Expansion fittings shall be placed as shown and set in accordance with the manufacturer's requirements and based on the air temperature at the time of setting given an estimated total expansion movement of 1 inch at filled joints using a maximum temperature range of 150° F and a maximum temperature of 120° F.

All end bent and corral curb junction boxes shall be PVC molded in accordance with Sec 1062 and designed for flush surface mounting. The conduit terminations shall be permanent or separable. The terminations and covers shall be of watertight construction and shall meet requirements for NEMA 4 enclosure.

Drainage shall be provided at low points or other critical locations of all conduits and all junction boxes in accordance with Sec 707. All conduits shall be sloped to drain where possible.

Payment for furnishing and installing Conduit System, complete in place, will be considered completely covered by the contract lump sum price for Conduit System on Structure.

DETAILS OF CONDUIT SYSTEM IN CORRAL CURBS

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	22

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO. L09371

DESCRIPTION	DATE

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

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

Detailed Sep. 2017
Checked Oct. 2017

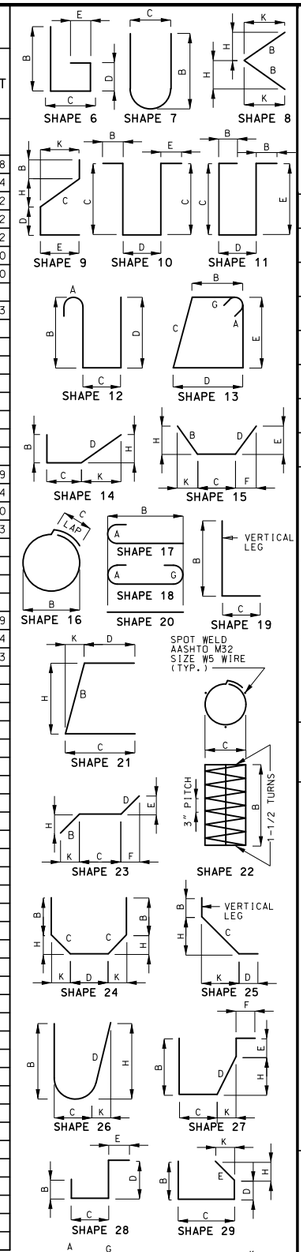
Note: This drawing is not to scale. Follow dimensions.

BILL OF REINFORCING STEEL

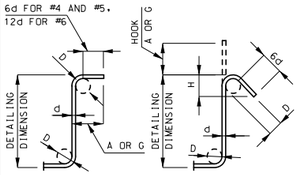
NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
			END BENT 1																									
4	5	H10	BACKWALL	E	20					53	9.000													53	9	53	9	224
2	5	H11	BACKWALL	E	20					43	9.000													43	9	43	9	91
4	5	H12	BACKWALL	E	9	S				18.000		23.750		11 9.750				3.000		23.500				15	4	15	1	63
32	5	U10	BACKWALL	E	10	S						16.500		9.000										3	6	3	4	111
12	5	U11	BACKWALL	E	10	S		V	2			2 2.375		9.000										5	2	4	11	
			INCREMENT =									2 0.625		9.000										4	10	4	8	60
			0.625 INCH																									
10	5	U12	BACKWALL	E	10	S		V	2			22.875		9.000										4	7	4	4	
			INCREMENT =									18.875		9.000										3	11	3	8	42
			2.000 INCH																									
			END BENT 6																									
4	5	H60	BACKWALL	E	20					53	9.000													53	9	53	9	224
2	5	H61	BACKWALL	E	20					43	9.000													43	9	43	9	91
4	5	H62	BACKWALL	E	9	S				18.000		23.750		11 9.750				3.000		23.500				15	4	15	1	63
32	5	U60	BACKWALL	E	10	S						16.500		9.000										3	6	3	4	111
12	5	U61	BACKWALL	E	10	S		V	2			2 2.375		9.000										5	2	4	11	
			INCREMENT =									2 0.625		9.000										4	10	4	8	60
			0.625 INCH																									
10	5	U62	BACKWALL	E	10	S		V	2			22.875		9.000										4	7	4	4	
			INCREMENT =									18.875		9.000										3	11	3	8	42
			2.000 INCH																									
			SLAB																									
447	5	S1	SLAB	E	20					46	3.000													46	3	46	3	21563
742	4	S2	SLAB	E	20					60	0.000													60	0	60	0	29739
106	4	S3	SLAB	E	20					41	6.000													41	6	41	6	2939
447	4	S4	SLAB	E	20					35	0.000													35	0	35	0	10451
1192	5	S5	SLAB	E	9	S					18.000	11.125		6 11.000				1.250		11.000				9	4	9	2	11397
8	5	S6	SLAB	E	20					46	3.000													46	3	46	3	386
			CORRAL CURB																									
75	5	K1	CORRAL CURB	E	10	S						3 0.000		9.500										6	10	6	7	515
24	5	K2	CORRAL CURB	E	10	S						4 3.000		9.000										9	3	9	1	227
8	5	K3	CORRAL CURB	E	20					10	6.000													10	6	10	6	88
8	5	K4	CORRAL CURB	E	20					11	3.000													11	3	11	3	94
16	5	K5	CORRAL CURB	E	19	S				5	2.000	12.000												6	2	6	1	102
16	5	K6	CORRAL CURB	E	19	S				5	11.000	12.000												6	11	6	10	114
4	5	K7	CORRAL CURB	E	20					30	4.000													30	4	30	4	127
4	5	K8	CORRAL CURB	E	20					31	1.000													31	1	31	1	130
8	5	K9	CORRAL CURB	E	20					7	0.000													7	0	7	0	58
4	5	K10	CORRAL CURB	E	20					9	7.000													9	7	9	7	40
4	5	K11	CORRAL CURB	E	20					8	10.000													8	10	8	10	37
924	5	R1	CORRAL CURB	E	19	S				3	8.000	6.000												4	2	4	1	3935
924	5	R2	CORRAL CURB	E	21	S					12.000	20.000		4 5.750				12.000		0.875				7	2	6	11	6666
924	5	R3	CORRAL CURB	E	10	S						2 5.000		9.500										5	8	5	5	5220
32	5	R4	CORRAL CURB	E	20					44	5.000													44	5	44	5	1482
64	5	R5	CORRAL CURB	E	20					41	6.000													41	6	41	6	2770

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
32	5	R6	CORRAL CURB	E	20					38	0.000													38	0	38	0	1268
16	5	R7	CORRAL CURB	E	20					47	7.000													47	7	47	7	794
128	5	R8	CORRAL CURB	E	20					9	9.000													9	9	9	9	1302
12	5	R9	CORRAL CURB	E	10	S						2 6.000		11.500										6	0	5	9	72
28	5	R10	CORRAL CURB	E	30	S					10.000		18.000		22.500		18.000		10.000		12.750		12.750	6	7	6	7	192
28	5	R11	CORRAL CURB	E	13	S					12.750		22.500		12.750		22.500							6	10	6	6	190
2	5	R12	CORRAL CURB	E	20						5 0.000													5	0	5	0	10
24	5	V1	CORRAL CURB	E	20						4 6.000													4	6	4	6	113
			TOTALS																									
	4			E																								43129
	5			E																								60074
			TOTAL																									0
			TOTAL	E																								103203
			Slab on																									
			Girder																									
	4			E																								43129
	5			E																								60074
			TOTAL																									103203

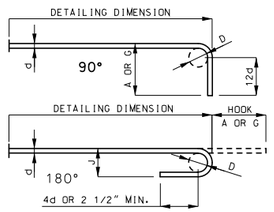


BENDING DIAGRAMS



STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK HOOK A OR G	135° HOOK HOOK A OR G	135° HOOK 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		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"	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.

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 23
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09371

DESCRIPTION
DATE

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

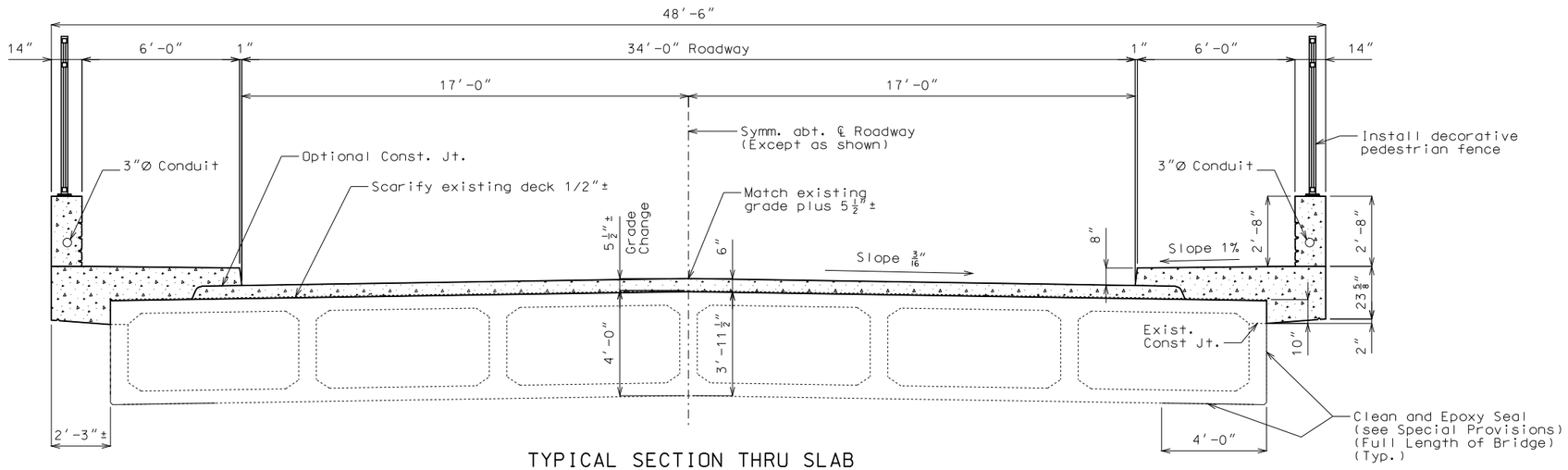
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Detailed Oct. 2017
Checked Nov. 2017

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

SEC/SUR 3 TWP 49N RGE 33W

U.I.P. & REHAB EXISTING (45'-75'-82'-58') CONTINUOUS CONCRETE BOX GIRDER SPANS (SKEW VARIES)



TYPICAL SECTION THRU SLAB

General Notes:

Design Specifications:

2002 - AASHTO (17th Edition) Standard Specifications
Load Factor Design
Seismic Performance Category A
Bridge Deck Rating = 3

Design Loading:

H20-S16-44 (1953)
HS20-44 (New Construction)
35 lb/sf Future Wearing Surface

Design Unit Stresses:

Class B-1 Concrete (Corral Curb)	f'c = 4,000 psi
Class B-2 Concrete (All rehab except for Corral Curb)	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 old concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, old bars shall extend into new concrete at least 40 diameters for smooth bars and 30 diameters for deformed bars, unless otherwise noted.

Outline of old 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.

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

Protective Coating:

Protective coating for concrete bents and piers (Epoxy) shall be applied as shown on bridge plans and in accordance with Sec 711.

Traffic Handling:

Structure to be closed during construction.

Estimated Quantities

Item		Total
Scarification of Bridge Decks	sq. yard	1279
Partial Removal of Existing Bridge Deck	sq. foot	3227
Removal of Existing Expansion Joint & Adjacent Concrete	linear foot	90
(72 in.) Decorative Pedestrian Fence	linear foot	552
Reinforced Concrete Slab Overlay	sq. yard	1423
Corral Curb	linear foot	598
Form Liners	sq. yard	117
Substructure Repair (Unformed)	sq. foot	100
Repairing Concrete Deck (Half-Soling)	sq. foot	100
Clean and Epoxy Seal	sq. foot	3734
Conduit System on Structure	lump sum	1
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Strip Seal Expansion Joint System	linear foot	70

Estimated Quantities for Reinforced Concrete Slab Overlay

Item		Total
Class B-2 Concrete	cu. yard	393
Reinforcing Steel (Epoxy Coated)	pound	43380

The table of Estimated Quantities Reinforced Concrete Slab Overlay represents the quantities used by the State in preparing the cost estimate for concrete slab overlay and sidewalks. The area of the concrete slab overlay will be measured to the nearest square yard from end of slab to end of slab and the overall width (48'-6") shown in the Typical Section Thru Slab. Payment for conventional forms, all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab overlay. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slabs shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type I, II or III.

Class B-2 concrete quantity is based on minimum 6" slab overlay thickness and sidewalks as shown.

The concrete and reinforcement for the new upper backwall at the end bents are included in Class B-2 Concrete and Reinforcing Steel (Epoxy Coated).

REPAIRS TO BRIDGE: 9TH STREET OVER RTE. I-70

ROUTE I-70 FROM ROUTE I-670 TO ROUTE I-35

IN KANSAS CITY

STA. 3+06.00± (Match Exist.)

STD. 901.00
STD. 706.35

Detailed Oct. 2017
Checked Oct. 2017

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

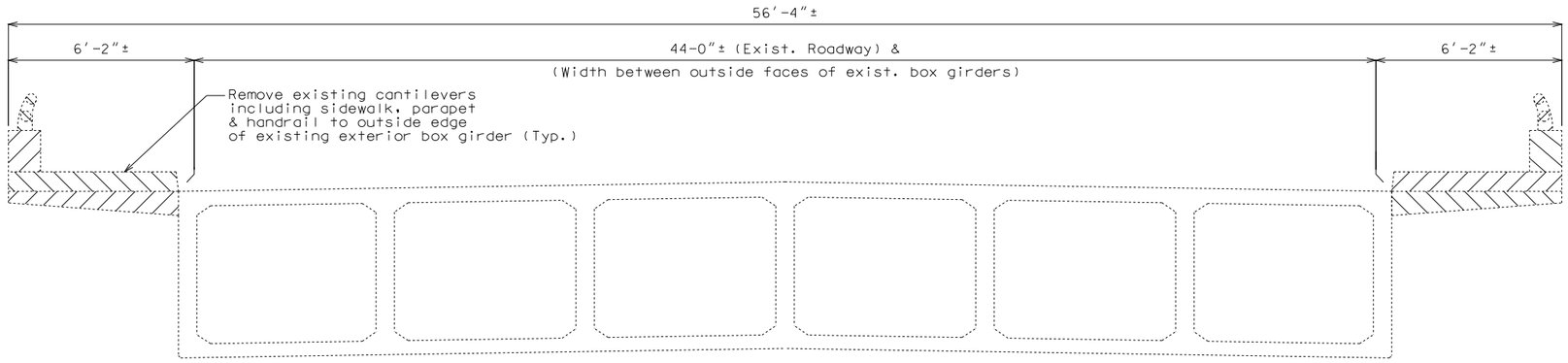
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09381

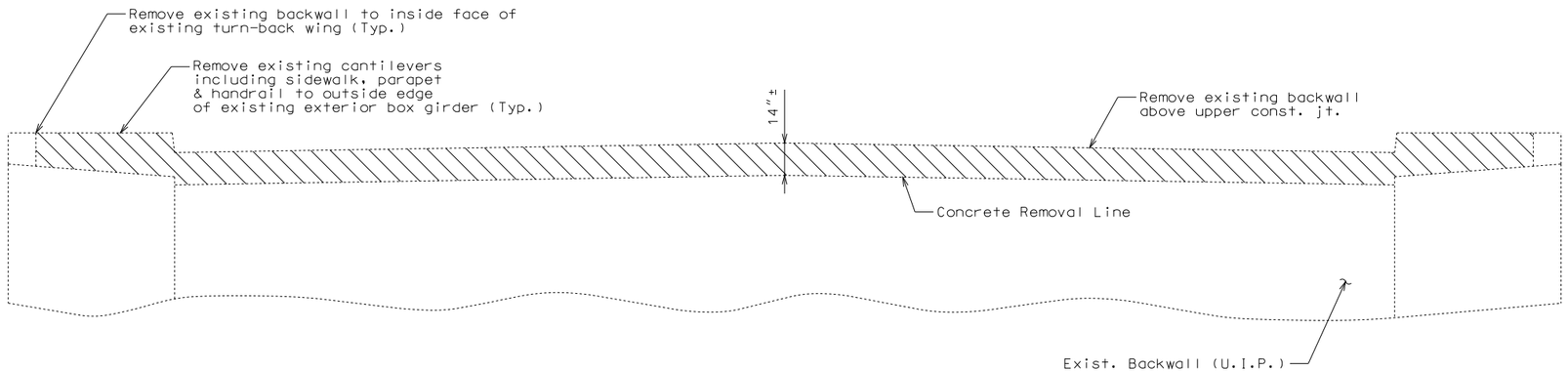
DESCRIPTION | DATE

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

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



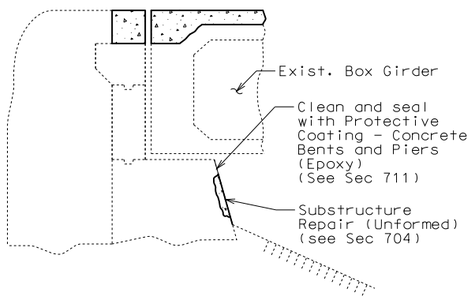
TYPICAL SECTION SHOWING CONCRETE REMOVAL AT MID SPAN



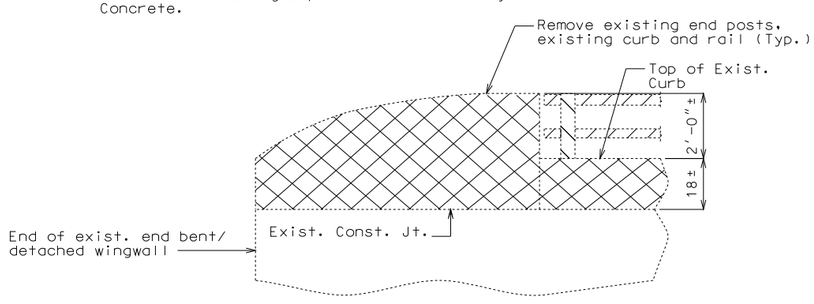
TYPICAL ELEVATION SHOWING CONCRETE REMOVAL AT END BENTS

(Note: Curb, handrail & end post not shown for clarity)

Note:
Cost of removing existing backwall above upper const. joint and end of existing box girder (as shown on Sheet No. 6 & 7) will be considered completely covered by contract unit price for Removal of Existing Expansion Joint and Adjacent Concrete.



TYPICAL SECTION THRU END BENTS SHOWING SUBSTRUCTURE REPAIR & PROTECTIVE COATING



TYPICAL ELEVATION OF EXISTING END POST & CURB SHOWING CONCRETE REMOVAL

Note:
Cost of removing existing cantilevers, sidewalks, end posts, curbs and rails will be considered completely covered by the contract unit price for Partial Removal of Existing Bridge Deck (square foot). The area of removal will be measured to the nearest square foot from fill face to fill face of end bents and the width from outside face of exist. box girder to the outside edge of exist. bridge deck.

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/19/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	2

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
L09381

DESCRIPTION	DATE

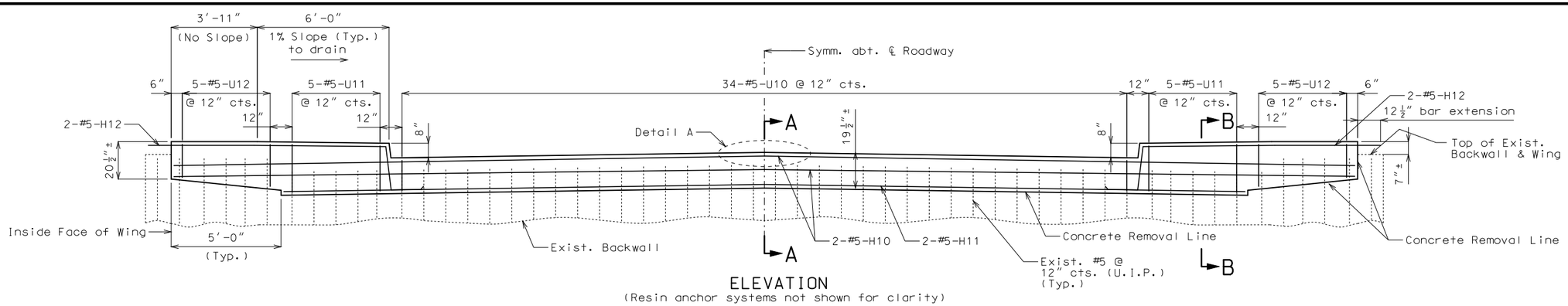
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

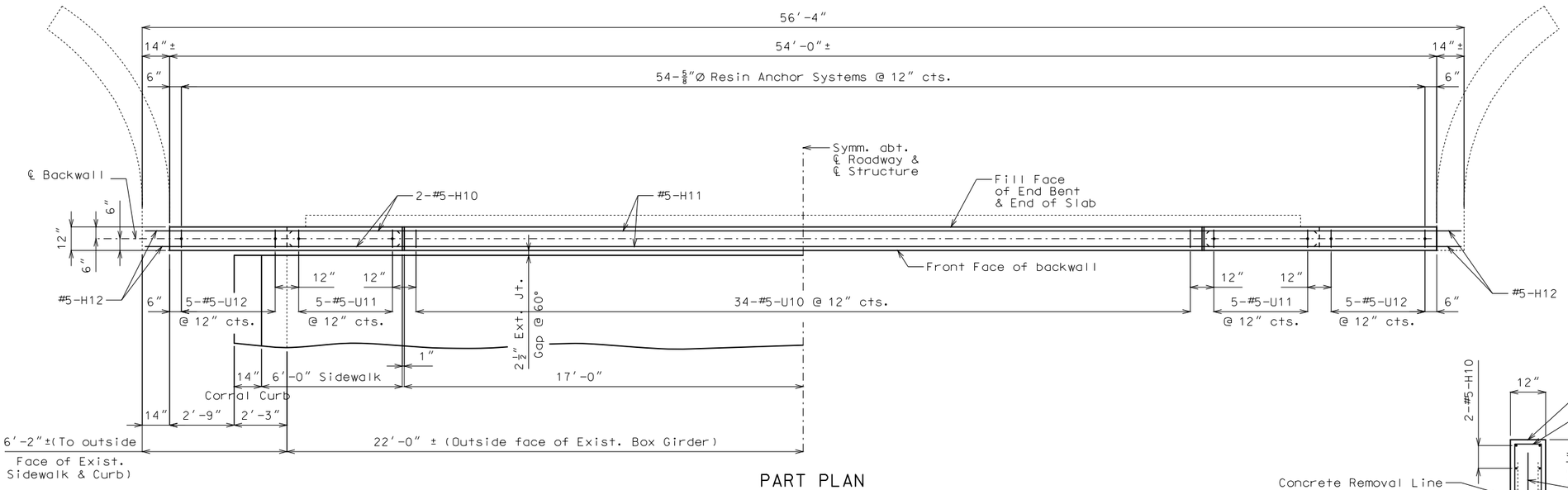
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Detailed Oct. 2017
Checked Oct. 2017

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



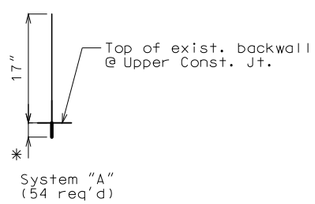
ELEVATION
(Resin anchor systems not shown for clarity)



PART PLAN

Note:
Top of backwall (including sidewalk) for End Bent No. 1 shall be formed to the crown and grade of the roadway. Backwall above exist. upper const. joint shall not be poured until the slab overlay & sidewalk has been poured in the adjacent span.

For location of K2 bars in corral curb at the ends of backwall, see Sht. No. 14 & 16.



* Manufacturer's recommended embedment length (5″ min.)

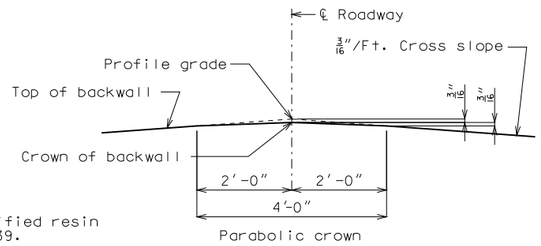
DETAIL OF RESIN ANCHOR SYSTEM

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

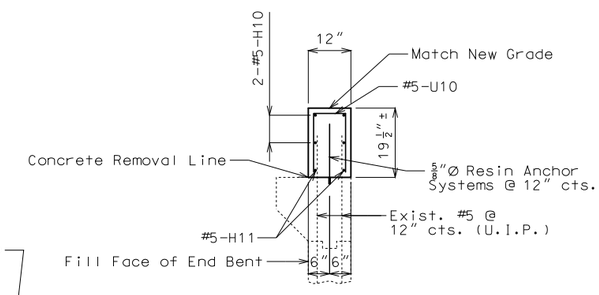
Cost of furnishing and installing the resin anchor systems, complete-in-place, will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

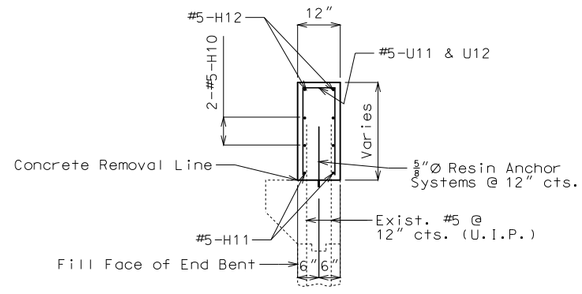
An epoxy coated #5 Grade 60 reinforcing bar shall be substituted for the 5/8″Ø threaded rod.



DETAIL A



SECTION A-A



SECTION B-B

DETAILS OF END BENT NO. 1

Detailed Oct. 2017
Checked Oct. 2017

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

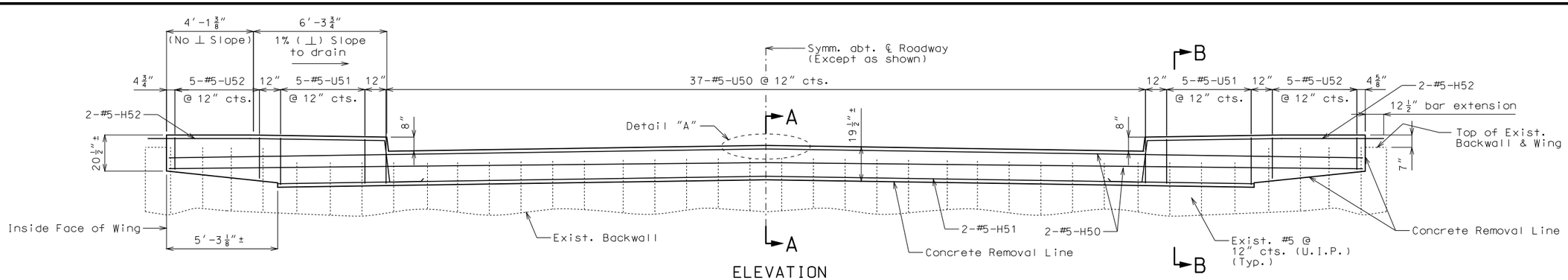
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 3
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09381

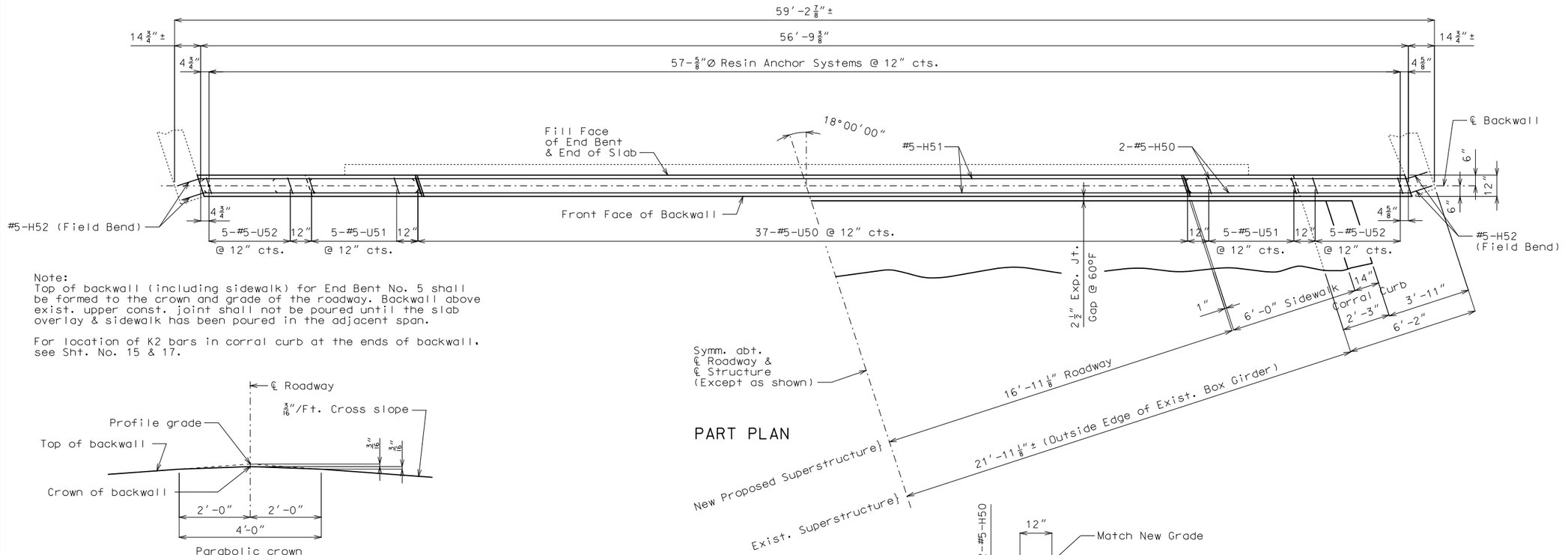
DESCRIPTION | DATE

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

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



ELEVATION
(Resin anchor systems not shown for clarity)

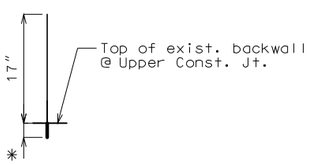


PART PLAN

Note:
Top of backwall (including sidewalk) for End Bent No. 5 shall be formed to the crown and grade of the roadway. Backwall above exist. upper const. joint shall not be poured until the slab overlay & sidewalk has been poured in the adjacent span.

For location of K2 bars in corral curb at the ends of backwall, see Sht. No. 15 & 17.

DETAIL A



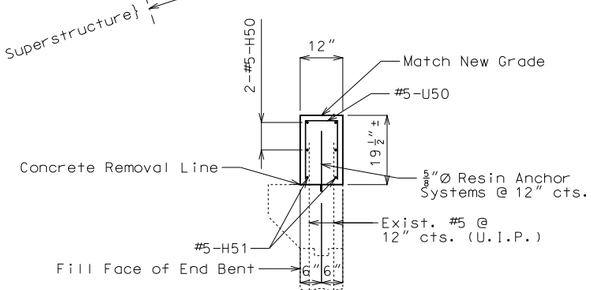
DETAIL OF RESIN ANCHOR SYSTEM

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

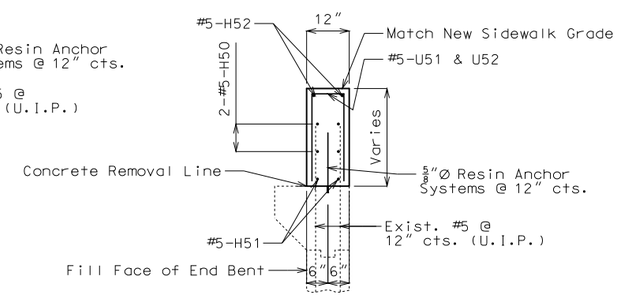
Cost of furnishing and installing the resin anchor systems, complete-in-place, will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



SECTION A-A



SECTION B-B

DETAILS OF END BENT NO. 5

Detailed Oct. 2017
Checked Oct. 2017

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

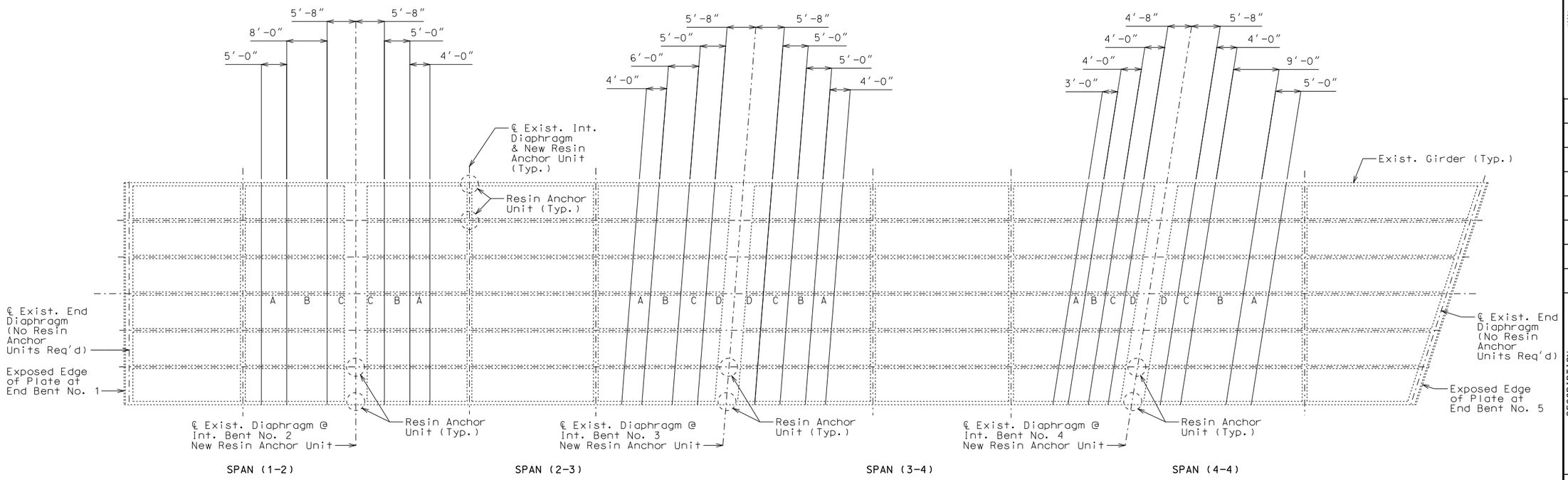
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 4
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09381

DESCRIPTION | DATE

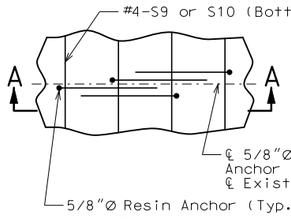
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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

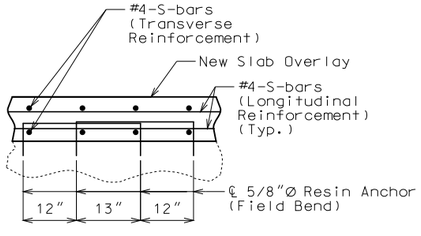


FRAMING PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES AND LOCATIONS OF RESIN ANCHOR UNITS

Note: Dimensions shown are horizontal dimensions along ℄ Roadway.



PLAN

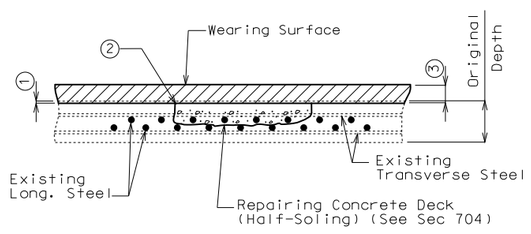


SECTION A-A

DETAIL OF RESIN ANCHOR UNIT

(63 Units Req'd, 4 Resin Anchors per Unit)

Note:
Locate Resin Anchor Units near the intersection of ℄ of existing girder & ℄ of existing int. diaphragms & ℄ of existing diaphragm @ Int. Bt. No. 2, 3 & 4.



HALF-SOLED REPAIR

① Scarify existing deck ½

② One inch vertical side shall be established outside the deteriorated area. See Sec 704.

③ Installation of 6" Reinforced Slab Overlay.

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

Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

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

An epoxy coated #5 Grade 60 reinforcing bar 2'-0" long shall be substituted for the 5/8"Ø threaded rod.

Notes:
Any half-soling required in the areas designated as special repair zones shall be completed in alphabetical sequence. Any repair in the remainder of the bridge that is adjacent to Zone A and not designated as a special repair zone shall be completed prior to work in Zone A.

Removal and repair shall be completed in one special repair zone and concrete shall have attained a compressive strength of 3200 psi before work can be started in the next special repair zone. Before placing concrete in areas adjacent to areas of subsequent repair, the concrete shall be separated with a material such as polyethylene sheets to aid in removal of old concrete.

Zones with the same letter designation may be repaired at the same time.

If any single repair area does not exceed 9 square feet in size and the total repair within a special repair zone does not exceed 27 square feet, the special repair zone requirement does not apply for that zone. Half-soling repair in the special repair zone, on either side of the intermediate bent, shall be to a depth that will not expose half the diameter of the longitudinal reinforcing bar. Full depth repair shall be made when removal of deteriorated concrete exposes half or more of the diameter of the longitudinal reinforcing bar.

Detailed Oct. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-2132
PROFESSIONAL ENGINEER
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DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 5
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09381

DESCRIPTION | DATE

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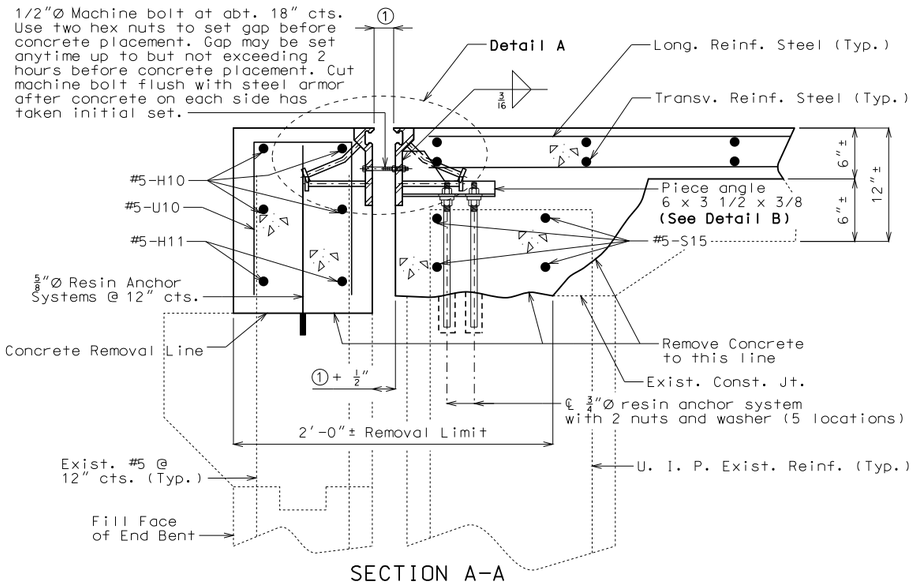
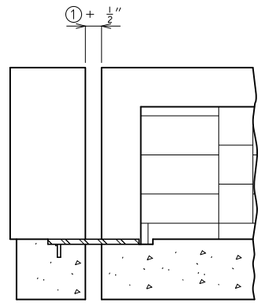
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



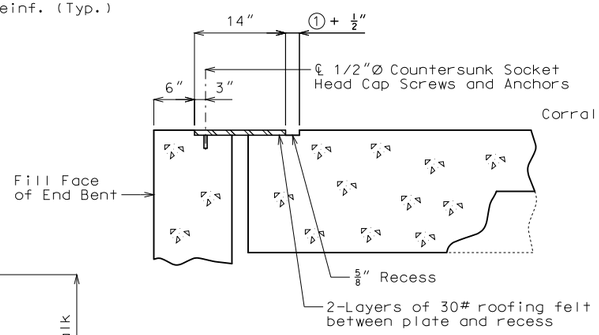
SECTION A-A

Note: Strip seal gland not shown for clarity.



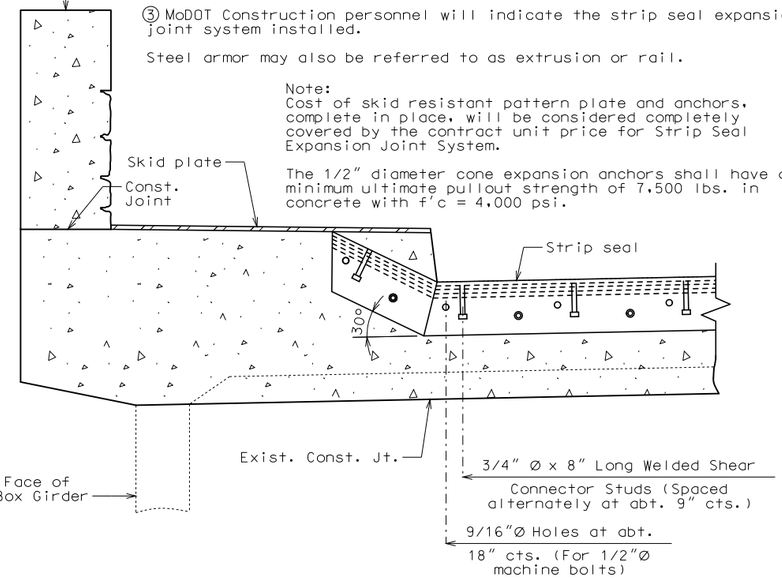
Note: Strip seal gland not shown for clarity.

PART SECTION THRU SIDEWALK NEAR CORRAL CURB

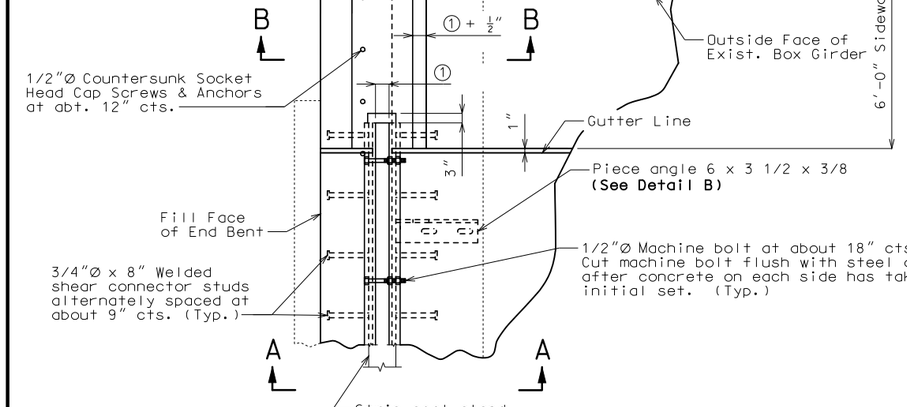


SECTION B-B
TYPICAL SECTION OF SKID PLATE

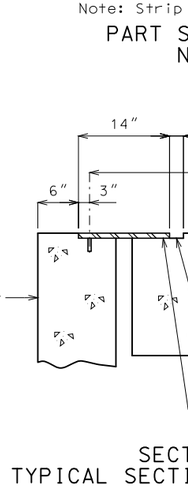
Note: Strip seal gland not shown for clarity.



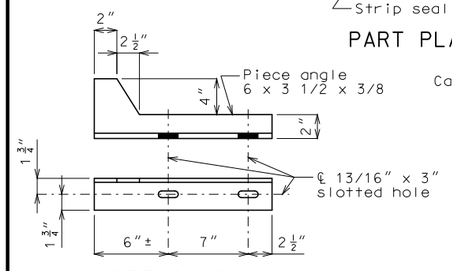
PART SECTION THRU BRIDGE DECK NEAR STRIP SEAL JOINT



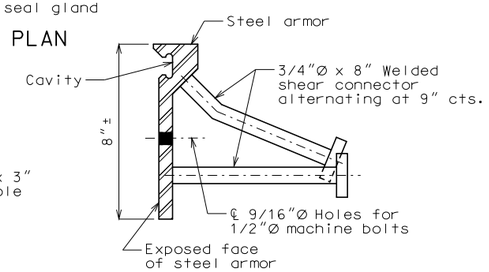
PART PLAN



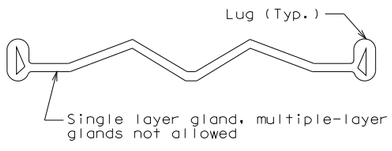
DETAIL A



DETAIL B



DETAIL OF JOINT ARMOR



DETAIL OF GLAND

DETAILS OF STRIP SEAL AT END BENT 1

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

Detailed Oct. 2017
Checked Oct. 2017

Sheet No. 6 of 24

GENERAL NOTES:

Expansion joint system shall be fabricated in one section, except for staged construction and when the length is over 50 feet. A complete joint penetration groove welded splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion joint system shall be fabricated and installed to the crown and grade of the roadway.

The strip seal gland shall be installed in joints in one continuous piece without field splices. Factory splicing will be permitted for joints in excess of 53 feet.

Structural steel for the expansion joint system shall be ASTM A709 Grade 36 except the steel armor may be ASTM A709 Grade 50W. Anchors for the expansion joint system shall be in accordance with Sec 1037. Strip seal expansion joint system shall be in accordance with Sec 717.

Structural steel for the expansion joint system shall be coated with a minimum of two coats of inorganic zinc primer (5 mils minimum) or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

Longitudinal reinforcing steel shall be placed so that ends shall be 1" from the vertical leg of the steel armor at the expansion joint system.

Concrete shall be forced under and around steel armor and anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

For details of backwall above upper const. jt., see Sheet No. 3.

Measurement of strip seal expansion joint system is to the nearest linear foot for each structure, measured along the ℄ of joint from roadway face to roadway face of sidewalk.

② The installation temperature shall be taken as the actual air temperature averaged over the 24-hour period immediately preceding installation.

③ MoDOT Construction personnel will indicate the strip seal expansion joint system installed.

Steel armor may also be referred to as extrusion or rail.

Note:
Cost of skid resistant pattern plate and anchors, complete in place, will be considered completely covered by the contract unit price for Strip Seal Expansion Joint System.

The 1/2" diameter cone expansion anchors shall have a minimum ultimate pullout strength of 7,500 lbs. in concrete with f'c = 4,000 psi.

Table of Allowed Transverse Strip Seal Expansion Joint System

Manufacturer	Strip Seal System (Designated Name)	Movement Parallel to RDWY	① Allowed Installation Gap Normal to Joint at RDWY Surface @ Air/Surface Temerature ②						③
			@ 40°F	@ 50°F	@ 60°F	@ 70°F	@ 80°F	@ 90°F	
D S Brown	Strip Seal L2-400	1 7/16"	2 1/4"	2 1/8"	2"	1 7/8"	1 3/4"	1 5/8"	□
D S Brown	Strip Seal L2-500	1 7/16"	2 1/4"	2 1/8"	2"	1 7/8"	1 3/4"	1 5/8"	□
Watson Bowman Acme (Wabo)	Strip Seal SE-300	1 7/16"	2 1/4"	2 1/8"	2"	1 7/8"	1 3/4"	1 5/8"	□
Watson Bowman Acme (Wabo)	Strip Seal SE-400	1 7/16"	2 1/4"	2 1/8"	2"	1 7/8"	1 3/4"	1 5/8"	□
Watson Bowman Acme (Wabo)	Strip Seal SE-500	1 7/16"	2 1/4"	2 1/8"	2"	1 7/8"	1 3/4"	1 5/8"	□

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/21/2017
ROUTE: I-70 | STATE: MO
DISTRICT: BR | SHEET NO.: 6
COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: L09381

DESCRIPTION | DATE

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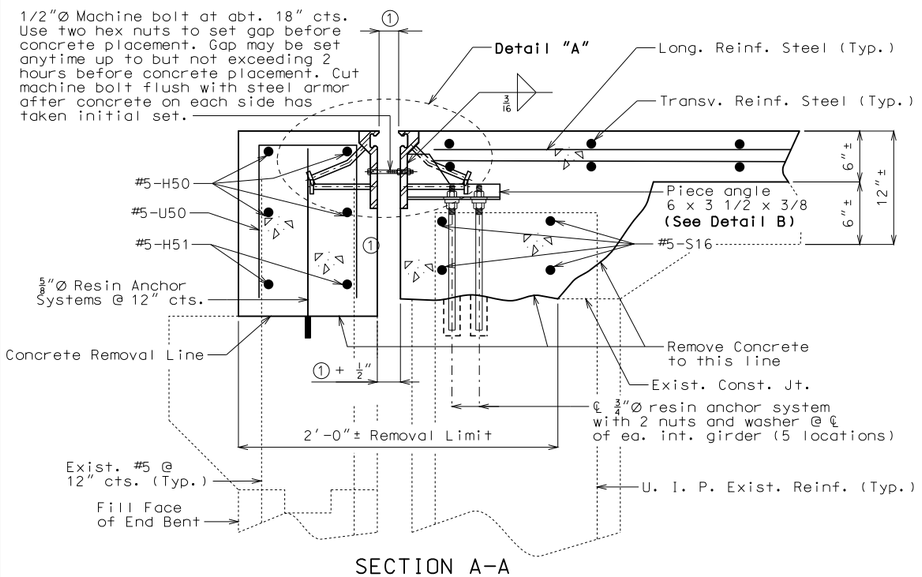
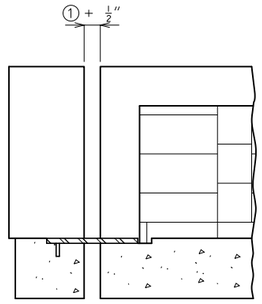
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



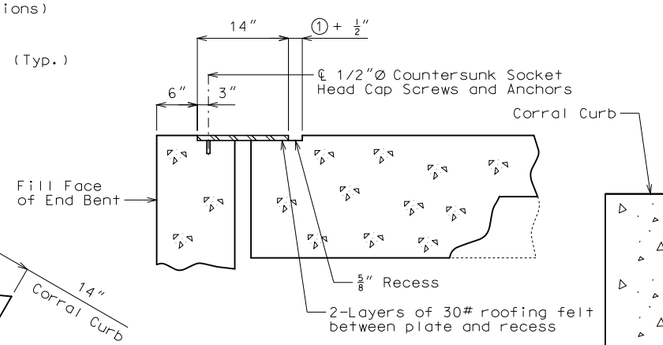
SECTION A-A

Note: Strip seal gland not shown for clarity.



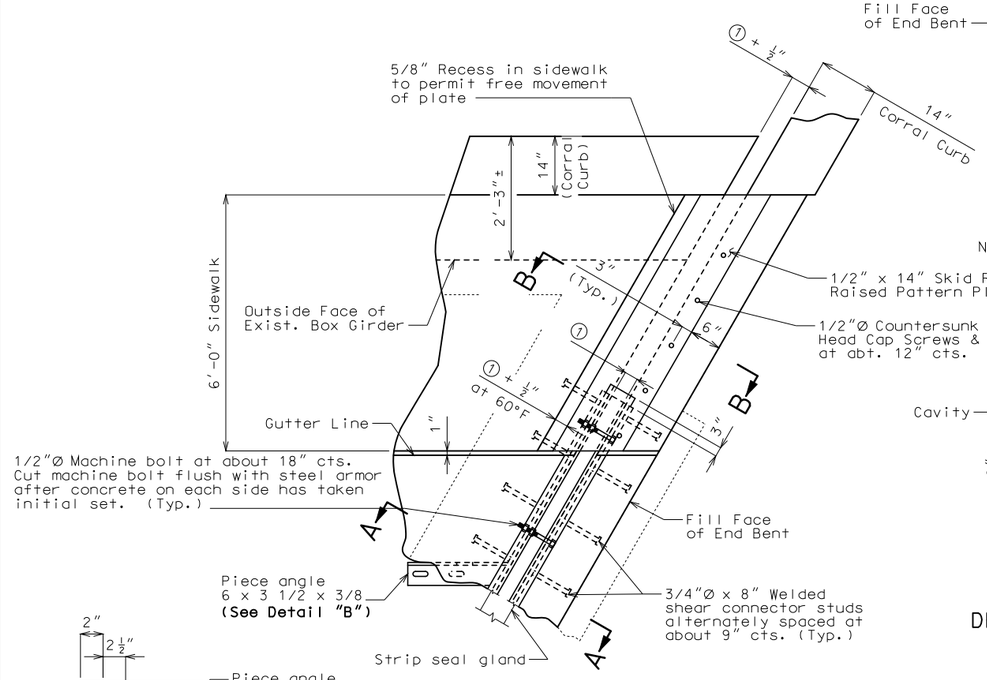
Note: Strip seal gland not shown for clarity.

PART SECTION THRU SIDEWALK NEAR CORRAL CURB

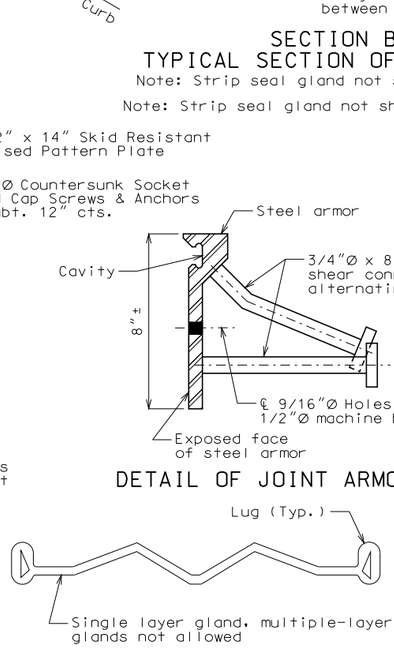


SECTION B-B
TYPICAL SECTION OF SKID PLATE

Note: Strip seal gland not shown for clarity.

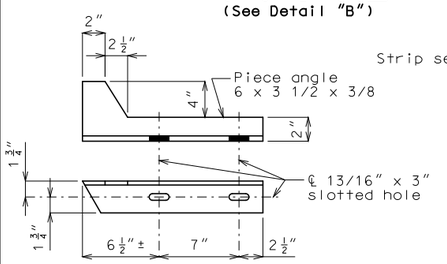


PART PLAN



DETAIL OF JOINT ARMOR

DETAIL OF GLAND



DETAIL B

Detailed Oct. 2017
Checked Oct. 2017

DETAILS OF STRIP SEAL AT END BENT 5 (Skew = 18° L.A.)

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

Sheet No. 7 of 24

GENERAL NOTES:

Expansion joint system shall be fabricated in one section, except for staged construction and when the length is over 50 feet. A complete joint penetration groove welded splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion joint system shall be fabricated and installed to the crown and grade of the roadway.

The strip seal gland shall be installed in joints in one continuous piece without field splices. Factory splicing will be permitted for joints in excess of 53 feet.

Structural steel for the expansion joint system shall be ASTM A709 Grade 36 except the steel armor may be ASTM A709 Grade 50W. Anchors for the expansion joint system shall be in accordance with Sec 1037. Strip seal expansion joint system shall be in accordance with Sec 717.

Structural steel for the expansion joint system shall be coated with a minimum of two coats of inorganic zinc primer (5 mils minimum) or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

Longitudinal reinforcing steel shall be placed so that ends shall be 1" from the vertical leg of the steel armor at the expansion joint system.

Concrete shall be forced under and around steel armor and anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

For details of backwall above upper const. jt., see Sheet No. 4.

Measurement of strip seal expansion joint system is to the nearest linear foot for each structure, measured along the ℄ of joint from roadway face to roadway face of sidewalk.

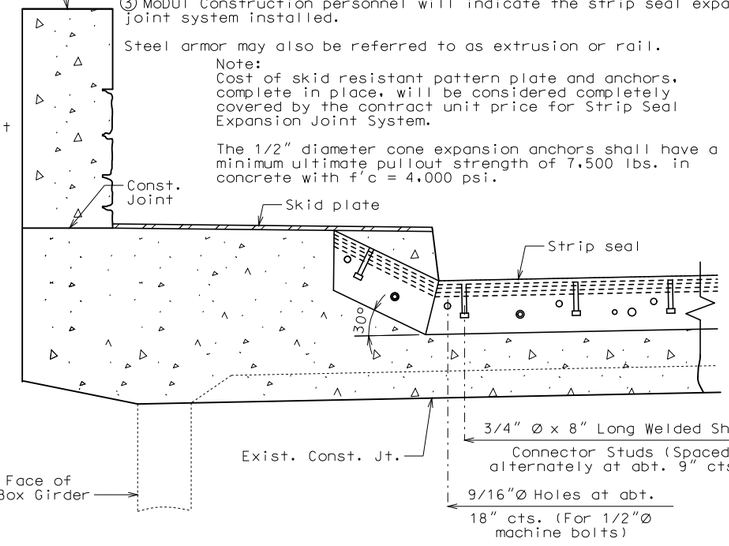
② The installation temperature shall be taken as the actual air temperature averaged over the 24-hour period immediately preceding installation.

③ MoDOT Construction personnel will indicate the strip seal expansion joint system installed.

Steel armor may also be referred to as extrusion or rail.

Note:
Cost of skid resistant pattern plate and anchors, complete in place, will be considered completely covered by the contract unit price for Strip Seal Expansion Joint System.

The 1/2" diameter cone expansion anchors shall have a minimum ultimate pullout strength of 7,500 lbs. in concrete with f'c = 4,000 psi.



PART SECTION THRU BRIDGE DECK NEAR STRIP SEAL JOINT

Table of Allowed Transverse Strip Seal Expansion Joint System

Manufacturer	Strip Seal System (Designated Name)	Movement Parallel to RDWY	① Allowed Installation Gap Normal to Joint at RDWY Surface @ Air/Surface Temerature ②						③
			@ 40°F	@ 50°F	@ 60°F	@ 70°F	@ 80°F	@ 90°F	
D S Brown	Strip Seal L2-400	1 1/16"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□
D S Brown	Strip Seal L2-500	1 1/16"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□
Watson Bowman Acme (Wabo)	Strip Seal SE-300	1 1/16"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□
Watson Bowman Acme (Wabo)	Strip Seal SE-400	1 1/16"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□
Watson Bowman Acme (Wabo)	Strip Seal SE-500	1 1/16"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 7
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09381

DESCRIPTION | DATE

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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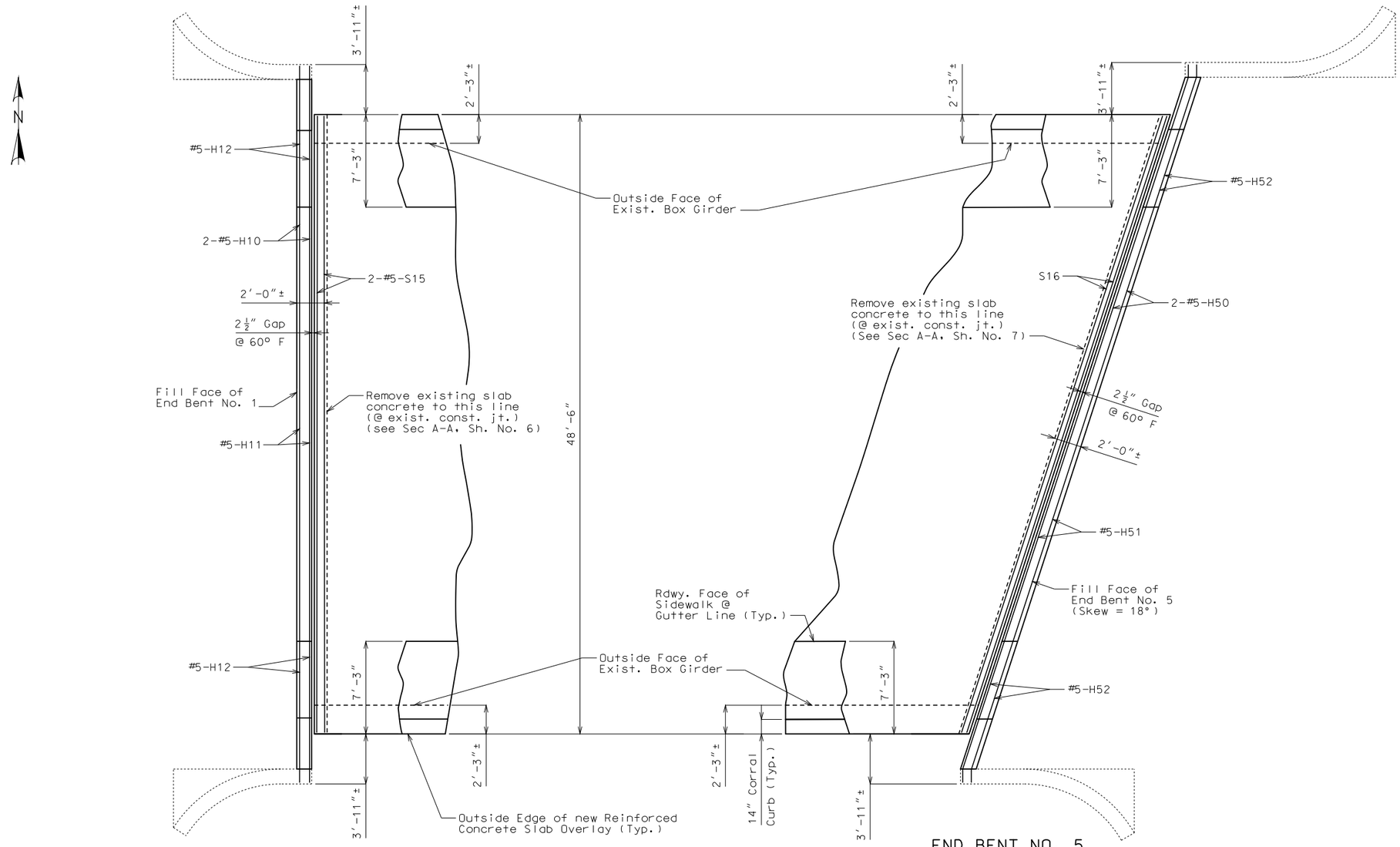

END BENT NO. 1

END BENT NO. 5

PART PLAN OF SLAB AT END BENTS SHOWING DIMENSIONS & REINFORCEMENT

Notes:
Shift #5-S bars where necessary to clear shear connector studs on the expansion joint system.

Payment for slab and backwall concrete, complete-in-place, for expansion joint replacement will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

Payment for furnishing and installing reinforcing steel in slab and backwall for expansion joint replacement will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

Cost of removing existing expansion joint, slab and backwall concrete within the limits shown will be considered completely covered by the contract unit price for Removal of Existing Expansion Joint & Adjacent Concrete.

For section thru Strip Seal at End Bent 1, see Sheet No. 6.

For section thru Strip Seal at End Bent 5, see Sheet No. 7.

Detailed Oct. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	8

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
L09381

DATE	DESCRIPTION

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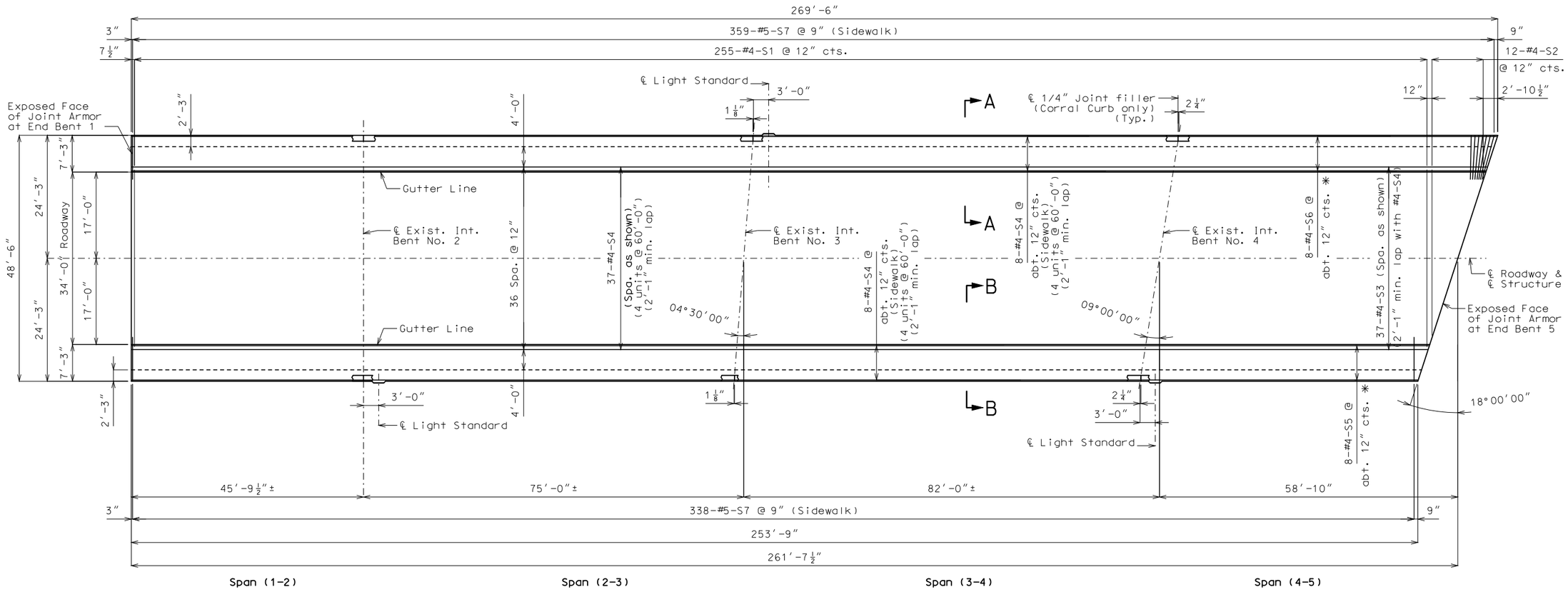

* 2′-1″ min. lap with #4-S4

PLAN OF SLAB & SIDEWALK SHOWING TOP REINFORCEMENT

Note:
Work this sheet with Sheets No. 10 & 11.

For Details of Corral Curb, see Sheets No. 12-18.

For Section A-A & Section B-B, see Sheet No. 11.

SLAB DETAILS

Detailed Oct. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	9

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
L09381

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

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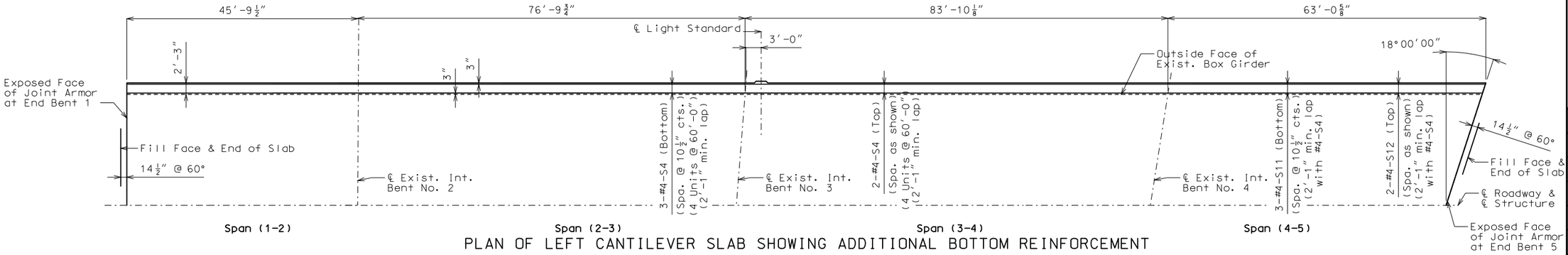
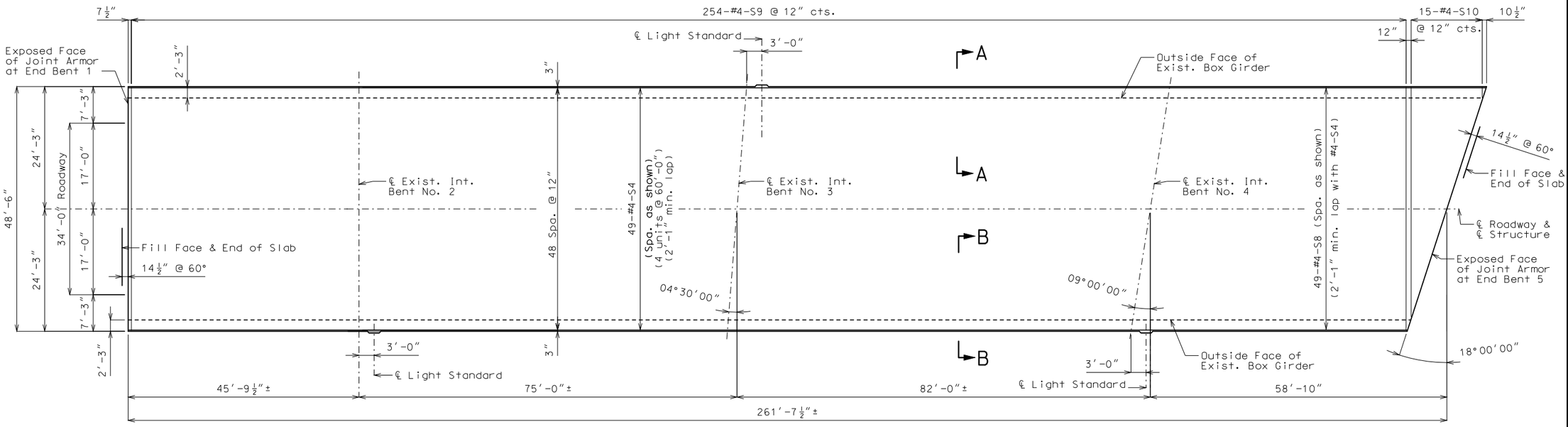
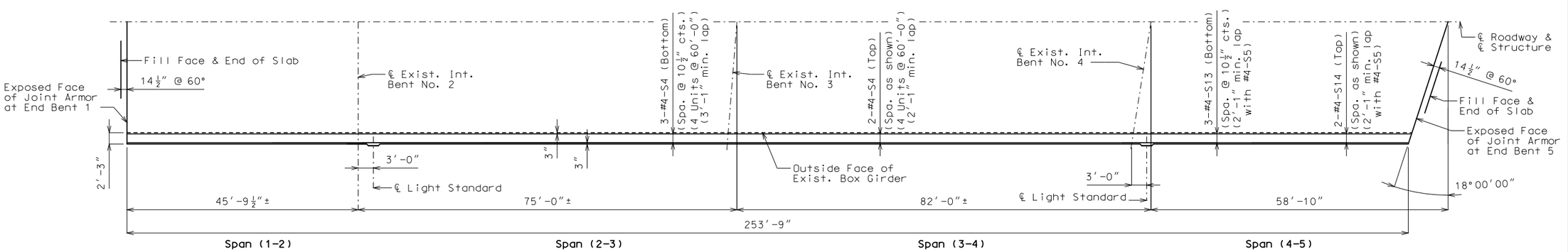


PLAN OF LEFT CANTILEVER SLAB SHOWING ADDITIONAL BOTTOM REINFORCEMENT

(Sidewalk & Corral Curb not shown for clarity)



PLAN OF SLAB SHOWING BOTTOM REINFORCEMENT



PLAN OF RIGHT CANTILEVER SLAB SHOWING ADDITIONAL BOTTOM REINFORCEMENT

(Sidewalk & Corral Curb not shown for clarity)

SLAB DETAILS

Note:
Work this sheet with Sheets No. 9 & 11.

For Details of Corral Curb, see Sheets No. 12-18.

For Section A-A & Section B-B, see Sheet No. 11.

Detailed Oct. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	10

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
L09381

DESCRIPTION	DATE

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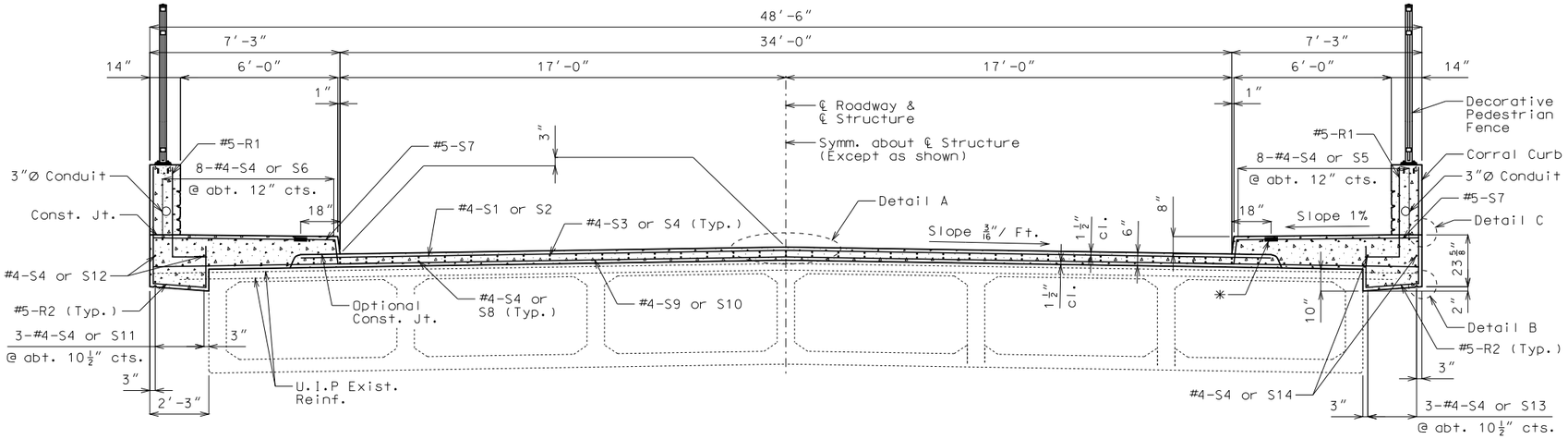
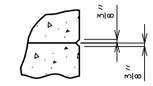
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

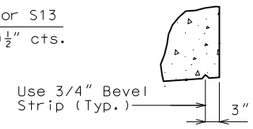


SECTION THRU SLAB SHOWING REINFORCEMENT

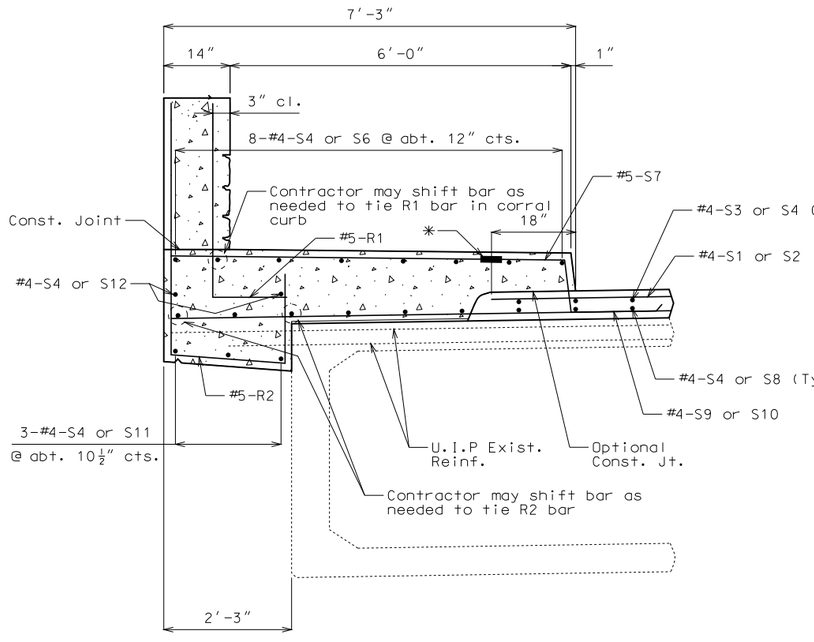
* Mechanical bar splices may be provided at no additional cost in lieu of #5-S24 bars with no splices.



DETAIL C

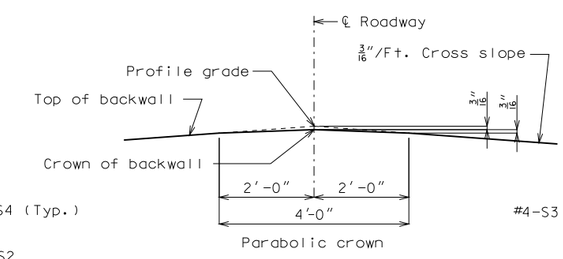


DETAIL B



SECTION A-A

(Pedestrian Fence not shown for clarity)



DETAIL A

Note:
Work this sheet with Sheets No. 9 & 10.

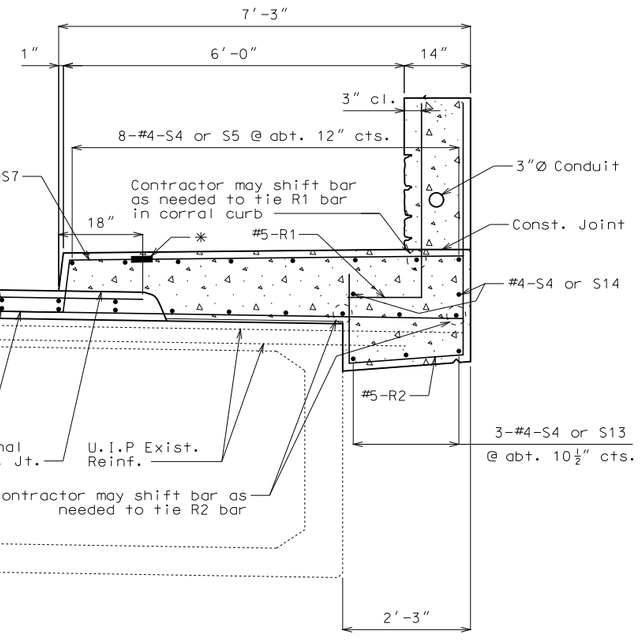
The contractor shall pour and satisfactorily finish the slab pours at the rate given. Retarder, if used, shall be an approved type and retard the set of concrete to 2.5 hours.

Min. Rate of Pour Cu. Yds./Hr.	Without Retarder	With Retarder
Slab and sidewalks (without optional consst. joint	59	36
Slab (with optional const. joint)	29	25
Sidewalk (Each)	25	25

For Details of Corral Curb, see Sheets No. 12-18.

For Details of Decorative Pedestrian Fence, see Sheets No. 19-21.

For location of Section A-A & B-B, see Sheet No. 9 & 10.



SECTION B-B

(Pedestrian Fence not shown for clarity)

SLAB DETAILS

Detailed Oct. 2017
Checked Oct. 2017

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

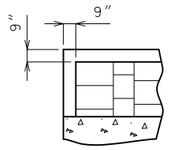
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 11
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09381

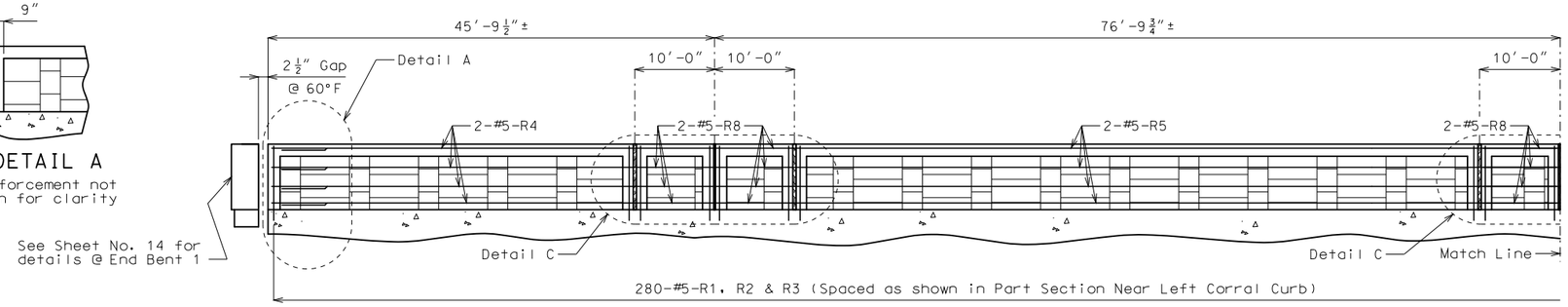
DESCRIPTION | DATE

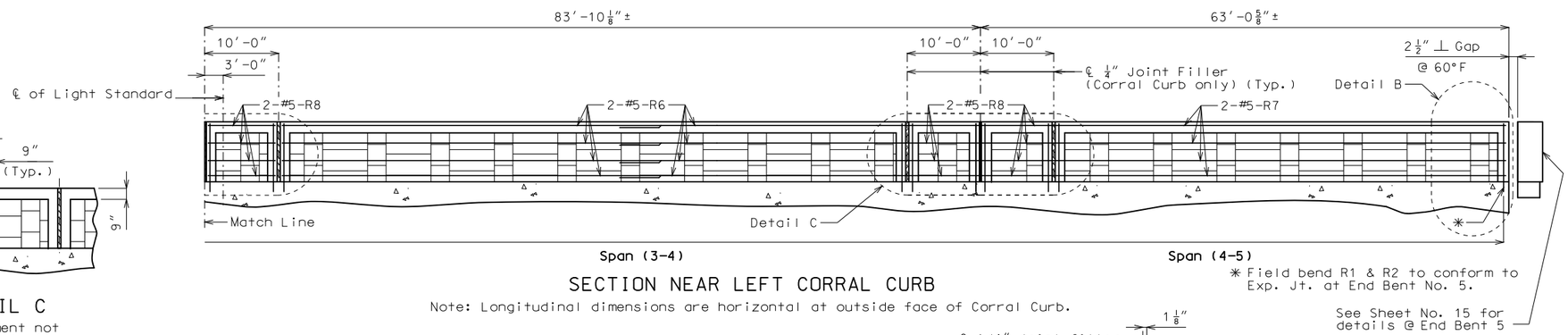
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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



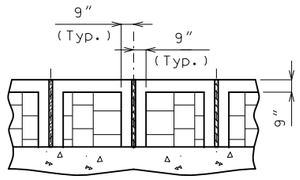
DETAIL A
Reinforcement not shown for clarity



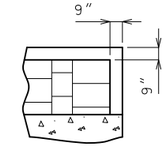


SECTION NEAR LEFT CORRAL CURB

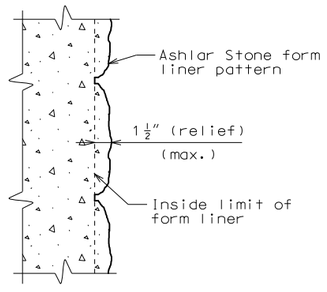
Note: Longitudinal dimensions are horizontal at outside face of Corral Curb.



DETAIL C
Reinforcement not shown for clarity



DETAIL B
Reinforcement not shown for clarity



TYPICAL PART SECTION AT FORM LINER

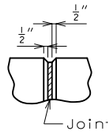
Notes:
The following is a list of form liner manufacturers and types which may be used. All form liner pattern's depth of relief shall vary up to 1 1/2". The height of any single 'stone' shall be 15" maximum.

Scott System, Inc.: Form liner pattern #167 "Ashlar Stone"

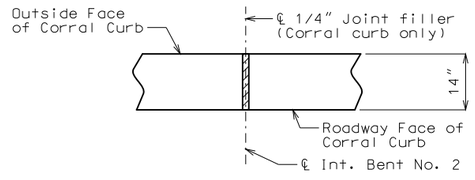
Fitzgerald formliners: Form liner pattern #16986 "Ashlar Stone"

Greenstreak: Form liner pattern #330 "Ashlar Stone"

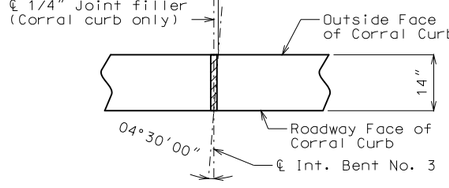
Dayton Superior/Symons: Form liner pattern #1515 "Ashlar Stone"



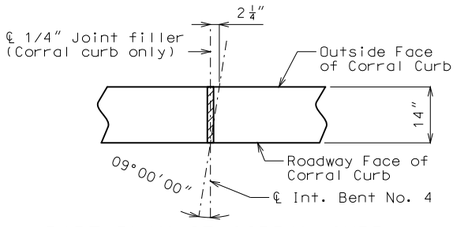
FILLED JOINT DETAIL



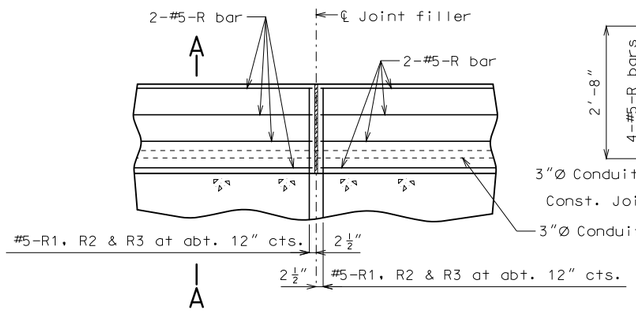
PART PLAN OF CORRAL CURB SHOWING JOINT FILLER AT INT. BENT NO. 2



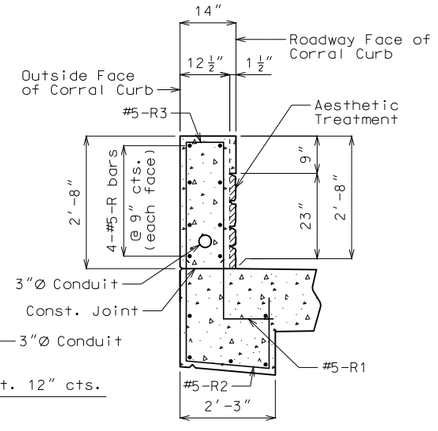
PART PLAN OF CORRAL CURB SHOWING JOINT FILLER AT INT. BENT NO. 3



PART PLAN OF CORRAL CURB SHOWING JOINT FILLER AT INT. BENT NO. 4



PART SECTION NEAR LEFT CORRAL CURB



PART SECTION A-A

User a minimum lap of 3'-1" for #5 horizontal corral curb bars.

Notes:
Top of corral curb shall be built parallel to grade with corral curb joints (except at end bents) normal to grade.

All exposed edges of corral curb shall have either a 1/2" radius or a 3/8" bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for corral curb per linear foot.

Concrete in the corral curb shall be Class B-1.

Measurement of corral curb is to the nearest linear foot for each structure, measured along the outside of corral curb from end of wing to end of wing.

For Details of Corral Curb at End Bents not shown, see Sheet No. 14 & 15.

For Light Standard mounting, see Sheet No. 18.

For Decorative Fence Post spacing, see Sheet No. 19.

For Details of Decorative Fencing, see Sheet No. 21.

The cross-sectional area above the slab = 2.88 sq. ft.

See Special Provisions for form liner specifications.

For Details of Conduit System, see Sheet No. 22.

DETAILS OF LEFT CORRAL CURB

Detailed Oct. 2017
Checked Oct. 2017

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

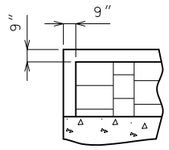
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 12
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09381

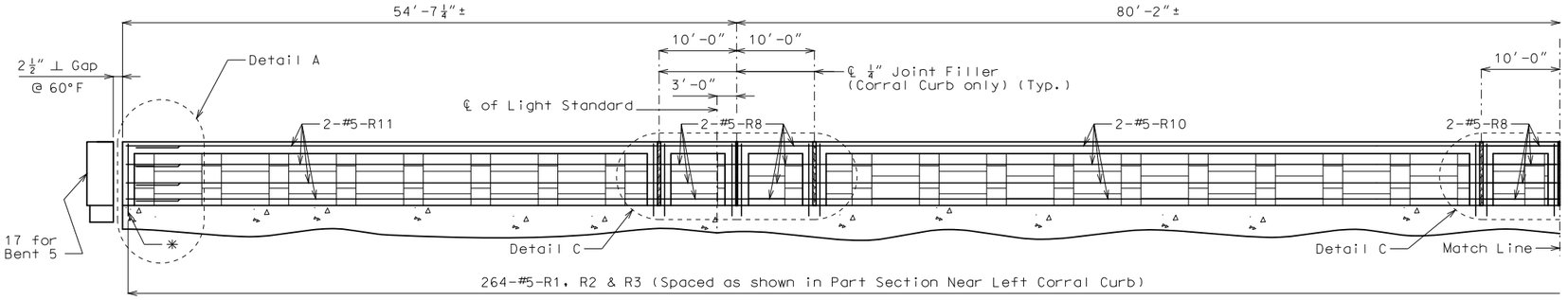
DESCRIPTION | DATE

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

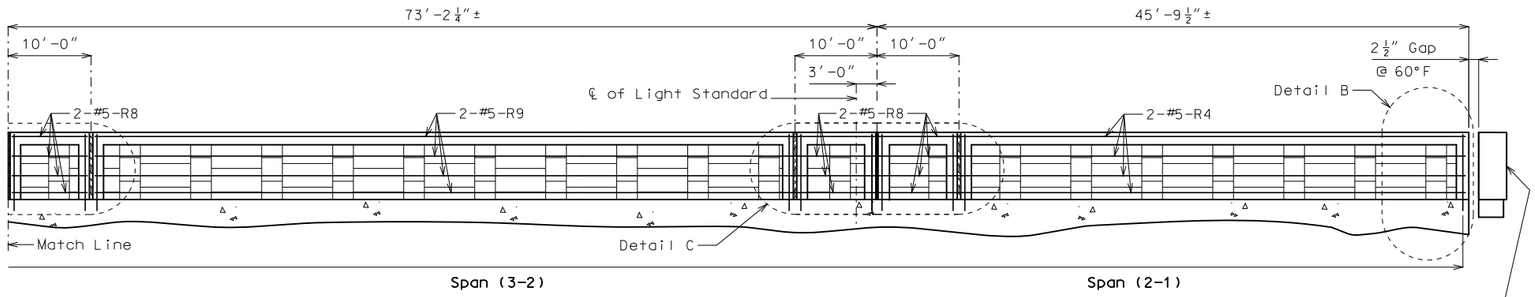
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



DETAIL A
Reinforcement not shown for clarity

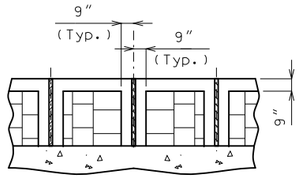


✳ Field bend R1 & R2 to conform to Exp. Jt. at End Bent No. 5.

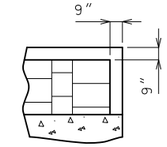


SECTION NEAR RIGHT CORRAL CURB

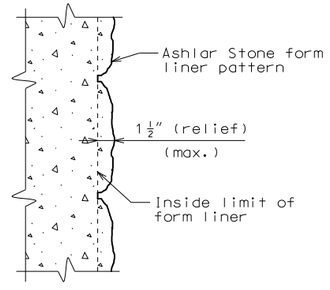
Note: Longitudinal dimensions are horizontal at outside face of Corral Curb.



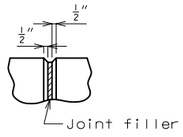
DETAIL C
Reinforcement not shown for clarity



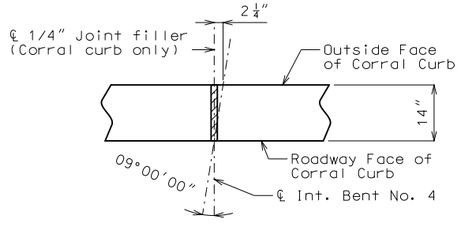
DETAIL B
Reinforcement not shown for clarity



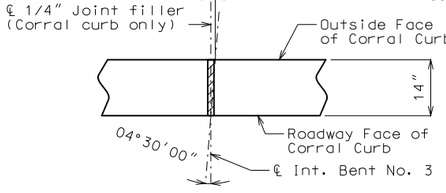
TYPICAL PART SECTION AT FORM LINER



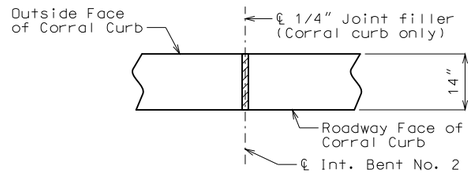
FILLED JOINT DETAIL



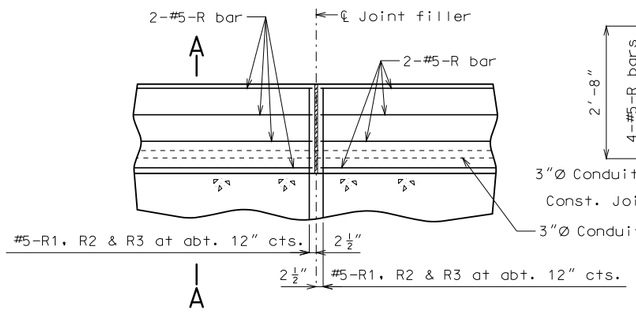
PART PLAN OF CORRAL CURB SHOWING JOINT FILLER AT INT. BENT NO. 4



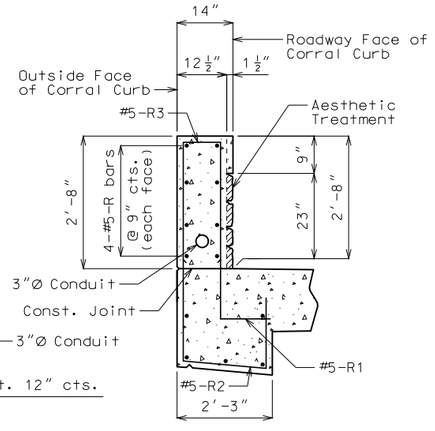
PART PLAN OF CORRAL CURB SHOWING JOINT FILLER AT INT. BENT NO. 3



PART PLAN OF CORRAL CURB SHOWING JOINT FILLER AT INT. BENT NO. 2



PART SECTION NEAR LEFT CORRAL CURB



PART SECTION A-A

User a minimum lap of 3′-1″ for #5 horizontal corral curb bars.

Notes:
The following is a list of form liner manufacturers and types which may be used. All form liner pattern's depth of relief shall vary up to 1 1/2". The height of any single 'stone' shall be 15" maximum.

Scott System, Inc.: Form liner pattern #167 "Ashlar Stone"

Fitzgerald formliners: Form liner pattern #16986 "Ashlar Stone"

Greenstreak: Form liner pattern #330 "Ashlar Stone"

Dayton Superior/Symons: Form liner pattern #1515 "Ashlar Stone"

Notes:
Top of corral curb shall be built parallel to grade with corral curb joints (except at end bents) normal to grade.

All exposed edges of corral curb shall have either a 1/2" radius or a 3/8" bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for corral curb per linear foot.

Concrete in the corral curb shall be Class B-1.

Measurement of corral curb is to the nearest linear foot for each structure, measured along the outside of corral curb from end of wing to end of wing.

For Details of Corral Curb at End Bents not shown, see Sheet No. 16 & 17.

For Light Standard mounting, see Sheet No. 18.

For Decorative Fence Post spacing, see Sheet No. 20.

For Details of Decorative Fencing, see Sheet No. 21.

The cross-sectional area above the slab = 2.88 sq. ft.

See Special Provisions for form liner specifications.

For Details of Conduit System, see Sheet No. 22.

DETAILS OF RIGHT CORRAL CURB

Detailed Oct. 2017
Checked Nov. 2017

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

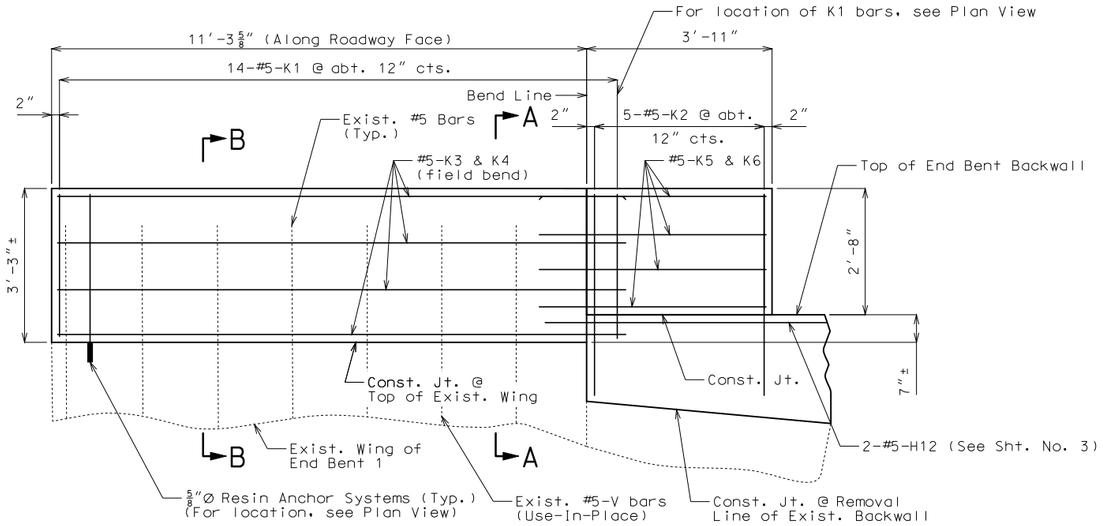
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 13
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09381

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

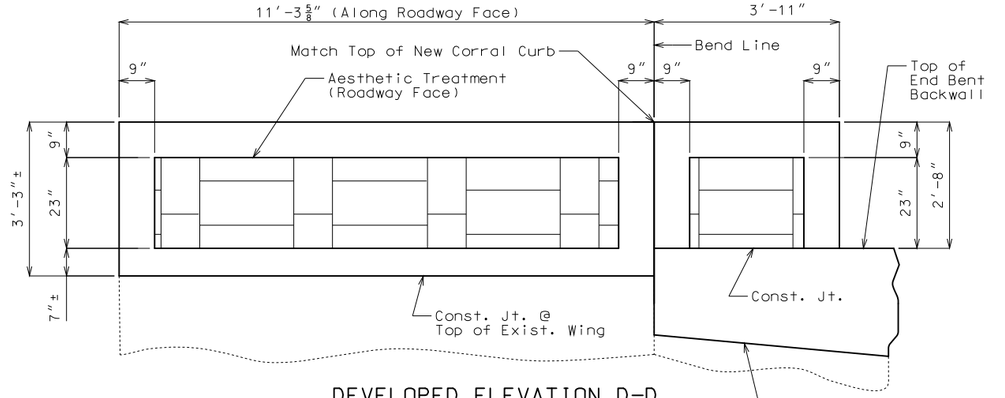
DATE | DESCRIPTION

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



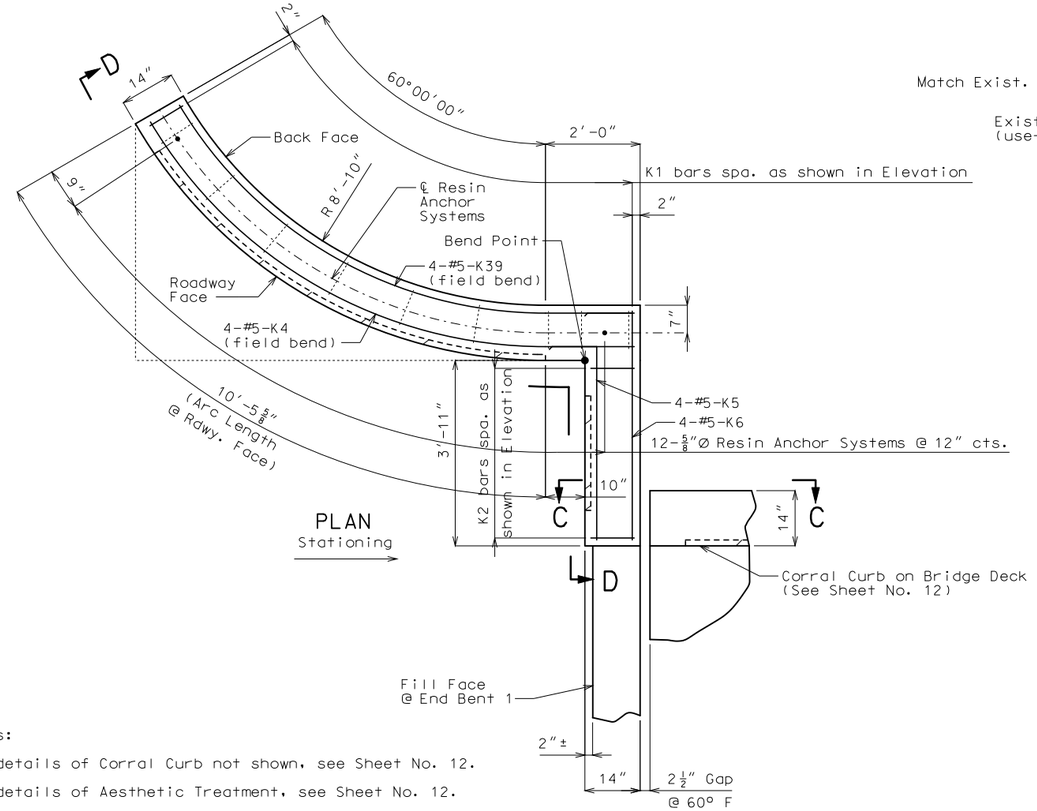
DEVELOPED ELEVATION D-D SHOWING REINFORCEMENT

Form liner not shown for clarity.

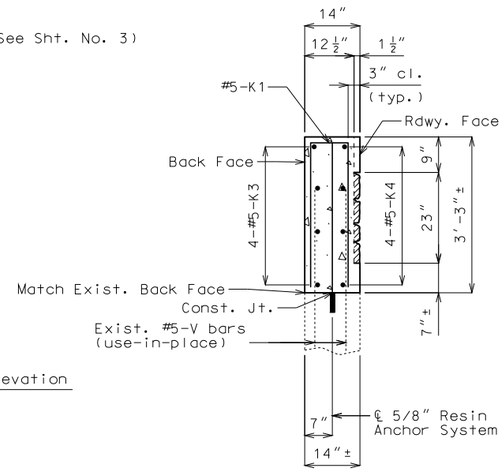


DEVELOPED ELEVATION D-D SHOWING FORM LINER DETAIL

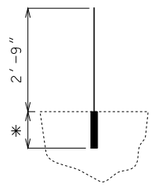
Reinforcement not shown for clarity.



PLAN
Stationing



SECTION A-A



* Manufacturer's recommendation

Total Req'd = 12 for Left Corral Curb at End Bent 1
Total Length = 2′-9″ + embedment

DETAIL OF RESIN ANCHOR SYSTEM

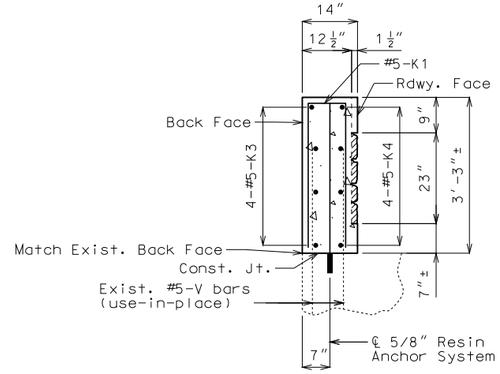
Resin Anchor Notes:

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

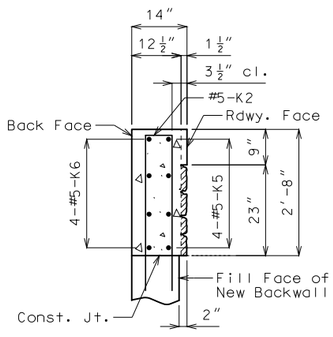
Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Corral Curb.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



SECTION B-B



SECTION C-C

Notes:

For details of Corral Curb not shown, see Sheet No. 12.

For details of Aesthetic Treatment, see Sheet No. 12.

For Decorative Fence Post spacing, see Sheet No. 19.

For details of Decorative Pedestrian Fence, see Sheet No. 21.

DETAILS OF LEFT CORRAL CURB AT END BENT NO. 1

Detailed Oct. 2017
Checked Oct. 2017

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

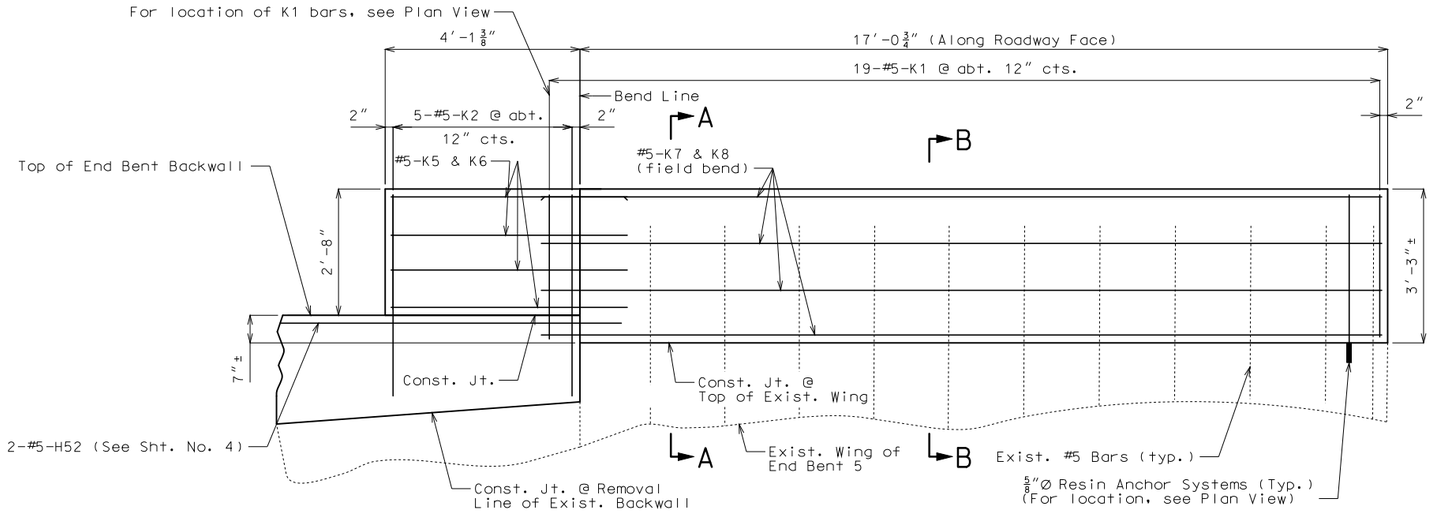
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 14
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09381

DESCRIPTION | DATE

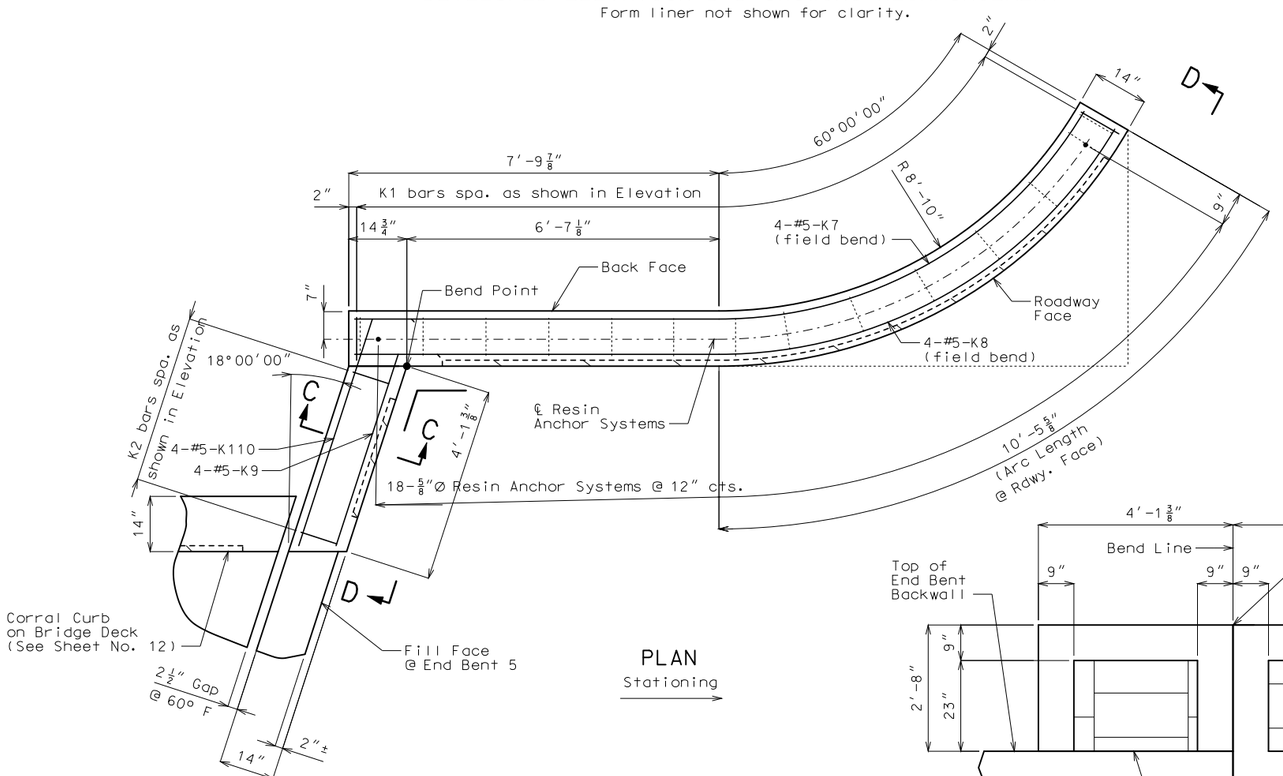
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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



DEVELOPED ELEVATION D-D SHOWING REINFORCEMENT

Form liner not shown for clarity.



PLAN

Stationing

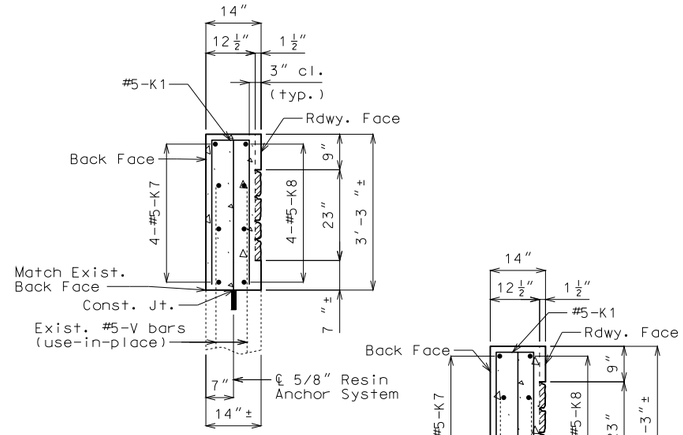
Notes:

For details of Corral Curb not shown, see Sheet No. 12.

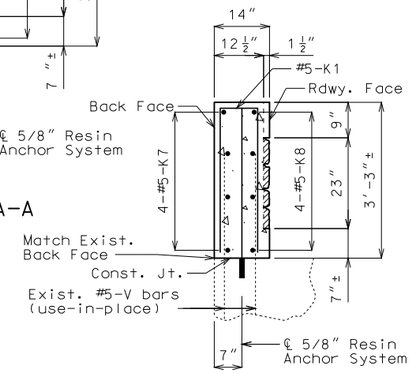
For details of Aesthetic Treatment, see Sheet No. 12.

For Decorative Fence Post spacing, see Sheet No. 19.

For details of Decorative Pedestrian Fence, see Sheet No. 21.



SECTION A-A



SECTION B-B

* Manufacturer's recommendation

Total Req'd = 18 for Left Corral Curb at End Bent 5

Total Length = 2′-9″ + embedment

DETAIL OF RESIN ANCHOR SYSTEM

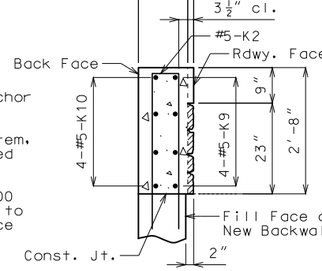
Resin Anchor Notes:

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

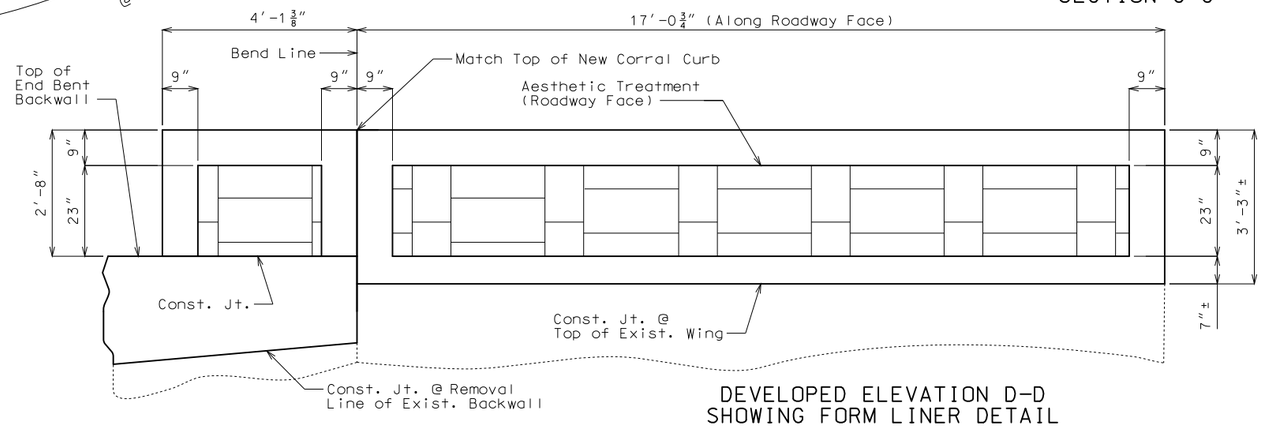
Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Corral Curb.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



SECTION C-C



DEVELOPED ELEVATION D-D SHOWING FORM LINER DETAIL

Reinforcement not shown for clarity.

DETAILS OF LEFT CORRAL CURB AT END BENT NO. 5

Detailed Oct. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	15

COUNTY: JACKSON

JOB NO.: J4I3198

CONTRACT ID.:

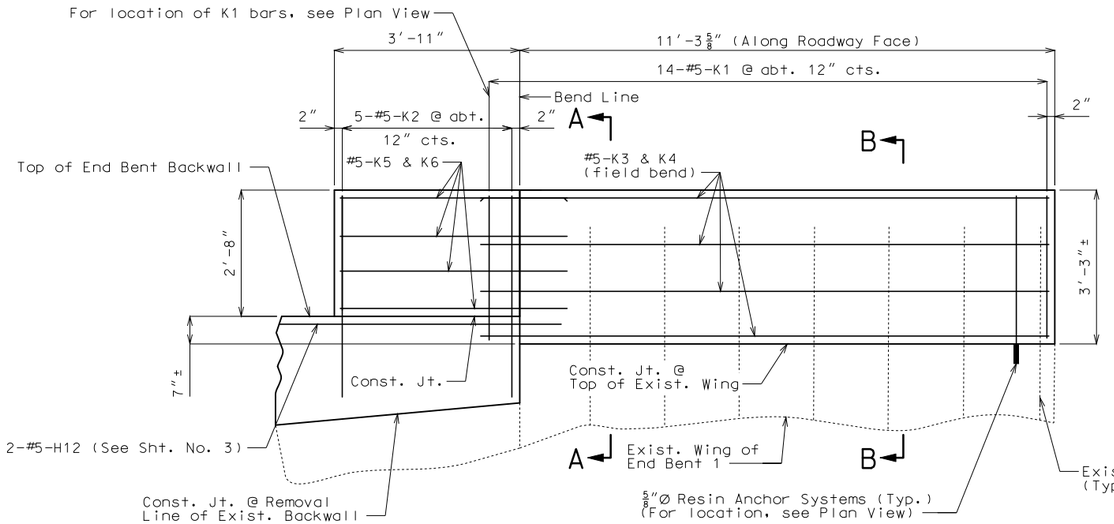
PROJECT NO.:

BRIDGE NO.: L09381

DESCRIPTION	DATE

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

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



DEVELOPED ELEVATION D-D SHOWING REINFORCEMENT

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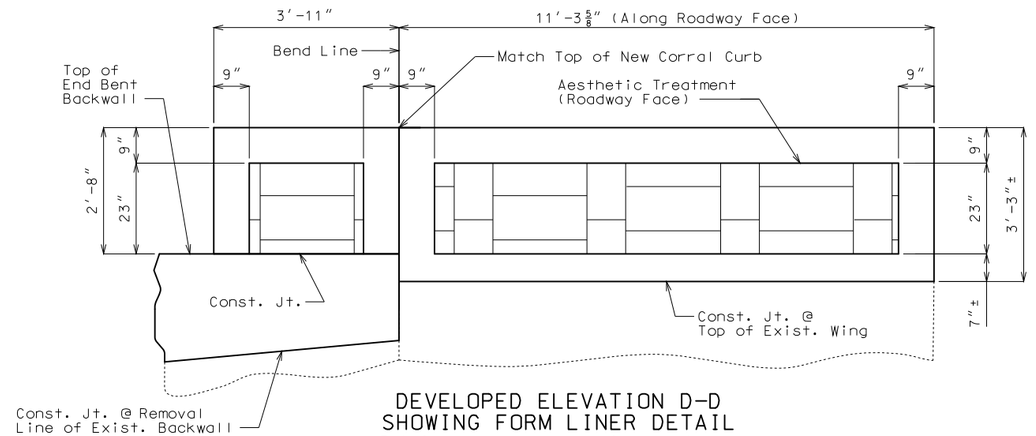
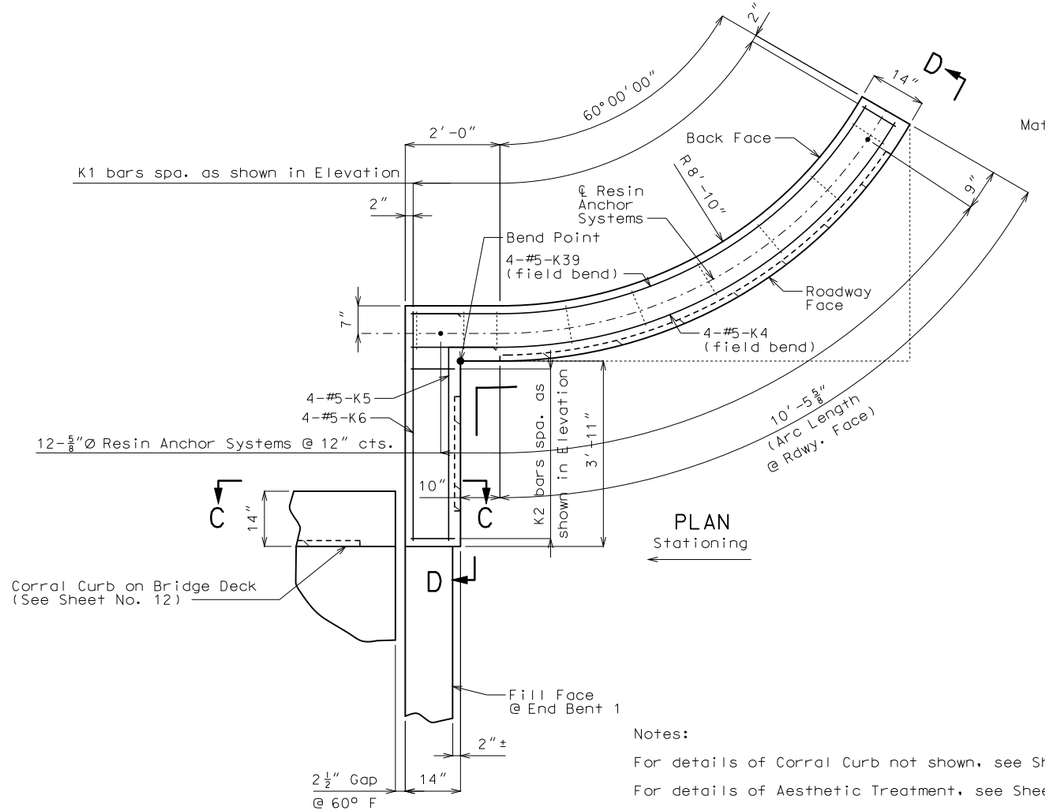
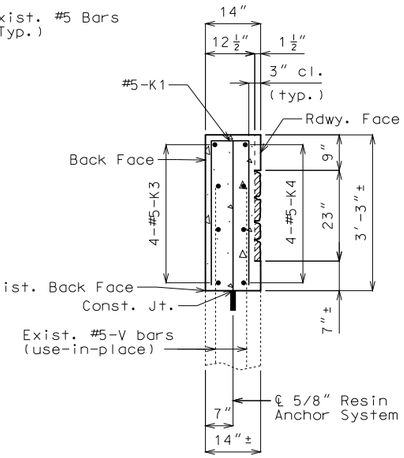


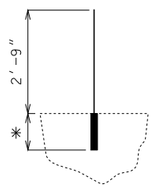
DEVELOPED ELEVATION D-D SHOWING FORM LINER DETAIL

Reinforcement not shown for clarity.





SECTION A-A



* Manufacturer's recommendation

Total Req'd = 12 for Right Corral Curb at End Bent 1

Total Length = 2′-9″ + embedment

DETAIL OF RESIN ANCHOR SYSTEM

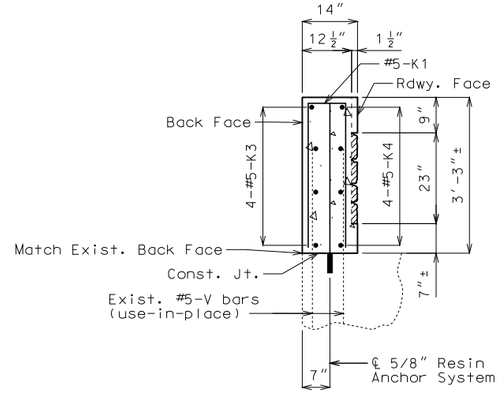
Resin Anchor Notes:

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

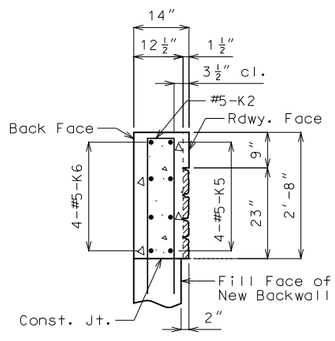
Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Corral Curb.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



SECTION B-B



SECTION C-C

Notes:

For details of Corral Curb not shown, see Sheet No. 13.

For details of Aesthetic Treatment, see Sheet No. 13.

For Decorative Fence Post spacing, see Sheet No. 20.

For details of Decorative Pedestrian Fence, see Sheet No. 21.

DETAILS OF RIGHT CORRAL CURB AT END BENT NO. 1

Detailed Oct. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	16

COUNTY: JACKSON

JOB NO.: J4I3198

CONTRACT ID.:

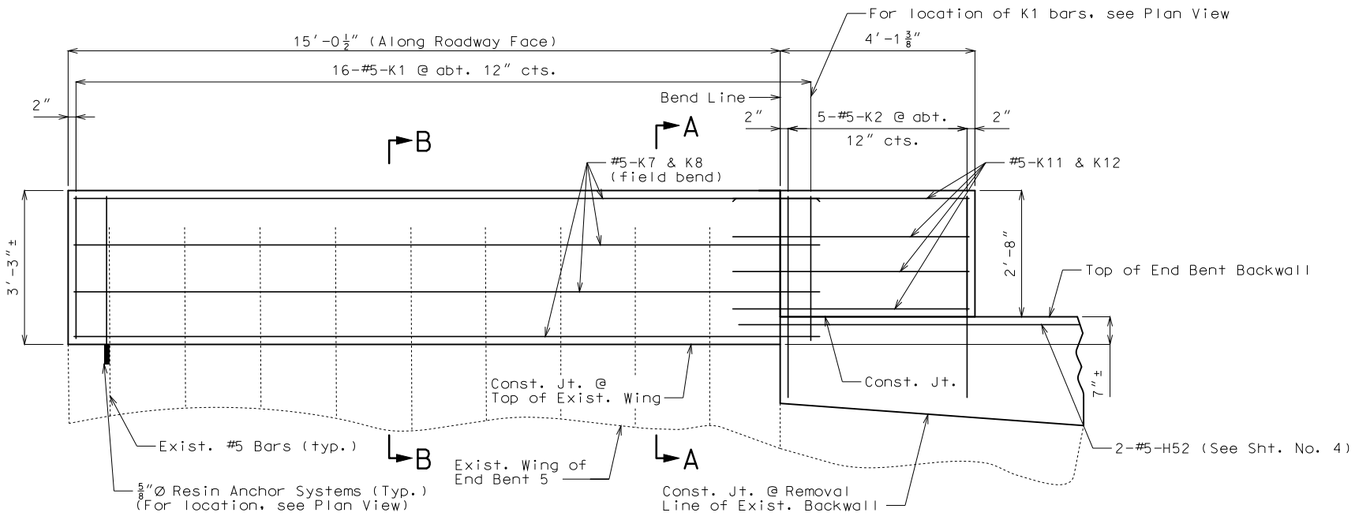
PROJECT NO.:

BRIDGE NO.: L09381

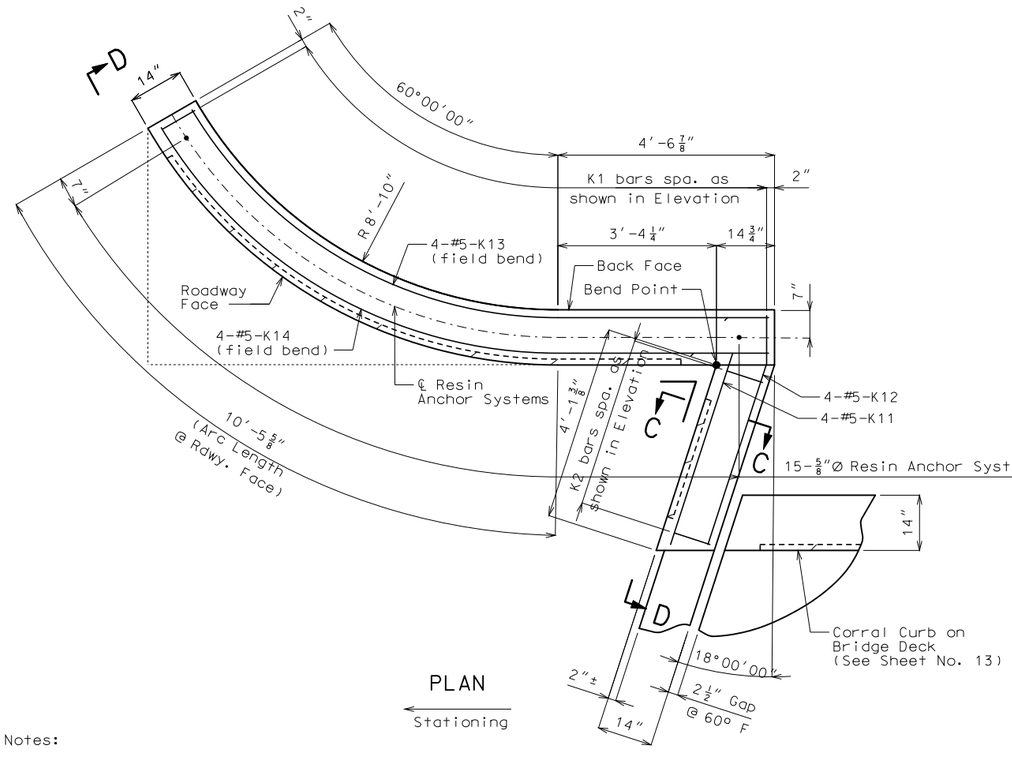
DESCRIPTION	DATE

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

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



DEVELOPED ELEVATION D-D SHOWING REINFORCEMENT



PLAN

Stationing

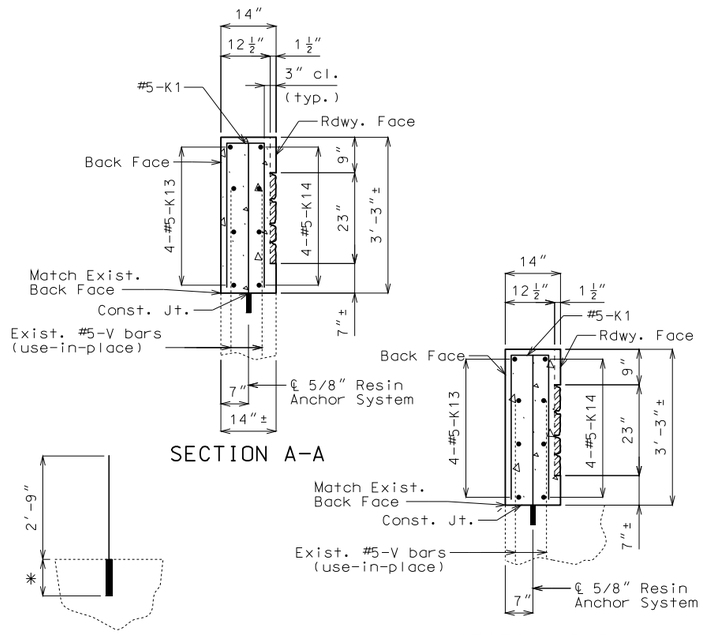
Notes:

For details of Corral Curb not shown, see Sheet No. 13.

For details of Aesthetic Treatment, see Sheet No. 13.

For Decorative Fence Post spacing, see Sheet No. 20.

For details of Decorative Pedestrian Fence, see Sheet No. 21.



SECTION A-A

SECTION B-B

* Manufacturer's recommendation

Total Req'd = 15 for Left Corral Curb at End Bent 5

Total Length = 2′-9″ + embedment

DETAIL OF RESIN ANCHOR SYSTEM

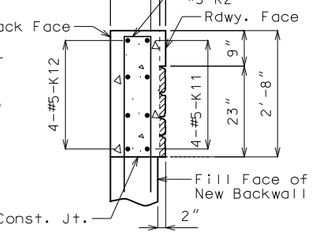
Resin Anchor Notes:

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

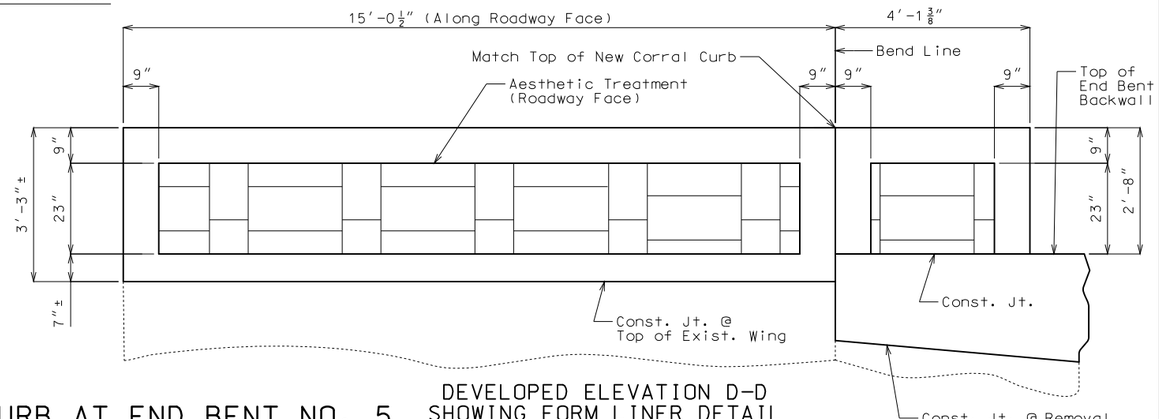
Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Corral Curb.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



SECTION C-C



DEVELOPED ELEVATION D-D
SHOWING FORM LINER DETAIL
Reinforcement not shown for clarity.

DESCRIPTION

DATE

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	17

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
L09381

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

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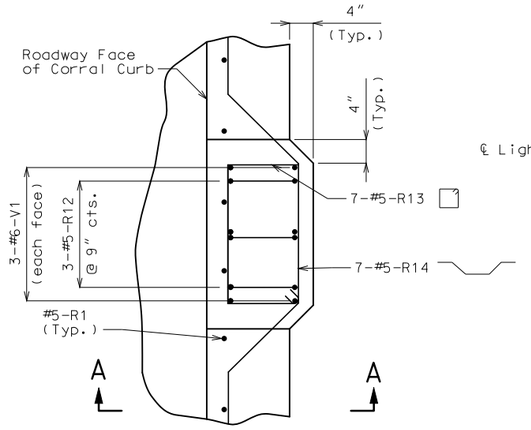
DETAILS OF RIGHT CORRAL CURB AT END BENT NO. 5

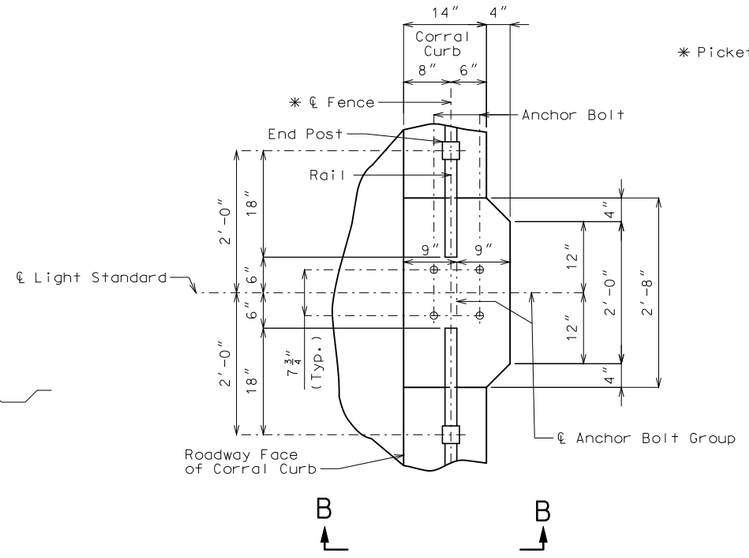
Detailed Oct. 2017
Checked Oct. 2017

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



PART PLAN SHOWING REINFORCEMENT

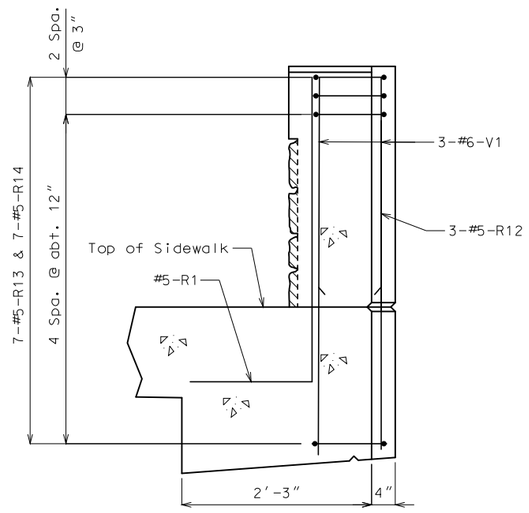
(Conduit & fence not shown for clarity)



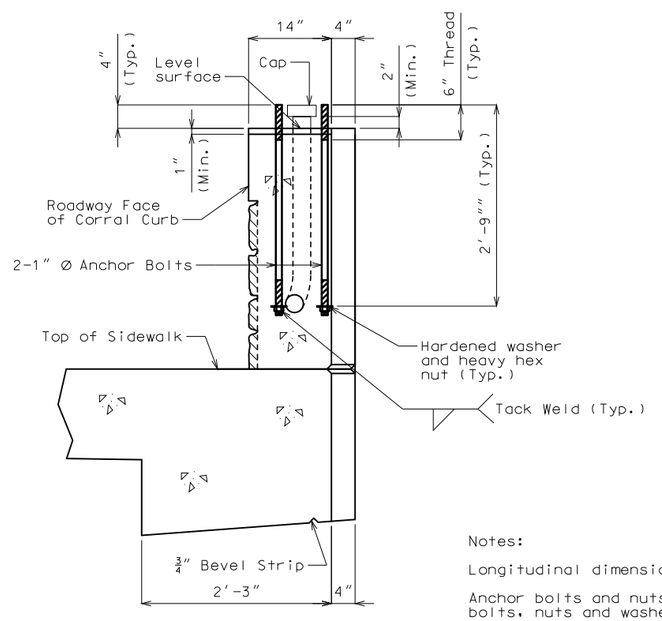
✱ Pickets not shown for clarity

PART PLAN SHOWING ANCHOR BOLTS AND FENCE

(Conduit not shown for clarity)



SECTION A-A



SECTION B-B

Notes:

Longitudinal dimensions are horizontal.

Anchor bolts and nuts shall be ASTM A449. Anchor bolts, nuts and washers shall be fully galvanized.

Cost of furnishing and placing anchor bolts for light standard will be considered completely covered by the contract unit price for other items.

Light standards, wiring and fixtures shall be furnished and installed by others.

Top of light standard supports shall be made horizontal; anchor bolts shall be placed vertically.

For Details of Conduit System on Structure, see Sheet No. 22.

For Decorative Pedestrian Fence Post Locations, see Sheets No. 19 & 20.

For Decorative Pedestrian Fence details, see Sheet No. 21.

DETAILS OF LIGHT STANDARD MOUNTING ON CORRAL CURB (3 Req'd)

Detailed Oct. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	18

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO. L09381

DESCRIPTION	DATE

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

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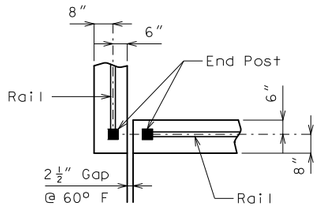
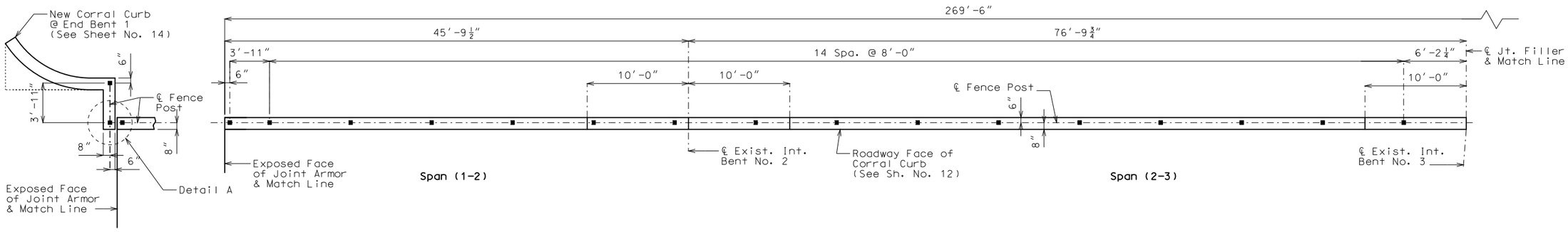
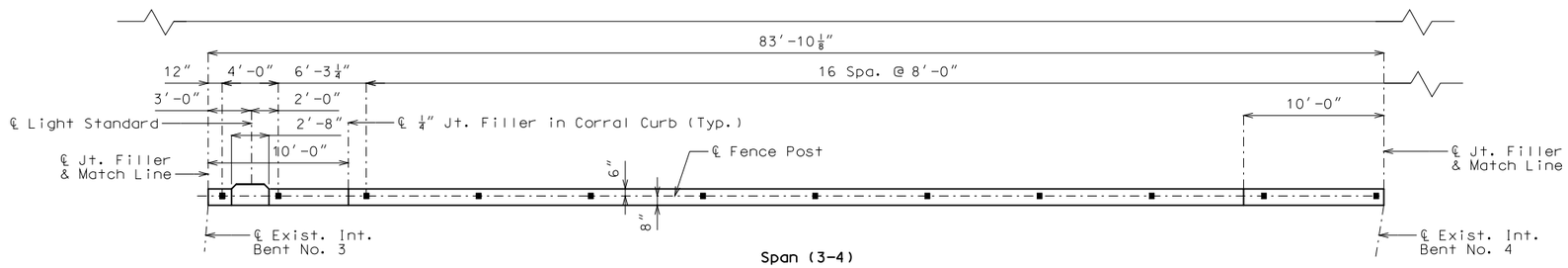
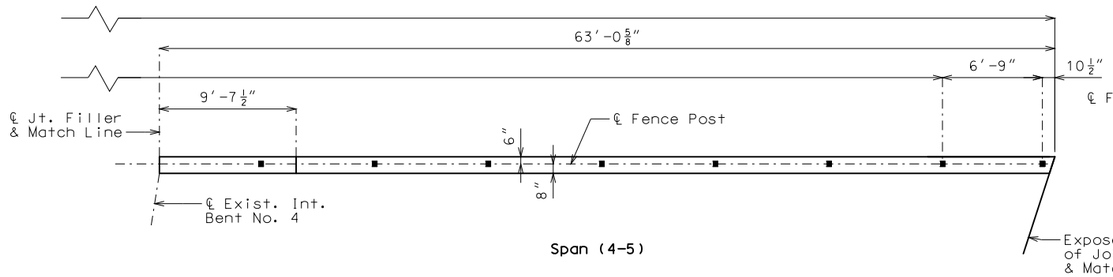
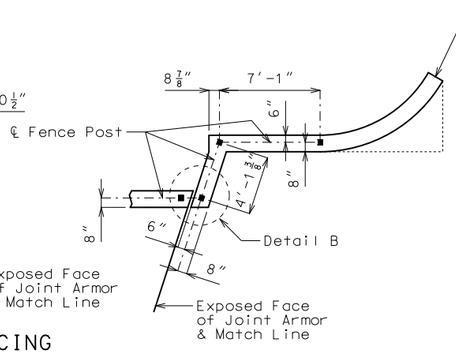


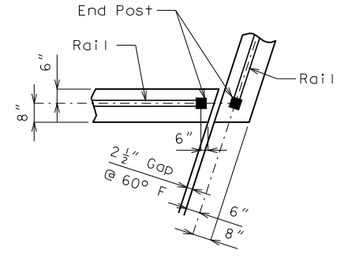
DETAIL A











DETAIL B

PLAN OF LEFT CORRAL CURB SHOWING FENCE POST SPACING

Notes:

For Decorative Pedestrian Fence Details, see Sheet No. 21.

For Details of Corral Curb, see Sheets No. 12, 14, 15 & 18.

LEFT DECORATIVE PEDESTRIAN FENCE DETAILS

Detailed Oct. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	19

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

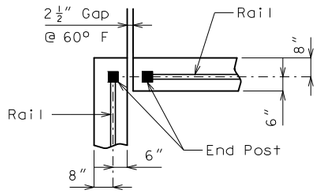
PROJECT NO.

BRIDGE NO.
L09381

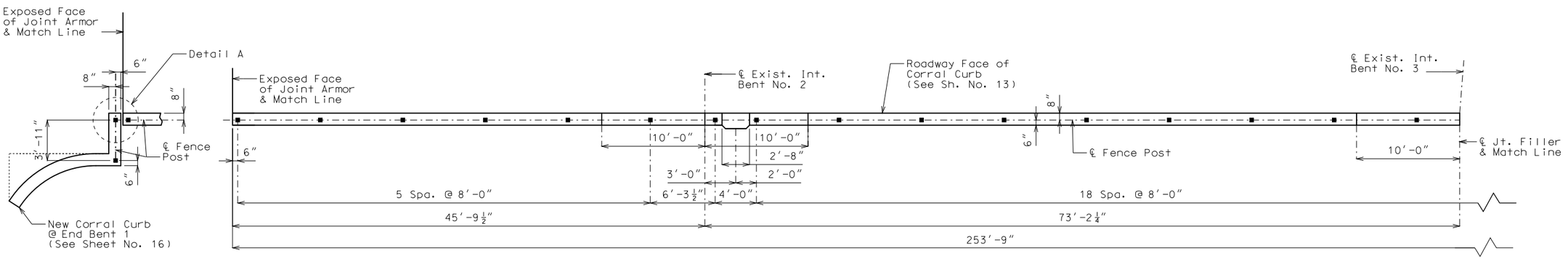
DESCRIPTION	DATE

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

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



DETAIL A



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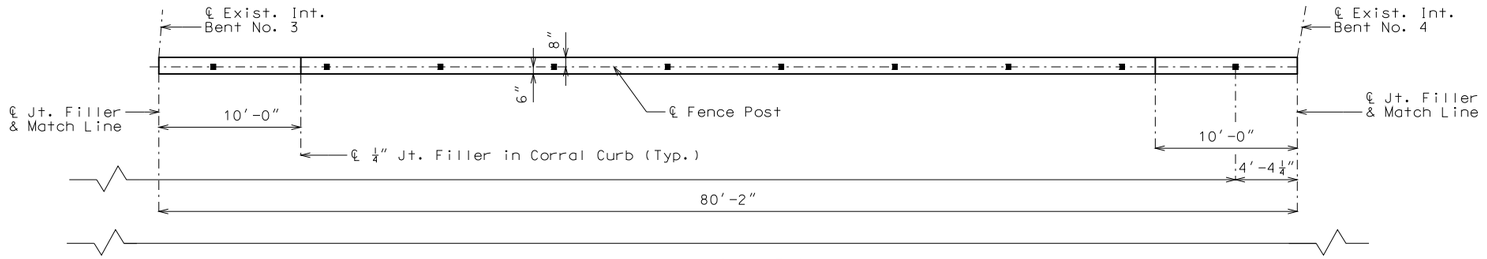

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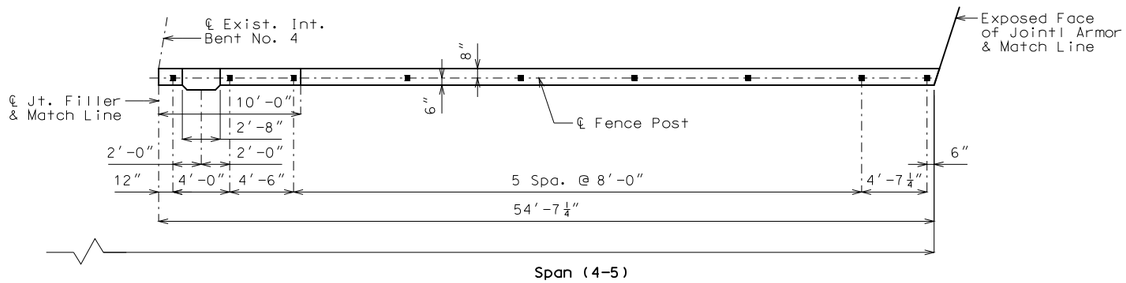

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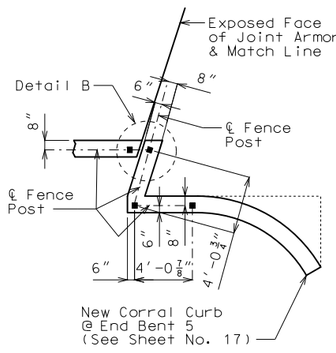
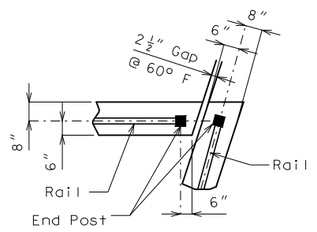
PLAN OF RIGHT CORRAL CURB SHOWING FENCE POST SPACING





DETAIL B

Notes:

For Decorative Pedestrian Fence Details, see Sheet No. 21.

For Details of Corral Curb, see Sheets No. 13, 16, 17 & 18.

RIGHT DECORATIVE PEDESTRIAN FENCE DETAILS

Detailed Oct. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 20
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09381

DESCRIPTION | DATE

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

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

Notes:

Decorative pedestrian fencing shall be in accordance with 2010 AASHTO LRFD Bridge Design Specifications and 2010 Interim Revisions. The design line load for pedestrian railings will not require a 50lb/ft and 200lb load be applied simultaneously. The posts of pedestrian railing will require both loadings applied simultaneously.

Fence shall have a gloss black finish (Federal Standard #17038) System "G" in accordance with Sec 1081.

Base plate shall be ASTM A709, Grade 36.

Dimensions of pedestrian fence are measured horizontally.

Measurement of pedestrian fence will be made to the nearest linear foot along centerline fence.

Payment for furnishing and erecting the fence, complete in place, with U-Bolts, washers and reinforcing bars will be considered completely covered by the contract unit price for 72" Decorative Pedestrian Fence (Structures).

All fence posts shall be vertical.

Substitution for the U-bolt cages on the decorative pedestrian fence will not be permitted.

Mortar shall be placed under the post base plates in accordance with Sec 1066.

Contractor shall submit complete detailed shop drawings in accordance with Sec 1080.

The contractor shall have the decorative pedestrian fencing manufacturer submit structural design computations signed and sealed by a registered professional engineer in the State of Missouri.

All materials used in fabrication and construction of the decorative pedestrian fencing shall be in accordance with the manufacturer's specifications, except as modified in the contract documents.

Decorative pedestrian fencing system shall be supplied by only one of the manufacturers. Fencing system shall include all components except the anchor bolts and #4 bars welded to the anchor bolts. The assembly of the pickets to the rails and the rails to the posts shall be the same as the style mentioned for the manufacturer.

Ameristar Fence Products, Inc.
1555 N. Mingo
Tulsa, OK. 74116
(800) 321-8724
www.ameristarfence.com

Style: AEGIS II Majestic

Iron Eagle Industries, Inc.
1256 Cardiff Blvd.
Mississauga, Ontario Canada L5S1R1
(905) 670-2558
www.ironeagleind.com

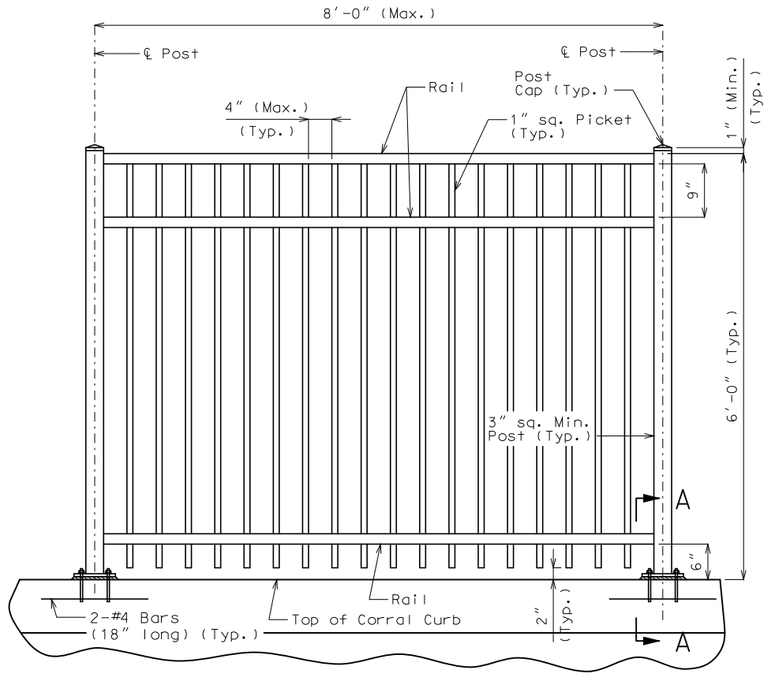
Style: Silver Eagle II

Betafence USA
3309 S.W. Interstate 45
Ennis, TX. 75119
(888) 650-4766
www.betafenceusa.com

Style: UpGrade-I Landmark

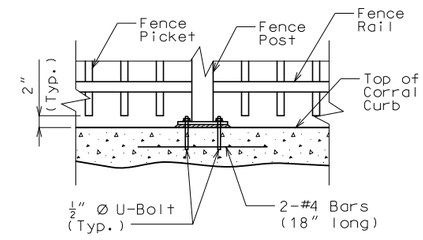
Merchants Metals
6575 Romiss Court
St. Louis, MO 63134
(800) 293-3363
www.merchantsmetals.com

Style: Guardsman Monroe

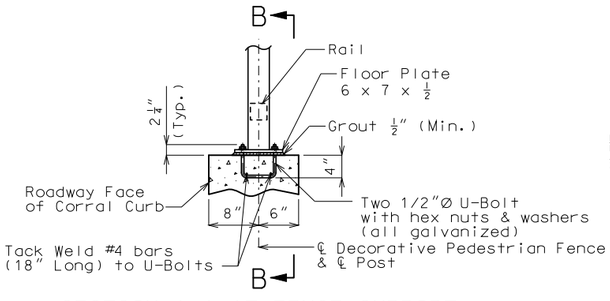


TYPICAL PART ELEVATION

Adjacent panels and Form Liner Detail not shown for clarity.



SECTION B-B AT SUPPORT

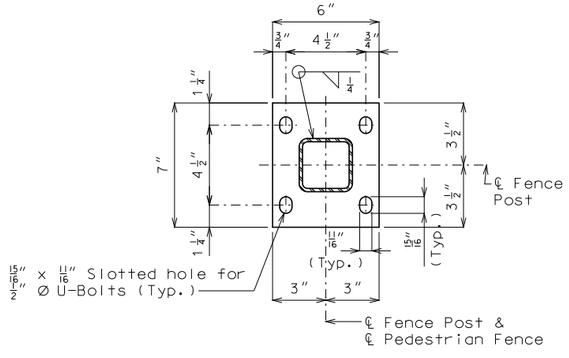


SECTION A-A AT FENCE SUPPORT

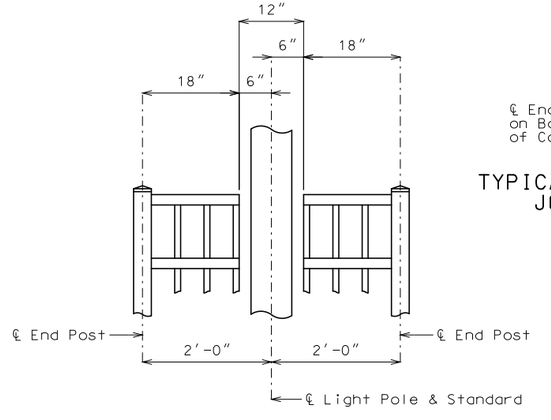
Note: Reinforcement not shown for clarity.

Notes:
For Part Plans of Corral Curb Showing Fence Post Spacing, see Sheet No. 19 & 20.

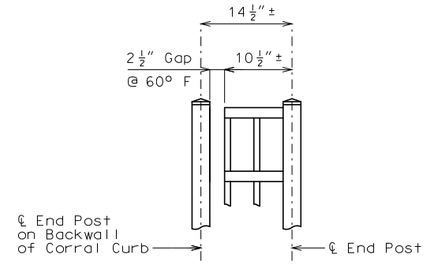
For Details of Corral Curb, see Sheets No. 12-18.



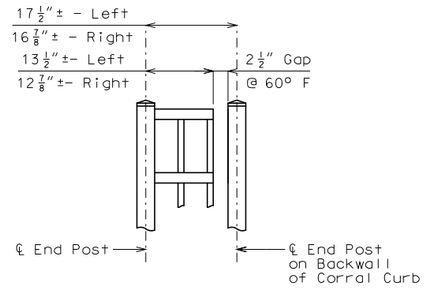
PLAN OF FLOOR PLATE



TYPICAL DETAIL OF FENCE AT LIGHT STANDARDS



TYPICAL DETAIL OF FENCE AT EXPANSION JOINTS AT END BENT NO. 1



TYPICAL DETAIL OF FENCE AT EXPANSION JOINTS AT END BENT NO. 5

DECORATIVE PEDESTRIAN FENCE DETAILS

Detailed Oct. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/14/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	21

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

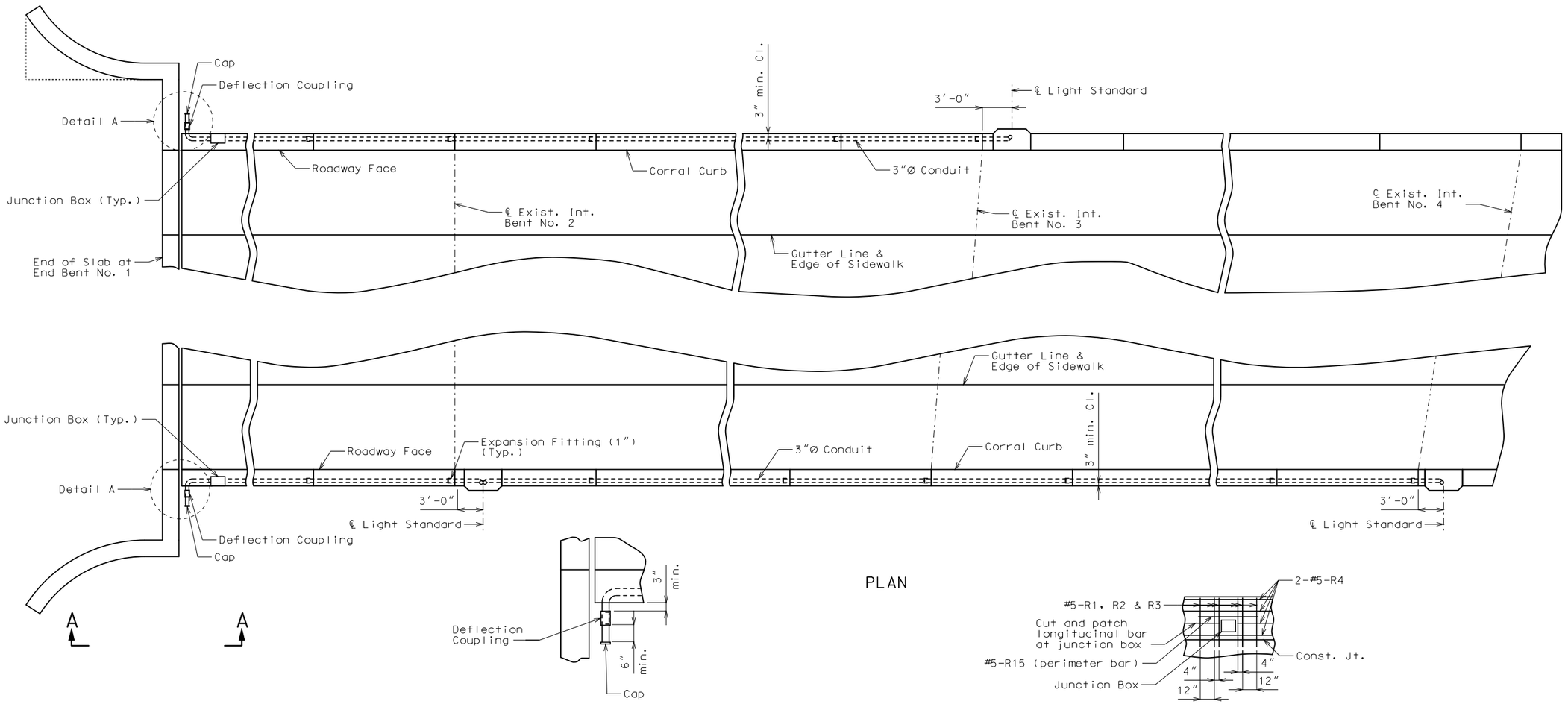
PROJECT NO.

BRIDGE NO.
L09381

DESCRIPTION	DATE

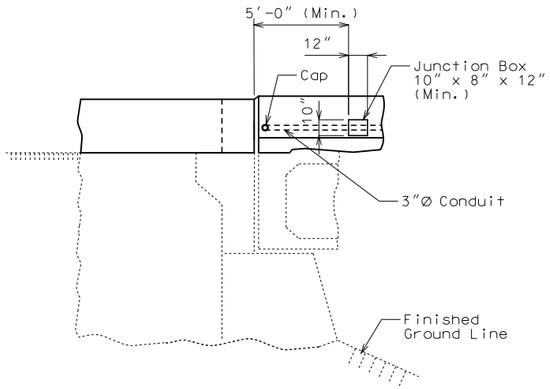
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

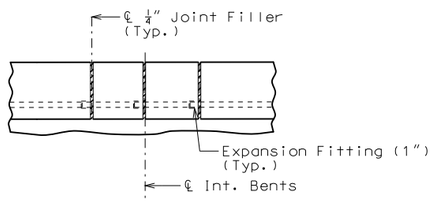


PLAN

DETAIL A



PART ELEVATION A-A AT END BENT 1



PART ELEVATION NEAR INT. BENTS

PART ELEVATION OF CORRAL CURB
OVER SLAB SHOWING PERIMETER STEEL

Notes:

All conduits shall be rigid nonmetallic schedule 40 heavy wall polyvinyl chloride (PVC) with 3" minimum cover in concrete. Each section of conduit shall bear the Underwriters Laboratories (UL) label.

Shift reinforcing steel in field where necessary to clear conduit and junction boxes.

Expansion fittings shall be placed as shown and set in accordance with the manufacturer's requirements and based on the air temperature at the time of setting given an estimated total expansion movement of 1 inch at filled joints using a maximum temperature range of 150° F and a maximum temperature of 120° F.

All end bent and corral curb junction boxes shall be PVC molded in accordance with Sec 1062 and designed for flush surface mounting. The conduit terminations shall be permanent or separable. The terminations and covers shall be of watertight construction and shall meet requirements for NEMA 4 enclosure.

Drainage shall be provided at low points or other critical locations of all conduits and all junction boxes in accordance with Sec 707. All conduits shall be sloped to drain where possible.

Payment for furnishing and installing Conduit System, complete in place, will be considered completely covered by the contract lump sum price for Conduit System on Structure.

DETAILS OF CONDUIT SYSTEM IN CORRAL CURBS

Detailed Oct. 2017
Checked Oct. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 22
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09381

DESCRIPTION | DATE

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

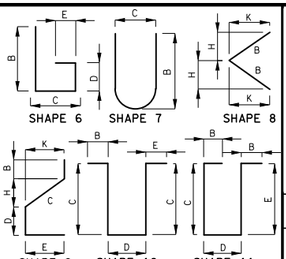
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

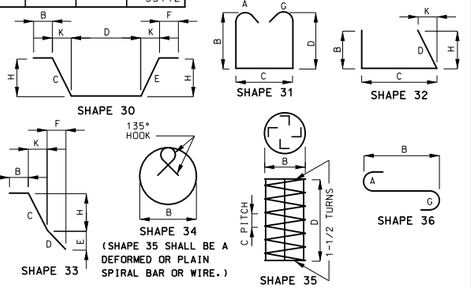
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
			END BENT 1																									
4	5	H10	BACKWALL	E	20					53	9.000													53	9	53	9	224
2	5	H11	BACKWALL	E	20					43	9.000													43	9	43	9	91
4	5	H12	BACKWALL	E	9	S				18.000		23.750		10	10.000			3.000		23.500				14	4	14	2	59
34	5	U10	BACKWALL	E	10	S						16.500		9.000										3	6	3	4	118
10	5	U11	BACKWALL	E	10	S		V	2			2	2.000	9.000										5	1	4	11	
			INCREMENT =									2	0.750	9.000										4	11	4	8	50
			0.750 INCH																									
10	5	U12	BACKWALL	E	10	S		V	2			21.125		9.000										4	3	4	1	
			INCREMENT =									17.625		9.000										3	8	3	6	40
			1.750 INCH																									
			END BENT 5																									
4	5	H50	BACKWALL	E	20					56	6.000													56	6	56	6	236
2	5	H51	BACKWALL	E	20					46	0.000													46	0	46	0	96
4	5	H52	BACKWALL	E	9	S				18.000		23.750		11	4.000			3.000		23.500				14	10	14	8	61
37	5	U50	BACKWALL	E	10	S						16.500		9.500										3	7	3	4	129
10	5	U51	BACKWALL	E	10	S		V	2			2	2.000	9.500										5	2	4	11	
			INCREMENT =									2	0.750	9.500										4	11	4	9	50
			0.500 INCH																									
10	5	U52	BACKWALL	E	10	S		V	2			21.125		9.500										4	4	4	1	
			INCREMENT =									17.625		9.500										3	9	3	6	40
			1.750 INCH																									
			SLAB																									
256	4	S1	SLAB	E	20					37	0.000													37	0	37	0	6327
12	4	S2	SLAB	E	20			V	1	36	7.000													36	7	36	7	
			INCREMENT =									2	8.000											2	8	2	8	157
			37.000 INCH																									
37	4	S3	SLAB	E	20			V	1	35	11.000													35	11	35	11	
			INCREMENT =									24	2.000											24	2	24	2	743
			3.875 INCH																									
448	4	S4	SLAB	E	20					60	0.000													60	0	60	0	17956
8	4	S5	SLAB	E	20			V	1	24	5.000													24	5	24	5	
			INCREMENT =							22	3.000													22	3	22	3	125
			3.750 INCH																									
8	4	S6	SLAB	E	20			V	1	37	10.000													37	10	37	10	
			INCREMENT =							35	8.000													35	8	35	8	196
			3.750 INCH																									
697	5	S7	SLAB	E	9	S				18.000		11.125		6	11.000			1.250		11.000				9	4	9	2	6664
49	4	S8	SLAB	E	20			V	1	37	10.000													37	10	37	10	
			INCREMENT =							22	3.000													22	3	22	3	983
			3.875 INCH																									
254	4	S9	SLAB	E	20					48	3.000													48	3	48	3	8187
15	4	S10	SLAB	E	20			V	1	45	3.000													45	3	45	3	
			INCREMENT =							2	2.000													2	2	2	2	238
			36.875 INCH																									
3	4	S11	SLAB	E	20			V	1	37	10.000													37	10	37	10	
			INCREMENT =							37	3.000													37	3	37	3	75
			3.500 INCH																									

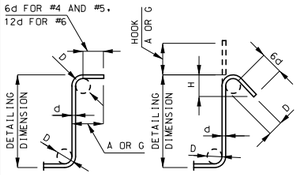
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
2	4	S12	SLAB	E	20			V	1	37	10.000													37	10	37	10	
			INCREMENT =							37	3.000													37	3	37	3	50
			7.000 INCH																									
3	4	S13	SLAB	E	20			V	1	22	10.000													22	10	22	10	
			INCREMENT =							22	3.000													22	3	22	3	45
			3.500 INCH																									
2	4	S14	SLAB	E	20			V	1	22	10.000													22	10	22	10	
			INCREMENT =							22	3.000													22	3	22	3	30
			7.000 INCH																									
4	5	S15	SLAB	E	20					48	3.000													48	3	48	3	201
4	5	S16	SLAB	E	20					50	9.000													50	9	50	9	212
			CORRAL CURB																									
63	5	K1	CORRAL CURB	E	10	S						3	0.000	9.500										6	10	6	7	433
20	5	K2	CORRAL CURB	E	10	S						4	2.000	9.000										9	1	8	11	186
✳ 8	5	K3	CORRAL CURB	E	20					11	2.000													11	2	11	2	93
✳ 8	5	K4	CORRAL CURB	E	20					11	11.000													11	11	11	11	99
8	5	K5	CORRAL CURB	E	19	S				4	1.000	12.000												5	1	5	0	42
8	5	K6	CORRAL CURB	E	19	S				4	9.000	12.000												5	9	5	8	47
✳ 4	5	K7	CORRAL CURB	E	20					17	0.000													17	0	17	0	71
✳ 4	5	K8	CORRAL CURB	E	20					17	9.000													17	9	17	9	74
4	5	K9	CORRAL CURB	E	23	S				12.000		4	3.000							11.375		3.750		5	3	5	2	22
4	5	K10	CORRAL CURB	E	23	S				12.000		5	0.000							11.375		3.750		6	0	5	11	25
4	5	K11	CORRAL CURB	E	21	S				12.000		4	3.000							11.375		3.750		5	3	5	1	21
4	5	K12	CORRAL CURB	E	14					12.000		11.375		4	0.125					14.375		3	9.875	6	0	5	10	24
✳ 4	5	K13	CORRAL CURB	E	20					13	10.000													13	10	13	10	58
✳ 4	5	K14	CORRAL CURB	E	20					14	8.000													14	8	14	8	61
548	5	R1	CORRAL CURB	E	19	S				3	8.000	16.000												5	0	4	11	2810
548	5	R2	CORRAL CURB	E	21	S				2	0.125	20.000		4	4.500					2	0.000		1.750	8	1	7	10	4477
548	5	R3	CORRAL CURB	E	10							2	5.000	9.500										5	8	5	5	3096
16	5	R4	CORRAL CURB	E	20					35	6.000													35	6	35	6	592
8	5	R5	CORRAL CURB	E	20					56	6.000													56	6	56	6	471
16	5	R6	CORRAL CURB	E	20					33	5.000													33	5	33	5	558
8	5	R7	CORRAL CURB	E	20			V	4	52	9.000													52	9	52	9	
			INCREMENT =							53	0.000													53	0	53	0	441
			3.000 INCH																									
96	5	R8	CORRAL CURB	E	20					9	9.000													9	9	9	9	976
8	5	R9	CORRAL CURB	E	20					52	11.000													52	11	52	11	442
8	5	R10	CORRAL CURB	E	20					59	11.000													59	11	59	11	500
8	5	R11	CORRAL CURB	E	20			V	4	44	4.000													44	4	44	4	
			INCREMENT =							44	7.000													44	7	44	7	371
			3.000 INCH																									
9	5	R12	CORRAL CURB	E	10	S						2	6.000	11.500										6	0	5	9	54
21	5	R13	CORRAL CURB	E	13	S				12.750		22.500		12.750		22.500								6	10	6	6	142
21	5	R14	CORRAL CURB	E	30	S				10.000		18.000		22.500		18.000		10.000		12.750		12.750		6	7	6	7	144
2	5	R15	CORRAL CURB	E	20					5	0.000													5	0	5	0	10
18	5	V1	CORRAL CURB	E	20					4	4.000													4	4	4	4	81
			TOTALS																									
	4			E																								35112



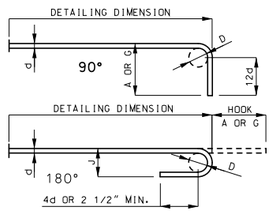


BENDING DIAGRAMS



STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK HOOK A OR G	135° HOOK HOOK A OR G	135° HOOK 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	180° HOOKS J	90° HOOKS 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"

✳ Field Bend

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.

Detailed Nov. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 23
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09381

DESCRIPTION
DATE

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

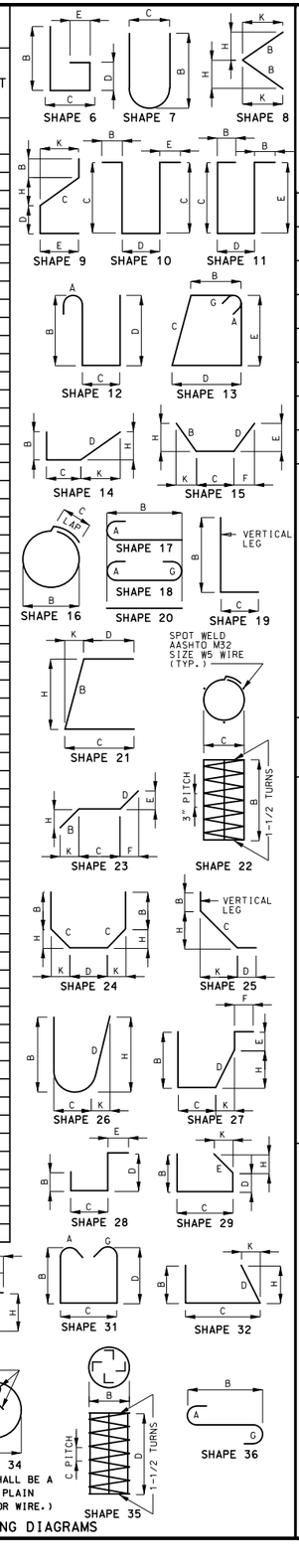
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BILL OF REINFORCING STEEL

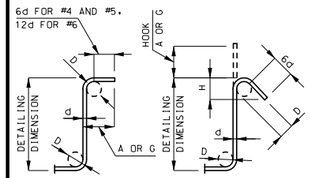
NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
	5			E																								24692
			TOTAL																									0
			TOTAL	E																								59804
			Slab on																									
			Girder																									
	4			E																								35112
	5			E																								24692
			TOTAL																									59804

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.

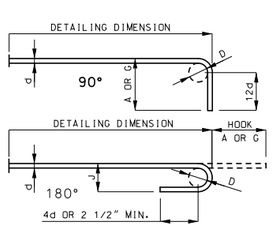


BENDING DIAGRAMS



STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK A OR G	135° HOOK A OR G	135° HOOK 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	180° HOOKS J	90° HOOKS 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.

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/14/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 24
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09381

DESCRIPTION | DATE

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

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

Detailed Nov. 2017
Checked Nov. 2017

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

U.I.P. & REHAB EXISTING (40'-52'-55'-60'-42') CONTINUOUS CONCRETE BOX GIRDER SPANS (SKEW: SQUARE)

SEC/SUR 5 TWP 49N RGE 33W

General Notes:

Design Specifications:

2002 - AASHTO (17th Edition) Standard Specifications
Load Factor Design
Seismic Performance Category A
Bridge Deck Rating = 3

Design Loading:

H20-S16-44 (1953)
HS20-44 (New Construction)

Design Unit Stresses:

Class B-1 Concrete (Corral Curb)	f'c = 4,000 psi
Class B-2 Concrete (All rehab except for Corral Curb)	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 old concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, old bars shall extend into new concrete at least 40 diameters for smooth bars and 30 diameters for deformed bars, unless otherwise noted.

Outline of old 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.

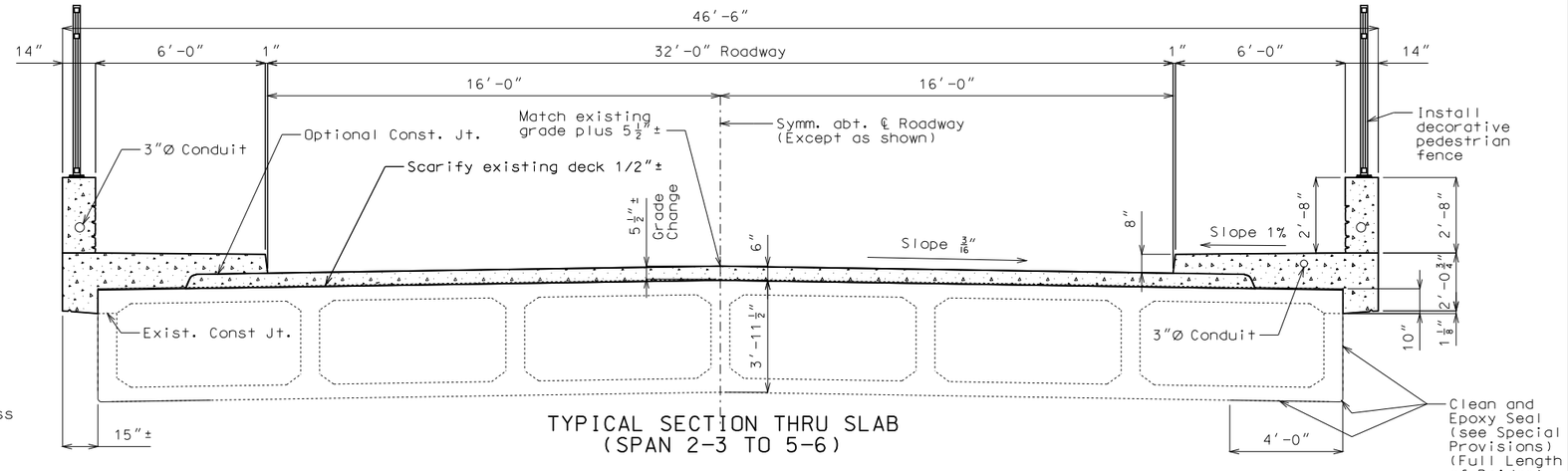
Cost of any required excavation for bridge will be considered completely covered by the contract unit price for other items.

Protective Coating:

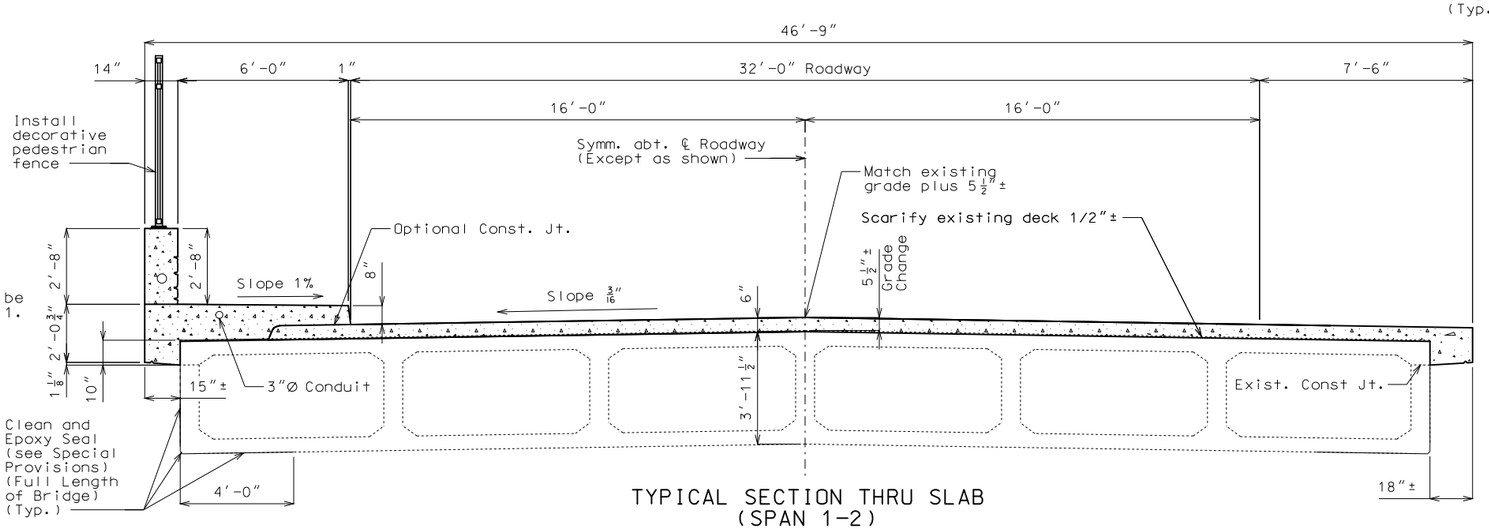
Protective coating for concrete bents and piers (Epoxy) shall be applied as shown on bridge plans and in accordance with Sec 711.

Traffic Handling:

Structure to be closed during construction.



TYPICAL SECTION THRU SLAB
(SPAN 2-3 TO 5-6)



TYPICAL SECTION THRU SLAB
(SPAN 1-2)

Estimated Quantities for Reinforced Concrete Slab Overlay

Item		Total
Class B-2 Concrete	cu. yard	326
Reinforcing Steel (Epoxy Coated)	pound	39250

The table of Estimated Quantities Reinforced Concrete Slab Overlay represents the quantities used by the State in preparing the cost estimate for concrete slab overlay and sidewalks. The area of the concrete slab overlay will be measured to the nearest square yard from end of slab to end of slab and the overall width (46'-6") shown in the Typical Section Thru Slab. Payment for conventional forms, all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab overlay. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slabs shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type I, II or III.

Class B-2 concrete quantity is based on minimum 6" slab overlay thickness and sidewalks as shown.

The concrete and reinforcement for the new upper backwall at the end bents are included in Class B-2 Concrete and Reinforcing Steel (Epoxy Coated).

Detailed Oct. 2017
Checked Nov. 2017

Estimated Quantities

Item		Total
Scarification of Bridge Decks	sq. yard	1227
Partial Removal of Existing Bridge Deck	sq. foot	2923
Removal of Existing Expansion Joint & Adjacent Concrete	linear foot	88
(72 in.) Decorative Pedestrian Fence	linear foot	484
Reinforced Concrete Slab Overlay	sq. yard	1309
Barrier Curb (Type D)	linear foot	27
Corral Curb	linear foot	514
Form Liners	sq. yard	101
Truncated Domes	sq. foot	11
Superstructure Repair (Formed)	sq. foot	300
Substructure Repair (Unformed)	sq. foot	90
Repairing Concrete Deck (Half-Soling)	sq. foot	100
Clean and Epoxy Seal	sq. foot	3947
Conduit System on Structure	lump sum	1
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Strip Seal Expansion Joint System	linear foot	109

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

BRIDGE: 10TH STREET OVER RTE. I-70

ROUTE I-70 FROM ROUTE I-670 TO ROUTE I-35
IN KANSAS CITY
STA. 2+41.00± (Match Exist.)

STD. 608.50
STD. 901.00
STD. 706.35

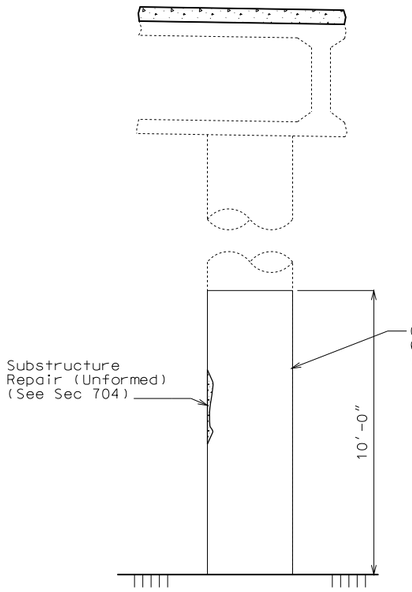
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09391

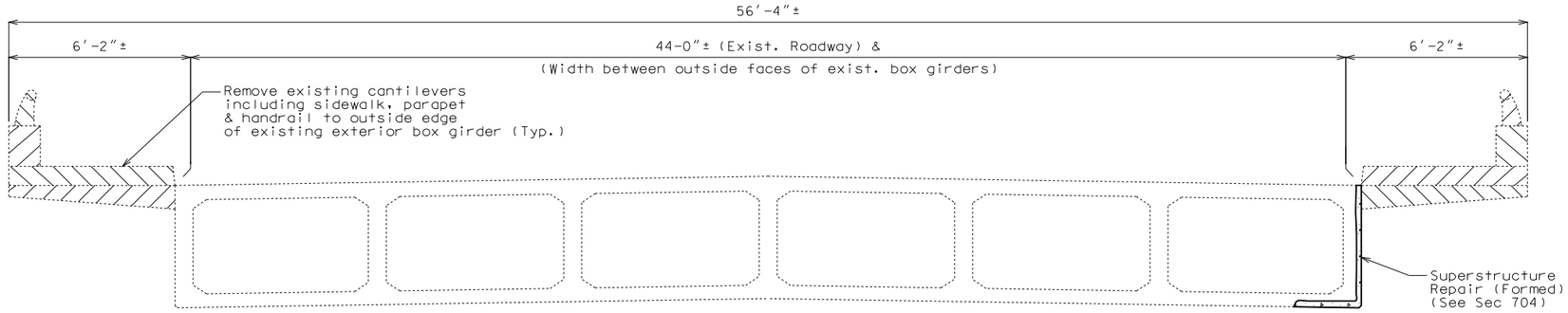
DESCRIPTION | DATE

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

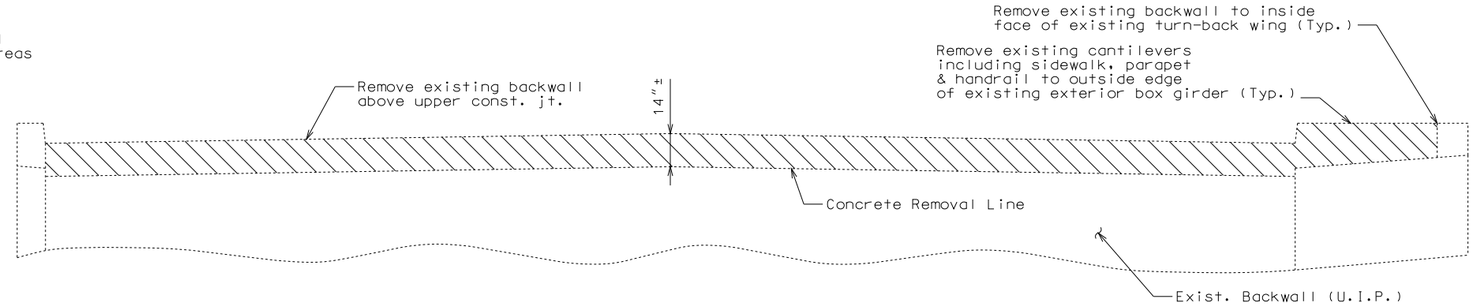
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



TYPICAL SECTION THRU
INT. BENT NO. 4 & 5 COLUMNS
SHOWING PROTECTIVE COATING
AND SUBSTRUCTURE REPAIRS



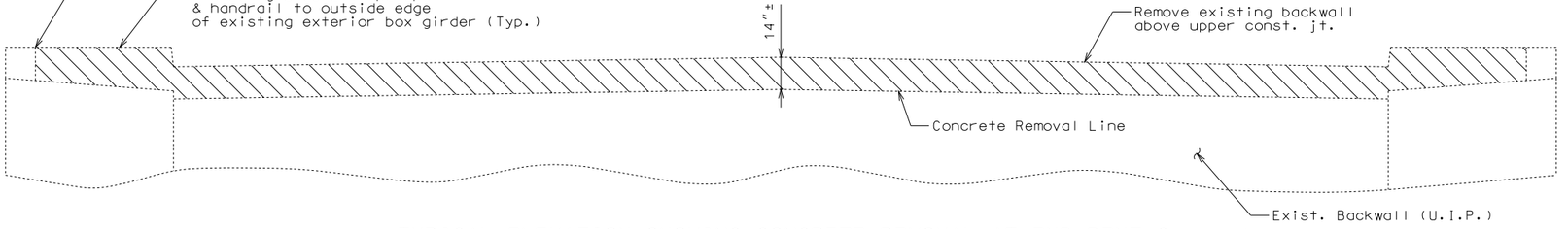
TYPICAL SECTION SHOWING CONCRETE REMOVAL AT MID SPAN



TYPICAL ELEVATION SHOWING CONCRETE REMOVAL AT END BENT 1

(Note: Curb, handrail & end post not shown for clarity)

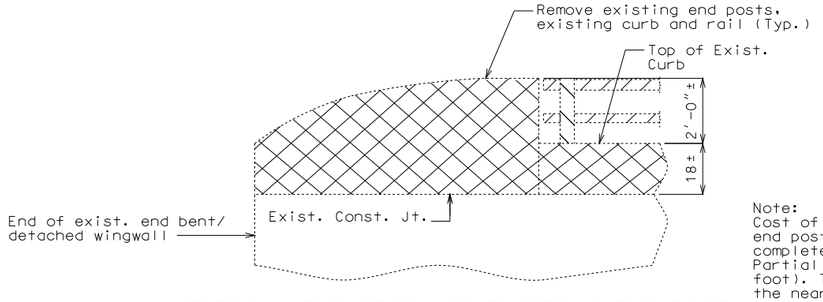
Note:
Cost of removing existing backwall above upper const. joint will be considered completely covered by contract unit price for Removal of Existing Expansion Joint and Adjacent Concrete.



TYPICAL ELEVATION SHOWING CONCRETE REMOVAL AT END BENT 6

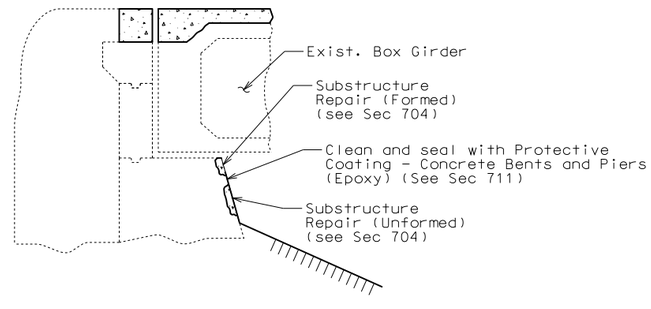
(Note: Curb, handrail & end post not shown for clarity)

Note:
Cost of removing existing backwall above upper const. joint and end of existing box girder (as shown on Sheet No. 6 & 8) will be considered completely covered by contract unit price for Removal of Existing Expansion Joint and Adjacent Concrete.



TYPICAL ELEVATION OF EXISTING END POST
& CURB SHOWING CONCRETE REMOVAL

Note:
Cost of removing existing cantilevers, sidewalks, end posts, curbs and rails will be considered completely covered by the contract unit price for Partial Removal of Existing Bridge Deck (square foot). The area of removal will be measured to the nearest square foot from fill face to fill face of end bents and the width from outside face of exist. box girder to the outside edge of exist. bridge deck.



TYPICAL SECTION THRU END BENTS SHOWING
SUBSTRUCTURE REPAIR & PROTECTIVE COATING

Detailed Oct. 2017
Checked

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	2

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
L09391

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

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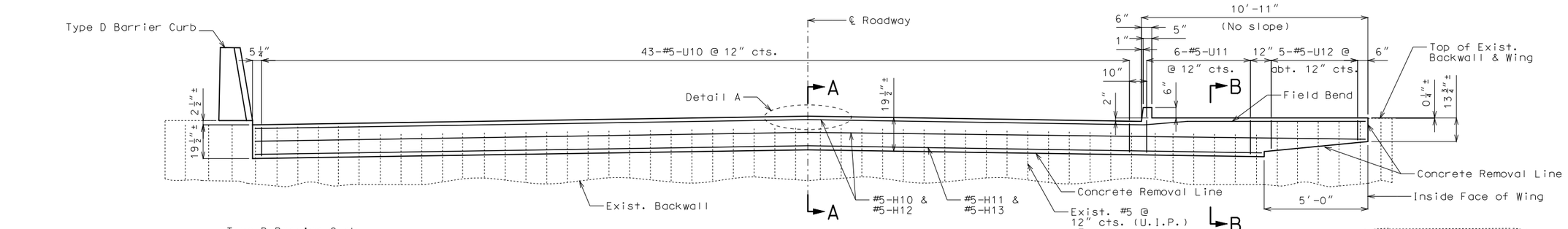
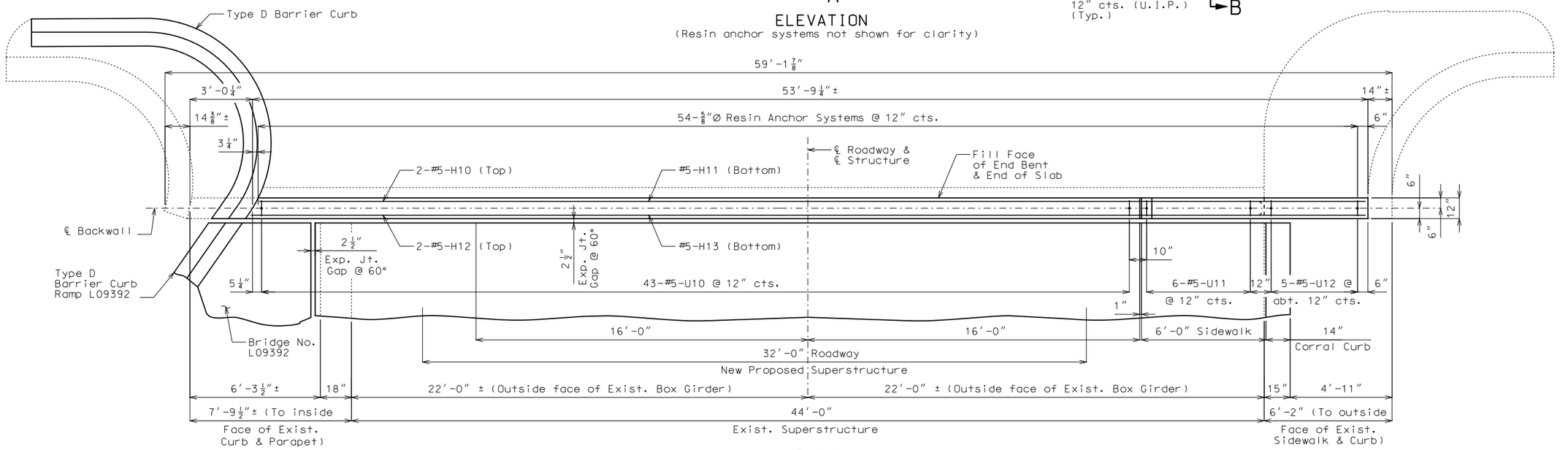
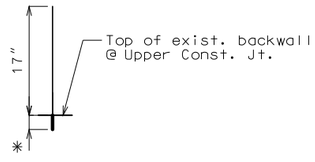


ELEVATION

(Resin anchor systems not shown for clarity)



PLAN



✳ Manufacturer's recommended embedment length (5″ min.)

DETAIL OF RESIN ANCHOR SYSTEM

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

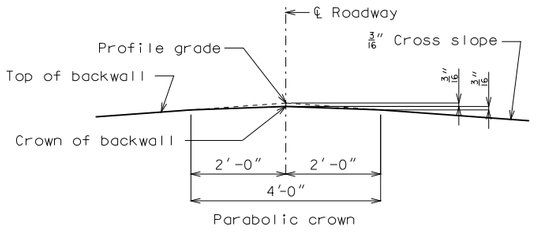
Cost of furnishing and installing the resin anchor systems, complete-in-place, will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

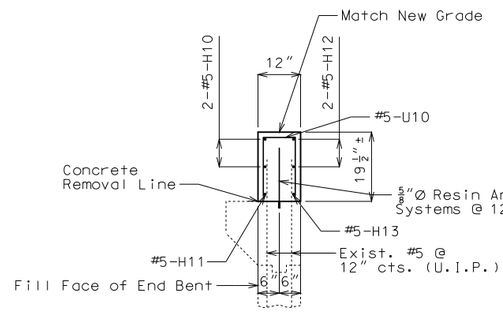
An epoxy coated #5 Grade 60 reinforcing bar shall be substituted for the 5/8″Ø threaded rod.

Note:
Top of backwall (including sidewalk) for End Bent No. 1 shall be formed to the crown and grade of the roadway. Backwall above concrete removal line shall not be poured until the slab overlay & sidewalk has been poured in the adjacent span.

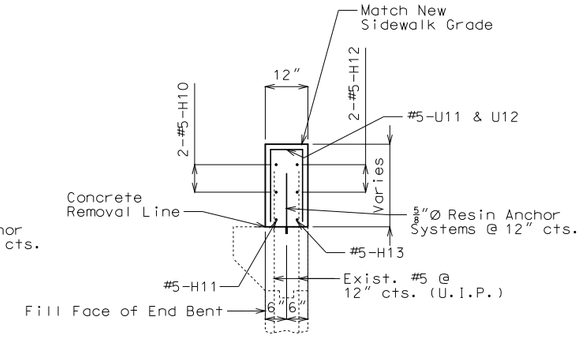
For location of K2 bars in corral curb at the ends of backwall, see Sht. No. 15.



DETAIL A



SECTION A-A



SECTION B-B

DEATILS OF END BENT NO. 1

Detailed Oct. 2017
Checked Nov. 2017

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

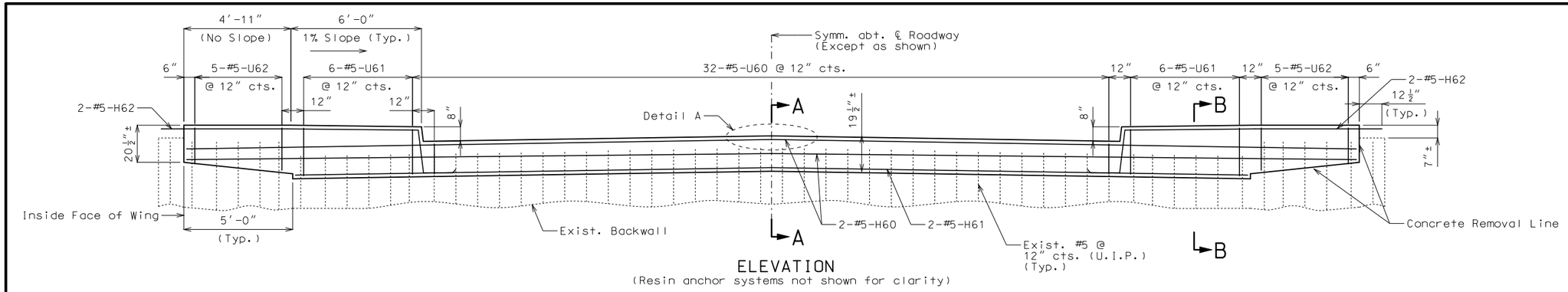
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 3
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09391

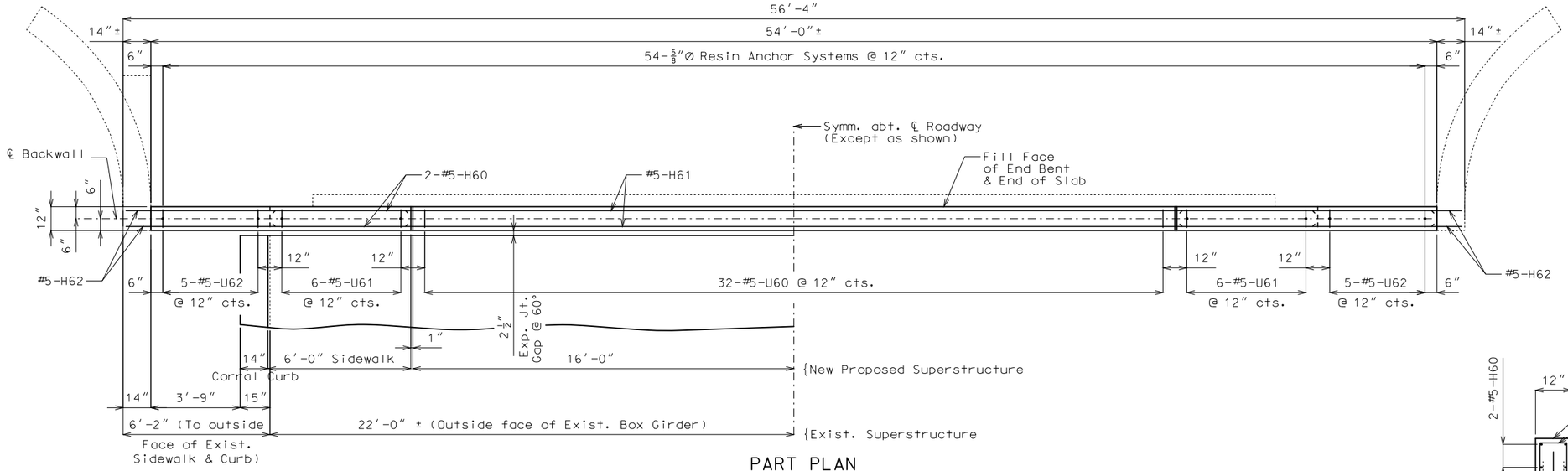
DESCRIPTION | DATE

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

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



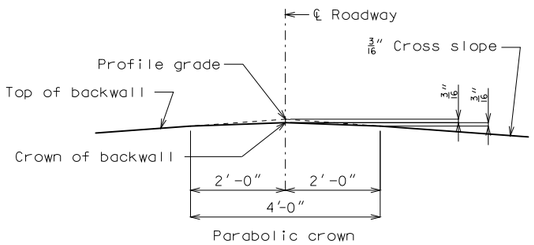
ELEVATION
(Resin anchor systems not shown for clarity)



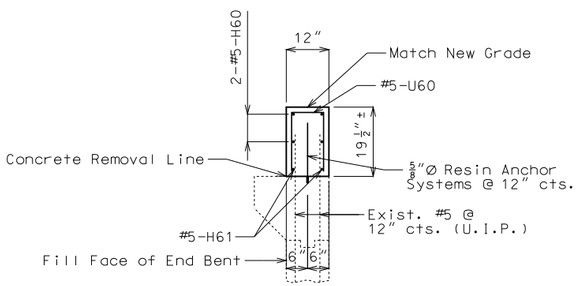
PART PLAN

Note:
Top of backwall (including sidewalk) for End Bent No. 6 shall be formed to the crown and grade of the roadway. Backwall above concrete removal line shall not be poured until the slab overlay & sidewalk has been poured in the adjacent span.

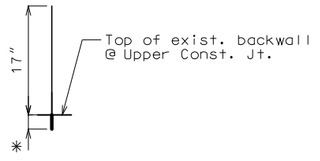
For location of K2 bars in corral curb at the ends of backwall, see Sht. No. 16 & 18.



DETAIL A



SECTION A-A



* Manufacturer's recommended embedment length (5″ min.)

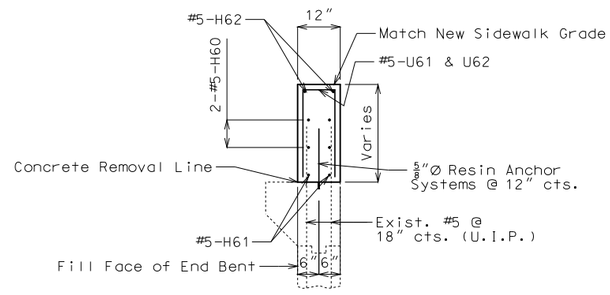
DETAIL OF RESIN ANCHOR SYSTEM

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

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

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



SECTION B-B

DEATILS OF END BENT NO. 6

Detailed Oct. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	4

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

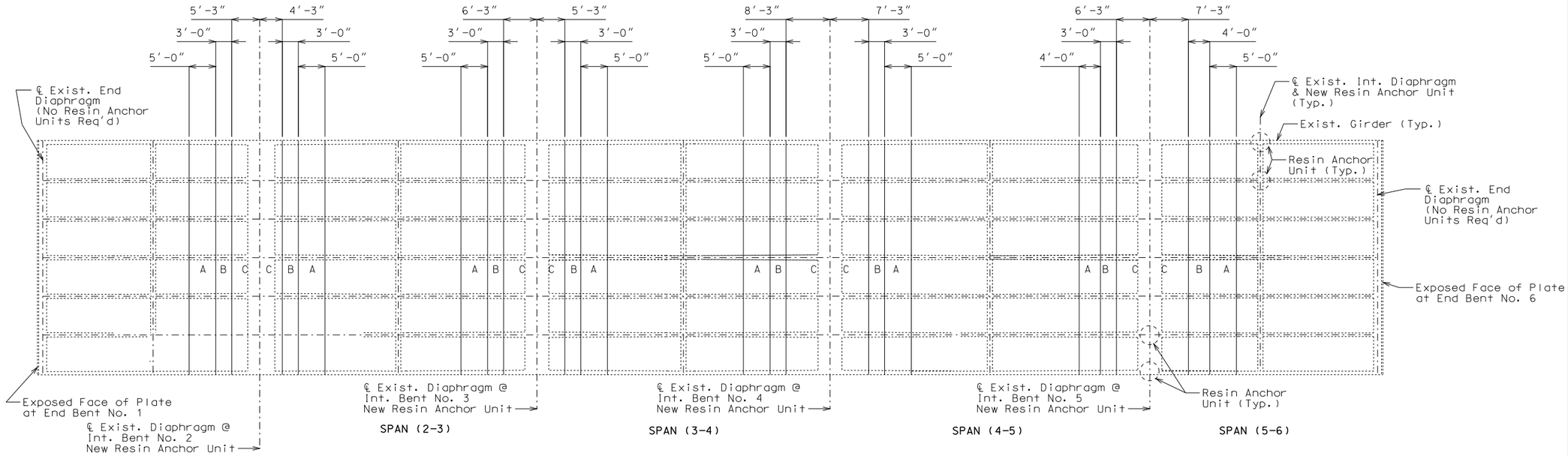
PROJECT NO.

BRIDGE NO.
L09391

DESCRIPTION	DATE

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

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



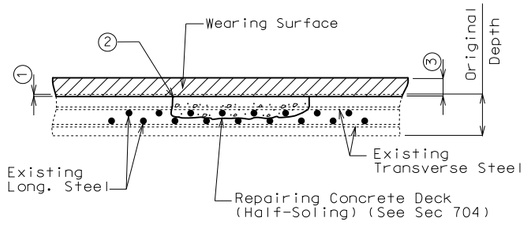
PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES AND LOCATIONS OF RESIN ANCHOR UNITS

Notes:
Any half-soling required in the areas designated as special repair zones shall be completed in alphabetical sequence. Any repair in the remainder of the bridge that is adjacent to Zone A and not designated as a special repair zone shall be completed prior to work in Zone A.

Removal and repair shall be completed in one special repair zone and concrete shall have attained a compressive strength of 3200 psi before work can be started in the next special repair zone. Before placing concrete in areas adjacent to areas of subsequent repair, the concrete shall be separated with a material such as polyethylene sheets to aid in removal of old concrete.

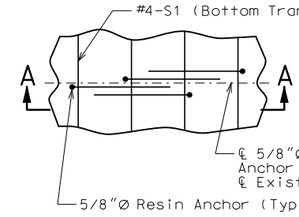
Zones with the same letter designation may be repaired at the same time.

If any single repair area does not exceed 9 square feet in size and the total repair within a special repair zone does not exceed 27 square feet, the special repair zone requirement does not apply for that zone. Half-soling repair in the special repair zone, on either side of the intermediate bent, shall be to a depth that will not expose half the diameter of the longitudinal reinforcing bar. Full depth repair shall be made when removal of deteriorated concrete exposes half or more of the diameter of the longitudinal reinforcing bar.

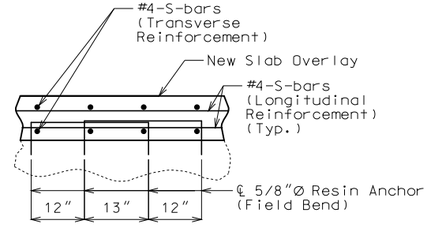


HALF-SOLED REPAIR

1. Scarify existing deck ½".
2. One inch vertical side shall be established outside the deteriorated area. See Sec 704.
3. Installation of 6" Reinforced Slab Overlay.



PLAN



SECTION A-A

DETAIL OF RESIN ANCHOR UNIT

(63 Units Req'd, 4 Resin Anchors per Unit)

Note:
Locate Resin Anchor Units near the intersection of ℄ of existing girder & ℄ of existing int. diaphragms & ℄ of existing diaphragm @ Int. Bt. No. 2, 3, 4 & 5.

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

Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

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

An epoxy coated #5 Grade 60 reinforcing bar 2'-0" long shall be substituted for the 5/8"Ø threaded rod.

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
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DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 5
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09391

DESCRIPTION | DATE

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

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

Detailed Nov. 2017
Checked Nov. 2017

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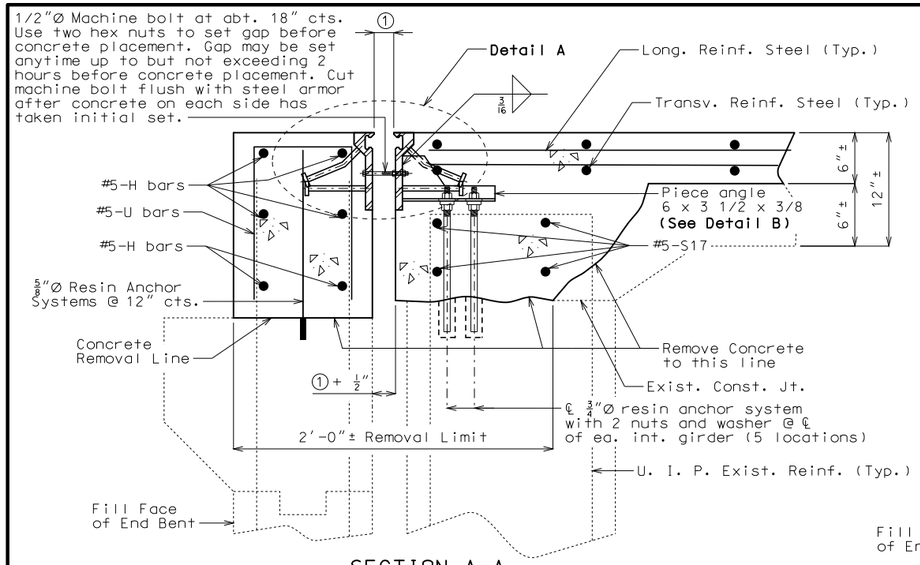
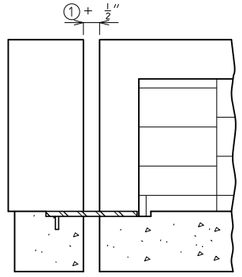


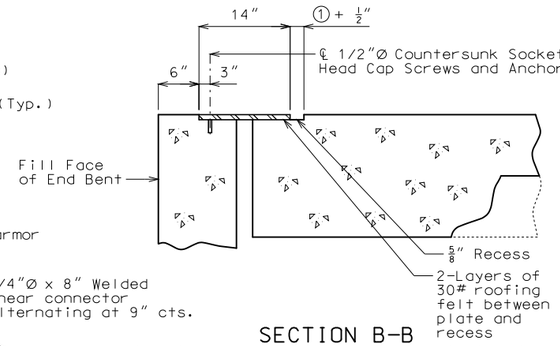
SECTION A-A

Note: Strip seal gland not shown for clarity.



PART SECTION THRU SIDEWALK NEAR CORRAL CURB

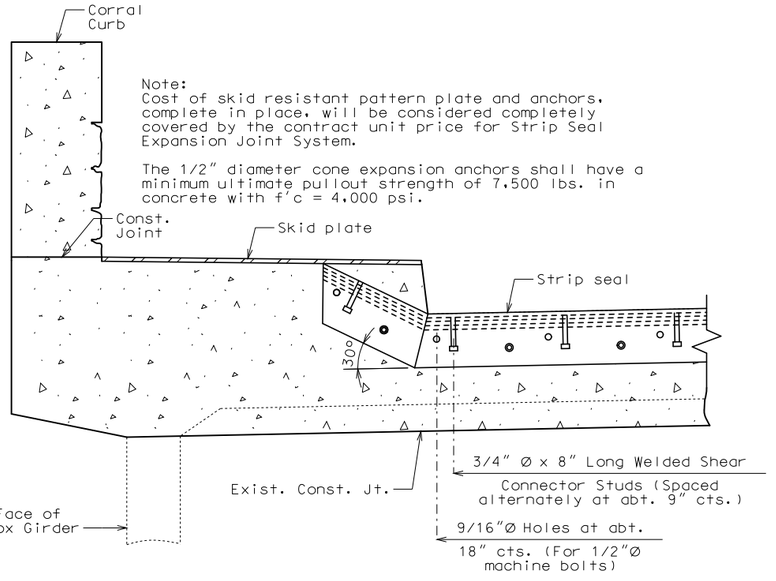
Note: Strip seal gland not shown for clarity.



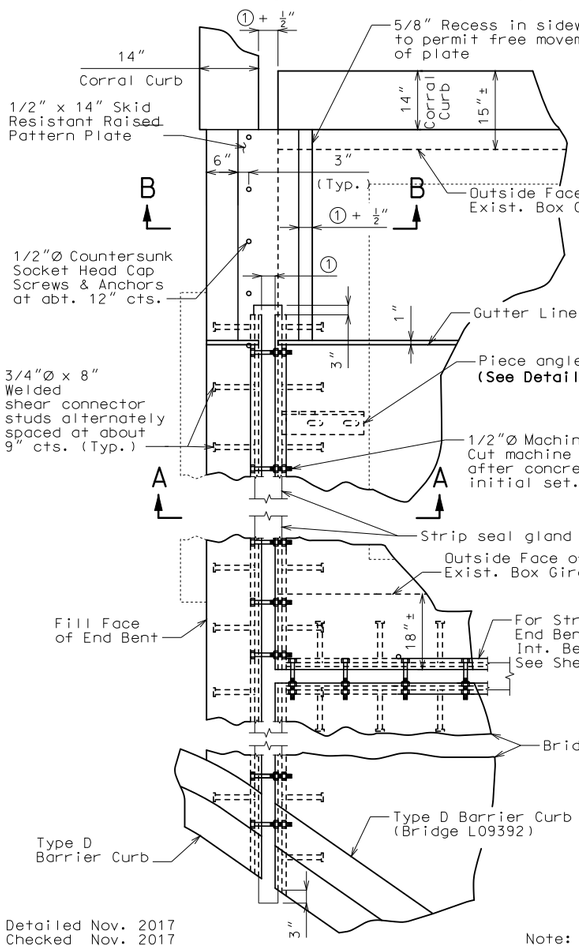
SECTION B-B

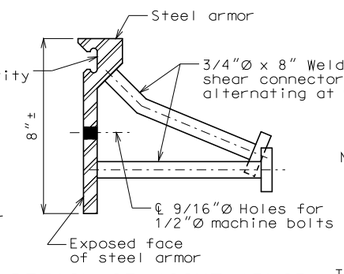
TYPICAL SECTION OF SKID PLATE

Note: Strip seal gland not shown for clarity.

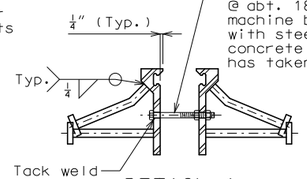


PART SECTION THRU BRIDGE DECK NEAR STRIP SEAL JOINT

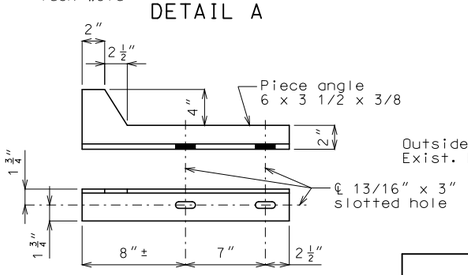




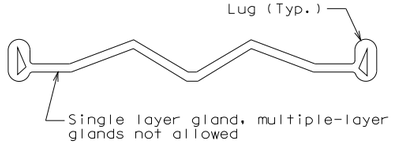
DETAIL OF JOINT ARMOR



DETAIL A



DETAIL B



DETAIL OF GLAND

DETAILS OF STRIP SEAL AT END BENT NO. 1

GENERAL NOTES:

Expansion joint system shall be fabricated in one section, except for staged construction and when the length is over 50 feet. A complete joint penetration groove welded splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion joint system shall be fabricated and installed to the crown and grade of the roadway.

The strip seal gland shall be installed in joints in one continuous piece without field splices. Factory splicing will be permitted for joints in excess of 53 feet.

Structural steel for the expansion joint system shall be ASTM A709 Grade 36 except the steel armor may be ASTM A709 Grade 50W. Anchors for the expansion joint system shall be in accordance with Sec 1037. Strip seal expansion joint system shall be in accordance with Sec 717.

Structural steel for the expansion joint system shall be coated with a minimum of two coats of inorganic zinc primer (5 mils minimum) or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

Longitudinal reinforcing steel shall be placed so that ends shall be 1" from the vertical leg of the steel armor at the expansion joint system.

Concrete shall be forced under and around steel armor and anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

② The installation temperature shall be taken as the actual air temperature averaged over the 24-hour period immediately preceding installation.

③ MoDOT Construction personnel will indicate the strip seal expansion joint system installed.

Steel armor may also be referred to as extrusion or rail.

Table of Allowed Transverse Strip Seal Expansion Joint System

Manufacturer	Strip Seal System (Designated Name)	Movement Parallel to RDWY	① Allowed Installation Gap Normal to Joint at RDWY Surface @ Air/Surface Temerature ②						③
			@ 40°F	@ 50°F	@ 60°F	@ 70°F	@ 80°F	@ 90°F	
D S Brown	Strip seal L2-400	1 1/4"	2 3/16"	2 1/4"	2"	1 7/8"	1 13/16"	1 11/16"	□
D S Brown	Strip seal L2-500	1 1/4"	2 3/16"	2 1/4"	2"	1 7/8"	1 13/16"	1 11/16"	□
Watson Bowman Acme (Wabo)	Strip seal SE-300	1 1/4"	2 3/16"	2 1/4"	2"	1 7/8"	1 13/16"	1 11/16"	□
Watson Bowman Acme (Wabo)	Strip seal SE-400	1 1/4"	2 3/16"	2 1/4"	2"	1 7/8"	1 13/16"	1 11/16"	□
Watson Bowman Acme (Wabo)	Strip seal SE-500	1 1/4"	2 3/16"	2 1/4"	2"	1 7/8"	1 13/16"	1 11/16"	□

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	6

COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: L09391

DESCRIPTION | DATE

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

Detailed Nov. 2017
Checked Nov. 2017

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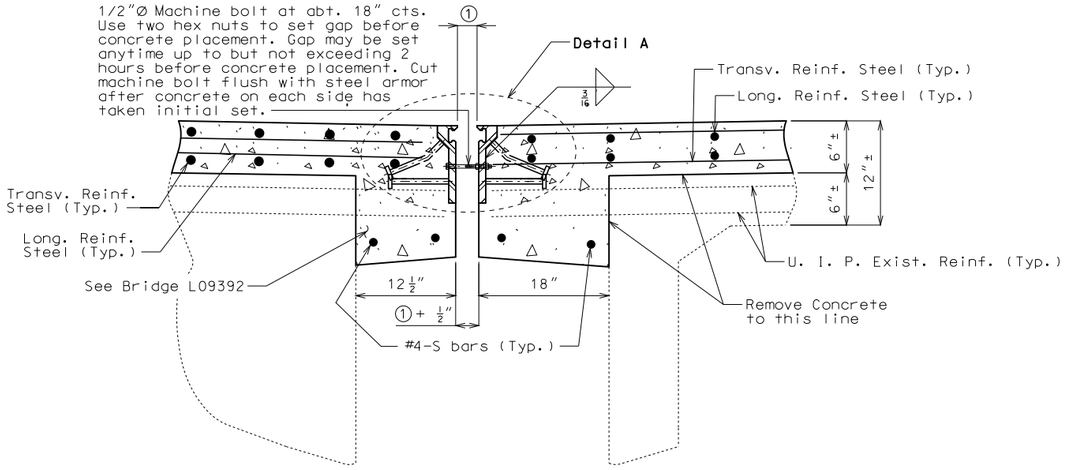
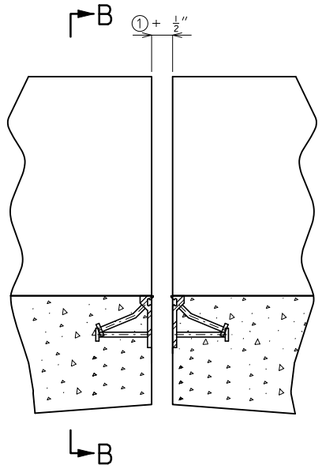


SECTION A-A

Note: Strip seal gland not shown for clarity.



Note: Strip seal gland not shown for clarity.

PART ELEVATION OF BARRIER CURB

GENERAL NOTES:

Expansion joint system shall be fabricated in one section, except for staged construction and when the length is over 50 feet. A complete joint penetration groove welded splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion joint system shall be fabricated and installed to the crown and grade of the roadway.

The strip seal gland shall be installed in joints in one continuous piece without field splices. Factory splicing will be permitted for joints in excess of 53 feet.

Structural steel for the expansion joint system shall be ASTM A709 Grade 36 except the steel armor may be ASTM A709 Grade 50W. Anchors for the expansion joint system shall be in accordance with Sec 1037. Strip seal expansion joint system shall be in accordance with Sec 717.

Structural steel for the expansion joint system shall be coated with a minimum of two coats of inorganic zinc primer (5 mils minimum) or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

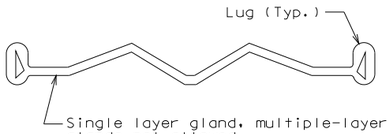
Longitudinal reinforcing steel shall be placed so that ends shall be 1" from the vertical leg of the steel armor at the expansion joint system.

Concrete shall be forced under and around steel armor and anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

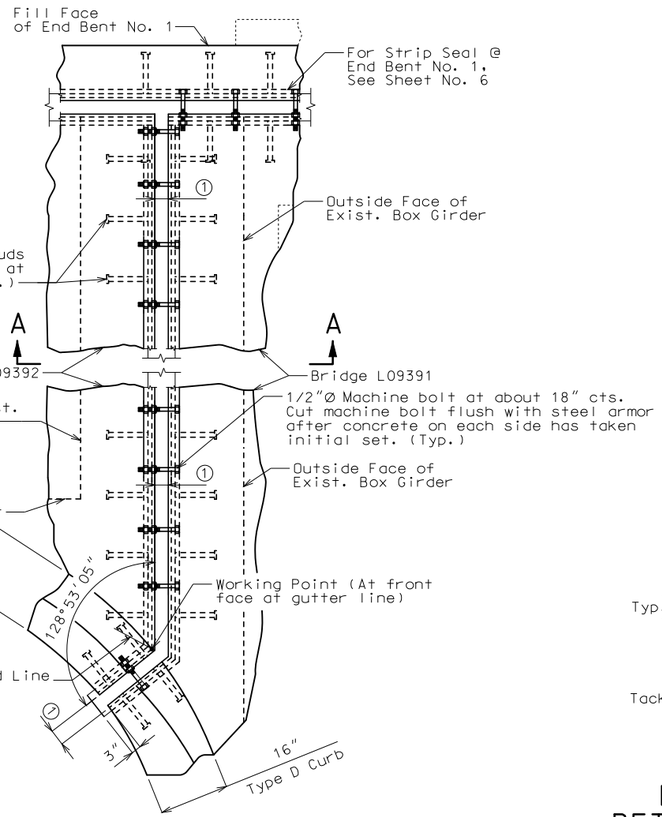
② The installation temperature shall be taken as the actual air temperature averaged over the 24-hour period immediately preceding installation.

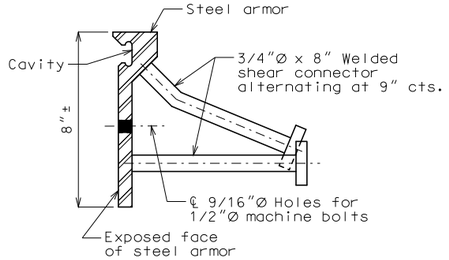
③ MoDOT Construction personnel will indicate the strip seal expansion joint system installed.

Steel armor may also be referred to as extrusion or rail.

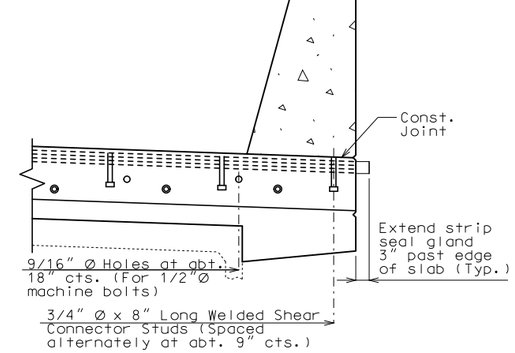


DETAIL OF GLAND

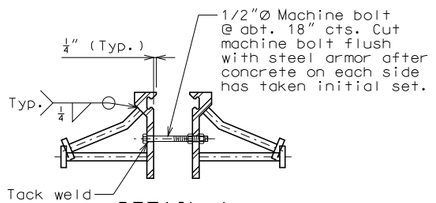




DETAIL OF JOINT ARMOR



PART SECTION B-B



DETAIL A

DETAILS OF STRIP SEAL BETWEEN END BENT NO. 1 & 2

Table of Allowed Transverse Strip Seal Expansion Joint System

Manufacturer	Strip Seal System (Designated Name)	Movement Parallel to RDWY	① Allowed Installation Gap Normal to Joint at RDWY Surface @ Air/Surface Temerature ②						③
			@ 40°F	@ 50°F	@ 60°F	@ 70°F	@ 80°F	@ 90°F	
D S Brown	Strip seal L2-400	1 ¼"	2 3/16"	2 ¼"	2"	1 7/8"	1 13/16"	1 11/16"	□
D S Brown	Strip seal L2-500	1 ¼"	2 3/16"	2 ¼"	2"	1 7/8"	1 13/16"	1 11/16"	□
Watson Bowman Acme (Wabo)	Strip seal SE-300	1 ¼"	2 3/16"	2 ¼"	2"	1 7/8"	1 13/16"	1 11/16"	□
Watson Bowman Acme (Wabo)	Strip seal SE-400	1 ¼"	2 3/16"	2 ¼"	2"	1 7/8"	1 13/16"	1 11/16"	□
Watson Bowman Acme (Wabo)	Strip seal SE-500	1 ¼"	2 3/16"	2 ¼"	2"	1 7/8"	1 13/16"	1 11/16"	□

Detailed Nov. 2017
Checked Nov. 2017

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STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
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DATE PREPARED 12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	7

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO. L09391

DESCRIPTION | DATE

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
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JEFFERSON CITY, MO 65102
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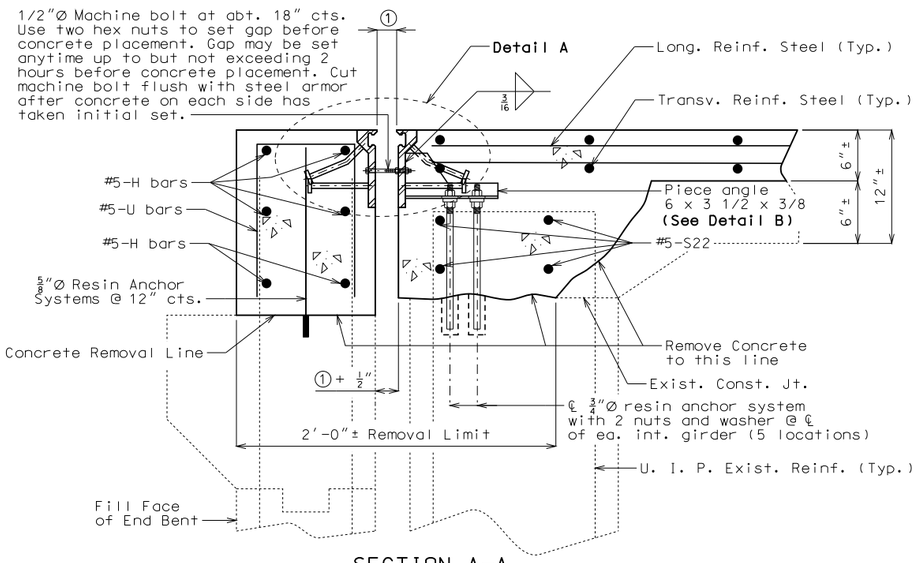
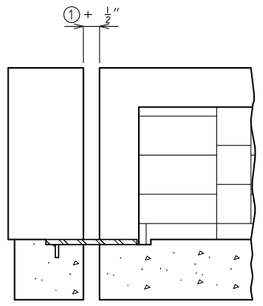


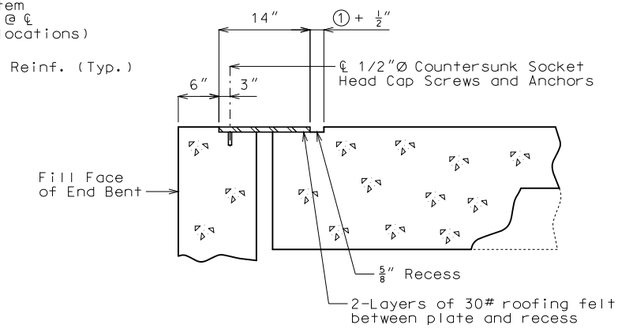
SECTION A-A

Note: Strip seal gland not shown for clarity.



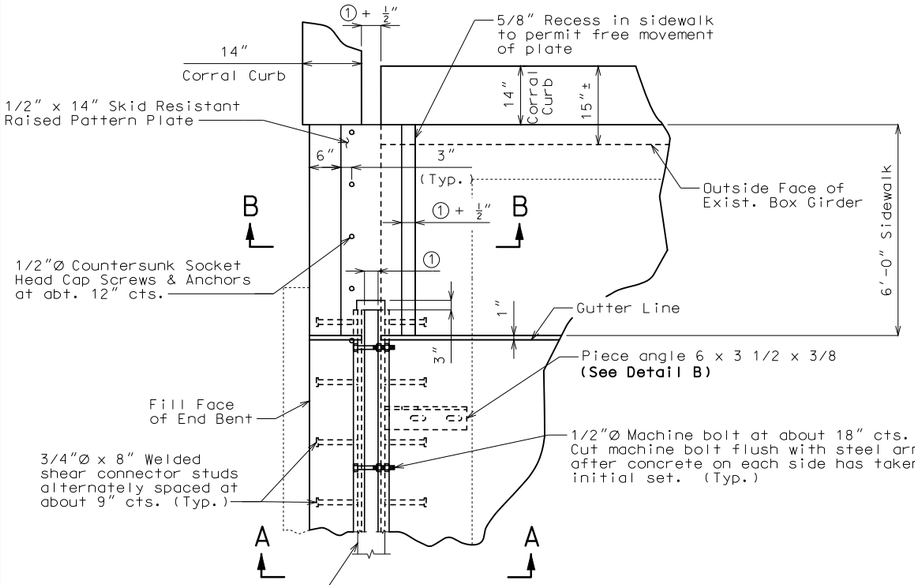
Note: Strip seal gland not shown for clarity.

PART SECTION THRU SIDEWALK NEAR CORRAL CURB

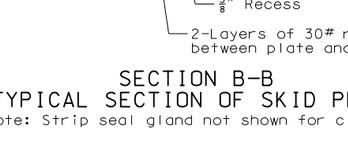


SECTION B-B
TYPICAL SECTION OF SKID PLATE

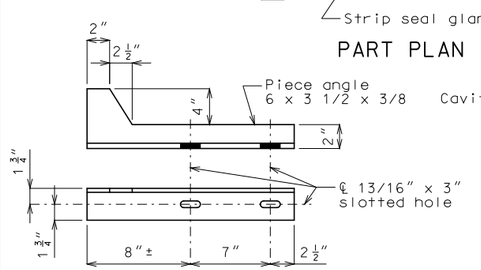
Note: Strip seal gland not shown for clarity.



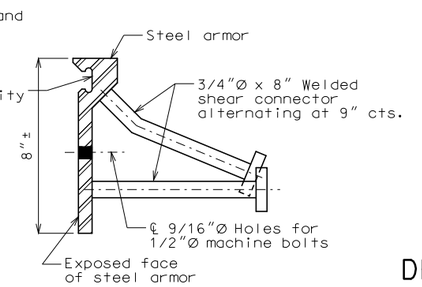
PART PLAN



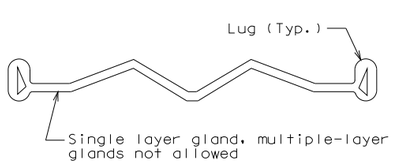
DETAIL A



DETAIL B



DETAIL OF JOINT ARMOR



DETAIL OF GLAND

DETAILS OF STRIP SEAL AT END BENT NO. 6

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

GENERAL NOTES:

Expansion joint system shall be fabricated in one section, except for staged construction and when the length is over 50 feet. A complete joint penetration groove welded splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion joint system shall be fabricated and installed to the crown and grade of the roadway.

The strip seal gland shall be installed in joints in one continuous piece without field splices. Factory splicing will be permitted for joints in excess of 53 feet.

Structural steel for the expansion joint system shall be ASTM A709 Grade 36 except the steel armor may be ASTM A709 Grade 50W. Anchors for the expansion joint system shall be in accordance with Sec 1037. Strip seal expansion joint system shall be in accordance with Sec 717.

Structural steel for the expansion joint system shall be coated with a minimum of two coats of inorganic zinc primer (5 mils minimum) or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

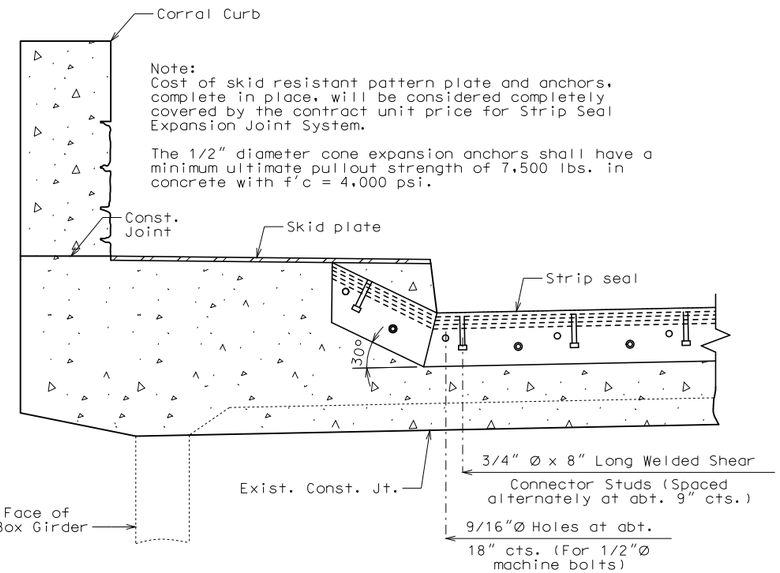
Longitudinal reinforcing steel shall be placed so that ends shall be 1" from the vertical leg of the steel armor at the expansion joint system.

Concrete shall be forced under and around steel armor and anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

② The installation temperature shall be taken as the actual air temperature averaged over the 24-hour period immediately preceding installation.

③ MoDOT Construction personnel will indicate the strip seal expansion joint system installed.

Steel armor may also be referred to as extrusion or rail.



Note:
Cost of skid resistant pattern plate and anchors, complete in place, will be considered completely covered by the contract unit price for Strip Seal Expansion Joint System.

The 1/2" diameter cone expansion anchors shall have a minimum ultimate pullout strength of 7,500 lbs. in concrete with f'c = 4,000 psi.

PART SECTION THRU BRIDGE DECK NEAR STRIP SEAL JOINT

Table of Allowed Transverse Strip Seal Expansion Joint System

Manufacturer	Strip Seal System (Designated Name)	Movement Parallel to RDWY	① Normal to Joint at RDWY Surface @ Air/Surface Temerature ②						③
			@ 40°F	@ 50°F	@ 60°F	@ 70°F	@ 80°F	@ 90°F	
D S Brown	Strip seal L2-400	1 1/4"	2 3/16"	2 1/4"	2"	1 7/8"	1 13/16"	1 11/16"	□
D S Brown	Strip seal L2-500	1 1/4"	2 3/16"	2 1/4"	2"	1 7/8"	1 13/16"	1 11/16"	□
Watson Bowman Acme (Wabo)	Strip seal SE-300	1 1/4"	2 3/16"	2 1/4"	2"	1 7/8"	1 13/16"	1 11/16"	□
Watson Bowman Acme (Wabo)	Strip seal SE-400	1 1/4"	2 3/16"	2 1/4"	2"	1 7/8"	1 13/16"	1 11/16"	□
Watson Bowman Acme (Wabo)	Strip seal SE-500	1 1/4"	2 3/16"	2 1/4"	2"	1 7/8"	1 13/16"	1 11/16"	□

Detailed Nov. 2017
Checked Nov. 2017

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 8
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09391

DESCRIPTION | DATE

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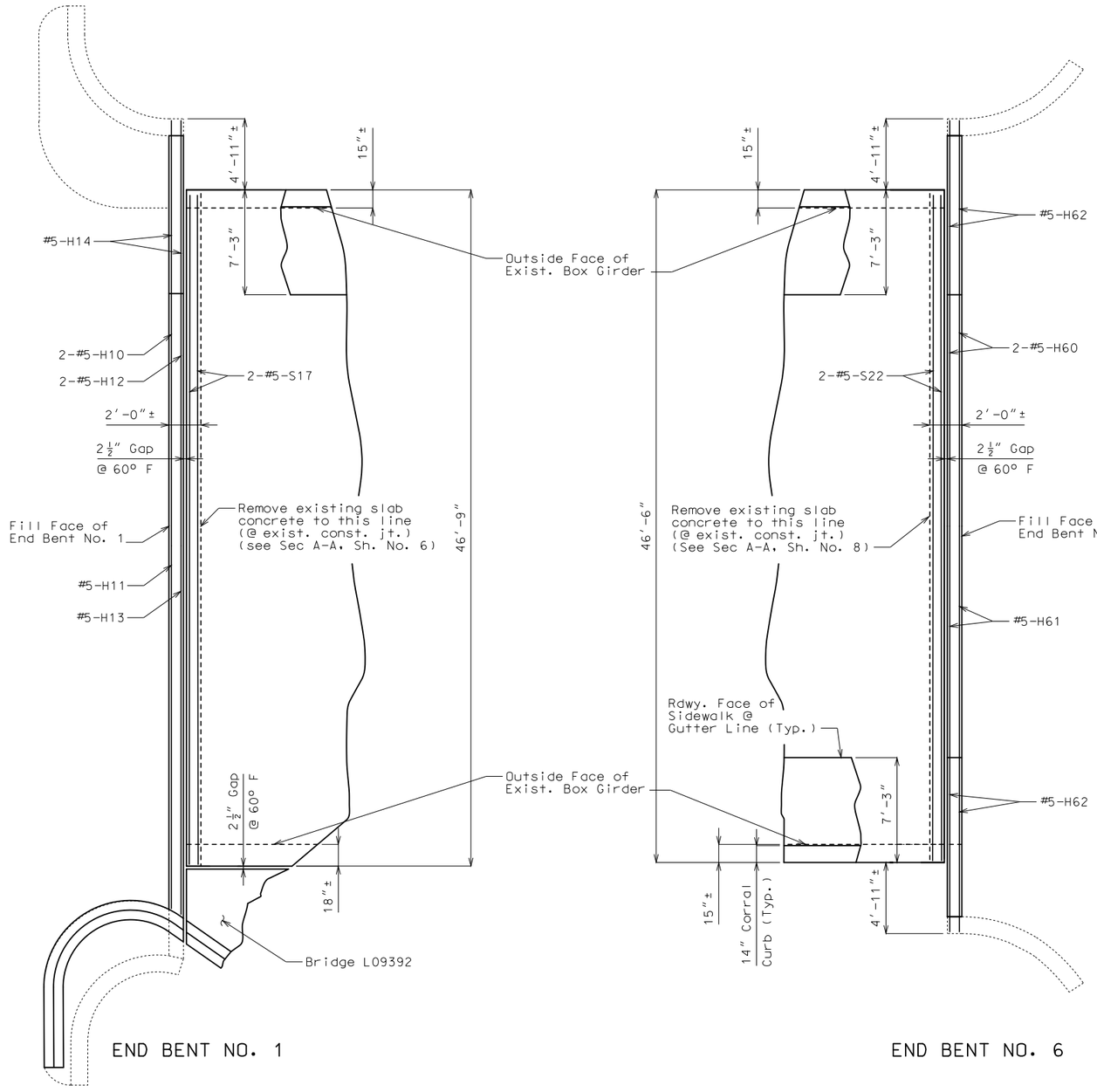
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



PART PLAN OF SLAB AT END BENTS SHOWING DIMENSIONS & REINFORCEMENT

Notes:
Shift #5-S bars where necessary to clear shear connector studs on the expansion joint system.

Payment for slab and backwall concrete, complete-in-place, for expansion joint replacement will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

Payment for furnishing and installing reinforcing steel in slab and backwall for expansion joint replacement will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

Cost of removing existing expansion joint, slab and backwall concrete within the limits shown will be considered completely covered by the contract unit price for Removal of Existing Expansion Joint & Adjacent Concrete.

For section thru Strip Seal at End Bents, see Sheets No. 6, 7 & 8.

STATE OF MISSOURI
DEAN DAVID FRANKE
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DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 9
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09391

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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Checked Nov. 2017

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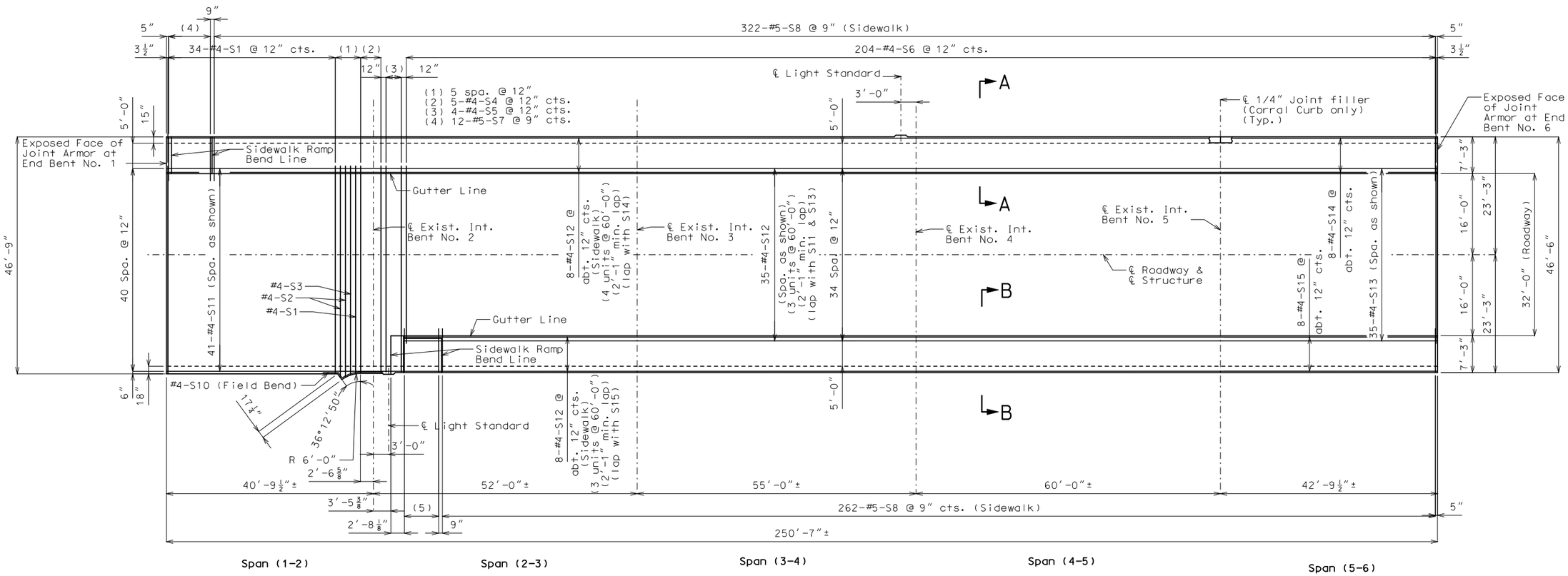


PLAN OF SLAB & SIDEWALK SHOWING TOP REINFORCEMENT

SLAB DETAILS

Note:
Work this sheet with Sheet No. 11 & 12.

For Details of Corral Curb, see
Sheets No. 14-22.

For Section A-A & Section B-B, see
Sheet No. 12.

For Details of Sidewalk Ramp, see Sheet No. 13.

Detailed Oct. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	10

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

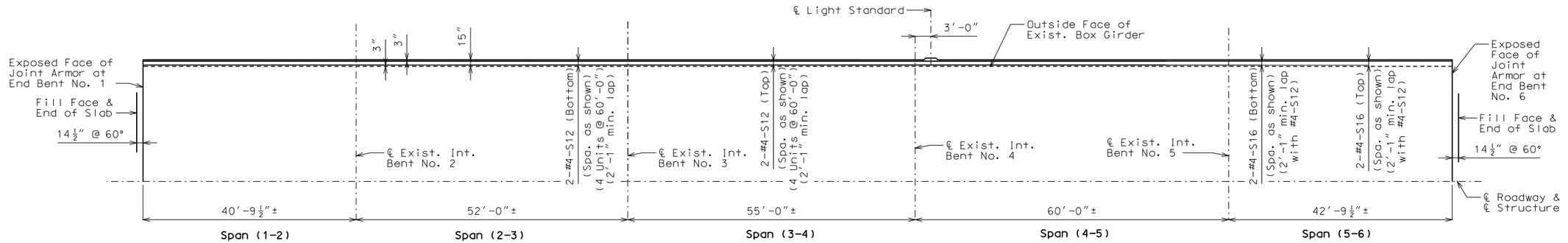
BRIDGE NO.
L09391

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

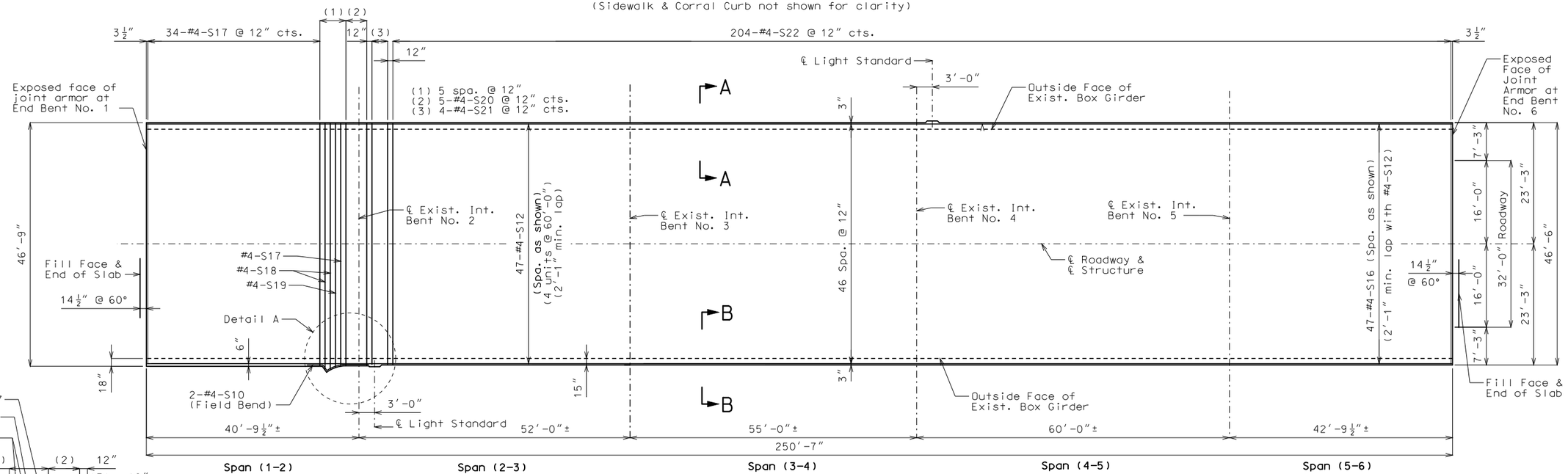
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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



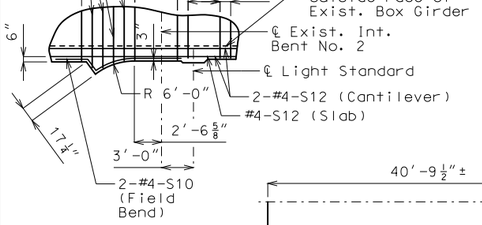
PLAN OF LEFT CANTILEVER SLAB SHOWING ADDITIONAL BOTTOM REINFORCEMENT

(Sidewalk & Corral Curb not shown for clarity)



PLAN OF SLAB SHOWING PART OF BOTTOM REINFORCEMENT

(Sidewalk & Corral Curb not shown for clarity)



DETAIL A

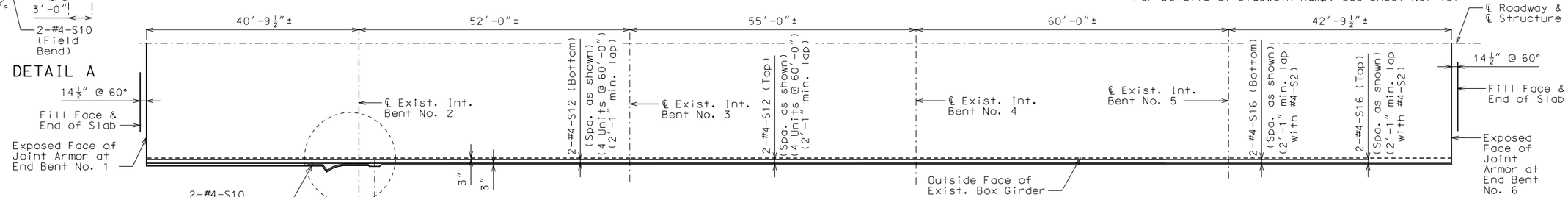
Note:
Work this sheet with Sheet No. 10 & 12.

For Details of Corral Curb, see Sheets No. 14-22.

For Details of Type D Barrier Curb at Int. Bent 2, see Sheet No. 19

For Section A-A & Section B-B, see Sheet No. 12.

For Details of Sidewalk Ramp, see Sheet No. 13.



PLAN OF RIGHT CANTILEVER SLAB SHOWING ADDITIONAL BOTTOM REINFORCEMENT

(Sidewalk & Corral Curb not shown for clarity)

SLAB DETAILS

Detailed Oct. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 11
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09391

DESCRIPTION | DATE

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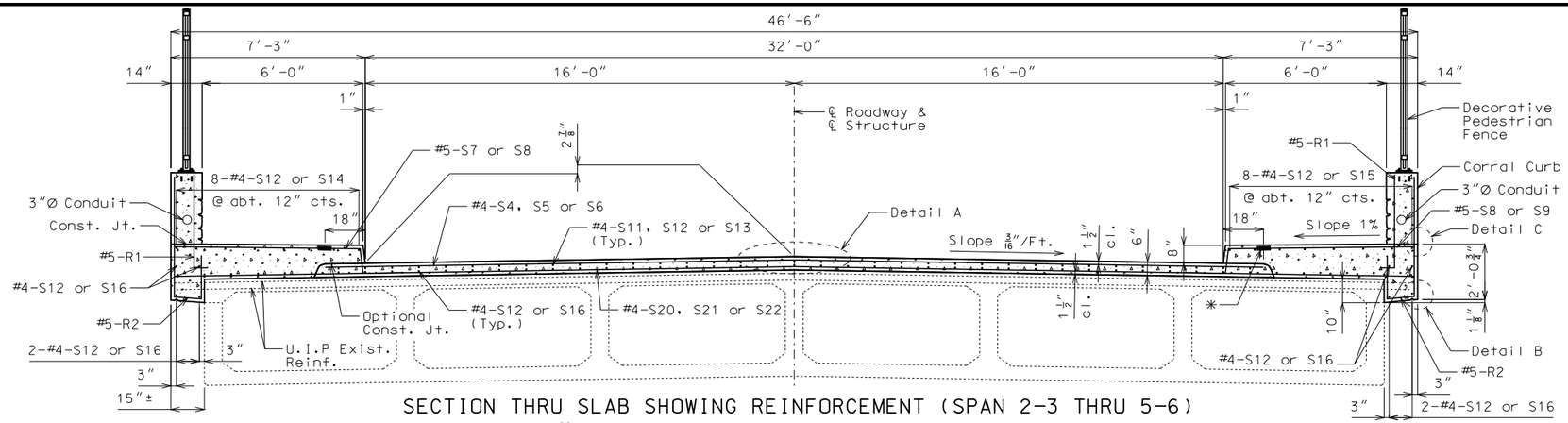
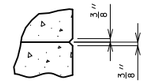
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

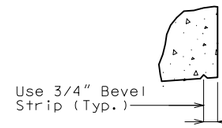


SECTION THRU SLAB SHOWING REINFORCEMENT (SPAN 2-3 THRU 5-6)

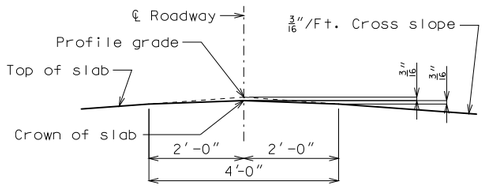
✳ Mechanical bar splices may be provided at no additional cost in lieu of #5-S7, S8 or S9 bars with no splices.



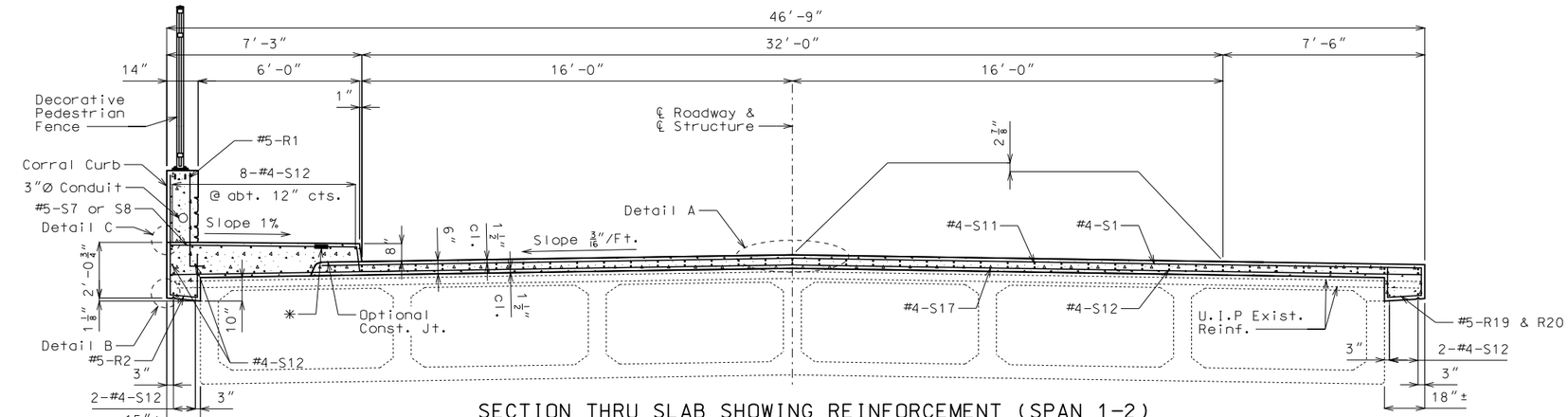
DETAIL C



DETAIL B

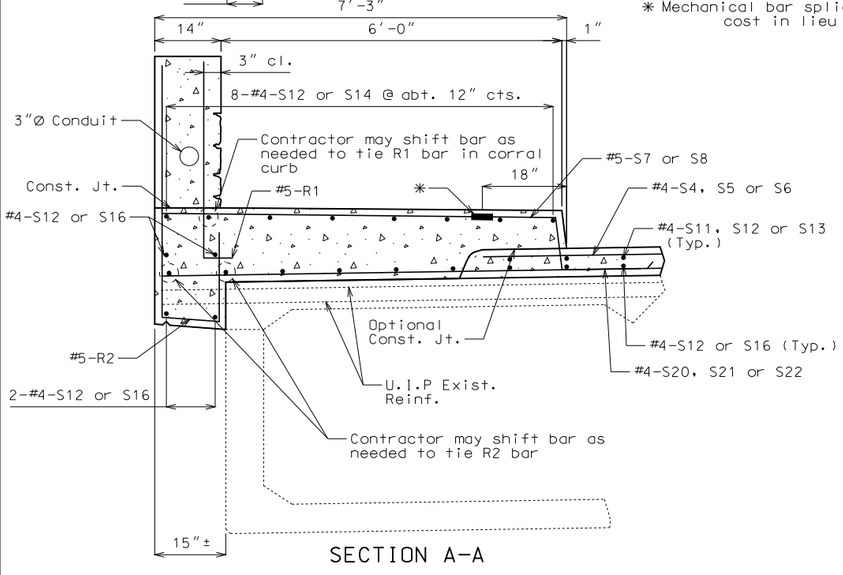


DETAIL A



SECTION THRU SLAB SHOWING REINFORCEMENT (SPAN 1-2)

✳ Mechanical bar splices may be provided at no additional cost in lieu of #5-S7 or S8 bars with no splices.



SECTION A-A

(Pedestrian Fence not shown for clarity)

Note:
Work this sheet with Sheets No. 10 & 11.

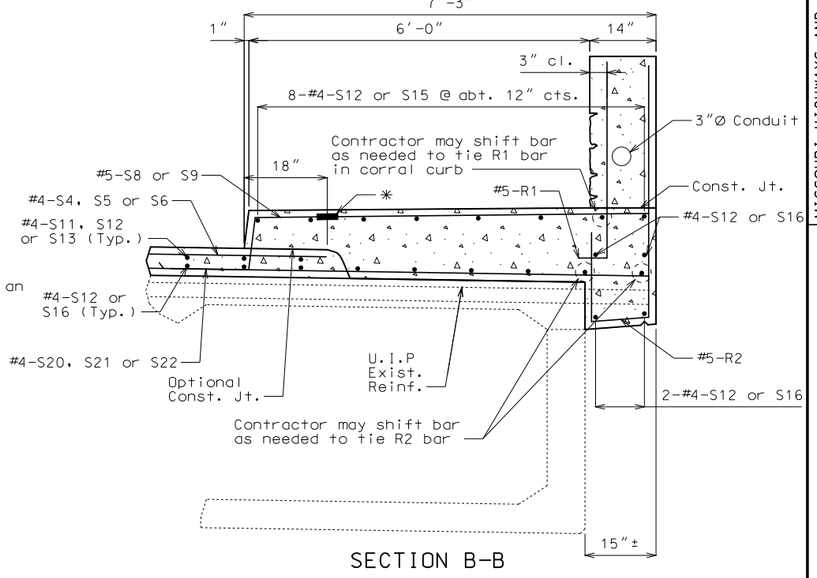
The contractor shall pour and satisfactorily finish the slab pours at the rate given. Retarder, if used, shall be an approved type and retard the set of concrete to 2.5 hours.

Min. Rate of Pour Cu. Yds./Hr.	Without Retarder	With Retarder
Slab and sidewalks (without optional consst. joint	41	25
Slab (with optional const. joint)	25	25
Sidewalk (Each)	25	25

For Details of Corral Curb, see Sheets No. 14-22.

For Details of Decorative Pedestrian Fence, see Sheets No. 23-25.

For location of Section A-A & B-B, see Sheet No. 10 & 11.



SECTION B-B

(Pedestrian Fence not shown for clarity)

SLAB DETAILS

Detailed Nov. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	12

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO. L09391

DESCRIPTION | DATE

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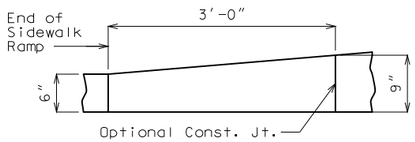
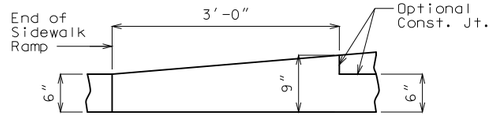
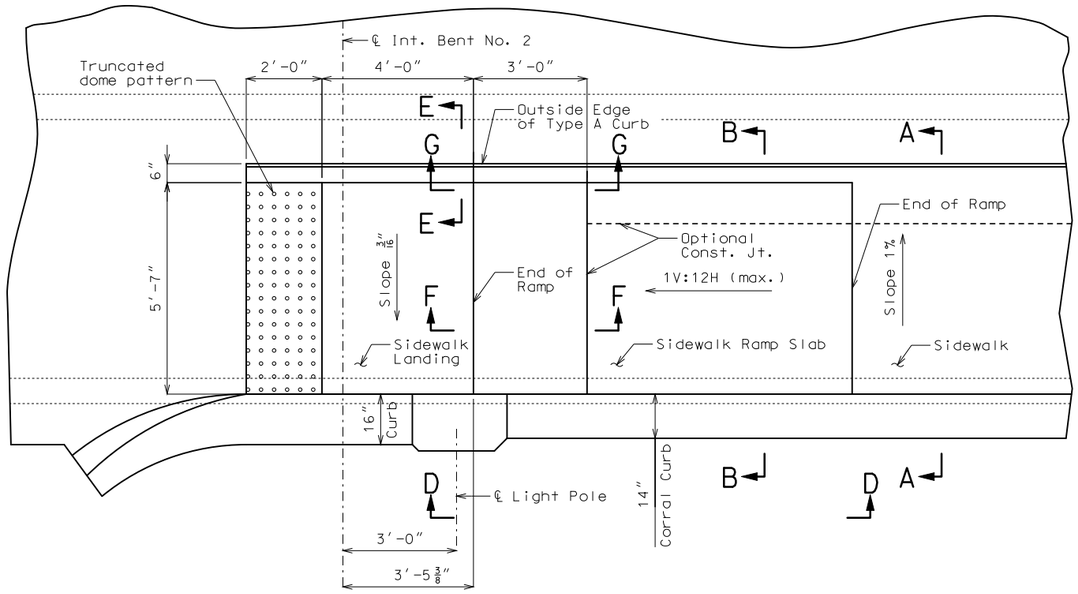
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



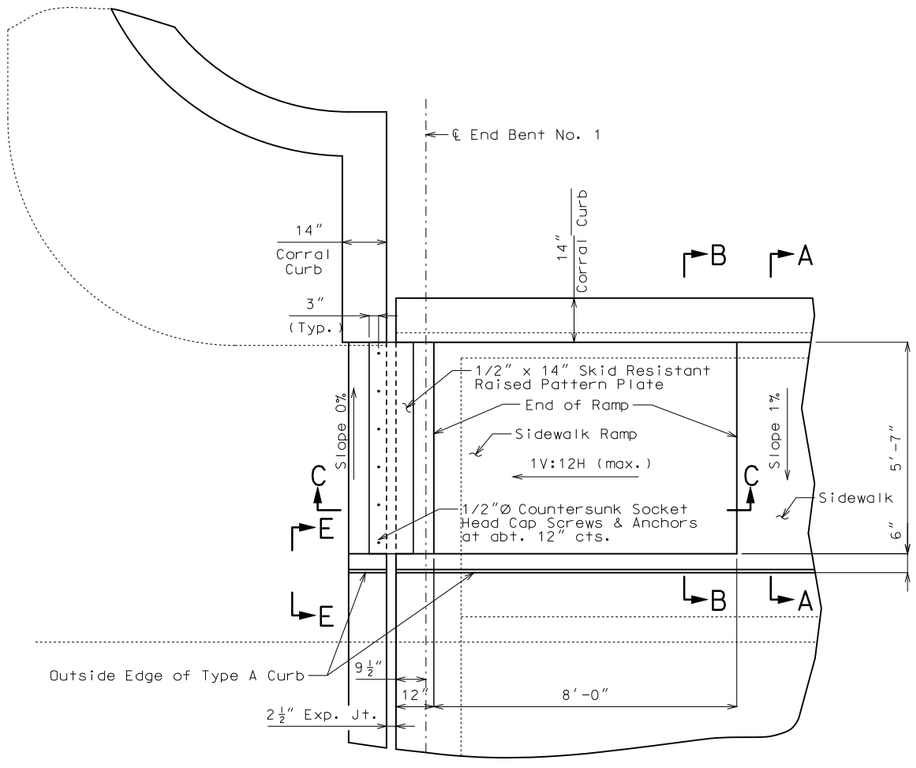
SECTION F-F



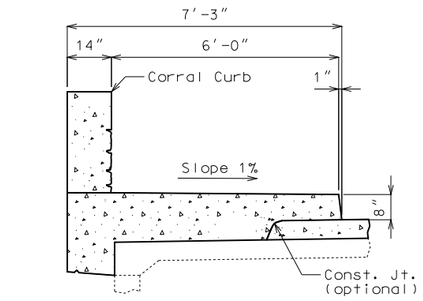
SECTION G-G



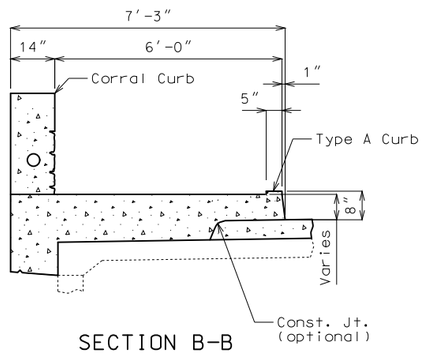
PART PLAN SOUTH SIDEWALK RAMP



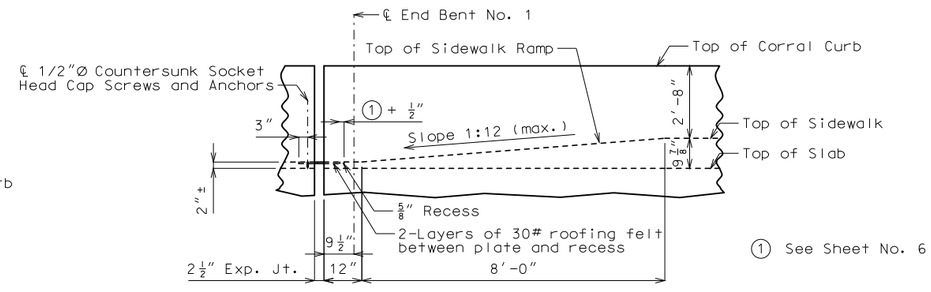
PART PLAN NORTH SIDEWALK RAMP



SECTION A-A

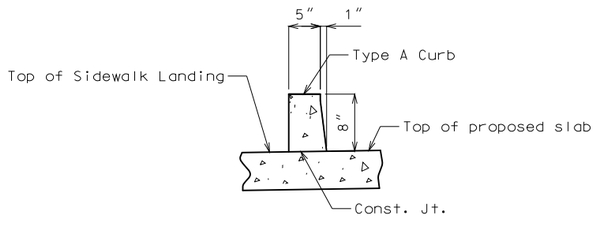


SECTION B-B

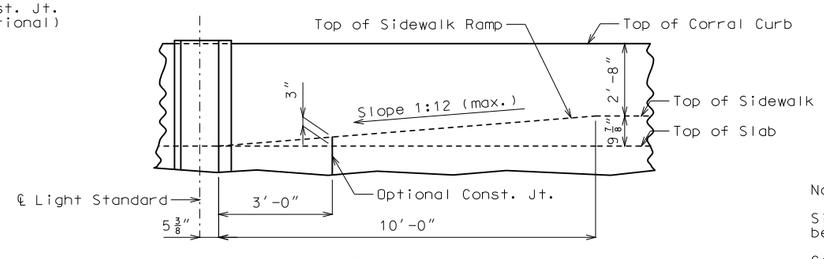


SECTION C-C
(Reinforcement not shown for clarity)

1 See Sheet No. 6



SECTION E-E



SECTION D-D
(Reinforcement not shown for clarity)

Notes continued:

Sidewalk ramps, sidewalk landing and truncated domes shall be in accordance with Mo. Standard Drawings 608.50.

Concrete in the sidewalk shall be Class B-2.

All exposed edges of Type A Curb shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

DETAILS OF SIDEWALK RAMPS, LANDING & CURBS

Detailed Nov. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	13

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
L09391

DESCRIPTION	DATE

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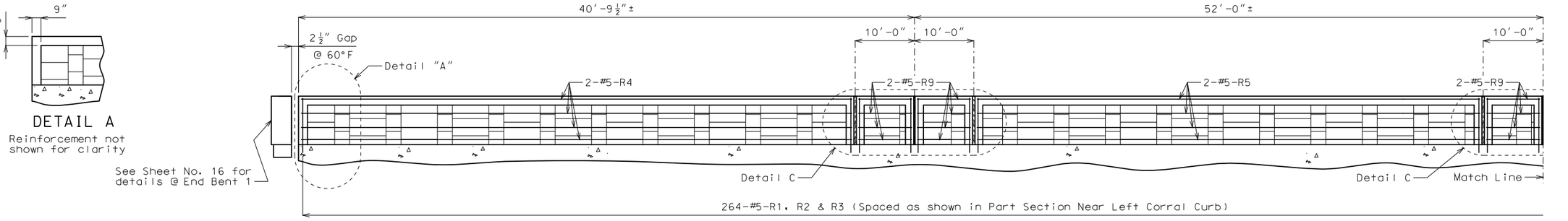
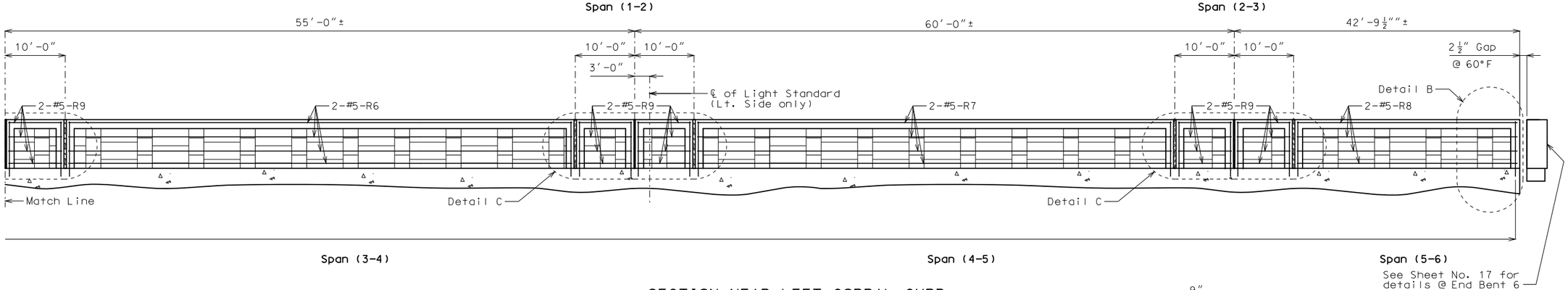
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

DETAIL A

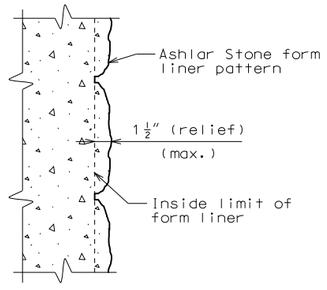
Reinforcement not shown for clarity



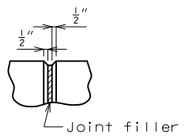


SECTION NEAR LEFT CORRAL CURB

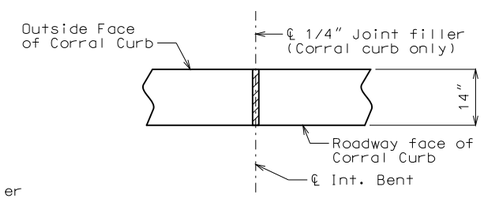
Note: Longitudinal dimensions are horizontal at outside face of Corral Curb.



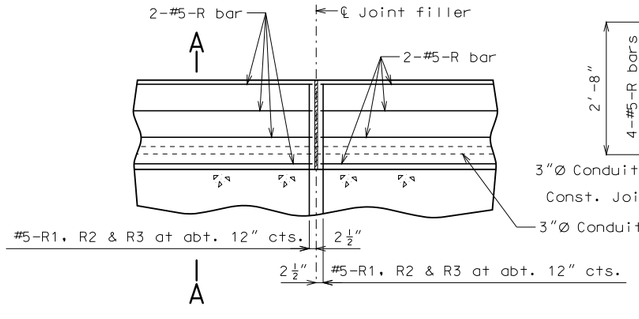
TYPICAL PART SECTION AT FORM LINER



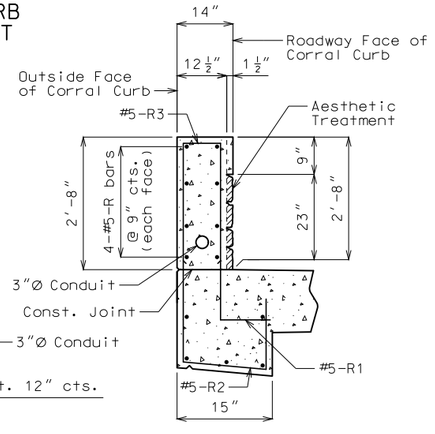
FILLED JOINT DETAIL



PART PLAN OF CORRAL CURB SHOWING JOINT FILLER AT INT. BENTS

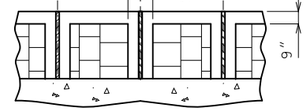


PART SECTION NEAR LEFT CORRAL CURB



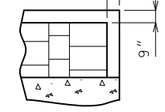
PART SECTION A-A

User a minimum lap of 3'-1" for #5 horizontal corral curb bars.



DETAIL C

Reinforcement not shown for clarity



DETAIL B

Reinforcement not shown for clarity

Notes:
The following is a list of form liner manufacturers and types which may be used. All form liner pattern's depth of relief shall vary up to 1 1/2". The height of any single 'stone' shall be 15" maximum.

Scott System, Inc.: Form liner pattern #167 "Ashlar Stone"

Fitzgerald formliners: Form liner pattern #16986 "Ashlar Stone"

Greenstreak: Form liner pattern #330 "Ashlar Stone"

Dayton Superior/Symons: Form liner pattern #1515 "Ashlar Stone"

Notes:
Top of corral curb shall be built parallel to grade with corral curb joints (except at end bents) normal to grade.

All exposed edges of corral curb shall have either a 1/2" radius or a 3/8" bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for corral curb per linear foot.

Concrete in the corral curb shall be Class B-1.

Measurement of corral curb is to the nearest linear foot for each structure, measured along the outside of corral curb from end to end.

For Details of Corral Curb at End Bents not shown, see Sheet No. 16 & 17.

For Light Standard mounting, see Sheet No. 21.

For Decorative Fence Post spacing, see Sheet No. 23.

For Details of Decorative Fencing, see Sheet No. 25.

The cross-sectional area above the slab = 2.88 sq. ft.

See Special Provisions for form liner specifications.

For Details of Conduit System, see Sheet No. 26.

DETAILS OF LEFT CORRAL CURB

Detailed Oct. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 14
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09391

DESCRIPTION | DATE

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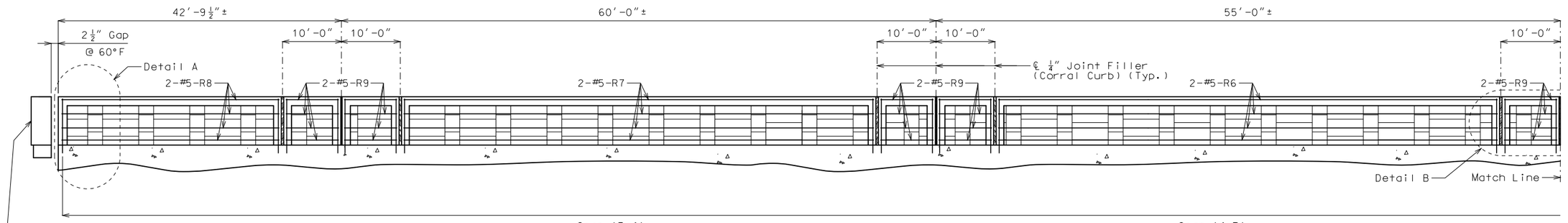
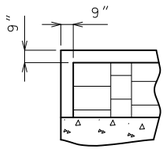
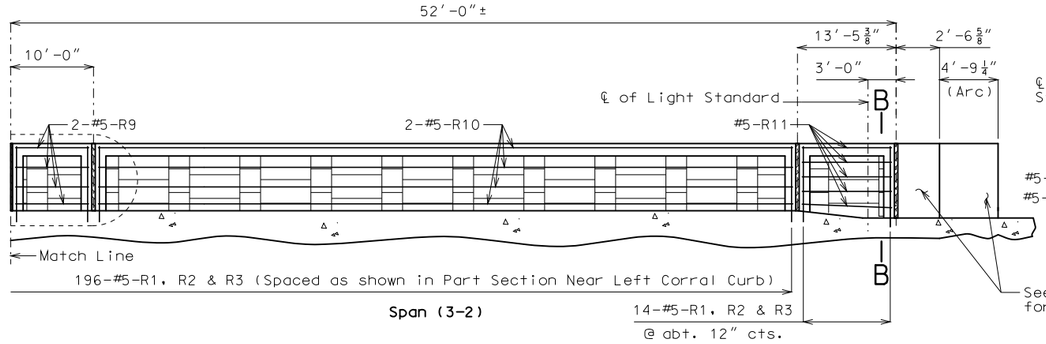
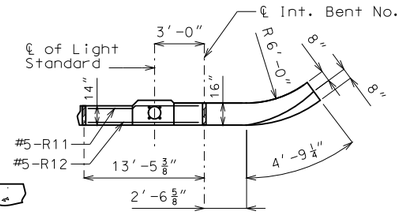
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



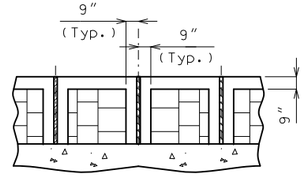


DETAIL A
Reinforcement not shown for clarity





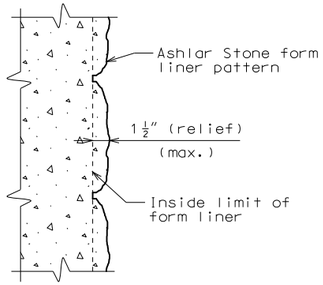
PART PLAN



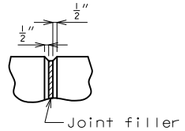
DETAIL B
Reinforcement not shown for clarity

DEVELOPED SECTION NEAR RIGHT CORRAL CURB

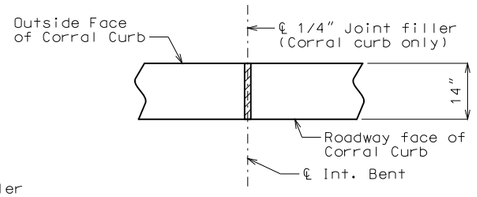
Note: Longitudinal dimensions are horizontal at outside face of Corral Curb.



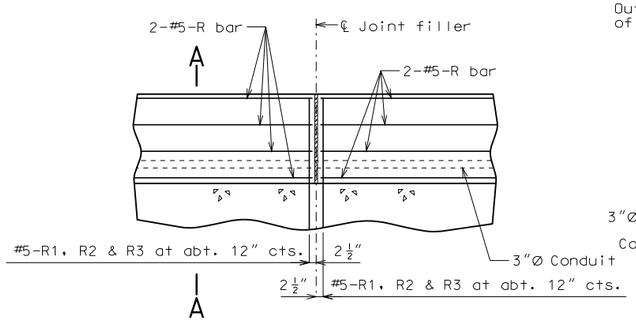
TYPICAL PART SECTION AT FORM LINER



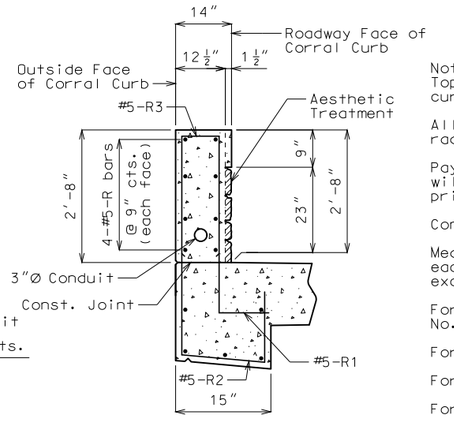
FILLED JOINT DETAIL



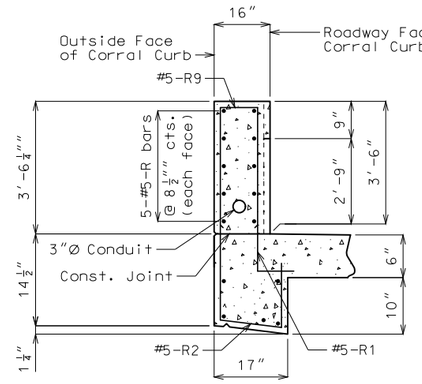
PART PLAN OF CORRAL CURB SHOWING JOINT FILLER AT INT. BENTS



PART SECTION NEAR RIGHT CORRAL CURB



PART SECTION A-A
User a minimum lap of 3′-1″ for #5 horizontal corral curb bars.



PART SECTION B-B
User a minimum lap of 3′-1″ for #5 horizontal corral curb bars.

DETAILS OF RIGHT CORRAL CURB

Notes:
The following is a list of form liner manufacturers and types which may be used. All form liner pattern's depth of relief shall vary up to 1 1/2". The height of any single 'stone' shall be 15" maximum.

Scott System, Inc.: Form liner pattern #167 "Ashlar Stone"

Fitzgerald formliners: Form liner pattern #16986 "Ashlar Stone"

Greenstreak: Form liner pattern #330 "Ashlar Stone"

Dayton Superior/Symons: Form liner pattern #1515 "Ashlar Stone"

Notes:
Top of corral curb shall be built parallel to grade with corral curb joints (except at end bents) normal to grade.

All exposed edges of corral curb shall have either a 1/2" radius or a 3/8" bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for corral curb per linear foot.

Concrete in the corral curb shall be Class B-1.

Measurement of corral curb is to the nearest linear foot for each structure, measured along the outside of corral curb, except arc dimensions, inside of corral curb, from end to end.

For Details of Corral Curb at End Bents not shown, see Sheet No. 19.

For Light Standard mounting, see Sheet No. 22.

For Decorative Fence Post spacing, see Sheet No. 24.

For Details of Decorative Fencing, see Sheet No. 25.

The cross-sectional area above the slab = 2.88 sq. ft.

See Special Provisions for form liner specifications.

For Details of Conduit System, see Sheet No. 26.

Detailed Oct. 2017
Checked Nov. 2017

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

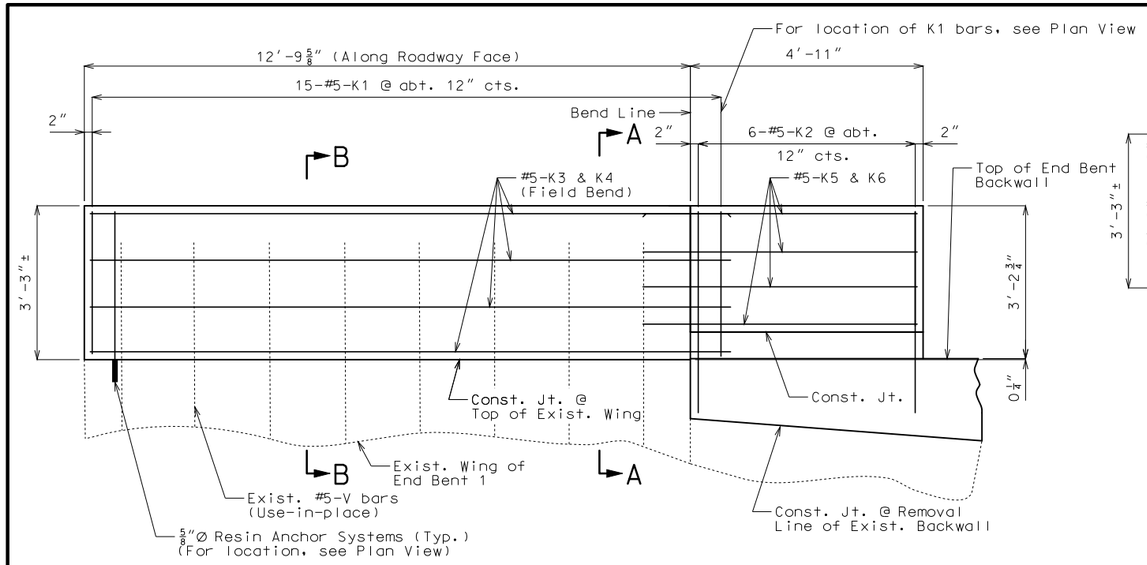
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 15
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A09391

DESCRIPTION | DATE

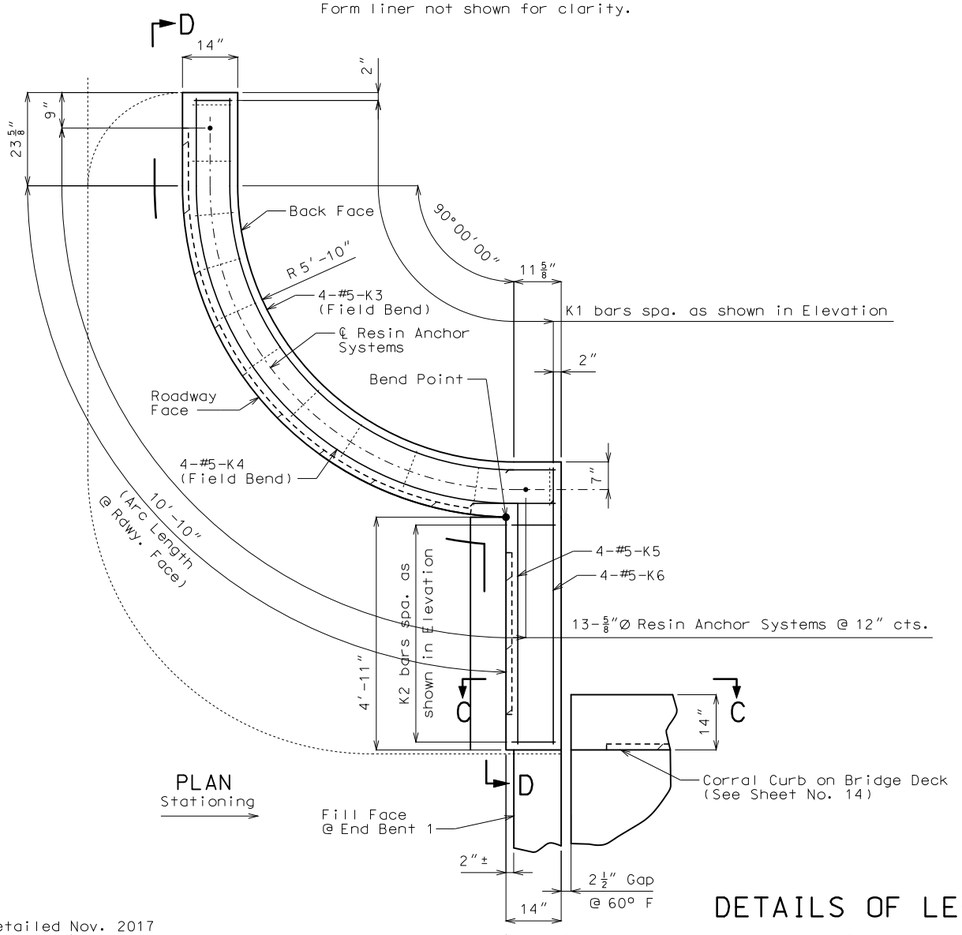
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

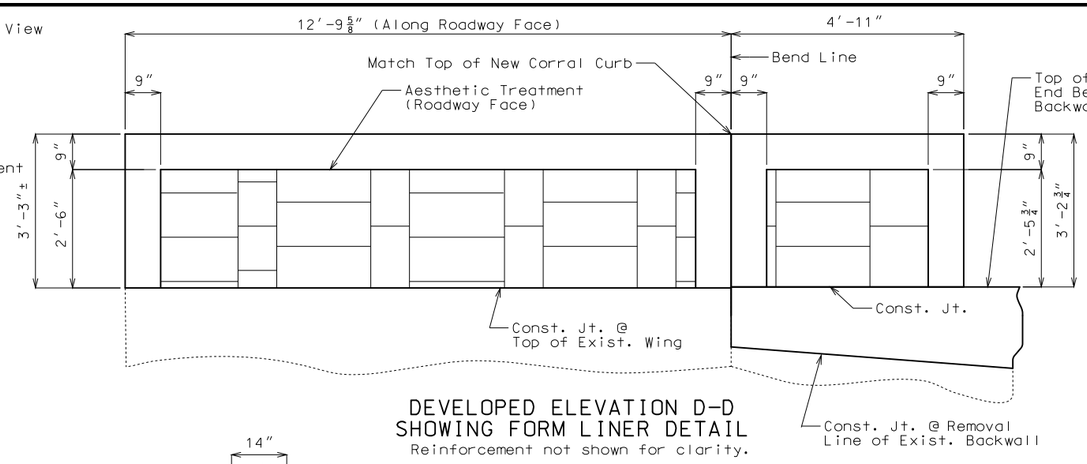
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



DEVELOPED ELEVATION D-D SHOWING REINFORCEMENT

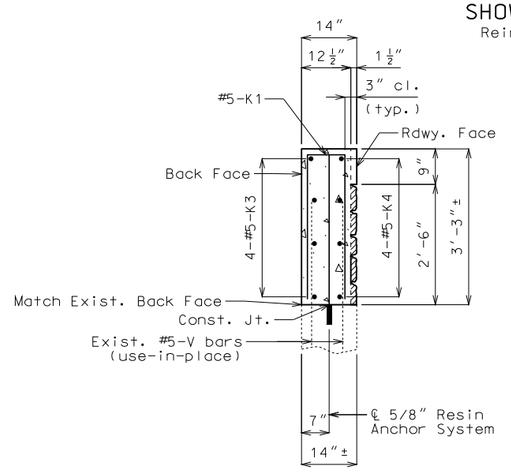
Form liner not shown for clarity.



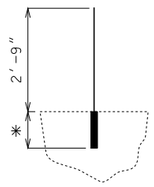


DEVELOPED ELEVATION D-D SHOWING FORM LINER DETAIL

Reinforcement not shown for clarity.



SECTION A-A



* Manufacturer's recommendaton

Total Req'd = 13 for Left Corral Curb at End Bent 1
Total Length = 2′-9″ + embedment

DETAIL OF RESIN ANCHOR SYSTEM

Resin Anchor Notes:

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

Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Corral Curb.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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

Notes:

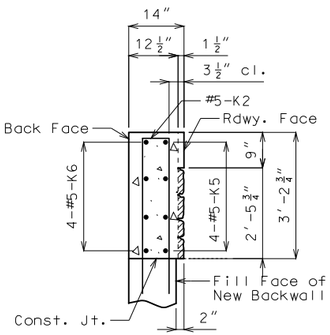
For details of Corral Curb not shown, see Sheet No. 14.

For details of Aesthetic Treatment, see Sheet No. 14.

For Decorative Fence Post spacing, see Sheet No. 23.

For details of Decorative Pedestrian Fence, see Sheet No. 25.

SECTION B-B



SECTION C-C

DETAILS OF LEFT CORRAL CURB AT END BENT NO. 1

Detailed Nov. 2017
Checked Nov. 2017

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

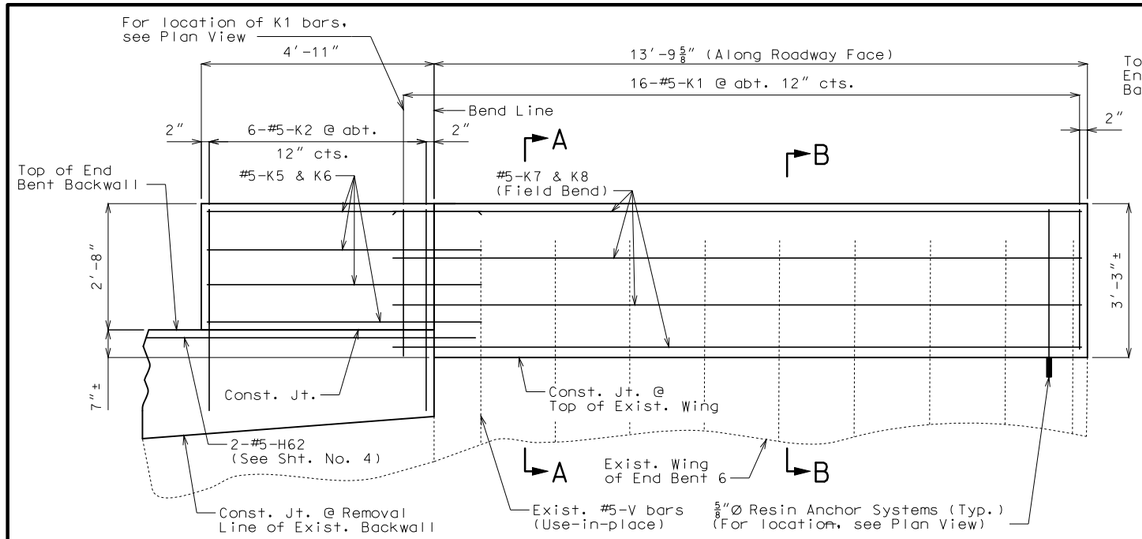
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 16
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09391

DESCRIPTION | DATE

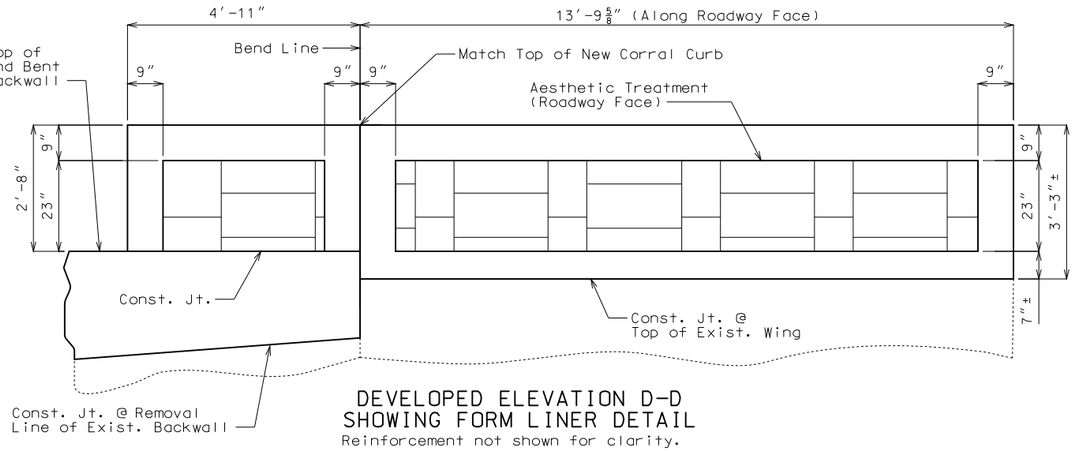
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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



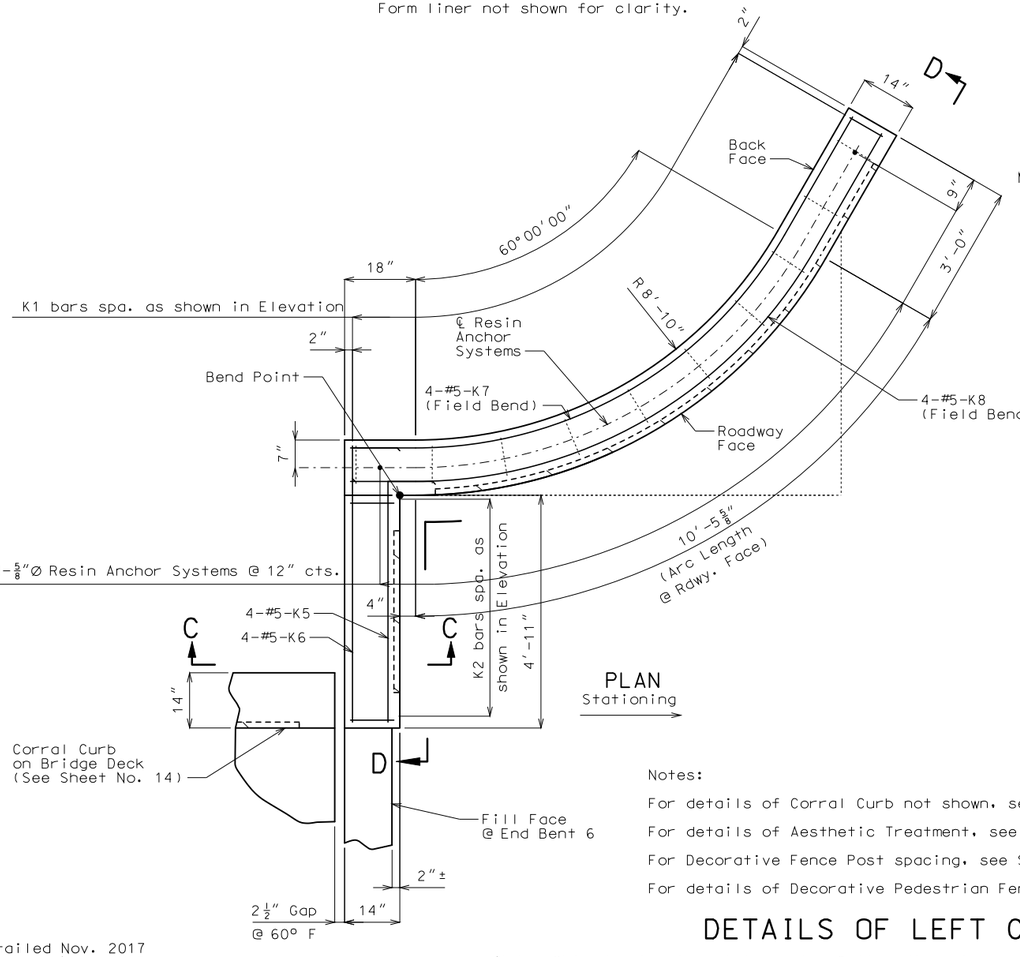
DEVELOPED ELEVATION D-D SHOWING REINFORCEMENT

Form liner not shown for clarity.

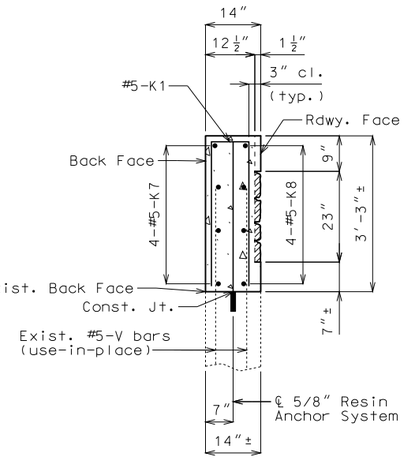


DEVELOPED ELEVATION D-D SHOWING FORM LINER DETAIL

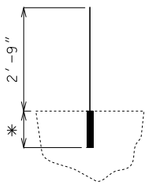
Reinforcement not shown for clarity.



PLAN
Stationing



SECTION A-A



* Manufacturer's recommendaton

Total Req'd = 14 for Right Corral Curb at End Bent 1
Total Length = 2′-9″ + embedment

DETAIL OF RESIN ANCHOR SYSTEM

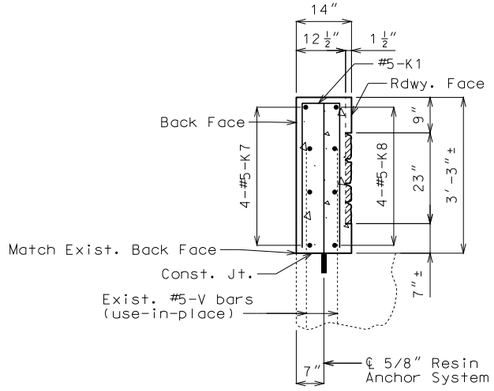
Resin Anchor Notes:

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

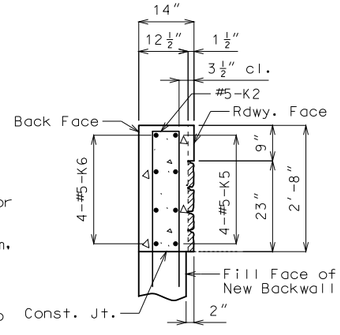
Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Corral Curb.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



SECTION B-B



SECTION C-C

Notes:

For details of Corral Curb not shown, see Sheet No. 14.

For details of Aesthetic Treatment, see Sheet No. 14.

For Decorative Fence Post spacing, see Sheet No. 23.

For details of Decorative Pedestrian Fence, see Sheet No. 25.

DETAILS OF LEFT CORRAL CURB AT END BENT NO. 6

Detailed Nov. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	17

COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: L09391

DESCRIPTION | DATE

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

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

Notes:

Top of barrier curb (Type D) shall be built parallel to grade with barrier curb joints (except at end bents) normal to grade.

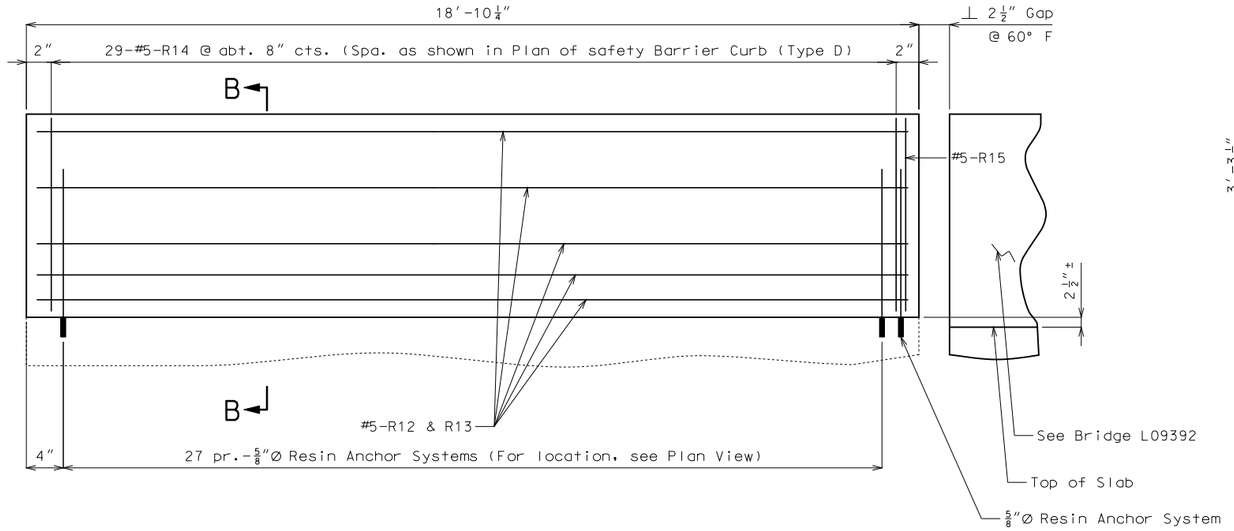
All exposed edges of barrier curb (Type D) shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Barrier Curb (Type D) per linear foot.

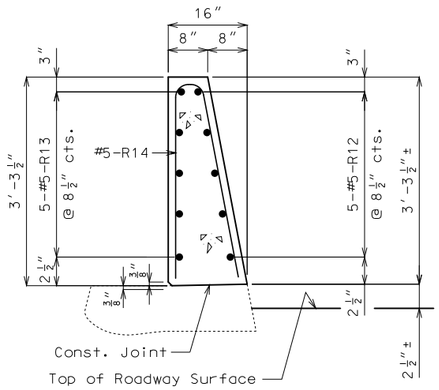
Concrete in the barrier curb (Type D) shall be Class B-1.

Measurement of barrier curb (Type D) is to the nearest linear foot for each structure, measured along the outside from end to end.

Concrete traffic barrier delineators shall be placed on top of the barrier curb (Type D) as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Barrier Curb (Type D).



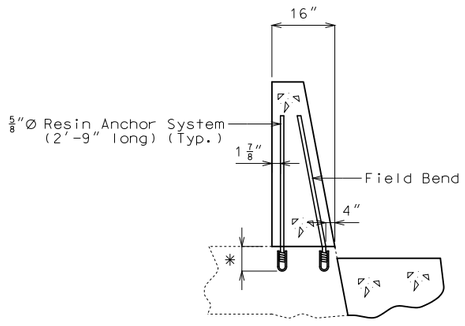
DEVELOPED ELEVATION A-A OF BARRIER CURB (TYPE D)



SECTION B-B

Use a minimum lap of 3′-1″ for #5 horizontal barrier curb (Type D) bars.

The cross-sectional area above the slab = 3.29 sq. ft.



✳ Manufacturer's recommendaton

Total Req'd = 55

TYPICAL SECTION SHOWING RESIN ANCHORS

Resin Anchor Notes:

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

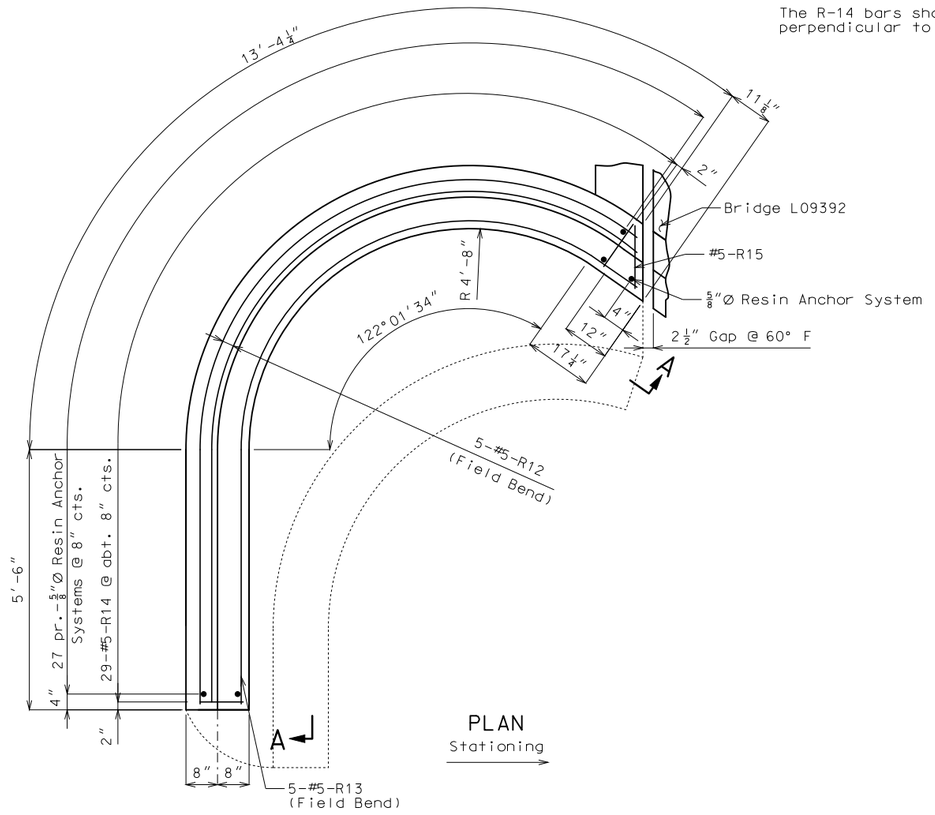
Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Corral Curb.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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

Note:

The R-14 bars shall be placed perpendicular to the curb.



DETAILS OF RIGHT TYPE D BARRIER CURB AT END BENT NO. 1

Detailed Dec. 2017
Checked Dec. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 18
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09391

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

DESCRIPTION | DATE

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

Notes:

Top of barrier curb (Type D) Transition shall be built parallel to grade with barrier curb joints (except at end bents) normal to grade.

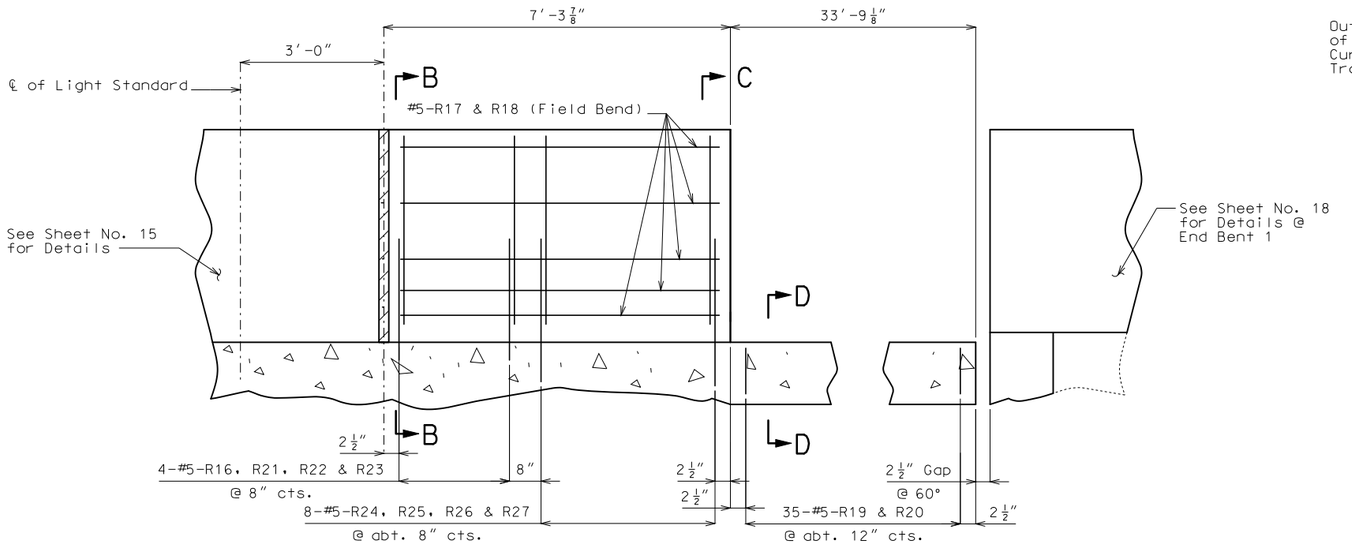
All exposed edges of barrier curb (Type D) shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Barrier Curb (Type D) per linear foot.

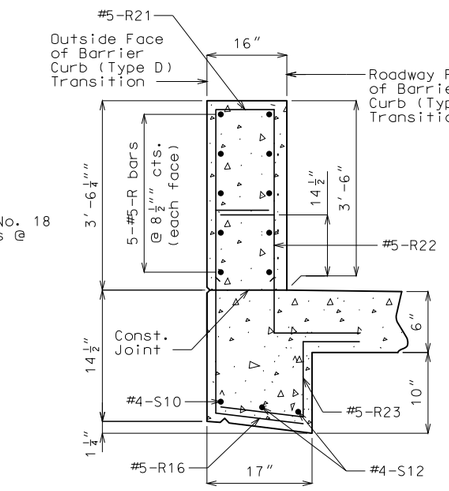
Concrete in the barrier curb (Type D) shall be Class B-1.

Measurement of barrier curb (Type D) is to the nearest linear foot for each structure, measured along the outside top of slab from end to end.

R24, R25 R26 & R27 shall be placed perpendicular to curb.

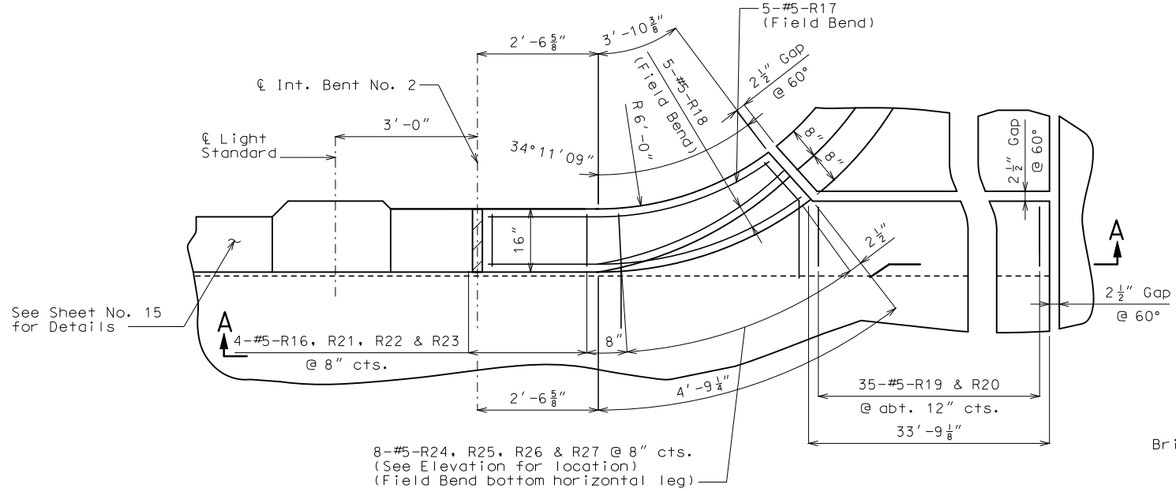


DEVELOPED SECTION A-A SHOWING REINFORCEMENT

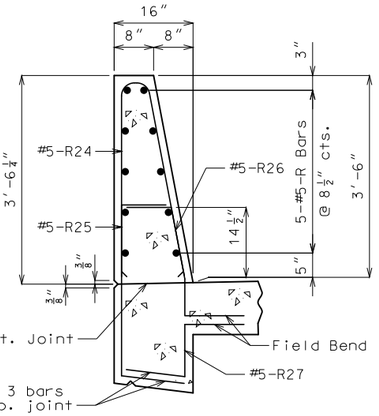


PART SECTION B-B

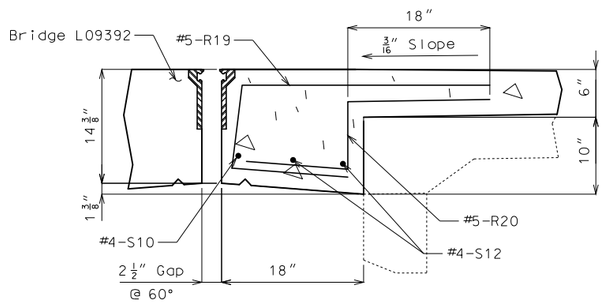
Use a minimum lap of 3′-1″ for #5 horizontal bars.



PART PLAN



SECTION C-C



SECTION D-D

Notes:

For Details of Corral Curb, see Sheet No. 15.

For Decorative Fence Post Spacing, see Sheet No. 24.

For Decorative Pedestrian Fence Details, see Sheet No. 25.

DETAILS OF RIGHT (TYPE D) TRANSITION BARRIER CURB AT INT. BENT NO. 2

(Slab reinforcing steel not shown for clarity.)

Detailed Dec. 2017
Checked Dec. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017

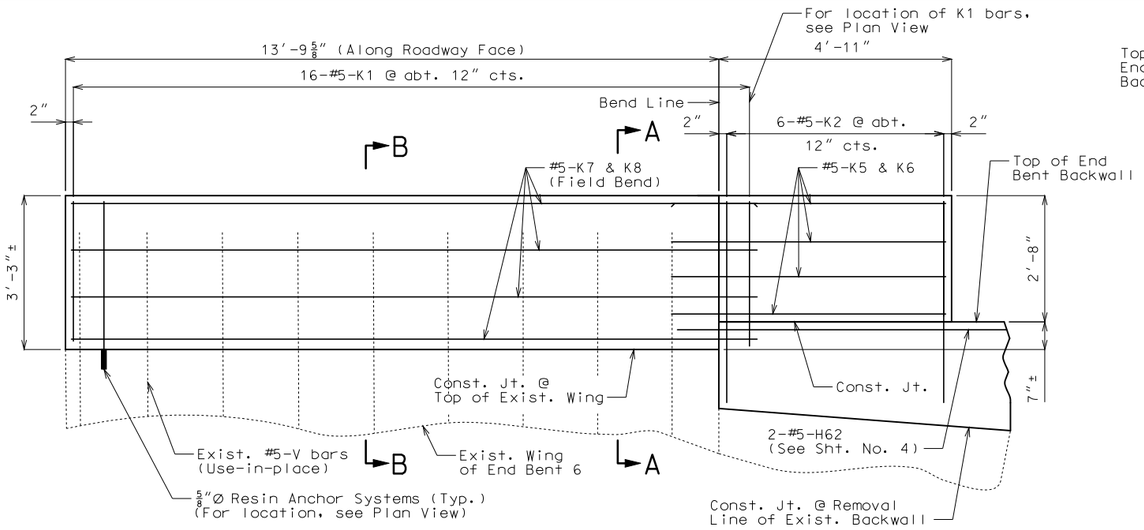
ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	19

COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: L09391

DATE	DESCRIPTION

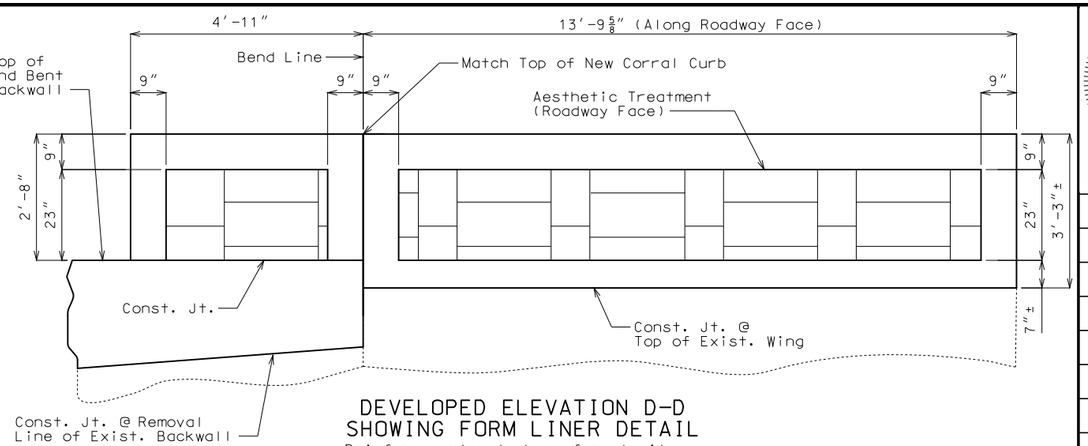
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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



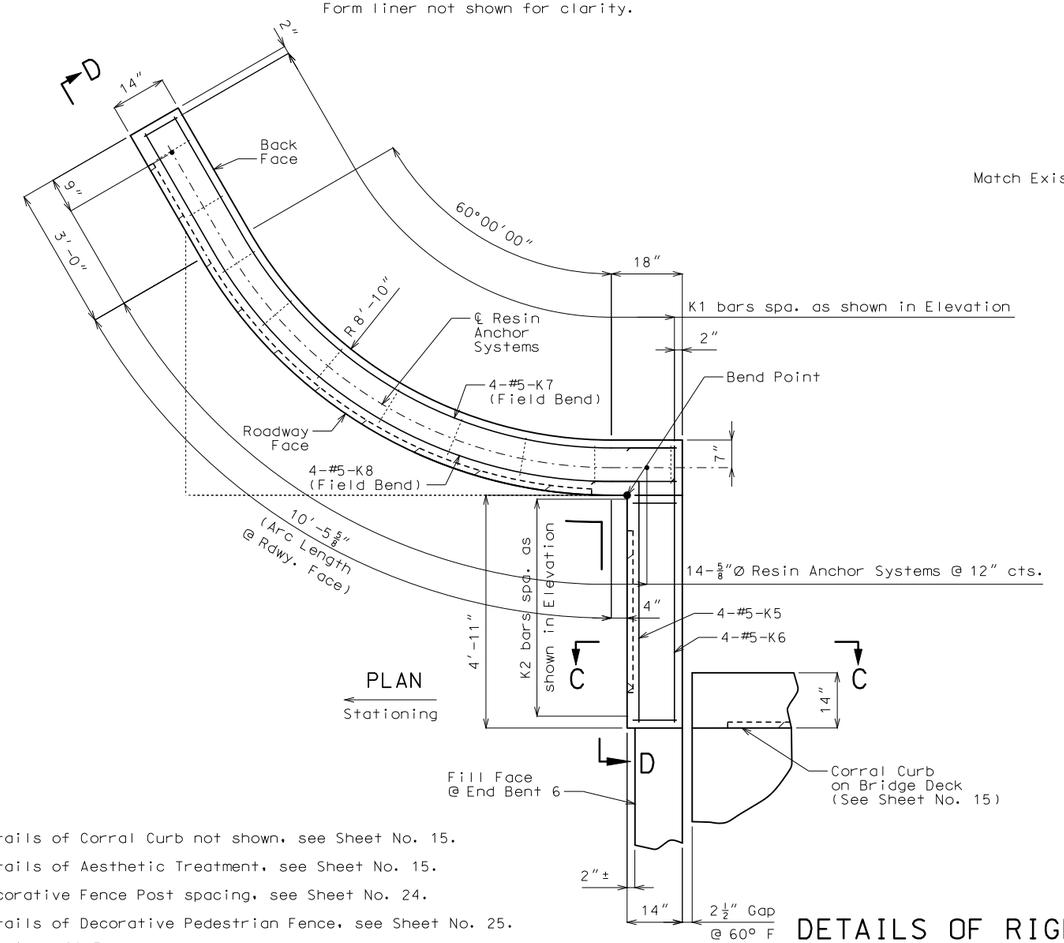
DEVELOPED ELEVATION D-D SHOWING REEINFORCEMENT

Form liner not shown for clarity.



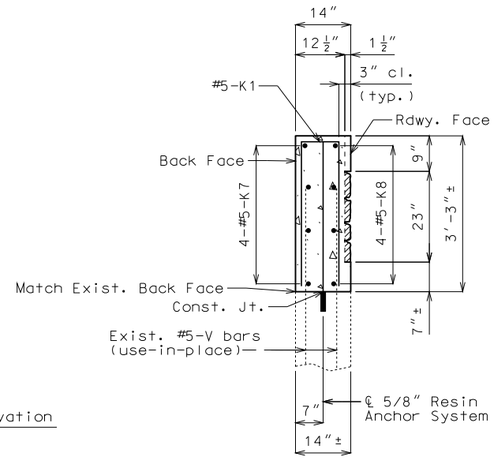
DEVELOPED ELEVATION D-D SHOWING FORM LINER DETAIL

Reinforcement not shown for clarity.

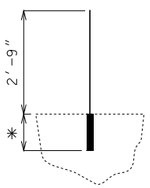


PLAN

Stationing



SECTION A-A



* Manufacturer's recommendaton

Total Req'd = 14 for Right Corral Curb at End Bent 1

Total Length = 2′-9″ + embedment

DETAIL OF RESIN ANCHOR SYSTEM

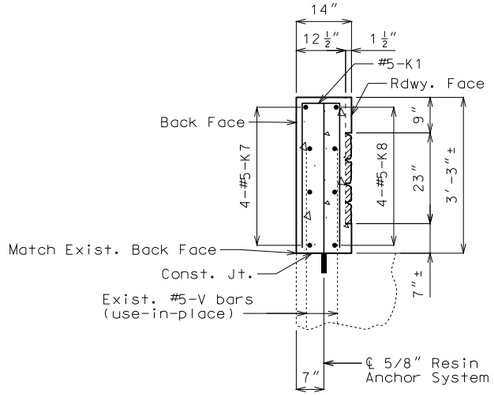
Resin Anchor Notes:

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

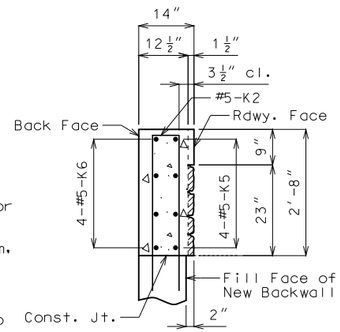
Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Corral Curb.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



SECTION B-B



SECTION C-C

Notes:

For details of Corral Curb not shown, see Sheet No. 15.

For details of Aesthetic Treatment, see Sheet No. 15.

For Decorative Fence Post spacing, see Sheet No. 24.

For details of Decorative Pedestrian Fence, see Sheet No. 25.

DETAILS OF RIGHT CORRAL CURB AT END BENT NO. 6

Detailed Nov. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	20

COUNTY: JACKSON

JOB NO.: J4I3198

CONTRACT ID.:

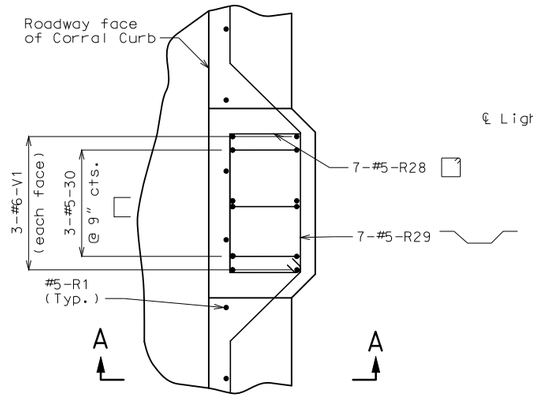
PROJECT NO.:

BRIDGE NO.: L09391

DESCRIPTION	DATE

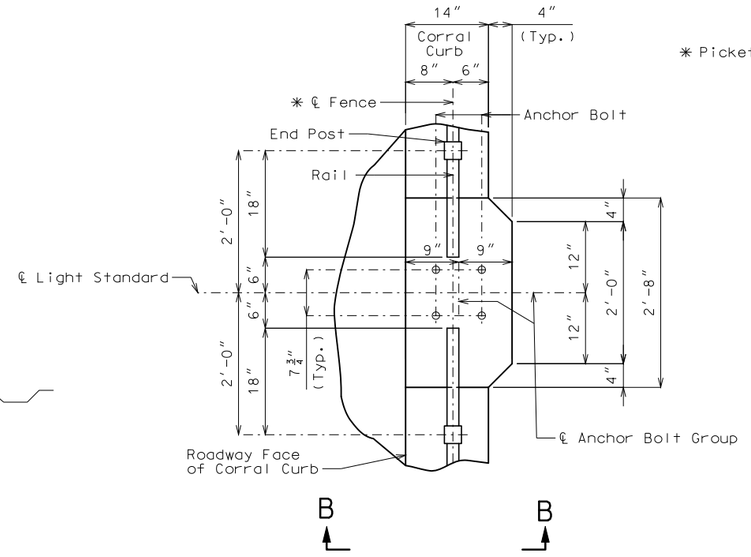
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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



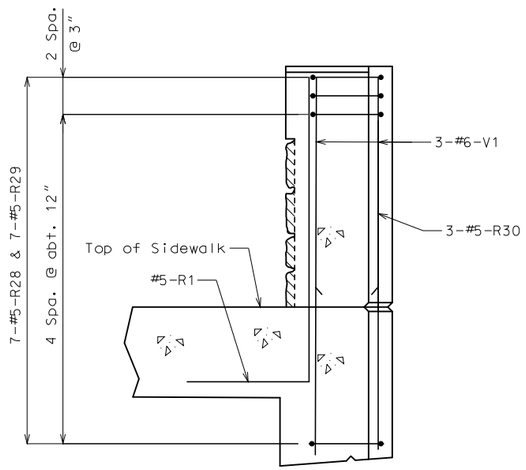
PART PLAN SHOWING REINFORCEMENT

(Conduit & fence not shown for clarity)

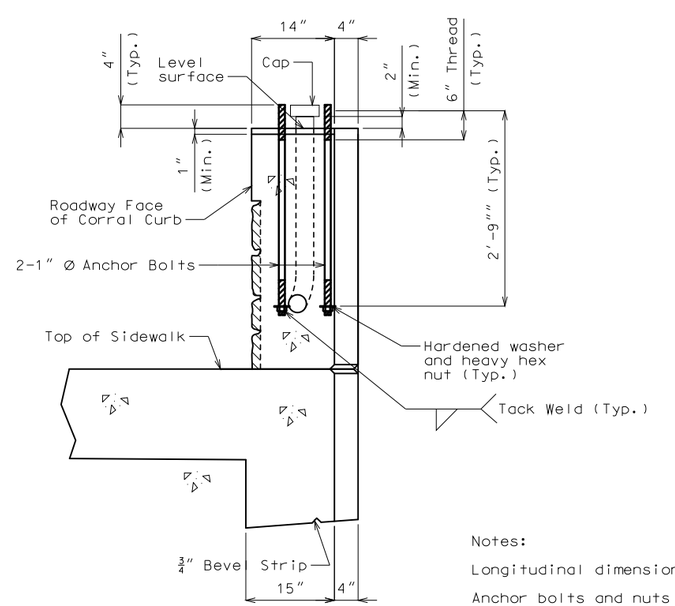


PART PLAN SHOWING ANCHOR BOLTS AND FENCE

(Conduit not shown for clarity)



SECTION A-A



SECTION B-B

Notes:

Longitudinal dimensions are horizontal.

Anchor bolts and nuts shall be ASTM A449. Anchor bolts, nuts and washers shall be fully galvanized.

Cost of furnishing and placing anchor bolts for light standard will be considered completely covered by the contract unit price for other items.

Light standards, wiring and fixtures shall be furnished and installed by others.

Top of light standard supports shall be made horizontal; anchor bolts shall be placed vertically.

For Details of Conduit System on Structure, see Sheet No. 26.

For Decorative Pedestrian Fence Post Locations, see Sheet No. 23.

For Decorative Pedestrian Fence details, see Sheet No. 25.

DETAILS OF LIGHT STANDARD MOUNTING ON LEFT CORRAL CURB (1 Req'd)

Detailed Oct. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	21

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

PROJECT NO.

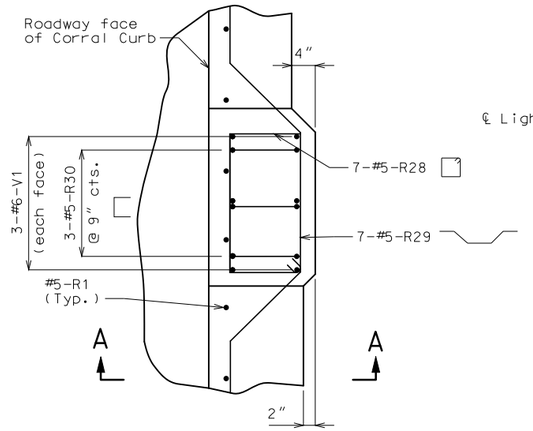
BRIDGE NO. L09391

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

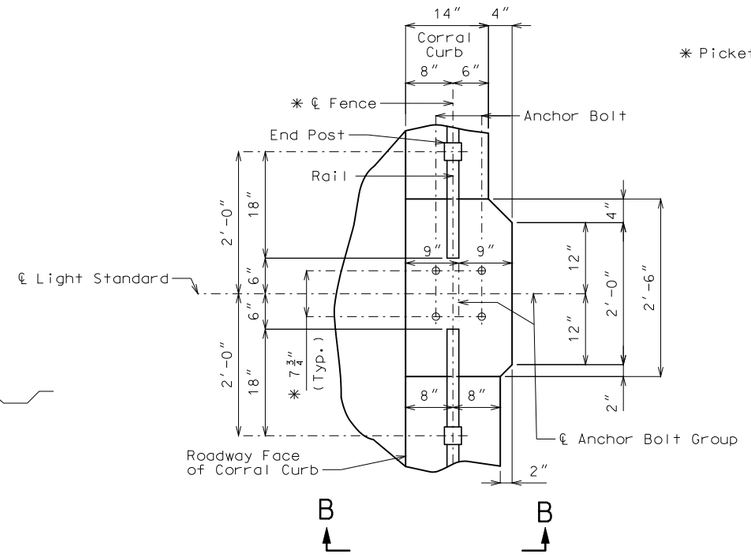
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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



PART PLAN SHOWING REINFORCEMENT

(Conduit & fence not shown for clarity)

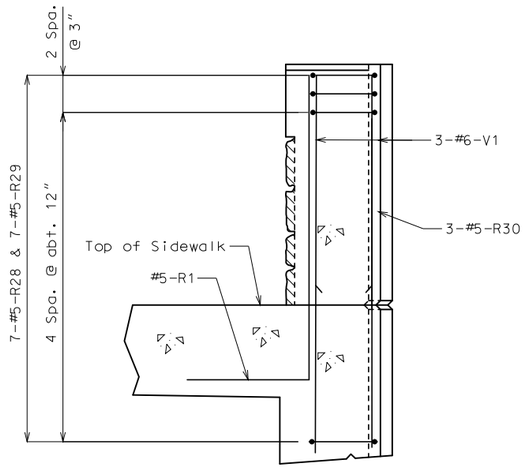


* Pickets not shown for clarity

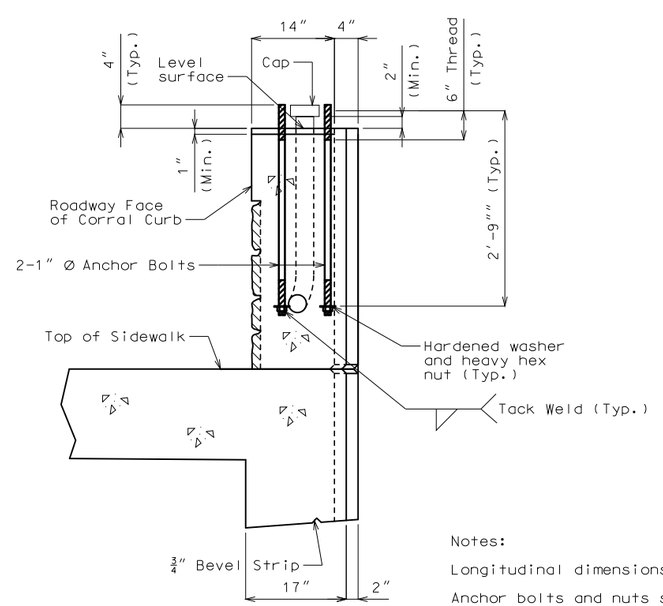
PART PLAN SHOWING ANCHOR BOLTS AND FENCE

(Conduit not shown for clarity)

* Match existing light pole



SECTION A-A



SECTION B-B

Notes:

Longitudinal dimensions are horizontal.

Anchor bolts and nuts shall be ASTM A449. Anchor bolts, nuts and washers shall be fully galvanized.

Cost of furnishing and placing anchor bolts for light standard will be considered completely covered by the contract unit price for other items.

Light standards, wiring and fixtures shall be furnished and installed by others.

Top of light standard supports shall be made horizontal; anchor bolts shall be placed vertically.

For Details of Conduit System on Structure, see Sheet No. 26.

For Decorative Pedestrian Fence Post Locations, see Sheet No. 24.

For Decorative Pedestrian Fence details, see Sheet No. 25.

DETAILS OF LIGHT STANDARD MOUNTING ON RIGHT CORRAL CURB (1 Req'd)

Detailed Nov. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	22

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

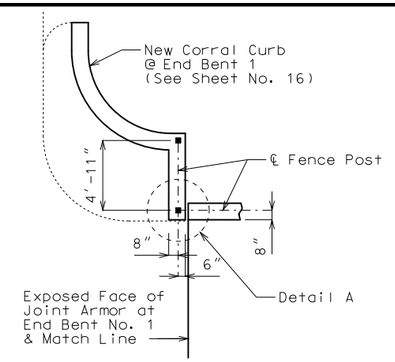
PROJECT NO.

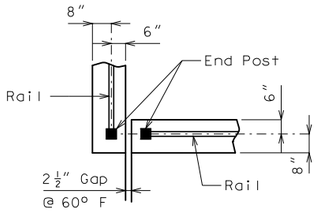
BRIDGE NO. L09391

DESCRIPTION	DATE

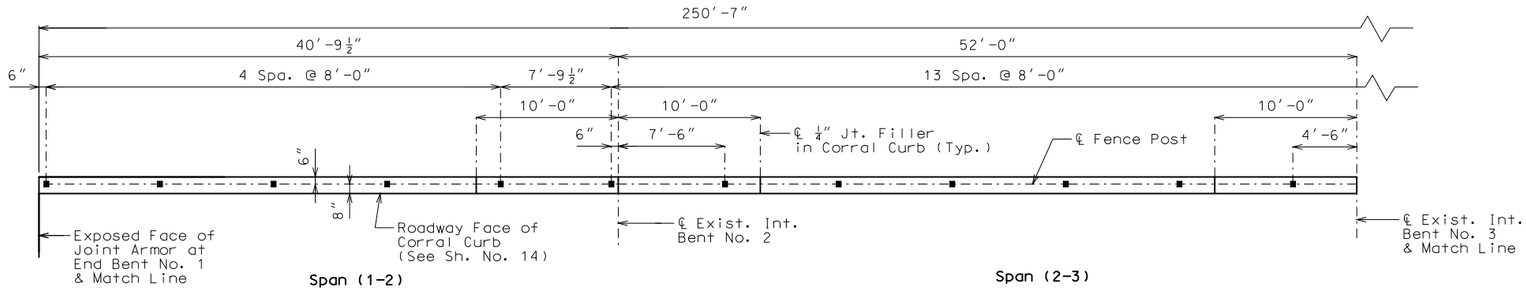
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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



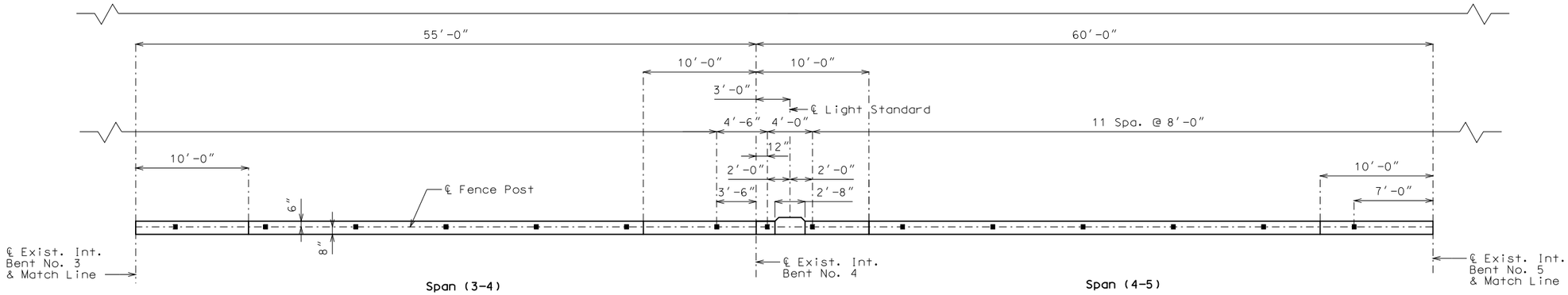


DETAIL A



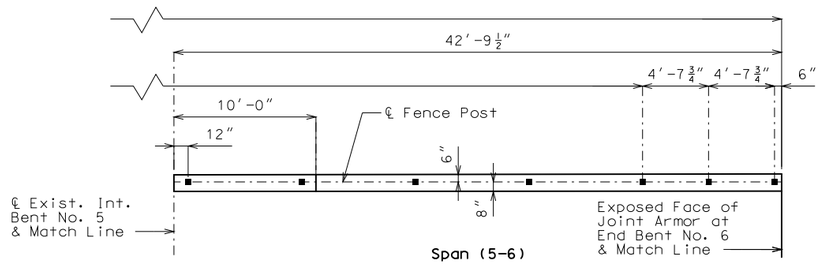
Span (1-2)

Span (2-3)

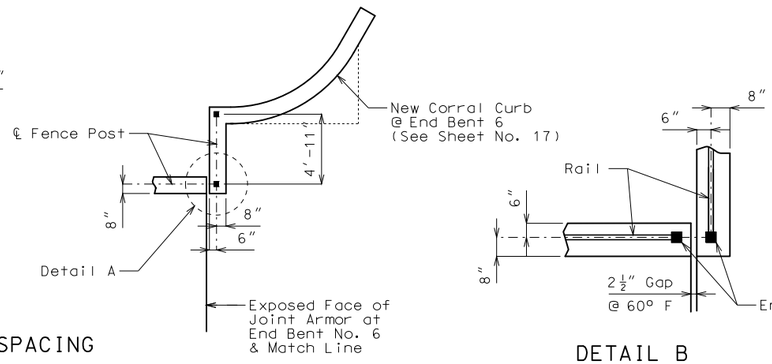


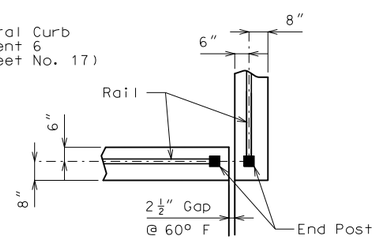
Span (3-4)

Span (4-5)



Span (5-6)





DETAIL B

PLAN OF LEFT CORRAL CURB SHOWING FENCE POST SPACING

Notes:

For Decorative Pedestrian Fence Details, see Sheet No. 25.

For Details of Corral Curb, see Sheets No. 14, 16, 17 & 21.

LEFT DECORATIVE PEDESTRIAN FENCE DETAILS

Detailed Nov. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	23

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

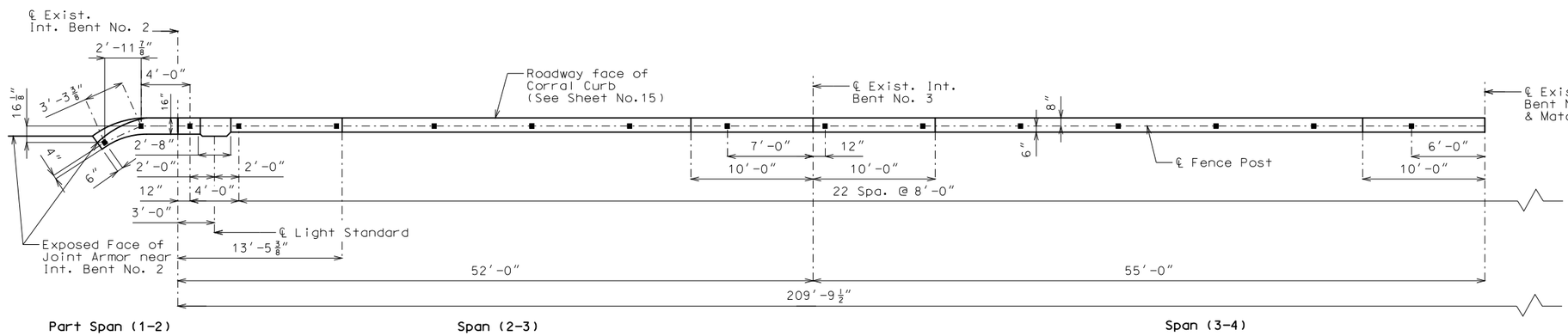
PROJECT NO.

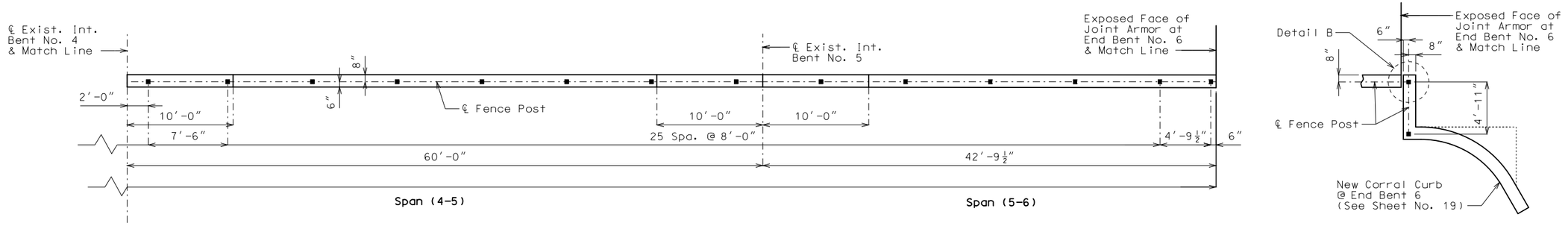
BRIDGE NO.
L09391

DESCRIPTION	DATE

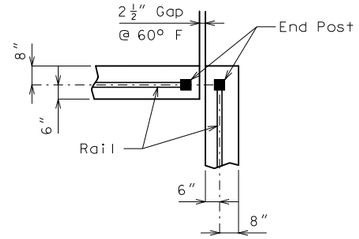
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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





PLAN OF RIGHT CORRAL CURB SHOWING FENCE POST SPACING



DETAIL B

Notes:

For Decorative Pedestrian Fence Details, see Sheet No. 25.

For Details of Corral Curb, see Sheets No. 15, 20, & 22.

For Details of Barrier Curb (Type D) Transition at Int. Bent 2, see Sheet No. 19.

RIGHT DECORATIVE PEDESTRIAN FENCE DETAILS

Detailed Nov. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 24
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09391

DESCRIPTION | DATE

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

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

Notes:

Decorative pedestrian fencing shall be in accordance with 2010 AASHTO LRFD Bridge Design Specifications and 2010 Interim Revisions. The design line load for pedestrian railings will not require a 50lb/ft and 200lb load be applied simultaneously. The posts of pedestrian railing will require both loadings applied simultaneously.

Fence shall have a gloss black finish (Federal Standard #17038) System "G" in accordance with Sec 1081.

Base plate shall be ASTM A709, Grade 36.

Dimensions of pedestrian fence are measured horizontally.

Measurement of pedestrian fence will be made to the nearest linear foot along centerline fence.

Payment for furnishing and erecting the fence, complete in place, with U-Bolts, washers and reinforcing bars will be considered completely covered by the contract unit price for 72" Decorative Pedestrian Fence (Structures).

All fence posts shall be vertical.

Substitution for the U-bolt cages on the decorative pedestrian fence will not be permitted.

Mortar shall be placed under the post base plates in accordance with Sec 1066.

Contractor shall submit complete detailed shop drawings in accordance with Sec 1080.

The contractor shall have the decorative pedestrian fencing manufacturer submit structural design computations signed and sealed by a registered professional engineer in the State of Missouri.

All materials used in fabrication and construction of the decorative pedestrian fencing shall be in accordance with the manufacturer's specifications, except as modified in the contract documents.

Decorative pedestrian fencing system shall be supplied by only one of the manufacturers. Fencing system shall include all components except the anchor bolts and #4 bars welded to the anchor bolts. The assembly of the pickets to the rails and the rails to the posts shall be the same as the style mentioned for the manufacturer.

Ameristar Fence Products, Inc.
1555 N. Mingo
Tulsa, OK. 74116
(800) 321-8724
www.ameristarfence.com

Style: AEGIS II Majestic

Iron Eagle Industries, Inc.
1256 Cardiff Blvd.
Mississauga, Ontario Canada L5S1R1
(905) 670-2558
www.ironeagleind.com

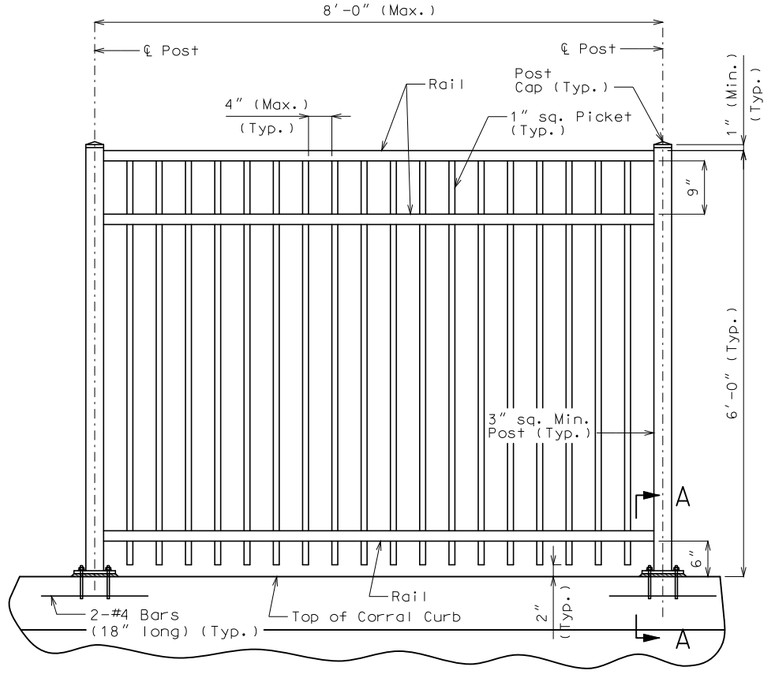
Style: Silver Eagle II

Betafence USA
3309 S.W. Interstate 45
Ennis, TX. 75119
(888) 650-4766
www.betafenceusa.com

Style: UpGrade-I Landmark

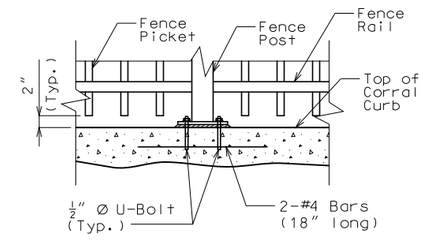
Merchants Metals
6575 Romiss Court
St. Louis, MO 63134
(800) 293-3363
www.merchantsmetals.com

Style: Guardsman Monroe

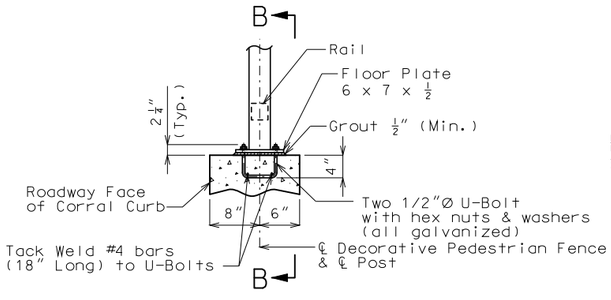


TYPICAL PART ELEVATION

Adjacent panels and Form Liner Detail not shown for clarity.



SECTION B-B AT SUPPORT

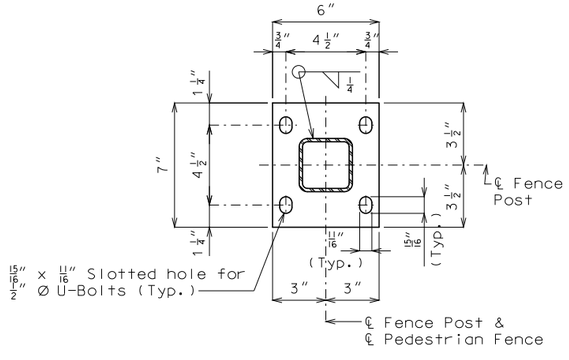


SECTION A-A AT FENCE SUPPORT

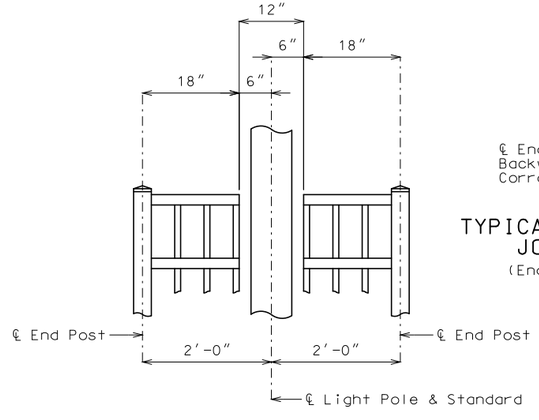
Note: Reinforcement not shown for clarity.

Notes:
For Part Plans of Corral Curb Showing Fence Post Spacing, see Sheets No. 23 & 24.

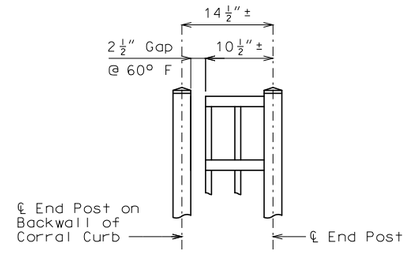
For Details of Corral Curb, see Sheets No. 14-22.



PLAN OF FLOOR PLATE



TYPICAL DETAIL OF FENCE AT LIGHT STANDARDS



TYPICAL DETAIL OF FENCE AT EXPANSION JOINTS AT END BENTS NO. 1 & 5

(End Bent No. 1 shown, End Bent No. 5 similar)

DECORATIVE PEDESTRIAN FENCE DETAILS

Detailed Oct. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	25

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

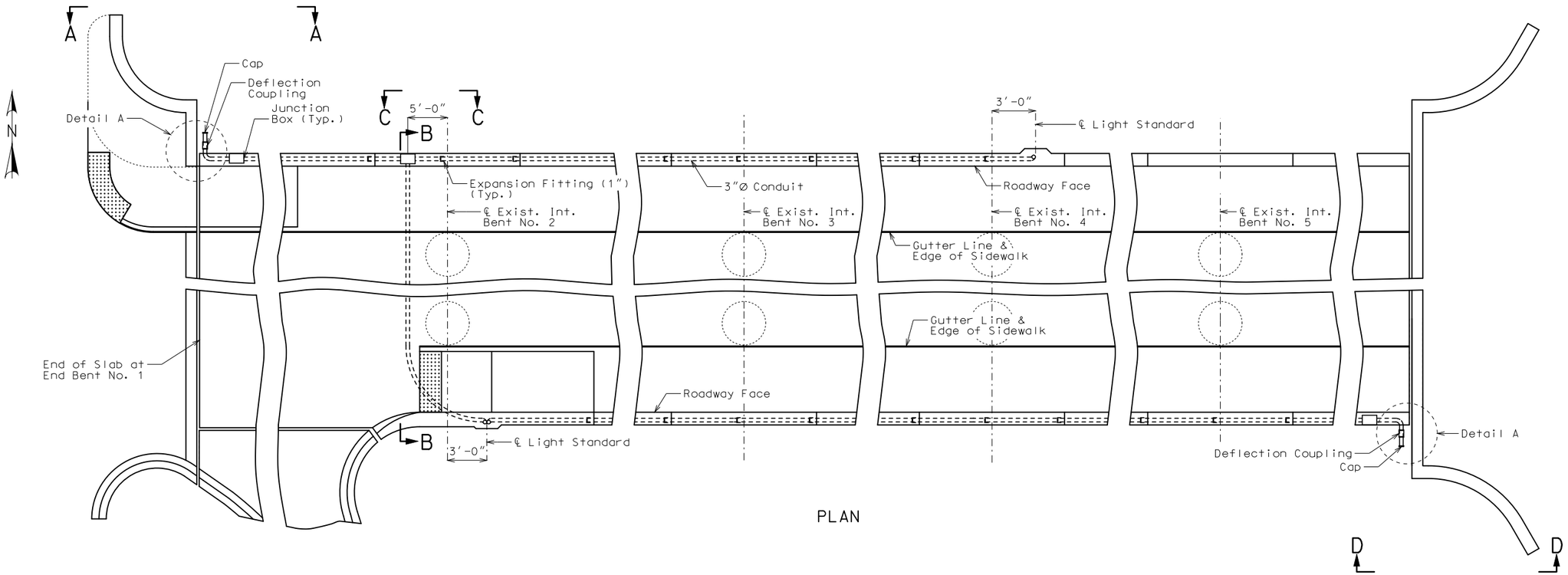
PROJECT NO.

BRIDGE NO.
L09391

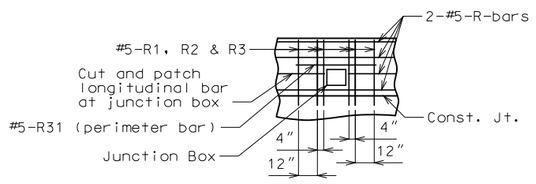
DESCRIPTION	DATE

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

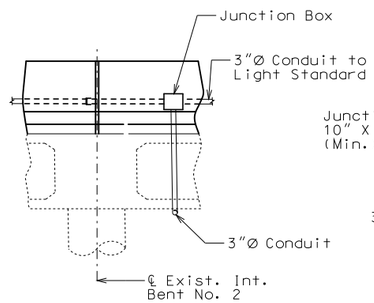
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



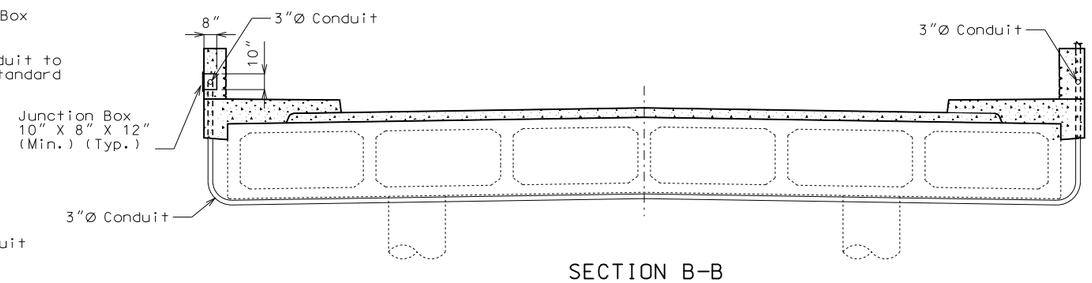
PLAN



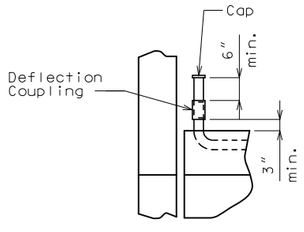
PART ELEVATION OF CORRAL CURB OVER SLAB SHOWING PERIMETER STEEL



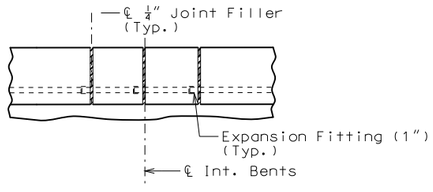
PART ELEVATION C-C AT INT. BENT 2



SECTION B-B



DETAIL A



PART ELEVATION NEAR INT. BENTS

Notes:

All conduits shall be rigid nonmetallic schedule 40 heavy wall polyvinyl chloride (PVC) with 3" minimum cover in concrete. Each section of conduit shall bear the Underwriters Laboratories (UL) label.

Shift reinforcing steel in field where necessary to clear conduit and junction boxes.

Expansion fittings shall be placed as shown and set in accordance with the manufacturer's requirements and based on the air temperature at the time of setting given an estimated total expansion movement of 1 inch at filled joints using a maximum temperature range of 150° F and a maximum temperature of 120° F.

All end bent and corral curb junction boxes shall be PVC molded in accordance with Sec 1062 and designed for flush surface mounting. The conduit terminations shall be permanent or separable. The terminations and covers shall be of watertight construction and shall meet requirements for NEMA 4 enclosure.

Drainage shall be provided at low points or other critical locations of all conduits and all junction boxes in accordance with Sec 707. All conduits shall be sloped to drain where possible.

All conduit clamps shall be commercially-available, nonmetallic conduit clamps and approved by the engineer.

All conduit shall be secured to concrete with nonmetalic clamps at about 5'-0" cts. Concrete anchors for clamps shall be in accordance with Federal Specification FF-S-325, Group II, Type 4, XClass 1 and shall be galvanized in accordance with ASTM A153, B695-91 Class 50 or stainless steel. Minimum embedment in concrete shall be 1 3/4". The supplier shall furnish a manufacturer's certification that the concrete anchors meet the required material and galvanizing specifications.

Payment for furnishing and installing Conduit System, complete in place, will be considered completely covered by the contract lump sum price for Conduit System on Structure.

DETAILS OF CONDUIT SYSTEM IN CORRAL CURBS

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

Detailed Nov. 2017
Checked Nov. 2017

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	26

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO. L09391

DESCRIPTION	DATE

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

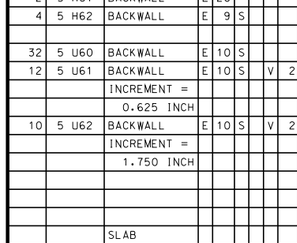
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
			END BENT 1																									
2	5	H10	BACKWALL	E	20					53	4.000													53	4	53	4	111
1	5	H11	BACKWALL	E	20					48	4.000													48	4	48	4	50
2	5	H12	BACKWALL	E	20					53	9.000													53	9	53	9	112
1	5	H13	BACKWALL	E	20					48	9.000													48	9	48	9	51
43	5	U10	BACKWALL	E	10	S						16.500		9.000										3	6	3	4	149
6	5	U11	BACKWALL	E	10	S		V	1			18.500		9.000										3	10	3	8	
			INCREMENT =									19.375		9.000										4	0	3	9	23
			0.250 INCH																									
5	5	U12	BACKWALL	E	10	S		V	1			16.250		9.000										3	6	3	3	
			INCREMENT =									11.250		9.000										2	8	2	5	15
			2.500 INCH																									
			END BENT 6																									
4	5	H60	BACKWALL	E	20					53	9.000													53	9	53	9	224
2	5	H61	BACKWALL	E	20					43	9.000													43	9	43	9	91
4	5	H62	BACKWALL	E	9	S					18.000	2	0.000	11	10.000					3.000		23.750		15	4	15	2	63
32	5	U60	BACKWALL	E	10	S						16.500		9.000										3	6	3	4	111
12	5	U61	BACKWALL	E	10	S		V	2			2	2.375	9.000										5	2	4	11	
			INCREMENT =									2	0.625	9.000										4	10	4	8	60
			0.625 INCH																									
10	5	U62	BACKWALL	E	10	S		V	2			23.250		9.000										4	8	4	5	
			INCREMENT =									19.750		9.000										4	1	3	10	43
			1.750 INCH																									
			SLAB																									
35	4	S1	SLAB	E	20					40	11.000													40	11	40	11	957
2	4	S2	SLAB	E	20					41	6.000													41	6	41	6	55
1	4	S3	SLAB	E	20					41	1.000													41	1	41	1	27
5	4	S4	SLAB	E	20					40	10.000													40	10	40	10	136
4	4	S5	SLAB	E	20					40	8.000													40	8	40	8	109
204	4	S6	SLAB	E	20					35	0.000													35	0	35	0	4770
12	5	S7	SLAB	E	9	S		V	1		18.000		10.875	6	11.000					1.250		10.750		9	4	9	2	
			INCREMENT =								18.000		4.500	6	11.000					0.500		4.500		8	10	8	8	112
			0.500 INCH																									
584	5	S8	SLAB	E	9	S					18.000		11.125	6	11.000					1.250		11.000		9	4	9	2	5584
10	5	S9	SLAB	E	9	S		V	1		18.000		10.625	6	11.000					1.250		10.500		9	4	9	2	
			INCREMENT =								18.000		5.125	6	11.000					0.625		5.125		8	10	8	8	93
			0.625 INCH																									
2	4	S10	SLAB	E	23	S					2	11.875	15.875	8	2.000	8	2.000	0.125	2	4.000		22.500		12	6	12	4	16
41	4	S11	SLAB	E	20					46	6.000													46	6	46	6	1274
381	4	S12	SLAB	E	20					60	0.000													60	0	60	0	15270
35	4	S13	SLAB	E	20					32	8.000													32	8	32	8	764
8	4	S14	SLAB	E	20					19	2.000													19	2	19	2	102
8	4	S15	SLAB	E	20					30	3.000													30	3	30	3	162
55	4	S16	SLAB	E	20					19	2.000													19	2	19	2	704
39	4	S17	SLAB	E	20					46	6.000													46	6	46	6	1211
2	4	S18	SLAB	E	20					47	2.000													47	2	47	2	63
1	4	S19	SLAB	E	20					46	9.000													46	9	46	9	31
5	4	S20	SLAB	E	20					46	5.000													46	5	46	5	155
4	4	S21	SLAB	E	20					46	3.000													46	3	46	3	124
208	4	S22	SLAB	E	20					46	3.000													46	3	46	3	6426

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
			CURB																									
47	5	K1	CORRAL CURB	E	10	S						3	0.000	9.500										6	10	6	7	323
18	5	K2	CORRAL CURB	E	10	S						4	3.000	9.000										9	3	9	1	171
✳ 4	5	K3	CORRAL CURB	E	20					12	3.000													12	3	12	3	51
✳ 4	5	K4	CORRAL CURB	E	20					13	3.000													13	3	13	3	55
12	5	K5	CORRAL CURB	E	19	S				5	1.000	12.000												6	1	6	0	75
12	5	K6	CORRAL CURB	E	19	S				5	10.000	12.000												6	10	6	9	84
✳ 8	5	K7	CORRAL CURB	E	20					13	8.000													13	8	13	8	114
✳ 8	5	K8	CORRAL CURB	E	20					14	5.000													14	5	14	5	120
474	5	R1	CORRAL CURB	E	19	S				3	8.000	16.000												5	0	4	11	2431
474	5	R2	CORRAL CURB	E	21	S					12.000	20.000		4	5.750					12.000		0.875		7	2	6	11	3419
474	5	R3	CORRAL CURB	E	10							2	5.000	9.500										5	8	5	5	2678
8	5	R4	CORRAL CURB	E	20					30	6.000													30	6	30	6	254
8	5	R5	CORRAL CURB	E	20					31	9.000													31	9	31	9	265
16	5	R6	CORRAL CURB	E	20					34	9.000													34	9	34	9	580
16	5	R7	CORRAL CURB	E	20					39	9.000													39	9	39	9	663
16	5	R8	CORRAL CURB	E	20					32	6.000													32	6	32	6	542
112	5	R9	CORRAL CURB	E	20					9	9.000													9	9	9	9	1139
8	5	R10	CORRAL CURB	E	20					28	3.000													28	3	28	3	236
10	5	R11	CORRAL CURB	E	20					13	2.000													13	2	13	2	137
✳ 5	5	R12	BARRIER CURB	E	20			V	1	17	10.000													17	10	17	10	
			INCREMENT =							18	2.000													18	2	18	2	94
			1.000 INCH																									
✳ 5	5	R13	BARRIER CURB	E	20					16	11.000													16	11	16	11	88
29	5	R14	BARRIER CURB	E	14	S				3	0.500		5.250	3	1.125					3	0.500	7.000		6	7	6	5	194
1	5	R15	BARRIER CURB	E	14	S				3	0.500		6.375	3	1.750					3	0.500	9.500		6	9	6	7	7
4	5	R16	BARRIER CURB	E	14	S					13.000	2	3.750		14.000						14.000		1.000	4	7	4	4	18
✳ 5	5	R17	BARRIER CURB	E	20					6	4.000													6	4	6	4	33
✳ 5	5	R18	BARRIER CURB	E	20			V	1	6	9.000													6	9	6	9	
			INCREMENT =							6	11.000													6	11	6	11	36
			0.500 INCH																									
35	5	R19	BARRIER CURB	E	51	S				2	7.000		11.625		15.000		15.000		0.750	2	6.750	4.000		4	10	4	7	167
35	5	R20	BARRIER CURB	E	50	S					18.000		10.000		15.000						15.000		1.125	3	7	3	4	122
4	5	R21	CORRAL CURB	E	10	S						3	3.000		13.000									7	7	7	5	31
4	5	R22	CORRAL CURB	E	28	S							13.000	2	5.000	13.000								4	7	4	5	18
4	5	R23	CORRAL CURB	E	50	S					18.000		10.000		14.000						14.000		1.000	3	6	3	3	14
8	5	R24	BARRIER CURB	E	14	S		V	1	3	3.000		12.375	3	3.000					3	3.000	0.625		7	6	7	4	
			INCREMENT =							3	3.000		5.125	3	3.750					3	3.000	7.875		7	0	6	10	59
			0.875 INCH																									
1	5	R25	BARRIER CURB	E	14	S					10.000	2	3.750		13.000						13.000		1.000	4	3	4	0	4
1	5	R25	BARRIER CURB	E	14	S					10.375	2	3.750		14.750						14.750		1.000	4	5	4	2	4
1	5	R25	BARRIER CURB	E	14	S					10.787	2	3.750		16.125						16.125		1.000	4	7	4	4	5
1	5	R25	BARRIER CURB	E	14	S					11.250	2	3.750		18.125						18.125		1.000	4	9	4	7	5
1	5	R25	BARRIER CURB	E	14	S					11.625	2	3.750		21.000						21.000		1.000	5	0	4	10	5
1	5	R25	BARRIER CURB	E	14	S					12.000	2	3.750		23.375						23.375		1.000	5	3	5	1	5
1	5	R25	BARRIER CURB	E	14	S					12.375	2	3.750	2	3.000						2 3.000		1.000	5	7	5	5	6
1	5	R25	BARRIER CURB	E	14	S					12.750	2	3.750	2	7.000						2 7.000		1.000	6	0	5	9	6
8	5	R26	BARRIER CURB	E	27	S							10.000		15.000	4.250	12.000				14.750		2.875	3	5	3	3	27
1	5	R27	CORRAL CURB	E	50	S					18.000		10.000		13.000						13.000		1.000	3	5	3	2	3
1	5	R27	CORRAL CURB	E	50	S					18.000		10.000		14.750						14.750		1.000	3	7	3	4	3
1	5	R27	CORRAL CURB	E	50	S					18.000		10.000		16.125						16.125		1.000	3	8	3	5	4
1	5	R27	CORRAL CURB	E	50	S					18.000		10.000		18.125						18.125		1.000	3	10	3	7	4
1	5	R27	CORRAL CURB	E	50	S					18.000		10.000		21.000						21.000		1.000	4	1	3	10	4
1	5	R27	CORRAL CURB	E	50	S					18.000		10.000		23.375						23.375		1.000	4	3	4	1	4
1	5	R27	CORRAL CURB	E	50	S					18.000		10.000	2	3.000						2 3.000		1.000	4	7	4	4	5
1	5	R27	CORRAL CURB	E	50	S					18.000		10.000	2	7.000						2 7.000		1.000	4	11	4	8	5

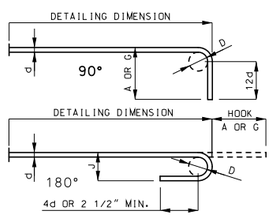


STIRRUP HOOK DIMENSIONS

GRADES 40 - 50 - 60 KSI

BAR SIZE	D (IN.)	90° HOOK HOOK A OR G	135° HOOK HOOK A OR G	135° HOOK 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.

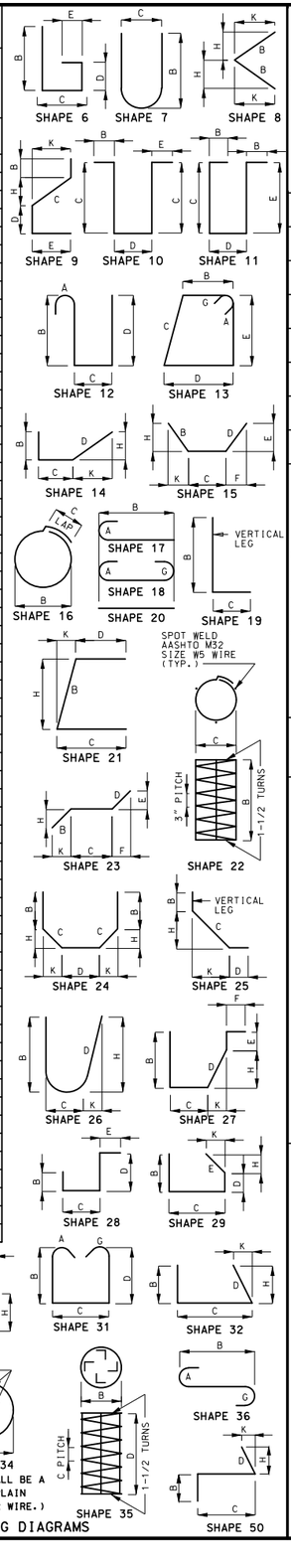


END HOOK DIMENSIONS

BAR SIZE	D (IN.)	ALL GRADES 180° HOOKS A OR G	180° HOOKS J	90° HOOKS 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"

✳ Field Bend

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.



BENDING DIAGRAMS

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 27
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09391

DESCRIPTION | DATE

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

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

Detailed Dec. 2017
Checked Dec. 2017

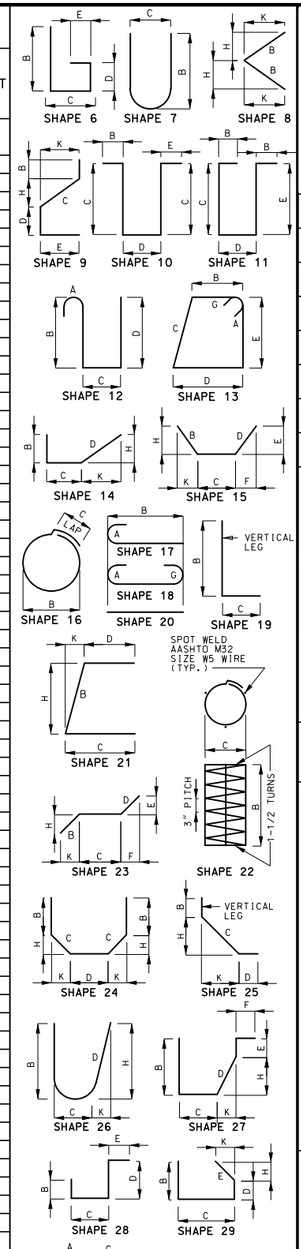
Note: This drawing is not to scale. Follow dimensions.

BILL OF REINFORCING STEEL

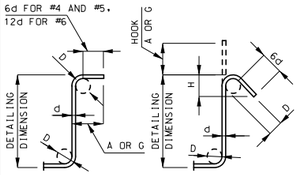
NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT. IN.	C FT. IN.	D FT. IN.	E FT. IN.	F FT. IN.	H FT. IN.	K FT. IN.	NOMINAL LENGTH FT. IN.	ACTUAL LENGTH FT. IN.	WEIGHT LBS.
14	5	R28	CORRAL CURB	E	13	S				12.750	22.500	12.750	22.500				6 10	6 6	95
14	5	R29	CORRAL CURB	E	30	S				10.000	18.000	22.500	18.000	10.000	12.750	12.750	6 7	6 7	96
8	5	R30	CORRAL CURB	E	10	S					2 6.000	11.500					6 0	5 9	48
3	5	R31	CORRAL CURB	E	20					5 0.000							5 0	5 0	16
12	6	V1	CORRAL CURB	E	20					4 6.000							4 6	4 6	81
			TOTALS																
	4			E															32356
	5			E															21464
	6			E															81
			TOTAL																0
			TOTAL	E															53901
			Slab on Girder																
	4			E															32356
	5			E															20579
	6			E															81
			TOTAL																53016
			Safety Barrier Curb																
	5			E															885
			TOTAL	E															885

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT. IN.	C FT. IN.	D FT. IN.	E FT. IN.	F FT. IN.	H FT. IN.	K FT. IN.	NOMINAL LENGTH FT. IN.	ACTUAL LENGTH FT. IN.	WEIGHT LBS.

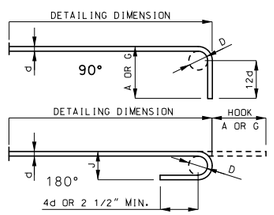


BENDING DIAGRAMS



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		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"	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.
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ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.
PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.
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REINFORCING STEEL (GRADE 60) FY = 60,000 PSI.

Detailed Dec. 2017
Checked Dec. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
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DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 28
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09391

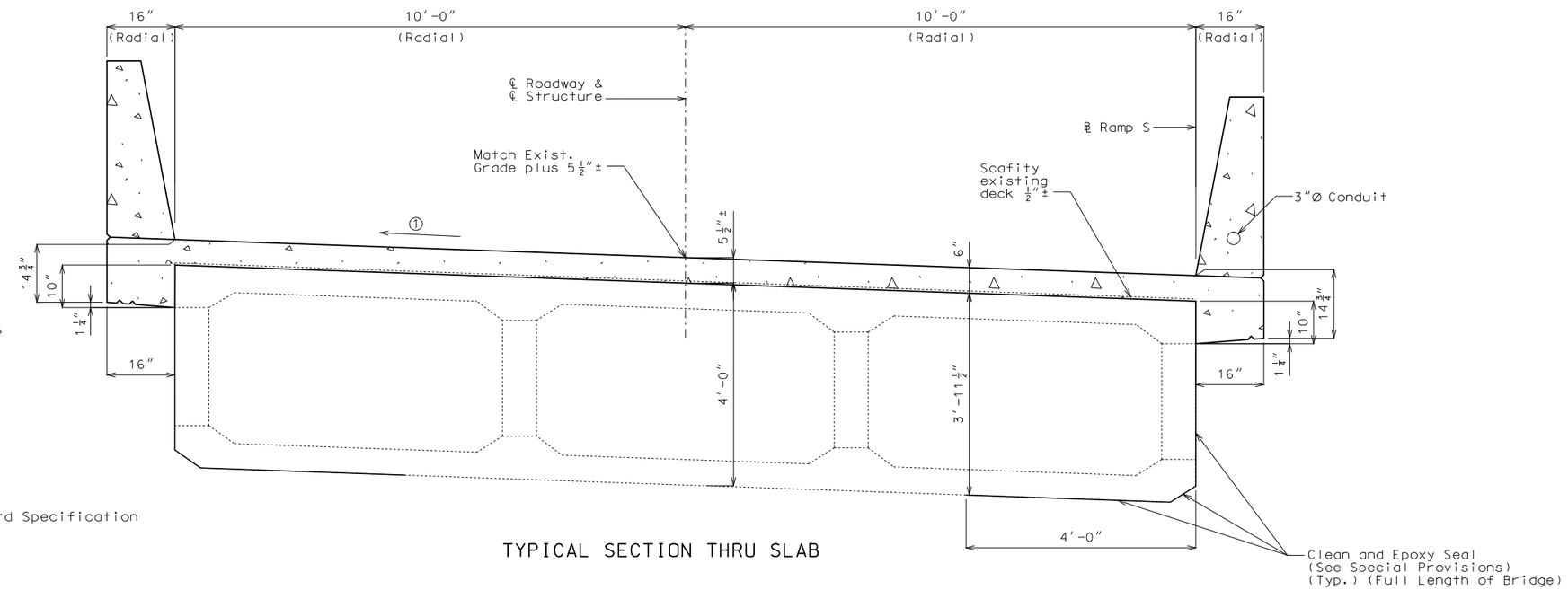
DESCRIPTION | DATE

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

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

SEC/SUR 5 TWP 49N RGE 33W

U.I.P. AND REHABILITATE EXISTING (53′-77′-59′) CONTINUOUS CONCRETE BOX GIRDER SPANS



TYPICAL SECTION THRU SLAB

①

Sta.	Slope
0+57.00	= 5.75%
0+75.00	= 4.85%
1+00.00	= 3.90%
1+25.00 to 3+70.00	= 3.00%

General Notes:

Design Specifications:

2002 - AASHTO (17th Edition) Standard Specification
Load Factor Design
Seismic Performance Category A
Bridge Deck Rating = 5

Design Loading:

H20-S16-44 (1953)
HS20-44 (New Construction)
35 lb/sf Future Wearing Surface

Design Unit Stresses:

Class B-1 Concrete (Barrier Curb)	f′c = 4,000 psi
Class B-2 Concrete (All rehab except for Barrier Curb)	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 old concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, old bars shall extend into new concrete at least 40 diameters for smooth bars and 30 diameters for deformed bars, unless otherwise noted.

Outline of old 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.

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

Protective Coating:

Protective coating for concrete bents and piers (Epoxy) shall be applied as shown on bridge plans and in accordance with Sec 711.

Traffic Handling:

Structure to be closed during construction.

Estimated Quantities

Item		Total
Scarification of Bridge Decks	sq. yard	438
Partial Removal of Existing Bridge Deck	sq. foot	1242
Removal of Existing Expansion Joint & Adjacent Concrete	linear foot	20
Reinforced Concrete Slab Overlay	sq. yard	500
✳ Barrier Curb (Type D)	linear foot	404
Substructure Repair (Unformed)	sq. foot	30
Repairing Concrete Deck (Half-Soling)	sq. foot	100
Clean and Epoxy Seal	sq. foot	2726
Conduit System on Structure	lump sum	1
Protective Coating - Concrete Bents and Piers (Epoxy)	lump sum	1
Strip Seal Expansion Joint System	linear foot	20

✳ Safety barrier curb shall be cast-in-place option or slip-form option.

Estimated Quantities for Reinforced Concrete Slab Overlay

Item		Total
Class B-2 Concrete	cu. yard	111
Reinforcing Steel (Epoxy Coated)	pound	13470

The table of Estimated Quantities Reinforced Concrete Slab Overlay represents the quantities used by the State in preparing the cost estimate for concrete slab overlay and sidewalks. The area of the concrete slab overlay will be measured to the nearest square yard from end of slab to end of slab and the overall width shown in the Typical Section Thru Slab. Payment for conventional forms, all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab overlay. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slabs shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type I, II or III.

Class B-2 concrete quantity is based on minimum 6″ slab overlay thickness.

REPAIRS TO BRIDGE: RAMP S FROM 10th STREET TO I-70 EB OVER RAMP U FROM I-70 EB TO 11th STREET

ROUTE I-70 FROM ROUTE I-670 TO ROUTE I-55
IN KANSAS CITY
MILES FROM
BEGINNING STATION 0+26.19± (MATCH EXISTING)

STD. 901.00
STD. 617.10
STD. 706.35

Detailed Nov. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09392

DESCRIPTION | DATE

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

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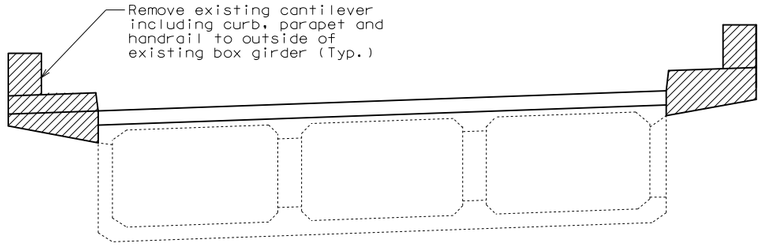
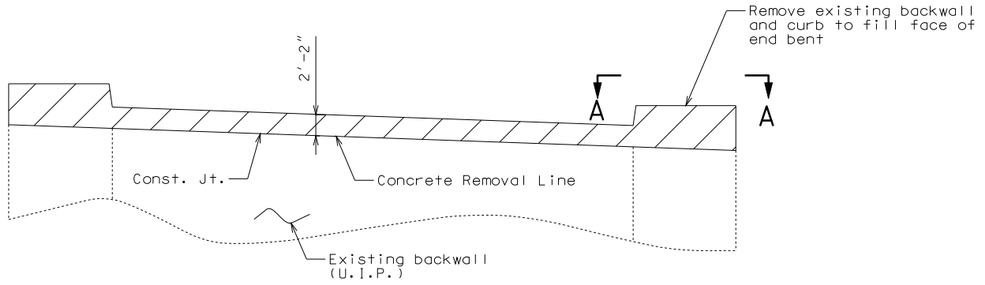


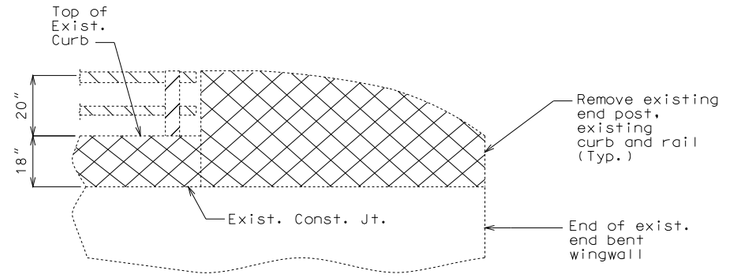
SECTION THRU SLAB SHOWING REMOVAL OF SLAB AND CANTILEVER SECTIONS



TYPICAL ELEVATION SHOWING CONCRETE REMOVAL AT END BENT NO. 4

Note:

Cost of removing existing backwall above upper const. joint and end of existing box girder (as shown on Sheet No. 5) will be considered completely covered by the contract unit price for Removal of Existing Expansion Joint and Adjacent Concrete.

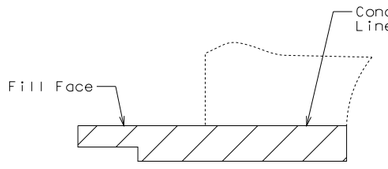


TYPICAL ELEVATION OF EXISTING END POST & CURB SHOWING CONCRETE REMOVAL AT END BENT NO. 4

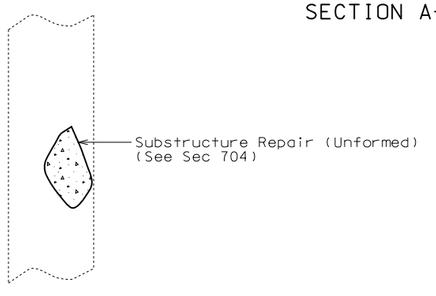
Note:

Cost of removing existing cantilevers (including end cantilever at Bent No. 1), end posts, curbs and rails will be considered completely covered by the contract unit price for Partial Removal of Existing Bridge Deck.

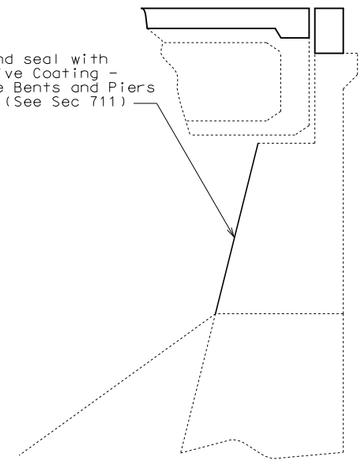
The area of removal will be measured to the nearest square foot from end of slab to fill face of Bent No. 4 and width from outside face of existing box girder to the outside face of existing bridge deck plus the end cantilever area of Bent No. 1.



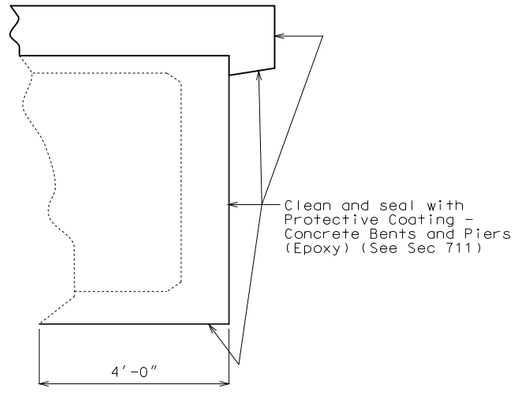
SECTION A-A



PART ELEVATION SHOWING SUBSTRUCTURE REPAIR AT INTERMEDIATE BENT NO. 3



TYPICAL SECTION SHOWING PROTECTIVE COATING AT ABUTMENT NO. 4



PART ELEVATION SHOWING PROTECTIVE COATING AT BENT NO. 1 AT END OF GIRDER

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

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DATE PREPARED 12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	2

COUNTY: JACKSON

JOB NO.: J4I3198

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: L09392

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

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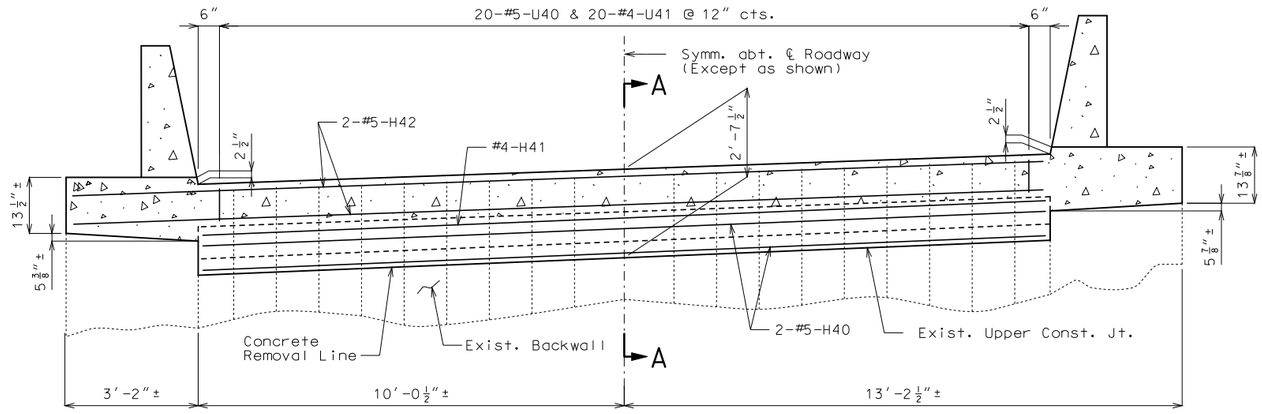
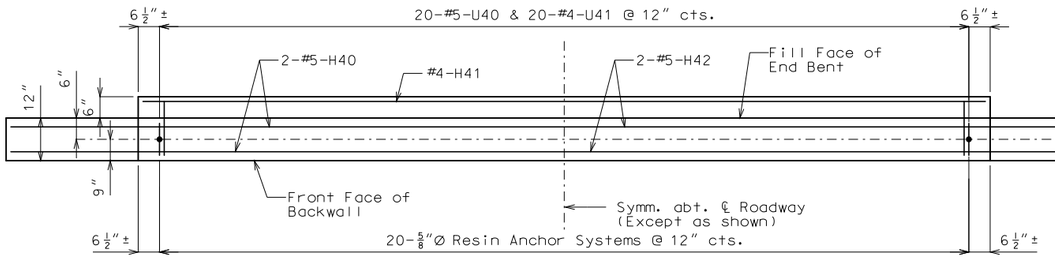
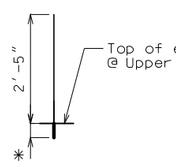


PART ELEVATION

(Resin Anchor Systems not shown for clarity)



PART PLAN



(20 req'd)

✳ Manufacturer's recommended embedment length (5″ min.)

DETAIL OF RESIN ANCHOR SYSTEM

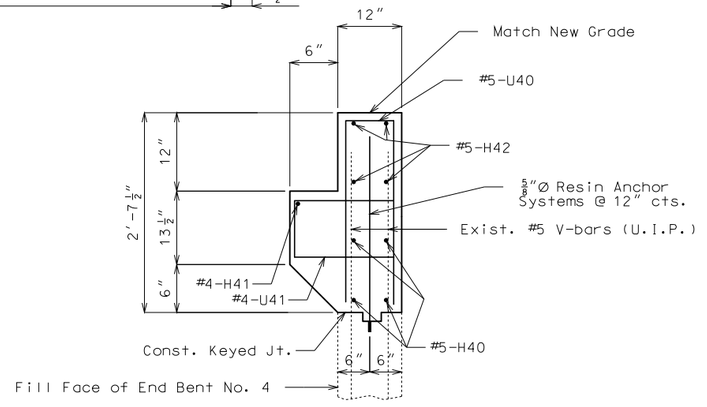
Notes:

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

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

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

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



SECTION A-A

Note:

Top of backwall for End Bent No. 4 shall be formed to the crown & grade of the roadway. Backwall above exist. upper const. joint shall not be poured until the slab is poured.

DETAILS OF END BENT NO. 4

Detailed Nov. 2017
Checked Nov. 2017

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STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER

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DATE PREPARED 12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	3

COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: L09392

DESCRIPTION | DATE

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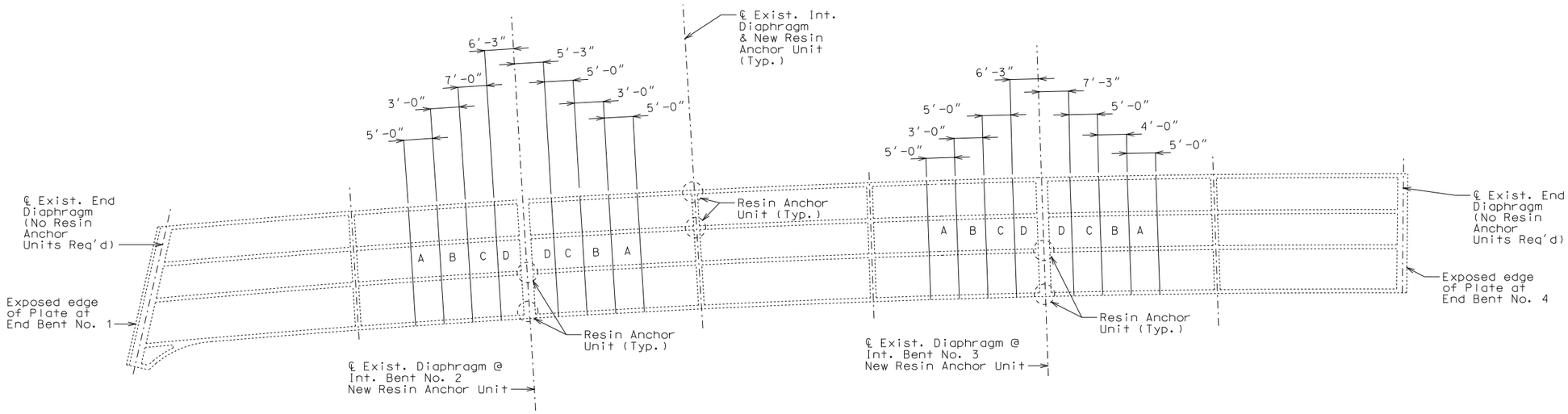
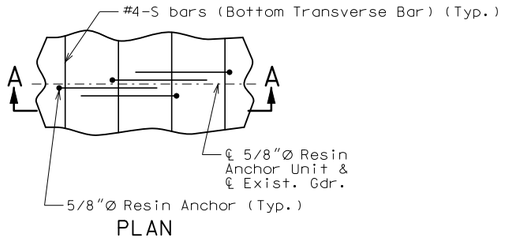


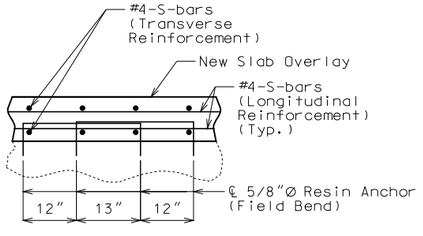
SPAN (1-2) SPAN (2-3) SPAN (3-4)

FRAMING PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES AND LOCATIONS OF RESIN ANCHOR UNITS

Note: Dimensions shown are horizontal dimensions along ℄ Roadway.



PLAN

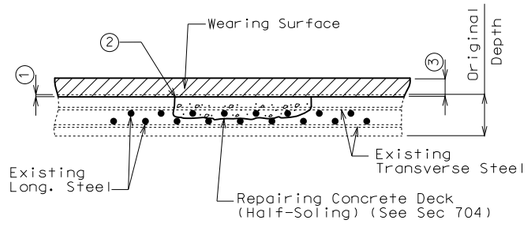


SECTION A-A

DETAIL OF RESIN ANCHOR UNIT

(24 Units Req′d, 4 Resin Anchors per Unit)

Note:
Locate Resin Anchor Units near the intersection of ℄ of existing girder & ℄ of existing int. diaphragms & ℄ of existing diaphragm @ Int. Bt. No. 2 & 3.



HALF-SOLED REPAIR

① Scarify existing deck ½″.

② One inch vertical side shall be established outside the deteriorated area. See Sec 704.

③ Installation of 6″ reinforced Slab Overlay.

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

Cost of furnishing and installing the resin anchor system, complete in place, will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

An epoxy coated #5 Grade 60 reinforcing bar 2′-0″ long shall be substituted for the 5/8″Ø threaded rod.

Notes:
Any half-soling required in the areas designated as special repair zones shall be completed in alphabetical sequence. Any repair in the remainder of the bridge that is adjacent to Zone A and not designated as a special repair zone shall be completed prior to work in Zone A.

Removal and repair shall be completed in one special repair zone and concrete shall have attained a compressive strength of 3200 psi before work can be started in the next special repair zone. Before placing concrete in areas adjacent to areas of subsequent repair, the concrete shall be separated with a material such as polyethylene sheets to aid in removal of old concrete.

Zones with the same letter designation may be repaired at the same time.

If any single repair area does not exceed 9 square feet in size and the total repair within a special repair zone does not exceed 27 square feet, the special repair zone requirement does not apply for that zone. Half-soling repair in the special repair zone, on either side of the intermediate bent, shall be to a depth that will not expose half the diameter of the longitudinal reinforcing bar. Full depth repair shall be made when removal of deteriorated concrete exposes half or more of the diameter of the longitudinal reinforcing bar.

Detailed Nov. 2017
Checked Nov. 2017

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STATE OF MISSOURI
DEAN DAVID FRANKE
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PROFESSIONAL ENGINEER

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DATE PREPARED
12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	4

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
L09392

DATE	DESCRIPTION

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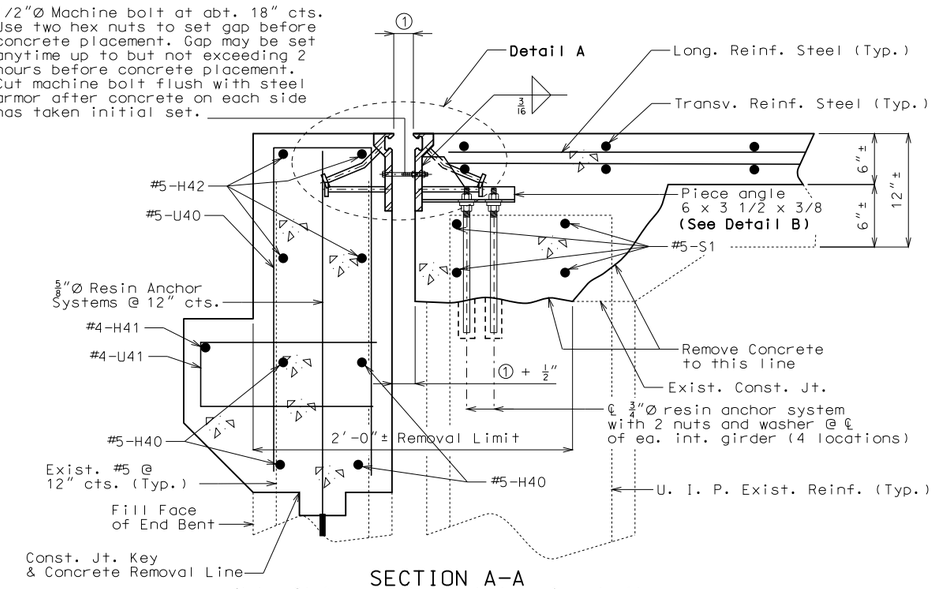
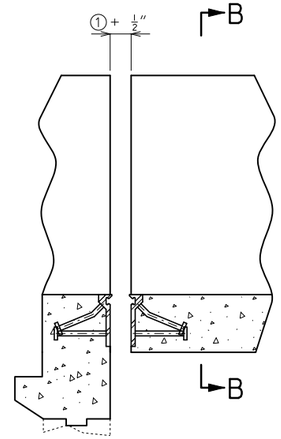
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



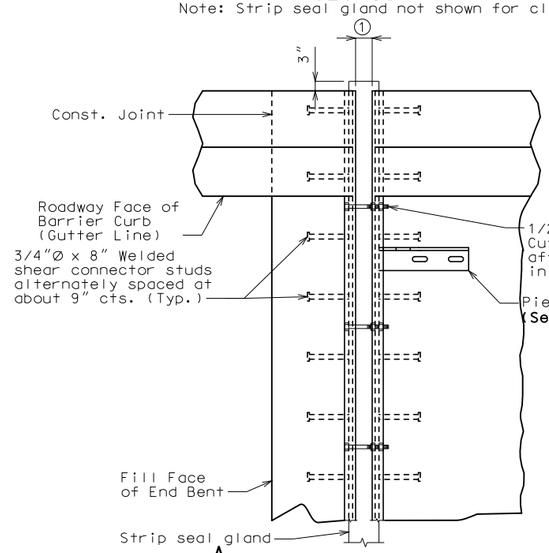
SECTION A-A

Note: Strip seal gland not shown for clarity.

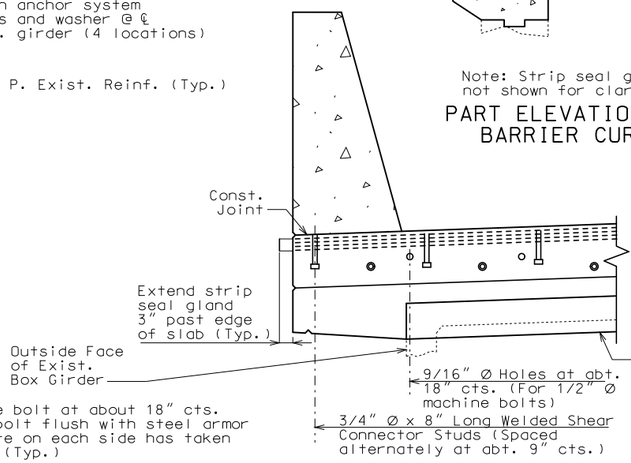


Note: Strip seal gland not shown for clarity.

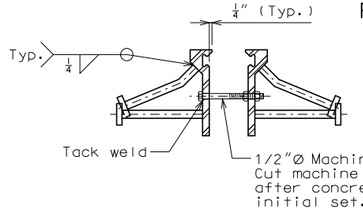
PART ELEVATION OF BARRIER CURB



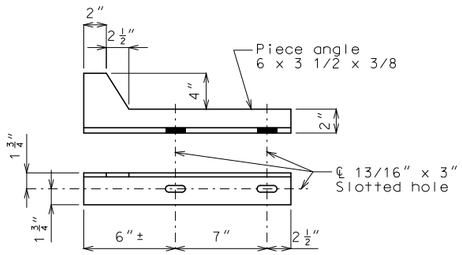
PART PLAN



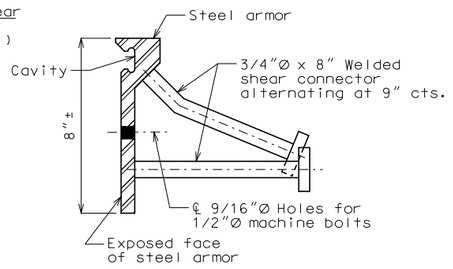
PART SECTION B-B



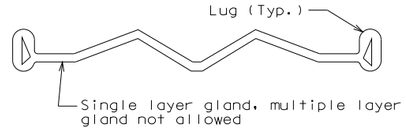
DETAIL A



DETAIL B



DETAIL OF JOINT ARMOR



DETAIL OF GLAND

GENERAL NOTES:

Expansion joint system shall be fabricated in one section, except for staged construction and when the length is over 50 feet. A complete joint penetration groove welded splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion joint system shall be fabricated and installed to the crown and grade of the roadway.

The strip seal gland shall be installed in joints in one continuous piece without field splices. Factory splicing will be permitted for joints in excess of 53 feet.

Structural steel for the expansion joint system shall be ASTM A709 Grade 36 except the steel armor may be ASTM A709 Grade 50W. Anchors for the expansion joint system shall be in accordance with Sec 1037. Strip seal expansion joint system shall be in accordance with Sec 717.

Structural steel for the expansion joint system shall be coated with a minimum of two coats of inorganic zinc primer (5 mils minimum) or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

Longitudinal reinforcing steel shall be placed so that ends shall be 1" from the vertical leg of the steel armor at the expansion joint system.

Concrete shall be forced under and around steel armor and anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

② The installation temperature shall be taken as the actual air temperature averaged over the 24-hour period immediately preceding installation.

③ MoDOT Construction personnel will indicate the strip seal expansion joint system installed.

Steel armor may also be referred to as extrusion or rail.

Table of Allowed Transverse Strip Seal Expansion Joint System

Manufacturer	Strip Seal System (Designated Name)	Movement Parallel to RDWY	① Allowed Installation Gap Normal to Joint at RDWY Surface @ Air/Surface Temerature ②						③
			@ 40°F	@ 50°F	@ 60°F	@ 70°F	@ 80°F	@ 90°F	
D S Brown	Strip seal L2-400	1"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□
D S Brown	Strip seal L2-500	1"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□
Watson Bowman Acme (Wabo)	Strip seal SE-300	1"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□
Watson Bowman Acme (Wabo)	Strip seal SE-400	1"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□
Watson Bowman Acme (Wabo)	Strip seal SE-500	1"	2 3/16"	2 1/16"	2"	1 15/16"	1 13/16"	1 3/4"	□

DETAILS OF STRIP SEAL EXPANSION JOINT SYSTEM AT END BENT NO. 4

Detailed Nov. 2017
Checked Nov. 2017

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

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DEAN DAVID FRANKE
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PROFESSIONAL ENGINEER
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COUNTY JACKSON
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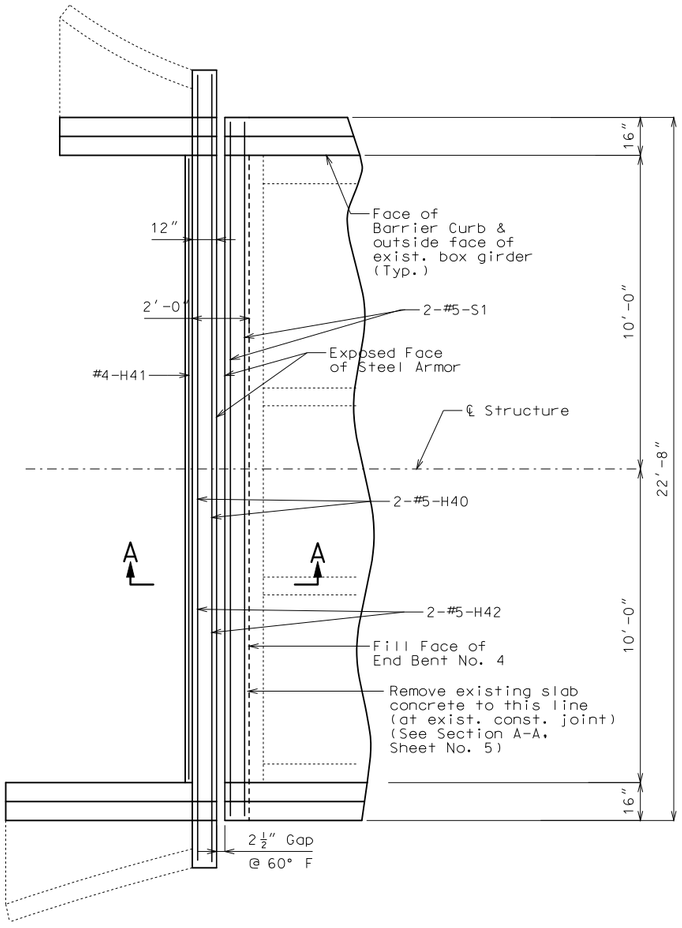

PART PLAN OF SLAB
AT END BENT NO. 4
SHOWING REINFORCEMENT

Note: Existing reinforcement (U.I.P.) not shown for clarity.

Notes:

For details of strip seal expansion joint system not shown, see Sheet No. 5.

#6-S bars shall be shifted where necessary to clear shear connector studs on the expansion joint system.

Payment for slab and backwall concrete, complete in place, for expansion joint replacement will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

Payment for furnishing and installing reinforcing steel in slab & backwall for expansion joint will be considered completely covered by the contract unit price for Reinforced Concrete Slab Overlay.

Cost of removing existing expansion joint, slab & backwallconcrete within the limits shown will be considered completely covered by the contract unit price for Removal of Existing Expansion Joints & Adjacent Concrete.

DETAILS OF SLAB REPLACEMENT AT END BENT NO. 4

Detailed Nov. 2017
Checked Nov. 2017

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NUMBER PE-28132
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	6

COUNTY
JACKSON

JOB NO.
J4I3198

CONTRACT ID.

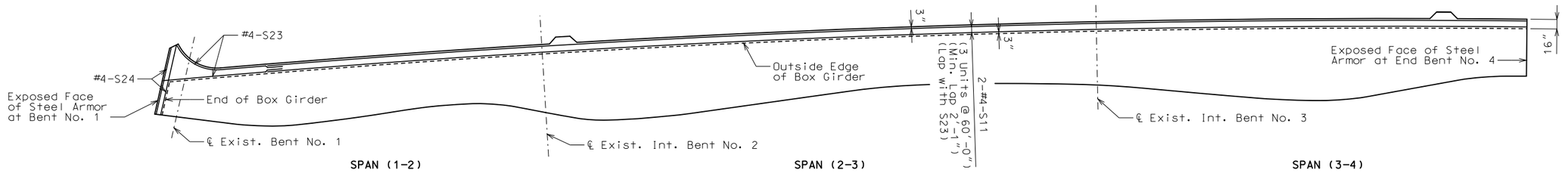
PROJECT NO.

BRIDGE NO.
L09392

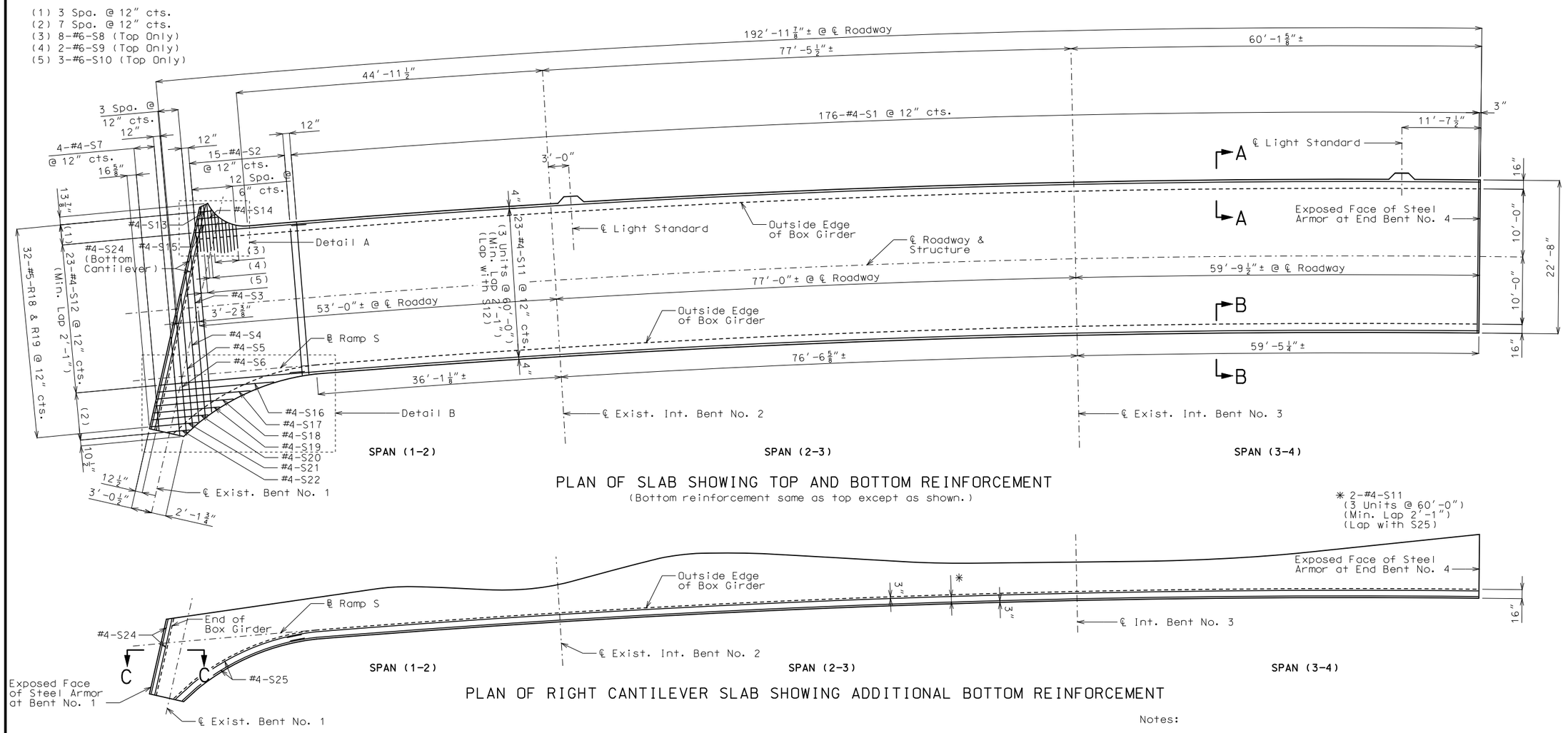
DESCRIPTION	DATE

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

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



PLAN OF LEFT CANTILEVER SLAB SHOWING ADDITIONAL BOTTOM REINFORCEMENT



PLAN OF SLAB SHOWING TOP AND BOTTOM REINFORCEMENT

(Bottom reinforcement same as top except as shown.)

PLAN OF RIGHT CANTILEVER SLAB SHOWING ADDITIONAL BOTTOM REINFORCEMENT

Notes:

Transverse bars shall be place radially along outside of curve as shown.

For Section A-A, B-B & C-C and Detail A & B, see Sheet No. 8.

For Section Thru Slab, see Sheet No. 8.

For details and reinforcement of Type D Barrier Curb, see Sheet No. 9-12.

SLAB DETAILS

Detailed Nov. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
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DATE PREPARED: 12/21/2017
ROUTE: I-70 | STATE: MO
DISTRICT: BR | SHEET NO.: 7
COUNTY: JACKSON
JOB NO.: J4I3198
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: L09392

DESCRIPTION | DATE

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105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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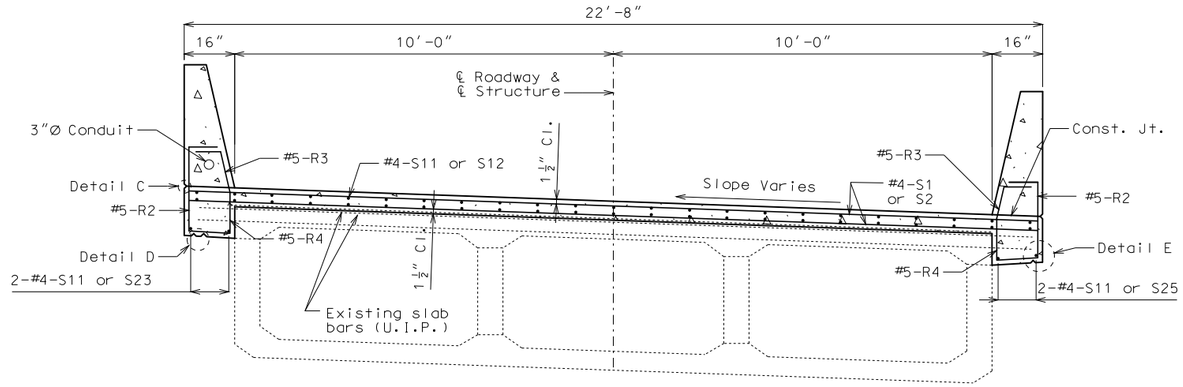
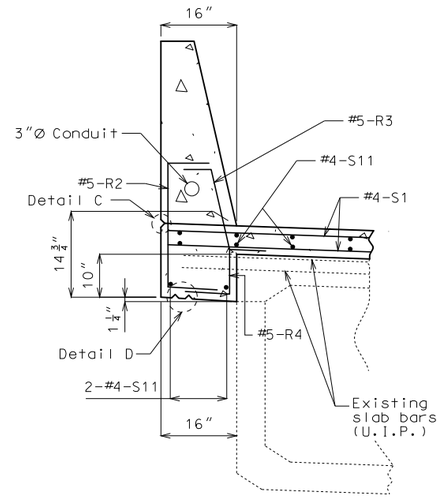
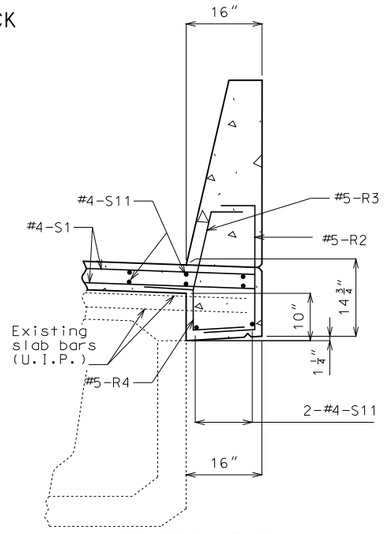


TYPICAL SECTION THRU EXISTING DECK



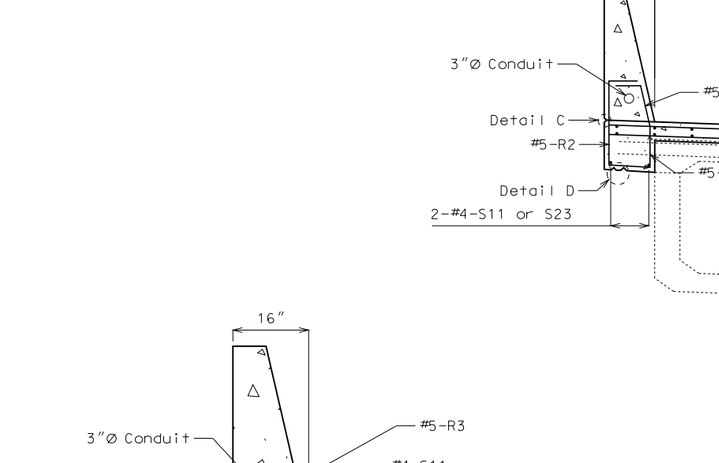
SECTION A-A



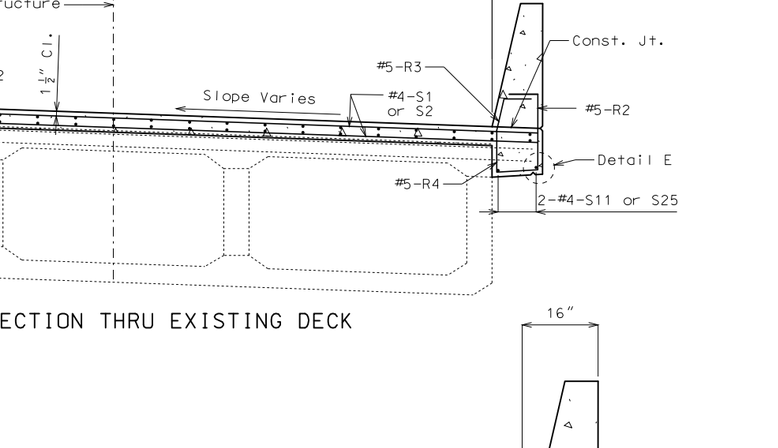
SECTION B-B

Note:

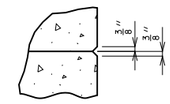
The contractor shall pour upgrade and satisfactorily finish the slab pours at the rate of 25 cu. yd. per hr. Retarder, if used, shall be an approved type and retard the set of concrete to 2.5 hours.



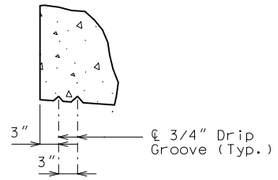
DETAIL A



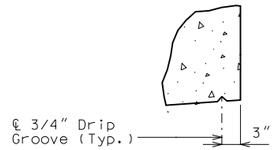
DETAIL B



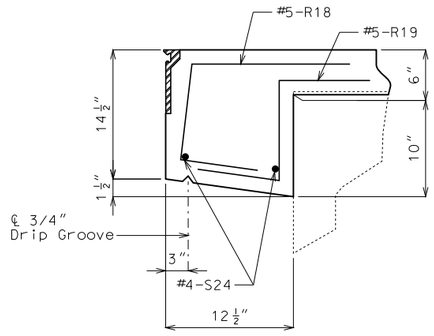
DETAIL C



DETAIL D



DETAIL E



SECTION C-C

Notes:

For Plan of Slab Showing Top and Bottom Reinforcement, Location of Section A-A, B-B & C-C and Location of Detail A & B, see Sheet No. 7.

For details and reinforcement of Type D Barrier Curb, see Sheets No. 9 thru 12.

SLAB DETAILS

Detailed Nov. 2017
Checked Nov. 2017

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

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DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
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DATE PREPARED 12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	8

COUNTY JACKSON

JOB NO. J4I3198

CONTRACT ID.

PROJECT NO.

BRIDGE NO. L09392

DATE	DESCRIPTION

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

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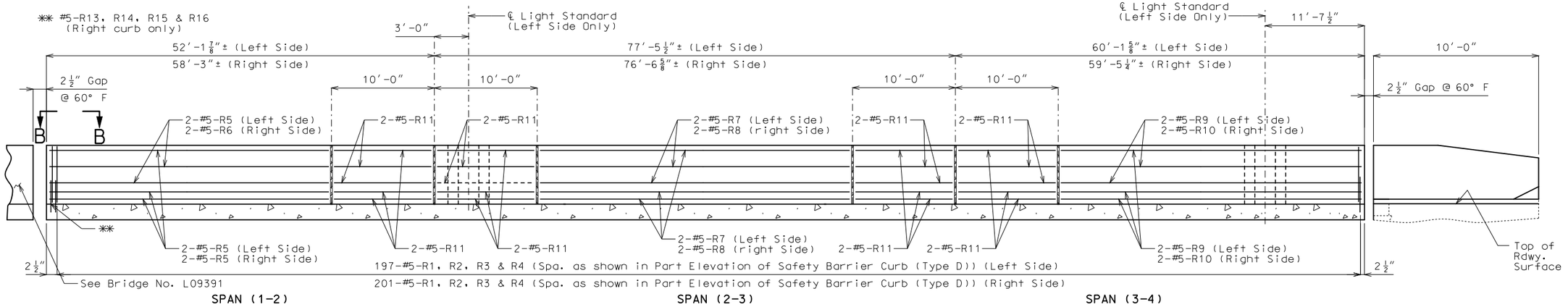
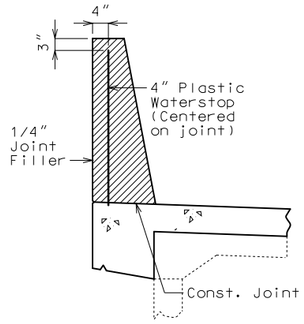


Note:

#5-R3 & R4 and R15 & R16 bars shall have the 12" and 20" horizontal leg field bent to align with the slab transverse steel. The R1, R2, R3 & R4 bars shall be placed perpendicular to the curb.

DEVELOPED ELEVATION OF BARRIER CURB (TYPE D)

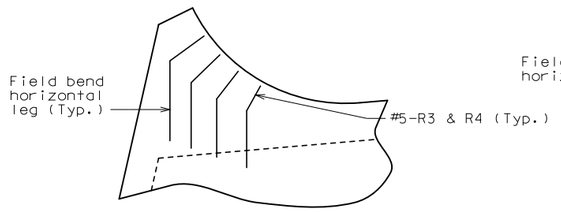
Longitudinal dimensions are horizontal along outside of curb.



PLASTIC WATERSTOP DETAIL

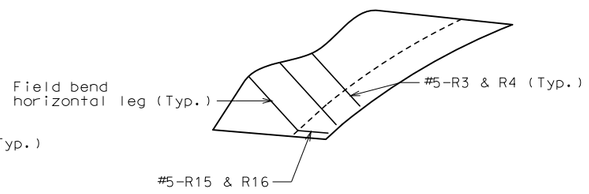
Plastic waterstop shall be placed in all barrier curb (Type D) filled joints, except structures with superelevation, use on all lower barrier curb (Type D) joints only.

Cost of plastic waterstop, complete in place, will be considered completely covered by the contract unit price for Barrier Curb (Type D).



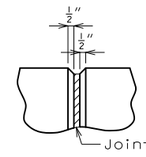
SECTION B-B SHOWING FIELD BENDING

(Left Side)

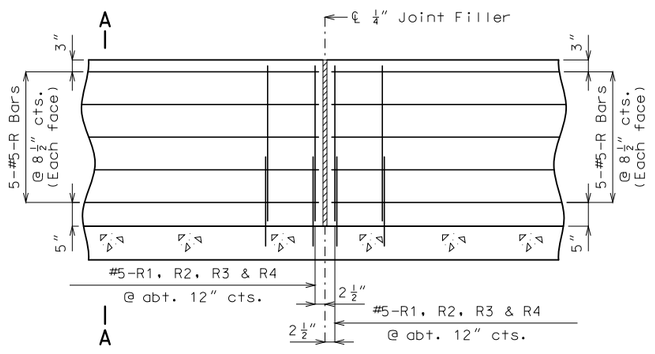


SECTION B-B SHOWING FIELD BENDING

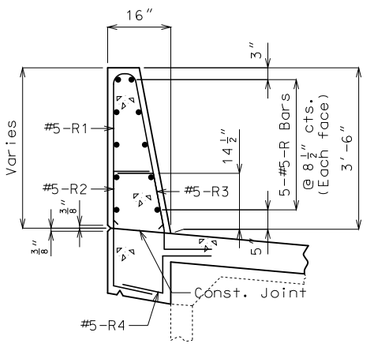
(Right Side)



FILLED JOINT DETAIL



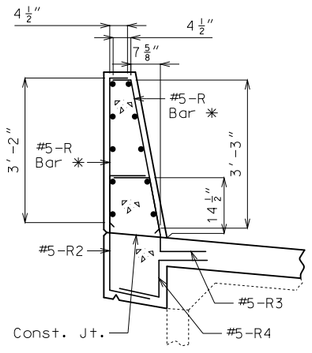
PART ELEVATION OF BARRIER CURB (TYPE D)



SECTION A-A

Use a minimum lap of 3'-1" for #5 horizontal barrier curb (Type D) bars.

The cross-sectional area above the slab = 3.52 sq. ft.



R-BAR PERMISSIBLE ALTERNATE SHAPE

* The R1 bar may be separated into two bars as shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)

General Notes

Top of barrier curb (Type D) shall be built parallel to grade with barrier curb joints (except at end bents) normal to grade.

All exposed edges of barrier curb (Type D) shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Barrier Curb (Type D) per linear foot.

Concrete in the barrier curb (Type D) shall be Class B-1.

Measurement of barrier curb (Type D) is to the nearest linear foot for each structure, measured along the outside top of slab from end to end.

Concrete traffic barrier delineators shall be placed on top of the barrier curb (Type D) as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Barrier Curb (Type D).

CONVENTIONAL-FORMED BARRIER CURB (TYPE D)

Detailed Nov. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
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DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 9
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09392

DESCRIPTION | DATE

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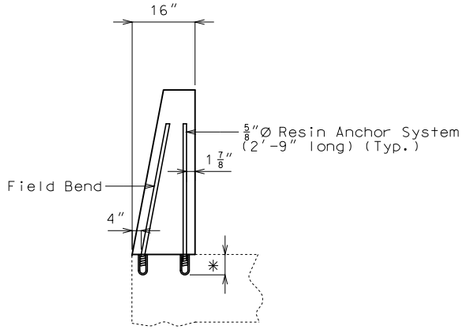
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



* Manufacturer's recommended embedment length (5" min.)

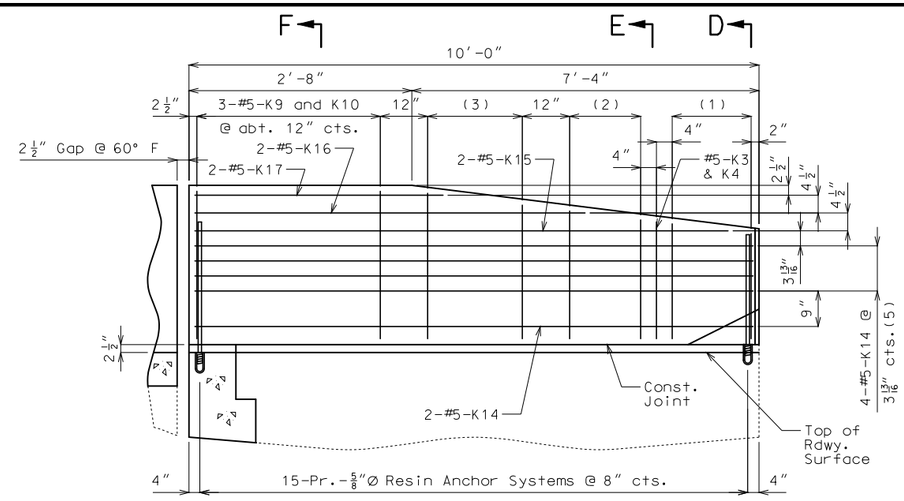
TYPICAL SECTION SHOWING RESIN ANCHORS

Notes:

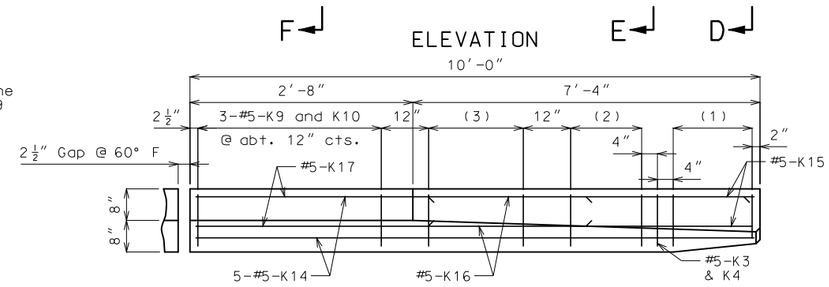
The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039.

The minimum embedment depth in concrete with f'c = 4.000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5".

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



ELEVATION



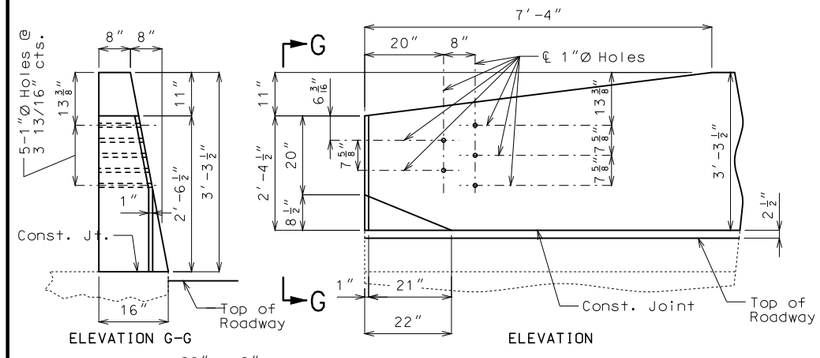
PLAN

(1) 6-#5-K1 and 6-#5-K2 @ 4" cts.

(2) 4-#5-K5 and 4-#5-K6 @ 6" cts.

(3) 3-#5-K7 and 3-#5-K8 @ 12" cts.

(4) (Each Face)



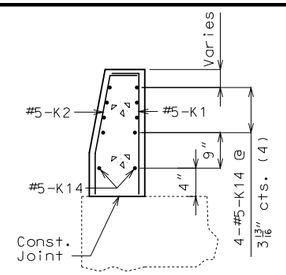
DETAILS OF GUARD RAIL ATTACHMENT

Note:

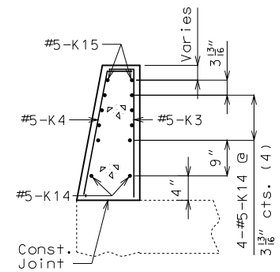
Concrete traffic barrier delineators shall be placed on top of the barrier curb (Type D) as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Barrier Curb (Type D).

CONVENTIONAL-FORMED BARRIER CURB (TYPE D) AT END BENT NO. 4

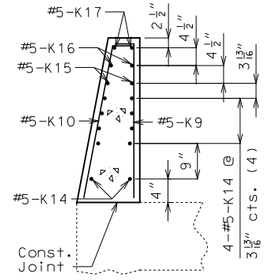
(Left barrier curb shown, right barrier curb similar)



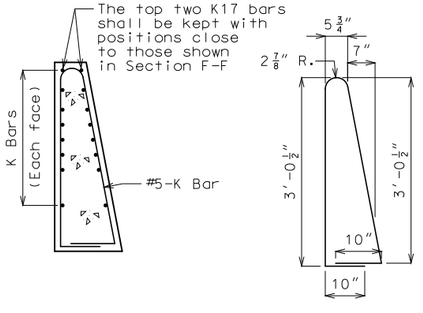
SECTION D-D



SECTION E-E



SECTION F-F



K9-K10 BAR PERMISSABLE ALTERNATE SHAPE

(Other K bars not shown for clarity)

The K9 and K10 bar combination may be furnished as one bar as shown, at the contractor's option.

STATE OF MISSOURI
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DATE PREPARED 12/21/2017

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	10

COUNTY: JACKSON

JOB NO.: J4I3198

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: L09392

DESCRIPTION | DATE

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Detailed Nov. 2017
Checked Nov. 2017

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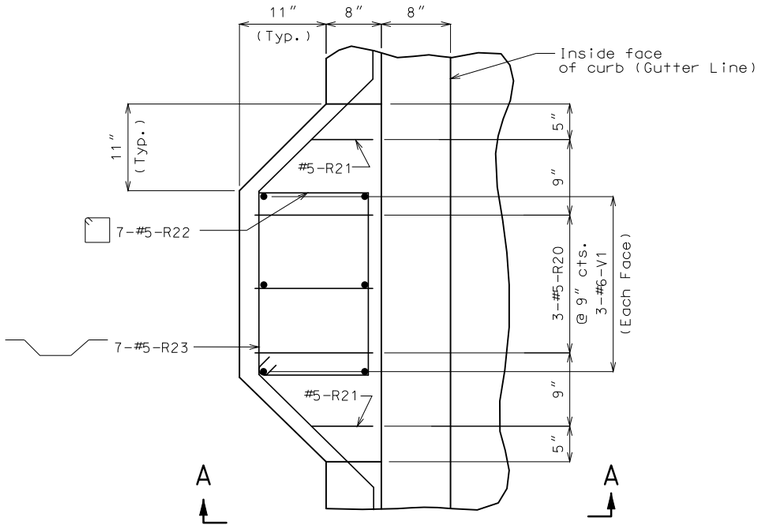
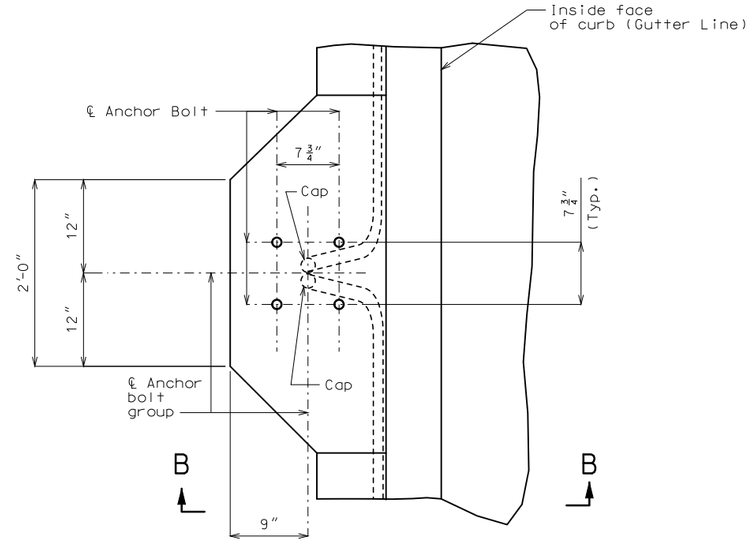
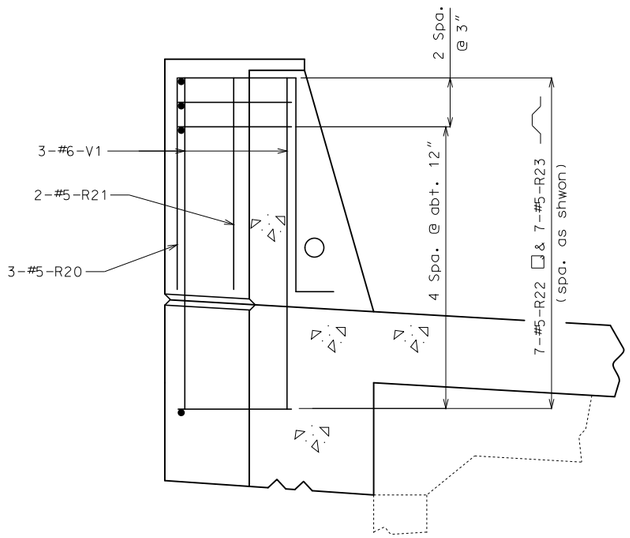


PART PLAN SHOWING REINFORCEMENT

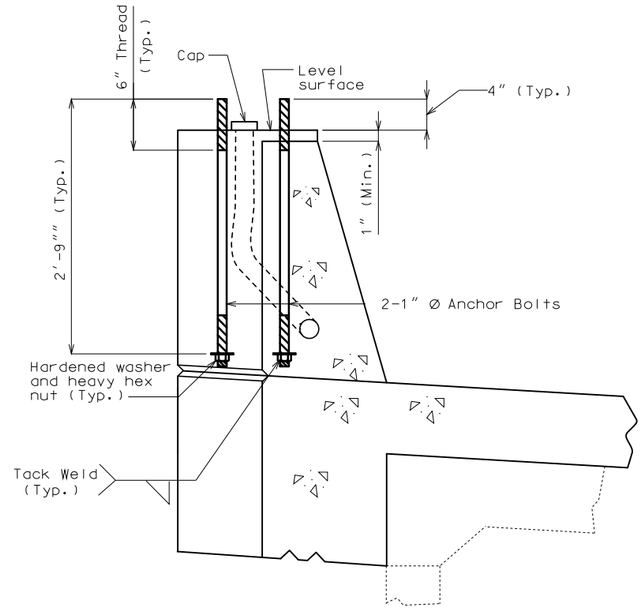
(Conduit not shown for clarity.)



PART PLAN SHOWING ANCHOR BOLTS



SECTION A-A



SECTION B-B

Notes:

Longitudinal dimensions are horizontal.

Anchor bolts and nuts shall be ASTM A449. Anchor bolts, nuts and washers shall be fully galvanized.

Cost of furnishing and placing anchor bolts for light standard will be considered completely covered by the contract unit price for other items.

Light standards, wiring and fixtures shall be furnished and installed by others.

Top of light standard supports shall be made horizontal; anchor bolts shall be placed vertically.

For Details of Conduit System on Structure, see Sheet No. 13.

DETAILS OF LIGHT STANDARD MOUNTING ON LEFT BARRIER CURB (2 REQ'D.)

Detailed Nov. 2017
Checked Nov. 2017

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COUNTY JACKSON

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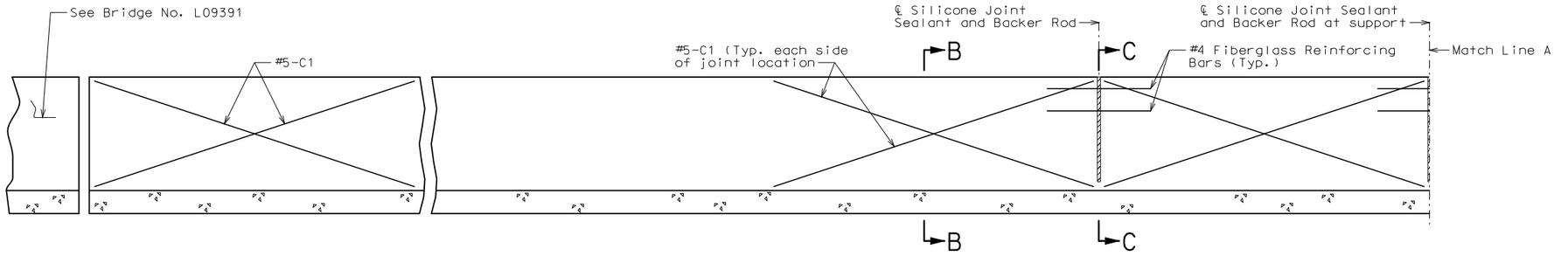
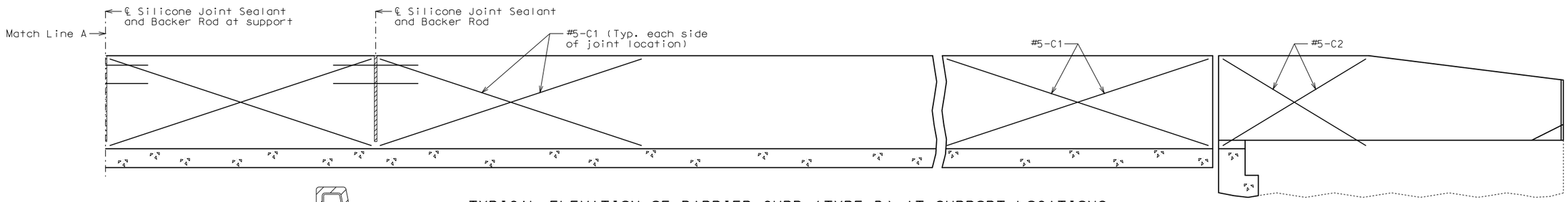
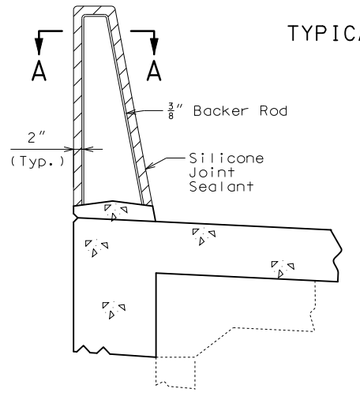
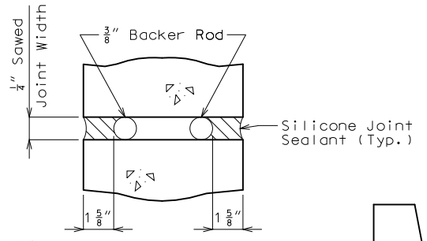




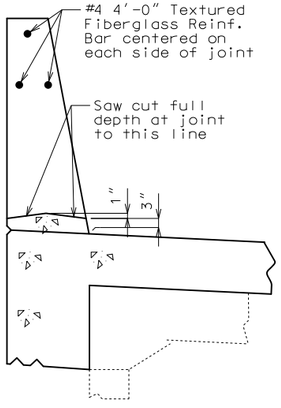
TYPICAL ELEVATION OF BARRIER CURB (TYPE D) AT SUPPORT LOCATIONS



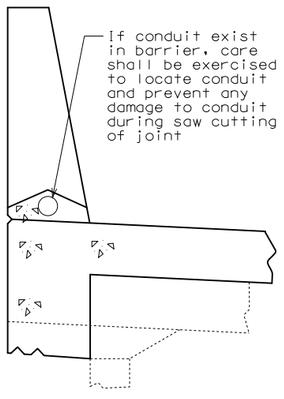
SECTION THRU JOINT



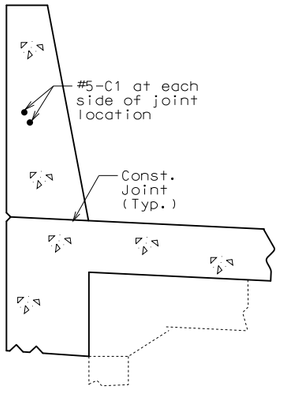
SECTION A-A



SECTION C-C



SECTION C-C



SECTION B-B

OPTIONAL SLIP-FORMED BARRIER CURB (TYPE D)

Use R bars and K bars similarly as shown for conventional-formed barrier curb (Type D).

General Notes:

Top of barrier curb (Type D) shall be built parallel to grade with barrier curb joints (except at end bents) normal to grade.

All exposed edges of barrier curb (Type D) shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Barrier Curb (Type D) per linear foot.

Concrete in the barrier curb (Type D) shall be Class B-1.

Measurement of barrier curb (Type D) is to the nearest linear foot for each structure, measured along the outside top of slab from end to end.

Concrete traffic barrier delineators shall be placed on top of the safety barrier curb as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Barrier Curb (Type D).

Joint sealant and backer rods shall be used on all slip-form barrier curbs instead of joint filler and shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

Plastic waterstop shall not be used with slip-form option.

For slip-form option, all sides of the safety barrier curb shall have a vertically broomed finish and the curb top shall have a transversely broomed finish.

Cost of silicone joint sealant and backer rod, complete in place, will be considered completely covered by the contract unit price for Barrier Curb (Type D).

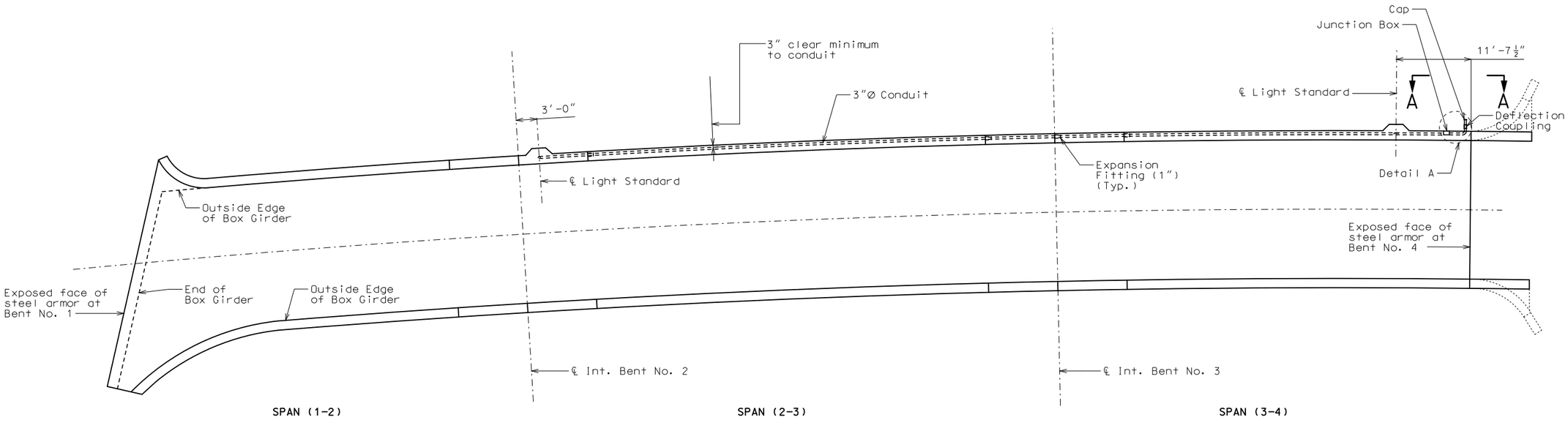
STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 12
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09392

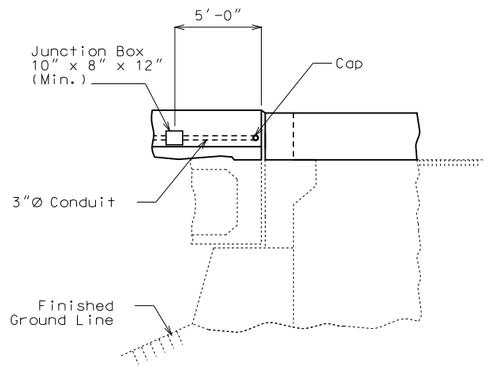
DESCRIPTION | DATE

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

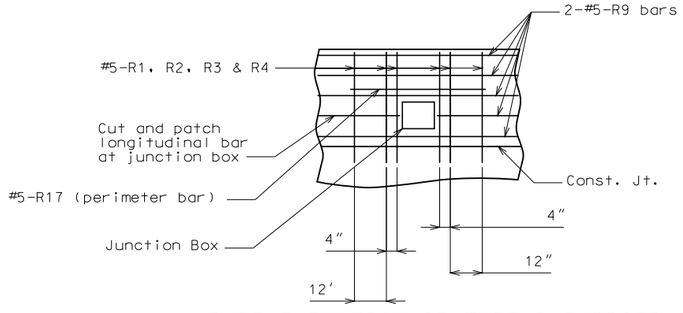
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



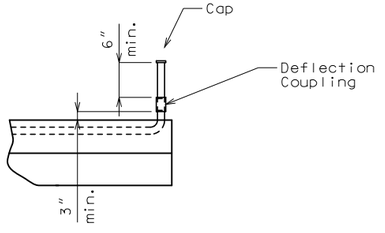
PLAN OF SLAB SHOWING CONDUIT IN TYPE D BARRIER CURB



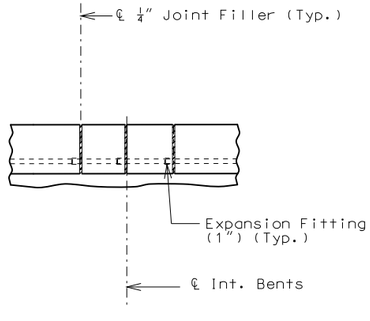
PART ELEVATION A-A AT END BENT 4



PART ELEVATION OF TYPE D BARRIER CURB SHOWING PERIMETER STEEL



DETAIL A



PART ELEVATION NEAR INT. BENT NO. 3

Notes:

All conduits shall be rigid nonmetallic schedule 40 heavy wall polyvinyl chloride (PVC) with 3″ minimum cover in concrete. Each section of conduit shall bear the Underwriters Laboratories (UL) label.

Shift reinforcing steel in field where necessary to clear conduit and junction boxes.

Expansion fittings shall be placed as shown and set in accordance with the manufacturer's requirements and based on the air temperature at the time of setting given an estimated total expansion movement 1 inch at filled joints using a maximum temperature range of 150° F and a maximum temperature of 120° F.

All end bent and corral curb junction boxes shall be PVC molded in accordance with Sec 1062 and designed for flush surface mounting. The conduit terminations shall be permanent or separable. The terminations and covers shall be of watertight construction and shall meet requirements for NEMA 4 enclosure.

Drainage shall be provided at low points or other critical locations of all conduits and all junction boxes in accordance with Sec 707. All conduits shall be sloped to drain where possible.

Payment for furnishing and installing Conduit System, complete in place, will be considered completely covered by the contract lump sum price for Conduit System on Structure.

DETAILS OF CONDUIT SYSTEM IN LEFT BARRIER CURB

Detailed Nov. 2017
Checked Nov. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 13
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09392

DESCRIPTION | DATE

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

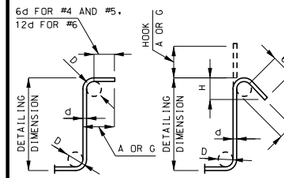
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
			END BENT 4																									
4	5	H40	BACKWALL	E	20					19	9.000													19	9	19	9	82
1	4	H41	APP NOTCH	E	20					19	9.000													19	9	19	9	13
4	5	H42	BACKWALL	E	20					26	2.000													26	2	26	2	109
20	5	U40	BACKWALL	E	10	S						2	4.500	9.000										5	6	5	4	111
20	4	U41	APP NOTCH	E	10	S						15.000		10.500										3	5	3	3	43
			SLAB																									
356	4	S1	SLAB	E	20					22	5.000													22	5	22	5	5331
30	4	S2	SLAB	E	20			V	2	21	9.000													21	9	21	9	
			INCREMENT =							26	1.000													26	1	26	1	479
			3.750 INCH																									
2	4	S3	SLAB	E	20					24	7.000													24	7	24	7	33
2	4	S4	SLAB	E	20					22	1.000													22	1	22	1	30
2	4	S5	SLAB	E	20					19	9.000													19	9	19	9	26
2	4	S6	SLAB	E	20					17	5.000													17	5	17	5	23
8	4	S7	SLAB	E	20			V	2	4	2.000													4	2	4	2	
			INCREMENT =							14	6.000													14	6	14	6	50
			41.375 INCH																									
8	6	S8	SLAB	E	20			V	1	3	4.000													3	4	3	4	
			INCREMENT =							6	0.000													6	0	6	0	56
			4.625 INCH																									
2	6	S9	SLAB	E	20					6	10.000													6	10	6	10	21
3	6	S10	SLAB	E	20			V	1	3	4.000													3	4	3	4	
			INCREMENT =							6	5.000													6	5	6	5	22
			18.500 INCH																									
150	4	S11	SLAB	E	20					60	0.000													60	0	60	0	6012
46	4	S12	SLAB	E	20			V	2	17	2.000													17	2	17	2	
			INCREMENT =							22	1.000													22	1	22	1	603
			2.625 INCH																									
2	4	S13	SLAB	E	20						21.000													0	21	0	21	2
2	4	S14	SLAB	E	20					2	11.000													2	11	2	11	4
2	4	S15	SLAB	E	20					4	6.000													4	6	4	6	6
2	4	S16	SLAB	E	20					17	1.000													17	1	17	1	23
2	4	S17	SLAB	E	20					13	10.000													13	10	13	10	18
2	4	S18	SLAB	E	20					11	6.000													11	6	11	6	15
2	4	S19	SLAB	E	20					9	9.000													9	9	9	9	13
2	4	S20	SLAB	E	20					8	3.000													8	3	8	3	11
2	4	S21	SLAB	E	20					7	0.000													7	0	7	0	9
2	4	S22	SLAB	E	20					3	2.000													3	2	3	2	4
2	4	S23	SLAB	E	20			V	1	16	8.000													16	8	16	8	
			INCREMENT =							17	4.000													17	4	17	4	23
			8.000 INCH																									
2	4	S24	SLAB	E	20			V	1	33	6.000													33	6	33	6	
			INCREMENT =							33	11.000													33	11	33	11	45
			5.000 INCH																									
2	4	S25	SLAB	E	20			V	1	21	11.000													21	11	21	11	
			INCREMENT =							21	3.000													21	3	21	3	29
			8.000 INCH																									
			TYPE D																									
			CURB																									

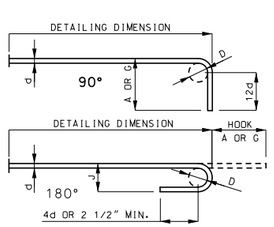
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
12	5	K1	BARRIER CURB	E	19	S		V	2	2	1.750	7.250												2	9	2	8	
			INCREMENT =							2	4.250	6.875												2	11	2	10	34
			0.375 INCH																									
12	5	K2	BARRIER CURB	E	15	S		V	2		7.250	20.125		6.000		1.125		5.875		7.125		1.375	2	9	2	8	
			INCREMENT =								6.875	2	4.750	0.000		0.000		0.000		6.750		1.250	3	0	2	11	35
			0.625 INCH																									
2	5	K3	BARRIER CURB	E	19	S				2	4.750	6.750												3	0	2	10	6
2	5	K4	BARRIER CURB	E	15	S					6.750	2	5.250									6.625	1.250	3	0	2	11	6
8	5	K5	BARRIER CURB	E	19	S		V	2	2	5.250	6.625												3	0	2	11	
			INCREMENT =							2	7.500	6.250												3	2	3	1	25
			0.625 INCH																									
8	5	K6	BARRIER CURB	E	15	S		V	2		6.625	2	5.750									6.500	1.250	3	0	2	11	
			INCREMENT =								6.250	2	8.125									6.125	1.125	3	2	3	1	25
			0.625 INCH																									
6	5	K7	BARRIER CURB	E	19	S		V	2	2	9.000	5.875												3	3	3	2	
			INCREMENT =							3	3.000	5.375												3	8	3	7	21
			2.500 INCH																									
6	5	K8	BARRIER CURB	E	15	S		V	2		6.000	2	9.625									5.875	1.125	3	4	3	3	
			INCREMENT =								5.375	3	0.625									5.250	1.000	3	6	3	5	21
			1.000 INCH																									
6	5	K9	BARRIER CURB	E	19	S				3	0.500	5.250												3	6	3	5	21
6	5	K10	BARRIER CURB	E	15	S					5.250	3	1.125									5.125	1.000	3	6	3	5	21
20	5	K14	BARRIER CURB	E	20					9	9.000													9	9	9	9	203
4	5	K15	BARRIER CURB	E	20					9	2.000													9	2	9	2	38
4	5	K16	BARRIER CURB	E	20					6	2.000													6	2	6	2	26
4	5	K17	BARRIER CURB	E	20					3	2.000													3	2	3	2	13
398	5	R1	BARRIER CURB	E	26					3	2.000	5.750		3	3.625					3	3.000	6.875		6	8	6	8	2767
398	5	R2	BARRIER CURB	E	14	S					10.000	2	3.875	13.000								13.000	1.000	4	3	4	0	1660
398	5	R3	BARRIER CURB	E	27	S						10.000		15.000		4.250		12.000		14.750		2.875		3	5	3	3	1349
398	5	R4	BARRIER CURB	E	32	S					20.000	10.375		13.000						13.000		1.000		3	7	3	5	1418
10	5	R5	BARRIER CURB	E	20					41	10.000													41	10	41	10	436
10	5	R6	BARRIER CURB	E	20					48	0.000													48	0	48	0	501
10	5	R7	BARRIER CURB	E	20					57	2.000													57	2	57	2	596
10	5	R8	BARRIER CURB	E	20					56	3.000													56	3	56	3	587
10	5	R9	BARRIER CURB	E	20					49	10.000													49	10	49	10	520
10	5	R10	BARRIER CURB	E	20					49	2.000													49	2	49	2	513
80	5	R11	BARRIER CURB	E	20					9	9.000													9	9	9	9	814
1	5	R13	BARRIER CURB	E	26					3	2.000	7.000		3	3.750					3	3.000	7.750		6	9	6	9	7
1	5	R14	BARRIER CURB	E	14	S					12.250	2	3.875	15.875								15.875	1.000	4	8	4	6	5
1	5	R15	BARRIER CURB	E	27	S						12.250		15.125		4.250		12.000		14.750		3.500		3	8	3	5	4
1	5	R16	BARRIER CURB	E	50	S					20.000	10.375		15.875						15.875		1.000		3	10	3	8	4
32	5	R18	SLAB	E	51	S				2	1.000	11.375		9.500		9.500		0.500		2	0.625	4.375		3	10	3	8	122
32	5	R19	SLAB	E	50	S					18.000	10.750		9.625						9.500		1.125		3	2	3	0	100
6	5	R20	BARRIER CURB	E	28	S				3	2.000	14.750		3	3.000	6.000								8	2	7	10	49
4	5	R21	BARRIER CURB	E	28	S				3	2.000	8.250		3	3.000	6.000								7	7	7	4	31
14	5	R22	BARRIER CURB	E	13	S					15.500	22.500		15.500		22.500								7	3	6	11	101
14	5	R23	BARRIER CURB	E	30	S					18.000	21.875		22.500		21.875		8.000		15.500		15.500		7	8	7	8	112
12	5	V1	BARRIER CURB	E	20					4	5.000													4	5	4	5	55
			SLIP FORM																									
			OPTION																									
40	5	C1	SLIP FORM	E	20					10	3.000													10	3	10	3	428
4	5	C2	SLIP FORM	E	20					4	0.000													4	0	4	0	17



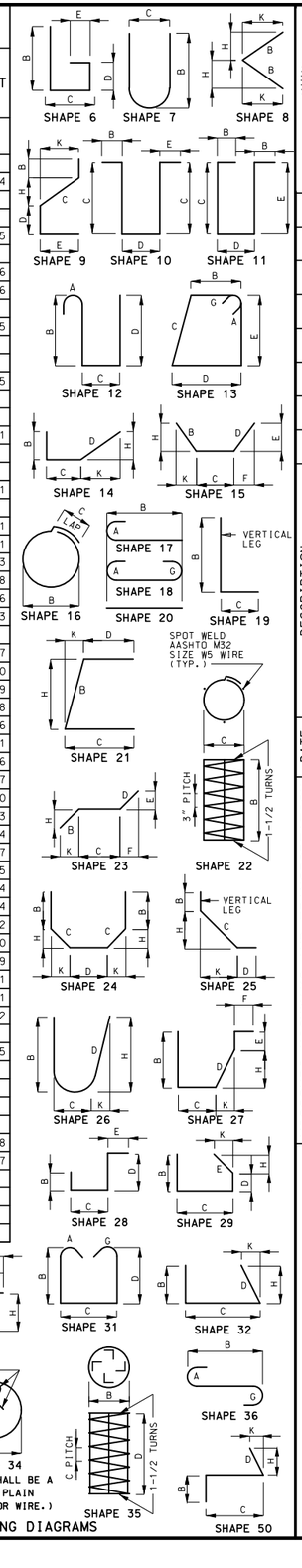
STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK A OR G	135° HOOK A OR G	135° HOOK APPROX. H
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	12"	8"	4 1/2"

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		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"	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.



STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 14
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09392

DESCRIPTION	DATE

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

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

Detailed Dec. 2017
Checked Dec. 2017

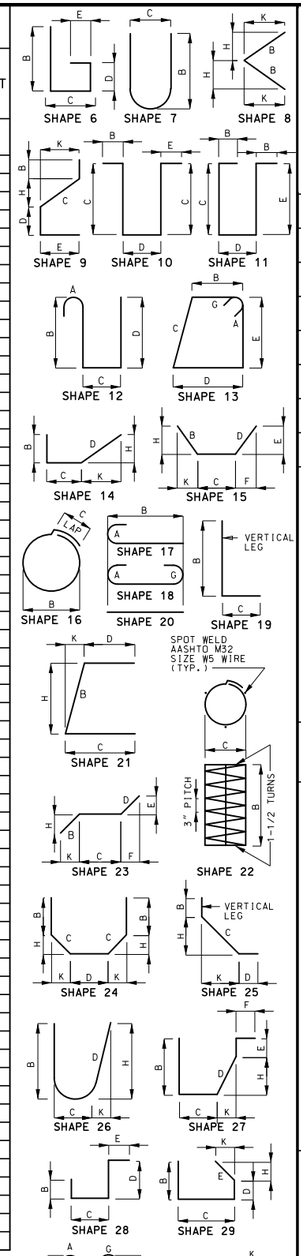
Note: This drawing is not to scale. Follow dimensions.

BILL OF REINFORCING STEEL

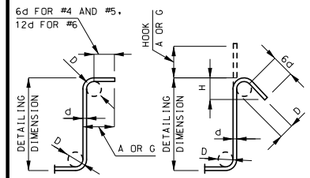
NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
			TOTALS																									
	4			E																								12845
	5			E																								12993
	6			E																								99
			TOTAL																									0
			TOTAL	E																								25937
			Slab on Girder																									
	4			E																								12845
	5			E																								524
	6			E																								99
			TOTAL																									13468
			Safety Barrier Curb																									
	5			E																								12024
			TOTAL																									12024
			Slip Form Option																									
	5			E																								445
			TOTAL																									445

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.

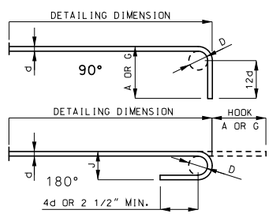


BENDING DIAGRAMS



STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK A OR G	135° HOOK A OR G	135° HOOK 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	180° HOOKS J	90° HOOKS 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.

Detailed Dec. 2017
Checked Dec. 2017

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

STATE OF MISSOURI
DEAN DAVID FRANKE
NUMBER PE-28132
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/21/2017
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 15
COUNTY JACKSON
JOB NO. J4I3198
CONTRACT ID.
PROJECT NO.
BRIDGE NO. L09392

DESCRIPTION | DATE

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

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