

DESIGN DESIGNATION

LOCAL / RURAL MINOR COLLECTOR
ADT 2013 / 268 CURRENT SPEED 30 MPH
DESIGN ADT 2036 / <400 DESIGN SPEED 30 MPH
TRUCKS 18% POSTING TO REMAIN @ 30 MPH

STATE OF MISSOURI JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT PLANS FOR THE PROPOSED STRUCTURE REPLACEMENT

OF

EIME ROAD

OVER

WINE CREEK

BRO-B050 (22)

BRIDGE NO. 16200121

ISSUED FOR CONSTRUCTION

APRIL 18, 2018

JEFFERSON COUNTY

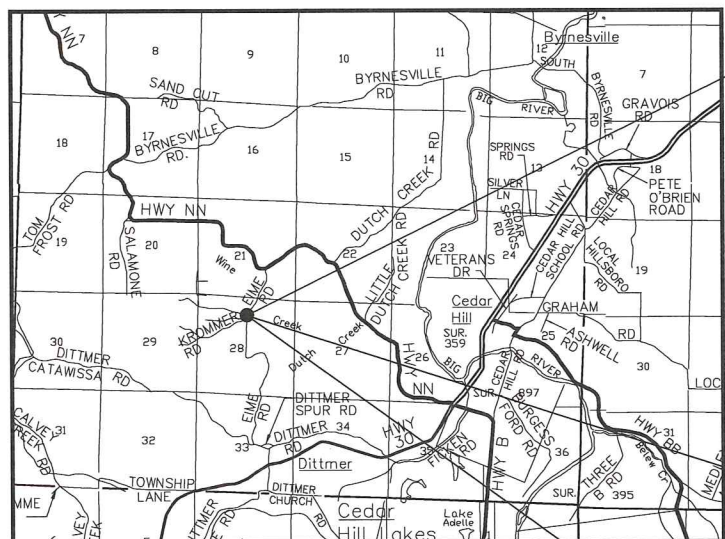
SEC 28 T42N, R3E

SYMBOL LEGEND

A/C UNIT	GRATED MANHOLE	STORM MANHOLE
BOLLARD	GUY WIRE ANCHOR	STUMP
BUSH	LANDSCAPE LIGHT	TELEPHONE PEDESTAL
CLEANOUT	LAWN SPRINKLER	TELEPHONE PULLBOX
COMBINED MANHOLE	LIGHT STANDARD	TEMPORARY CONSTRUCTION EASEMENT
CURB/AREA INLET	MONITORING WELL	TREE, DECIDUOUS
ELECTRIC MANHOLE	PARKING METER	TREE, CONIFEROUS
ELECTRIC METER	POWER POLE	TRAFFIC SIGNAL MAST ARM
ELECTRIC PEDESTAL	PROPOSED ROW	TRAFFIC SIGNAL PEDESTAL
ELECTRIC PULLBOX	ROW MARKER	UTILITY MARKER
FIRE HYDRANT	RR FLASHERS	WATER MANHOLE
GAS DRIP	SAMPLING TEE	WATER METER
GAS METER	SANITARY MANHOLE	WATER VALVE
GAS VALVE	SIGN	
GRATED INLET	SOIL BORING	

INDEX

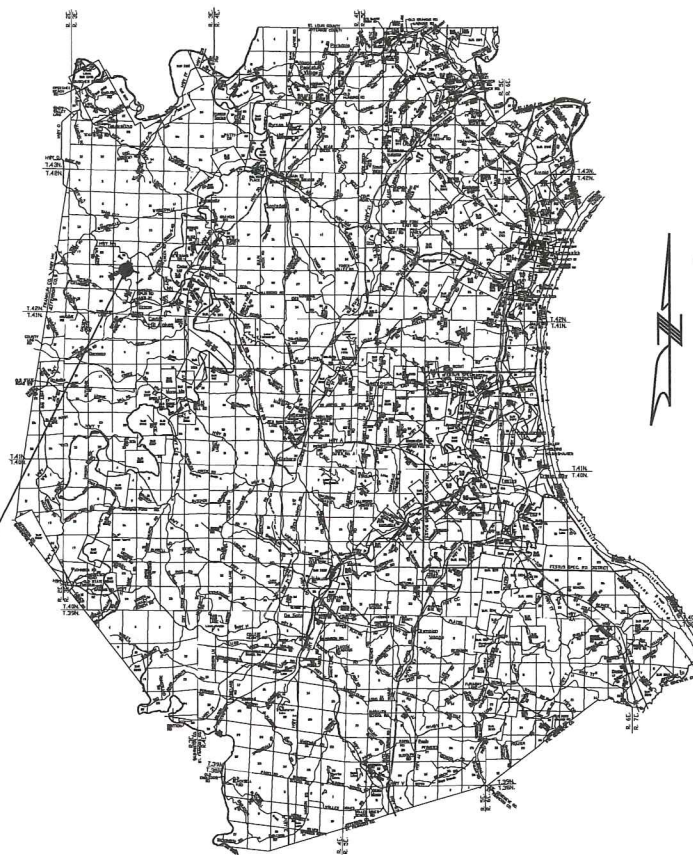
SHEET NO.	DESCRIPTION OF SHEET
1	COVER SHEET
2	TYPICAL SECTIONS
2A	SUMMARY OF QUANTITIES
2B	SCHEDULE OF QUANTITIES
2BS	SCHEDULE OF QUANTITIES
3	PLAN & PROFILE
4-5	RIGHT OF WAY SURVEY
6	COORDINATE POINTS
7	SPECIAL SHEET (RIPRAP DETAILS)
8	DRIVEWAYS AND CULVERT PROFILES
9-10	TRAFFIC CONTROL
11	EROSION CONTROL
12-35	BRIDGE DRAWINGS (16200121)
36-38	ROADWAY SECTIONS



RIGHT OF WAY BEGINS
STA. 10+59.22
CONSTRUCTION BEGINS
STA. 10+65.00

RIGHT OF WAY, GRADING, DRAINAGE,
BRIDGE, GUARDRAIL AND PAVEMENT
PROJECT ENDS
STA. 15+30.00

PROJECT
LOCATION
N 38.35500° (DD)
W 90.69441° (DD)



SCALE

LOCATION MAP

NET PROJECT LENGTH 465.00 FEET (0.0881 MILES)

Line Legend

Proposed Right of Way	+
Permanent Drainage Easement	--- PDE ---
Temporary Construction Easement	--- TCE ---
Overhead Electric	--- OHE ---
Underground Telephone	--- T ---
Slope Limit	--- SL ---
Proposed Ditch	--- D ---

Site Benchmarks: (NAVD 1988)

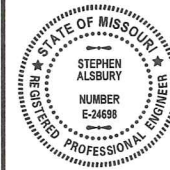
TBM#2 - Iron Rod with orange cap marked 'ABNA Trav Pnt', on west side of Krommer Road just south of intersection with Wine Creek Road and Eime Road. 34.10' W of stop sign, 53' N of dead-end sign, 39.60' S of power pole. Elevation 538.64

TBM #3 - Iron Rod with orange cap marked 'ABNA Trav Pnt', on west side of Eime Rd just south of intersection with Freunds Way. 33.35' W of mailbox, 44.75' SW of underground cable sign, 48.90' SW of AT&T pedestal. Elevation 542.69

APPROVED

PUBLIC WORKS DIRECTOR

5/22/2018
DATE



DATE PREPARED
4/18/2018

STATE MO SHEET NO. 1

ROUTE
EIME

COUNTY
JEFFERSON

JOB NO.
15-6145

PROJECT NO.
BRO-B050(22)

BRIDGE NO.
16200121

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

UTILITIES

TELEPHONE

AT&T
JIM LASHLEY
909 CHESTNUT 9-V-07
ST. LOUIS, MO 63101
(636) 402-7027

ELECTRIC

AMEREN U.E.
MR. BILL ROSENER
CONSULTING ENGINEER
6450 HIGHWAY MM
HOUSE SPRINGS, MO 63051
(636) 671-6162

UTILITY LOCATION SERVICE
1-800-DIG-RITE

JEFFERSON COUNTY PUBLIC WORKS
DEPARTMENT

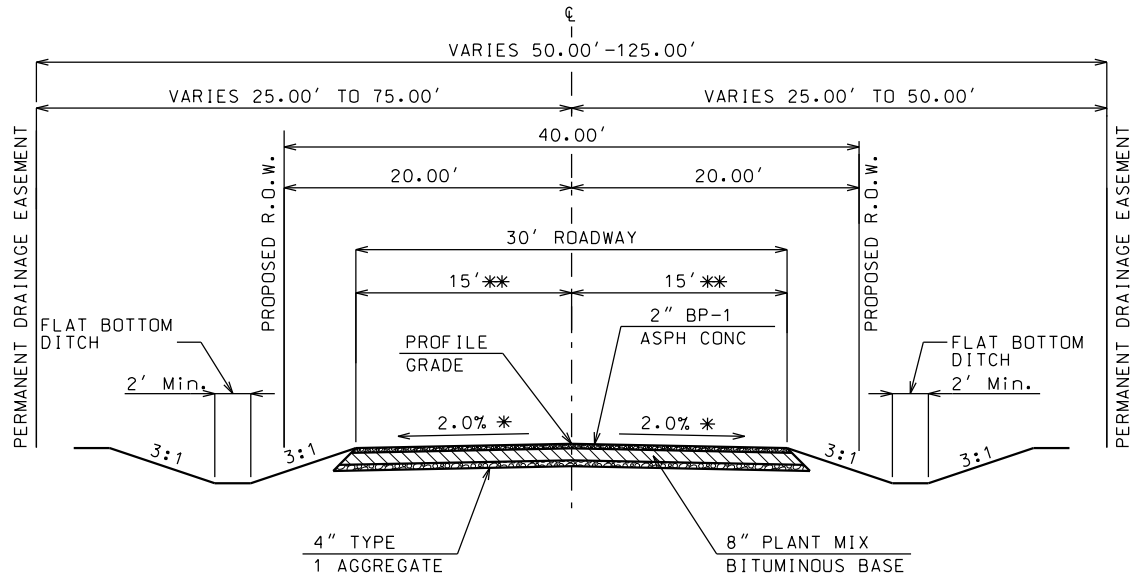


P.O. BOX 100
HILLSBORO, MO 63050
(636-797-3340) PHONE
(636-797-5565) FAX

ABNA

4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501

SUPERELEVATION (FEET) RELATIVE TO PROFILE GRADE		
	LOCATION	LOCATION
	15' Left	15' Right
Station	ELEV (FEET)	ELEV (FEET)
10+65	Match Existing	Match Existing
11+00	+0.30	-0.30
11+25	+0.30	-0.30
11+35.81	+0.30	-0.30
11+50	+0.21	-0.30
11+75	+0.06	-0.30
12+00	-0.09	-0.30
12+25	-0.24	-0.30
12+35.81	-0.30	-0.30
12+50	-0.30	-0.30
13+00	-0.30	-0.30
13+25	-0.30	-0.30
13+50	-0.30	+0.00
13+82	-0.30	+0.19
14+15	-0.30	+0.00
14+50	-0.30	-0.30
15+00	-0.30	-0.30
15+30	Match Existing	Match Existing



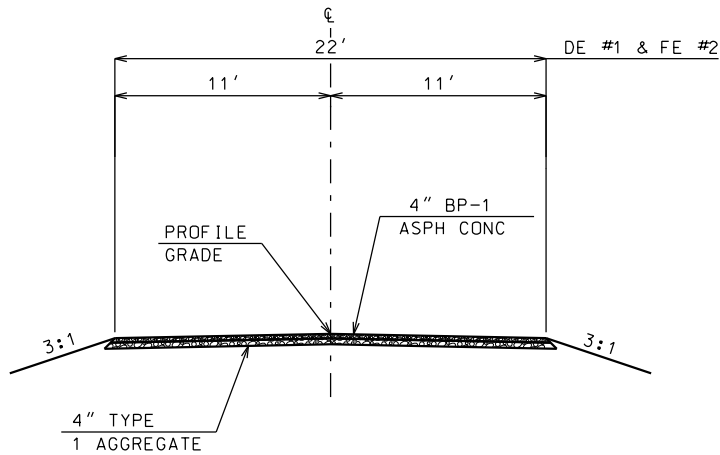
* CROSS SLOPE VARIES SEE SUPERELEVATION TABLE

**PROPOSED TYPICAL CROSS SECTION
EIME ROAD**

STA 11+15.00 TO STA 12+37.41
STA 13+38.58 TO STA 14+80.00

* TRANSITION FROM 15' TO EXISTING STA 10+65.00 TO STA 11+15.00
STA 14+80.00 TO STA 15+30.00

BRIDGE APPROACH SLAB (MINOR ROAD) STA 12+37.41 TO STA 12+57.41
STA 13+18.58 TO STA 13+38.58



**PROPOSED TYPICAL CROSS SECTION
DRIVEWAY/FIELD ENTRANCE**

DE #1 STA 11+16.82 LT
FE #2 STA 14+58.75 LT



DATE PREPARED
4/18/2018

STATE MO SHEET NO. 2

ROUTE E I ME

COUNTY JEFFERSON

JOB NO. 15-6145

PROJECT NO. BRO-B050(22)

BRIDGE NO. 16200121

DESCRIPTION	DATE

JEFFERSON COUNTY PUBLIC WORKS
DEPARTMENT

P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX

XABNA

4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501

ESTIMATED QUANTITIES

[illegible]

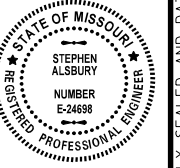
Detailed Jan 2018
Checked Jan 2018

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

ESTIMATED QUANTITIES

[illegible]

SUMMARY OF QUANTITIES

DATE PREPARED
4/18/2018

STATE MO	SHEET NO. 2A
-------------	-----------------

ROUTE	TIME
1	2
2	3
3	4
4	5
5	6
6	7
7	8
8	9
9	10
10	11
11	12
12	13
13	14
14	15
15	16
16	17
17	18
18	19
19	20
20	21
21	22
22	23
23	24
24	25
25	26
26	27
27	28
28	29
29	30
30	31
31	32
32	33
33	34
34	35
35	36
36	37
37	38
38	39
39	40
40	41
41	42
42	43
43	44
44	45
45	46
46	47
47	48
48	49
49	50
50	51
51	52
52	53
53	54
54	55
55	56
56	57
57	58
58	59
59	60
60	61
61	62
62	63
63	64
64	65
65	66
66	67
67	68
68	69
69	70
70	71
71	72
72	73
73	74
74	75
75	76
76	77
77	78
78	79
79	80
80	81
81	82
82	83
83	84
84	85
85	86
86	87
87	88
88	89
89	90
90	91
91	92
92	93
93	94
94	95
95	96
96	97
97	98
98	99
99	100

COUNTY
EFFERSON

OBJ NO.
-6145

PROJECT NO.
RO-B050(22)

JUDGE NO.
200121

[illegible]

U.S. COAST GUARD
DEPARTMENT

P.O. BOX 100
HILLSBORO, MD 63050
(636-797-5340) PHONE
(636-797-5565) FAX



KABNA
4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501

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

CLEARING & GRUBBING = 0.8 ACRES

REMOVAL OF IMPROVEMENTS = 1 LUMP SUM

-Asphalt Pavement Sta. 10+65 to Ex. Bridge = 584 Sq Yd
-Asphalt Pavement Sta. Ex. Bridge to Sta. 15+30 = 640 Sq Yd
-Fence Rt. Sta. 13+50 to Rt. Sta. 15+30 = 180 Lin Ft.
-18" CMP AR Sta. 10+95 = 50 Lin. Ft.
-Concrete in channel upstream side of existing bridge.
-Fence Rt. Sta. 6+00 to Rt. Sta. 11+00 = 500 Lin Ft.
-2 Each - Load Limit Signs at Ex. Bridge
-4 Each - Panel Markers at Ex. Bridge
-2 Each - Yield to On Coming Traffic at Ex. Bridge
-Concrete barrier sectins and drums will be removed by County

EARTH WORK SUMMARY	CUT	FILL
	CU YD	CU YD
CLASS A EXCAVATION (MAIN LINE)	561	629
CLASS A EXCAVATION (ENTRANCES)	89	
CLASS A EXCAVATION (CHANNEL)	690	
ESTIMATED EXCESS *		711
TOTALS	1340	1340
* For Information Only		

BRIDGE APPROACH SLAB (MINOR ROAD)			
LOCATION	LENGTH FEET	WIDTH FEET	BRIDGE APPROACH SLAB (SQ YD)
13+37.41 TO 12+57.41	20.0	30	67.0
13+19.11 TO 13+39.11	20.0	30	67.0
TOTALS			134.0

MODIFIED SUBGRADE = 170 SQ YD.

LOCATIONS AS DIRECTED BY THE ENGINEER.
(SEE SPECIAL PROVISIONS)

ASPHALTIC PAVEMENT & BASE				2"/4" ENTRANCES	8"	0.035 G/SY	TYPE 4 AGGREGATE WIDTH	TYPE 4 AGGREGATE 4"
LOCATION	LENGTH FEET	WIDTH FEET	AREA (1) SQ YD	BP-1 TON	BIT. BASE TON	TACK GAL (2)		SQ YD
10+65 TO 11+43.30	78.3	33.25	290	34.4	135.0	10	33.6 AVG	292
11+43.30 TO 12+37.41	94.1	30.0	314	37.4	146.9	11	30.67	321
13+38.58 TO 14+80	141.42	30.0	471	56.1	220.1	16	30.67	482
14+80 TO 15+30	50.0	25.8	144	17.1	66.9	5	26.48 AVG	147
DRIVEWAY ENTRANCE #1	40.0	50.35	224	26.6	105.1	8	51.1	227
FIELD ENTRANCE #1	17.0	30.1	57	13.4	-	-	29.85	56
TOTALS				185	674	50		1525

(1) INCLUDES TAPERS
(2) INCLUDES TACK FOR ONE LIFT

GUARDRAIL				
LOCATION	BRIDGE ANCHOR EACH	TRANS SECTION EACH	TYPE A TERMINAL EACH	REMARKS
SOUTH APPROACH	1	1	1	Bridge Anchor Section, Transition Section & Type A Terminal
SOUTH DEPARTING	1	1	1	Typical all four bridge corners.
NORTH APPROACH	1	1	1	.
NORTH DEPARTING	1	1	1	
TOTALS	4	4	4	.

EROSION/BANK PROTECTION	RIPRAP BEDDING (12" INCHES)	RIPRAP (36" INCHES)	
LOCATION	SQ YD	CU YD	
LEFT	244.5	244	
UNDER BRIDGE	202.0	202	
RIGHT	244.5	244	
TOTALS	691	690	

MOBILIZATION = 1 LUMP SUM

CONTRACTOR FURNISHED SURVEYING AND STAKING = 1 LUMP SUM

PIPE CULVERTS							
PIPE GROUP	A	B	FLARED END SECTION			CLASS 3 EXCAVATION	
	24" LIN FT	18" LIN FT	18" EACH	24" EACH		CU YD	
FE1 TO FE2	78	.	.	2		20	
FE3 TO FE4	.	34	2	.		9	
TOTALS	78	34	2	2		29	

4" WHITE PAVEMENT MARKING

EDGE LINES 12' LT & RT
STA 10+65 TO STA 15+30 = 930 LIN FT

4" YELLOW PAVEMENT MARKING

DOUBLE SOLID CENTERLINE
STA 10+65 TO STA 15+30 = 930 LIN FT

TEMPORARY RAISED PAVEMENT MARKER = 12 EACH

TO BE USED IF ROAD IS OPENED PRIOR TO FINAL STRIPING AT 40' SPACING

SEEDING = 0.4 ACRE

ROCK DITCH CHECK	
LOCATION	WIDTH FEET
RT. STA. 12+00.00	12
LT. STA. 12+25.00	12
RT. STA. 12+50.00	12
LT. STA. 13+40.00	12
RT. STA. 13+50.00	12
LT. STA. 14+00.00	12
RT. STA. 14+50.00	12
TOTAL	84 LIN FT

SILT FENCE	
LOCATION	LENGTH
20' RT. STA. 10+59 TO 44' RT. STA. 11+39	= 84 LIN. FT.
44' RT. STA. 11+39 TO 55' RT. STA. 12+93	= 154 LIN. FT.
57' RT. STA. 13+18 TO 59' RT. STA. 13+50	= 32 LIN. FT.
59' RT. STA. 13+50 TO 36' RT. STA. 15+10	= 162 LIN. FT.
36' RT. STA. 15+10 TO 20' RT. STA. 15+30	= 26 LIN. FT.
44' LT. STA. 10+59 TO 31' LT. STA. 10+59	= 13 LIN. FT.
31' LT. STA. 10+59 TO 22' LT. STA. 10+82	= 25 LIN. FT.
22' LT. STA. 10+82 TO 32' LT. STA. 10+94	= 16 LIN. FT.
32' LT. STA. 10+94 TO 51' LT. STA. 10+88	= 22 LIN. FT.
51' LT. STA. 10+88 TO 44' LT. STA. 10+59	= 30 LIN. FT.
45' LT. STA. 11+17 TO 54' LT. STA. 12+50	= 133 LIN. FT.
55' LT. STA. 12+71 TO 35' LT. STA. 15+30	= 260 LIN. FT.
TOTAL	957 LIN FT

STATE OF MISSOURI

REGISTERED PROFESSIONAL ENGINEER

STEPHEN ALSBURY

NUMBER E-24698

DATE PREPARED
4/18/2018

STATE
MO

SHEET NO.
2B

ROUTE
E I M E

COUNTY
JEFFERSON

JOB NO.
15-6145

PROJECT NO.
BRO-B050(22)

BRIDGE NO.
16200121

DESCRIPTION

DATE

JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT

P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX

MISSOURI

STATE

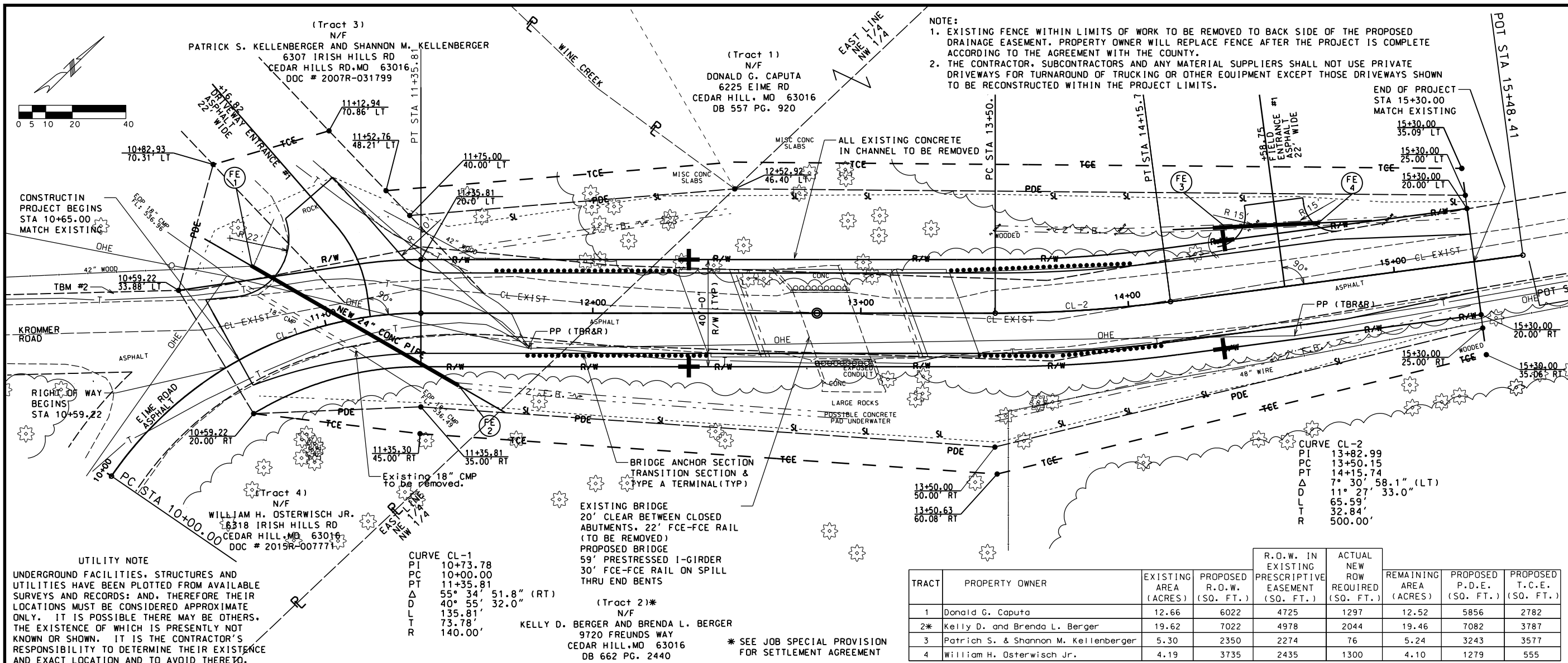
JEFFERSON COUNTY

MISSOURI

XABNA

4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501

SIGN	SIZE (IN.)	AREA (SQ. FT.)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION	SIGN	SIZE (IN.)	AREA (SQ. FT.)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION	ITEM NUMBER	TOTAL QTY	DESCRIPTION			
WARNING SIGNS																					
W01-1L	48X48	16.00					TURN (SYMBOL LEFT ARROW) WITH FLAGS	W020-5a	48X48	16.00					RIGHT/CENTER/LEFT TWO LANES CLOSED AHEAD WITH FLAGS	612-20.08		IMPACT ATTENUATOR (8 SAND BARRELS)			
W01-1R	48X48	16.00					TURN (SYMBOL RIGHT ARROW) WITH FLAGS	W020-6a	48X48	16.00					RIGHT/CENTER/LEFT LANE CLOSED WITH FLAGS	612-20.09		IMPACT ATTENUATOR (9 SAND BARRELS)			
W01-2L	48X48	16.00					CURVE (SYMBOL LEFT ARROW) WITH FLAGS	W020-7a	48X48	16.00					FLAGGER (SYMBOL) WITH FLAGS	612-20.10		IMPACT ATTENUATOR (10 SAND BARRELS)			
W01-2R	48X48	16.00					CURVE (SYMBOL RIGHT ARROW) WITH FLAGS	W021-2	36X36	9.00					FRESH OIL	612-20.12		IMPACT ATTENUATOR (12 SAND BARRELS)			
W01-3L	48X48	16.00					REVERSE TURN (SYMBOL LEFT ARROW) WITH FLAGS	W021-5b	48X48	16.00					SHOULDER WORK AHEAD	612-20.14		IMPACT ATTENUATOR (14 SAND BARRELS)			
W01-3R	48X48	16.00					REVERSE TURN (SYMBOL RIGHT ARROW) WITH FLAGS	W022-1	48X48	16.00					BLASTING ZONE AHEAD	612-20.17		IMPACT ATTENUATOR (17 SAND BARRELS)			
W01-4L	48X48	16.00					REVERSE CURVE (SYMBOL LEFT ARROW) WITH FLAGS	W022-2	42X36	10.50					TURN OFF 2-WAY RADIO AND PHONE	612-20.19		IMPACT ATTENUATOR (19 SAND BARRELS)			
W01-4R	48X48	16.00					REVERSE CURVE (SYMBOL RIGHT ARROW) WITH FLAGS	W022-3	42X36	10.50					END BLASTING ZONE	612-20.20		REPLACEMENT SAND BARREL			
W01-4bL	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS) WITH FLAGS	W022-6e	21X15	2.19					WET PAINT (ARROW PIVOTS)	612-20.30		IMPACT ATTENUATOR ARRAY (RELOCATION)			
W01-4bR	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS) WITH FLAGS	GUIDE SIGNS										612-30.00A		TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)	
W01-4cL	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS) WITH FLAGS	SPECIAL	36X36	9.00					FRESH OIL/LOOSE GRAVEL	616-10.07		SPEED LIMIT AND STROBE LIGHT ASSEMBLY			
W01-4cR	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS) WITH FLAGS	E05-1	36X48	12.00					GORE EXIT	616-10.08		ADVANCED WARNING RAIL SYSTEM			
W01-6	48X24	8.00					HORIZONTAL ARROW (SYMBOL)	E05-2	48X36	12.00					EXIT OPEN	616-10.20		CHANNELIZER (DRUM-LIKE)			
W01-6a	72X36	18.00					HORIZONTAL ARROW (SYMBOL ON PERMANENT BARRICADE)	E05-2a	48X36	12.00					EXIT CLOSED	616-10.22		CHANNELIZER (CONES)			
W01-7	48X24	8.00					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)	G020-1	60X24	10.00					ROAD WORK NEXT XX MILES	616-10.24		CHANNELIZER (TRIM LINE) WITH LIGHT			
W01-7a	72X36	18.00					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL ON PERMANENT BARRICADE)	G020-2	48X24	8.00	2	16.00			END ROAD WORK	616-10.25		CHANNELIZER (TRIM LINE)			
W01-8	18X24	3.00					CHEVRON (SYMBOL)	G020-4	36X18	4.50					PILOT CAR FOLLOW ME	616-10.26		CHANNELIZER (VERTICAL PANEL)			
W01-8a	36X48	12.00					CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)	SPECIAL	42X30	8.75					PLEASE WAIT FOR PILOT CAR WITH FLAGS	616-10.27		CHANNELIZER (VERTICAL PANEL) WITH LIGHT			
W03-1a	48X48	16.00					STOP AHEAD (SYMBOL) WITH FLAGS	G023-1	36X12	3.00					WORK ZONE (PLAQUE)	616-10.28		CHANNELIZER			
W03-2a	48X48	16.00					YIELD AHEAD (SYMBOL) WITH FLAGS	M04-8a	24X18	3.00					END DETOUR	616-10.30	6	TYPE III MOVEABLE BARRICADE			
W03-3	48X48	16.00					SIGNAL AHEAD (SYMBOL) WITH FLAGS	M04-9L	48X36	12.00					DETOUR (LEFT ARROW)	616-10.31		TYPE III MOVEABLE BARRICADE WITH LIGHT			
W03-4	48X48	16.00					BE PREPARED TO STOP WITH FLAGS	M04-9R	48X36	12.00					DETOUR (RIGHT ARROW)	616-10.33		DIRECTION INDICATOR BARRICADE			
W03-5	48X48	16.00					SPEED LIMIT XX AHEAD (SYMBOL) WITH FLAGS	M04-10L	48X18	6.00					DETOUR (ARROW LEFT)	616-10.34		DIRECTION INDICATOR BARRICADE, WITH LIGHT			
W04-1L	48X48	16.00					MERGE (SYMBOL FROM LEFT)	M04-10R	48X18	6.00					DETOUR (ARROW RIGHT)	616-10.40		FLASHING ARROW PANEL			
W04-1R	48X48	16.00					MERGE (SYMBOL FROM RIGHT)	REGULATORY SIGNS										616-10.47		TYPE III OBJECT MARKER	
W05-1	48X48	16.00					ROAD/B														



RIGHT OF WAY SURVEY
EIME ROAD
OVER WINE CREEK
SECTION 28, TOWNSHIP 42 NORTH,
RANGE 3 E
JEFFERSON COUNTY, MO

PLAT SHEET 1 OF 2
Plan set sheet 4



6/5/17
DATE PREPARED

STATE MO SHEET NO. 1
ROUTE EIME
COUNTY JEFFERSON
JOB NO. 15-6145
PROJECT NO. BRO-8050(22)
BRIDGE NO. 16200121

DATE	DESCRIPTION
4-25-17	EASEMENT CHANGES
5-8-17	EASEMENT CHANGES

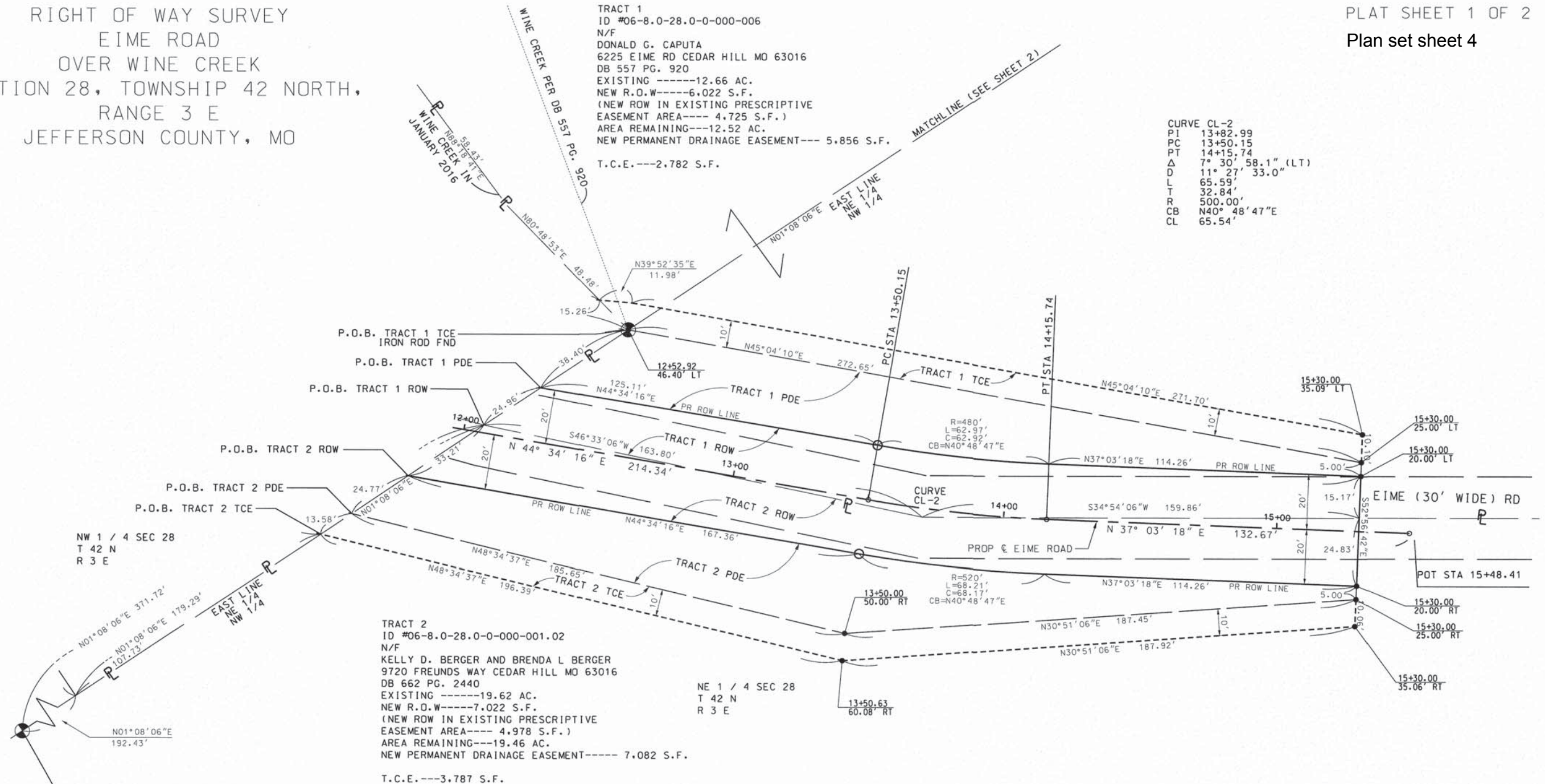
JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT

P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX

ABNA
4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501

TRACT 1
ID #06-8.0-28.0-0-000-006
N/F
DONALD G. CAPUTA
6225 EIME RD CEDAR HILL MO 63016
DB 557 PG. 920
EXISTING -----12.66 AC.
NEW R.O.W-----6.022 S.F.
(NEW ROW IN EXISTING PRESCRIPTIVE
EASEMENT AREA---- 4.725 S.F.)
AREA REMAINING---12.52 AC.
NEW PERMANENT DRAINAGE EASEMENT--- 5.856 S.F.
T.C.E.---2.782 S.F.

CURVE CL-2
PI 13+82.99
PC 13+50.15
PT 14+15.74
Δ 7° 30' 58.1" (LT)
D 11° 27' 33.0"
L 65.59'
T 32.84'
R 500.00'
CB N40° 48' 47"E
CL 65.54'



- NOTES
1. IT IS NOT WARRANTED THAT ANY/ALL EXISTING EASEMENTS ARE AS SHOWN. ADDITIONAL EASEMENTS MAY EXIST.
 2. BASIS OF BEARING IS MISSOURI STATE PLANE GRID AND WAS CALCULATED FROM STATIC GPS OBSERVATIONS MADE ON JANUARY 19, 2016.
 3. CLASS OF SURVEY: URBAN PROPERTY.
 4. ALL EXISTING MONUMENTS FOUND ARE NOTED AS TO TYPE.
 5. MONUMENTS TO BE SET AT COMPLETION OF CONSTRUCTION.
 6. WINE CREEK CENTERLINE SHOWN AS LOCATED IN JANUARY 2016.
 7. WINE CREEK ROAD, EIME ROAD, AND KROMMER ROAD AS TRAVELED IN JANUARY 2016.

LEGEND	
○	- SET 3/8" IRON PIN
●	- FOUND MONUMENT
▽	- FOUND RIGHT-OF-WAY MONUMENT
+	- CHISELED CROSS
□	- FOUND STONE
---	- C/L OF ROADWAY
---	- NEW BOUNDARY LINE
---	- NEW PERMANENT DRAINAGE EASEMENT LINE
---	- NEW TEMPORARY CONSTRUCTION EASEMENT LINE
---	- PUBLIC LAND LINE
---	- EXISTING PROPERTY LINE
---	- EXISTING ROADWAY EASEMENT LINE

SURVEYORS CERTIFICATE

THIS IS TO CERTIFY THAT AT THE REQUEST OF JEFFERSON COUNTY MISSOURI, WE HAVE DURING THE MONTH OF NOVEMBER 2016 PREPARED THIS RIGHT OF WAY PLAT FROM BOUNDARY INFORMATION IN SECTION 28, TOWNSHIP 42 NORTH, RANGE 3 EAST JEFFERSON COUNTY, MISSOURI.

THAT THE RESULTS OF SAID SURVEY ARE AS SHOWN HEREON AND ARE IN ACCORDANCE WITH THE CURRENT "MISSOURI MINIMUM STANDARDS FOR PROPERTY BOUNDARY SURVEYS".

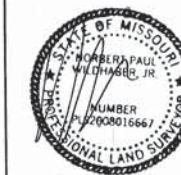
NORBERT WILDHABER JR. DATE
MO. PLS 2008016667
ABNA ENGINEERING INCORPORATED L.S. # 365D
4140 LINDELL BOULEVARD
ST. LOUIS, MISSOURI 63108
314-454-0222.



RIGHT OF WAY SURVEY
EIME ROAD
OVER WINE CREEK
SECTION 28, TOWNSHIP 42 NORTH,
RANGE 3 E
JEFFERSON COUNTY, MO

PLAT SHEET 2 OF 2

Plan set sheet 5



DATE PREPARED

STATE MO SHEET NO. 2

ROUTE EIME

COUNTY JEFFERSON

JOB NO. 15-6145

PROJECT NO. BRO-B050(22)

BRIDGE NO. 16200121

DATE	DESCRIPTION
4-25-17	EASEMENT CHANGES
5-8-17	EASEMENT CHANGES

JEFFERSON COUNTY PUBLIC WORKS
DEPARTMENT

P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX

XABNA
4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501

TRACT 3
ID #06-8.0-28.0-0-000-010.06
N/F
PATRICK S. KELLENBERGER AND SHANNON M. KELLENBERGER
6307 IRISH HILLS RD CEDAR HILL MO 63016
DOC# 2007R-031799
EXISTING ----- 5.30 AC.
NEW R.O.W----- 2.350 S.F.
(NEW ROW IN EXISTING PRESCRIPTIVE
EASEMENT AREA---- 2.274 S.F.)
AREA REMAINING--- 5.24 AC.
NEW PERMANENT DRAINAGE EASEMENT--- 3.243 S.F.
(NEW PERMANENT DRAINAGE EASEMENT
IN EXISTING PRESCRIPTIVE EASEMENT AREA---- 169 S.F.)
T.C.E.--- 3.577 S.F.

CURVE CL-1
PI 10+73.78
PC 10+00.00
PT 11+35.81
Δ 55° 34' 51.8" (RT)
D 40° 55' 32.0"
L 135.81'
T 73.78'
R 140.00'
CB N16° 46' 50"E
CL 130.55'

NW 1 / 4 SEC 28
T 42 N
R 3 E

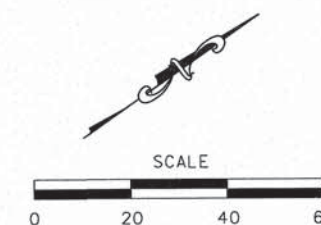
TRACT 4
ID #06-8.0-28.0-0-000-010.03
N/F
WILLIAM H. OSTERWISCH JR.
6318 IRISH HILLS RD CEDAR HILL MO 63016
DOC# 2015R-007771
EXISTING ----- 4.19 AC.
NEW R.O.W----- 3.735 S.F.
(NEW ROW IN EXISTING PRESCRIPTIVE
EASEMENT AREA---- 2.435 S.F.)
AREA REMAINING--- 4.10 AC.
NEW PERMANENT DRAINAGE EASEMENT--- 1.279 S.F.
(NEW PERMANENT DRAINAGE EASEMENT
IN EXISTING PRESCRIPTIVE EASEMENT AREA--- 0 S.F.)
T.C.E.--- 555 S.F.

NOTES

1. IT IS NOT WARRANTED THAT ANY/ALL EXISTING EASEMENTS ARE AS SHOWN. ADDITIONAL EASEMENTS MAY EXIST.
2. BASIS OF BEARING IS MISSOURI STATE PLANE GRID AND WAS CALCULATED FROM STATIC GPS OBSERVATIONS MADE ON JANUARY 19, 2016.
3. CLASS OF SURVEY: URBAN PROPERTY.
4. ALL EXISTING MONUMENTS FOUND ARE NOTED AS TO TYPE.
5. MONUMENTS TO BE SET AT COMPLETION OF CONSTRUCTION.
6. WINE CREEK CENTERLINE SHOWN AS LOCATED IN JANUARY 2016.
7. WINE CREEK ROAD, EIME ROAD, AND KROMMER ROAD AS TRAVELED IN JANUARY 2016.

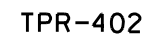
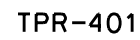
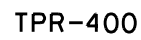
LEGEND

○	- SET $\frac{3}{8}$ " IRON PIN	---	- C/L OF ROADWAY
●	- FOUND MONUMENT	---	- NEW BOUNDARY LINE
▽	- FOUND RIGHT-OF-WAY MONUMENT	---	- NEW PERMANENT DRAINAGE EASEMENT LINE
+	- CHISELED CROSS	---	- NEW TEMPORARY CONSTRUCTION EASEMENT LINE
□	- FOUND STONE	---	- PUBLIC LAND LINE
		---	- EXISTING PROPERTY LINE
		---	- EXISTING ROADWAY EASEMENT LINE

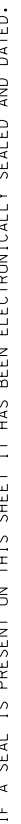


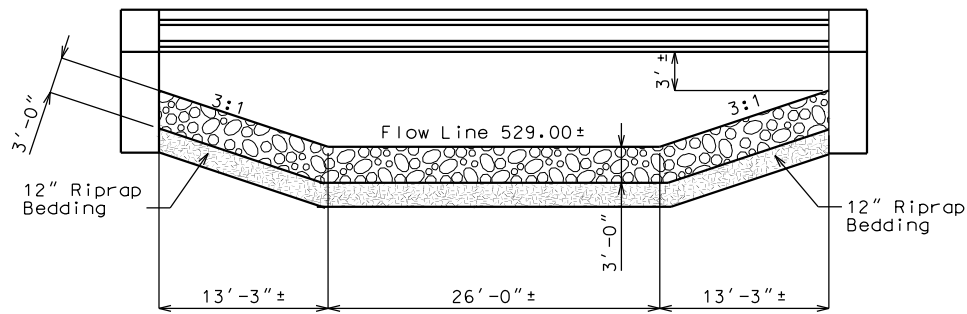
MAINLINE E1ME ROAD LAYOUT COORDINATES		
Point Description	North	East
Control Point TRP-400	918,224.71	764,398.60
Control Point TRP-401	918,070.20	764,208.93
Control Point TRP-402	918,540.11	764,609.61
P.C. Sta. 10+00.00 CUR#1	918,020.43	764,254.59
P.I. Sta. 10+73.78 CUR#1	918,092.86	764,240.49
P.T. Sta. 11+35.81 CUR#1	918,145.42	764,292.27
P.C. Sta. 13+50.15 CUR#2	918,298.11	764,442.70
P.I. Sta. 13+82.99 CUR#2	918,321.51	764,465.75
P.T. Sta. 14+15.74 CUR#2	918,347.72	764,485.54
P.O.T. Sta. 15+30.00	918,438.90	764,554.39

DRIVEWAY LAYOUT COORDINATES		
Point Description	North	East
Driveway Entrance #1 P.D.T. Sta. 0+00 = @ Eime Road 11+16.82	918,144.94	764,279.90
Driveway Entrance #1 P.C. Sta 0+08.23	918,135.95	764,273.31
Driveway Entrance #1 P.I. Sta 0+23.22	918,144.94	764,261.31
Driveway Entrance #1 P.T. Sta 0+37.37	918,145.83	764,246.34
Driveway Entrance #1 P.D.T. Sta 0+60.80	918,147.22	764,222.94
Field Entrance #1 P.D.T. Sta. 0+00 = @ Eime Road 14+58.75	918,382.04	764,511.45
Field Entrance #1 P.D.T. Sta 0+32.00	918,401.51	764,486.05



J:\2015\6145\Cadd\Design\Roadway\B_16200121_006_Coordinate Points.dgn 5:07:06 PM 4/18/2018





SECTION A-A
(Right angle opening to stream)

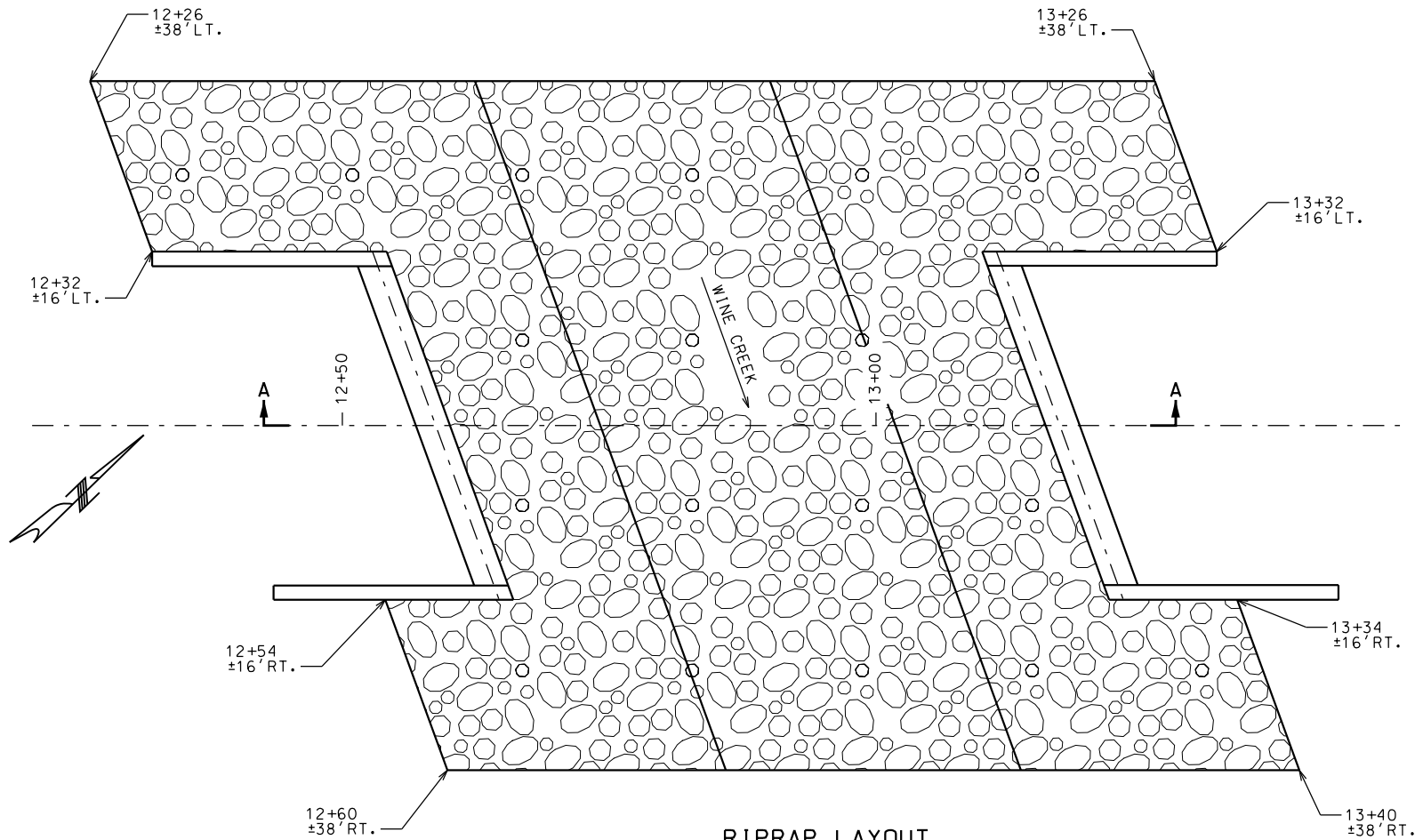
RIPRAP GRADATIONS

GRAD NO.	PERCENT PASSING ROCK SIZE (LBS)									
	1500	1000	700	500	300	250	150	60	45	30
R-700	100		50-100		15-50			0-15		

Note:
Values in table represent percent by weight of stones lighter than the mass specified.

BEDDING MATERIAL GRADATIONS

GRAD NO.	PERCENT PASSING SIEVES				
	4 IN	3 IN	2 IN	1 1/2 IN	NO. 4
RR 2	100		53±23		8 ±8



RIPRAP LAYOUT

NOTE:
LAYOUT OF THE SLOPE PROTECTION SYSTEM
MAY BE VARIED TO SUIT GROUND CONDITIONS
IN THE FIELD AS DIRECTED BY THE ENGINEER.

SPECIAL SHEET RIPRAP DETAILS



DATE PREPARED
4/18/2018
STATE
MO
SHEET NO.
7
ROUTE
E I ME
COUNTY
JEFFERSON
JOB NO.
15-6145
PROJECT NO.
BRD-B050(22)
BRIDGE NO.
16200121

DESCRIPTION

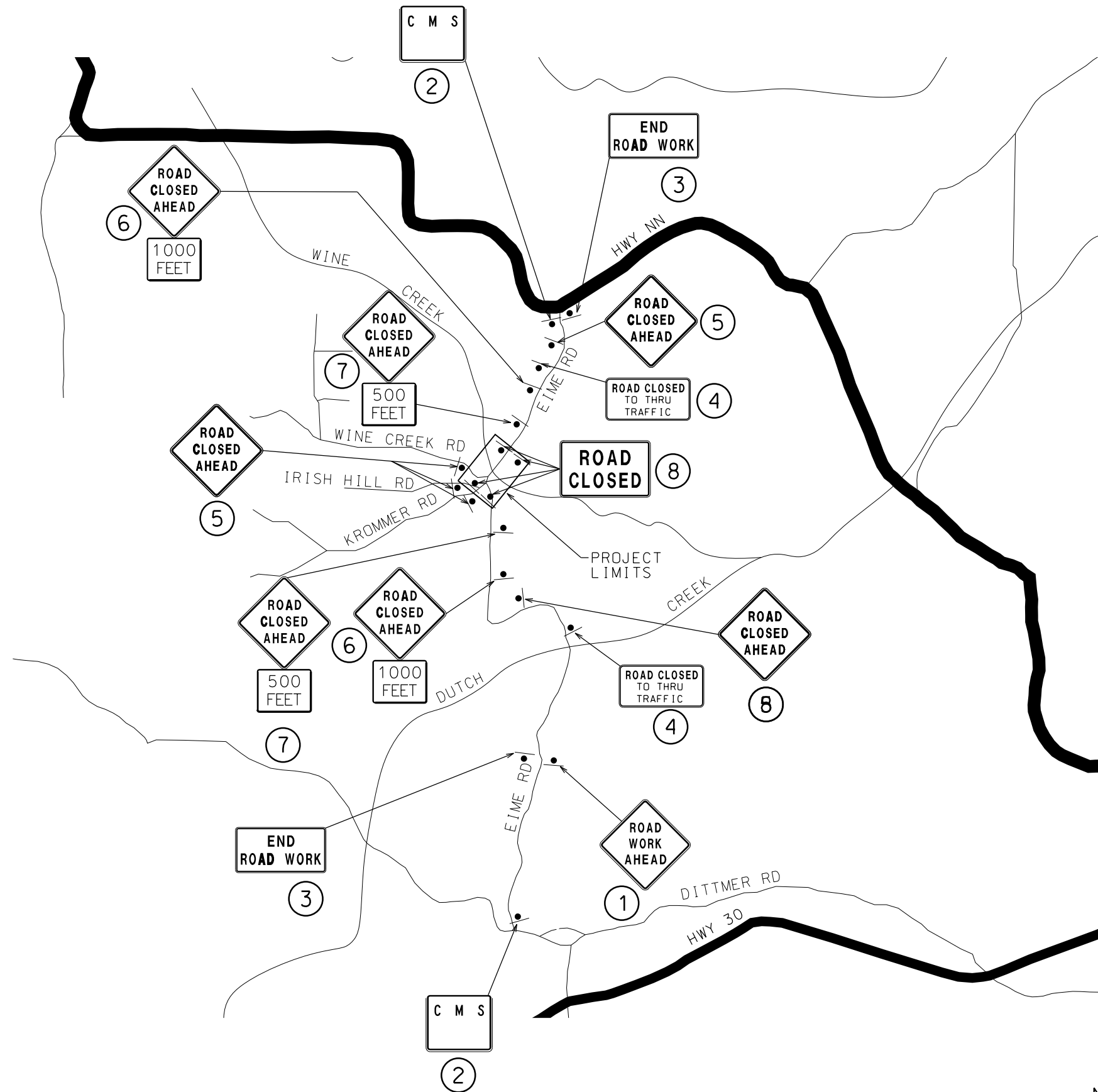
DATE

JEFFERSON COUNTY PUBLIC WORKS
DEPARTMENT



4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501



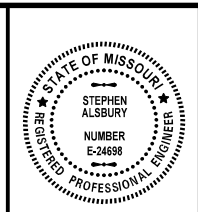


SIGNING (ROAD CLOSED)

NOTE:
ACCESS TO ADJACENT PROPERTIES
SHALL BE MAINTAINED DURING CONSTRUCTION

Detailed Jan 2018
Checked Jan 2018

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



DATE PREPARED 4/18/2018	
STATE MO	SHEET NO. 9
ROUTE E I M E	
COUNTY JEFFERSON	
JOB NO. 15-6145	
PROJECT NO. BRD-B050(22)	
BRIDGE NO. 16200121	

DATE	DESCRIPTION

JEFFERSON COUNTY PUBLIC WORKS
DEPARTMENT

P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX



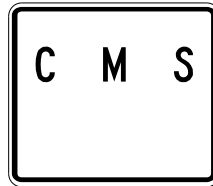
XABNA

4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501



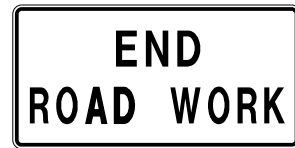
W020-1

1



CHANGABLE
MESSAGE
SIGN

2



G020-2

3



R11-4

4



W020-3

5



W020-3



W016-2

6



W020-3



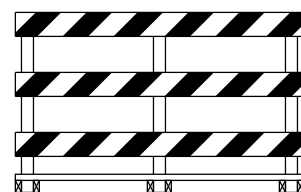
W016-2

7



R11-2

8



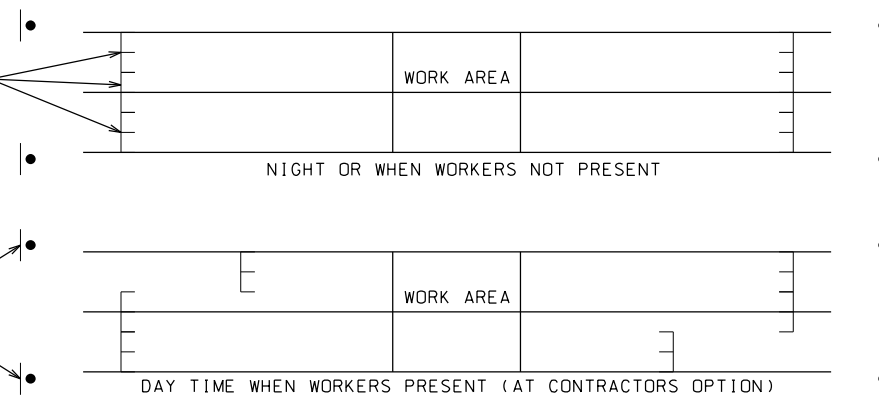
TYPE III
MOVEABLE BARRICADE

NOTES:

1. ALL CONSTRUCTION SIGNS SHALL BE NON-PORTABLE MOUNTED 48 HOURS PRIOR TO ROAD CLOSURE.
2. TYPE III BARRICADES SHALL EXTEND FROM SHOULDER TO SHOULDER.
3. CONTRACTOR IS RESPONSIBLE FOR UTILITY LOCATES PRIOR TO PLACING SIGN POSTS.

8' WIDE BARRICADE

MOUNT ROAD CLOSED
SIGNS WITH TYPE B
WARNING LIGHTS
100' IN FRONT OF
BARRICADES (TYP.)



BARRICADE PLACEMENT

Detailed Jan 2018
Checked Jan 2018

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



DATE PREPARED
4/18/2018
STATE MO SHEET NO. 10
ROUTE E I ME
COUNTY JEFFERSON
JOB NO. 15-6145
PROJECT NO. BRO-B050(22)
BRIDGE NO. 16200121

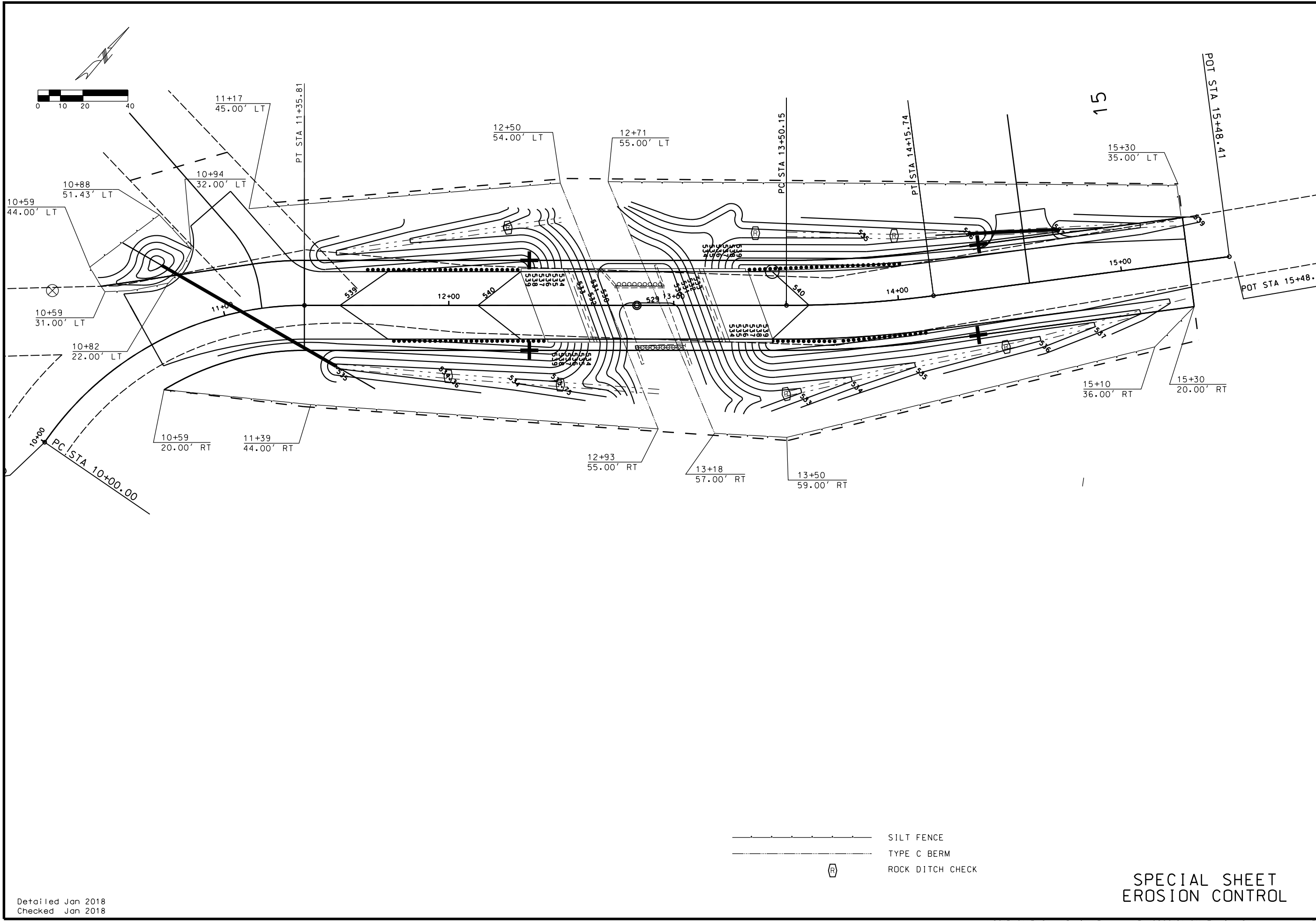
DATE	DESCRIPTION

JEFFERSON COUNTY PUBLIC WORKS
DEPARTMENT

P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX



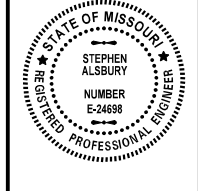
XABNA
4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501



- SILT FENCE
- TYPE C BERM
- (R) ROCK DITCH CHECK

Detailed Jan 2018
Checked Jan 2018

SPECIAL SHEET
EROSION CONTROL



DATE PREPARED 4/18/2018	
STATE MO	SHEET NO. 11
ROUTE E I ME	
COUNTY JEFFERSON	
JOB NO. 15-6145	
PROJECT NO. BRO-B050(22)	
BRIDGE NO. 16200121	

DATE	DESCRIPTION

JEFFERSON COUNTY PUBLIC WORKS
DEPARTMENT

P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX





4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501

[illegible]

The diagram consists of two main parts: a General Elevation view at the top and a Plan view at the bottom.

General Elevation: This view shows the bridge structure from a side perspective. It includes two bents, B1 and B2, each supported by four piles. The bridge deck is shown with a 30'-0" roadway width. The structure is labeled with dimensions such as 15", 21", 18", and 12+50. A note indicates "Wine Creek" is adjacent to the structure. The elevation also shows the "Fill Face of End Bent No. 1" and "End Bent No. 2".

Plan: This view shows the bridge structure from a top-down perspective. It includes the same two bents, B1 and B2, and the bridge deck. The plan view shows the bridge spans and the roadway width. Key dimensions include a total span length of 58'-6" (Span 1-2) and a total width of 62'-2 3/4". Stationing is provided for the bridge structure, including Sta. 12+56.88, Sta. 12+58.75, Sta. 13+17.25, and Sta. 13+19.11. The plan also shows the "Fill Face of End Bent No. 1" and "End Bent No. 2".

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

Foundation Data			
Type	Design Data	Bent No.	
		1	2
Load Bearing Pile	Pile Type and Size	HP 10x42	HP 10x42
	Number ea	4	4
	Approximate Length per Each ft	20	20
	Pile Point Reinforcement ea	4	4
	Minimum Galvanized Penetration (Elev.) ft	509	509
	Minimum Tip Penetration (Elev.) ft	514.0	514.0
	Criteria for Minimum Tip Penetration	Minimum Embedment into Natural Ground	Minimum Embedment into Natural Ground
	Pile Driving Verification Method	DF	DF
	Design Bearing Nominal Axial Pile Compression Resistance kip	249	249
	Hammer Energy Required ft-lb	8,000	8,000

Estimated Quantities for Slab on Concrete I-Girder		
Item		Total
Class B-2 Concrete (Superstructure on Concrete I-Girder)	cu. yard	76.4
Reinforcing Steel	pound	13,610
Reinforcing Steel (Epoxy Coated)	pound	16,870

Figure 10 is a technical drawing of a structural connection, labeled "Detail A (Typ.)". It shows a cross-section of a pile and an L4x4 angle. An L4x4x3/8x10 angle is connected to the pile. The drawing includes dimensions: a 4" vertical offset, a 1 1/2" (Typ.) horizontal offset, and center-to-center dimensions for the pile and L4x4.

Technical drawing of a bracket with the following dimensions and specifications:

- Overall width: 4"
- Overall height: 4"
- Vertical dimensions on the left: 2 1/2" (top section) and 1 1/2" (bottom section).
- Material: L4x4x 3/8"
- Mounting: ⌀ Two 1 3/16" Dia. Holes for 3/4" Dia. H.S. bolts with two washers and one nut each

Note:
Galvanizing L4x4, $\frac{3}{4}$ " Diameter High Strength Bolts,
Washers and Nuts shall not be required.

Neoprene Pads:
Bearings shall be 60 durometer neoprene pads. Plain Neoprene Bearing Pads shall be in accordance with Sec 716.

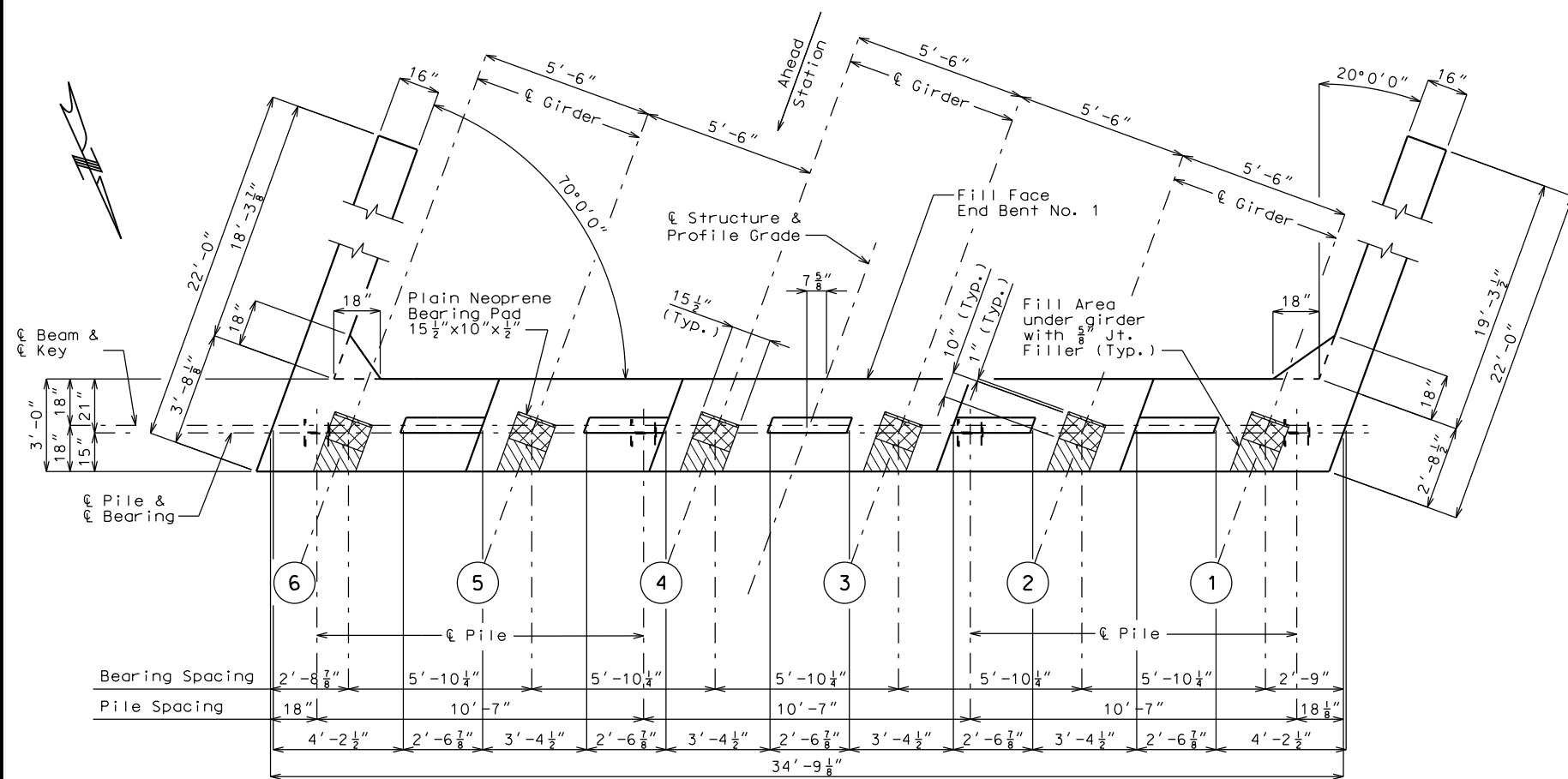
Reinforcing Steel:
Minimum clearance to reinforcing steel shall be 1-1/2", unless otherwise shown.
All reinforcing steel shall be tied 100% at all intersections with minimum 16 gauge wire.

Existing Structure:
Remove existing Bridge No. 1620012 over Wine Creek.

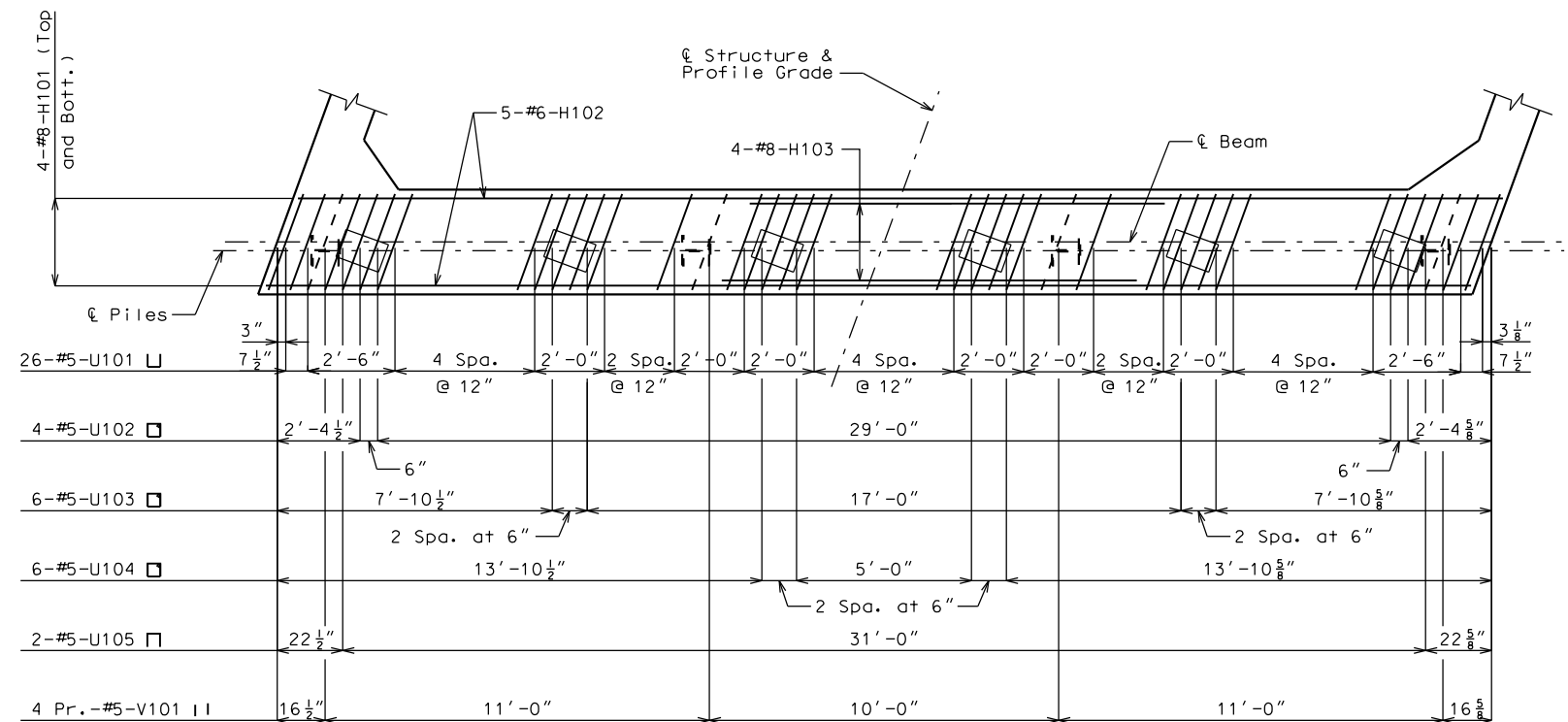
Construction Specifications:
The 2017 Edition of the Missouri Highway and Transportation Commission, "Missouri Standard Specifications for Highway Construction" supplemental revisions and the job specifications shall govern.

Miscellaneous:
"Sec" refers to the sections in the standard and supplemental specifications unless specified otherwise.

Prebore quantities are based on performing Class 1 Excavation prior to piling operations.



PLAN OF BEAM SHOWING DIMENSIONS



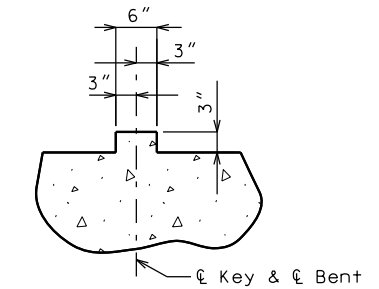
PLAN OF BEAM SHOWING REINFORCEMENT

PLAN DETAILS - END BENT NO. 1

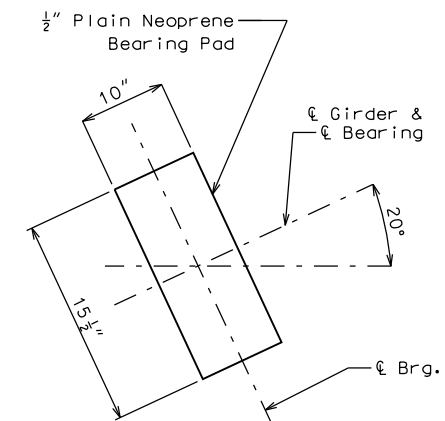
Detailed Jan 2018
Checked Jan 2018

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

Sheet No. 3 of 24



TYPICAL SECTION THRU KEY



TYPICAL PLAN OF BEARINGS
6 Required

Notes:

Work this Sheet with Sheets No. 4 and 5.

For details of Pile Anchors, see Sheet No. 2.

For details of Vertical Drain at End Bents, see Sheet No. 6.

All vertical reinforcing bars in the substructure beams or caps shall be field adjusted to clear piles by at least 1 1/2\".

All U-Bars and Pr. V-Bars in End Bent shall be placed parallel to Structure.

Substructure Quantity Table for End Bent No. 1		
Item		Quantity
Class 1 Excavation	cu. yard	109
Structural Steel Pile (10 in.)	linear foot	80
Pre-Bore For Piling	linear foot	64
Pile Point Reinforcement	each	4
Class B Concrete (substructure)	cu. yard	39.1
Vertical Drain at End Bent	each	1



DATE PREPARED
4/18/2018
STATE MO SHEET NO. 14
ROUTE E I ME
COUNTY JEFFERSON
JOB NO. 15-6145
PROJECT NO. BRO-B050(22)
BRIDGE NO. 16200121

DESCRIPTION

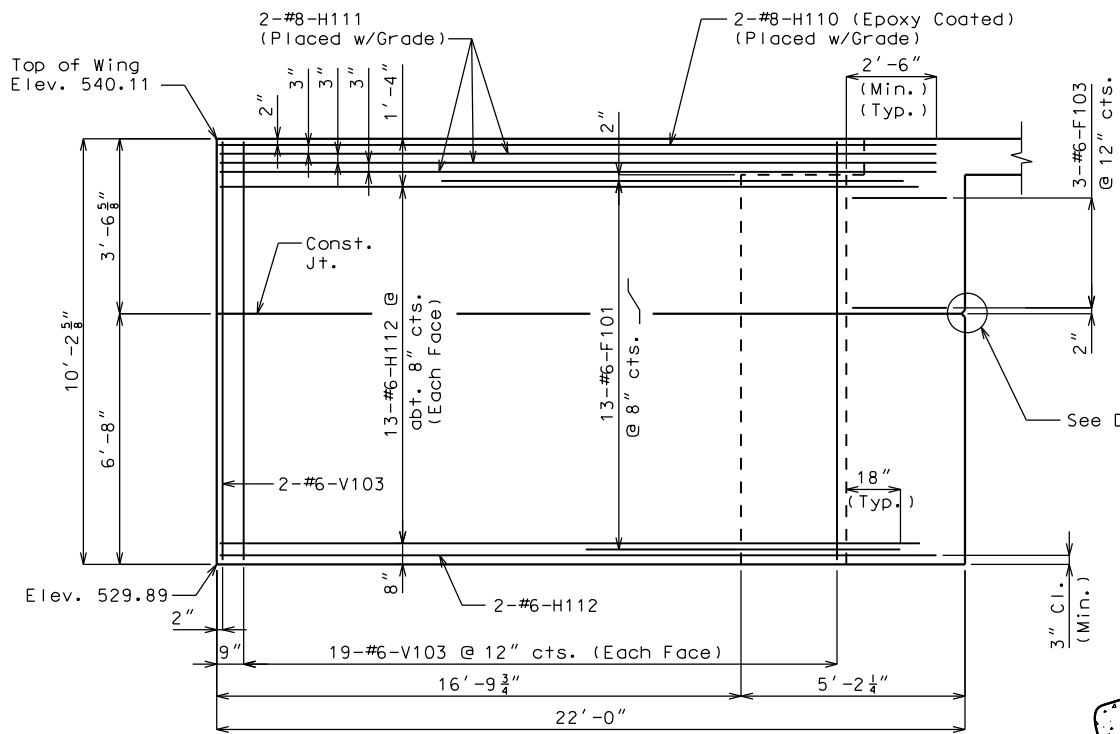
DATE

JEFFERSON COUNTY PUBLIC WORKS
DEPARTMENT

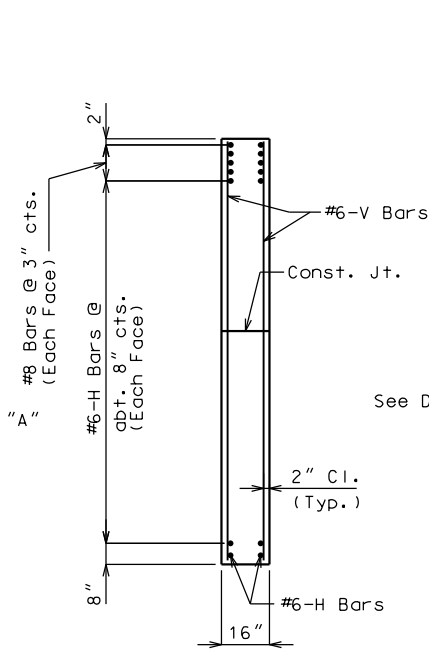
P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX



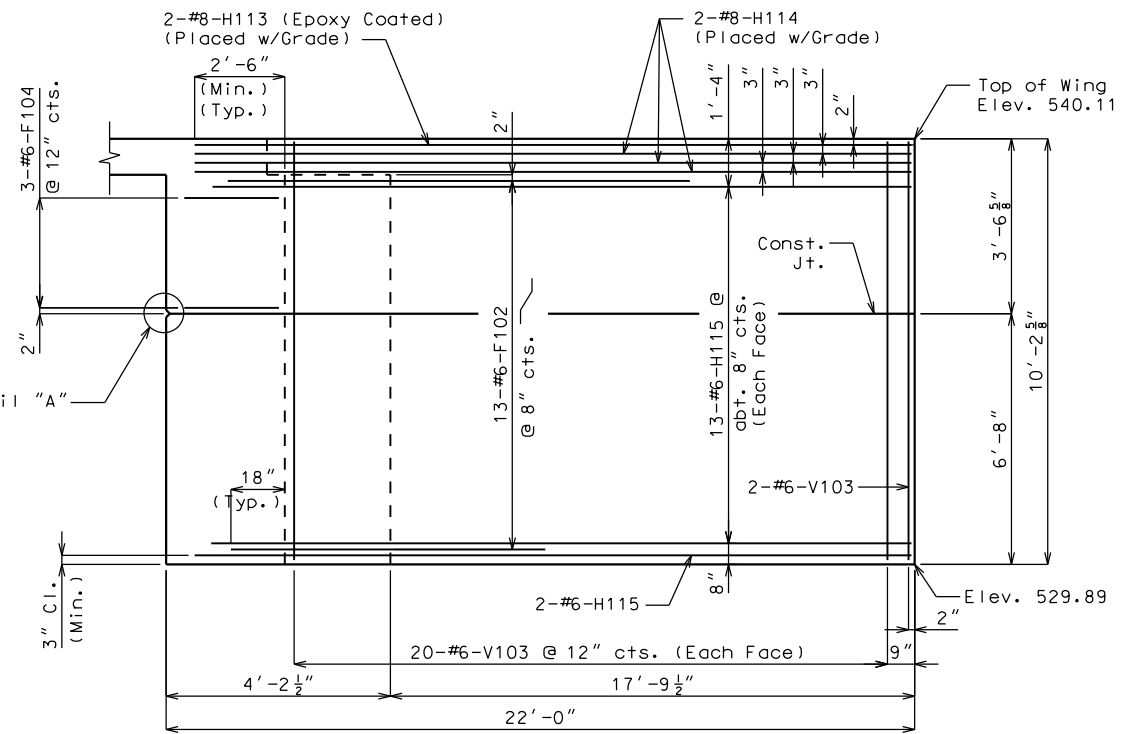
XABNA
140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501



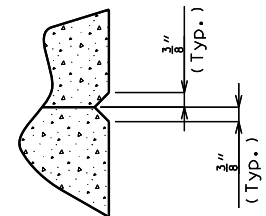
ELEVATION A-A



PART SECTION THRU WING



ELEVATION B-B



DETAIL "A"

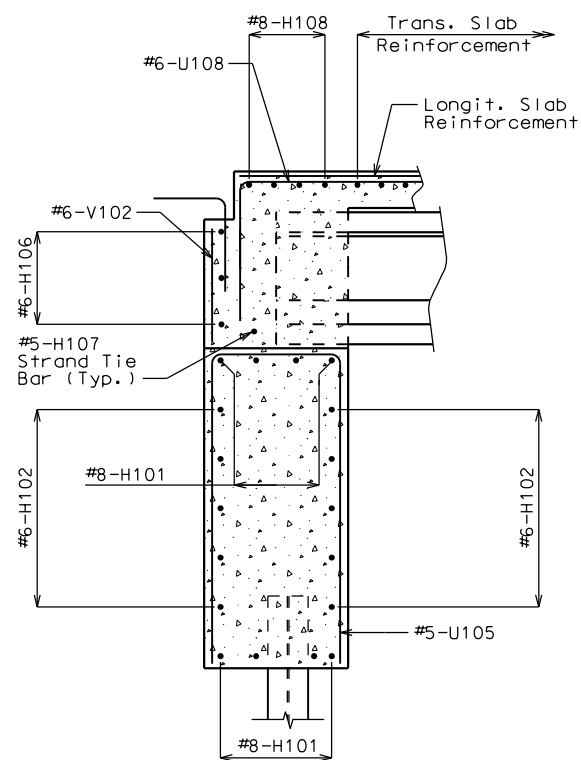
Notes:

Work this Sheet with Sheets No. 3 and 4.

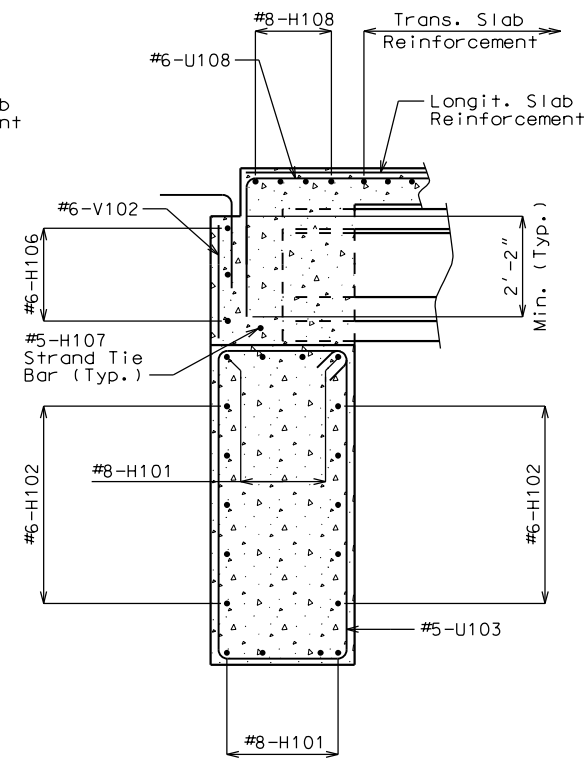
For location of Elevations A-A, B-B and Sections C-C, D-D, E-E and F-F see Sheet No. 4.

Bend #6 F bars in field to clear girders.

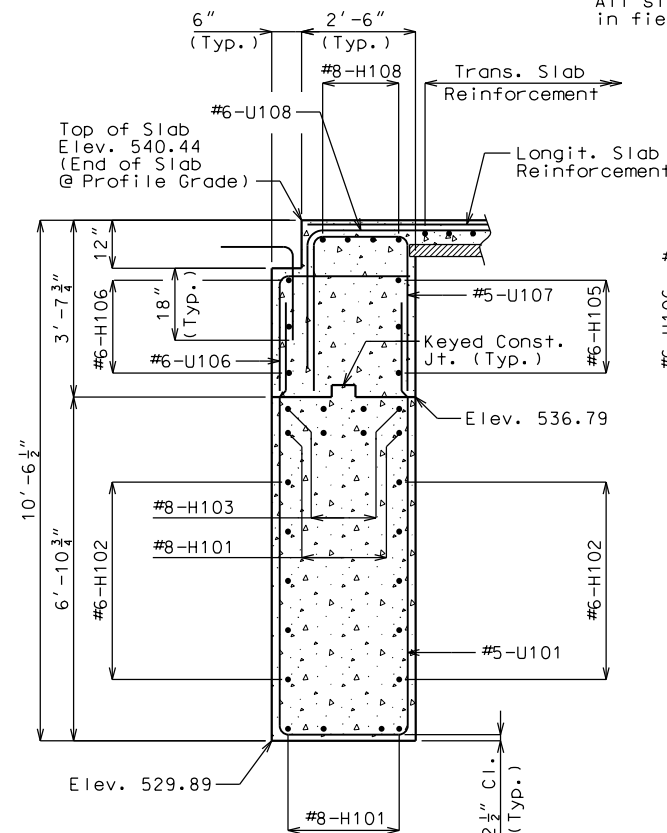
All strands at end of girder shall be field bent or, if necessary, cut in field to maintain 1 1/2" minimum clearance to fill face of end bent.



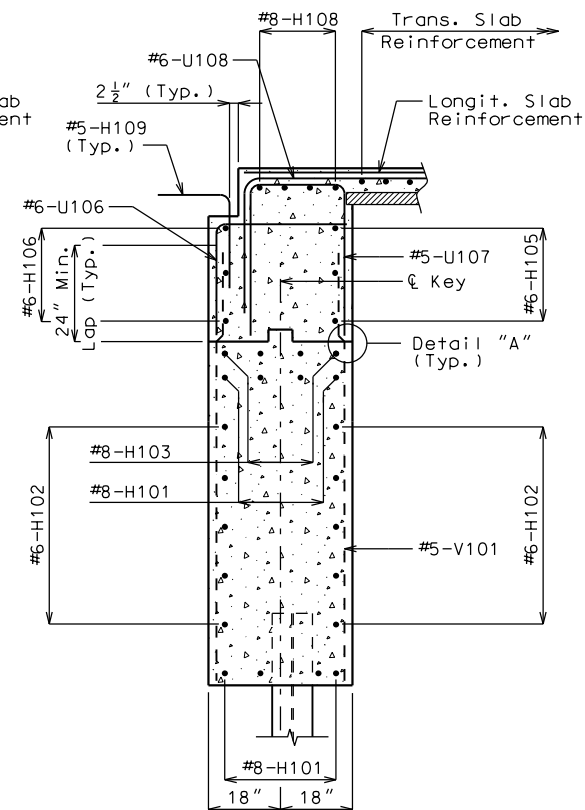
SECTION C-C



SECTION D-D



SECTION E-E



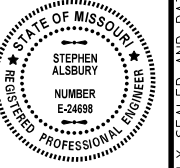
SECTION F-F

SECTIONS OF END BENT NO. 1

Detailed Jan 2018
Checked Jan 2018

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

Sheet No. 5 of 24



DATE PREPARED	4/18/2018
STATE	MO
SHEET NO.	16
ROUTE	E I ME
COUNTY	JEFFERSON
JOB NO.	15-6145
PROJECT NO.	BRO-B050(22)
BRIDGE NO.	16200121

DATE	DESCRIPTION

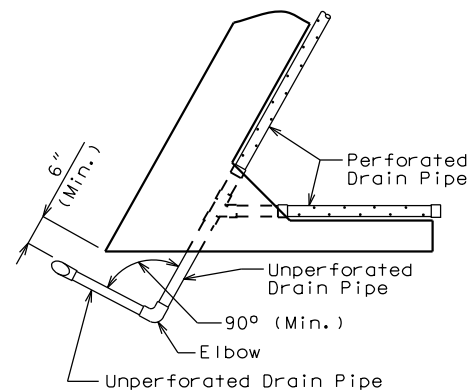
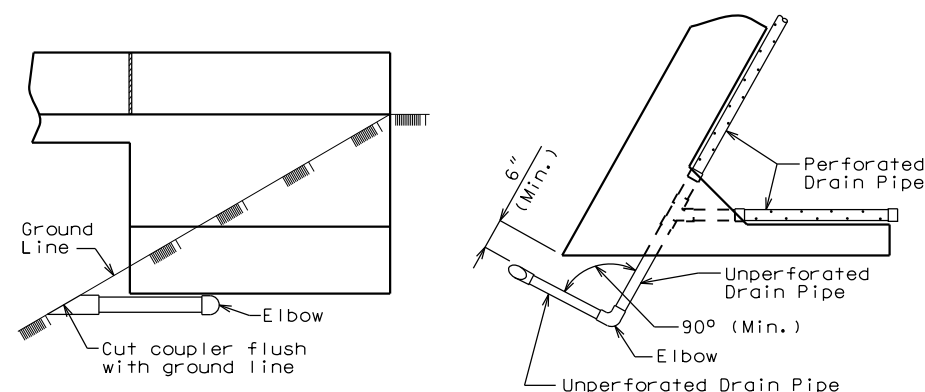
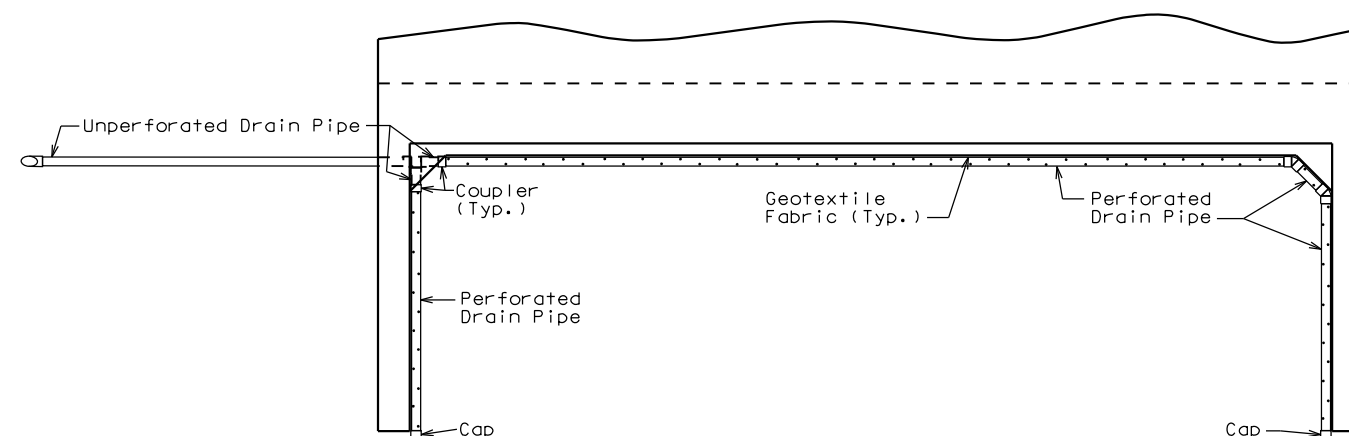
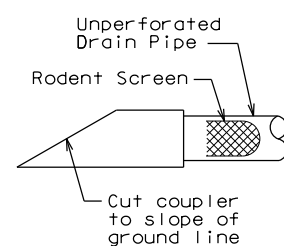
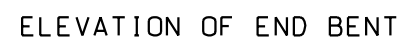
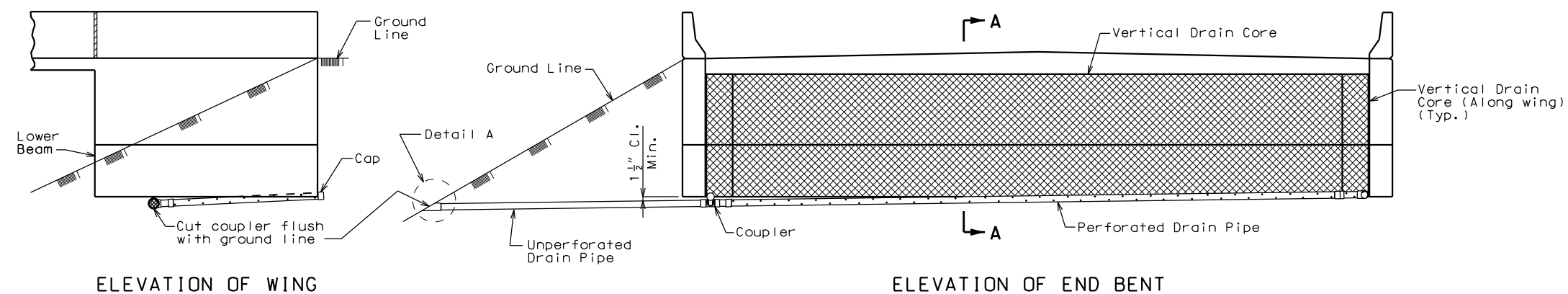
JEFFERSON COUNTY PUBLIC WORKS
DEPARTMENT

P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX



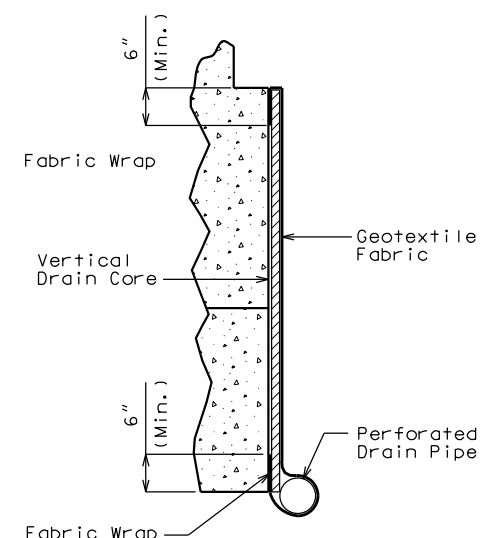
XABNA

4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501



VERTICAL DRAIN AT END BENTS

(Squared end bent shown, skewed end bent similar)



PART SECTION A-A
(Section thru wing similar)

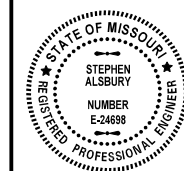
General Notes:

All drain pipe shall be sloped 1 to 2 percent.

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

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

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



DATE PREPARED	
4/18/2018	
STATE	SHEET NO.
MO	17
ROUTE	
E 11E	
COUNTY	
JEFFERSON	
JOB NO.	
15-6145	
PROJECT NO.	
BRO-B050(22)	
BRIDGE NO.	
16200121	

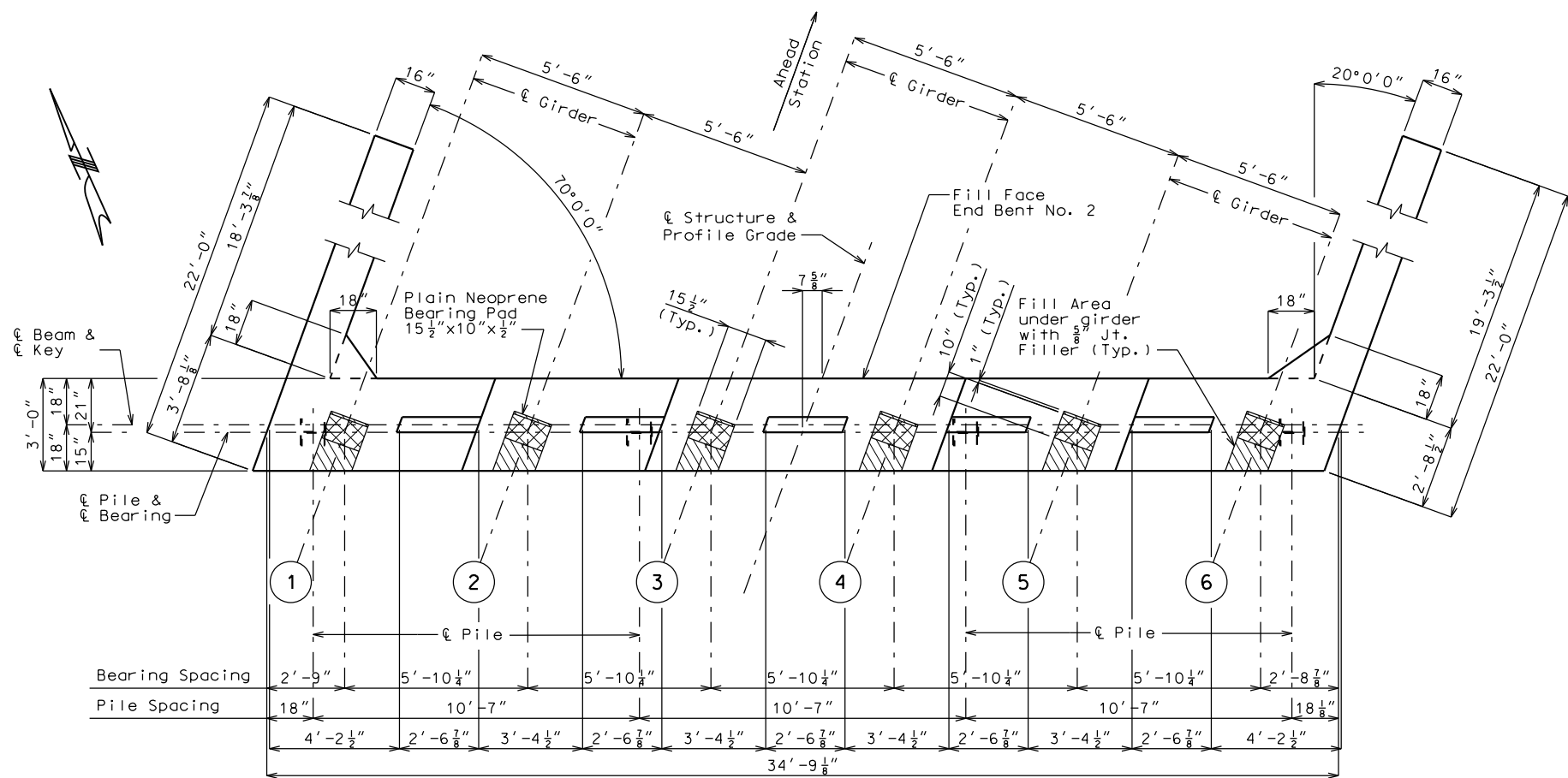
[illegible]

JEFFERSON COUNTY PUBLIC WORKS
DEPARTMENT

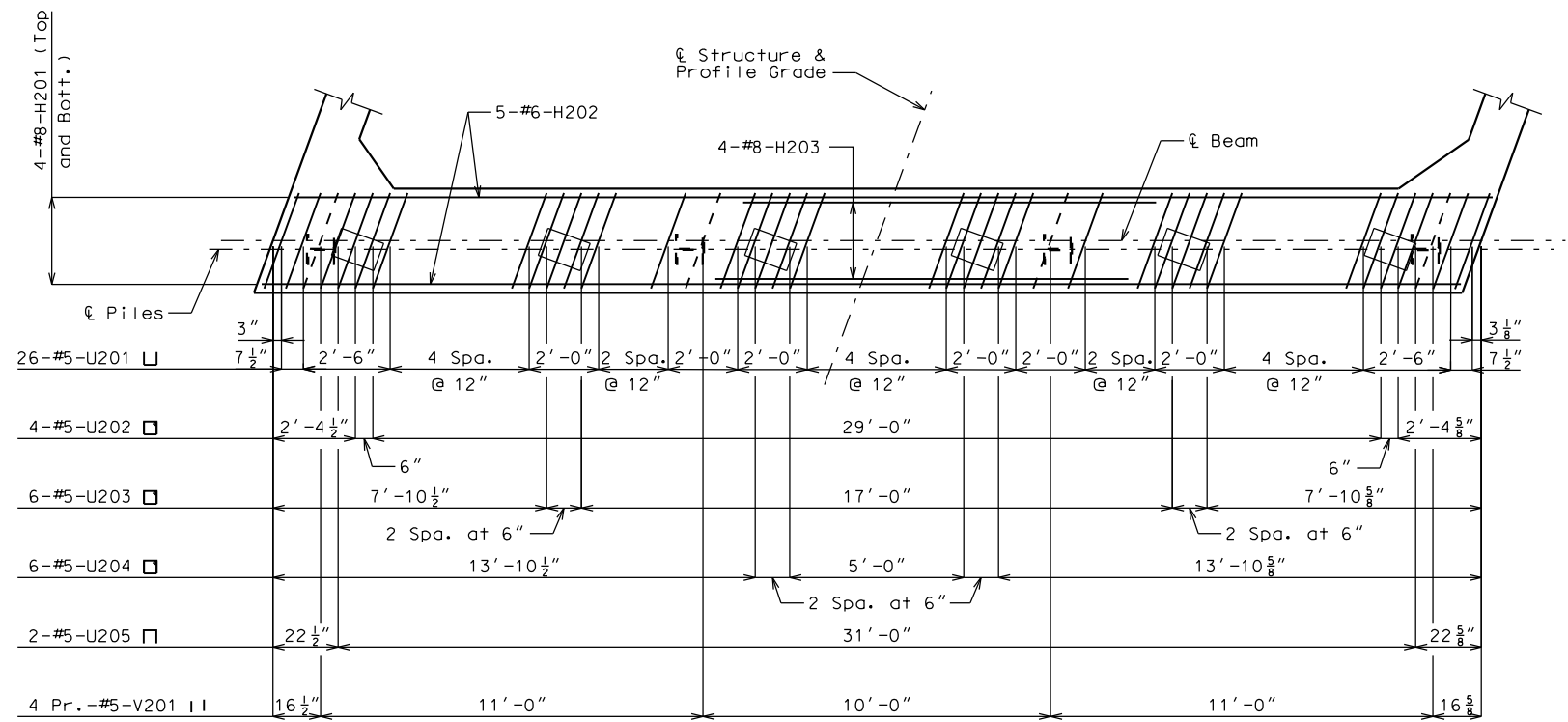


P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX

14140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501

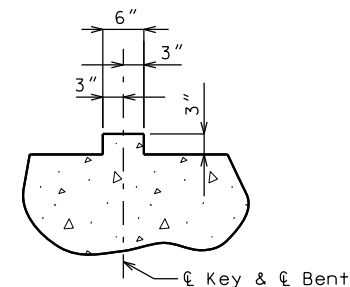


PLAN OF BEAM SHOWING DIMENSIONS

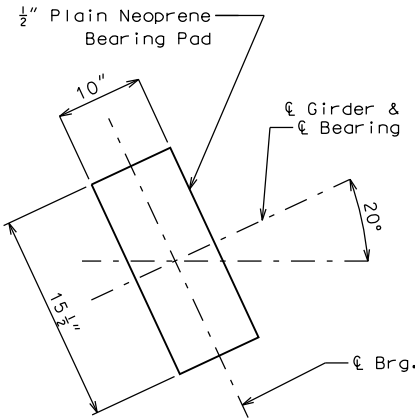


PLAN OF BEAM SHOWING REINFORCEMENT

PLAN DETAILS - END BENT NO. 2



TYPICAL SECTION THRU KEY



TYPICAL PLAN OF BEARINGS
6 Required

Notes:
 Work this Sheet with Sheets No. 8 and 9.
 For details of Pile Anchors, see Sheet No. 2.
 For details of Vertical Drain at End Bents, see Sheet No. 6.
 All vertical reinforcing bars in the substructure beams or caps shall be field adjusted to clear piles by at least 1 1/2".
 All U-Bars and Pr. V-Bars in End Bent shall be placed parallel to Structure.

Substructure Quantity Table for End Bent No. 2		
Item		Quantity
Class 1 Excavation	cu. yard	109
Structural Steel Pile (10 in.)	linear foot	80
Pre-Bore For Piling	linear foot	64
Pile Point Reinforcement	each	4
Class B Concrete (substructure)	cu. yard	39.1
Vertical Drain at End Bents	each	1

Detailed Jan 2018
 Checked Jan 2018



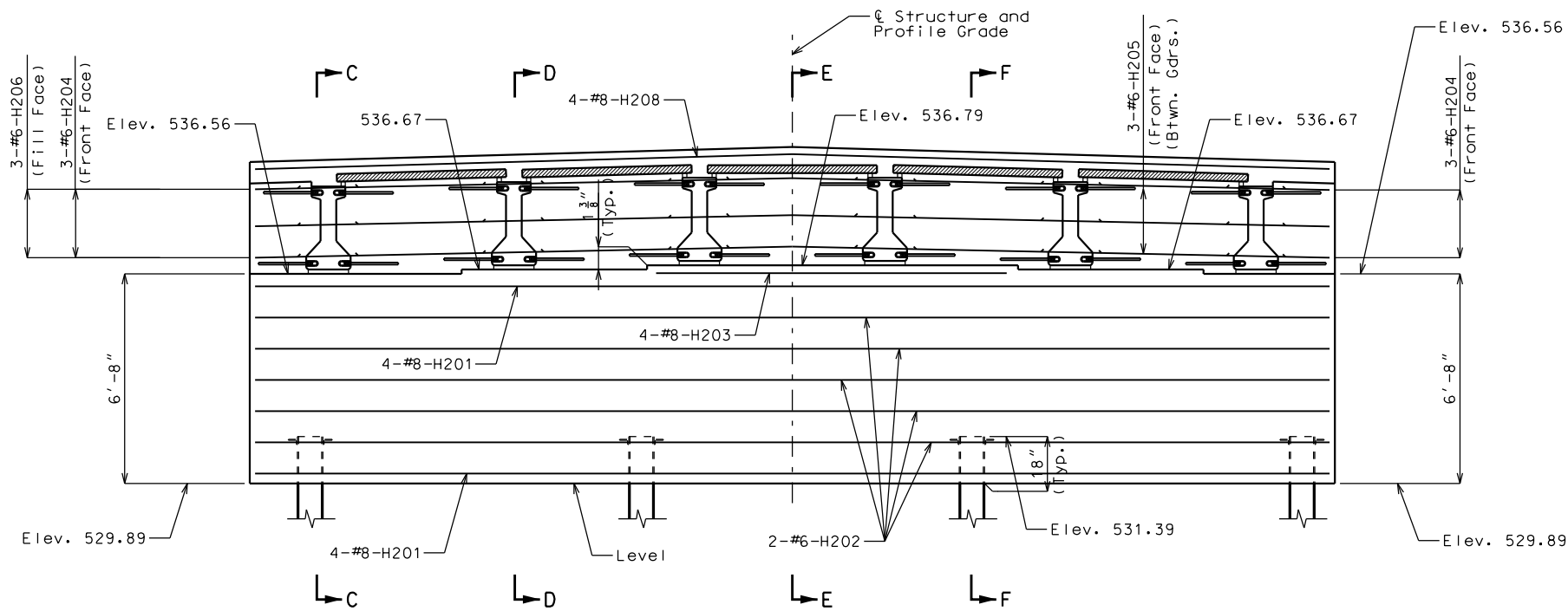
DATE PREPARED
 4/18/2018
 STATE MO SHEET NO. 18
 ROUTE E I ME
 COUNTY JEFFERSON
 JOB NO. 15-6145
 PROJECT NO. BRO-B050(22)
 BRIDGE NO. 16200121

DESCRIPTION	DATE

JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT
 P.O. BOX 100
 HILLSBORO, MO 63050
 (636-797-5340) PHONE
 (636-797-5565) FAX

4140 LINDELL BOULEVARD
 ST. LOUIS, MO 63108
 PH. 314-454-0222
 CERTIFICATE/LICENSE NO. 001501

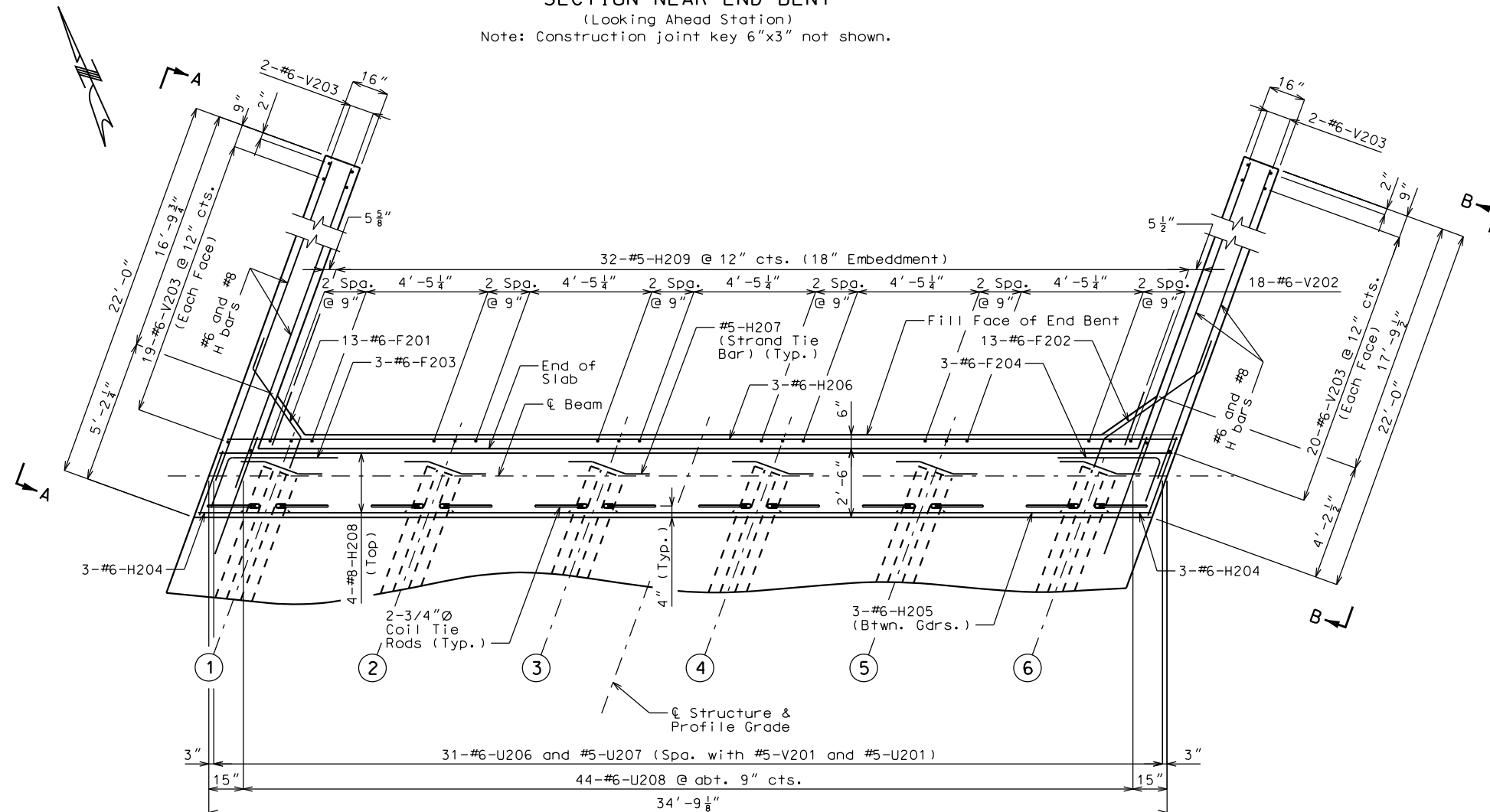




SECTION NEAR END BENT

(Looking Ahead Station)

Note: Construction joint key 6"x3" not shown.



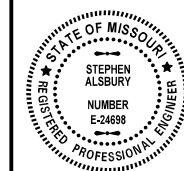
PART PLAN

DETAILS OF END BENT NO. 2

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

Sheet No. 8 of 24

Detailed Jan 2018
Checked Jan 2018



DATE PREPARED
4/18/2018
STATE MO SHEET NO. 19
ROUTE E I ME
COUNTY JEFFERSON
JOB NO. 15-6145
PROJECT NO. BRO-B050(22)
BRIDGE NO. 16200121

DESCRIPTION

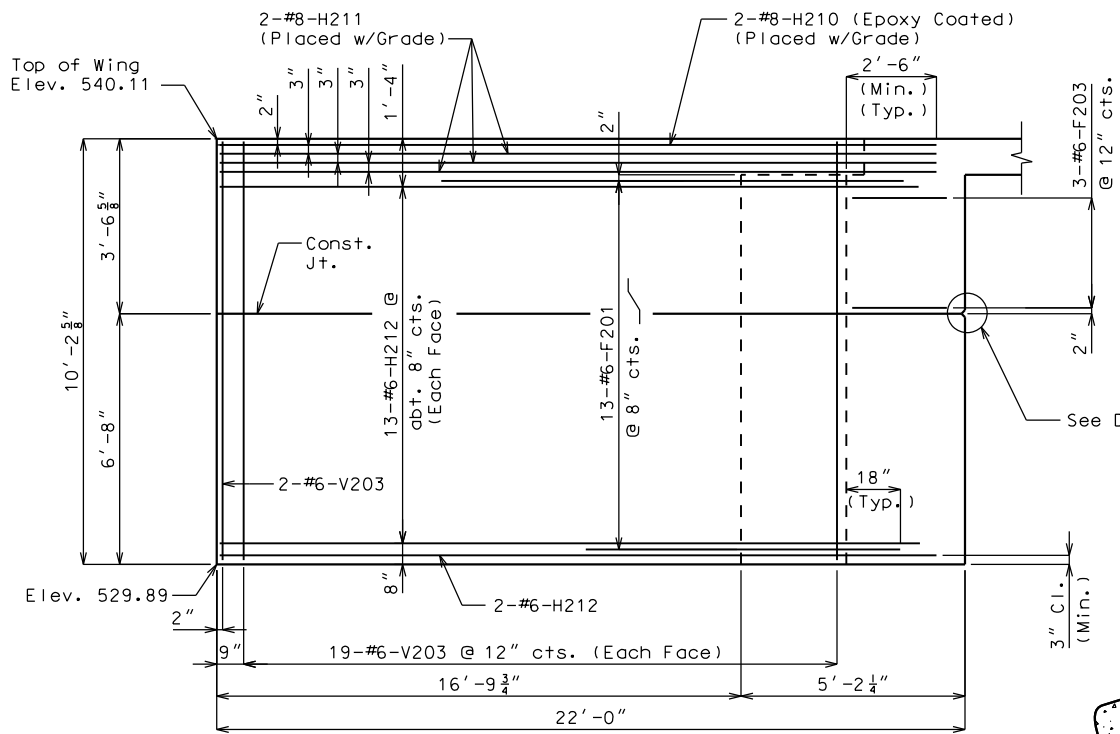
DATE

JEFFERSON COUNTY PUBLIC WORKS
DEPARTMENT

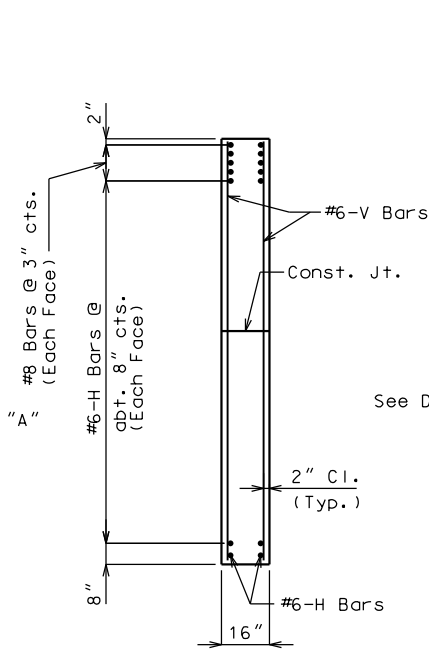


P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX

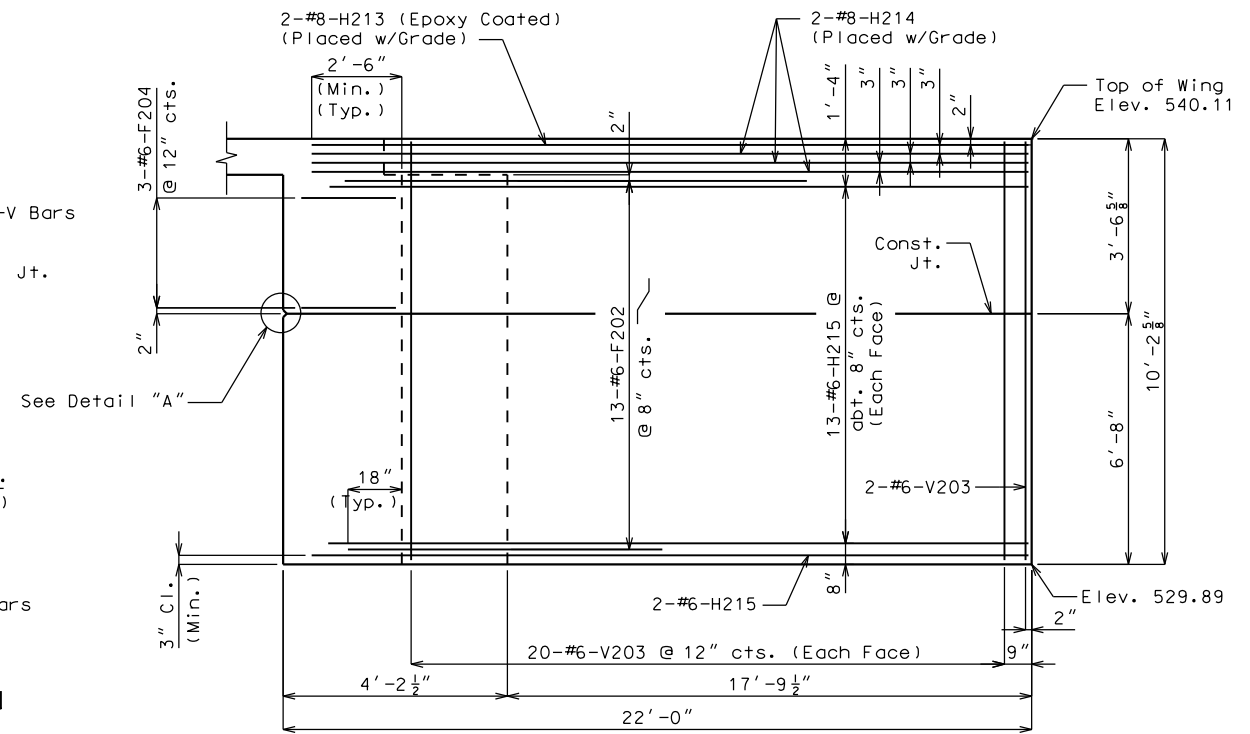
XABNA
4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501



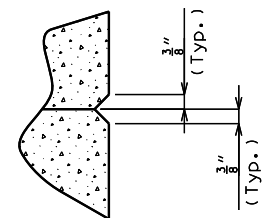
ELEVATION A-A



PART SECTION THRU WING



ELEVATION B-B



DETAIL "A"

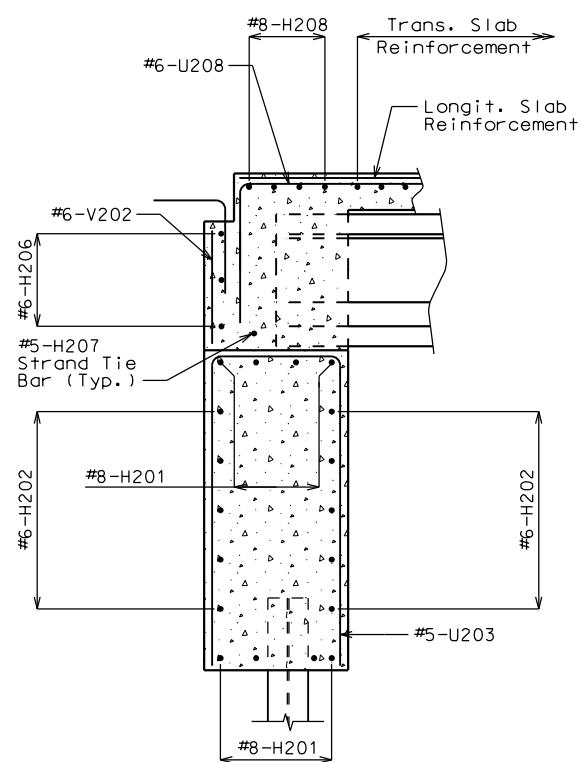
Notes:

Work this Sheet with Sheets No. 7 and 8.

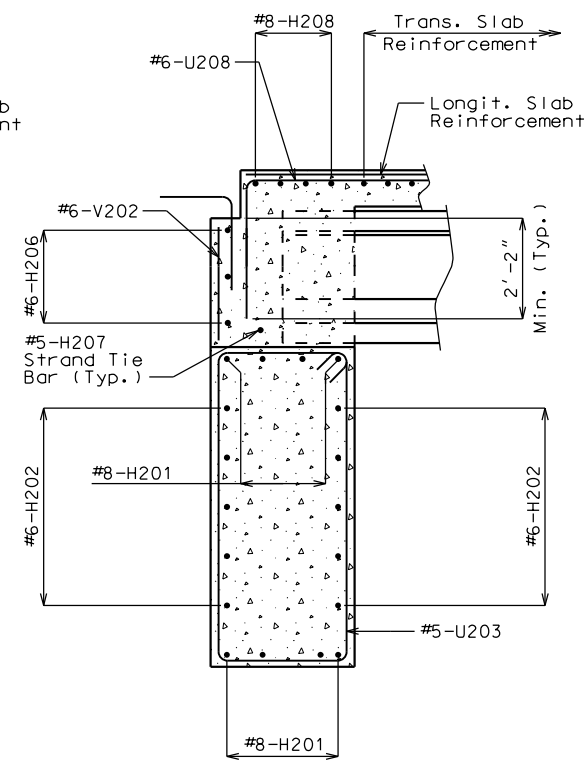
For location of Elevations A-A, B-B and Sections C-C, D-D, E-E and F-F see Sheet No. 7.

Bend #6 F bars in field to clear girders.

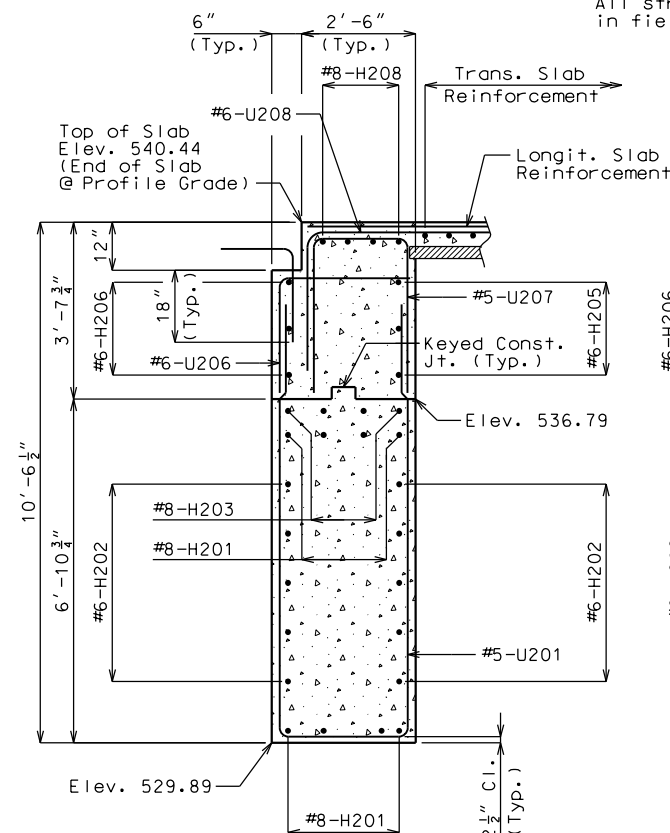
All strands at end of girder shall be field bent or, if necessary, cut in field to maintain 1 1/2" minimum clearance to fill face of end bent.



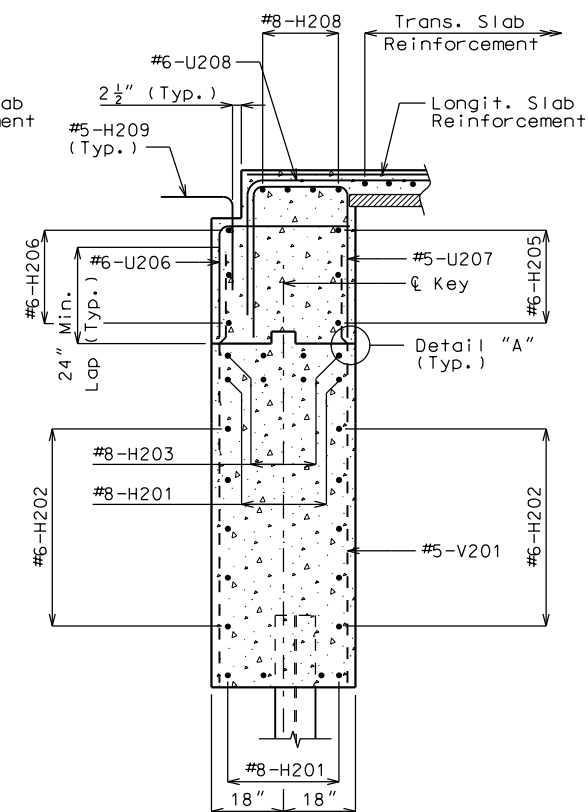
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

SECTIONS OF END BENT NO.2

Detailed Jan 2018
Checked Jan 2018

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

Sheet No. 9 of 24



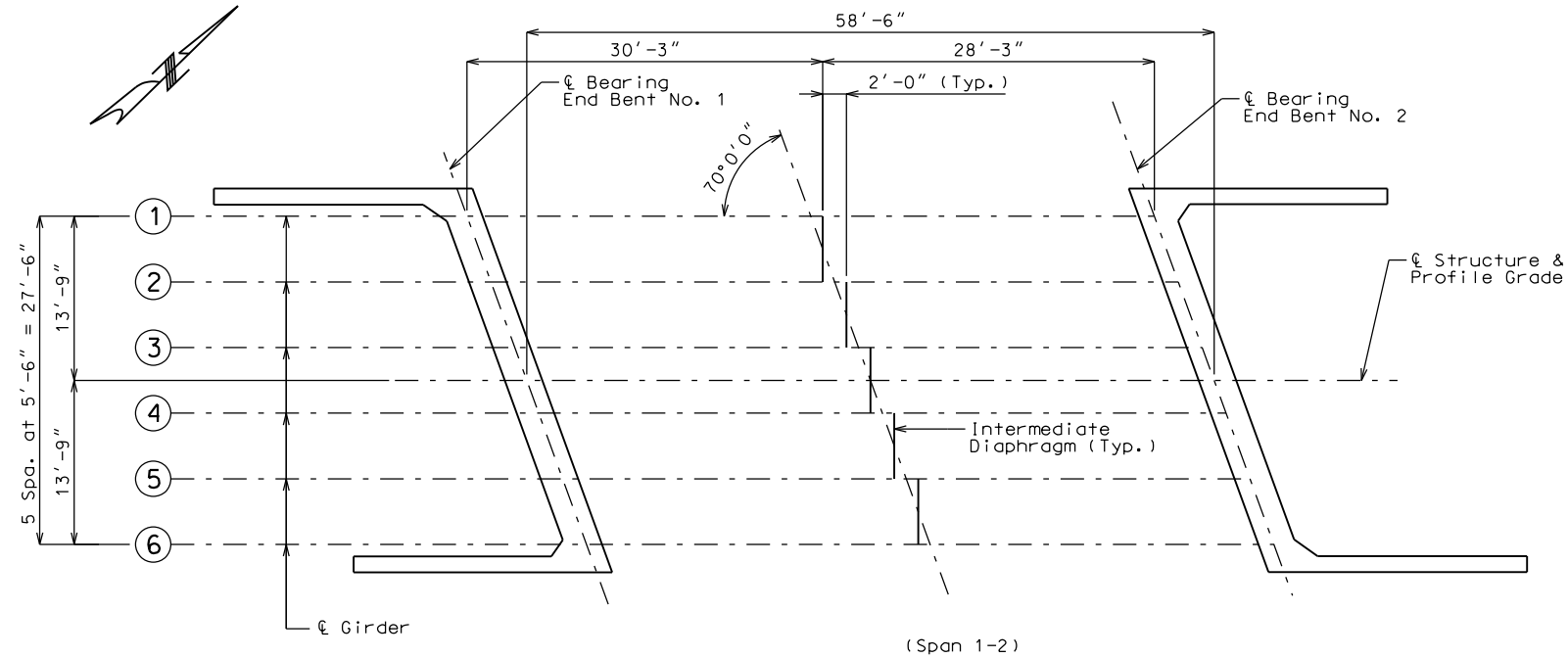
DATE PREPARED
4/18/2018
STATE MO SHEET NO. 20
ROUTE E I ME
COUNTY JEFFERSON
JOB NO. 15-6145
PROJECT NO. BRO-B050(22)
BRIDGE NO. 16200121

DATE	DESCRIPTION

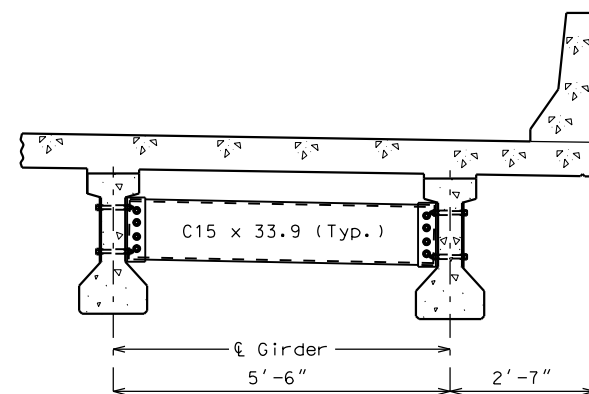
JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT
P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX



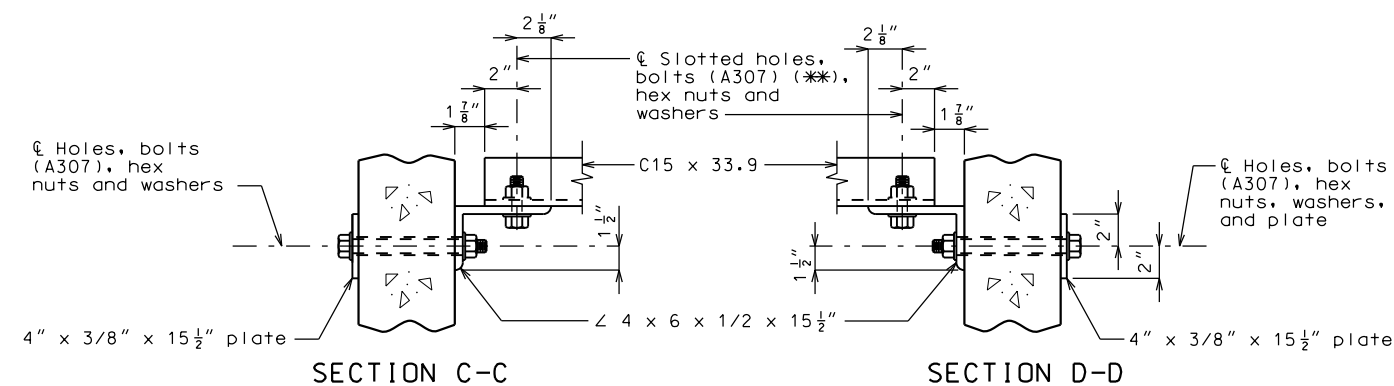
XABNA
4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501



LOCATION OF INTERMEDIATE DIAPHRAGMS
Note: Longitudinal dimensions are measured horizontal.



PART SECTION SHOWING
INTERMEDIATE DIAPHRAGMS

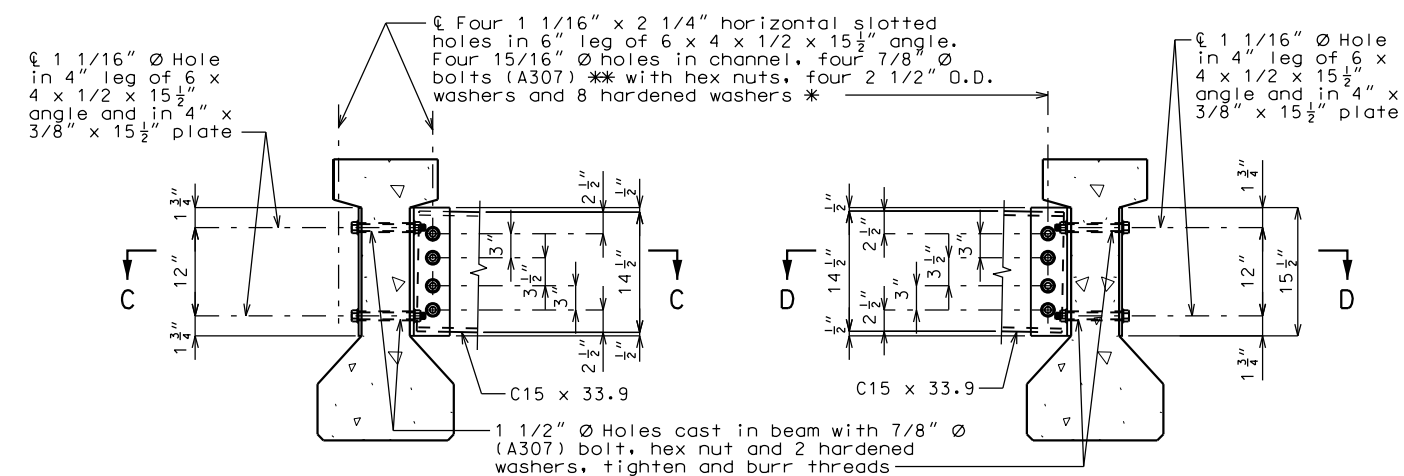


SECTION C-C

SECTION D-D

STEEL INTERMEDIATE DIAPHRAGMS

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



SECTION THRU INT. GIRDER
AT DIAPHRAGM

SECTION THRU EXT. GIRDER
AT DIAPHRAGM

STEEL DIAPHRAGM NOTES:

* In lieu of 2 1/2" outside diameter washers, contractor may substitute a 3/16" (Min. thickness) plate with four 15/16" $\varnothing$ holes and one hardened washer per bolt.

** Bolts shall be tightened to provide a tension of one-half that specified in Sec 712 for high strength bolt installation. A325 bolts may be substituted for and installed in accordance with the requirements for the specified A307 bolts.

All diaphragm materials including bolts, nuts, and washers shall be galvanized.

Fabricated structural steel shall be ASTM A709 Grade 36 except as noted.

Payment for furnishing and installing steel intermediate diaphragms will be considered completely covered by the contract unit price for Steel Intermediate Diaphragm for P/S Concrete Girders.

Shop drawings will not be required for steel intermediate diaphragms and angle connections.

Detailed Jan 2018
Checked Jan 2018

Sheet No. 11 of 24

J:\2015\6145\Cadd\Design\Bridge\B_16200121_B011_Diaphragm Det.dgn 3:23:07 PM 4/18/2018



DATE PREPARED
4/18/2018
STATE MO SHEET NO. 22
ROUTE
COUNTY JEFFERSON
JOB NO. 15-6145
PROJECT NO. BRO-B050(22)
BRIDGE NO. 16200121

DESCRIPTION

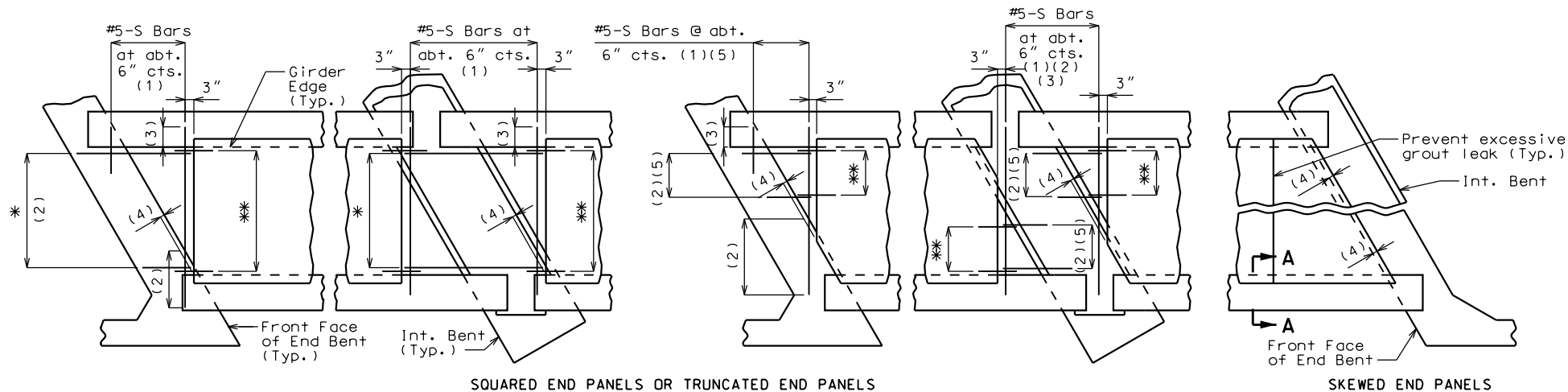
DATE

JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT



P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX
KABNA
4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501

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

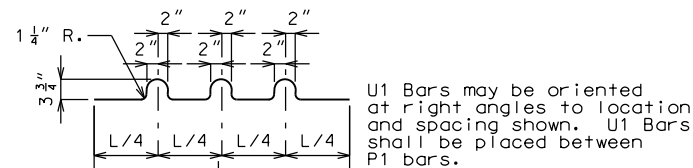


SQUARED END PANELS OR TRUNCATED END PANELS

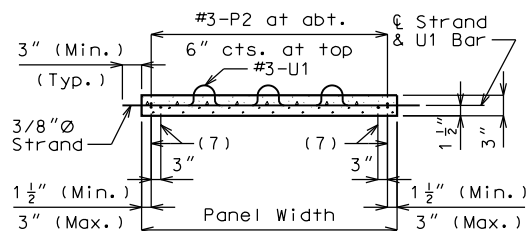
SKewed END PANELS

PLAN SHOWING PANELS PLACEMENT

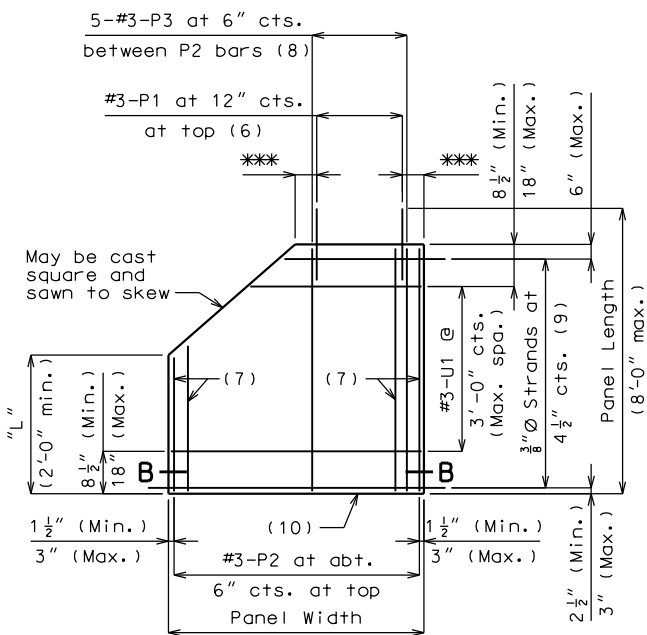
- * #5-S Bars at abt. 9" cts. (1)
- ** #3-P1 at 12" cts. (End panels only)



BENDING DIAGRAM FOR U1 BAR

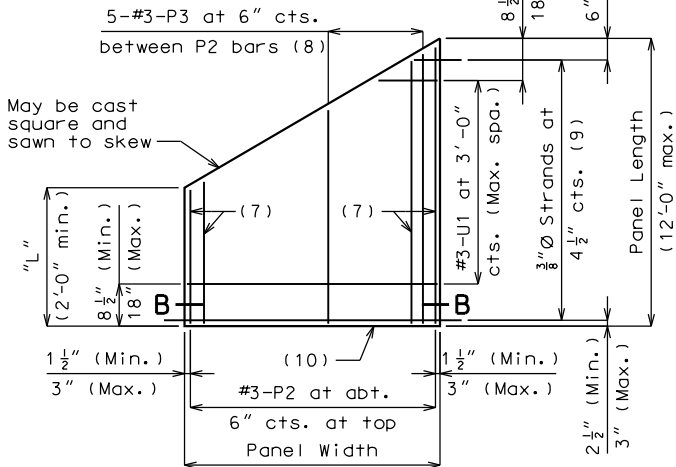


SECTION B-B

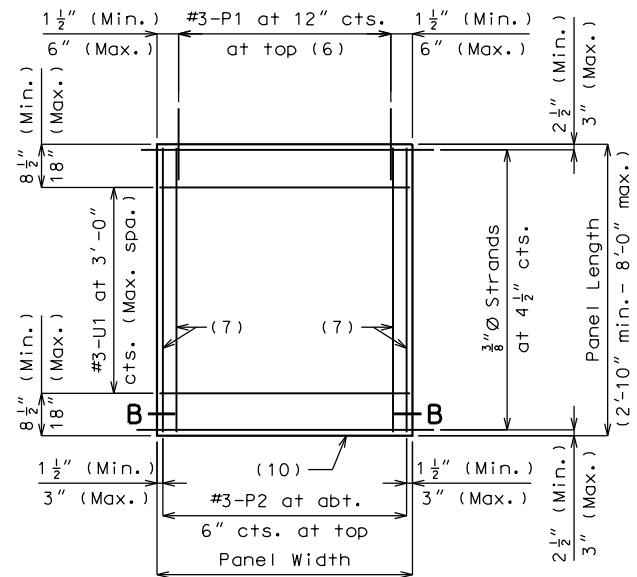


PLAN OF OPTIONAL TRUNCATED END PANEL

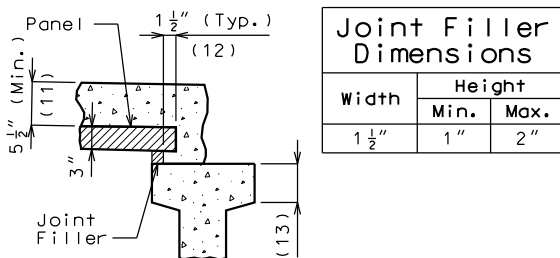
*** 3" (Min.), 6" (Max.)



PLAN OF OPTIONAL SKewed END PANEL



PLAN OF SQUARED PANEL



SECTION A-A

Reference Notes:

Plan of Panels Placement:

(1) S-bars shown are bottom steel in slab between panels and used with squared and truncated end panels only.

(2) Extend S-bars 18 inches beyond the front face of end bents and int. bents for squared and truncated end panels only.

(3) Extend S-bars 9 inches beyond edge of girder (Typ.).

(4) End panels shall be dimensioned 1/2" min. to 1 1/2" max. from the inside face of diaphragm.

(5) For truncated end panels, use a min. of #5-S bars at 6" crossings in openings, or min. 4x4-W7xW7.

Plans of Panels:

(6) For end panels only, P1 bars shall be 2'-0" in length and embedded 12". P1 bars will not be required for panels at squared integral end bents.

(7) #3-P2 bars near edge of panel at bottom (under strands).

(8) Use #3-P3 bars if panel is skewed 45° or greater.

(9) Any strand 2'-0" or shorter shall have a #4 reinforcing bar on each side of it, centered between strands. Strands 2'-0" or shorter may then be debonded at the fabricator's option.

(10) Optional 1/2" x 45° Chamfer one or both sides at bottom.

Section A-A:

(11) Slab thickness over prestressed panels varies due to girder camber. In order to maintain minimum slab thickness, it may be necessary to raise the grade uniformly throughout the structure. No payment will be made for additional labor or materials required for necessary grade adjustment.

(12) Contractor shall ensure proper consolidation under and between panels.

(13) At the contractor's option, the variation in slab thickness over prestressed panels may be eliminated or reduced by increasing and varying the girder top flange thickness. Dimensions shall be shown on the shop drawings.

General Notes:

Prestressed Panels:

Concrete for prestressed panels shall be Class A-1 with $f'_c = 6,000$ psi, $f'_{ci} = 4,000$ psi.

The top surface of all panels shall receive a scored finish with a depth of scoring of 1/8" perpendicular to the prestressing strands in the panels.

Prestressing tendons shall be high-tensile strength, uncoated, seven-wire, low-relaxation strands for prestressed concrete in accordance with AASHTO M 203 Grade 270, with nominal diameter of strand = 3/8" and nominal area = 0.085 sq. in. and minimum ultimate strength = 22.95 kips (270 ksi). Larger strands may be used with the same spacing and initial tension.

Initial prestressing force = 17.2 kips/strand.

The method and sequence of releasing the strands shall be shown on the shop drawings.

Suitable anchorage devices for lifting panels may be cast in panels, provided the devices are shown on the shop drawings and approved by the engineer. Panel lengths shall be determined by the contractor and shown on the shop drawings.

When squared end panels are used at skewed bents, the skewed portion shall be cast full depth. No separate payment will be made for additional concrete and reinforcing required.

Support from diaphragm forms is required under the optional skewed end until cast-in-place concrete has reached 3,000 psi compressive strength.

Prestressed panels shall be brought to saturated surface-dry (SSD) condition just prior to the deck pour. There shall be no free standing water on the panels or in the area to be cast.

The prestressed panel quantities are not included in the table of estimated quantities for the slab.

Reinforcing Steel:

All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

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

If U1 bars interfere with placement of slab steel, U1 loops may be bent over, as necessary, to clear slab steel.

Welded wire reinforcement providing a minimum area of reinforcing perpendicular to strands of 0.22 sq. in./ft., with spacing parallel to strands sufficient to ensure proper handling, may be used in lieu of the #3-P2 bars shown. Wire or bar diameter shall not be larger than 0.375 inch. The above alternative reinforcement criteria may be used in lieu of the #3-P3 bars, when required, and placed over a width not less than 2 feet.

The reinforcing steel shall be tied securely to the 3/8" Ø strands with the following maximum spacing in each direction:

#3-P2 bars at 16 inches.

Welded wire reinforcement at 2'-0".

Tie the #3-U1 bars to the #3-P2 bars, or to the welded wire reinforcement, or to the strands at about 3'-0" centers.

Minimum reinforcement steel length shall be 2'-0".

All reinforcement other than prestressing strands shall be epoxy coated.

Precast panels may be in contact with stirrup reinforcing in diaphragms.

S-bars are not listed in the bill of reinforcing.

Cost of S-bars will be considered completely covered by the contract unit price for the slab.

Joint Filler:

Joint filler shall be preformed fiber expansion joint material in accordance with Sec 1057 or expanded or extruded polystyrene bedding material in accordance with Sec 1073.

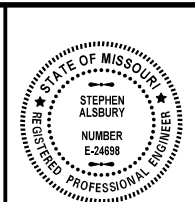
Use Slab Haunching Diagram on Sheet No. 12 for determining thickness of joint filler within the limits noted in the table of Joint Filler Dimensions.

Thicker material may be used on one or both sides of the girder to reduce cast-in-place concrete thickness to within tolerances.

The same thickness of preformed fiber expansion joint material shall be used under any one edge of any panel except at locations where top flange thickness may be stepped. The maximum change in thickness between adjacent panels shall be 1/4 inch. The polystyrene bedding material may be cut with a transition to match haunch height above top of flange.

Joint filler shall be glued to the girder. When thickness exceeds 1 1/2 inches, the joint filler shall be glued top and bottom. The glue used shall be the type recommended by the joint filler manufacturer.

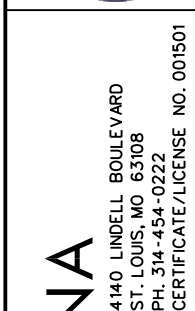
Edges of panels shall be uniformly seated on the joint filler before slab reinforcement is placed.



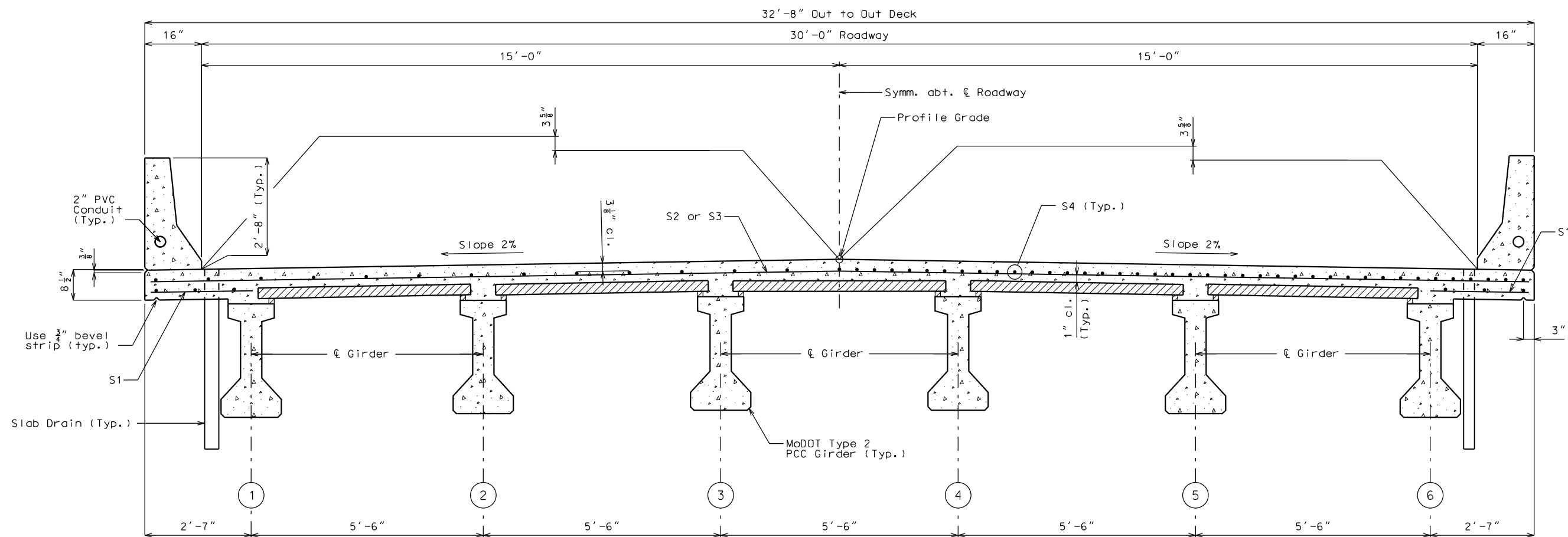
DATE PREPARED	4/18/2018
STATE	MO
SHEET NO.	24
ROUTE	E I ME
COUNTY	JEFFERSON
JOB NO.	15-6145
PROJECT NO.	BR0-B050(22)
BRIDGE NO.	16200121

DESCRIPTION	DATE

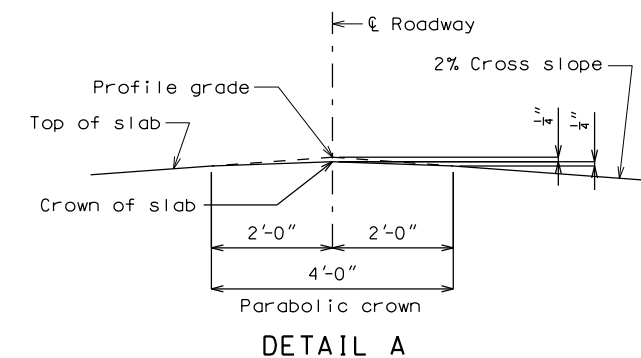
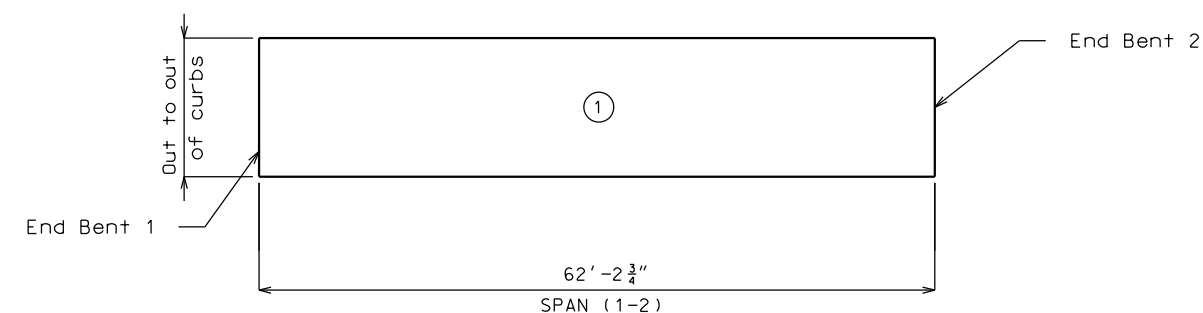
JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT	P.O. BOX 100 HILLSBORO, MO 63050 (636-797-5340) PHONE (636-797-5565) FAX
--	---



XABNA
4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501



TYPICAL CROSS SECTION



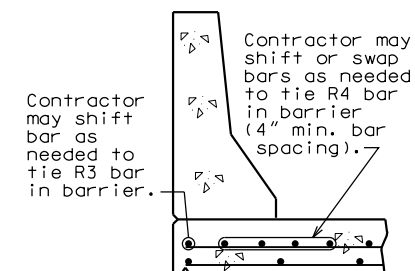
DETAIL A

	Sequence of Pours		Min. rate of pour cu. yds./hr.
	Direction		With retarder
Basic sequence	1	2	25

Note: The contractor shall furnish an approved retarder to retard the set of the concrete to 2.5 hours, and shall pour and satisfactorily finish the slab pours at the rate given.

The concrete diaphragm at the intermediate bents and integral end bents shall be poured a minimum of 30 minutes and a maximum of 2 hours before the slab is poured.

SLAB POURING SEQUENCE

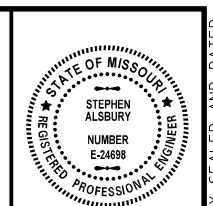


TYPICAL SLAB SECTION

Detailed Jan 2018
Checked Jan 2018

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

Sheet No. 14 of 24



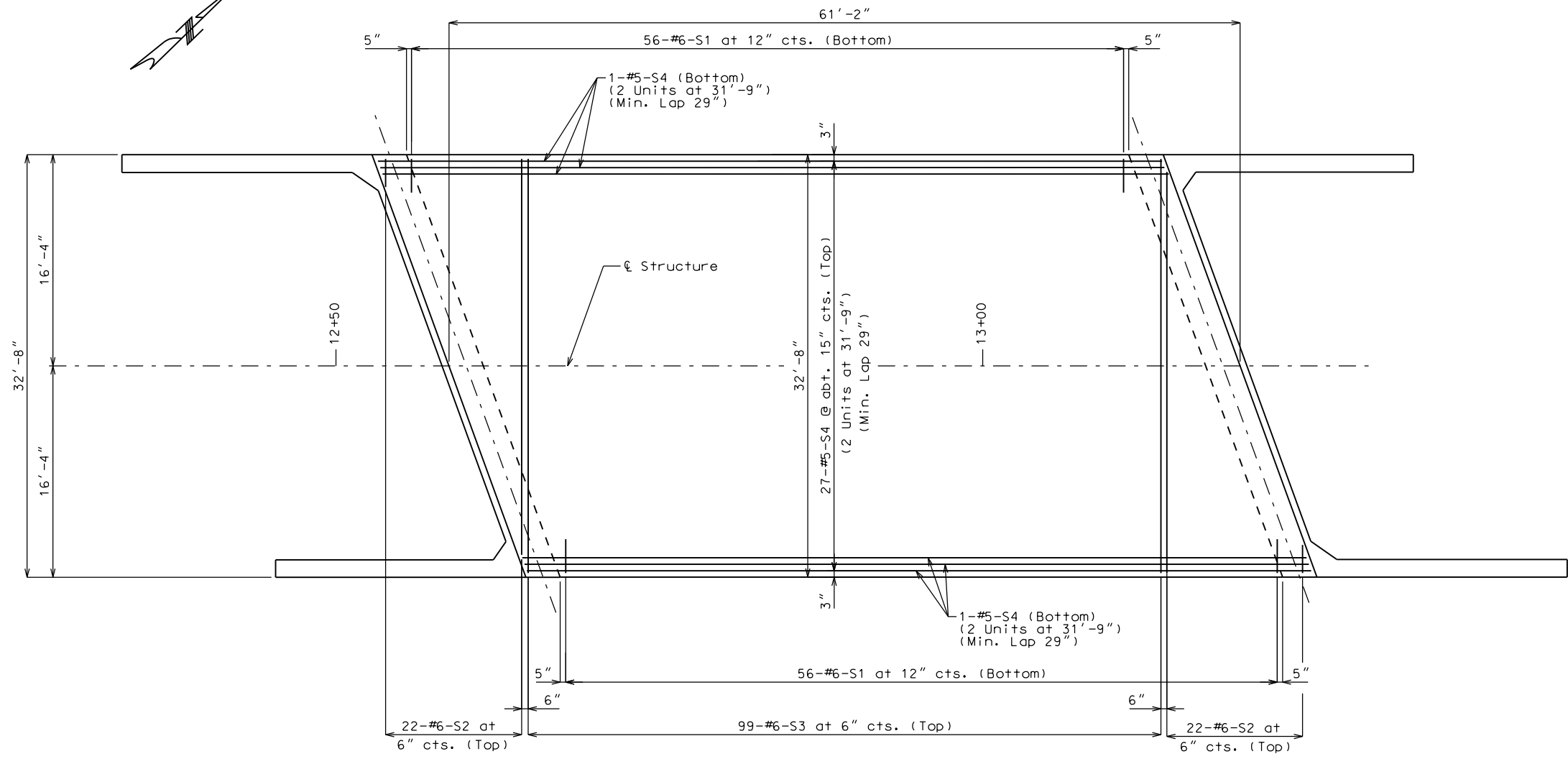
DATE PREPARED
4/18/2018
STATE MO SHEET NO. 25
ROUTE E I ME
COUNTY JEFFERSON
JOB NO. 15-6145
PROJECT NO. BRO-B050(22)
BRIDGE NO. 16200121

DATE	DESCRIPTION

JEFFERSON COUNTY PUBLIC WORKS
DEPARTMENT
P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX



XABNA
4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501



(Span 1-2)
PLAN

SLAB PLAN

Detailed Jan 2018
Checked Jan 2018

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

Sheet No. 15 of 24

J:\2015\6145\Cadd\Design\Bridge\B_16200121_B015_Slab Plan.dgn 3:25:51 PM 4/18/2018



DATE PREPARED
4/18/2018
STATE MO SHEET NO. 26
ROUTE E I ME
COUNTY JEFFERSON
JOB NO. 15-6145
PROJECT NO. BRO-B050(22)
BRIDGE NO. 16200121

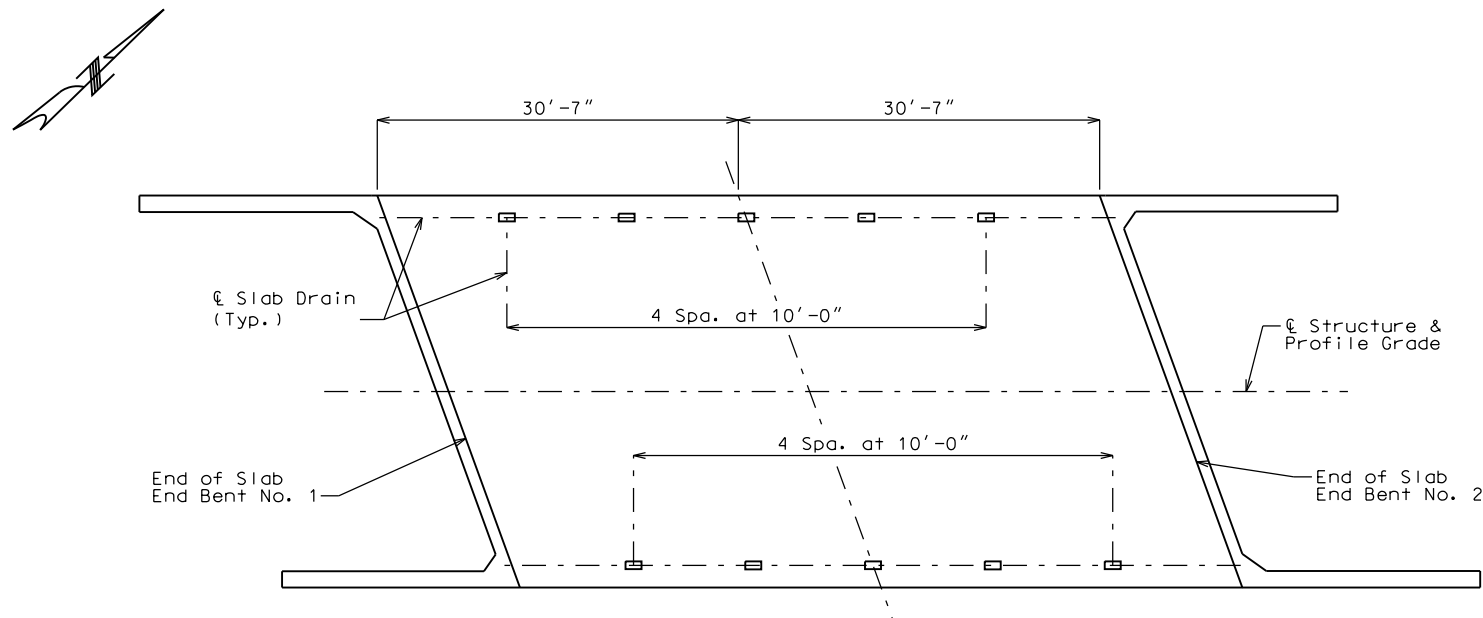
DATE	DESCRIPTION

JEFFERSON COUNTY PUBLIC WORKS
DEPARTMENT
P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX

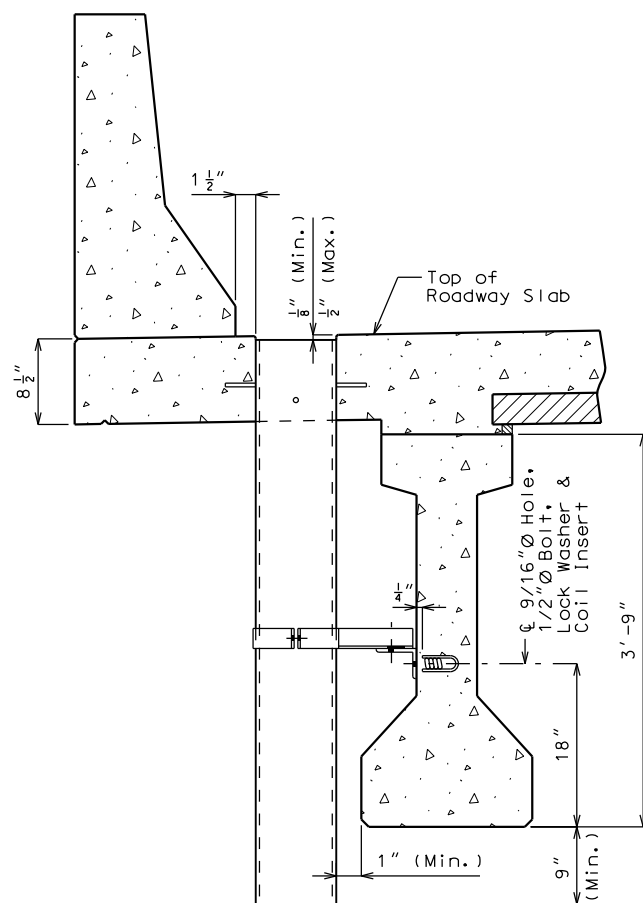


KABNA
4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501

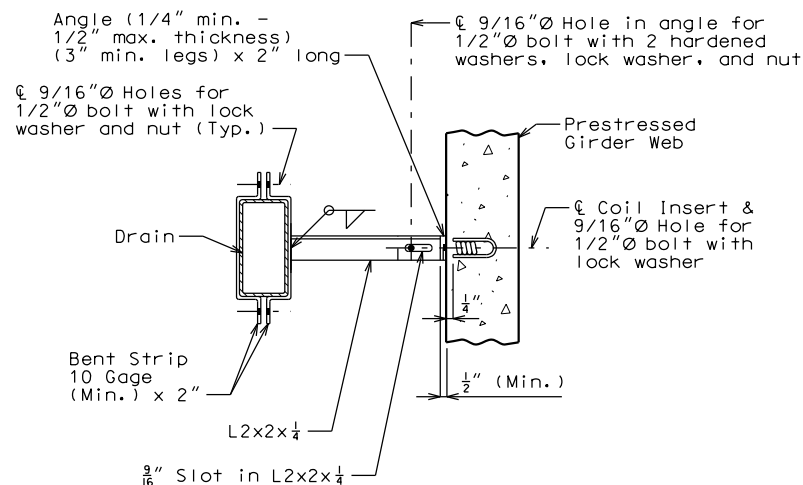
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



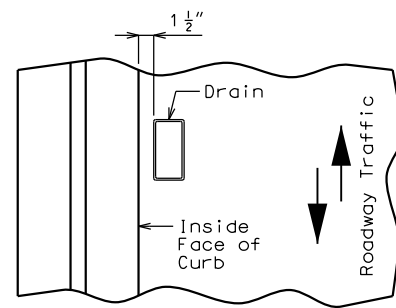
PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS
(Span 1-2)



PART SECTION NEAR DRAIN



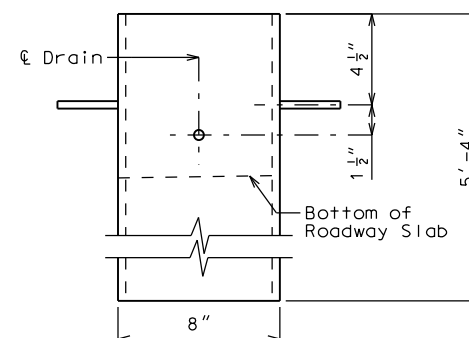
PART SECTION SHOWING BRACKET ASSEMBLY



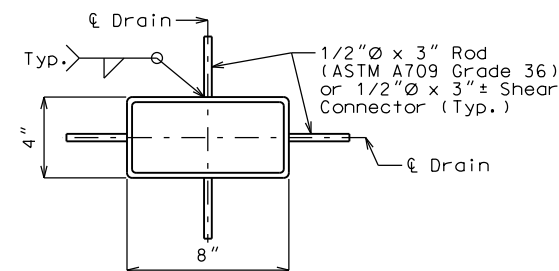
PART PLAN OF SLAB AT DRAIN

SLAB DRAIN DETAILS

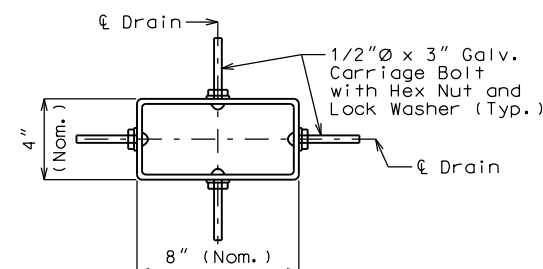
Note: This drawing is not to scale. Follow dimensions.



ELEVATION OF DRAIN



PLAN OF STEEL DRAIN



PLAN OF OPTIONAL
FRP DRAIN

Sheet No. 16 of 24

General Notes:

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

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

Reinforcing steel shall be shifted to clear drains.

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

All bolts, hardened washers, lock washers and nuts shall be galvanized in accordance with ASTM A153.

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

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

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

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

Notes (Steel Drain):

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

Outside dimensions of drains are 8" x 4".

The drains shall be galvanized in accordance with ASTM A123.

Notes (Optional FRP Drain)

Fiberglass Reinforced Polymer (FRP) slab drains may be substituted for steel slab drains as a contractor's option.

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

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

Minimum reinforced wall thickness shall be 1/4 inch.

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

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

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

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

No additional payment will be made for this substitution.



DATE PREPARED
4/18/2018

STATE
MO

SHEET NO.
27

ROUTE
E I ME

COUNTY
JEFFERSON

JOB NO.
15-6145

PROJECT NO.
BRO-B050(22)

BRIDGE NO.
16200121

DESCRIPTION

DATE

JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT

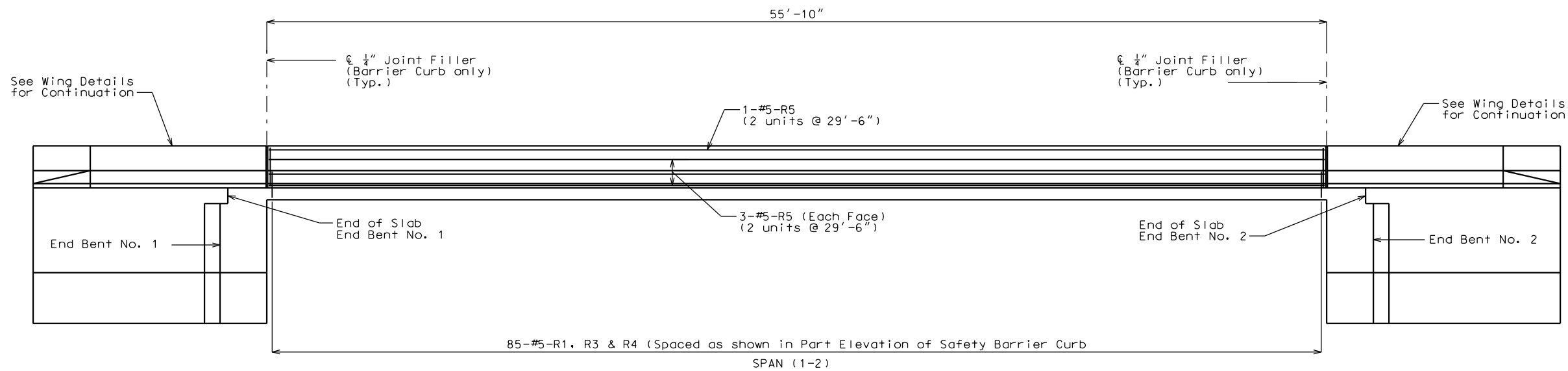
P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX

CERTIFICATE/LICENSE NO. 001501

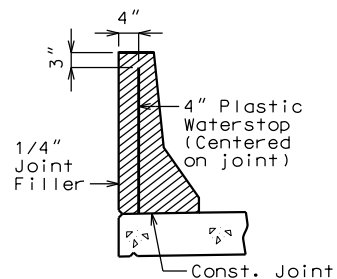
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222

XABNA



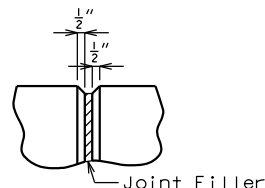
ELEVATION OF SAFETY BARRIER CURB
(Left barrier curb shown, right barrier curb similar)
Longitudinal dimensions are horizontal.



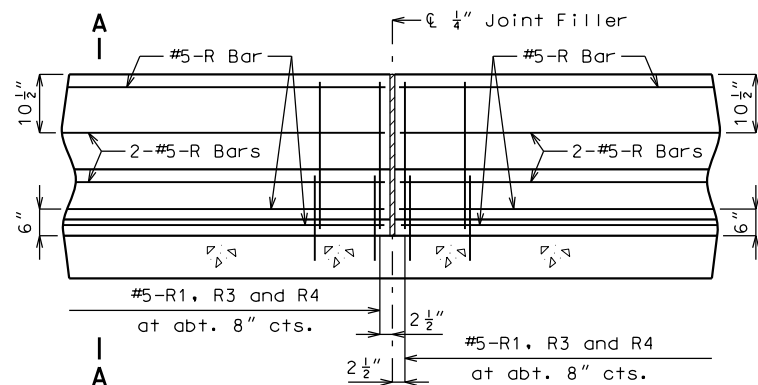
PLASTIC WATERSTOP DETAIL

Plastic waterstop shall be placed in all safety barrier curb filled joints, except structures with superelevation, use on all lower safety barrier curb joints only.

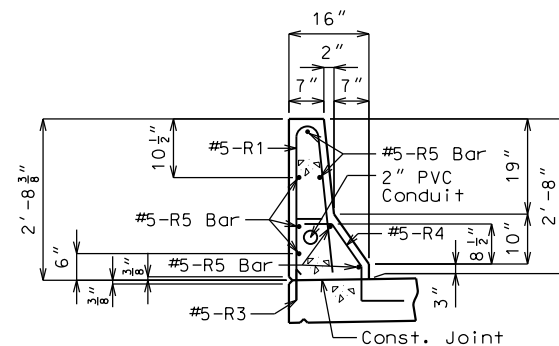
Cost of plastic waterstop, complete in place, will be considered completely covered by the contract unit price for Safety Barrier Curb.



FILLED JOINT DETAIL

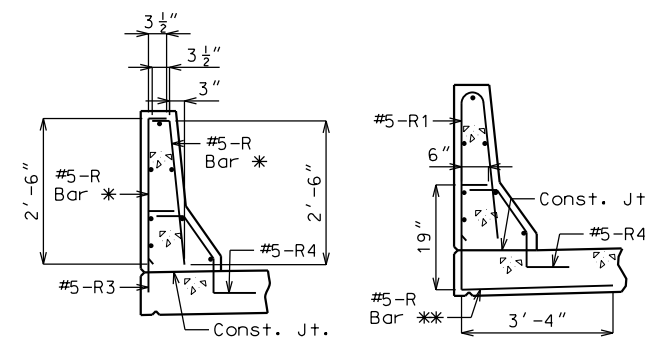


PART ELEVATION OF SAFETY BARRIER CURB



SECTION A-A

Use a minimum lap of 3'-1" for #5 horizontal safety barrier curb bars.
The cross-sectional area above the slab = 2.27 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.)

** The R3 bar and #5 bottom transverse slab bar in cantilever (P/S panels only) combination may be furnished as one bar as shown, at the contractor's option.

General Notes

Top of safety barrier curb shall be built parallel to grade with barrier curb joints (except at end bents) normal to grade.

All exposed edges of safety barrier curb shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

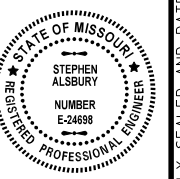
Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Safety Barrier Curb per linear foot.

Concrete in the safety barrier curb shall be Class B-1.

Measurement of safety barrier curb is to the nearest linear foot for each structure, measured along the outside top of slab from end of wing to end of wing.

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

Except for Section A-A, conduit is not shown for clarity.



DATE PREPARED
4/18/2018
STATE
MO
SHEET NO.
28
ROUTE
E I ME
COUNTY
JEFFERSON
JOB NO.
15-6145
PROJECT NO.
BRO-B050(22)
BRIDGE NO.
16200121

DESCRIPTION

DATE

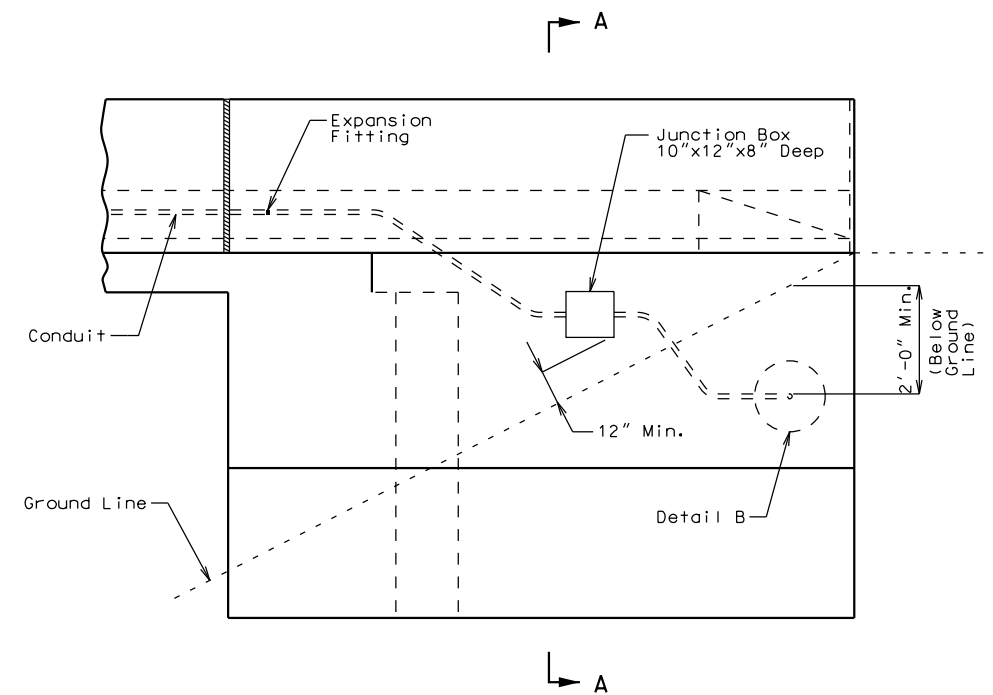
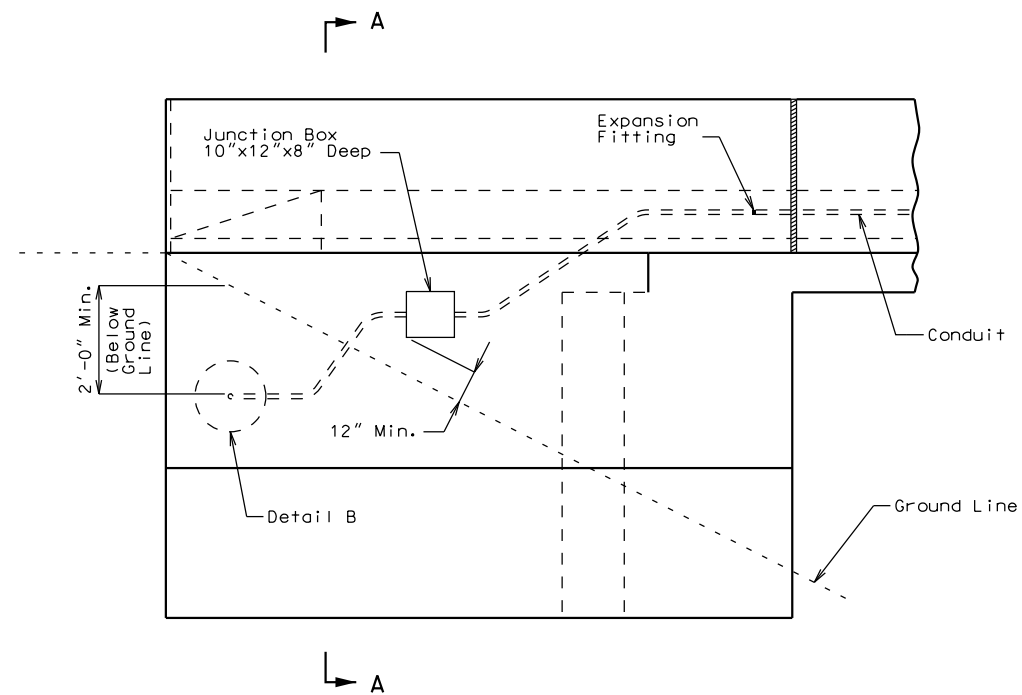
JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT

P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX



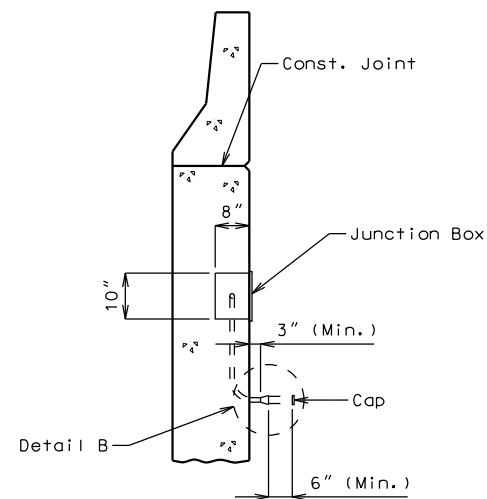
CERTIFICATE/LICENSE NO. 001501



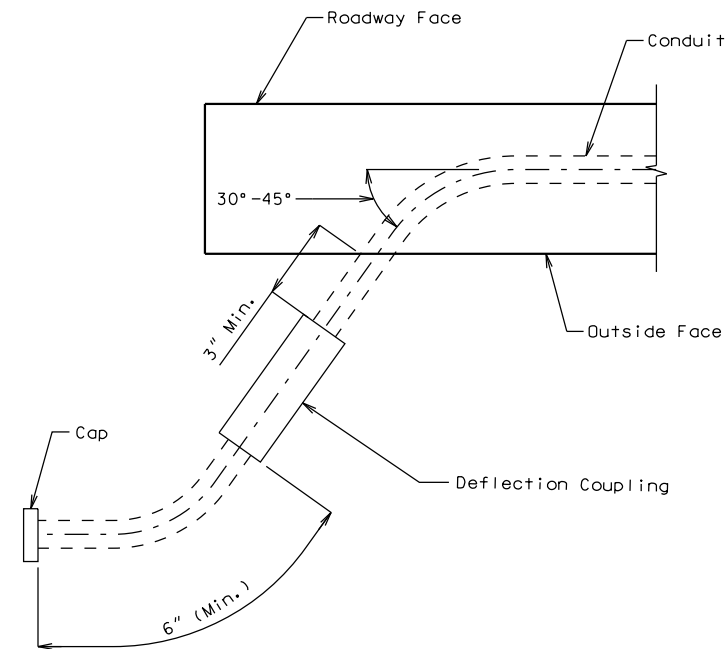


ELEVATION

Note:
Right side shown, left side similar.



SECTION A-A



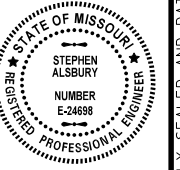
DETAIL B

CONDUIT ON STRUCTURE

Detailed Jan 2018
Checked Jan 2018

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

Sheet No. 19 of 24



DATE PREPARED
4/18/2018
STATE
MO
SHEET NO.
30
ROUTE
E I ME
COUNTY
JEFFERSON
JOB NO.
15-6145
PROJECT NO.
BRO-B050(22)
BRIDGE NO.
16200121

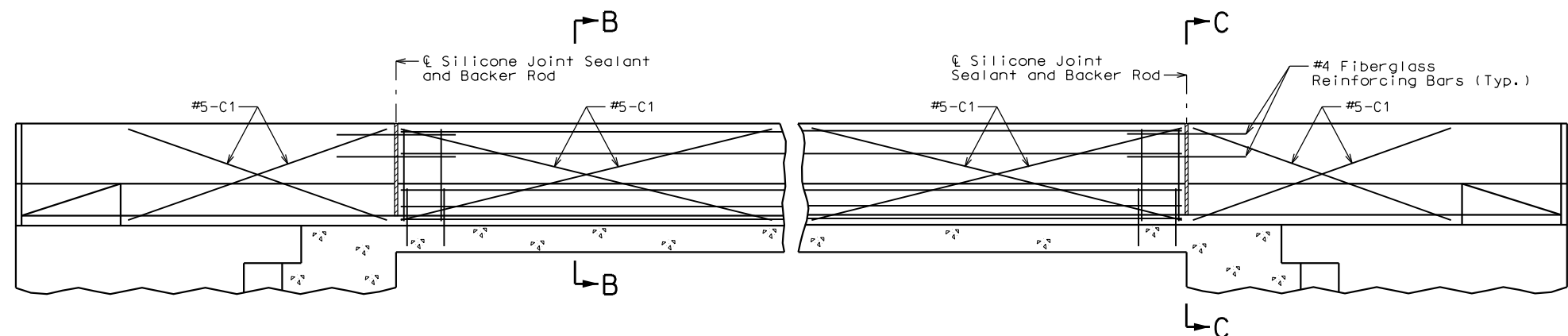
DESCRIPTION

DATE

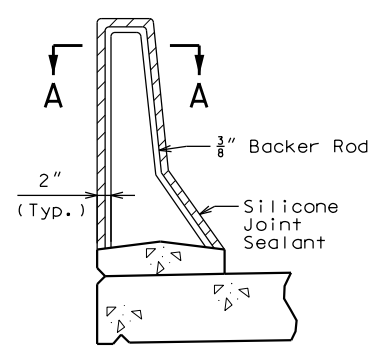
JEFFERSON COUNTY PUBLIC WORKS
DEPARTMENT



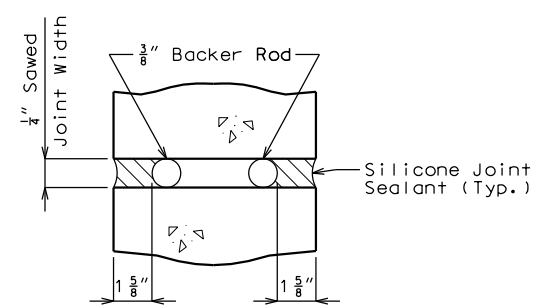
P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX
KABNA
4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501



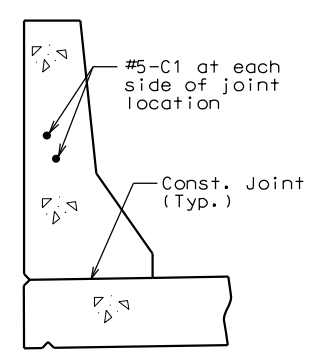
TYPICAL ELEVATION OF SAFETY BARRIER CURB AT SUPPORT LOCATIONS



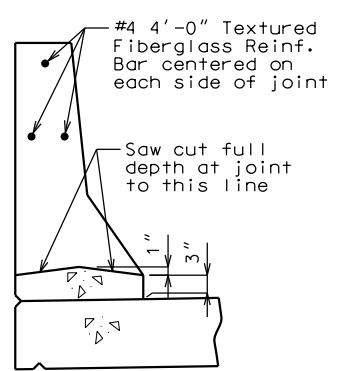
SECTION THRU JOINT



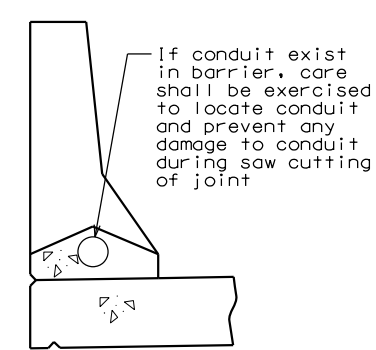
SECTION A-A



SECTION B-B



SECTION C-C



SECTION C-C
(Use when conduit required)

OPTIONAL SLIP-FORMED SAFETY BARRIER CURB

Use R bars and K bars similarly as shown for conventional-formed safety barrier curb.

General Notes:

- Top of safety barrier curb shall be built parallel to grade with barrier curb joints (except at end bents) normal to grade.
- All exposed edges of safety barrier curb 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 Safety Barrier Curb per linear foot.
- Concrete in the safety barrier curb shall be Class B-1.
- Measurement of safety barrier curb is to the nearest linear foot for each structure, measured along the outside top of slab from end of wing to end of wing.
- Concrete traffic barrier delineators shall be placed on top of the safety barrier curb as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Safety Barrier Curb.
- 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 Safety Barrier Curb.

DATE PREPARED
4/18/2018

STATE MO SHEET NO. 31

ROUTE E I ME

COUNTY JEFFERSON

JOB NO. 15-6145

PROJECT NO. BRO-B050(22)

BRIDGE NO. 16200121

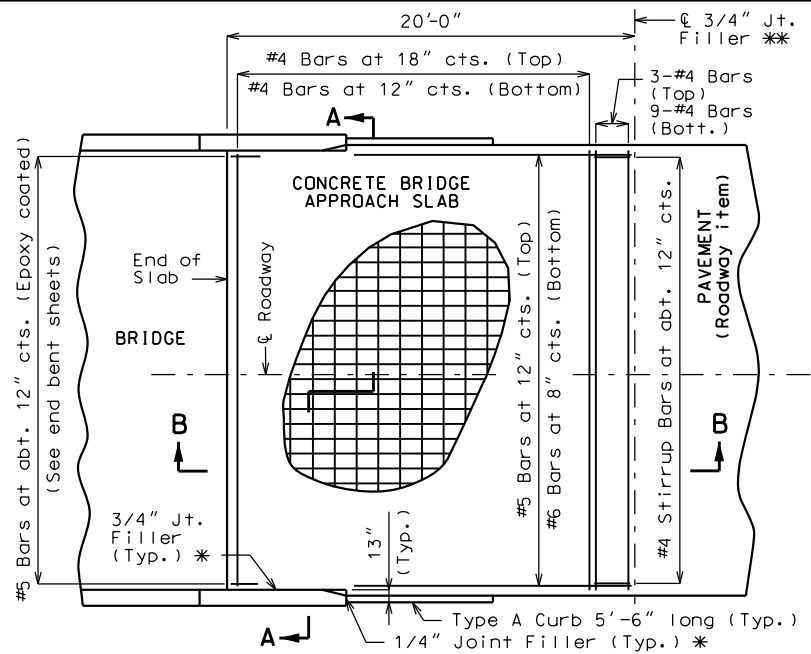
DATE	DESCRIPTION

JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT

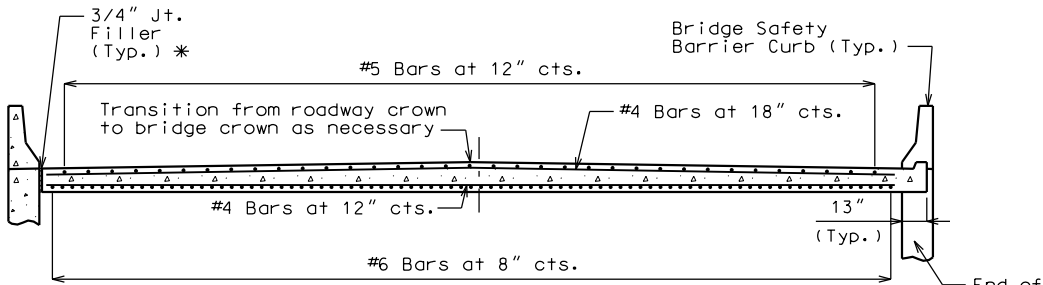
P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX

XABNA

4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501

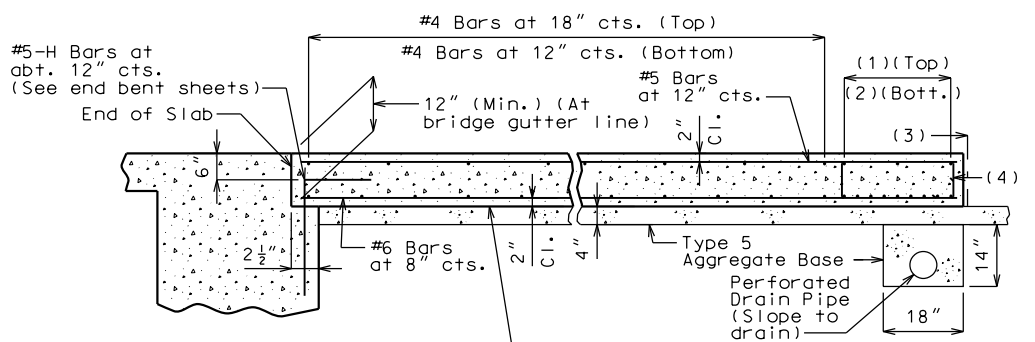


PART PLAN OF SQUARED STRUCTURE



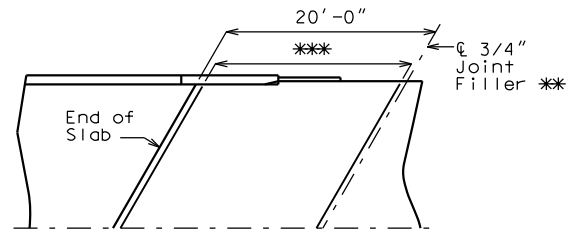
SECTION A-A

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



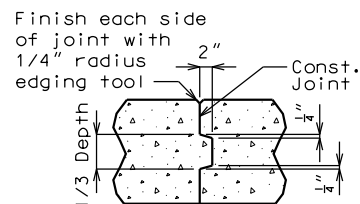
SECTION B-B
(Integral end bent)

2 Layers of 4 Mil Polyethylene Sheeting between bridge approach slab and granular base in accordance with ASTM E 1745 Performance Class A



LEFT ADVANCED STRUCTURE SHOWN.
RIGHT ADVANCED SIMILAR

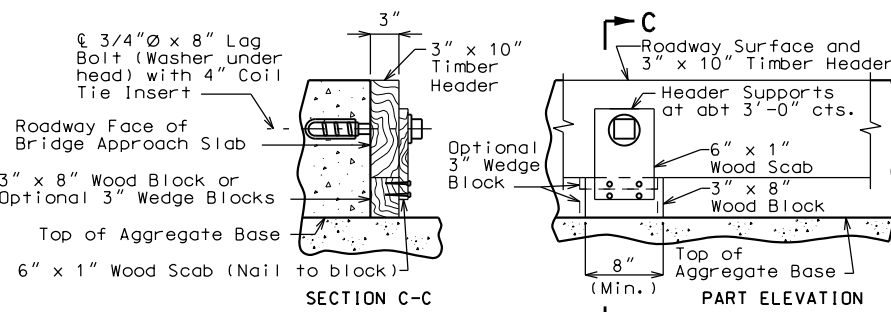
PART PLAN OF SKEWED STRUCTURE



CONCRETE CONST.
JOINT DETAIL

(If required)

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



DETAILS OF TIMBER HEADER

Remove timber header when concrete pavement is placed.

DETAILS OF BRIDGE APPROACH SLAB (MINOR ROAD)

General Notes:

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

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

All concrete for the bridge approach slab shall be in accordance with Sec 503 ($f'c = 4,000$ psi).

The reinforcing steel in the bridge approach slab shall be epoxy coated Grade 60 with $f_y = 60,000$ psi.

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

Minimum clearance to reinforcing steel shall be $\frac{1}{2}$ " unless otherwise shown.

The reinforcing steel in the bridge approach slab shall be continuous. The transverse reinforcing steel may be made continuous by lap splicing the #4 bars 23".

All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler except as noted.

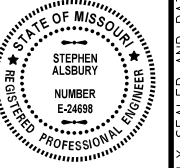
Payment for furnishing all materials, labor and excavation necessary to construct the concrete bridge approach slab, including the timber header, underdrain, Type 5 aggregate base, joint filler, and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Minor Road) per square yard.

See Missouri Standard Plans Drawing 609.00 for details of Type A Curb.

* Seal joint between vertical face of bridge approach slab and wing with "Silicone Joint Sealant for Saw Cut and Formed Joints" in accordance with Sec 717.

** Except not allowed with asphalt pavement.

*** Transverse reinforcing bars shall be placed parallel to end bents.



DATE PREPARED
4/18/2018
STATE
MO
SHEET NO.
32
ROUTE
E I ME
COUNTY
JEFFERSON
JOB NO.
15-6145
PROJECT NO.
BRO-B050(22)
BRIDGE NO.
16200121

DESCRIPTION

DATE

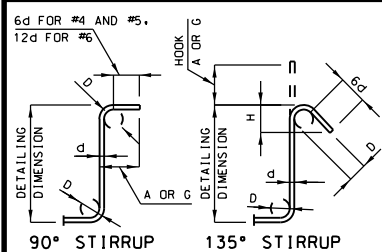
JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT

P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX



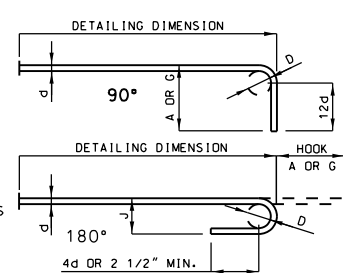
4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501

BILL OF REINFORCING STEEL																							
NO.	REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS								NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT			
										B		C		D		E					F		H
										FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.
			END BENT 1																				
13	6	F101	WINGWALL		23					14.000	3 0.000	14.000	11.500	8.000	11.500	8.000	5 4	5 3	103				
13	6	F102	WINGWALL		23					14.000	4 3.000	14.000	8.000	11.500	8.000	11.500	6 7	6 6	121				
3	6	F103	BEAM		15					2 3.000	4 8.000				2 1.375	9.250	6 11	6 10	31				
3	6	F104	BEAM		32						4 8.000	2 3.000			2 1.375	9.250	6 11	6 7	30				
8	8	H101	BEAM		20					34 6.000							34 6	34 6	737				
10	6	H102	BEAM		20					34 6.000							34 6	34 6	518				
4	8	H103	BEAM		20					9 0.000							9 0	9 0	96				
6	6	H104	DIAPHRAGM		20					21.000							1 9	1 9	16				
15	6	H105	DIAPHRAGM		20					4 2.000							4 2	4 2	94				
3	6	H106	DIAPHRAGM		20					34 6.000							34 6	34 6	155				
6	5	H107	STRAND TIE		23					15.000	17.000	15.000	5.125	14.125	5.125	14.125	3 11	3 11	25				
4	8	H108	DIAPHRAGM	E	20					34 6.000							34 6	34 6	368				
32	5	H109	APP HAUNCH	E	19					2 0.000	15.000						3 3	3 1	103				
2	8	H110	WINGWALL	E	20					21 2.000							21 2	21 2	113				
6	8	H111	WINGWALL		20					21 2.000							21 2	21 2	339				
28	6	H112	WINGWALL		20					20 2.000							20 2	20 2	848				
2	8	H113	WINGWALL	E	20					21 1.000							21 1	21 1	113				
6	8	H114	WINGWALL		20					21 1.000							21 1	21 1	338				
28	6	H115	WINGWALL		20					20 1.000							20 1	20 1	845				
26	5	U101	BEAM		10						8 8.000	2 10.000					20 2	19 11	540				
4	5	U102	BEAM		13	S				2 10.000	6 3.000	2 10.000	6 3.000				19 1	18 9	78				
6	5	U103	BEAM		13	S				2 10.000	6 4.375	2 10.000	6 4.375				19 4	19 0	119				
6	5	U104	BEAM		13	S				2 10.000	6 5.750	2 10.000	6 5.750				19 6	19 3	120				
2	5	U105	BEAM		10						6 4.000	2 10.000					15 6	15 3	32				
31	6	U106	DIAPHRAGM		19					2 4.500	2 9.000						5 2	5 0	233				
31	5	U107	DIAPHRAGM	E	10						3 3.000	2 1.000					8 7	8 4	269				
44	6	U108	DIAPHRAGM	E	19					3 0.000	4 9.000						7 9	7 7	501				
8	5	V101	BEAM		20					8 8.000							8 8	8 8	72				
18	6	V102	DIAPHRAGM		20					2 3.000							2 3	2 3	61				
82	6	V103	WINGWALL		20					10 0.000							10 0	10 0	1232				
			END BENT 2																				
13	6	F201	WINGWALL		23					14.000	3 0.000	14.000	11.500	8.000	11.500	8.000	5 4	5 3	103				
13	6	F202	WINGWALL		23					14.000	6 1.000	14.000	8.000	11.500	8.000	11.500	8 5	8 4	163				
3	6	F203	BEAM		15					2 3.000	4 8.000				2 1.375	9.250	6 11	6 10	31				
3	6	F204	BEAM		32						4 8.000	2 3.000			2 1.375	9.250	6 11	6 7	30				
8	8	H201	BEAM		20					34 6.000							34 6	34 6	737				
10	6	H202	BEAM		20					34 6.000							34 6	34 6	518				
4	8	H203	BEAM		20					9 0.000							9 0	9 0	96				
6	6	H204	DIAPHRAGM		20					21.000							1 9	1 9	16				
15	6	H205	DIAPHRAGM		20					4 2.000							4 2	4 2	94				
3	6	H206	DIAPHRAGM		20					34 6.000							34 6	34 6	155				
6	5	H207	STRAND TIE		23					15.000	17.000	15.000	5.125	14.125	5.125	14.125	3 11	3 11	25				
4	8	H208	DIAPHRAGM	E	20					34 6.000							34 6	34 6	368				
32	5	H209	APP HAUNCH	E	19					2 0.000	15.000						3 3	3 1	103				
2	8	H210	WINGWALL	E	20					21 2.000							21 2	21 2	113				
6	8	H211	WINGWALL		20					21 2.000							21 2	21 2	339				
28	6	H212	WINGWALL		20					20 2.000							20 2	20 2	848				
2	8	H213	WINGWALL	E	20					21 1.000							21 1	21 1	113				
6	8	H214	WINGWALL		20					21 1.000							21 1	21 1	338				
28	6	H215	WINGWALL		20					20 1.000							20 1	20 1	845				



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

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



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

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.
HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.
S = EPOXY COATED REINFORCEMENT.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.
ND, 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) F_y = 60,000 PSI.

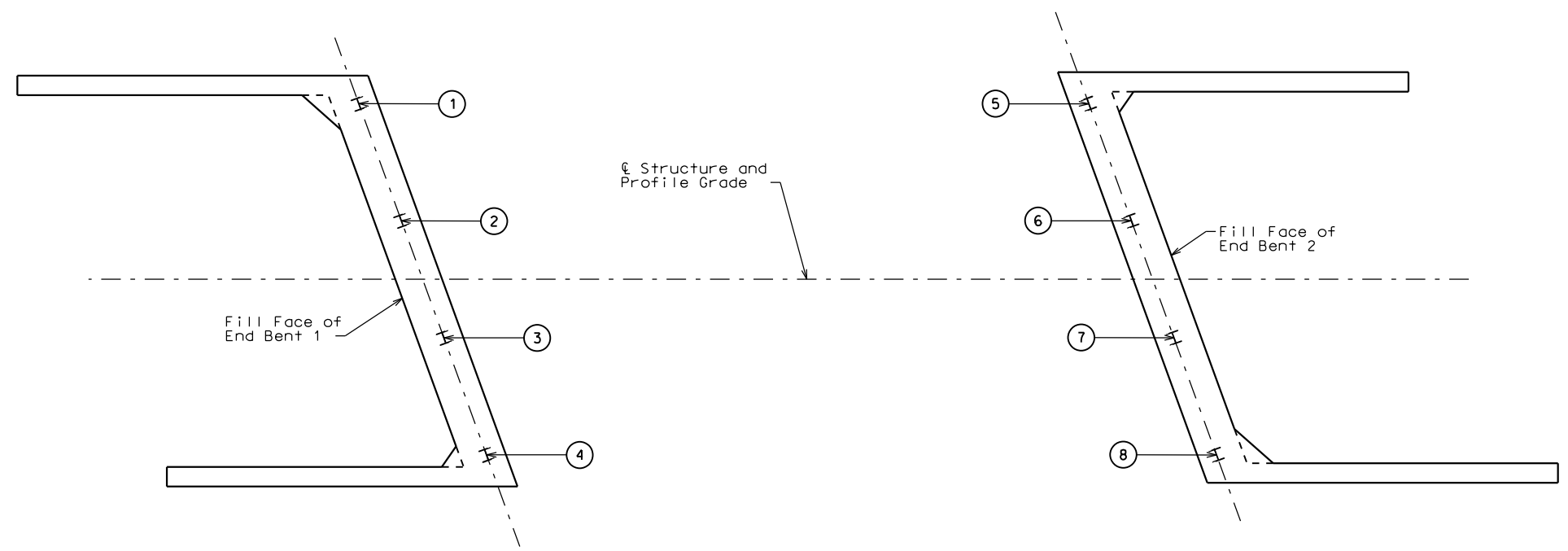
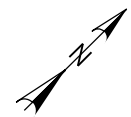
Detailed Jan 2018
Checked Jan 2018

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

Sheet No. 22 of 24

BILL OF REINFORCING STEEL

NO.	REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS												NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
										B		C		D		E		F		H				
										FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.
			END BENT 2 CONT.																					
26	5	U201	BEAM		10						8	8.000	2	10.000										540
4	5	U202	BEAM		13	S				2	10.000	6	3.000	2	10.000	6	3.000							96
6	5	U203	BEAM		13	S				2	10.000	6	4.375	2	10.000	6	4.375							119
6	5	U204	BEAM		13	S				2	10.000	6	5.750	2	10.000	6	5.750							120
2	5	U205	BEAM		10						6	4.000	2	10.000										32
31	6	U206	DIAPHRAGM		19					2	4.500	2	9.000											233
31	5	U207	DIAPHRAGM	E	10						3	3.000	2	1.000										269
44	6	U208	DIAPHRAGM	E	19					3	0.000	4	9.000											501
8	5	V201	BEAM		20					8	8.000													72
18	6	V202	DIAPHRAGM		20					2	3.000													61
82	6	V203	WINGWALL		20					10	0.000													1232
			SLAB																					
112	6	S1	SLAB	E	20					2	6.000													421
44	6	S2	SLAB	E	20			V	2	2	4.000													
			INCR=16.5 IN							31	2.000													1107
99	6	S3	SLAB	E	20					32	5.000													4820
66	5	S4	SLAB	E	20					31	9.000													2186
			BARRIERS																					
156	5	K1	BARRIER TRAN	E	19					2	5.000		5.125											447
156	5	K2	BARRIER TRAN	E	14						5.125		11.125											203
112	5	K3	BARRIER TRAN	E	27					3	4.125		5.125		12.000	2	6.250							821
44	5	K4	BARRIER TRAN	E	7					3	4.125		6.000											317
4	5	K5	BARRIER TRAN	E	25					2	10.625		6.875		4.375									16
4	5	K6	BARRIER TRAN	E	25					2	9.625		8.000		4.375									16
4	5	K7	BARRIER TRAN	E	25					2	8.250		9.875		4.375									16
4	5	K8	BARRIER TRAN	E	25					2	6.875		11.250		4.375									16
48	5	K9	BARRIER TRAN	E	20					6	2.000													305
40	4	K10	BARRIER TRAN	E	20					16	2.000													432
4	5	K11	BARRIER TRAN	E	8					2	3.000													19
170	5	R1	BARRIER	E	26					2	6.000		4.250											93
170	5	R3	BARRIER	E	19						17.000		6.000											310
170	5	R4	BARRIER	E	27								6.000		11.250	7	0.000							502
28	5	R5	BARRIER	E	20					29	6.000													862
16	5	C1	SLIP FORM	E	20					10	0.000													167



PART PLAN SHOWING
PILE NUMBERING FOR RECORDING
"AS BUILT PILE" DATA

NOTE: INDICATE IN REMARKS COLUMN:
A.) IF PILING WERE DRIVEN TO PRACTICAL REFUSAL.
B.) PILE BATTER IF OTHER THAN SHOWN ON BENT DETAIL SHEET.
C.) TYPE OF PILING USED.

NOTE: THIS SHEET TO BE COMPLETED BY CONSTRUCTION PERSONNEL.

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (KIPS)	REMARKS
END BENT NO. 1			
1			
2			
3			
4			

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (KIPS)	REMARKS
END BENT NO. 2			
5			
6			
7			
8			

DATE PREPARED
4/18/2018

STATE MO	SHEET NO. 34
-------------	-----------------

ROUTE
E I ME

COUNTY
JEFFERSON

JOB NO.
15-6145

PROJECT NO.
BRO-B050(22)

BRIDGE NO.
16200121

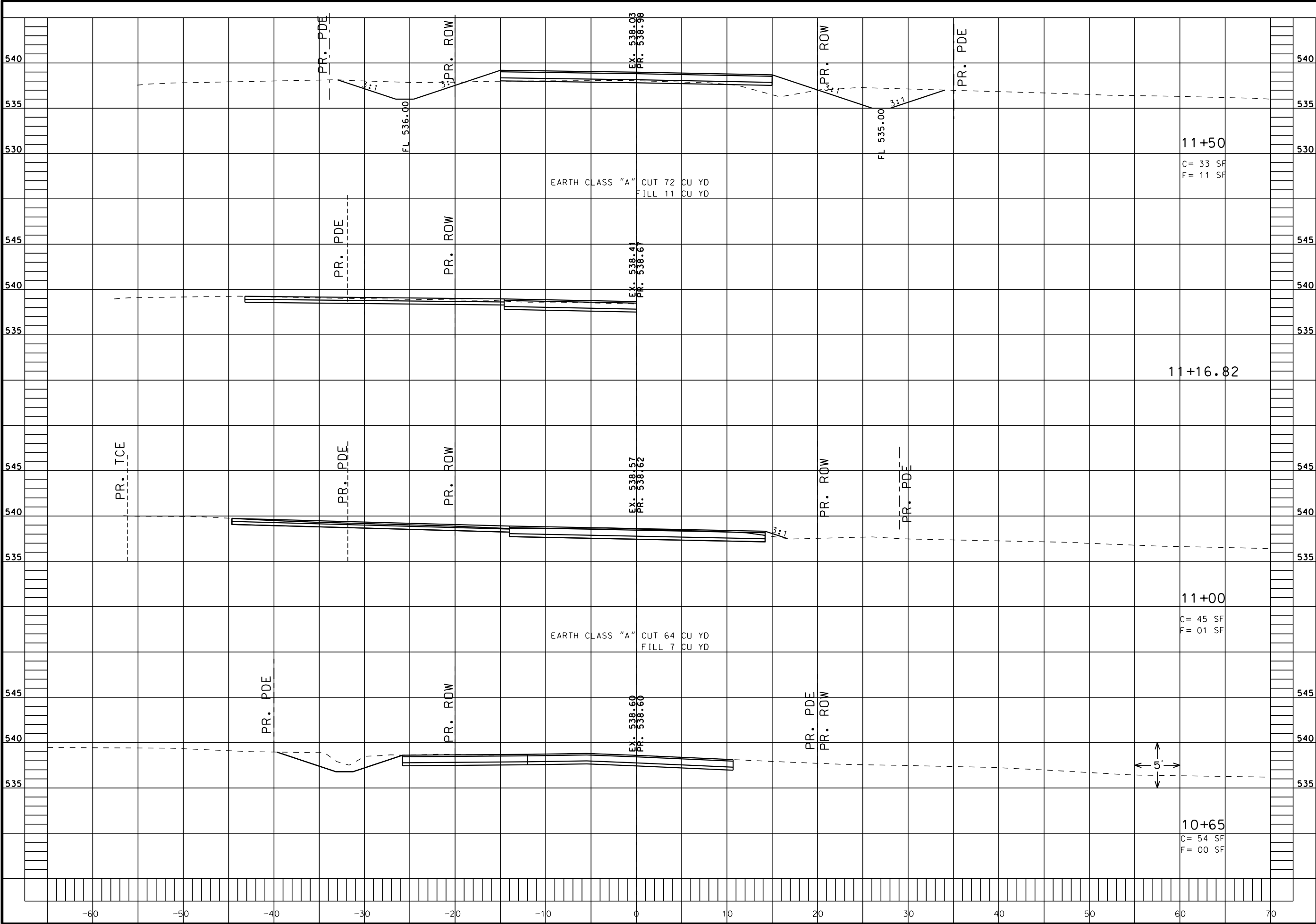
DESCRIPTION	DATE

JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT

P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX

KABNA
4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501

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



STATE OF MISSOURI
STEPHEN ALSBURY
NUMBER E-24698
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
4/18/2018

STATE
MO

SHEET NO.
36

ROUTE
E I ME

COUNTY
JEFFERSON

JOB NO.
15-6145

PROJECT NO.
BRO-B050(22)

BRIDGE NO.
16200121

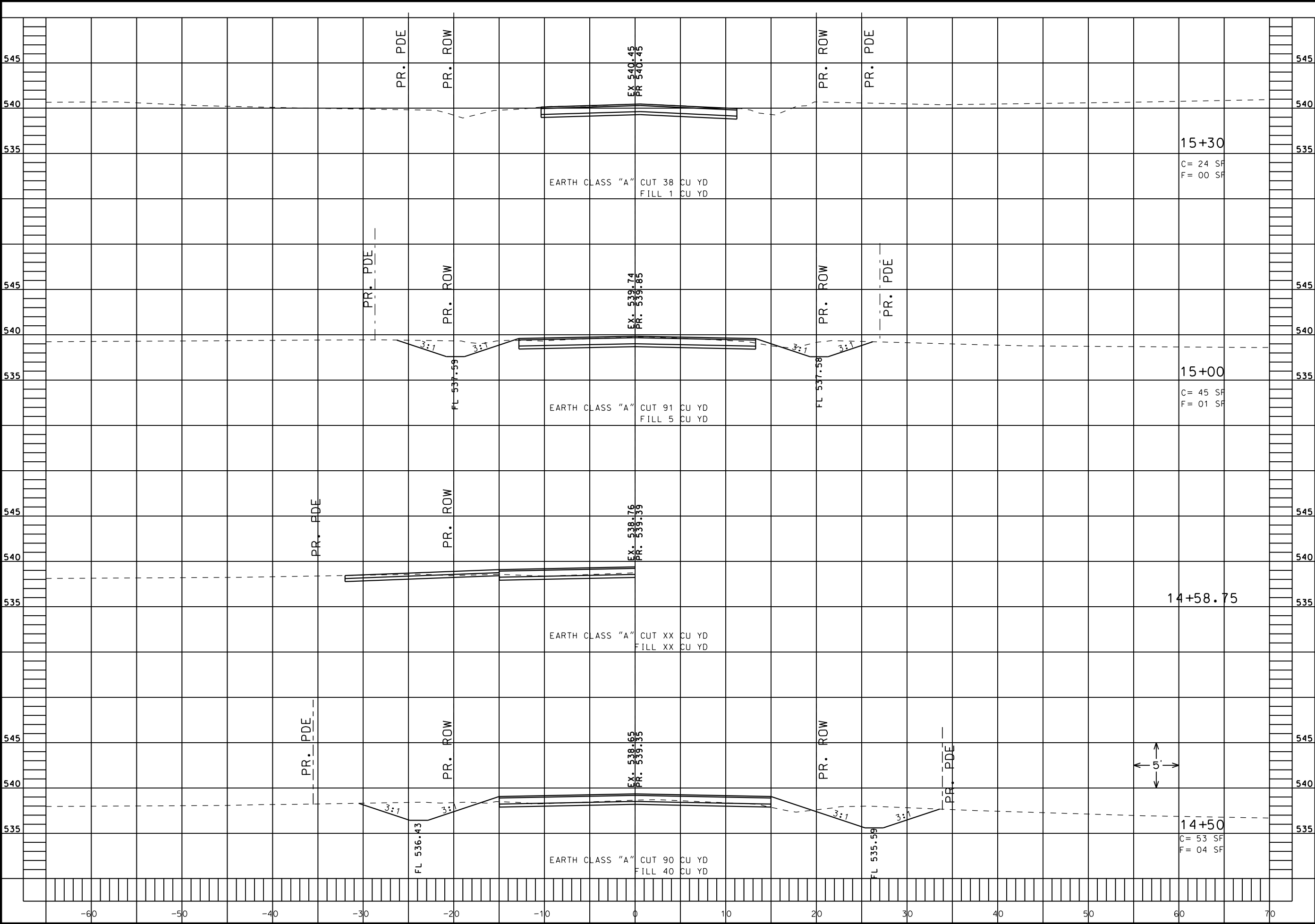
DATE

DESCRIPTION

JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT

P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX

4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501





DATE PREPARED
4/18/2018

STATE
MO

SHEET NO.
38

ROUTE
E I ME

COUNTY
JEFFERSON

JOB NO.
15-6145

PROJECT NO.
BRO-B050(22)

BRIDGE NO.
16200121

DATE	DESCRIPTION

JEFFERSON COUNTY PUBLIC WORKS
DEPARTMENT



P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX



4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501

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