DESIGN DESIGNATION

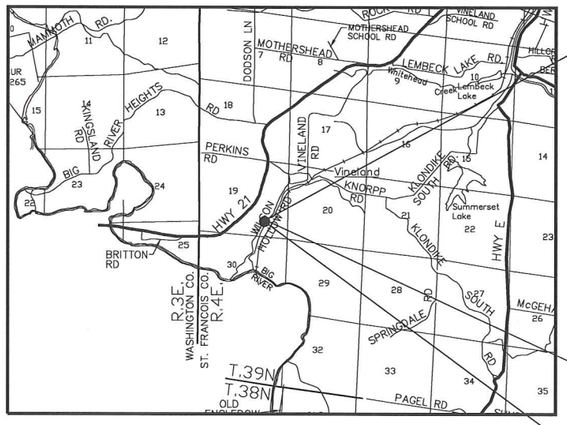
LOCAL ROAD
ADT 2012 /139 — CURRENT SPEED 30 MPH
DESIGN ADT 2032 /309 — DESIGN SPEED 30 MPH
TRUCKS 10%

STATE OF MISSOURI
JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT
PLANS FOR THE PROPOSED STRUCTURE REPLACEMENT
OF
WILSON HOLLOW ROAD
OVER
TRIBUTARY TO BIG RIVER
BRIDGE NO. 30600071

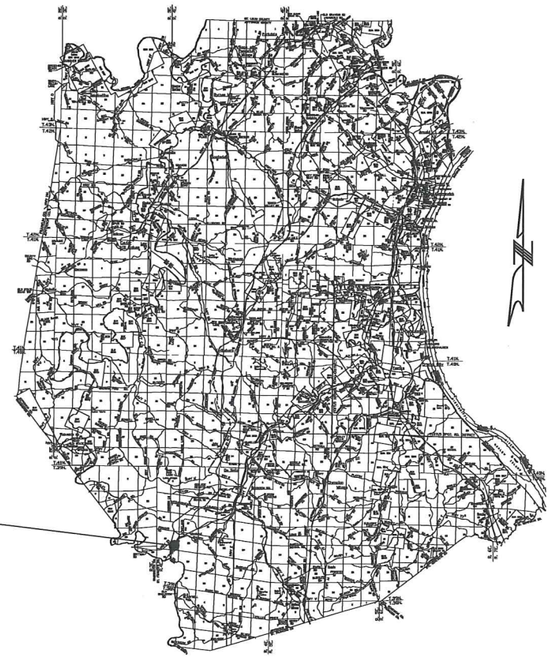
BID SET
FEBRUARY 17, 2014

SYMBOL LEGEND

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



JEFFERSON COUNTY
NW 1/4, SE 1/4, SEC 19 T39N, R4E



SCALE

LOCATION MAP
NET PROJECT LENGTH 875 FEET (0.1657 MILES)

INDEX

SHEET NO.	DESCRIPTION OF SHEET
1	COVER SHEET
2	TYPICAL SECTIONS
2A	SUMMARY OF QUANTITIES
2B	SCHEDULE OF QUANTITIES
3-5	PLAN & PROFILE
6-7	RIGHT OF WAY PLAT
8	COORDINATE POINTS
9	TRAFFIC CONTROL
10	ERISION CONTROL
11	DRIVE #1 GRADING
12	SLOPE PROTECTION LAYOUT
13	DRIVEWAY & CULVERT PROFILES
14-34	BRIDGE
35-40	ROADWAY
41-42	CREEK

Line Legend

- Proposed Right of Way
- Temporay Constructin Easement — TCE —
- Overhead Electric
- Underground Telephone — T —
- Slope limit — SL — SL — SL —
- Proposed Ditch

Site Benchmarks:(NAVD 1988)

TBM#1 - Railroad spike in Powerpole.
124.82' Lt. Sta.4+43.82: Elevation 610.59

TBM#2 - Railroad spike in Powerpole.
206.70' Lt. Sta. 8+41.54: Elevation 617.98

SBM - Railroad Spike in Powerpole.
5.93' Lt. Sta. 7+23.83: Elevation 614.13

UTILITIES

TELEPHONE	ELECTRIC
AT&T ALLEN RICH 222 W. MAIN STREET PARKHILLS, MO 63601 (573) 431-9850	AMEREN U.E. DON KNOTTS SUPERVISING ENGINEER 6450 HIGHWAY MM HOUSE SPRINGS, MO 63051 (636) 671-6151

UTILITY LOCATION SERVICE
1-800-DIG-RITE

APPROVED FOR CONSTRUCTION

PUBLIC WORKS DIRECTOR — DATE 2/25/14

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

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	1

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

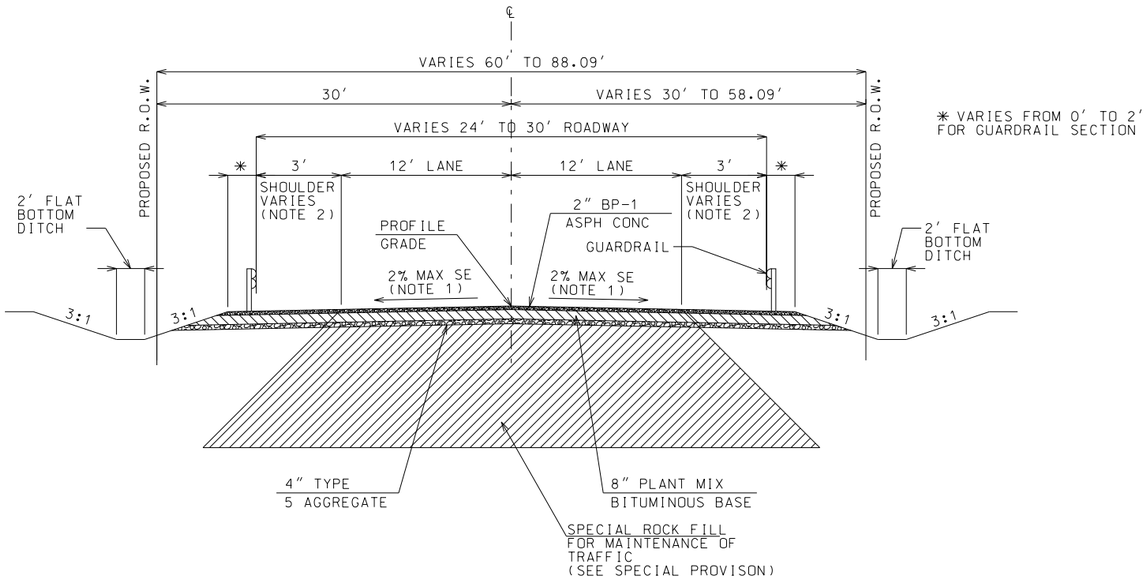
BRIDGE NO.
30600071

DESCRIPTION	DATE

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

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



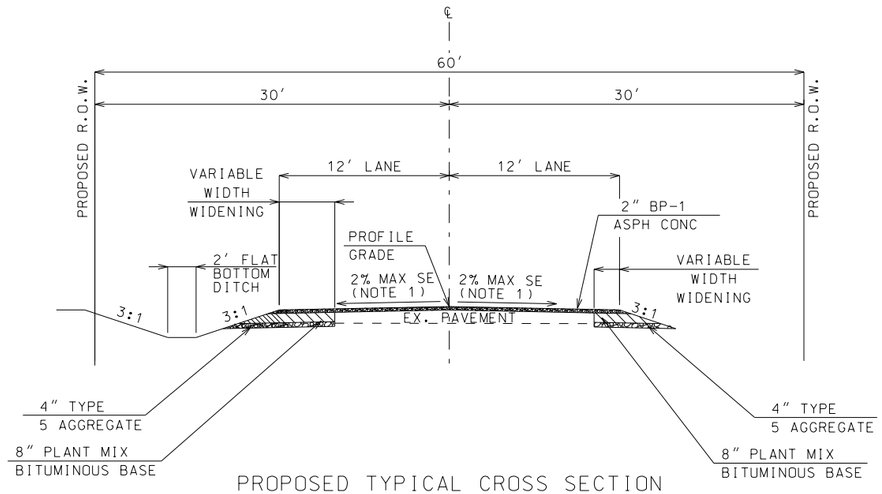
PROPOSED TYPICAL CROSS SECTION
WILSON HOLLOW ROAD

STA 1+00.00 TO STA 4+44.71
STA 5+77.64 TO STA 9+75.00

NOTE 1: CROSS SLOPE VARIES SEE SUPERELEVATION TABLE

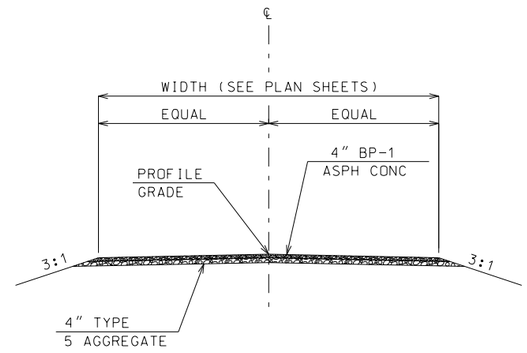
NOTE 2: SHOULDER WIDTH VARIES SEE PLAN AND PROFILE FOR LOCATIONS

NOTE 3: BRIDGE APPROACH SLAB FROM 4+44.71 TO BRIDGE
BRIDGE TO 5+77.64



PROPOSED TYPICAL CROSS SECTION
WILSON HOLLOW ROAD

STA 8+00.00 TO STA 9+75.00



PROPOSED TYPICAL CROSS SECTION
DRIVEWAY/FIELD ENTRANCE

EDGE OF PAVEMENT ELEVATIONS RELATIVE TO PROFILE GRADE

	LOCATION	LOCATION
	12' Left	12' Right
Station	ELEV (FEET)	ELEV (FEET)
0+50	Existing	Existing
1+00	Match Existing	Match Existing
1+50	-0.24	+0.00
2+00	-0.24	+0.24
2+50	-0.24	+0.24
3+00	-0.09	+0.09
3+50	+0.17	-0.17
4+00	+0.24	-0.24
4+50	+0.24	-0.24
5+00	+0.24	-0.24
5+50	+0.24	-0.24
6+00	+0.24	-0.24
6+50	+0.24	-0.24
7+00	+0.02	-0.02
7+50	-0.24	+0.24
8+00	-0.24	+0.24
8+50	-0.24	+0.24
9+00	-0.24	+0.24
9+50	-0.24	+0.24
9+75	Match Existing	Match Existing

Detailed Aug. 2013
Checked Aug. 2013

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

TYPICAL SECTIONS

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

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	2

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
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BRIDGE NO.
30600071

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ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
Roadway			
2013000	Clearing & Grubbing	ACRE	1.6
2022010	Removal of Improvements	LS	1.0
2031000	Class A Excavation	CUYD	1321.0
2032000	Class C Excavation	CUYD	47.0
2036000	Compacting Embankment	CUYD	560.0
2059999	Subgrade Repair	SQYD	550.0
2065500	Temporary Shoring	LS	1.0
2142000	Furnishing Rock Fill	CUYD	1610.0
2143000	Placing Rock Fill	CUYD	1610.0
3040504	Type 5 Aggregate (4" Thick)	SQYD	2885.0
4011209	Bituminous Pavement Mixture Surface (BP-1)	TON	398.0
4013000	Bituminous Pavement Mixture (Base)	TON	1120.0
4071005	Tack Coat	GAL	170.0
6061050	Guardrail Type E, 3 ft - 1.5 in spacing	LF	47.0
6062300	Transition Section	EA	3.0
6062400	Bridge Anchor Section (Thrie Beam)	EA	3.0
6063015	Type A Crashworthy End Terminal	EA	3.0
6113010	Furnishing Type 1 Rock Blanket	CUYD	330.0
6113030	Placing Type 1 Rock Blanket	CUYD	330.0
6161005	Construction Signs	SQFT	144.0
6181000	Mobilization	LS	1.0
6240103A	Permanent Erosion Control Geotextile	SQYD	500.0
6274000	Contractor Furnished Surveying and Staking	LS	1.0
7250318A	18" Pipe Group B	LF	22.0
7250324A	24" Pipe Group B	LF	52.0
7320018A	18" or Allowed Substitute Group B Flared End Section	EA	2.0
7320024A	24" or Allowed Substitute Group B Flared End Section	EA	4.0
8061019	Silt Fence	LF	1972.0
8061021	Type I Ditch Check	EA	6.0
8061022	Type II Ditch Check	EA	3.0

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
Bridge			
2160500	Removal of Bridges	LS	1.0
5031010	Bridge Approach Slab (Bridge)	SQYD	167.0
7021010	Structural Steel Piles (10 in)	LF	143.0
7029902	Setting Piles in Rock (Special Provision Required)	Each	11.0
7032003	Class B Concrete (Substructure)	CUYD	42.0
7034213	Slab on Concrete I-Girder	SQYD	305.0
7056001	Type 3 (39") Prestressed Concrete I-Girder	LF	468.0
7123301	Steel Intermediate Diaphragm for P/S Concrete Girders	EA	10.0
7134000	Bridge Guardrail (Thrie Beam)	LF	207.0
7151001	Vertical Drain at End Bents	EA	2.0
7161000	Plain Neoprene Bearing Pad	EA	12.0
Striping			
6206000B	4" White Acrylic Waterborne Pavement Marking Paint	LF	2000.0
6206001B	4" Yellow Acrylic Waterborne Pavement Marking Paint	LF	2000.0
6208065	Temporary Raised Pavement Marker, Type 2	EA	25.0
Landscaping			
8051000	Seeding	ACRE	1.6

Detailed Aug. 2013
Checked Aug. 2013

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SUMMARY OF QUANTITIES

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

DATE PREPARED
2/17/2014

STATE MO | SHEET NO. 2A

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

BRIDGE NO.
30600071

DESCRIPTION | DATE

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

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

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CLEARING & GRUBBING = 1.6 ACRES

REMOVAL OF IMPROVEMENTS = 1 LUMP SUM

-Chip & Seal Pavement Sta. 1+00 to Ex. Bridge = 980 Sq Yd
-Chip & Seal Pavement Sta. Ex. Bridge to 9+75 = 1000 Sq Yd
-20' - 12" CMP Lt. Sta. 7+00
-20' - 15" CMP Lt. Sta. 9+10
-2 Each -Load Limit Signs at Ex. Bridge
-4 Each -Panel Markers at Ex. Bridge
-Mail Box Lt. Sta. 7+10
-Mail Box Lt. Sta. 8+95
-Mail Box Rt. Sta. 4+00
-Property Owner Agreements (See Special Provisions)

EARTH WORK SUMMARY	CUT	FILL
	CU YD	CU YD
CLASS A EXCAVATION (MAIN LINE)	571	-
CLASS A EXCAVATION (CREEK)	750	
COMPACTING EMBANKMENT (MAINLINE)		257
COMPACTING EMBANKMENT (DRIVE #1)		280
COMPACTING EMBANKMENT (DRIVE #2)		23
TOTALS	1321	560
ESTIMATED EXCESS*	761	
* FOR INFORMATION ONLY		

SUBGRADE REPAIR = 550 SQ YD.

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

TEMPORARY SHORING = 1 LUMP SUM

Wilson Hollow is a dead end road with NO ACCESS Beyond this project. A minimum of one (1) twelve (12) foot lane shall be maintained through the project. SPECIAL ROCK EMBANKMENT (FILL) and TEMPORARY SHORING are provided to maintain through traffic at this minimum width.
(SEE ROADWAY CROSS SECTIONS)

FURNISHING & PLACING ROCK FILL	FILL
	CU YD
MAIN LINE	1610
TOTALS	1610

ASPHALTIC PAVEMENT & BASE				2"/4" DRIVEWAYS	8"	0.035 G/SY	TYPE 5 AGGREGATE WIDTH	TYPE 5 AGGREGATE 4" SQ YD
LOCATION	LENGTH FEET	WIDTH FEET	AREA SQ YD (1)	BP-1 TON	BIT. BASE TON	TACK GAL (2)		
1+00 TO 4+44.71	344.71	24.0	1101	130	520	80	25.67	1101
5+77.64 TO 9+75	397.36	24.0	1285	150	600	90	25.67	1285
DRIVEWAY #1 RT. 4+41	140.0	16.0	366	86	-	-	16.67	366
DRIVEWAY #2 LT. 6+94.11	34.0	16.0	65	16	-	-	16.67	65
DRIVEWAY #3 LT. 9+17.10	18.0	16.0	34	8	-	-	16.67	34
FIELD ENTRANCE	18.0	16.0	34	8	-	-	16.67	34
.	-	-	-	-	-	-	-	-
TOTALS			2885	398	1120	170		2885

(1) INCLUDES TAPERS, SHOULDERS & PARKING AREA
(2) INCLUDES TACK FOR TWO LIFTS

GUARDRAIL						
LOCATION	BRIDGE ANCHOR EACH	TRANS SECTION EACH	TYPE A TERMINAL EACH	TYPE A GUARDRAIL LIN FT	TYPE E GUARDRAIL LIN FT	REMARKS
SOUTH APPROACH	-	-	-	-	47	BEND 25' ON A 15'RADUIS CONNECT DIRECTLY TO BRIDGE THRIE BEAM
NORTH DEPARTING	1	1	1	-		
NORTH APPROACH	1	1	1	-		
SOUTH DEPARTING	1	1	1	-	-	
TOTALS	3	3	3	-	47	

Detailed Aug. 2013
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EROSION/BANK PROTECTION	FURNISHING TYPE 1 ROCK BLANKET	PLACING TYPE 1 ROCK BLANKET	CLASS C EXCAVATION FOR ROCK BLANKET KEY	PERMANENT EROSION CONTROL GEOTEXTILE
LOCATION	CU YD	CU YD	CU YD	SQ YD
END BENT NO. 1	200	200	30	305
END BENT NO. 2	130	130	17	195
TOTALS	330	330	47	500

CONSTRUCTION SIGNS				
SIGN ID.	DESCRIPTION	NO.	AREA (SF)	TOTAL AREA
W020-1	ROAD WORK AHEAD	2	16	32
W020-4	ONE LANE ROAD AHEAD	2	16	32
W03-2A	YIELD AHEAD	2	16	32
R1-2	YIELD	2	7	14
R1-2A	TO ONCOMING TRAFFIC	2	9	18
G020-1	END ROADWORK	2	8	16
TOTALS				= 144 SF

MOBILIZATION = 1 LUMP SUM

CONTRACTOR FURNISHED SURVEYING AND STAKING = 1 LUMP SUM

PIPE CULVERTS				
	18" CLASS B (FEET)	24" CLASS B (FEET)	18" FES (EACH)	24" FES (EACH)
FE1 TO FE2		30		2
FE3 TO FE4	22	22		2
FE5 TO FE6			2	
TOTALS	22	52	2	4

4" WHITE PAVEMENT MARKING

EDGE LINES 12' LT & RT
STA 0+50 TO STA 10+50 = 2000 LIN FT

4" YELLOW PAVEMENT MARKING

DOUBLE SOLID CENTERLINE
STA 0+50 TO STA 10+50 = 2000 LIN FT

TEMPORARY RAISED PAVEMENT MARKER, TYPE 2 = 25 EACH

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

SEEDING = 1.6 ACRE

SCHEDULE OF QUANTITIES

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

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	2B

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

BRIDGE NO.
30600071

DATE	DESCRIPTION

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

ABNA
4140 LINDELL BOULEVARD
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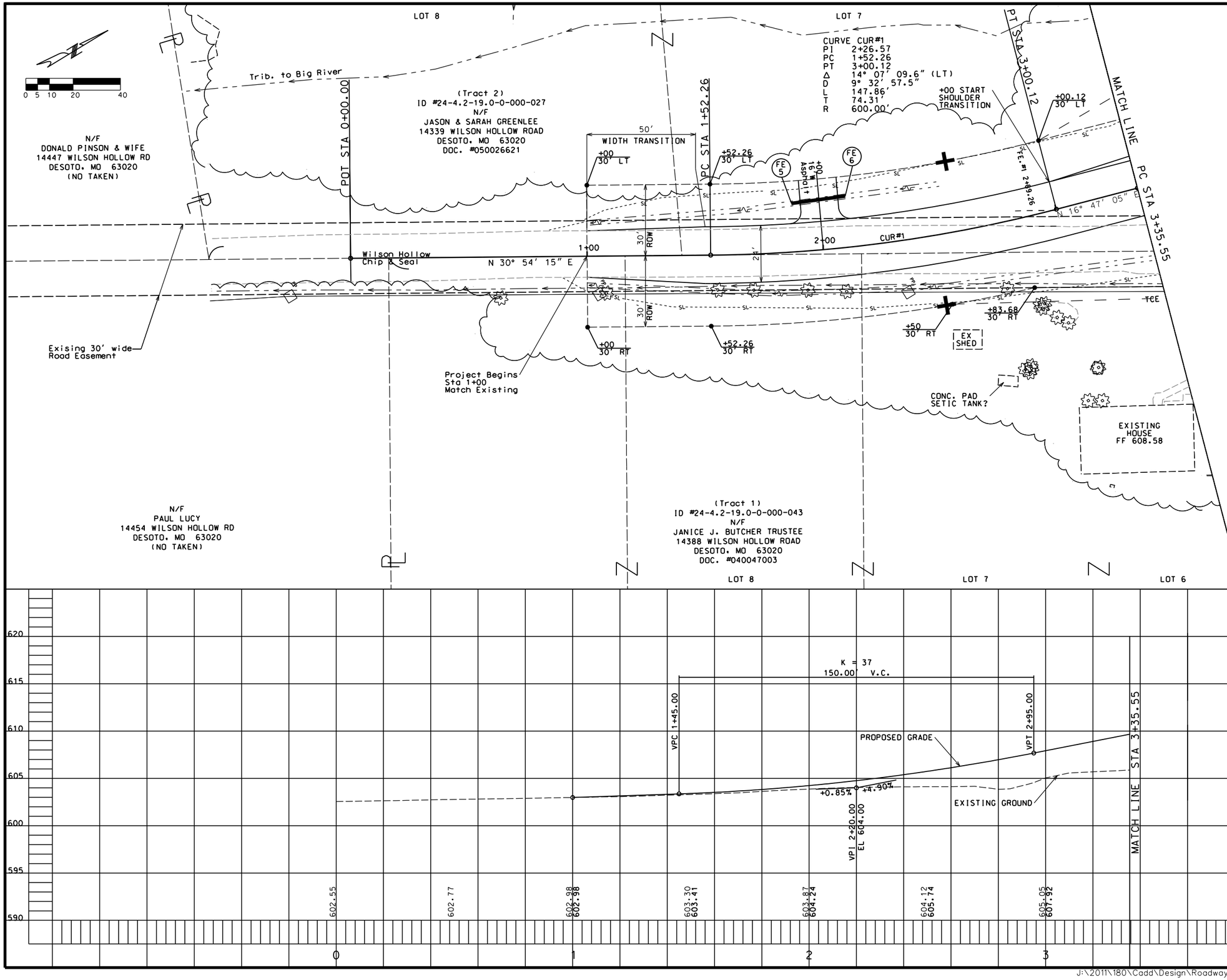

STATE OF MISSOURI
STEPHEN ALSBURY
NUMBER E-24698
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	3

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

BRIDGE NO.
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DESCRIPTION

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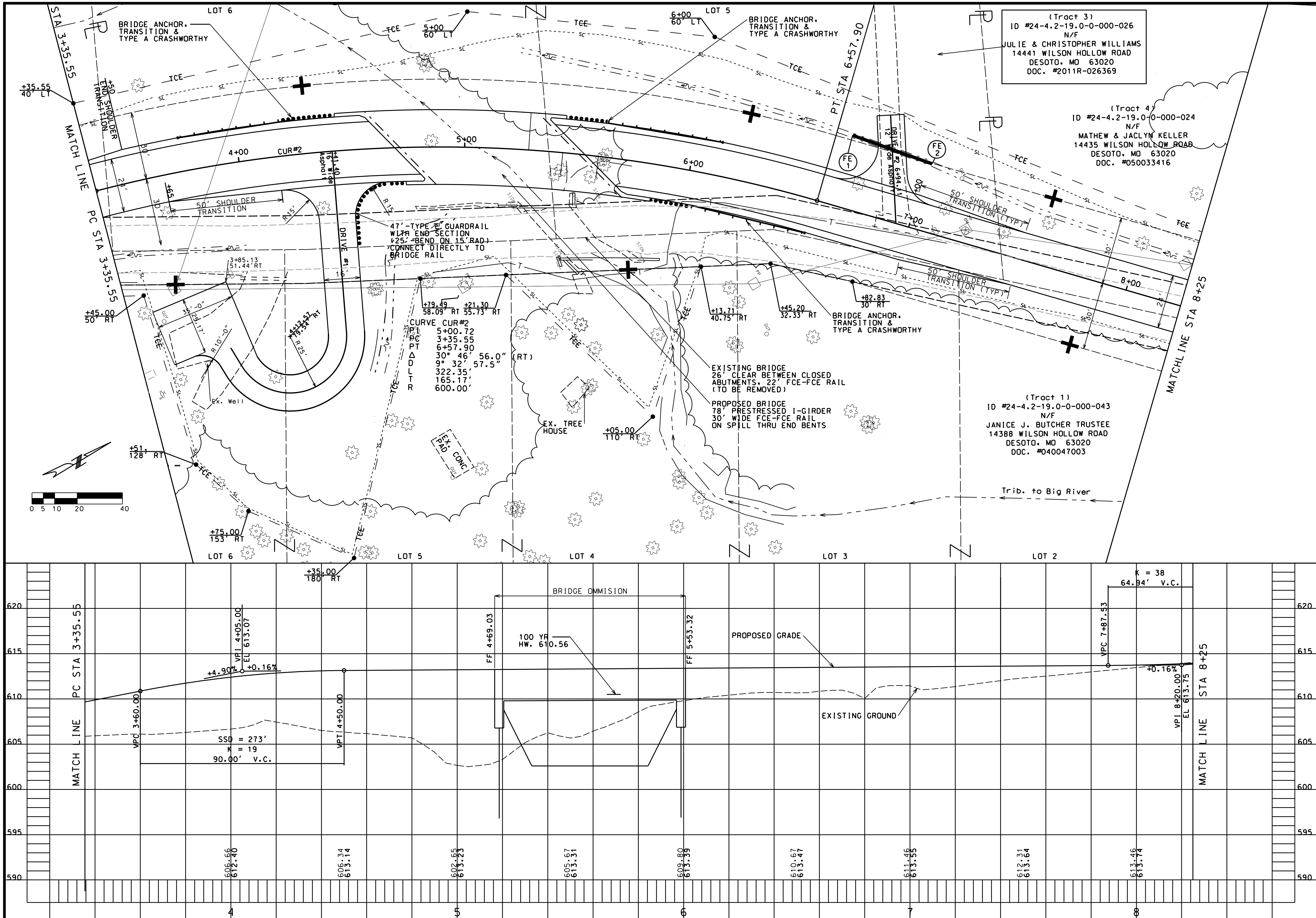

DATE PREPARED 2/17/2014

STATE	SHEET NO.
MO	4

ROUTE

COUNTY JEFFERSON

JOB NO. 2011-180

PROJECT NO. STP-5403 (646)

BRIDGE NO. 30600071

DESCRIPTION

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0 5 10 20 40

(Tract 4)
ID #24-4.2-19.0-0-000-024
N/F
MATHEW & JACLYN KELLER
14435 WILSON HOLLOW ROAD
DESOTO, MO 63020
DOC. #050033416

N/F
JOSEPH & TERESA HURT
14423 WILSON HOLLOW ROAD
DESOTO, MO 63020
(NO TAKEN)

CURVE CUR#3
PI 9+76.90
PC 8+65.61
PT 10+85.69
Δ 21° 00' 58.8" (LT)
D 9° 32' 57.5"
L 220.08'
T 111.29'
R 600.00'

PC STA 8+65.61
PT STA 10+85.69
POT STA 11+46.23
MATCH LINE 8+25
TCE
+65.61 30' LT
+38.93 30' LT
+55.10 30' LT
FE 3
FE 4
DRIVE #5 12' Asphalt
9+00
10+00
11+00
CUR#3
30' ROW
24'
Wilson Hollow Chip & Seal
N 26° 33' 03" E
+65.61 30' RT
+31.38 30' RT
(Tract 1)
ID #24-4.2-19.0-0-000-043
N/F
JANICE J. BUTCHER TRUSTEE
14388 WILSON HOLLOW ROAD
DESOTO, MO 63020
DOC. #040047003
Exising 30' wide Road Easement
Trib. to Big River
Project Ends Sta 9+75 Match Existing
N/F
DALLAS & ANGELINE BUCHANAN
3172 BYRNESMILL ROAD
EUREKA, MO 63025
(NO TAKEN)
N
LOT 1

MATCH LINE STA 8+25
K = 38
64.94' V.C.
VPT 8+52.47
+1.88%
615.25
PROFILE GRADE
MATCH EXISTING
EXISTING GROUND
625
620
615
610
605
600
614.56
614.31
615.25
615.25
615.80
616.41
9
10
11

TRACT	PROPERTY OWNER	EX. AREA (ACRES)	PROP. ROW. (SQ. FT.)	REMAINING (ACRES)	PROP. TCE. (SQ. FT.)	EXISTING PRESCRIPTIVE EASEMENT (SQ. FT.)
1	Janice J. Butcher, Trustee	3.50	16,416	3.12	13,896	12,253
2	Jason & Sarah Greenlee	11.31	8,997	11.10	287	3,596
3	Julie & Christopher Williams	12.17	24,171	11.62	8,462	3,873
4	Mathew & Jaclyn Keller	3.82	7,045	3.70	936	3,002

STATE OF MISSOURI
STEPHEN ALSBURY
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2/17/2014

STATE	SHEET NO.
MO	5

ROUTE

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RIGHT OF WAY SURVEY

WILSON HOLLOW ROAD.
PART OF THE SOUTHEAST QUARTER OF SECTION 19, TOWNSHIP 39 NORTH, RANGE 4 EAST, JEFFERSON COUNTY, MISSOURI

FOR INFORMATION ONLY
SEE RECORDED DOCUMENTS

DESCRIPTION OF PROPOSED RIGHT OF WAY CENTERLINE

COMMENCING AT THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF SAID SECTION 19; THENCE NORTH 1 DEGREE 31 MINUTES 57 SECONDS EAST ALONG THE WEST LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 31, 188.15 FEET TO THE SOUTHWEST CORNER OF MEADOWBROOK SUBDIVISION AS RECORDED PLAT BOOK 56 PAGE 21 OF THE JEFFERSON COUNTY RECORDS; THENCE SOUTH 82 DEGREES 21 MINUTES 57 SECONDS EAST ALONG THE SOUTH LINE OF SAID MEADOWBROOK SUBDIVISION 744.35 FEET TO THE SOUTHEAST CORNER OF LOT 10 OF SAID MEADOWBROOK SUBDIVISION; THENCE NORTH 30 DEGREES 53 MINUTES 39 SECONDS EAST ALONG THE SOUTHEAST LINE OF LOTS 8, 9, AND 10, 459.83 TO THE POINT OF BEGINNING BEING AT PROPOSED CENTERLINE RIGHT OF WAY 0+00.00:

THENCE CONTINUING ALONG SAID SOUTHEAST LINE OF LOT 8 AND THE SOUTHEAST LINE OF LOT 7 NORTH 30 DEGREES 53 MINUTES 39 SECONDS EAST 152.26 FEET LOCATED AT PROPOSED CENTERLINE 1+52.26; THENCE LEAVING SAID SOUTHEAST LOT LINES, ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 600.00 FEET, AND A CHORD WHICH BEARS NORTH 23 DEGREES 50 MINUTES 40 SECONDS EAST 147.48 FEET, AN ARC DISTANCE OF 147.86 FEET LOCATED AT PROPOSED CENTERLINE 3+00.12; THENCE NORTH 16 DEGREES 47 MINUTES 05 SECONDS EAST 35.43 FEET LOCATED AT PROPOSED CENTERLINE 3+35.55; THENCE ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 600.00 FEET, AND A CHORD WHICH BEARS NORTH 32 DEGREES 10 MINUTES 33 SECONDS EAST 318.49, AN ARC DISTANCE OF 322.35 FEET LOCATED AT PROPOSED CENTERLINE 6+57.90; THENCE NORTH 47 DEGREES 34 MINUTES 01 SECONDS EAST 207.71 FEET LOCATED AT PROPOSED CENTERLINE 8+65.61; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 600.00 FEET, AND A CHORD WHICH BEARS NORTH 37 DEGREES 03 MINUTES 32 SECONDS EAST 218.85 FEET, AN ARC DISTANCE OF 220.08 TO THE SOUTHEAST LINE OF LOT 3 OF SAID MEADOWBROOK SUBDIVISION LOCATED AT PROPOSED CENTERLINE 10+85.69,; THENCE NORTH 26 DEGREES 33 MINUTES 03 SECONDS EAST ALONG THE SAID SOUTHEAST LINE OF LOT 3, 60.54 FEET TO THE EASTERN MOST CORNER OF SAID LOT 3 LOCATED AT PROPOSED CENTERLINE 11+46.23.

NOTES
1. IT IS NOT WARRANTED THAT ANY/ALL EXISTING EASEMENTS ARE AS SHOWN, ADDITIONAL EASEMENTS MAY EXIST. A TITLE COMMITMENT WILL DISCLOSE ALL EASEMENTS OF PUBLIC RECORD.
2. BASIS OF BEARING IS MISSOURI STATE PLANE GRID AND WAS CALCULATED FROM STATIC GPS OBSERVATIONS MADE ON JUNE 4, 2012.
3. CLASS OF SURVEY: URBAN PROPERTY.
4. ALL EXISTING MONUMENTS FOUND ARE NOTED AS TO TYPE.
5. CALCULATED DIMENSIONS AND BEARINGS NOTED ARE NOTED WITHOUT PARENTHESIS, RECORD DIMENSIONS ARE NOTED WITHIN PARENTHESIS.
6. MONUMENTS TO BE SET WILL BE SET AT COMPLETION OF CONSTRUCTION.
7. ACREAGE OF AFFECTED PARCELS IS BASED UPON JEFFERSON COUNTY ASSESSORS RECORDS.

TRACT 2
PARCEL ID 24-4.2-19.0-0-000-027
14439 WILSON HOLLOW ROAD
DE SOTO, MO 63020
NOW OR FORMERLY
JASON A. GREENLEE &
SARAH F. GREENLEE
DOC #050026621
EXISTING ---------- 11.31 ACRES
NEW R.O.W --------- 8,997 S.F.
AREA REMAINING ----- 11.10 ACRES
T.C.E. ---------- 287 S.F.
EXISTING PRESCRIPTIVE
EASEMENT AREA ----- 3,596 S.F.

TRACT 3
PARCEL ID 24-4.2-19.0-0-000-026
14441 WILSON HOLLOW ROAD
DE SOTO, MO 63020
NOW OR FORMERLY
JULIE M. WILLIAMS &
CHRISTOPHER W. WILLIAMS
DOC #2011R-026369
EXISTING ---------- 12.17 ACRES
NEW R.O.W --------- 24,171 S.F.
AREA REMAINING ----- 11.62 ACRES
T.C.E. ---------- 8,462 S.F.
EXISTING PRESCRIPTIVE
EASEMENT AREA ----- 3,873 S.F.

TRACT 1
PARCEL ID 24-4.2-19.0-0-000-043
14388 WILSON HOLLOW ROAD
DE SOTO, MO 63020
NOW OR FORMERLY
JANICE J. BUTCHER, TRUSTEE
DOC #040047003
EXISTING ---------- 3.50 ACRES
NEW R.O.W --------- 16,416 S.F.
AREA REMAINING ----- 3.12 ACRES
T.C.E. ---------- 13,296 S.F.
EXISTING PRESCRIPTIVE
EASEMENT AREA ----- 12,253 S.F.

MEADOWBROOK
P.B. 56, PG. 21

WILSON HOLLOW
P.B. 66, PG. 23

LOT 10 · LOT 9 · LOT 8 · LOT 7 · LOT 6 · LOT 5 · LOT 4

SW ¼ SE ¼ SEC19 · SW CORNER MEADOWBROOK · SE CORNER LOT 10 · N1°31'57"E 188.5' · S82°21'57"E 744.35' · N30°53'39"E 459.83'

POB TRACT 1&2 · POB TRACT 2 · POB TRACT 3 · POB TCE TRACT 2 · POB TCE TRACT 3 · POB TCE SOUTH TRACT #1 · POB TCE NORTH TRACT #1 · POB CL

PROP. R/W · PROP. R/W C/L · PROP. TCE · PROP. R/W

R-570.00' L-140.46' CB-N23°50'40"E CL-140.11'
R-630.00' L-338.47' CB-N32°10'33"E CL-334.41'
R-570.00 L-306.23' CB-S32°10'33"W CL-302.56'
R-630.00' L-137.99' CB-S24°37'48"W CL-137.71'
CB-N26°14'15"E CL-102.51' L-102.63'
CB-N19°57'46"E CL-35.36'

N30°53'39"E 52.26' · N30°53'39"E (N30°08'E) 99.98' (100.00') · S30°53'39"W 52.26' · S30°53'39"E 136.24' · S29°45'24"W 99.19' · N18°16'17"E 166.78' · N37°15'47"E 109.87' · S63°32'02"E 1248.77' · S63°32'02"E 1352.85' · N01°01'23"E 36.81' · N16°47'05"E 35.43' · 9.92' · L-10.25' · L-35.36' · 200.04' (200.00') · 325.13' · 84.98' (85.04') · 40.11' · 16.09' · 16.07' · 9.12' · 207' · 50.45' · 37.91' · 86.20' · 96.04' · 110.96' · CB-N32°38'32"E CL-324.52' (TRACT 3) 328.22 (ARC) · N28°57'28"E (N28°14'E) 99.96' (100.00') · N28°57'28"E (N28°14'E) 90.85' (90.88') · S28°57'28"W 205.31' · S75°25'32"W 90.15' · N75°46'28"W 78.17' · S73°04'45"W 31.02' · S55°18'42"W 51.04' · S45°16'52"E 126.93' · N59°01'15"W 161.09' · N59°01'15"W 166.41' · N59°01'15"W 174.67' · N59°01'15"W 170.23' · N59°01'15"W 182.18' · N59°01'15"W 162.58'

+00 30'LT · +52.26 30'LT · +00 30'RT · +52.26 30'RT · +00.12 30'LT · +35.55 40'LT · +46.73 39.80'LT · +35.55 30'LT · +45.31 30'LT · +00 60'LT · +50 30'RT · +83.68 30'RT · +45 50'RT · +23.67 57.13'RT · +79.49 58.09'RT · +21.30 55.73'RT · +51 128'RT · +75 153'RT · +35 180'RT

ROD FOUND · PK NAIL FOUND

30' WIDE PRESCRIPTIVE EASEMENT FOR EXISTING ROADWAY

TCE SOUTH (10,479 SF)

TCE NORTH (2,817 SF)

C/L WILSON HOLLOW RD. AS TRAVELED (UN-DEDICATED)

0+00 · 1+00 · 2+00 · 3+00 · 4+00 · 5+00

GRAPHIC SCALE -20 0 10 20 40

LEGEND
EXISTING PROPERTY LINE
PROPOSED RIGHT OF WAY
PROPOSED TEMPORARY CONSTRUCTION EASEMENT
PROPOSED CENTERLINE
EXISTING MONUMENTATION ○
SET ½" IRON ROD WITH CAP ●
R – RADIUS
L – ARC LENGTH
CB – CHORD BEARING
CL – CHORD LENGTH
POB – POINT OF BEGINNING

Sheet No. 1 of 2

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

DATE PREPARED 9/9/13
STATE MO · SHEET NO. 6
ROUTE .
COUNTY JEFFERSON
JOB NO. 2011-180
PROJECT NO. STP-5403 (646)
BRIDGE NO. 30600071

SHEET 2 5+70 MATCHLINE SHEET

DATE	DESCRIPTION
.	.

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

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

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RIGHT OF WAY SURVEY

WILSON HOLLOW ROAD.
PART OF THE SOUTHEAST QUARTER OF SECTION 19, TOWNSHIP 39 NORTH, RANGE 4 EAST, JEFFERSON COUNTY, MISSOURI

FOR INFORMATION ONLY
USE RECORED DOCUMENTS

TRACT 3

PARCEL ID 24-4.2-19.0-0-000-026
14441 WILSON HOLLOW ROAD
DE SOTO, MO 63020
NOW OR FORMERLY
JULIE M. WILLIAMS &
CHRISTOPHER W. WILLIAMS
DOC #2011R-026369
EXISTING ---------- 12.17 ACRES
NEW R.O.W --------- 24,171 S.F.
AREA REMAINING ----- 11.62 ACRES
T.C.E. ------------ 8,462 S.F.
EXISTING PRESCRIPTIVE
EASEMENT AREA ----- 3,873 S.F.

TRACT 4

PARCEL ID 24-4.2-19.0-0-000-024
14435 WILSON HOLLOW ROAD
DE SOTO, MO 63020
NOW OR FORMERLY
MATTHEW KELLER &
JACLYN KELLER
DOC #050033416
EXISTING ---------- 3.82 ACRES
NEW R.O.W --------- 7,045 S.F.
AREA REMAINING ----- 3.70 ACRES
T.C.E. ------------ 936 S.F.
EXISTING PRESCRIPTIVE
EASEMENT AREA ----- 3,002 S.F.

TRACT 1

PARCEL ID 24-4.2-19.0-0-000-043
14388 WILSON HOLLOW ROAD
DE SOTO, MO 63020
NOW OR FORMERLY
JANICE J. BUTCHER, TRUSTEE
DOC #040047003
EXISTING ---------- 3.50 ACRES
NEW R.O.W --------- 16,416 S.F.
AREA REMAINING ----- 3.12 ACRES
T.C.E. ------------ 13,896 S.F.
EXISTING PRESCRIPTIVE
EASEMENT AREA ----- 12,253 S.F.

MATCHLINE SHEET 1

5+70

N37°15'47"E 109.87'
+00 60'LT
LOT 5
R-630.00'
L-338.47'
CB-N32°10'33"E
CL-334.41'
N53°14'08"E 131.93'
PROP. TCE
+57.90 30'LT
CB-N32°38'32"E CL-324.52' (TRACT 3) 328.22 (ARC)
N47°34'01"E 73.06'
PROP. R/W
+25.60 30'LT
+25.60 43.90'LT
14.90'
N53°14'08"E 140.70'
N47°34'01"E 134.59'
POB TCE TRACT 4
ROD FOUND
6+00
PROP. R/W C/L
7+00
43.64
POB TRACT 4
S63°32'02"E 1480.98'
MEADOWBROOK
P.B. 56, PG. 21
LOT 4
LOT 3
S63°32'02"E 691.48'
PK NAIL FOUND
96.04'
C/L WILSON HOLLOW RD. AS TRAVELED (UN-DEDICATED)
N28°57'28"E (N28°14'E) 99.96' (100.00')
N28°57'28"E (N28°14'E) 16.19'
N43°45'24"E 83.81' (83.88')
103.96'
PK NAIL FOUND
20.15'
S28°57'28"W 205.31'
PROP. R/W 207'
30.75'
+13.71 40.76'RT
+45.20 32.33'RT
S43°45'24"W 37.03'
+82.83 30'RT
277.22'
N43°45'24"E 100.04' (100.00')
173.26'
PROP. R/W C/L
8+00
30' WIDE PRESCRIPTIVE EASEMENT FOR EXISTING ROADWAY
+65.61 30'LT
R-570.00'
L-69.65'
CB-N44°03'59"E
CL-69.61'
PROP. R/W
+38.93 30'LT
ROD FOUND
S63°32'02"E 29.37'
9+00
+25.92 0'
N34°31'17"E 26.81' (26.74')
N34°31'17"E 126.90' (126.97')
10+00
PK NAIL FOUND
N43°45'24"E 93.37' (93.34')
6.66'
S47°34'01"W 182.78'
TCE NORTH (2,817 SF)
PROP. TCE
S40°47'45"E 69.66'
S75°25'32"W 90.15'
+05 110'RT
+65.61 30'RT
PROP. R/W
R-630.00'
L-69.06'
CB-S44°25'36"W
CL-69.03'
S59°01'15"E 29.76'
R-600.00
L-20.53'
CB-S40°49'38"W
CL-20.53'
+31.38 30'RT
WILSON HOLLOW
P.B. 66, PG. 23
LOT 4
LOT 3
LOT 2
LOT 1
N59°01'15"W 190.00'
N59°01'15"W 1510.63'
N59°01'15"W 158.31'
N59°01'15"W 141.44'

GRAPHIC SCALE
-20 0 10 20 40

LEGEND
EXISTING PROPERTY LINE
PROPOSED RIGHT OF WAY
PROPOSED TEMPORARY CONSTRUCTION EASEMENT
PROPOSED CENTERLINE
EXISTING MONUMENTATION ○
SET ½" IRON ROD WITH CAP ●
R – RADIUS
L – ARC LENGTH
CB – CHORD BEARING
CL – CHORD LENGTH
POB – POINT OF BEGINNING

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

DATE PREPARED 9/9/13
STATE MO
SHEET NO. 7
ROUTE .
COUNTY JEFFERSON
JOB NO. 2011-180
PROJECT NO. STP-5403 (646)
BRIDGE NO. 30600071

DESCRIPTION	DATE

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

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

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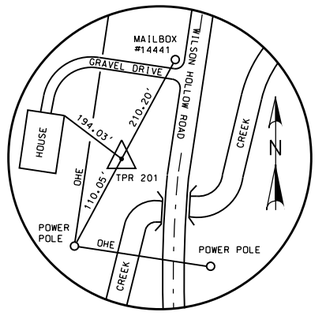
MAINLINE WILSON HOLLOW LAYOUT COORDINATES

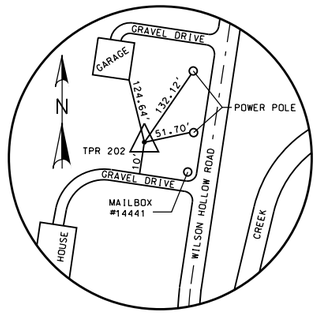
Point Description	North	East
Control Point CP-201	820,207.69	784,816.22
Control Point CP-202	820,308.24	784,966.02
Control Point CP-203	820,690.69	785,033.07
P.O.T. Sta. 0+00	819,680.49	784,654.26
P.C. Sta. 1+52.26 CUR#1	819,811.14	784,732.46
P.I. Sta. 2+26.57 CUR#1	819,874.89	784,770.62
P.T. Sta. 3+00.12 CUR#1	819,946.03	784,792.08
P.C. Sta. 3+35.55 CUR#2	819,979.95	784,802.31
P.I. Sta. 5+00.72 CUR#2	820,138.08	784,850.01
P.T. Sta. 6+57.90 CUR#2	820,249.53	784,971.91
P.C. Sta. 8+65.61 CUR#3	820,389.68	785,125.22
P.I. Sta. 9+76.90 CUR#3	820,464.77	785,207.36
P.T. Sta. 10+85.69 CUR#3	820,564.32	785,257.10
P.O.T. Sta. 11+46.23	820,618.48	785,284.16

DRIVEWAY LAYOUT COORDINATES

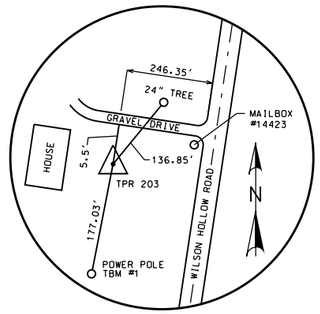
Point Description	North	East
℄ STA. 4+41.40 = DW #1 STA. 0+00	820,078.08	784,841.64
DW #1 P.C. Sta. 0+80.14 (80.14'RT. 4+41.40)	820,041.84	784,913.11
DW #1 P.I. Sta. 1+84.70	819,994.54	785,006.36
DW #1 P.T. Sta. 1+46.94 (89.25'RT. 3+85.76)	819,994.54	784,901.80
DW #1 P.O.T. STA.1+56.25 (80.59'RT. 3+81.81)	819,994.54	784,892.49
℄ STA.6+94.11 = DW #2 STA 0+00	820,273.96	784,998.64
DW #2 P.O.T 0+47.95 (45.35' LT. 6+78.53)	820,296.92	784,956.54
℄ STA. 9+17.10 = DW #3 STA. 0+00	820,426.00	785,161.68
FE #1 STA. 2+00.00	819,853.03	784,755.32
DW #3 P.O.T. Sta.0+26.29 (24.59' LT.9+07.61)	820,436.02	785,137.38



TPR-201



TPR-202



TPR-203

Detailed Aug. 2013
Checked Aug. 2013

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

COORDINATE POINTS

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

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

DATE PREPARED: 2/17/2014
STATE: MO
SHEET NO.: 8
ROUTE:
COUNTY: JEFFERSON
JOB NO.: 2011-180
PROJECT NO.: STP-5403 (646)
BRIDGE NO.: 30600071

DESCRIPTION | DATE

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

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

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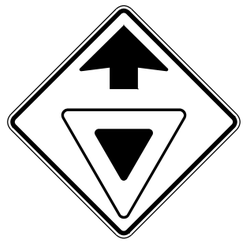
WO20-1

1 — 5 — 500'±

WO20-4

2 — 500'±



WO3-2a

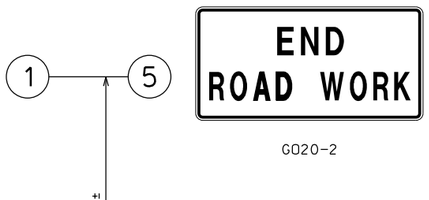
3 — 150'±

R1-2

4 — 150±

R1-2a

EXISTING BRIDGE



GO20-2

Traffic Control

Wilson Hollow is a dead end road with NO ACCESS Beyond this project. A minimum of one (1) twelve (12) foot lane shall be maintained through the project. SPECIAL ROCK EMBANKMENT (FILL) and TEMPORARY SHORING are provided to maintain through traffic at this minimum width. (SEE ROADWAY CROSS SECTIONS)

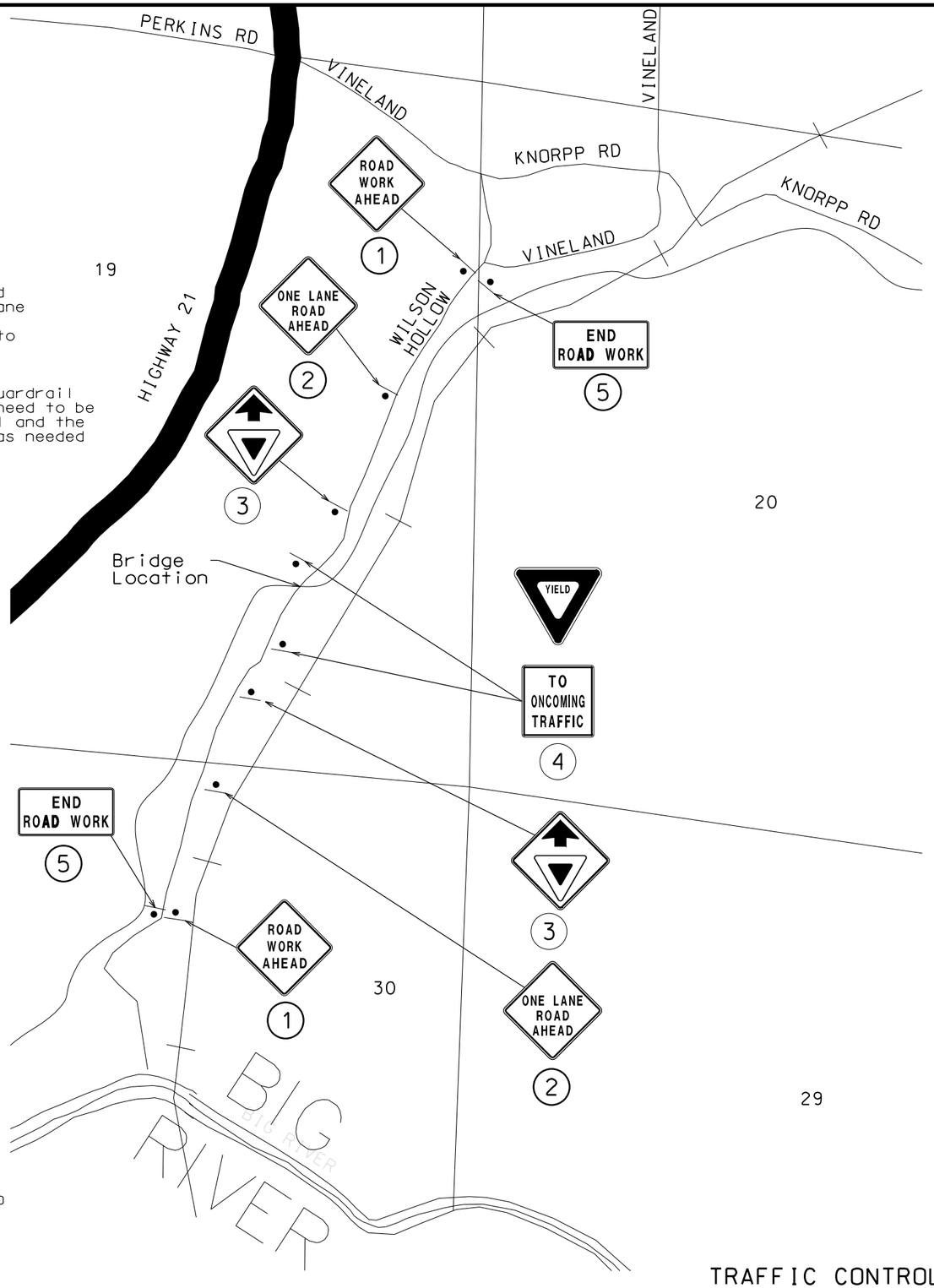
After construction of the bridge, approach slab and guardrail (approximately Sta. 3+50 to Sta. 6+50) traffic will need to be moved to the new roadway in order to build DRIVEWAY #1 and the remaining side slopes. Flagger control shall be used as needed to finish the work on the remaining roadway.

NOTES:

1. ALL CONSTRUCTION SIGNS SHALL BE NON-PORTABLE MOUNTED 48 HOURS PRIOR TO ROAD CLOSURE.
2. CONTRACTOR IS RESPONSIBLE FOR UTILITY LOCATES PRIOR TO PLACING SIGN POSTS.
3. SIGN PLACEMENT MAYBE MODIFIED IN THE FIELD BY THE ENGINEER AS NEEDED FOR GREATER VISABILITY

Detailed Aug. 2013
Checked Aug. 2013

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



TRAFFIC CONTROL

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

DATE PREPARED 2/17/2014
STATE MO | SHEET NO. 9
ROUTE
COUNTY JEFFERSON
JOB NO. 2011-180
PROJECT NO. STP-5403 (646)
BRIDGE NO. 30600071

DESCRIPTION | DATE

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

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

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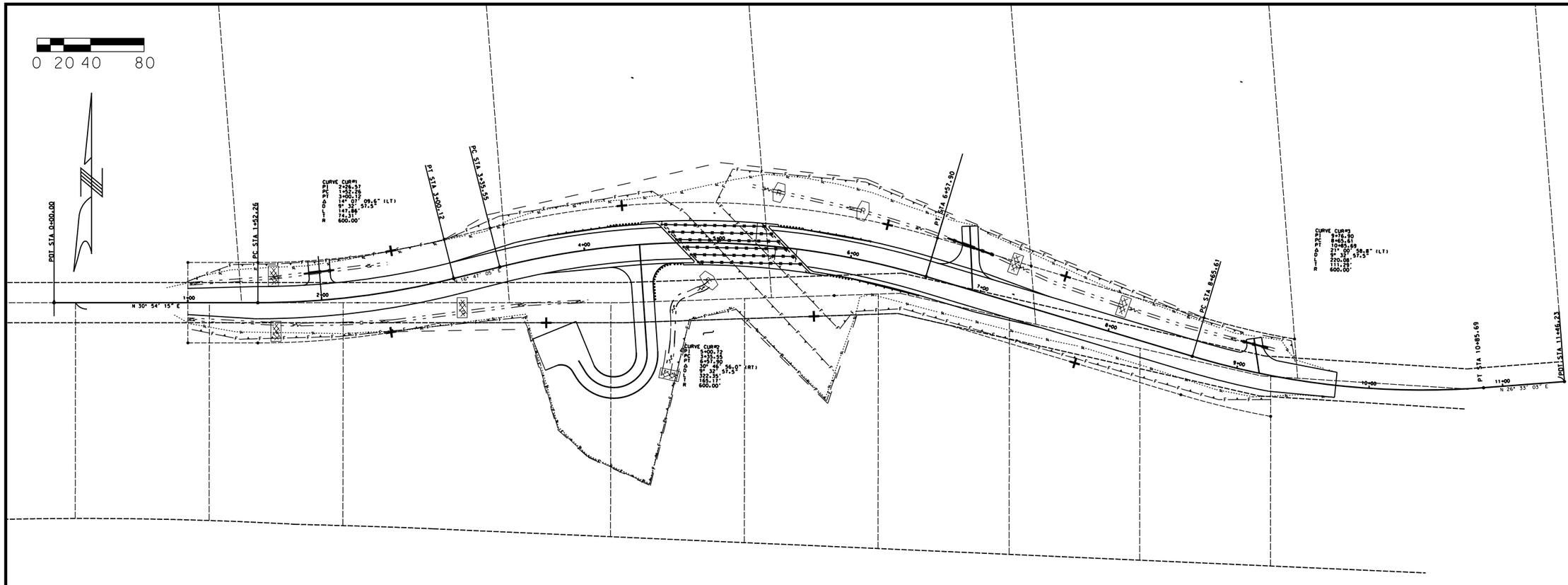

SILT FENCE

LOCATION	LENGTH (LIN. FT.)
15' LT. STA. 1+00 TO 29' LT. STA. 1+30	= 33
29' LT. STA. 1+30 TO 29' LT. STA. 2+00	= 70
29' LT. STA. 2+00 TO 29' LT. STA. 3+00	= 100
29' LT. STA. 3+00 TO 38' LT. STA. 3+75	= 76
38' LT. STA. 3+75 TO 38' LT. STA. 4+55	= 80
38' LT. STA. 4+55 TO 84' RT. STA. 6+04	= 192
84' RT. STA. 6+04 TO 105' RT. STA. 5+98	= 22
105' RT. STA. 5+98 TO 54' RT. STA. 5+18	= 95
54' RT. STA. 5+18 TO 58' RT. STA. 4+79	= 39
58' RT. STA. 4+79 TO 179' RT. STA. 4+34	= 129
179' RT. STA. 4+34 TO 152' RT. STA. 3+75	= 64
152' RT. STA. 3+75 TO 128' RT. STA. 3+52	= 33
128' RT. STA. 3+52 TO 50' RT. STA. 3+46	= 78
50' RT. STA. 3+46 TO 29' RT. STA. 2+25	= 30
29' RT. STA. 2+25 TO 25' RT. STA. 1+38	= 87
25' RT. STA. 1+38 TO 15' RT. STA. 1+00	= 39
22' LT. STA. 5+05 TO 53' LT. STA. 5+21	= 36
53' LT. STA. 5+21 TO 56' LT. STA. 5+73	= 52
56' LT. STA. 5+73 TO 48' LT. STA. 6+70	= 97
48' LT. STA. 6+70 TO 47' LT. STA. 6+88	= 18
47' LT. STA. 6+88 TO 27' LT. STA. 8+80	= 193
27' LT. STA. 8+80 TO 28' LT. STA. 9+13	= 33
28' LT. STA. 9+13 TO 25' LT. STA. 9+36	= 23
25' LT. STA. 9+36 TO 12' LT. STA. 9+42	= 14
22' RT. STA. 9+29 TO 30' RT. STA. 6+47	= 282
30' RT. STA. 6+47 TO 40' RT. STA. 6+11	= 37
40' RT. STA. 6+11 TO 59' RT. STA. 6+08	= 20
TOTAL	1972 L.F.

TYPE II DITCH CHECK (ROCK)

LOCATION	EACH
28' RT. STA. 4+95	1
42' LT. STA. 5+50	1
36' LT. STA. 6+00	1
TOTAL	3 EACH

TYPE I DITCH CHECK (STRAW)

LOCATION	EACH
20' RT. STA. 1+70	1
20' LT. STA. 1+70	1
20' RT. STA. 3+00	1
99' RT. STA. 4+55	1
27' LT. STA. 7+25	1
20' LT. STA. 8+25	1
TOTAL	6 EACH

EROSION CONTROL LEGEND

- (R) ROCK DITCH CHECK
- STRAW BALE DITCH CHECK
- SILT FENCE

Detailed Aug. 2013
Checked Aug. 2013

EROSION CONTROL

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

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

DATE PREPARED 2/17/2014

STATE	SHEET NO.
MO	10

ROUTE

COUNTY JEFFERSON

JOB NO. 2011-180

PROJECT NO. STP-5403 (646)

BRIDGE NO. 30600071

DATE | DESCRIPTION

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

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

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	11

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

BRIDGE NO.
30600071

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

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	12

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

BRIDGE NO.
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ROCK BLANKET

EXISTING CONTOUR

PROPOSED CONTOUR

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

SPECIAL SHEET
ROCK BLANKET LIMITS

Detailed Aug. 2013
Checked Aug. 2013

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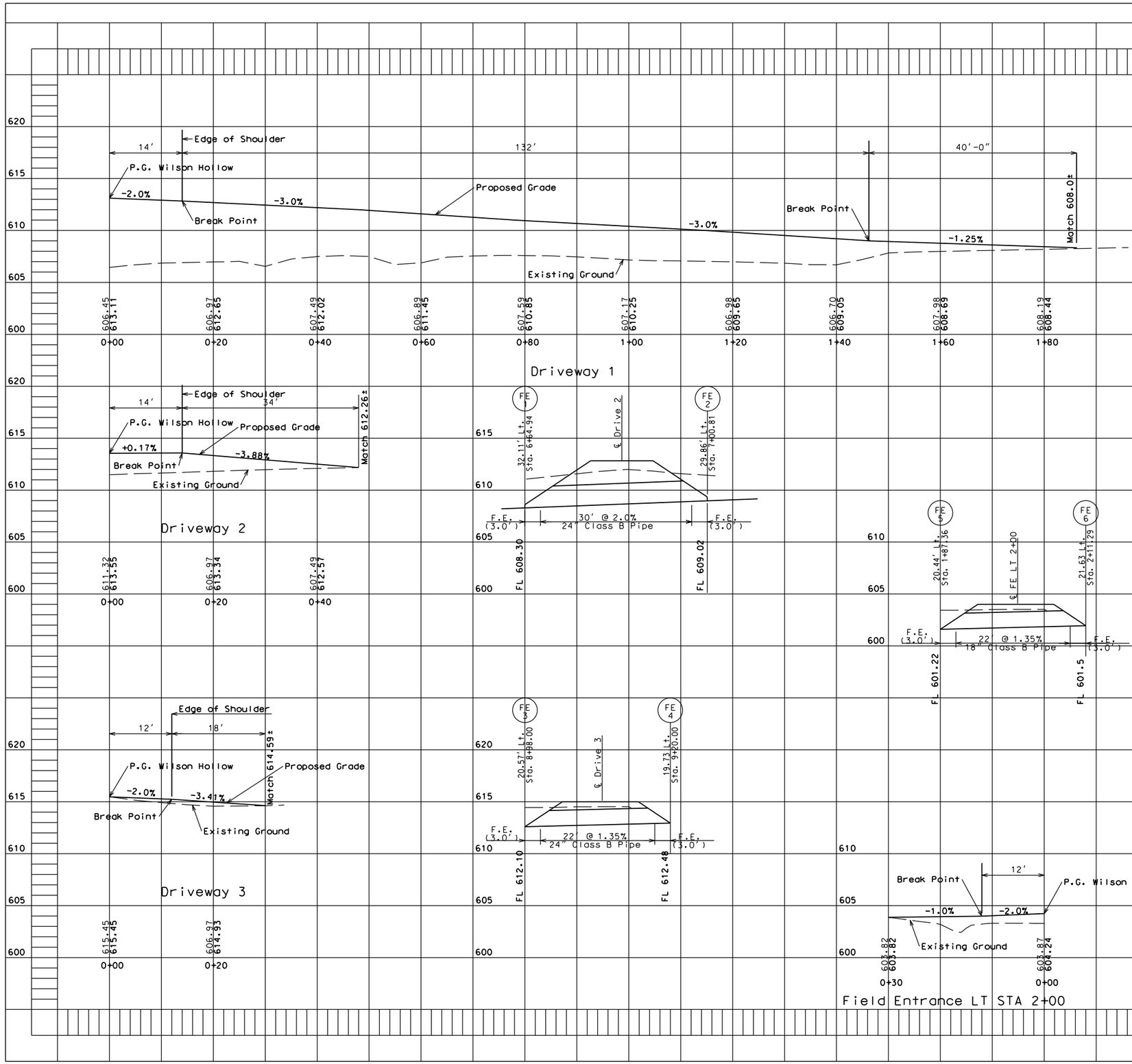
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501



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

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	13

ROUTE

COUNTY
JEFFERSON

JOB NO.
2010-207

PROJECT NO.
STP-5403 (622)

BRIDGE NO.
25200101

DATE	DESCRIPTION

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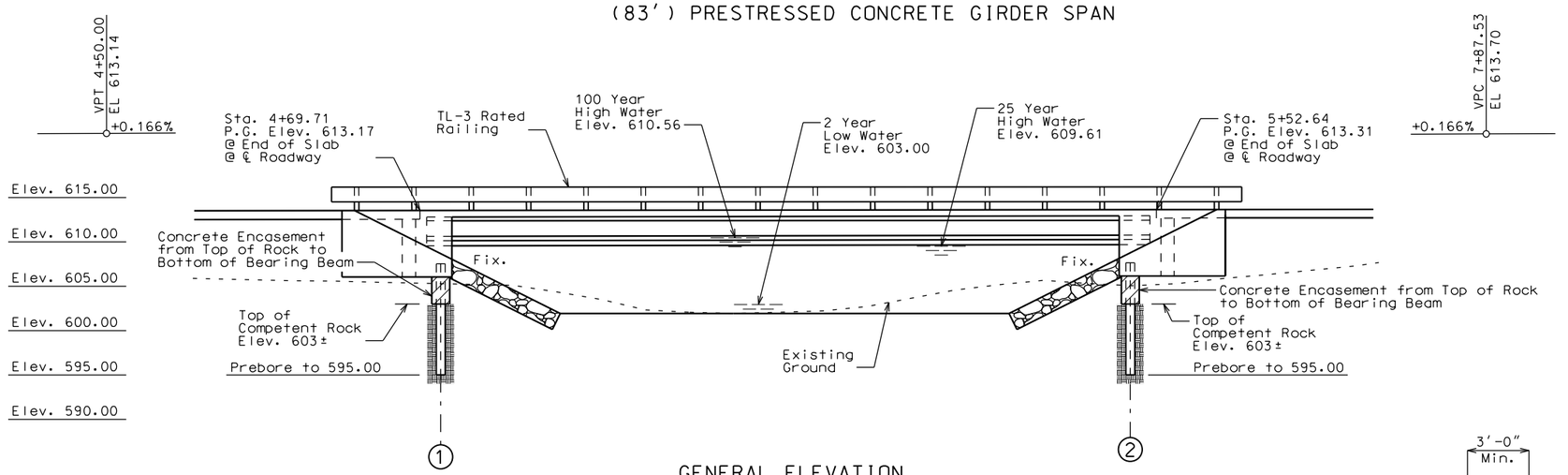
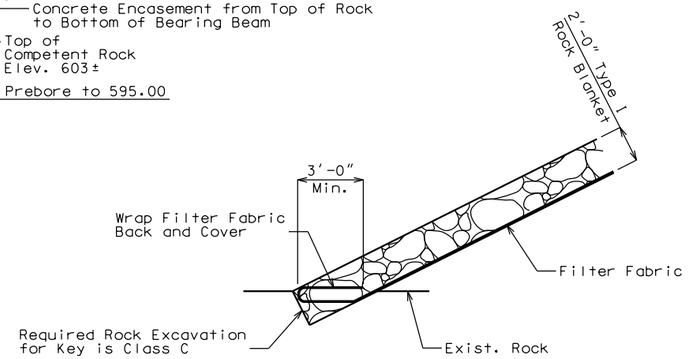
CERTIFICATE/LICENSE NO. 001501

(83') PRESTRESSED CONCRETE GIRDER SPAN

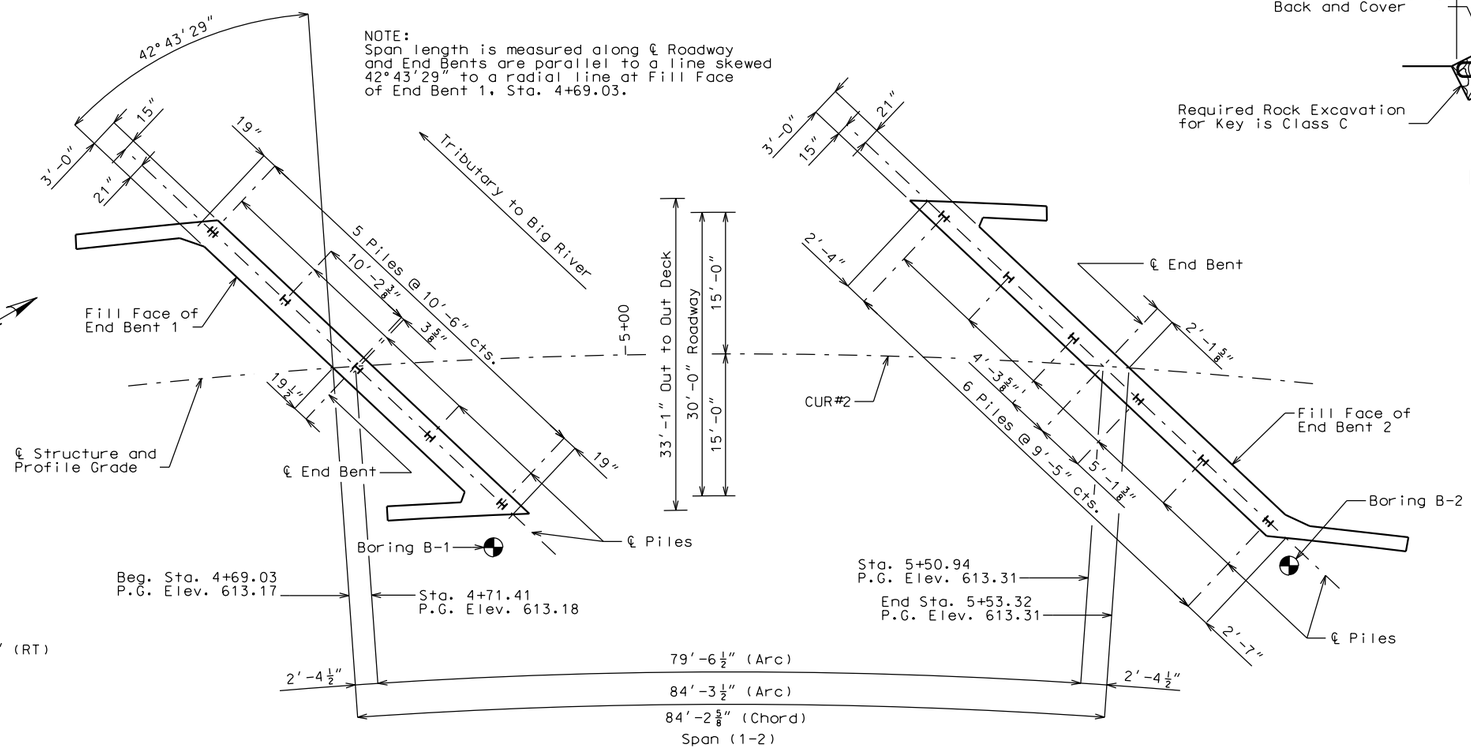


GENERAL ELEVATION



ROCK BLANKET DETAIL

NOTE:
Span length is measured along ℄ Roadway and End Bents are parallel to a line skewed 42°43'29" to a radial line at Fill Face of End Bent 1, Sta. 4+69.03.



PLAN

CURVE CUR#2
PI 5+00.72
PC 3+35.55
PT 6+57.90
Δ 30° 46' 56.0" (RT)
D 9° 32' 57.5"
L 322.35'
T 165.17'
R 600.00'

"⌖" Indicates location of borings.

Notice and Disclaimer Regarding Boring Log Data

The locations of all subsurface borings for this structure are shown on the bridge plan sheet for this structure. Boring data for the numbered locations is shown on Sheet No. 3. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the County for the design of the project, will be provided in the bridge electronic deliverable file or will be available from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is subsurface data available from the County or elsewhere.

The County does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the County.

Notes:

Roadway fill shall be completed to the final roadway section and up to the elevation of the bottom of the concrete beam within the limits of the structure and for not less than 25 feet in back of the fill face of the end bents before any piles are driven for any bents falling within the embankment section.

For General Notes, Pile and Footing Data and Estimated Quantities for Slab on Concrete I-Girder, see Sheet No. 2.

Dimensions shown in plan are horizontal.

B.M. #1 RAILROAD SPIKE IN POWER POLE.
STA.4+43.82, 124.82' LT. ELEVATION 610.59

B.M. #2 RAILROAD SPIKE IN POWER POLE.
STA.8+41.54, 206.70' LT. ELEVATION 617.98

S.B.M. RAILROAD SPIKE IN POWER POLE.
STA.7+23.83, 5.93' LT. ELEVATION 614.13

BRIDGE: OVER TRIBUTARY TO BIG RIVER

COUNTY ROAD: WILSON HOLLOW ROAD

STA. 4+69.03

Detailed Aug. 2013
Checked Aug. 2013

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

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

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	14

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

BRIDGE NO.
30600071

DATE	DESCRIPTION

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

Estimated Quantities

Item		Substr.	Superstr.	Total
Removal of Bridges (3060007)	lump sum	1		1
Bridge Approach Slab (Bridge)	sq. yard		167	167
Structural Steel Piles (10 in.)	linear foot	143		143
Setting Piles in Rock	each	11		11
Class B Concrete (Substructure)	cu. yard	42		42
Slab on Concrete I-Girder	sq. yard		305	305
Type 3 (39") Prestressed Concrete I-Girder	linear foot		468	468
Steel Intermediate Diaphragm for P/S Concrete Girders	each		10	10
Vertical Drain at End Bents	each	2		2
Plain Neoprene Bearing Pad	each		12	12
Bridge Guardrail (Thrie Beam)	linear foot		207	207

All concrete above the construction joint in the end bents is included in the Estimated Quantities for Slab on Concrete I-Girder.

All reinforcement in the end bents is included in the Estimated Quantities for Slab on Concrete I-Girder.

Cost of C4x5.4 channel shear connectors (ASTM A709 Grade A36) complete in place shall be considered completely covered in the contract.

All joint filler shall be in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

Estimated Quantities for Slab on Concrete I-Girder

Item		Total
Class B-2 Concrete (Superstructure on Concrete I-Girder)	cu. yard	95
Reinforcing Steel	pound	9130
Reinforcing Steel (Epoxy Coated)	pound	15,470

The table of Estimated Quantities for Slab on Concrete I-Girder represents the quantities used by the County in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard with the horizontal dimensions as shown on the plan of slab. Payment for prestressed panels, conventional forms, all concrete and coated and uncoated reinforcing steel will be considered completely covered by the contract unit price for the slab. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slab shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type I, II or III.

The Estimated Quantities for Slab on Concrete I-Girder are based on skewed precast prestressed end panels.

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

Class B-2 Concrete quantity is based on minimum top flange thickness.

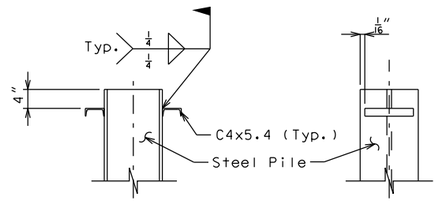
Cost of any required excavation for bridge will be considered completely covered by the contract unit price for other items.

Pile and Footing Data

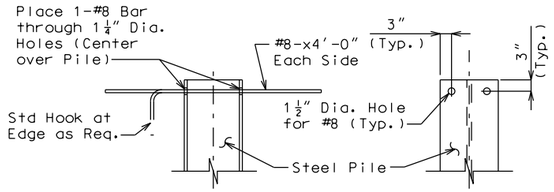
Bent No.		1	3
Type		Steel	Steel
Kind		HP 10x42	HP 10x42
Number		5	6
Approximate Length	foot	13	13
Pile Driving Verification Method		N/A	N/A
Nominal Axial Pile Compression Resistance	kip	382	382
Minimum Tip Penetration	Elev.	595.0	595.0
Criteria for Minimum Tip Penetration		Minimum Embedment into Natural Ground	Minimum Embedment into Natural Ground
Hammer Energy Required	foot-pound	N/A	N/A

Piles shall be installed per Special Provision "Setting Piles in Rock"

Prebore all piles to 595.0.



CHANNEL SHEAR CONNECTOR DETAIL
(Required for all piles)



CHANNEL SHEAR CONNECTOR ALTERNATE
(Required for all piles)

Hydrologic Data

Drainage Area	=	2.3 sq. miles
Design Discharge	=	2,627 cu. ft./sec. (100 Years)
Design H. W. Elev.	=	610.56 feet (100 Years)
Estimated Backwater	=	0.06 feet

Overtopping Flood Data

Discharge:

Roadway	=	Less than 50 years
Bridge	=	Greater than 100 years

GENERAL NOTES:

Design Specifications:

2010 - AASHTO LRFD 5th Edition
Load and Resistance Factor Design
Seismic Performance Category B
Seismic Peak Horizontal Ground Acceleration = 0.11g

Design Loading:

HL-93 (LRFD Superstructure, LRFD Substructure)
35#/Sq. Ft. Future Wearing Surface
Earth 120 #/Cu. Ft., Equivalent Fluid Pressure 45#/Cu. Ft.
Superstructure: Simply-supported, non-composite for dead load. Composite for live load.

Design Unit Stresses:

Class B Concrete (Substructure) f'c = 3,000 psi

Class B-2 Concrete (Superstructure, except Prestressed Girders, Safety Barrier Curb and Median Barrier Curb) f'c = 4,000 psi
Reinforcing Steel (Grade 60) fy = 60,000 psi
Steel Pile (ASTM A709 Grade 50) fy = 50,000 psi
For Precast Prestresssed Panel Stresses, see Sheet No. 13.
For Prestressed Girder Stresses, see Sheet No. 11.

Neoprene Pads:

Bearings shall be 60 durometer neoprene pads. Laminated 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.

Existing Structure:

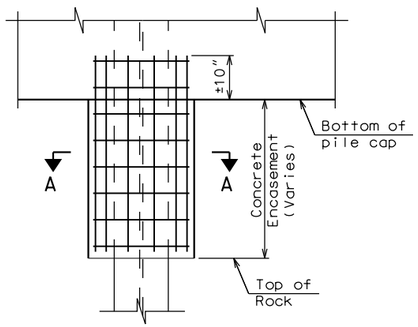
Remove existing Bridge No. 3060007 over Tributary to Big River.

Construction Specifications:

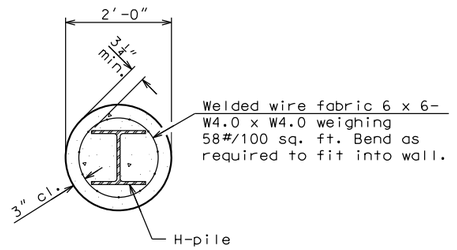
The 2011 Edition of the Missouri Highway and Transportation Commission, "Missouri Standard Specifications for Highway Construction" supplemental revisions and the job specifications shall govern.

Miscellaneous:

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



ELEVATION



Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

PILE ENCASEMENT

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

DATE PREPARED 2/17/2014
STATE MO
SHEET NO. 15
ROUTE
COUNTY JEFFERSON
JOB NO. 2011-180
PROJECT NO. STP-5403 (646)
BRIDGE NO. 30600071

DESCRIPTION
DATE

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

JEFFERSON COUNTY PUBLIC WORKS
DEPARTMENT
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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

GENERAL NOTES AND ESTIMATED QUANTITIES

Depth (Ft.)	Blows/6"	
		El. 609.70
1.0	1-2-1	Loose, moist brown silty SAND with gravel and rock fragments. (SM)
4.0	2-4-3	Medium, brown silty SAND with rock fragments. (SM)
5.8	50/3	El. 603.70
	6.0-11.0 RQD=50%	Auger Refusal @ 6'
		SANDSTONE, grey, moderately hard with interbeded shale and clay seams.
		El. 598.70
		Coring Terminated @ 11'

BORING B-1
CORE

Depth (Ft.)	Blows/6"	Pocket Pen (TSF)	
			El. 611.30
1.0	1-2-4	2.50	Stiff, brown clayey SILT with few root fibers. (CL-ML)
			El. 608.30
4.0	1-2-7		Medium, brown silty SAND with rock fragments. (SM)
			El. 605.80
6.0	2-10-50/3		Grey decomposed to weathered SANDSTONE fragments.
8.0	50/4		El. 603.05
		8.3-13.3 RQD=30%	Auger Refusal @ 8.25'
			SANDSTONE, grey, moderately hard with interbeded shale and clay seams.
			El. 598.05
			Coring Terminated @ 13.25'

BORING B-2
CORE

BORING DATA

Detailed Aug. 2013
Checked Aug. 2013

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

Sheet No. 3 of 21

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

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	16

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

BRIDGE NO.
30600071

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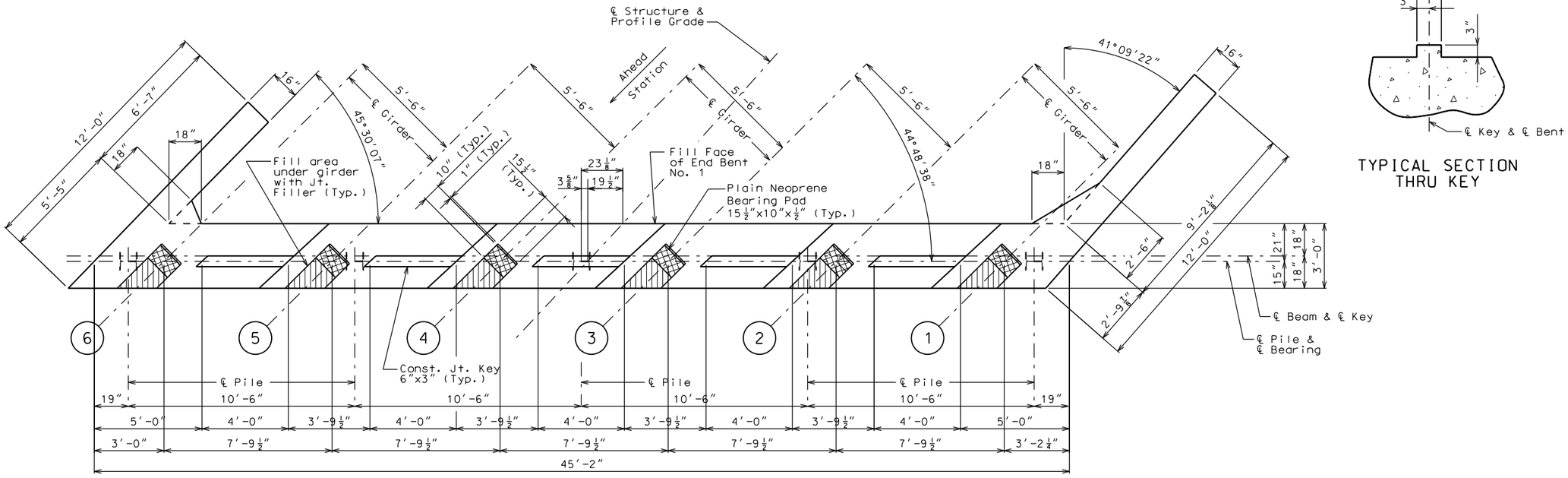
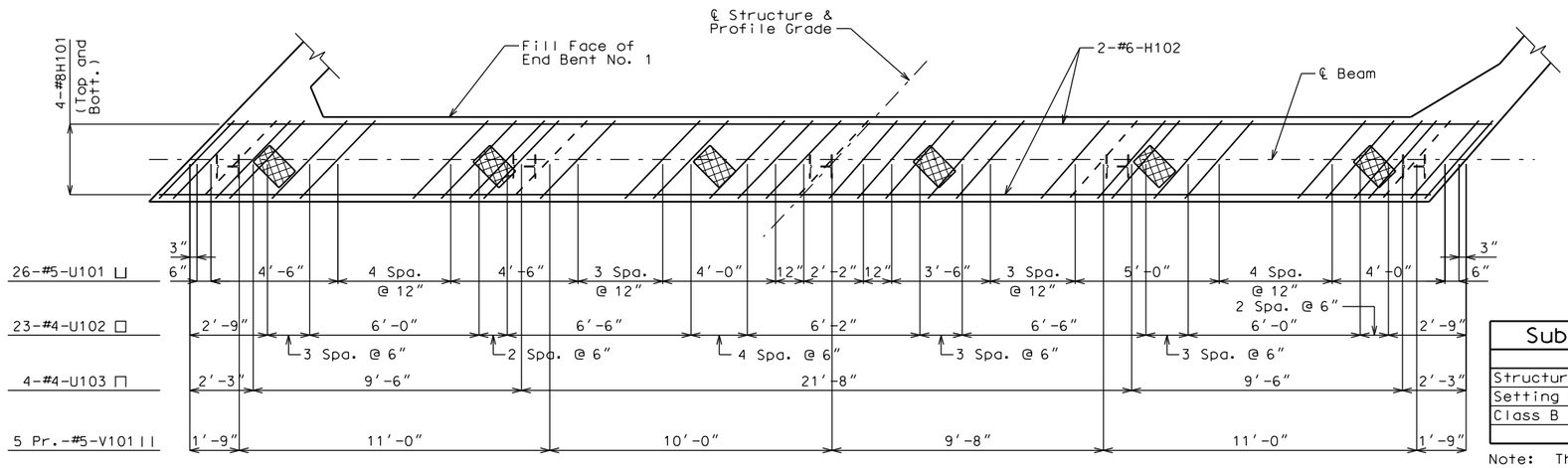


TYPICAL SECTION THRU KEY

PLAN OF BEAM SHOWING DIMENSIONS



PLAN OF BEAM SHOWING REINFORCEMENT

Notes:

For details of End Bent No. 1 not shown, see Sheet Nos. 5 and 6.

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

For details of Vertical Drain at End Bents, see Sheet No. 7.

All vertical reinforcing bars in the substructure beams or caps shall be field adjusted to clear piles by at least 1½″.

All U-bars and Pr. V-bars in End Bent are to be placed parallel to ℄ Structure.

Substructure Quantity Table for Bent No. 1		
Item		Quantity
Structural Steel Pile (10 in.)	linear foot	65
Setting Piles in Rock	each	5
Class B Concrete (substructure)	cu. yard	19.8

Note: These quantities are included in the estimated quantities table on sheet no. 2.

Detailed Aug. 2013
Checked Aug. 2013

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

Sheet No. 4 of 21

END BENT 1 DETAILS

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

DATE PREPARED: 2/17/2014
STATE: MO
SHEET NO.: 17
ROUTE:
COUNTY: JEFFERSON
JOB NO.: 2011-180
PROJECT NO.: STP-5403 (646)
BRIDGE NO.: 30600071

DESCRIPTION
DATE

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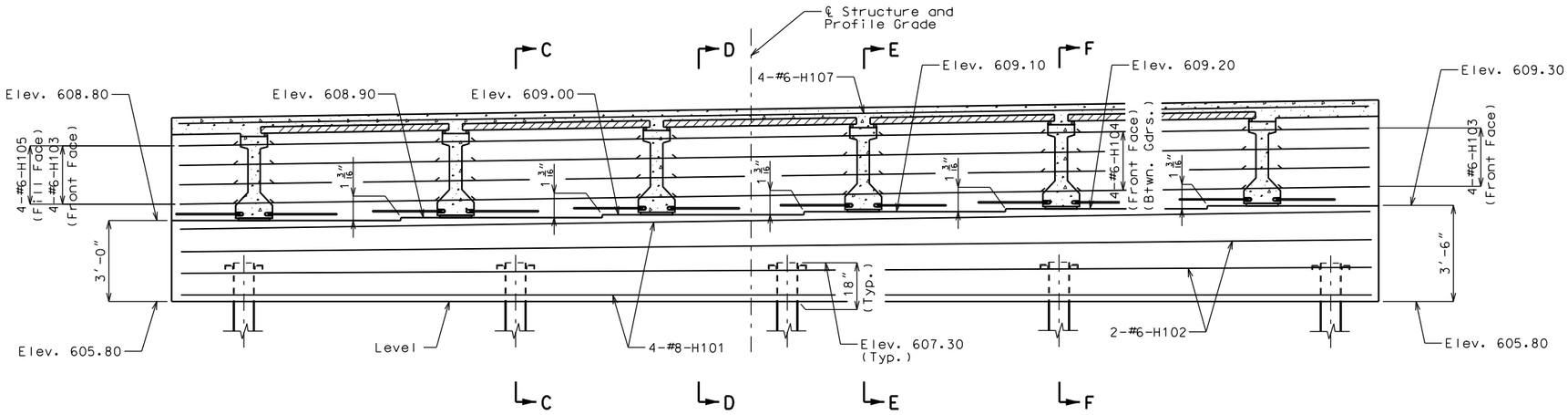


SECTION NEAR END BENT

(Looking Ahead Station)

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

Notes:

For details of End Bent No. 1 not shown, see Sheet Nos. 4 and 6.

For Elevation A-A, B-B, Sections C-C, D-D, E-E and F-F see Sheet No. 6.

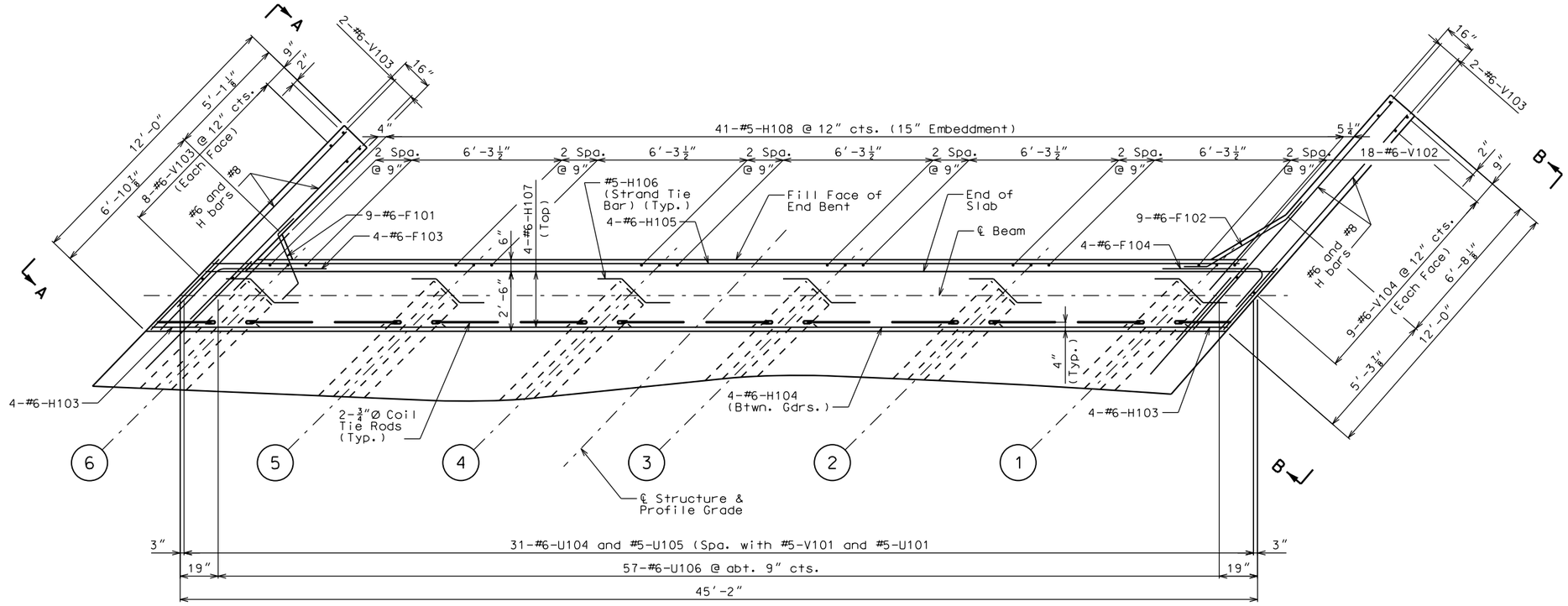
Bend #6 F bars in field to clear girders.

All strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1½" minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H105 (Strand Tie Bars), see Sheet No. 11.

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

Work this sheet with Sheet No. 4 and 6.



PART PLAN

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

END BENT 1 DETAILS

Detailed Aug. 2013
Checked Aug. 2013

Sheet No. 5 of 21

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

DATE PREPARED 2/17/2014
STATE MO
SHEET NO. 18
ROUTE
COUNTY JEFFERSON
JOB NO. 2011-180
PROJECT NO. STP-5403 (646)
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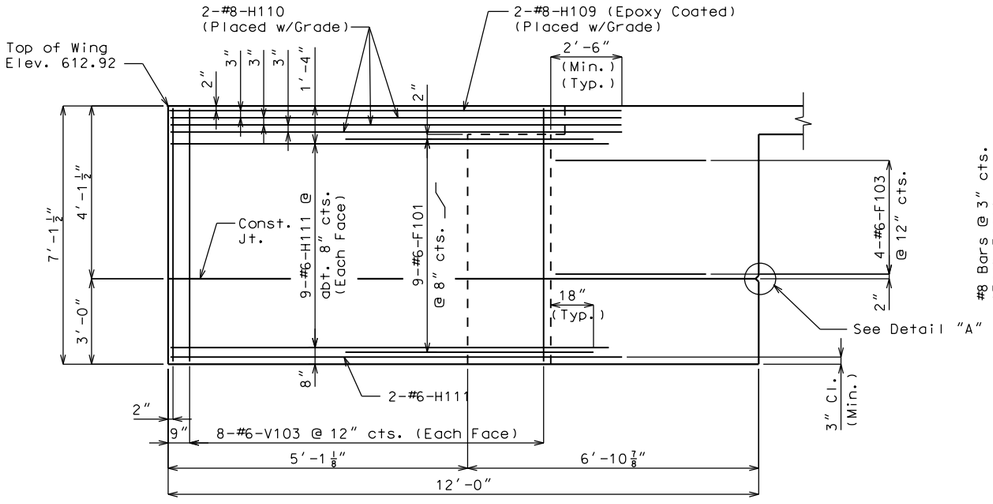
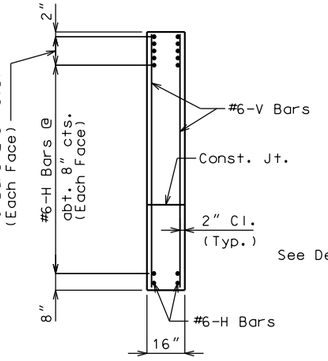
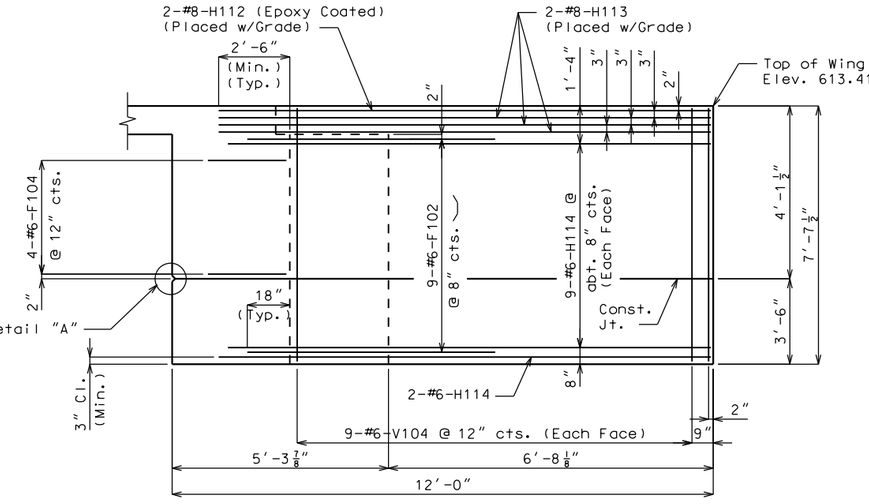


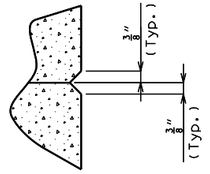
ELEVATION A-A



PART SECTION
THRU WING



ELEVATION B_B



DETAIL "A"

Notes:

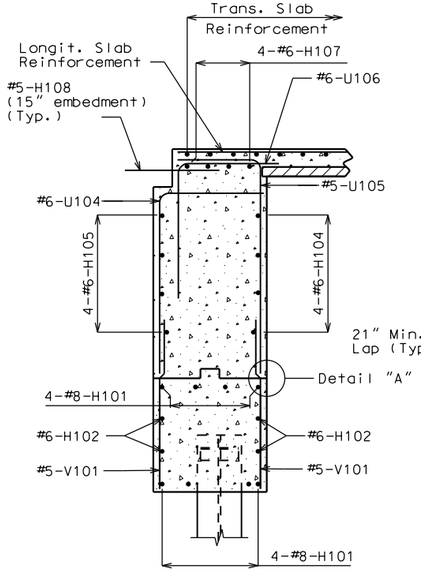
For details of End Bent No. 1 not shown, see Sheet Nos. 4 and 5.

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

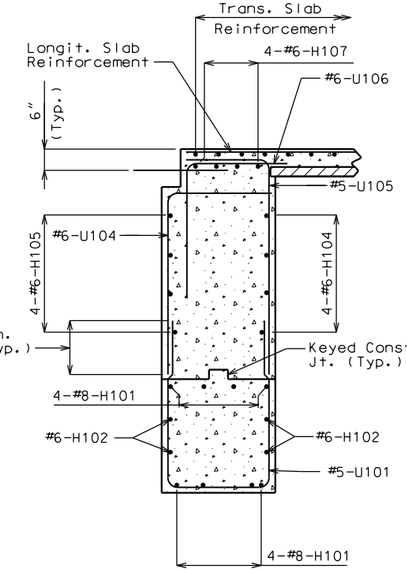
Bend #6 F bars in field to clear girders.

All strands at end of girder shall be field bent or, if necessary, cut in field to maintain 1½" minimum clearance to fill face of end bent.

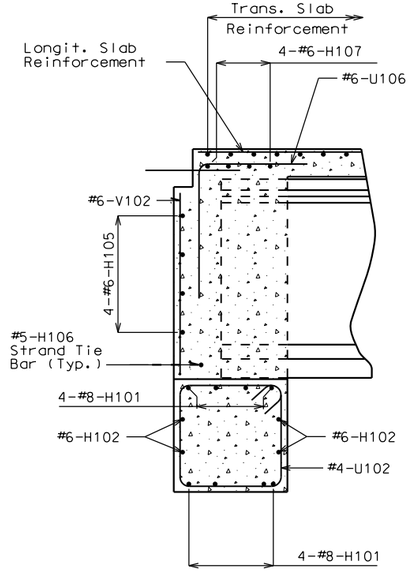
For location and details of Thrie Beam Anchors, see Sheet Nos. 16 and 17.



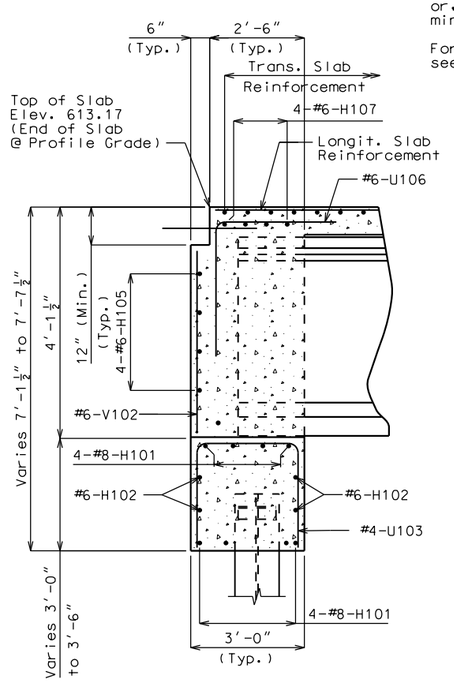
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

PART PLAN

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

Detailed Aug. 2013
Checked Aug. 2013

Sheet No. 6 of 21

END BENT 1 DETAILS

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

DATE PREPARED
2/17/2014

STATE MO | SHEET NO. 19

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

BRIDGE NO.
30600071

DESCRIPTION | DATE

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

JEFFERSON COUNTY PUBLIC WORKS
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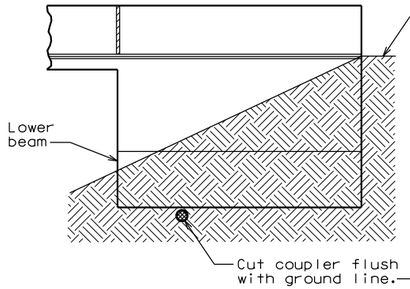
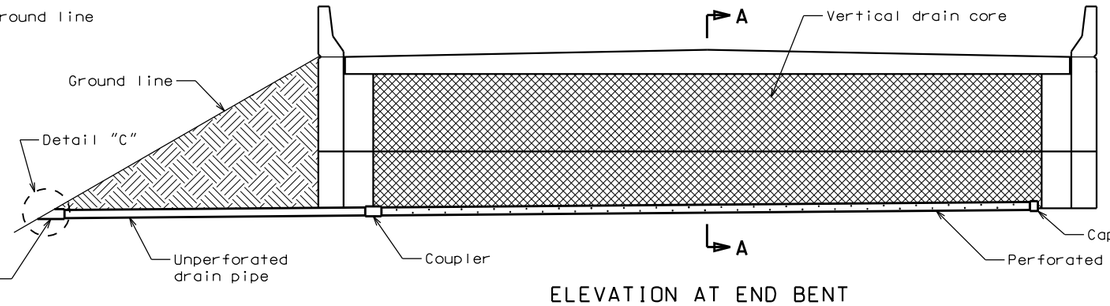
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501

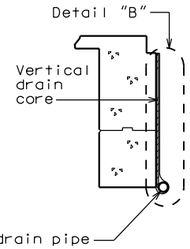
J:\2011\180\Cadd\Design\Bridge\B_30600071_006_End Bent 1.dgn 8:43:55 AM 2/17/2014



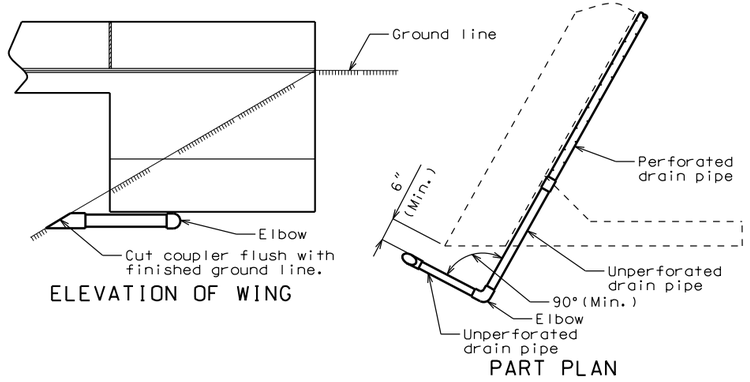
ELEVATION OF WING



ELEVATION AT END BENT

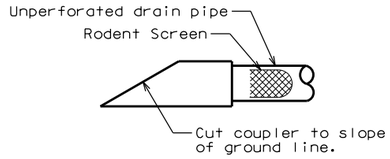


SECTION A-A

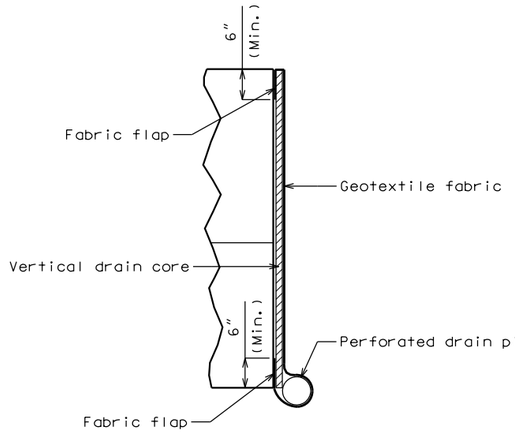


ELEVATION OF WING

PART PLAN



DETAIL "C"



DETAIL "B"

OPTIONAL BENT DRAIN (*)

(*) Only if rock is encountered at outside of wing.

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

Place drain pipe at fill face of end bent and slope to lowest grade of ground line, also missing the lower beam of end bent by 1 1/2". (See elevation at end bent.)

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

VERTICAL DRAIN AT END BENTS

Detailed Aug. 2013
Checked Aug. 2013

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

Sheet No. 7 of 21

J:\2011\180\Cadd\Design\Bridge\B_30600071_007_Vert Drain.dgn 8:44:22 AM 2/17/2014

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

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

DATE PREPARED: 2/17/2014
STATE: MO
SHEET NO.: 20
ROUTE:
COUNTY: JEFFERSON
JOB NO.: 2011-180
PROJECT NO.: STP-5403 (646)
BRIDGE NO.: 30600071

DESCRIPTION	DATE

JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT
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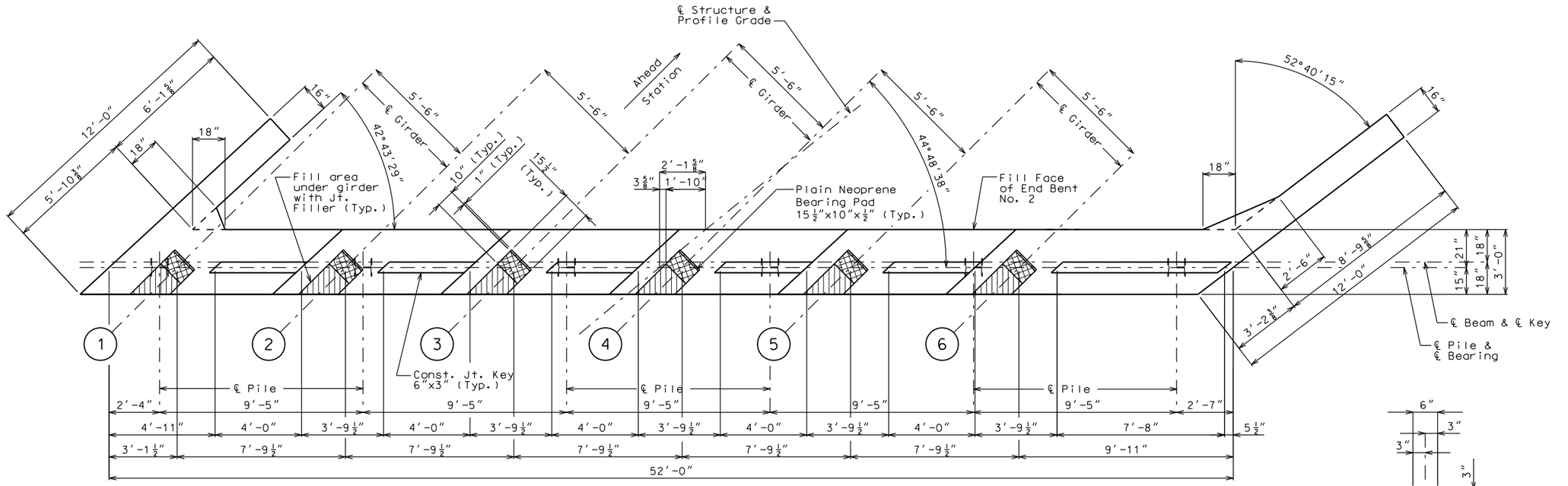
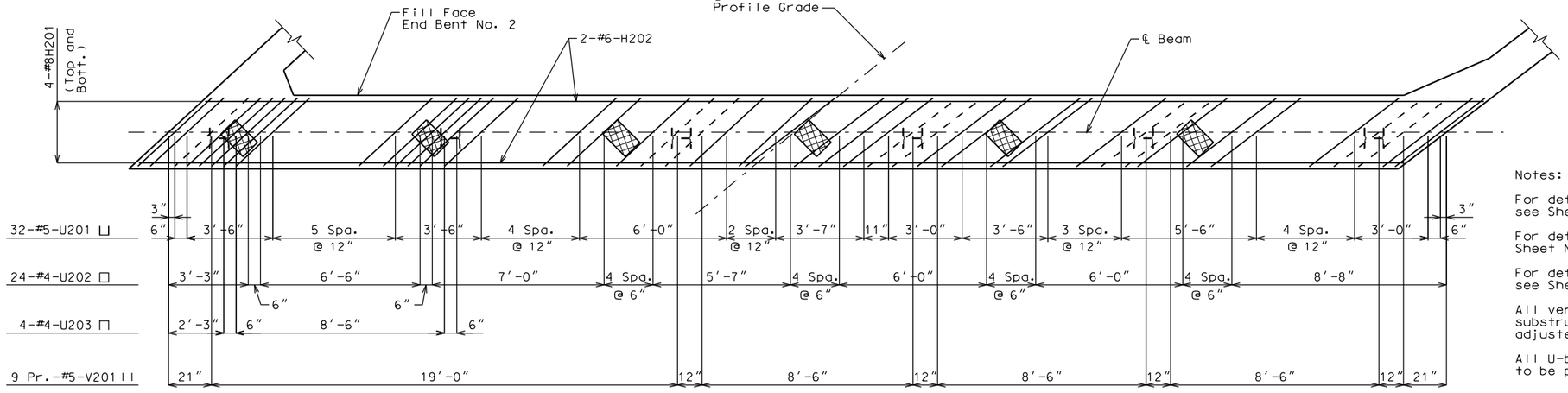
(636-797-5565) FAX

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



PLAN OF BEAM SHOWING DIMENSIONS



PLAN OF BEAM SHOWING REINFORCEMENT

TYPICAL SECTION THRU KEY

Notes:

For details of End Bent No. 2 not shown, see Sheet Nos. 9 and 10.

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

For details of Vertical Drain at End Bents, see Sheet No. 7.

All vertical reinforcing bars in the substructure beams or caps shall be field adjusted to clear piles by at least 1½″.

All U-bars and Pr. V-bars in End Bent are to be placed parallel to ℄ Structure.

Substructure Quantity Table for Bent No. 2		
Item		Quantity
Structural Steel Pile (10 in.)	linear foot	78
Setting Piles in Rock	each	6
Class B Concrete (substructure)	cu. yard	22.2

Note: These quantities are included in the estimated quantities table on sheet no. 2.

END BENT 2 DETAILS

Detailed Aug. 2013
Checked Aug. 2013

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

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

DATE PREPARED 2/17/2014
STATE MO
SHEET NO. 21
ROUTE
COUNTY JEFFERSON
JOB NO. 2011-180
PROJECT NO. STP-5403 (646)
BRIDGE NO. 30600071

DESCRIPTION | DATE

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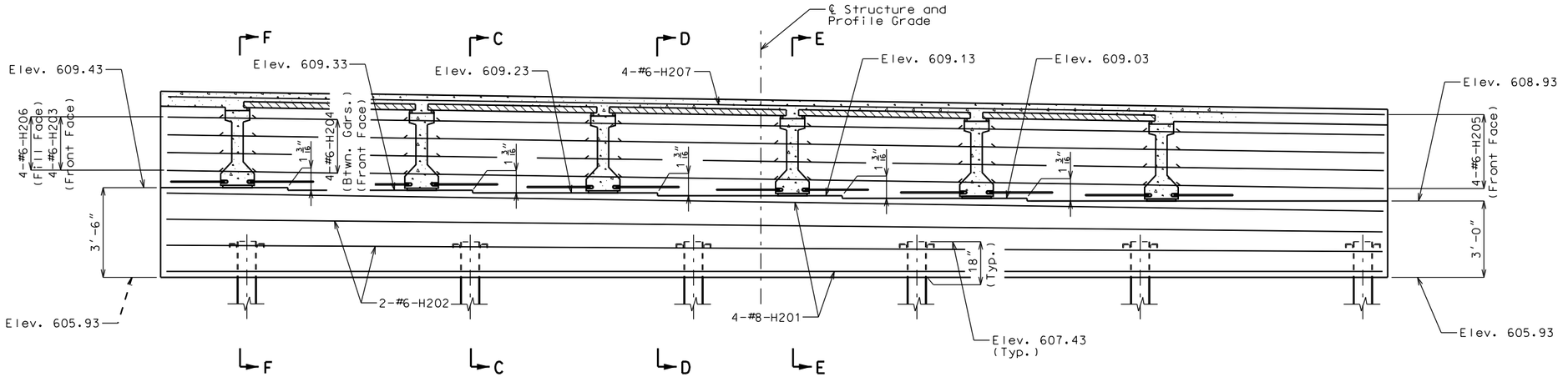


SECTION NEAR END BENT

(Looking Ahead Station)

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

Notes:

For details of End Bent No. 2 not shown, see Sheet Nos. 8 and 10.

For Elevation A-A, B-B, Sections C-C, D-D, E-E and F-F see Sheet No. 10.

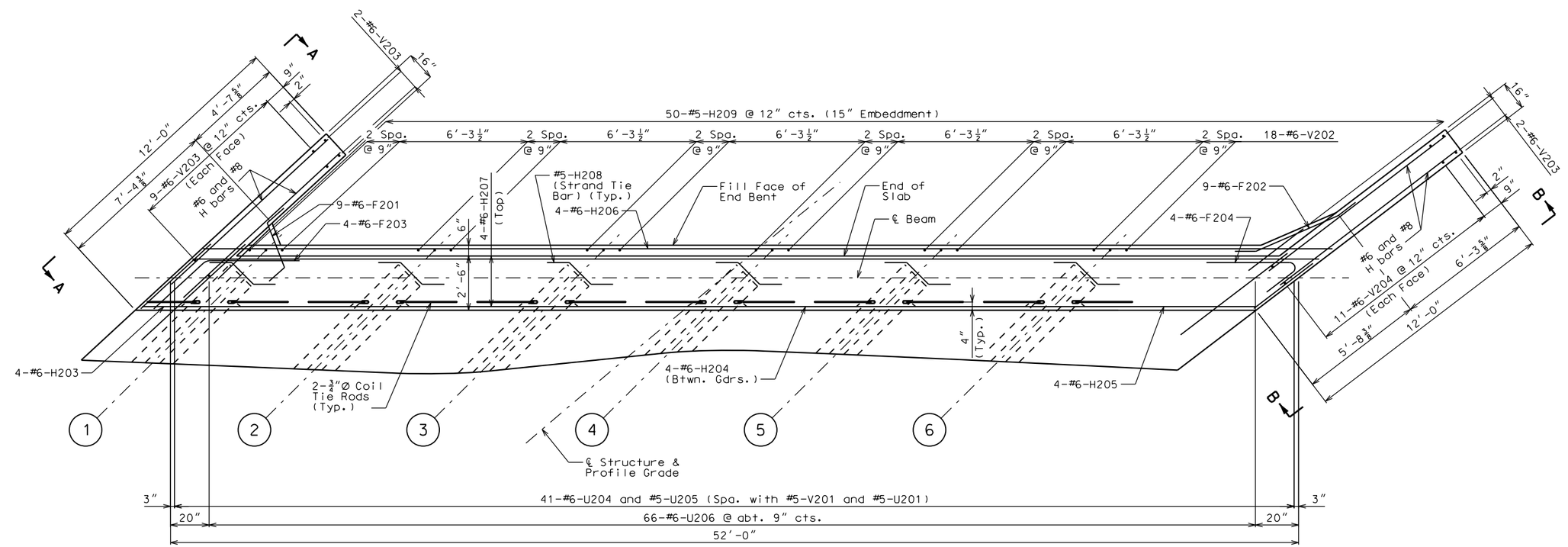
Bend #6 F bars in field to clear girders.

All strands at end of girders shall be field bent or, if necessary, cut in field to maintain 1½" minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H208 (Strand Tie Bars), see Sheet No. 11.

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

Work this sheet with Sheet No. 8 and 10.



PART PLAN

END BENT 2 DETAILS

Detailed Aug. 2013
Checked Aug. 2013

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

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

DATE PREPARED
2/17/2014

STATE MO | SHEET NO. 22

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

BRIDGE NO.
30600071

DESCRIPTION | DATE

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4140 LINDELL BOULEVARD
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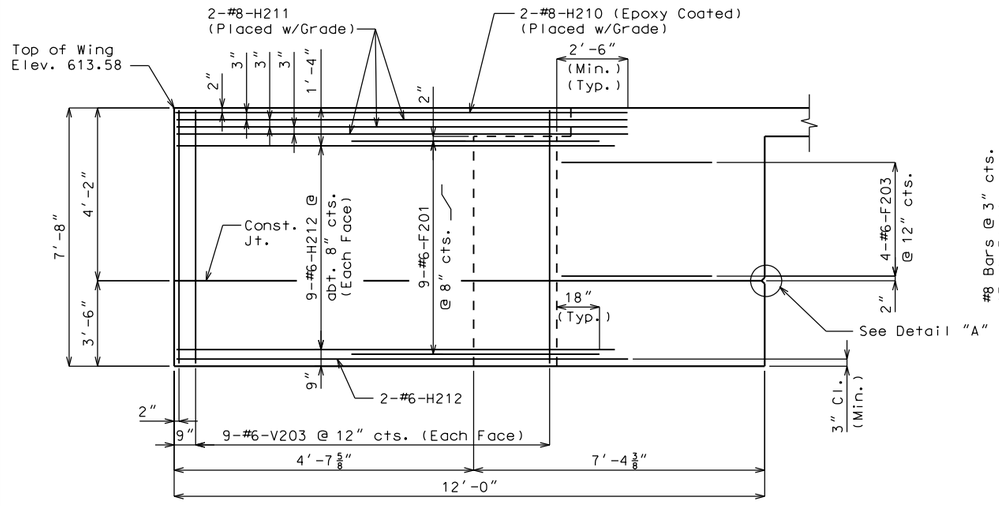
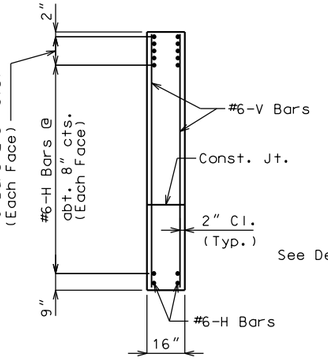
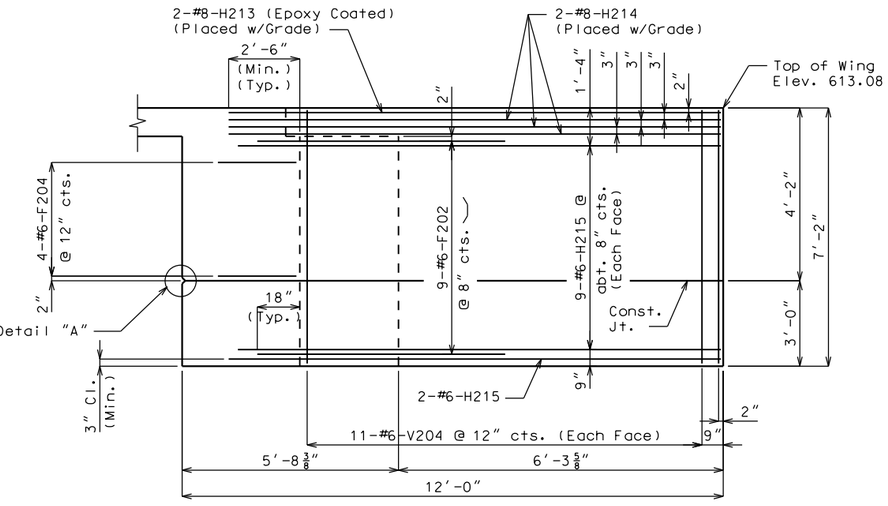


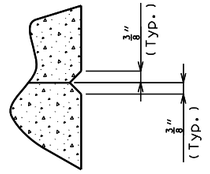
ELEVATION A-A



PART SECTION
THRU WING



ELEVATION B_B



DETAIL "A"

Notes:

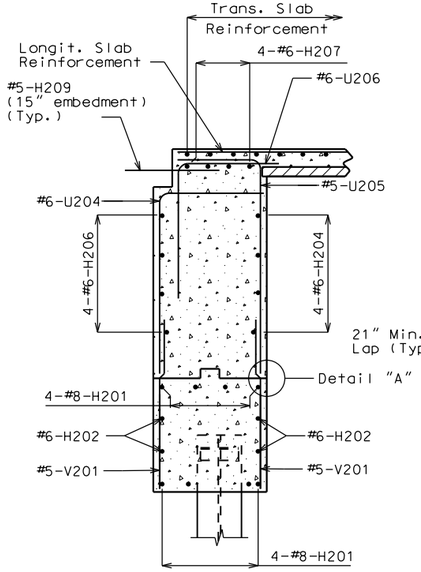
For details of End Bent No. 2 not shown, see Sheet Nos. 8 and 9.

For location of Elevations A-A, B-B and Sections C-C, D-D, E-E and F-F see Sheet No. 9.

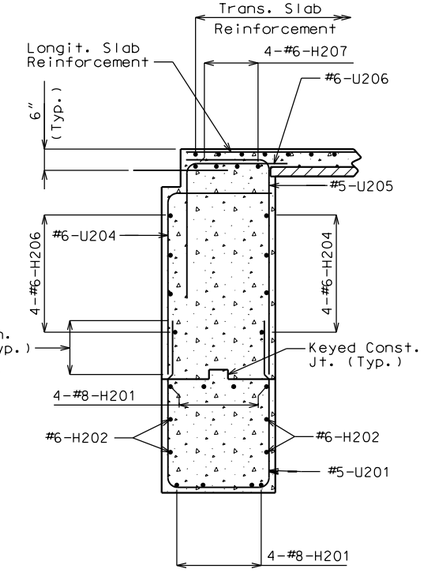
Bend #6 F bars in field to clear girders.

All strands at end of girder shall be field bent or, if necessary, cut in field to maintain 1½" minimum clearance to fill face of end bent.

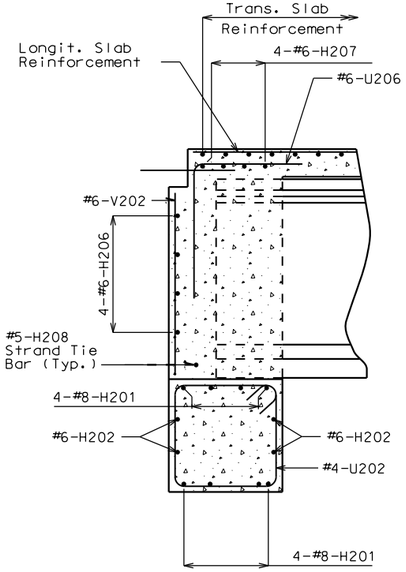
For location and details of Thrie Beam Anchors, see Sheet Nos. 16 and 17.



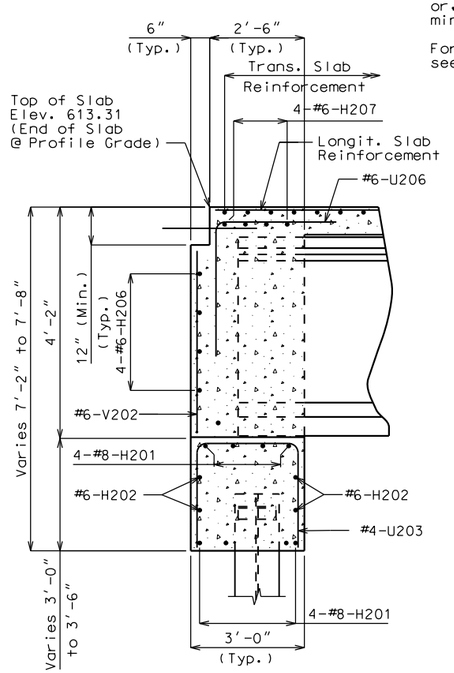
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

PART PLAN

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

Detailed Aug. 2013
Checked Aug. 2013

Sheet No. 10 of 21

END BENT 2 DETAILS

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

DATE PREPARED
2/17/2014

STATE MO | SHEET NO. 23

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

BRIDGE NO.
30600071

DATE	DESCRIPTION

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JEFFERSON COUNTY PUBLIC WORKS
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4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
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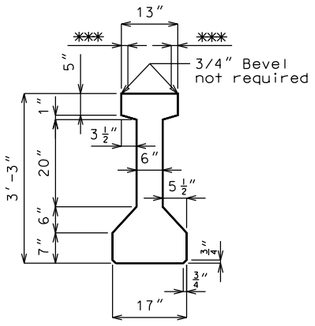
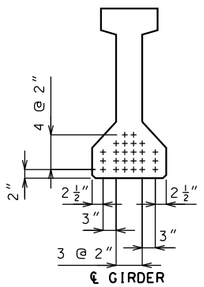
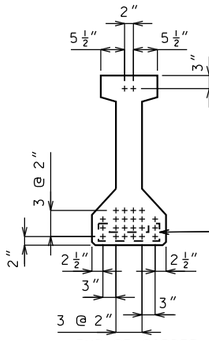
CERTIFICATE/LICENSE NO. 001501



GIRDER DIMENSIONS



℄ GIRDER



END OF GIRDER

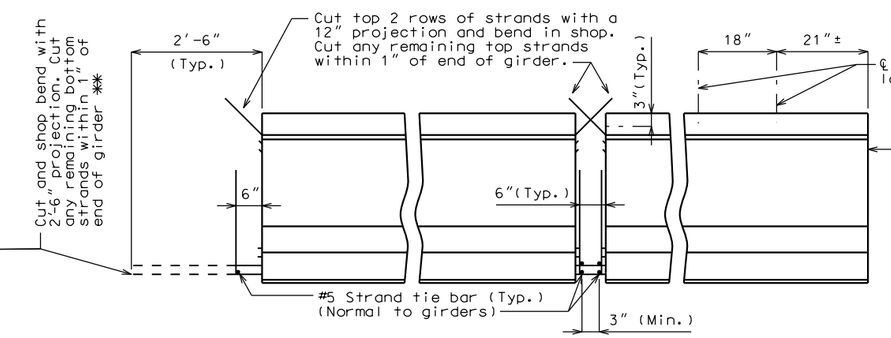
STRAND ARRANGEMENTS

Concrete for prestressed girders shall be Class A-1 with f'c = 7000 psi and f'ci = 6000 psi.

(+) indicates prestressing strand.

Use 24 strands with an initial prestress force of 744 kips.

Prestressing tendons shall be uncoated, seven-wire, low-relaxation strands, 1/2 inch diameter in accordance with AASHTO M 203, Grade 270. Pretensioned members shall be in accordance with Sec 1029.



END BENT INTERMEDIATE BENT

STRAND DETAILS AT GIRDER ENDS

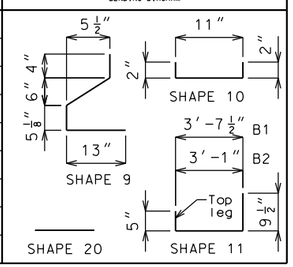
LOCATION OF LIFTING LOOPS

** At the contractor's option the location for bent-up strands may be varied from that shown. The total number of bent-up strands shall not be changed. One strand tie bar is required for each layer of bent-up strands except at end bents which require one bar on the bottom layer of strands only. No additional payment will be made if additional strand tie bars are required.

*** At contractor's option a 1 1/2" to 1 3/4" smooth finish strip is permitted to facilitate placement of preformed fiber expansion joint material or expanded or extruded polystyrene bedding material for the prestressed panels.

BILL OF REINFORCING STEEL - EACH GIRDER

NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE	BENDING DIAGRAM
4	5 A1	40'-6"	20	
164	4 B1	4'-8"	11	
16	6 B2	4'-1"	11	
98	4 C1	13"	10	
196	4 D1	2'-5"	9	



All dimensions are out to out.

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

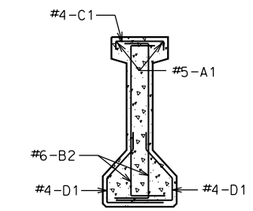
Actual lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be 1".

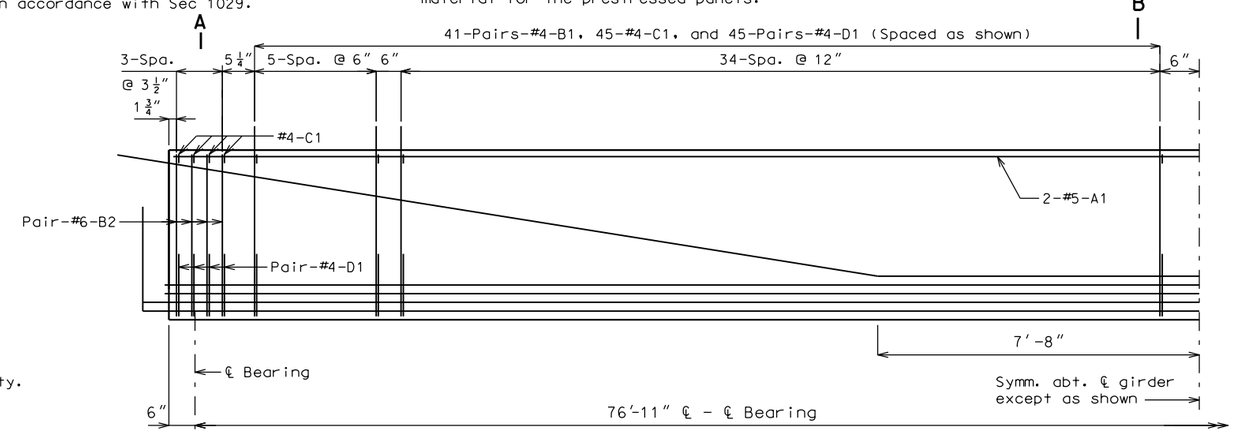
All reinforcement shall be Grade 60.

The two D1 bars may be furnished as one bar at the fabricator's option.

All B1 bars shall be epoxy coated.

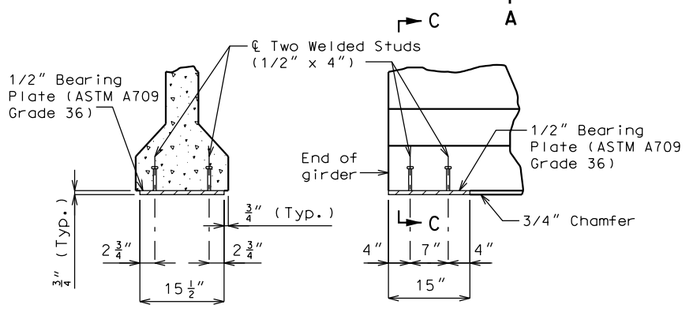


SECTION A-A
Strands not shown for clarity.



HALF ELEVATION OF GIRDER SPAN (1-2)

Exterior and interior girders are the same, except for coil ties, and holes for steel intermediate diaphragms.



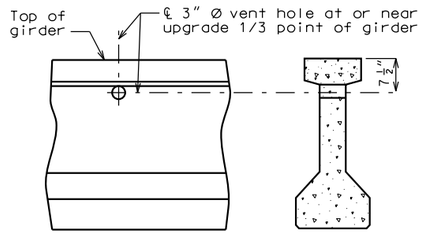
SECTION C-C

PART ELEVATION AT END OF GIRDER

BEARING PLATE DETAILS

Galvanize the 1/2" bearing plate (ASTM A709 Grade 36) in accordance with ASTM A123.

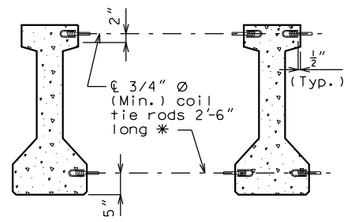
Cost of furnishing, galvanizing, and installing the 1/2" bearing plate (ASTM A709 Grade 36) and welded studs in the prestressed girder will be considered completely covered by the contract unit price for Prestressed Concrete I-Girder.



PART ELEVATION OF GIRDER

PART SECTION NEAR VENT HOLE

Place vent holes at or near upgrade 1/3 point of girders and clear reinforcing steel or strands by 1 1/2" minimum and steel intermediate diaphragm bolt connections by 6" minimum.



EXTERIOR GIRDERS AT INT. BENTS

EXTERIOR GIRDERS AT END BENTS INTERIOR GIRDERS AT ALL BENTS

DETAILS OF COIL TIES

Cost of 3/4" Ø coil tie rods placed in diaphragms will be considered completely covered by the contract unit price for Prestressed Concrete I-Girder.

Coil ties shall be held in place in the forms by slotted wire-setting-studs projecting through forms. Studs are to be left in place or replaced with temporary plugs until girders are erected, then replaced by coil tie rods.

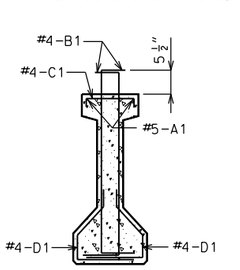
For location of coil ties, see Sheet No. 5.

The 1 1/2" Ø holes shall be cast in the web for steel intermediate diaphragms. Drilling is not allowed.

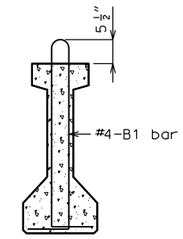
For details of diaphragms, see Sheet No. 12.

For Girder Camber Diagram, see Sheet No. 14.

* Length of coil tie rods at exterior girders at end bents = 2'-0".



SECTION B-B
Strands not shown for clarity.



B1 BAR PERMISSIBLE ALTERNATE SHAPE

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

DATE PREPARED 2/17/2014

STATE MO | SHEET NO. 24

ROUTE

COUNTY JEFFERSON

JOB NO. 2011-180

PROJECT NO. STP-5403 (646)

BRIDGE NO. 30600071

DESCRIPTION | DATE

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

JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT
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HILLSBORO, MO 63050
(636-797-5340) PHONE
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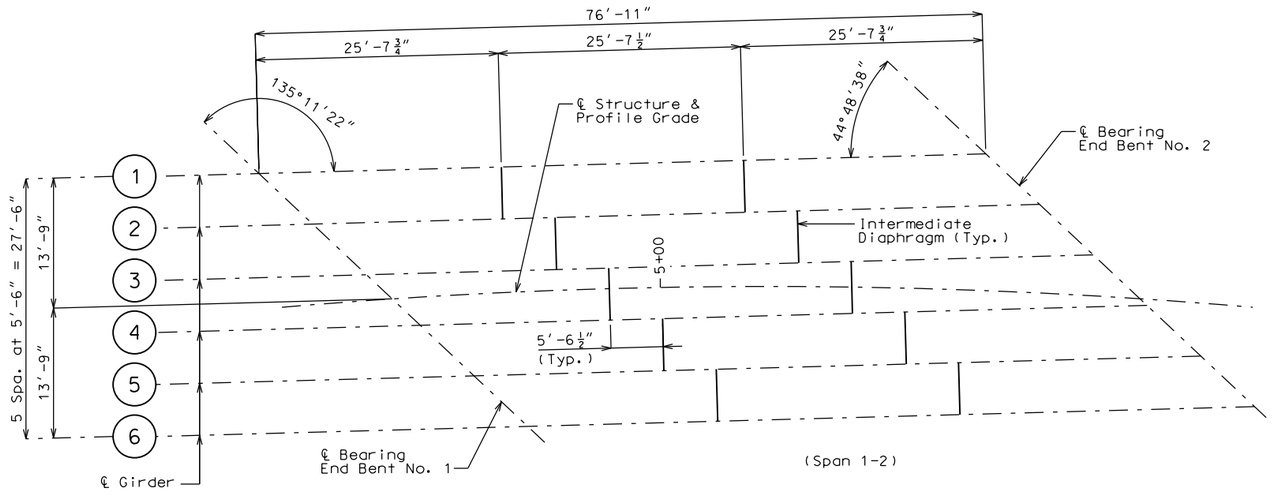
ABNA
4140 LINDELL BOULEVARD
ST. LOUIS, MO 63108
PH. 314-454-0222
CERTIFICATE/LICENSE NO. 001501

Detailed Aug. 2013
Checked Aug. 2013

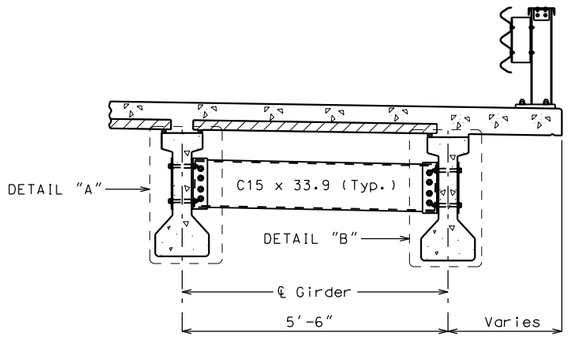
Note: This drawing is not to scale. Follow dimensions.

J:\2011\180\Cadd\Design\Bridge\B_30600071_011_Type 3 Girder.dgn 8:46:26 AM 2/17/2014

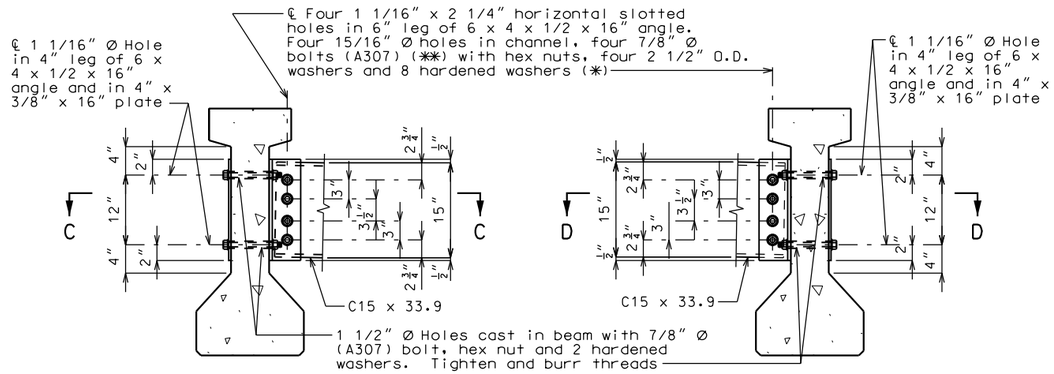


LOCATION OF INTERMEDIATE DIAPHRAGMS

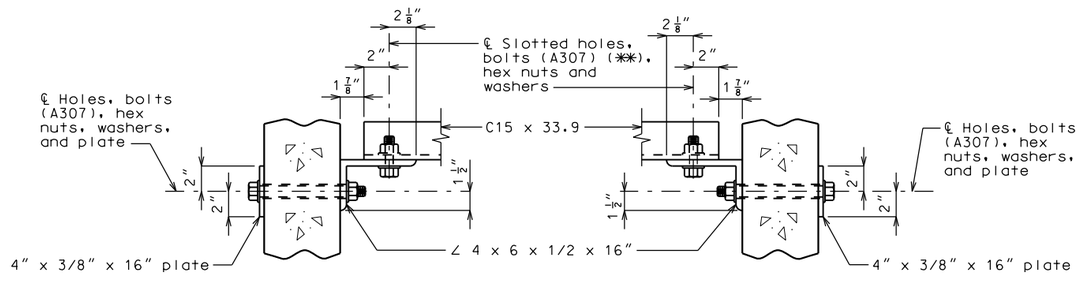
Note: Longitudinal dimensions are measured horizontal.



PART SECTION SHOWING INTERMEDIATE DIAPHRAGMS



DETAIL "A" DETAIL "B"



SECTION C-C SECTION D-D

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″ Ø 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.

STEEL INTERMEDIATE DIAPHRAGM DETAILS

Detailed Aug. 2013
Checked Aug. 2013

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

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STEPHEN ALSBURY
NUMBER E-24698
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED 2/17/2014
STATE MO
SHEET NO. 25
ROUTE
COUNTY JEFFERSON
JOB NO. 2011-180
PROJECT NO. STP-5403 (646)
BRIDGE NO. 30600071

DESCRIPTION
DATE

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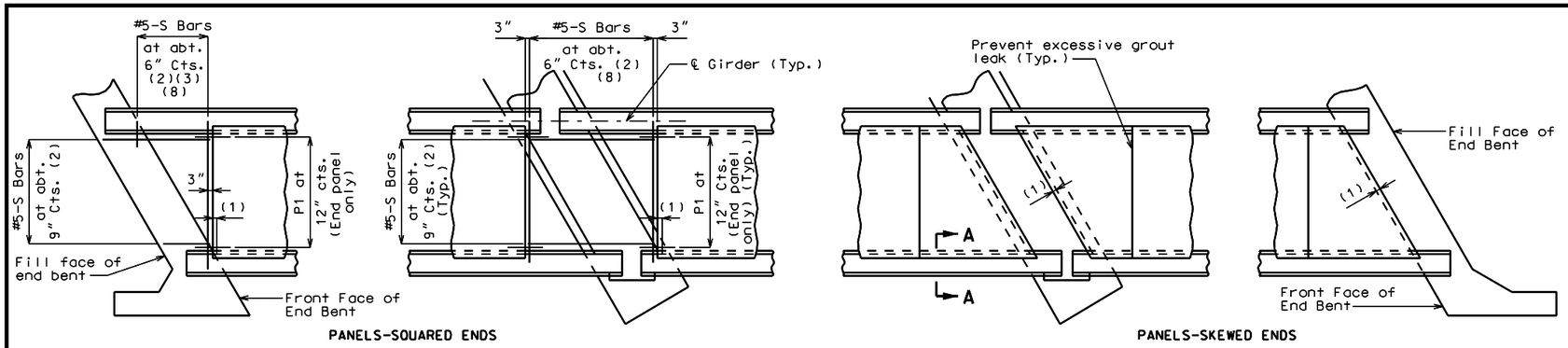
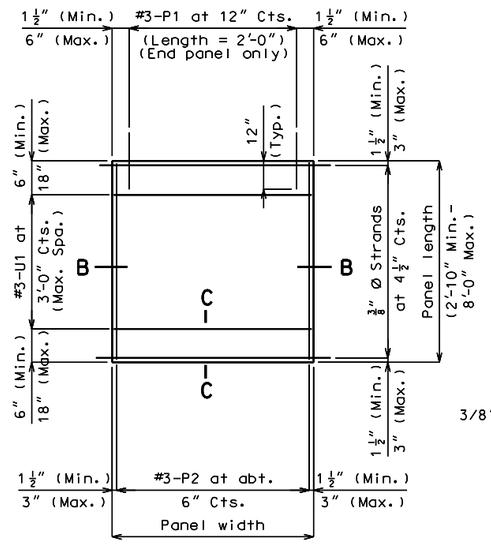
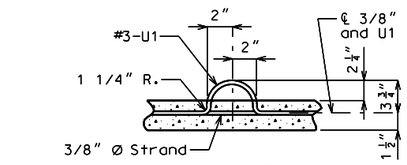


PANELS-SQUARED ENDS **PANELS-SKEWED ENDS**

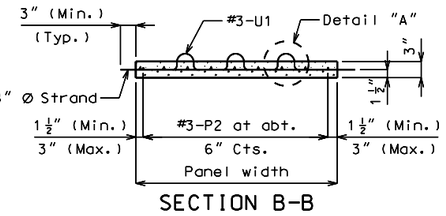
PLAN OF PRECAST PRESTRESSED PANELS PLACEMENT



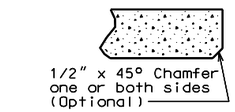
PLAN OF PRECAST PRESTRESSED PANEL



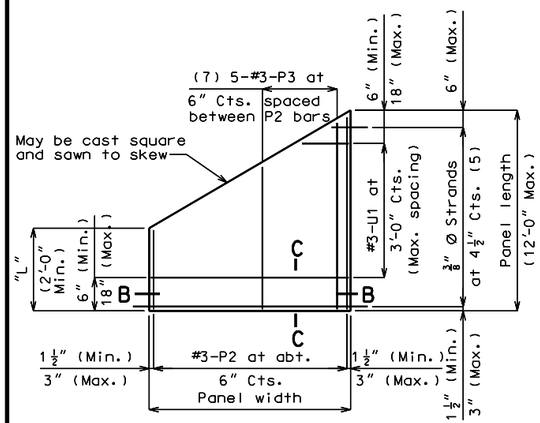
DETAIL "A"



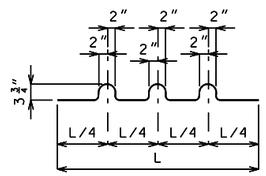
SECTION B-B



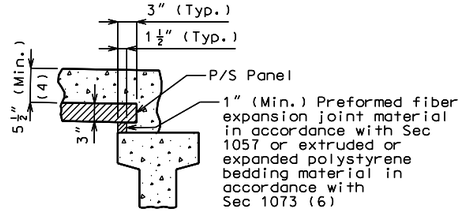
SECTION C-C



PLAN OF PRECAST PRESTRESSED PANEL
(SKEWED END-OPTIONAL)



BENDING DIAGRAM FOR U1 BAR
(U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars).



SECTION A-A

Note: Use slab haunching diagram on Sheet No. 14 for determining thickness of preformed fiber expansion joint material or polystyrene bedding material within the limits noted in general notes.

NOTES:

Welded wire fabric or welded deformed bar mats providing a minimum area of reinforcing perpendicular to strands of 0.22 sq. in./ft., with spacing parallel to strands sufficient to insure proper handling, may be used in lieu of the #3-P2 bars shown. Wire or bar diameter shall not be larger than 0.375 inches. 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 fabric or welded deformed bar mats at 2'-0".

Tie the #3-U1 bars to the #3-P2 bars, to the welded wire fabric or the welded deformed bar mats at about 3'-0" centers.

All reinforcement other than prestressing strands shall be epoxy coated.

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

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

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

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

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

(3) Extend S-Bars 18 inches beyond the front face of end bents only.

(4) 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.

(5) 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.

(6) All panel support pads shall be glued to the girder. When support thickness exceeds 1 1/2 inches, the pads shall be glued top and bottom. The glue used shall be the type recommended by the panel support pads manufacturer.

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

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

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 square 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.

Minimum preformed fiber expansion joint material or polystyrene bedding material thickness shall be 1 inch. Thicker material may be used on one or both sides of the girder to reduce cast-in-place concrete thickness, to within tolerances. No more than 2 inches total thickness shall be used.

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.

Slab thickness over prestressed panels varies due to girder camber.

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.

REINFORCING STEEL:
All dimensions are out to out.

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

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

Actual lengths are measured along centerline of bar to the nearest inch.

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

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

Detailed Aug. 2013
Checked Aug. 2013

DETAILS OF PRECAST PRESTRESSED PANELS

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

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

DATE PREPARED 2/17/2014
STATE MO
SHEET NO. 26
ROUTE
COUNTY JEFFERSON
JOB NO. 2011-180
PROJECT NO. STP-5403 (646)
BRIDGE NO. 30600071

DATE | DESCRIPTION

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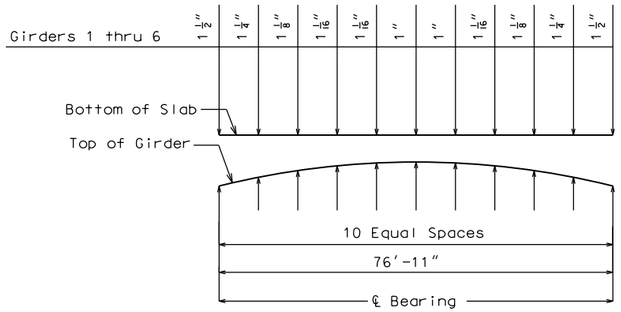
CERTIFICATE/LICENSE NO. 001501

Theoretical Bottom of Slab Elevations at ℄ Girder (Prior to Forming for Slab)(**)

	Span (1-2)										
	℄ Brg	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	℄ Brg
Girder No. 1	612.72	612.77	612.82	612.86	612.88	612.90	612.91	612.91	612.89	612.87	612.85
Girder No. 2	612.62	612.67	612.72	612.75	612.78	612.80	612.81	612.81	612.79	612.77	612.75
Girder No. 3	612.52	612.57	612.62	612.65	612.68	612.70	612.71	612.71	612.69	612.67	612.65
Girder No. 4	612.42	612.47	612.52	612.55	612.58	612.60	612.61	612.60	612.59	612.57	612.55
Girder No. 5	612.32	612.37	612.42	612.45	612.48	612.50	612.51	612.50	612.49	612.47	612.45
Girder No. 6	612.22	612.27	612.31	612.35	612.38	612.40	612.41	612.40	612.39	612.37	612.35

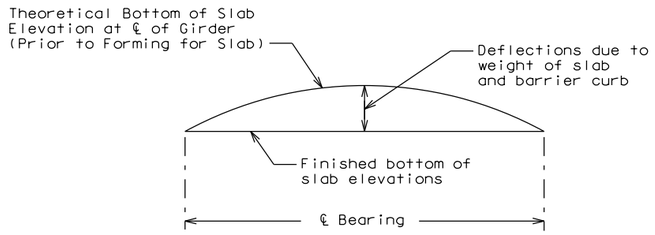
(**) Elevations are based on constant slab thickness of 8½" and include allowance for theoretical dead load deflections due to weight of slab (including prestressed panel) and rail.



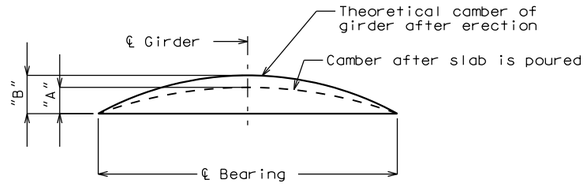
SPAN (1-2)

THEORETICAL SLAB HAUNCHING DIAGRAM

Concrete in the slab haunches is included in the Estimated Quantities for Slab on Concrete I-Girders.



TYPICAL SLAB ELEVATIONS DIAGRAM



GIRDER CAMBER DIAGRAM

Span (1-2)	
"A"	"B"
½"	1 7/8"

If girder camber is different from that shown in the camber diagram, adjustment of the slab haunches, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Concrete in the slab haunches is included in the Estimated Quantities for Slab on Concrete I-Girders.

Conversion factors for girder camber
0.1 pt. = 0.314 x 0.5 pt.
0.2 pt. = 0.593 x 0.5 pt.
0.3 pt. = 0.813 x 0.5 pt.
0.4 pt. = 0.952 x 0.5 pt.

0.25 pt. = 0.7125 x 0.5 pt.

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

DATE PREPARED 2/17/2014
STATE MO | SHEET NO. 27
ROUTE
COUNTY JEFFERSON
JOB NO. 2011-180
PROJECT NO. STP-5403 (646)
BRIDGE NO. 30600071

DESCRIPTION | DATE

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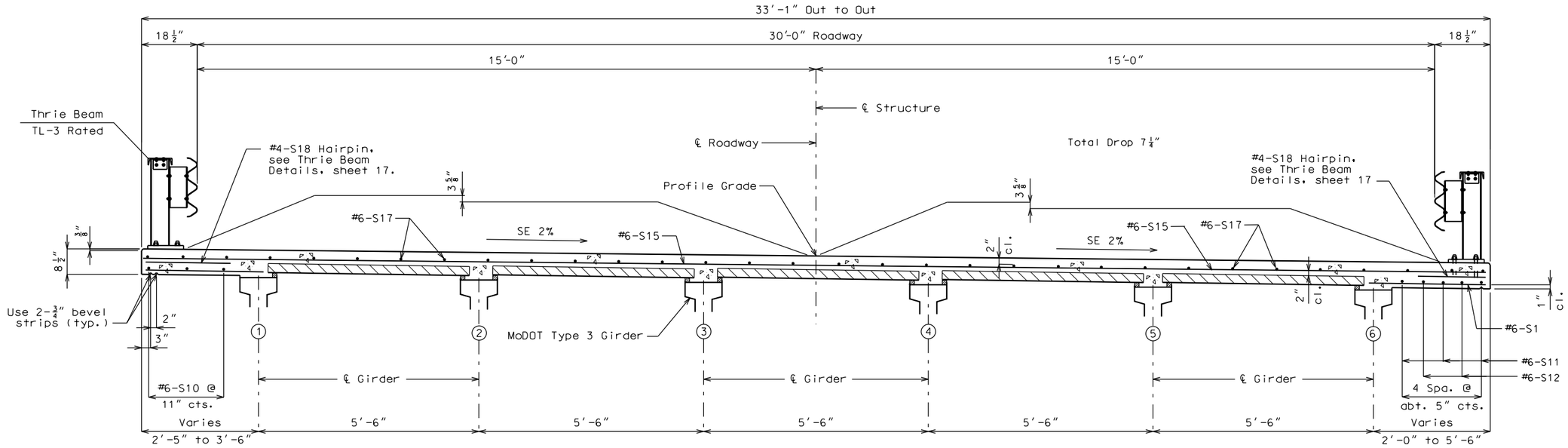
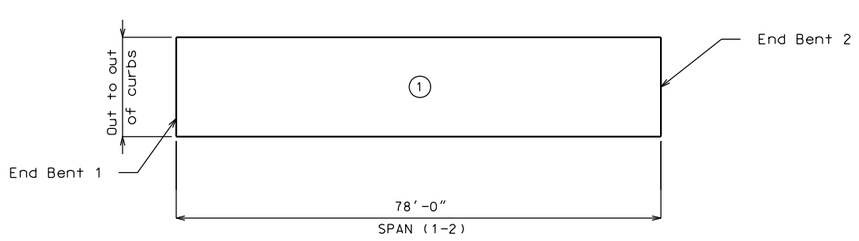


HALF SECTION NEAR ℄ SPAN

30'-0" ROADWAY - 6 GIRDER

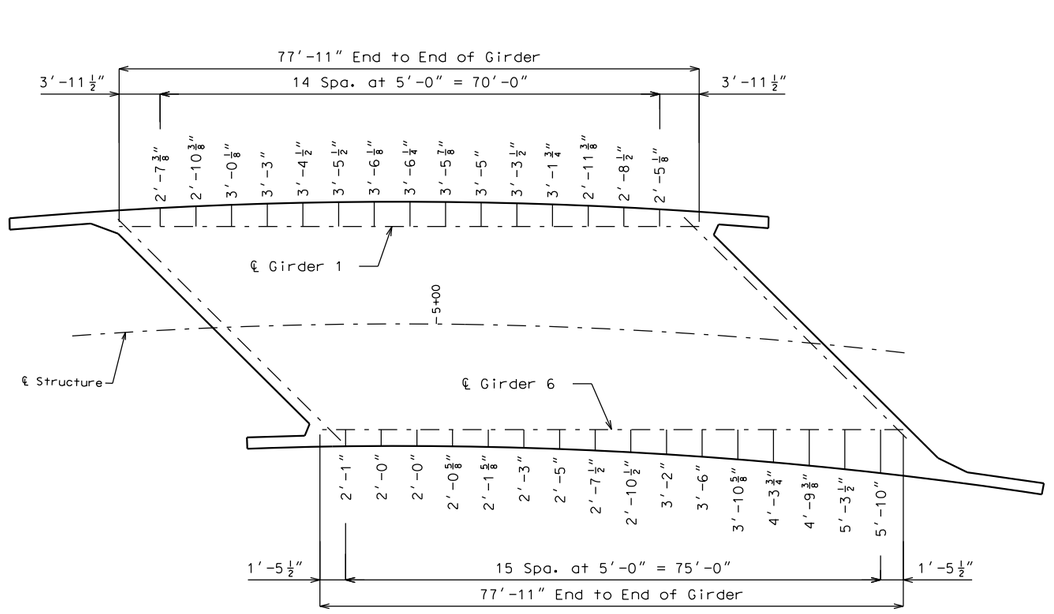


	Sequence of Pours		Min. rate of pour cu. yds./hr.
	Direction		With retarder
Basic sequence	1	2	25

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



SLAB OFFSET DIAGRAM

Note: Contractor shall submit falsework plans and supporting design calculations for variable overhang per MoDOT Standard Specification Section 703.3.1. Price shall be considered incidental to Slab on Concrete I-Girder.

Detailed Aug. 2013
Checked Aug. 2013

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

STATE OF MISSOURI
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NUMBER E-24698
REGISTERED PROFESSIONAL ENGINEER

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STATE MO
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ROUTE
COUNTY JEFFERSON
JOB NO. 2011-180
PROJECT NO. STP-5403 (646)
BRIDGE NO. 30600071

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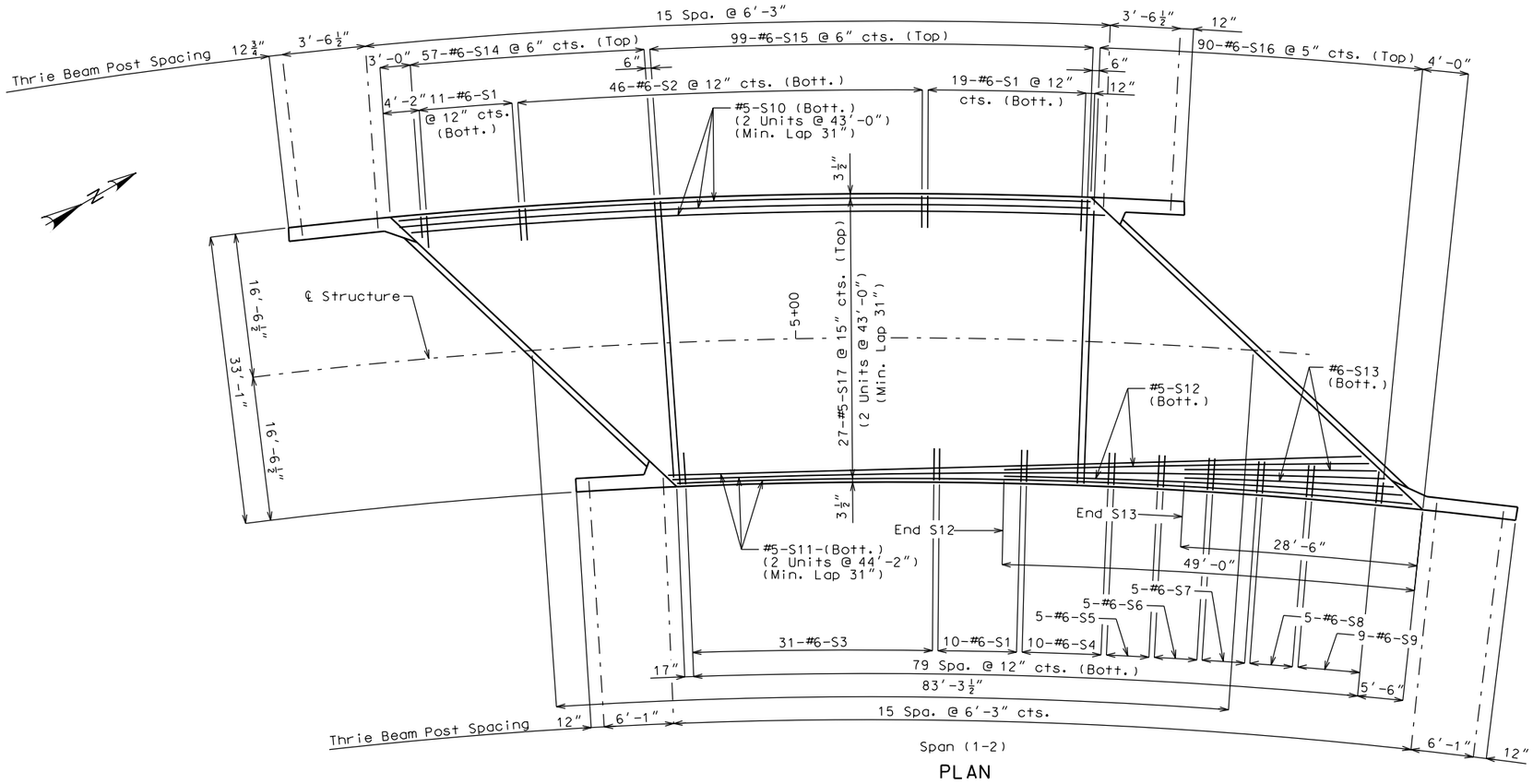

Span (1-2)

PLAN

Detailed Aug. 2013
Checked Aug. 2013

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

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NUMBER E-24698
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
2/17/2014

STATE MO | SHEET NO. 29

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

BRIDGE NO.
30600071

DESCRIPTION | DATE

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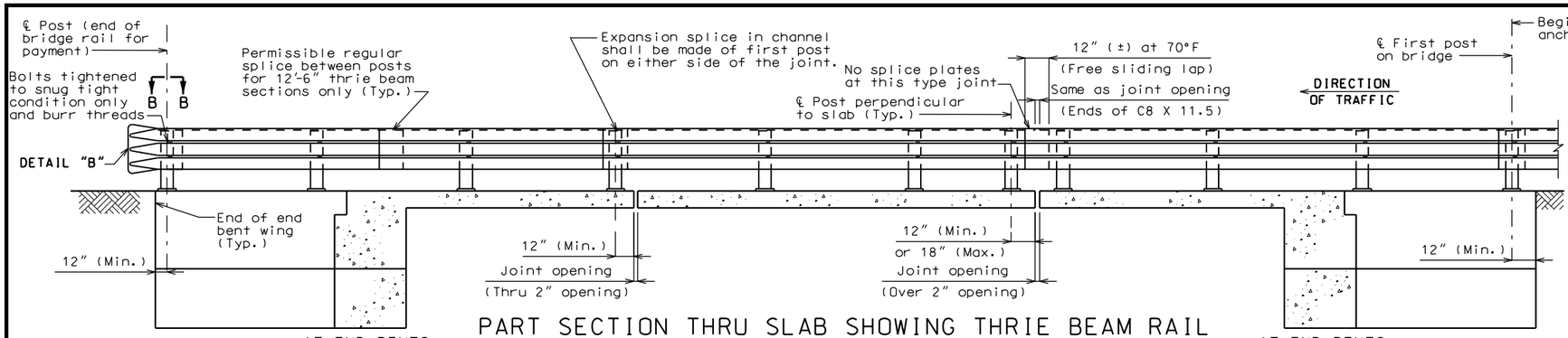
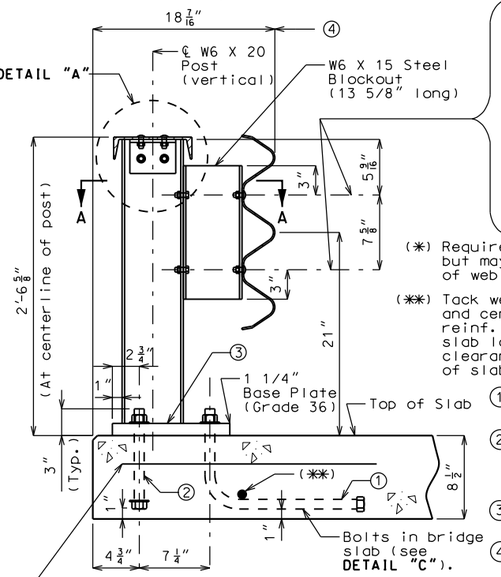


PART SECTION THRU SLAB SHOWING THRIE BEAM RAIL

AT END BENTS

AT END BENTS

Note:
At bridge ends for head to head traffic, guardrail shall be used at all four corners and for single directional traffic, guardrail shall be used at entrance ends only unless required at the exit.



Blockout-to-Post Conn.
℄ 2 Holes 13/16" Ø in W6 x 20 Post flange and W6 x 15 Blockout flange

℄ 2 Hex head bolt 5/8" Ø with two washers and hex nut in W6 x 20 Post flange

Thrie Beam-to-Blockout Conn.
℄ 13/16" x 2 1/2" Vertical slotted hole in W6 x 15 Blockout flange (*)

℄ 5/8" Ø Carriage bolt with one flat washer and hex nut

(*) Required on one side of web only, but may be provided on both sides of web at the contractor's option.

(**) Tack weld same size bar (32" long and centered) as slab longitudinal reinf. Optional to wrap bolt under slab long. reinf. provided that 1" clearance is maintained to bottom of slab.

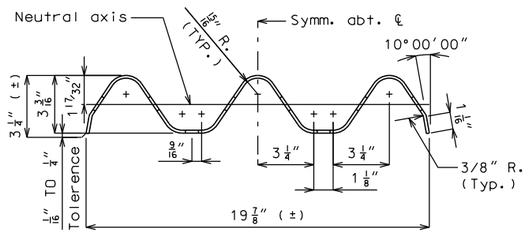
① 3 Bolts 1" Ø A307 with hex nuts and washers

② 2 Bolts 1" Ø A307 with hex nuts and standard flat washers. Use same length bolts in End Bent Wing as in slab.

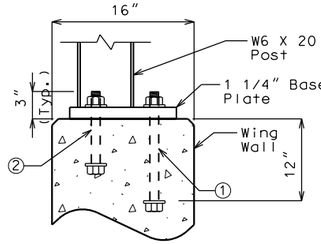
③ Bevel bottom of post (slope 2% or slab elevation).

④ Nominal roadway width and face of thrie beam rail

PART SECTION THRU SLAB AT RAIL POST

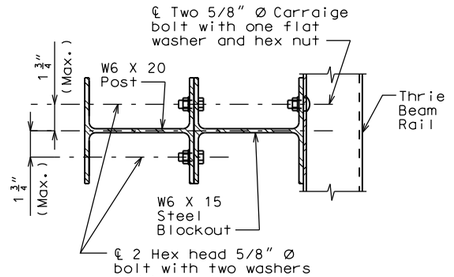


SECTION THRU THRIE BEAM RAIL

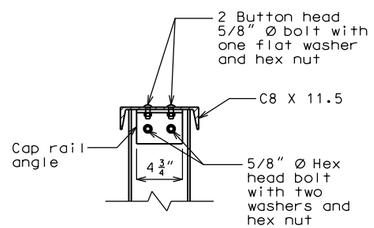


PART SECTION AT END BENT WING

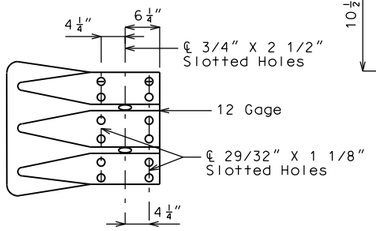
BASE PLATE



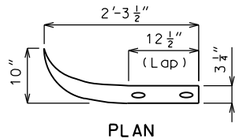
SECTION A-A



DETAIL "A"

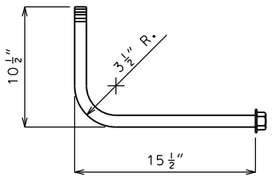


ELEVATION



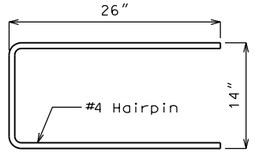
PLAN

DETAIL "B"

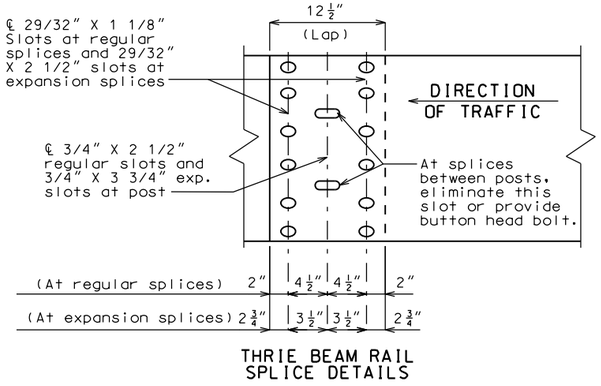


DETAIL "C"

NOTE: Bolt shall not be bent in slab depths greater than 14", use 12" straight embeddment.



DETAIL "D"



THRIE BEAM RAIL SPLICE DETAILS

GENERAL NOTES:

Design Specifications: 2002 - AASHTO 17th Edtion

Panel lengths of channel members shall be attached continuously to a minimum of four posts and a maximum of six posts (except at end bents).

All bolts, nuts, washers, and plates and elastomeric materials will be considered completely covered by the contract unit price for Bridge Guardrail (Thrie Beam) other items.

All steel connecting bolts and fasteners for posts and railing, and all anchor bolts, nuts, washers and plates shall be galvanized after fabrication except for bottom plate. Protective coating and material requirement of steel railing shall be in accordance with Sec 1040.

Rail posts shall be set perpendicular to roadway profile grade, vertically in cross section and aligned in accordance with Sec 713 except that the rail posts shall be aligned by the use of shims such that the post deviates not more than ½inch from true horizontal alignment after final adjustment. The shims shall be 3" x 1 ¾" and placed between the blockout post and the thrie beam rail. The thickness of the shims shall be determined by the contractor and verified by the engineer before ordering material for this work.

Rail posts shall be seated on elastomeric pads having the same dimensions as the post base plate and $\frac{1}{16}$" thickness. Such pads may be any elastomeric material, plain or fibered, having a hardness (Durometer) of 50 or above, as certified by the manufacturer. Additional pads or half pads may be used in shimming for alignment. Post heights shown will increase by the thickness of the pad.

At the expansion slots in the thrie beam rails and channels, the bolts shall be tightened and backed off one-half turn and the threads shall be burred.

At the thrie beam connection to blockout on wings, the bolts shall be tightened and backed off one-half turn and the threads shall be burred.

Minimum length of thrie beam sections is equal to one post space.

$\frac{5}{8}$"Ø button-head, oval shoulder bolts with $\frac{3}{8}$" min. thickness hex nuts shall be used at all slots.

Thrie beam guard rail on the bridge shall be 12 gage steel.

Posts, cap rail angles, top plates, base plates, channels and channel splice plates shall be fabricated from ASTM A709 Grade 36 steel and galvanized.

Washers shall be used at all post bolts between the bolt head and beam. The flat washers shall be rectangular in shape 3" x 1 ¾" x $\frac{3}{16}$" minimum and with a $\frac{11}{16}$" x 1" slot, or when necessary of such design as to fit the contour of the beam. A 3" x 1 ¾" x $\frac{3}{16}$" rectangular washer shall be used between the blockout and the thrie beam rail.

Special drilling of the thrie beam may be required at the splices. All drilling details shall be shown on the shop drawings.

Fabrication of structural steel shall be in accordance with Sec 1080.

Expansion splices in the thrie beam rail shall be made at either the first or second post on either side of the joint and on structure at bridge ends. When the splice is made at the second post, an expansion slot shall be provided in the thrie beam rail for connection to the first post to allow for movement.

In addition to the expansion provisions at the expansion joints, expansion splices in the thrie beam rail and the channel shall be provided at other locations so that the maximum length without expansion provisions does not exceed 200 ft.

Shim plates 6" x 6" x $\frac{1}{16}$" may be used between the top of the post and the channel member as required for vertical alignment.

See slab sheet 21 for rail post spacing.

See Missouri Standard Plans drawing 606.00 for details not shown.

For Part Plan B-B, see Sheet No. 18.

If type "A" guardrail is not attached to ends of the temporary structure, flared ends shall be required. The existing thrie beam rails shall be modified to accept flared ends. Cost for furnishing and installing flared ends will be considered completely covered by thecontract unit price for other items.

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

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	30

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

BRIDGE NO.
30600071

DATE	DESCRIPTION

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

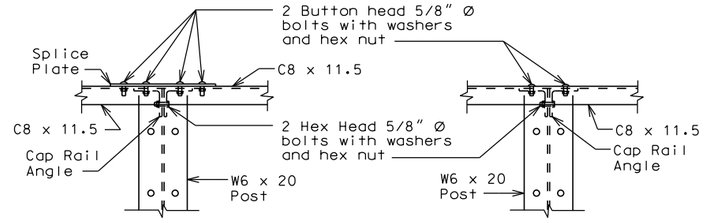
JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT
P.O. BOX 100
HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX

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

Detailed Aug. 2013
Checked Aug. 2013

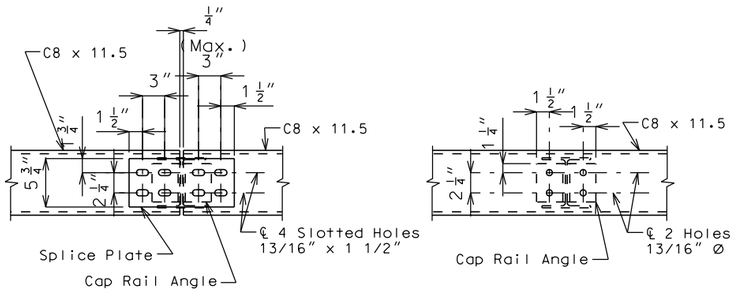
Note: This drawing is not to scale. Follow dimensions.

J:\2011\180\Cadd\Design\Bridge\B_30600071_017_Thrie 1.dgn 8:49:42 AM 2/17/2014



TYPICAL SPLICE ELEVATION

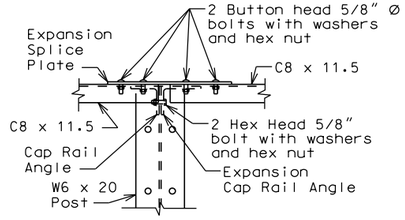
CONNECTION TO RAIL POST ELEVATION



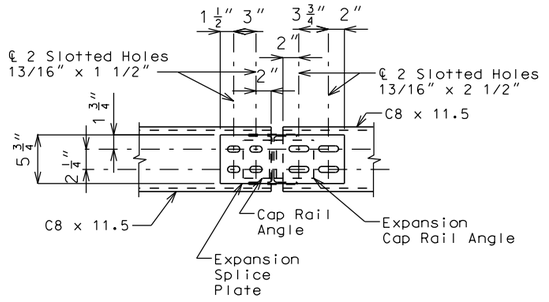
TYPICAL SPLICE PLAN

Shop or field splice at any location (Max. one per panel)

CONNECTION TO RAIL POST PLAN

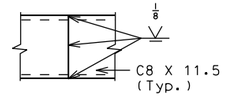


EXPANSION SPLICE ELEVATION



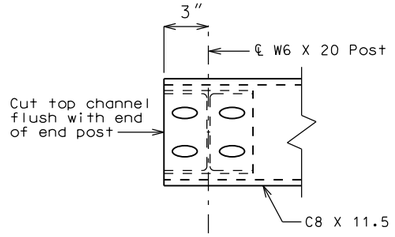
EXPANSION SPLICE PLAN

Expansion slots same side of post as exp. joint

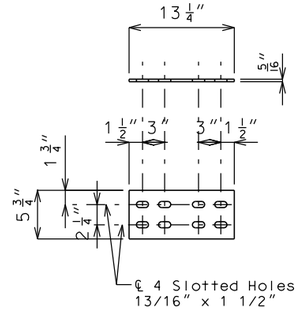


OPTIONAL SPLICE

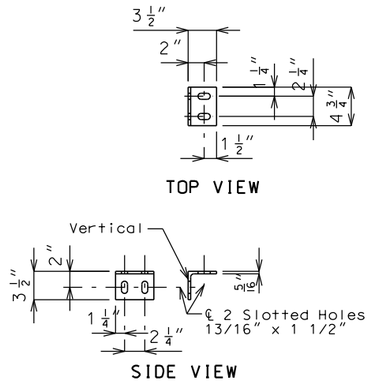
Shop or field splice at any location (Max. one per panel)



PART PLAN B-B

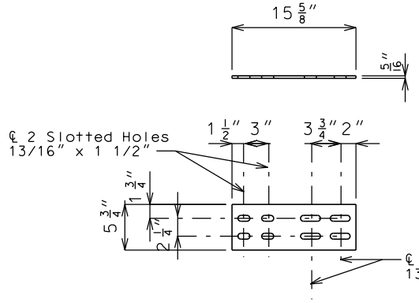


SPLICE PLATE

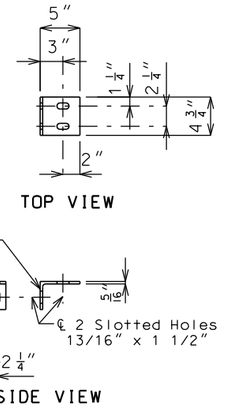


CAP RAIL ANGLE

∠3-1/2 x 3 1/2 x 5/16



EXPANSION SPLICE PLATE



EXPANSION CAP RAIL ANGLE

∠5 x 3 1/2 x 5/16

Detailed Aug. 2013
Checked Aug. 2013

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

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

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DATE PREPARED 2/17/2014
STATE MO
SHEET NO. 31
ROUTE
COUNTY JEFFERSON
JOB NO. 2011-180
PROJECT NO. STP-5403 (646)
BRIDGE NO. 30600071

DESCRIPTION
DATE

JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT
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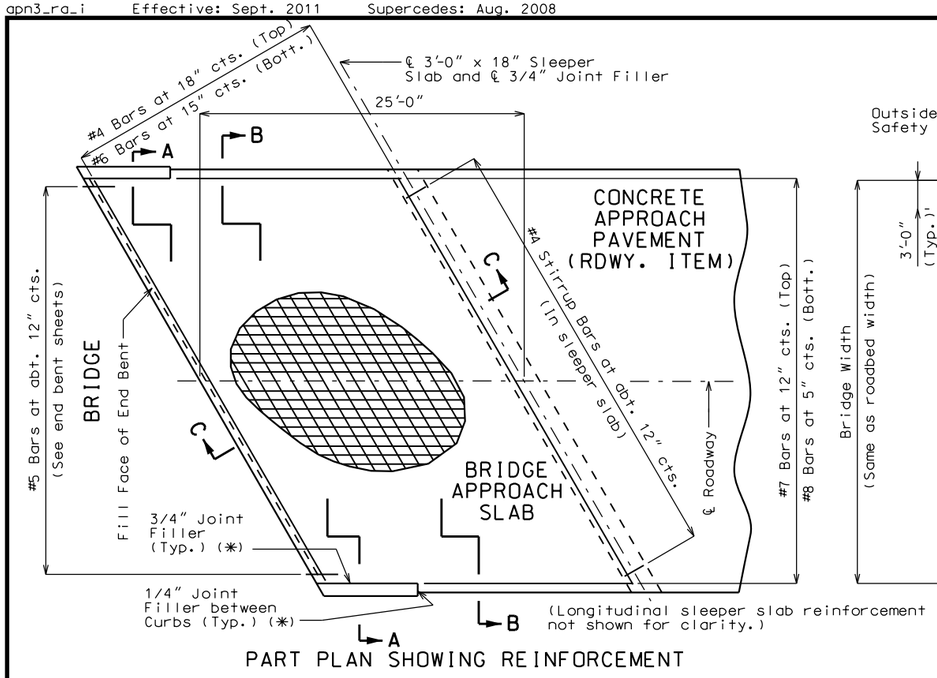
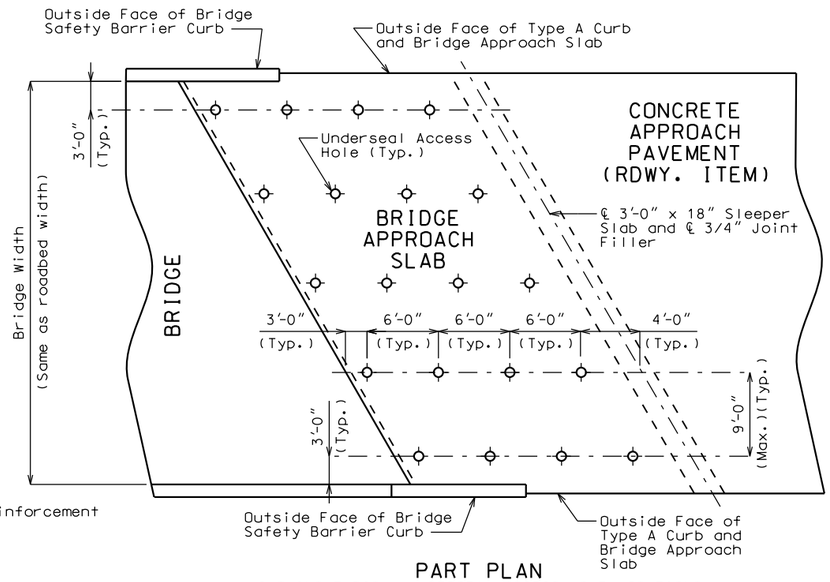
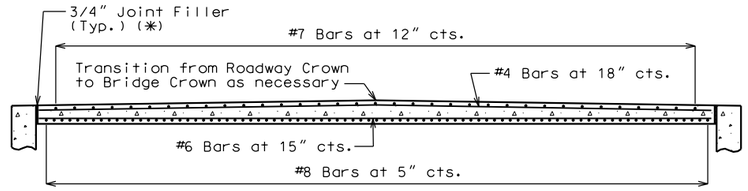


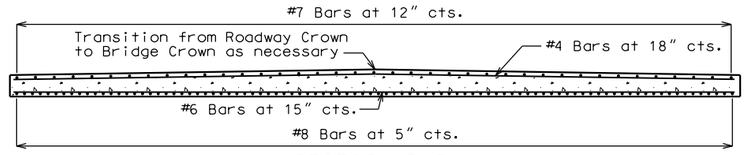
PART PLAN SHOWING REINFORCEMENT



PART PLAN
(SHOWING TYPICAL UNDERSEAL ACCESS HOLE LOCATIONS)

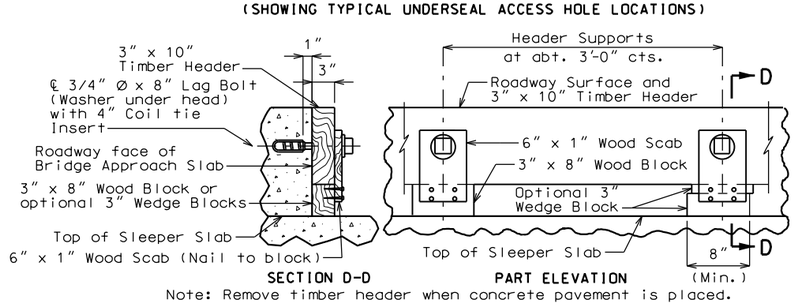


SECTION A-A



SECTION B-B

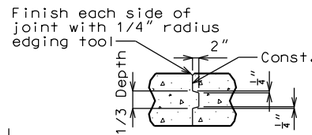
Note: With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.



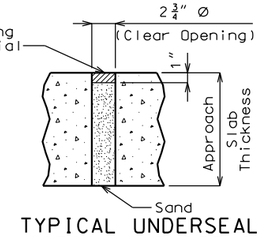
SECTION D-D PART ELEVATION

Note: Remove timber header when concrete pavement is placed.

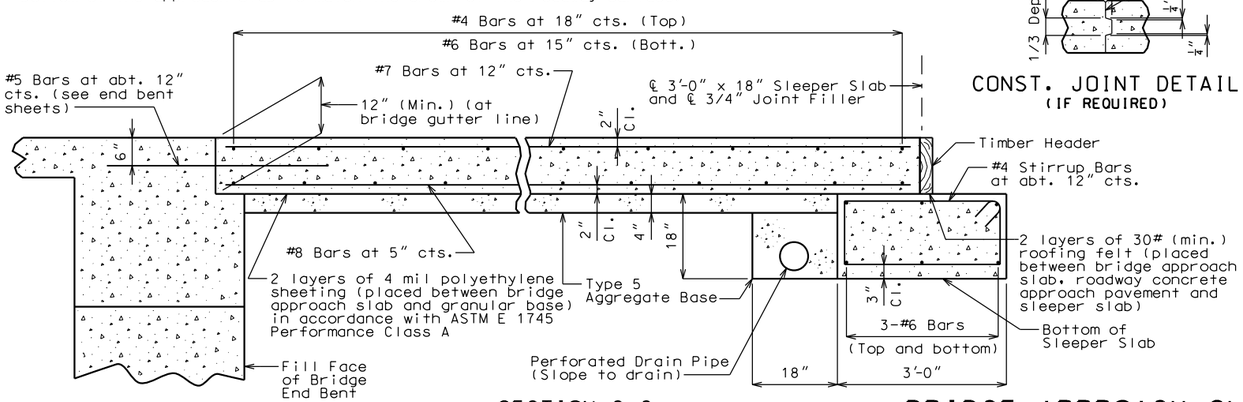
DETAILS OF TIMBER HEADER



CONST. JOINT DETAIL
(IF REQUIRED)



TYPICAL UNDERSEAL ACCESS HOLE DETAIL



SECTION C-C

BRIDGE APPROACH SLAB

GENERAL NOTES:

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

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

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

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

The reinforcing steel in the bridge approach slab and the sleeper slab shall be continuous. The transverse reinforcing steel may be made continuous by lap splicing the #4 & #6 bars 18" and 2'-2", respectively.

Mechanical bar splices shall be in accordance with Sec 706.

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

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

The contractor shall pour and satisfactorily finish the bridge or semi-deep slab before pouring the bridge approach slabs.

Longitudinal construction joints in approach slab and sleeper slab shall be aligned with longitudinal construction joints in bridge or semi-deep slab.

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

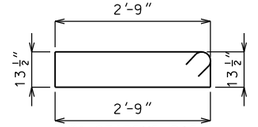
For Concrete Approach Pavement details, see roadway plans.

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

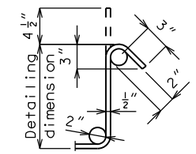
At the contractor's option, Grade 40 reinforcement may be substituted for the Grade 60 #5 dowel bars connecting the bridge approach slab to the bridge abutment. No additional payment will be made for this substitution.

When Grade 40 reinforcement is substituted for the Grade 60 #5 dowel bars connecting the bridge approach slab to the bridge abutment, the reinforcement may be bent up to 90 degrees with a 2" minimum radius near the abutment to allow compaction of the backfill material near the abutment. Damage to epoxy coating shall be repaired in accordance with Sec 710.

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.



#4 STIRRUP BAR
(ACTUAL LENGTH = 8'-3")



TYPICAL 135° STIRRUP HOOK DIMENSIONS BENDING DIAGRAM

Note:
Nominal lengths are based on out to out dimensions shown in bending diagram and are listed for fabricators use (nearest inch).

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

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	32

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

BRIDGE NO.
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CERTIFICATE/LICENSE NO. 001501

Detailed Aug. 2013
Checked Aug. 2013

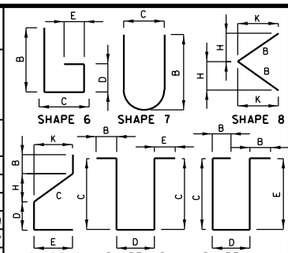
Note: This drawing is not to scale. Follow dimensions.

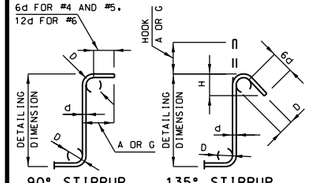
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	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.
			SUPERRSTR.																									
			END BENT 1																									
9	6	F101	BEAM		23					14.	000	3	0.000	14.000		13.000		5.125		13.000		5.125		5	4	5	2	70
9	6	F102	BEAM		15					14.	000	5	0.000	14.000		4.125		13.000		7.125		12.000		7	4	7	4	99
4	6	F103	BEAM		15					3	6.000	5	3.000							2	5.625	2	5.750	8	9	8	9	53
4	6	F104	BEAM		32					3	6.000	5	3.000							2	5.625	2	5.750	8	9	8	7	52
8	8	H101	BEAM		20					44	10.000													44	10	44	10	958
4	6	H102	BEAM		20					44	10.000													44	10	44	10	269
8	6	H103	DIAPHRAGM		20					2	0.000													2	0	2	0	24
20	6	H104	DIAPHRAGM		20					5	9.000													5	9	5	9	173
4	6	H105	DIAPHRAGM		20					44	10.000													44	10	44	10	269
6	5	H106	DIAPHRAGM		23					9	.000	18	.000	9.000		6.375		6.375		6.375		6.375		3	0	2	11	18
4	6	H107	DIAPHRAGM	E	20					44	10.000													44	10	44	10	269
41	5	H108	APPR. SLAB	E	20					2	6.000													2	6	2	6	107
2	8	H109	WING	E	20					9	1.000													9	1	9	1	49
6	8	H110	WING		20					9	1.000													9	1	9	1	146
20	6	H111	WING		20					8	6.000													8	6	8	6	255
2	8	H112	WING	E	20					11	8.000													11	8	11	8	62
6	8	H113	WING		20					11	8.000													11	8	11	8	187
20	6	H114	WING		20					11	1.000													11	1	11	1	333
26	5	U101	BEAM		10							5	2.000	3	8.000									14	0	13	9	373
23	4	U102	BEAM		13					3	8.000	2	9.000	3	8.000	2	9.000							13	7	13	3	204
4	4	U103	BEAM		10							2	9.000	3	8.000									9	2	8	11	24
31	6	U104	DIAPHRAGM		19					2	10.000	3	8.000											6	6	6	4	295
31	5	U105	DIAPHRAGM	E	19					3	10.000	3	2.000											7	0	6	10	221
57	6	U106	DIAPHRAGM	E	19					3	0.000	3	8.000											6	8	6	6	556
10	5	V101	BEAM		20					5	3.000													5	3	5	3	55
18	6	V102	DIAPHRAGM		20					2	10.000													2	10	2	10	77
16	6	V103	WING		20					6	10.000													6	10	6	10	164
18	6	V104	WING		20					7	3.000													7	3	7	3	196
			END BENT 2																									
9	6	F201	BEAM		23					14.	000	3	0.000	14.000		13.000		5.125		13.000		5.125		5	4	5	2	70
9	6	F202	BEAM		15					14.	000	5	0.000	14.000		4.125		13.000		7.125		12.000		7	4	7	4	99
4	6	F203	BEAM		15					3	6.000	5	3.000							2	5.625	2	5.750	8	9	8	9	53
4	6	F204	BEAM		32					3	6.000	5	3.000							2	5.625	2	5.750	8	9	8	7	52
8	8	H201	BEAM		20					51	8.000													51	8	51	8	1104
4	6	H202	BEAM		20					51	8.000													51	8	51	8	310
8	6	H203	DIAPHRAGM		20					2	0.000													2	0	2	0	24
20	6	H204	DIAPHRAGM		20					5	9.000													5	9	5	9	173
4	6	H205	DIAPHRAGM		20					9	0.000													9	0	9	0	54
4	6	H206	DIAPHRAGM		20					51	8.000													51	8	51	8	310
4	6	H207	DIAPHRAGM	E	20					51	8.000													51	8	51	8	310
6	5	H208	DIAPHRAGM		23					9	.000	18	.000	9.000		6.375		6.375		6.375		6.375		3	0	2	11	18
50	5	H209	APPR. SLAB	E	20					2	6.000													2	6	2	6	130
2	8	H210	WING	E	20					8	7.000													8	7	8	7	46
6	8	H211	WING		20					8	7.000													8	7	8	7	138
20	6	H212	WING		20					8	1.000													8	1	8	1	243
2	8	H213	WING	E	20					11	3.000													11	3	11	3	60
6	8	H214	WING		20					11	3.000													11	3	11	3	180
20	6	H215	WING		20					10	9.000													10	9	10	9	323

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 2 CONTINUED																									
32	5	U201	BEAM		10							5	2.000	3	8.000									14	0	13	9	459
24	4	U202	BEAM		13					3	8.000	2	9.000	3	8.000	2	9.000							13	7	13	3	212
4	4	U203	BEAM		10							2	9.000	3	8.000									9	2	8	11	24
41	6	U204	DIAPHRAGM		19					2	10.000	3	8.000											6	6	6	4	390
41	5	U205	DIAPHRAGM	E	19					3	10.000	3	2.000											7	0	6	10	292
66	6	U206	DIAPHRAGM	E	19					3	0.000	3	8.000											6	8	6	6	644
18	5	V201	BEAM		20					5	3.000													5	3	5	3	99
18	6	V202	DIAPHRAGM		20					2	10.000													2	10	2	10	77
18	6	V203	WING		20					7	4.000													7	4	7	4	198
22	6	V204	WING		20					6	8.000													6	8	6	8	220
			SLAB																									
40	6	S1	SLAB	E	20					2	5.000													2	5	2	5	145
46	6	S2	SLAB	E	20					3	0.000													3	0	3	0	207
31	6	S3	SLAB	E	20					2	0.000													2	0	2	0	93
10	6	S4	SLAB	E	20					2	10.000													2	10	2	10	43
5	6	S5	SLAB	E	20					3	6.000													3	6	3	6	26
5	6	S6	SLAB	E	20					3	10.000													3	10	3	10	29
5	6	S7	SLAB	E	20					4	3.000													4	3	4	3	32
5	6	S8	SLAB	E	20					4	9.000													4	9	4	9	36
9	6	S9	SLAB	E	20					5	3.000													5	3	5	3	71
6	5	S10	SLAB	E	20					43	0.000													43	0	43	0	269
6	5	S11	SLAB	E	20					44	2.000													44	2	44	2	276
2	5	S12	SLAB	E	20					49	0.000													49	0	49	0	102
2	6	S13	SLAB	E	20					28	6.000													28	6	28	6	86
57	6	S14	SLAB	E	20			V	1	3	0.000													3	0	3	0	
			INCR=6.25IN							32	3.000													32	3	32	3	1509
99	6	S15	SLAB	E	20					32	9.000													32	9	32	9	4870
90	6	S16	SLAB	E	20			V	1	3	0.000													3	0	3	0	
			INCR=4IN							32	3.000													32	3	32	3	2383
54	5	S17	SLAB	E	20					43	0.000													43	0	43	0	2422
36	4	S18	SLAB	E	10							2	2.000	14.000										5	6	5	3	126



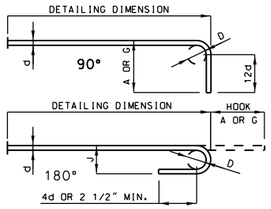


STIRRUP HOOK DIMENSIONS

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"

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
STEPHEN ALSBURY
NUMBER E-24698
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
2/17/2014
STATE MO
SHEET NO. 33
ROUTE
COUNTY JEFFERSON
JOB NO. 2011-180
PROJECT NO. STP-5403 (646)
BRIDGE NO. 30600071

DESCRIPTION
DATE

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

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

Detailed Aug. 2013
Checked Aug. 2013

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

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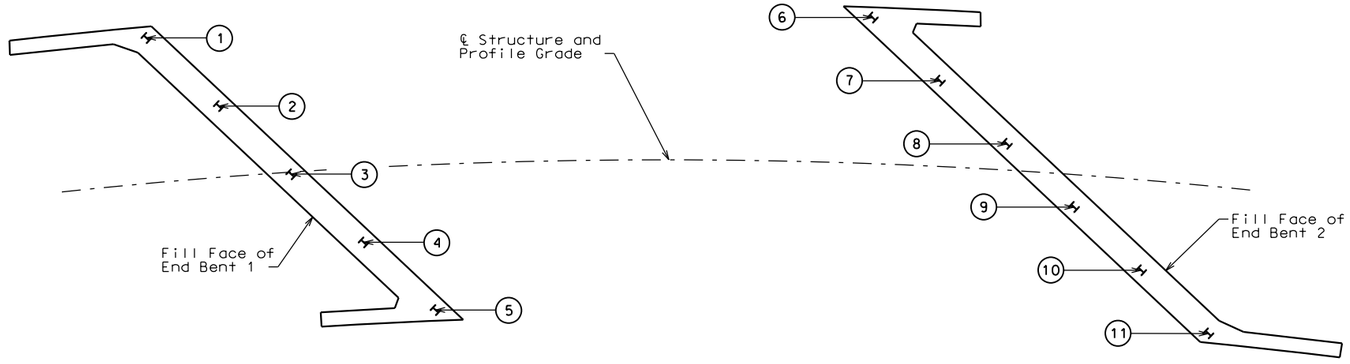

PART PLAN SHOWING
PILE NUMBERING FOR RECORDING
"AS BUILT PILE" DATA

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
COUNTY CONSTRUCTION PERSONNEL.

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (KIPS)	REMARKS
			END BENT NO. 1
1			
2			
3			
4			
5			

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (KIPS)	REMARKS
			END BENT NO. 2
6			
7			
8			
9			
10			
11			

"AS BUILT PILE" DATA			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (KIPS)	REMARKS

Detailed Aug. 2013
Checked Aug. 2013

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

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

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	34

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

BRIDGE NO.
30600071

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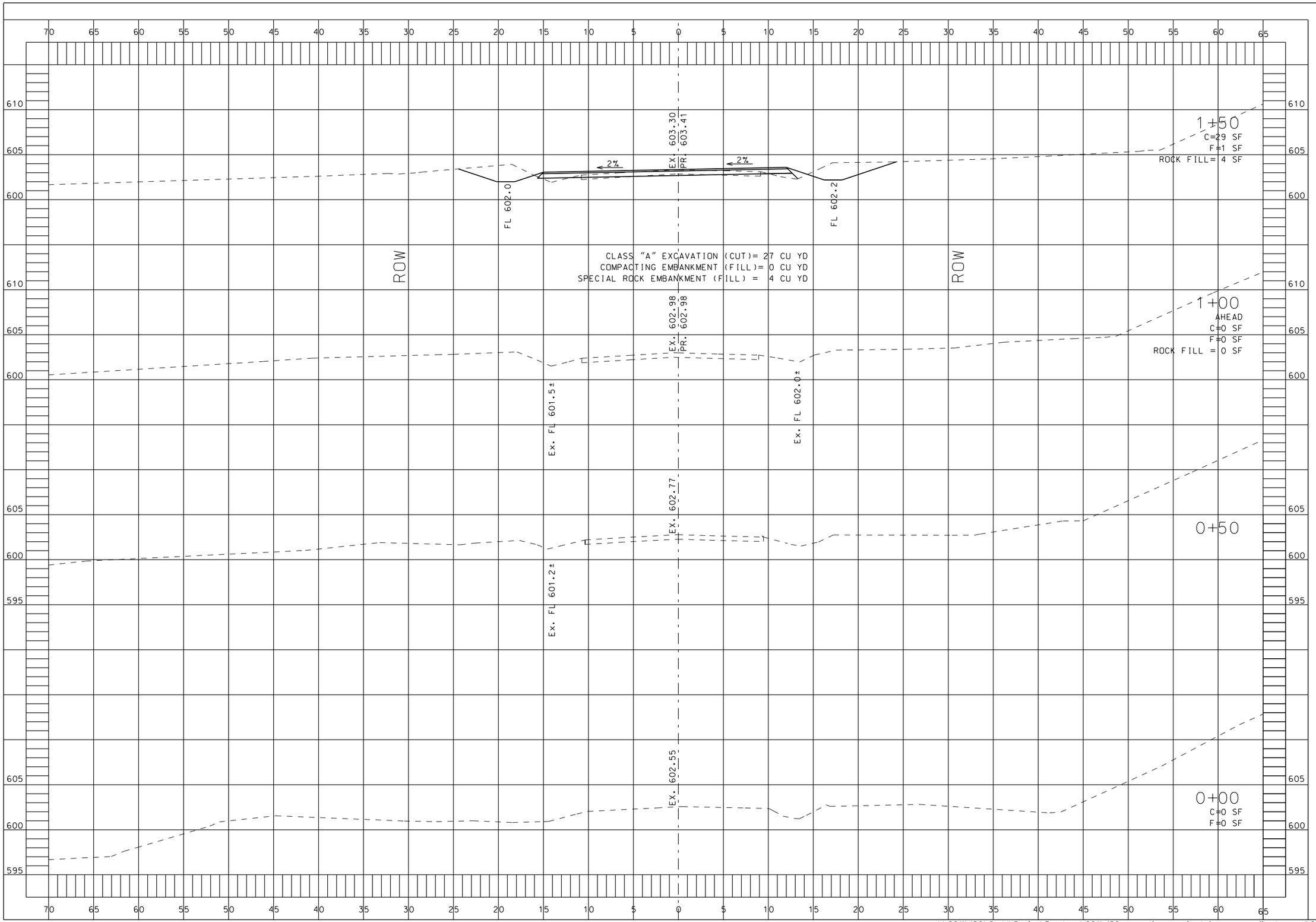

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STATE OF MISSOURI
STEPHEN ALSBURY
NUMBER E-24698
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	35

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

BRIDGE NO.
30600071

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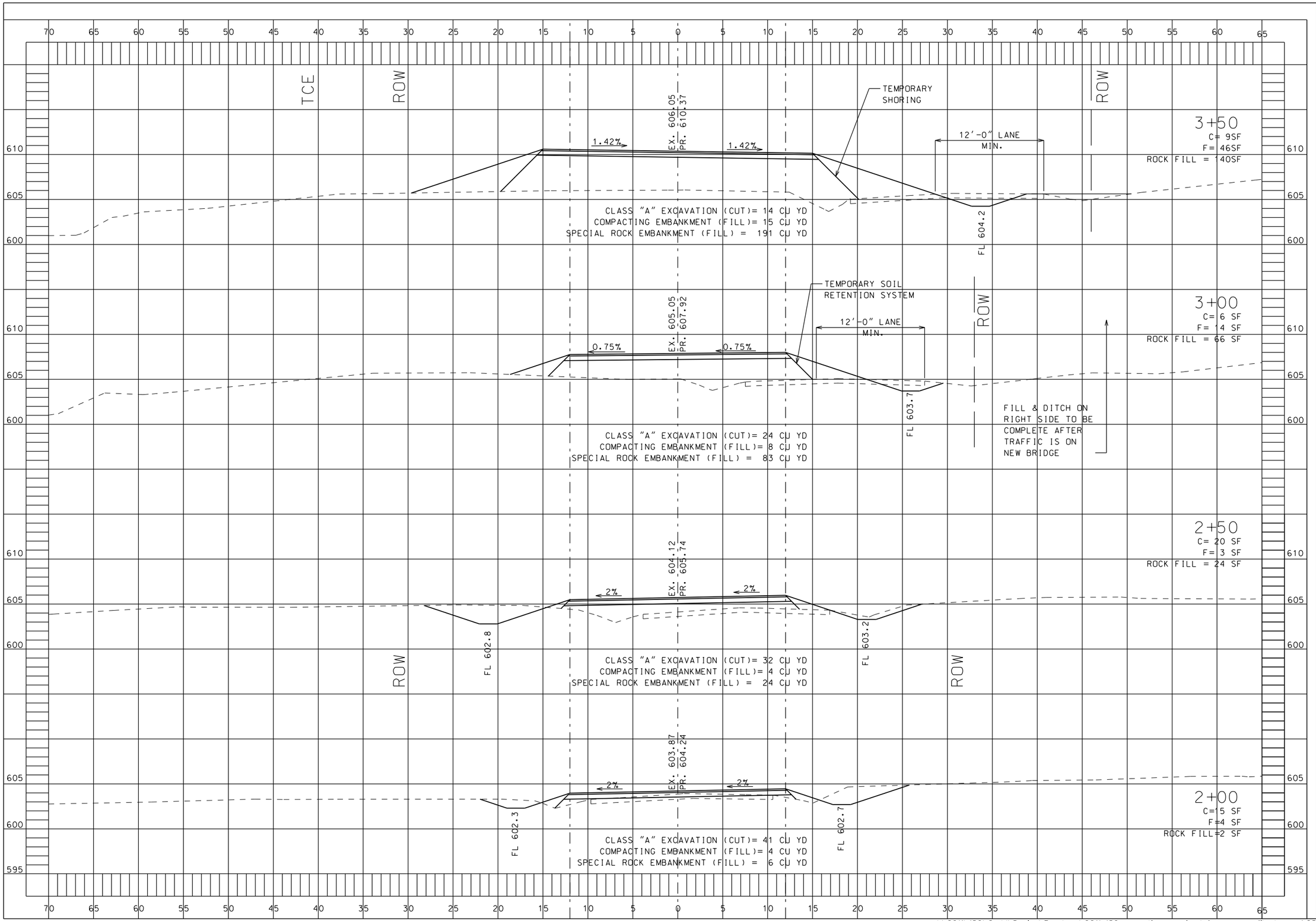

STATE OF MISSOURI
STEPHEN ALSBURY
NUMBER E-24698
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	36

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

BRIDGE NO.
30600071

DESCRIPTION

DATE

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70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65

610 605 600

TCE

ROW

SEE CREEK SECTIONS FOR EARTHWORK BETWEEN END BENTS

CLASS "A" EXCAVATION (CUT)= 6 CU YD
COMPACTING EMBANKMENT (FILL)= 14 CU YD
SPECIAL ROCK EMBANKMENT (FILL) = 151 CU YD

AHEAD
C=43 SF
F=7 SF
ROCK FILL=101 SF

5+53.32
BACK
C=0SF
F=0SF

ROW

FILL & DITCH ON
RIGHT SIDE TO BE
COMPLETE AFTER
TRAFFIC IS ON
NEW BRIDGE

AHEAD
C=0 SF
F=0 SF
ROCK FILL=0 SF

4+69.03
BACK
C=9 SF
F=58 SF
ROCK FILL= 214 SF

ROW

EX. 606.34
PR. 613.14

2% 2%

Driveway (See Special Grading Plan)

MAINTAIN EXISTING ROAD

4+50
C=9 SF
F=58 SF
ROCK FILL =214 SF

TCE

CLASS "A" EXCAVATION (CUT)= 18 CU YD
COMPACTING EMBANKMENT (FILL)= 41 CU YD
SPECIAL ROCK EMBANKMENT (FILL) = 363 CU YD

ROW

EX. 606.66
PR. 612.40

2% 2%

ROW

TCE

4+00
AHEAD
C=10 SF
F=69 SF
ROCK FILL = 178 SF

FL 604.7

CLASS "A" EXCAVATION (CUT)= 18 CU YD
COMPACTING EMBANKMENT (FILL)= 37 CU YD
SPECIAL ROCK EMBANKMENT (FILL) = 294 CU YD

70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65

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STATE OF MISSOURI
STEPHEN ALSBURY
NUMBER E-24698
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DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	37

ROUTE

COUNTY
JEFFERSON

JOB NO.
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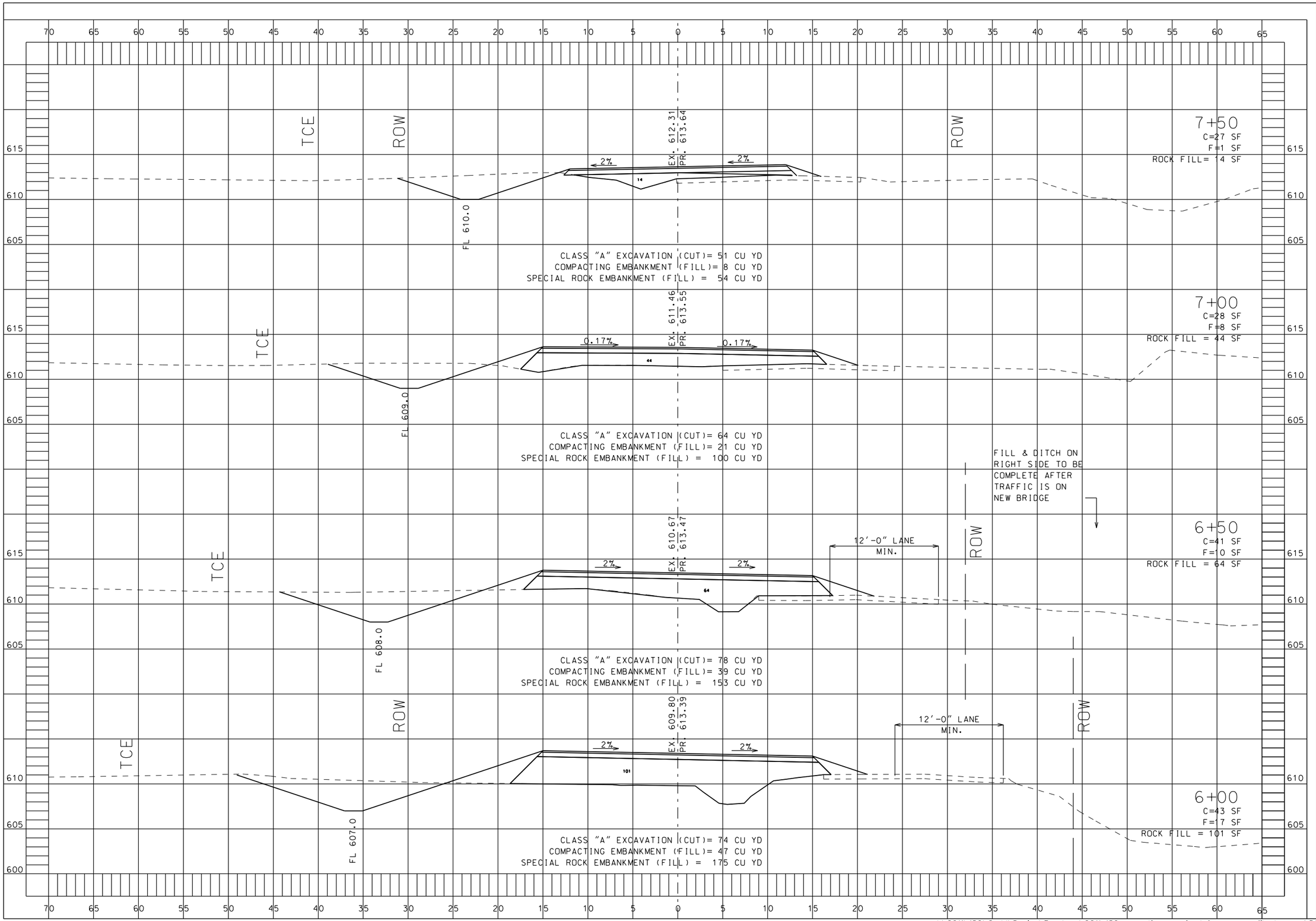

STATE OF MISSOURI
STEPHEN ALSBURY
NUMBER E-24698
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	38

ROUTE

COUNTY
JEFFERSON

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2011-180

PROJECT NO.
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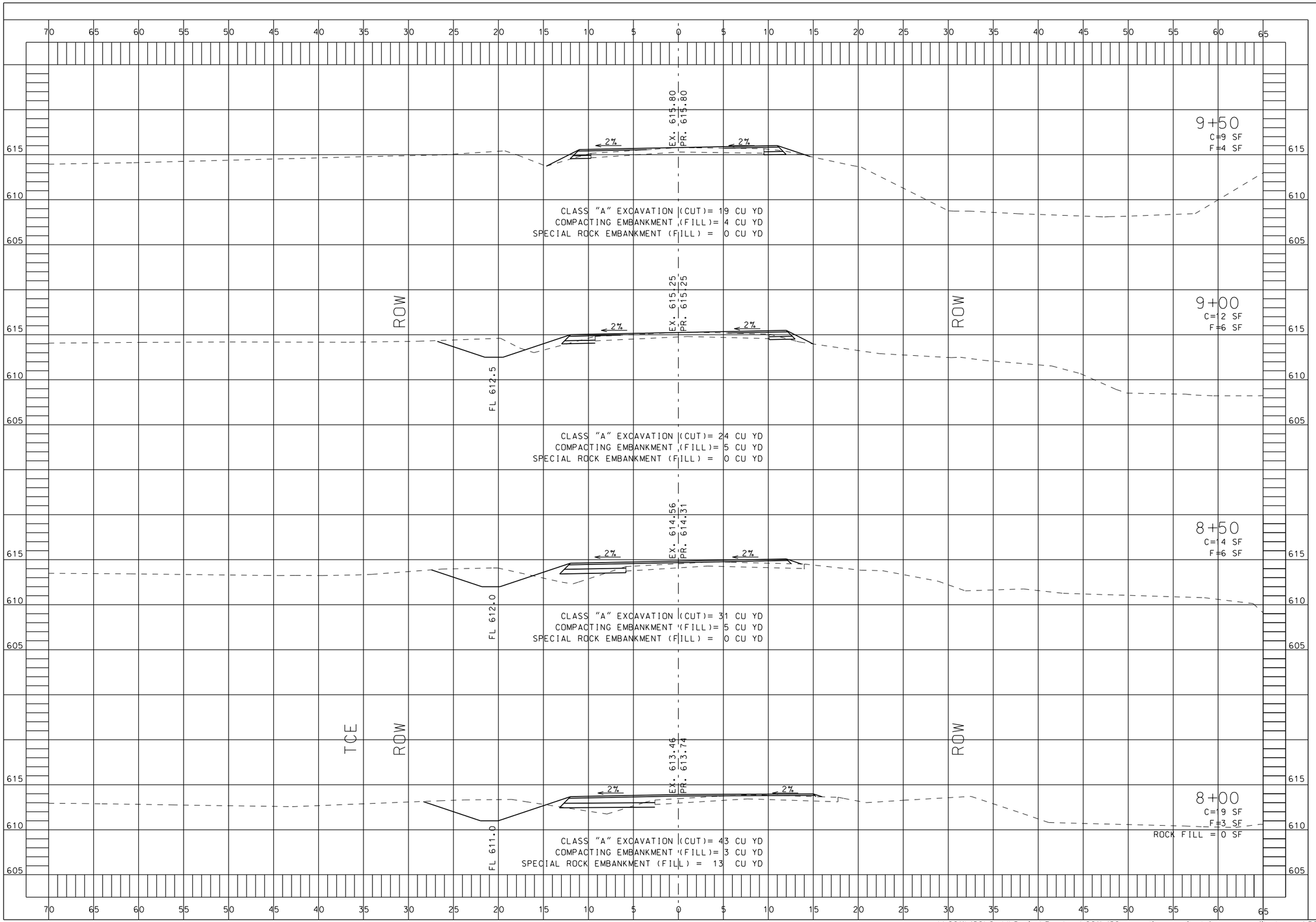

STATE OF MISSOURI
STEPHEN ALSBURY
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DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	39

ROUTE

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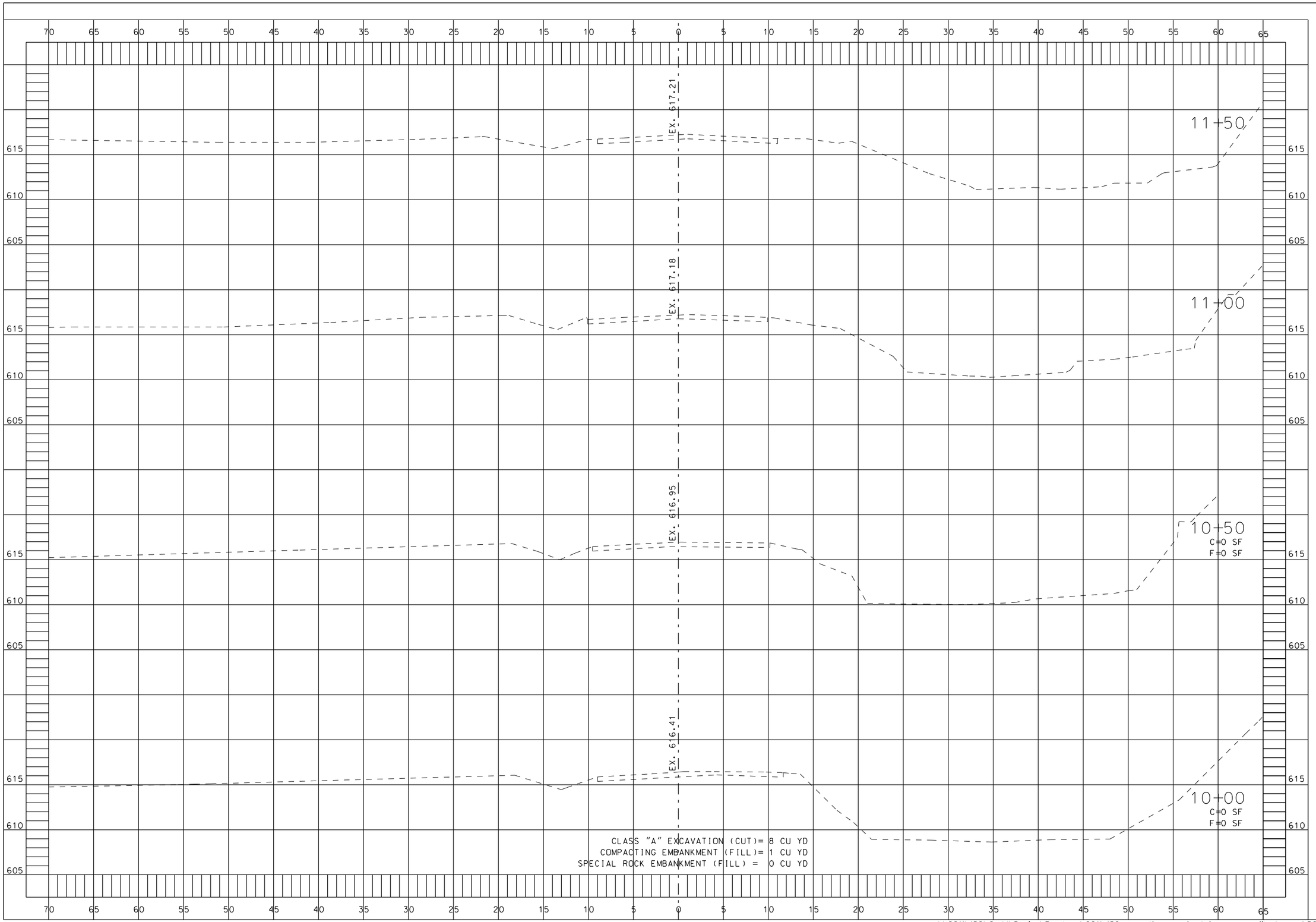

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STATE OF MISSOURI
STEPHEN ALSBURY
NUMBER E-24698
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	40

ROUTE

COUNTY
JEFFERSON

JOB NO.
2011-180

PROJECT NO.
STP-5403 (646)

BRIDGE NO.
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JEFFERSON COUNTY PUBLIC WORKS
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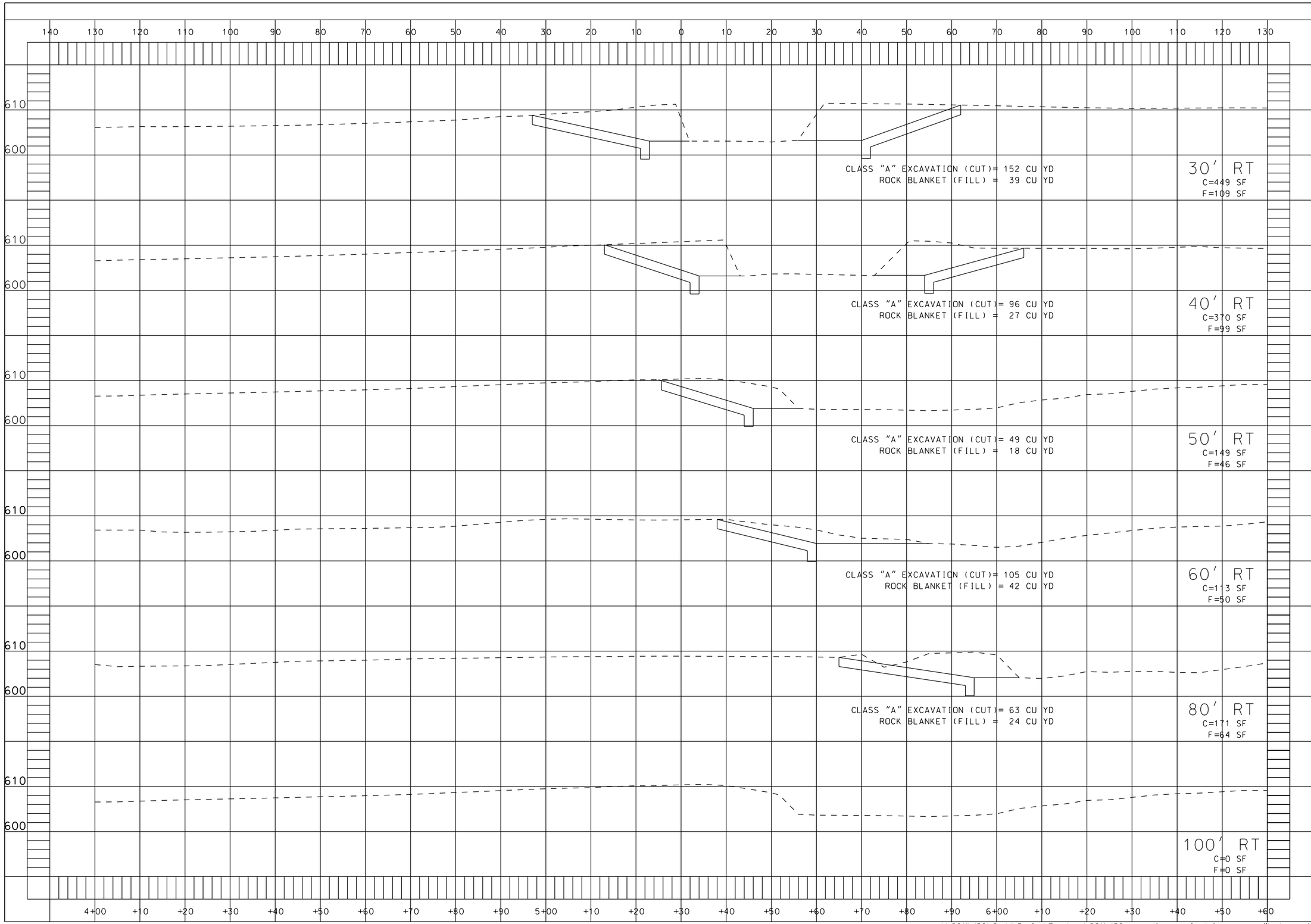

STATE OF MISSOURI
STEPHEN ALSBURY
NUMBER E-24698
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	41

ROUTE

COUNTY
JEFFERSON

JOB NO.
2010-207

PROJECT NO.
STP-5403 (622)

BRIDGE NO.
25200101

DATE	DESCRIPTION

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

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

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140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130

610
600

30' LT
C=0 SF
F=0 SF

CLASS "A" EXCAVATION (CUT)= 18 CU YD
ROCK BLANKET (FILL) = 26 CU YD

610
600

CLASS "A" EXCAVATION (CUT)= 45 CU YD
ROCK BLANKET (FILL) = 50 CU YD

15' LT
C=64 SF
F=95 SF

610
600

CLASS "A" EXCAVATION (CUT)= 37 CU YD
ROCK BLANKET (FILL) = 32 CU YD

CL
C=97 SF
F=84 SF

610
600

CLASS "A" EXCAVATION (CUT)= 61 CU YD
ROCK BLANKET (FILL) = 34 CU YD

10' RT
C=105 SF
F=90 SF

610
600

CLASS "A" EXCAVATION (CUT)= 125 CU YD
ROCK BLANKET (FILL) = 38 CU YD

20' RT
C=224 SF
F=96 SF

4+00 +10 +20 +30 +40 +50 +60 +70 +80 +90 5+00 +10 +20 +30 +40 +50 +60 +70 +80 +90 6+00 +10 +20 +30 +40 +50 +60

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

DATE PREPARED
2/17/2014

STATE	SHEET NO.
MO	42

ROUTE

COUNTY
JEFFERSON

JOB NO.
2010-207

PROJECT NO.
STP-5403 (622)

BRIDGE NO.
25200101

DATE	DESCRIPTION

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

JEFFERSON COUNTY PUBLIC WORKS
DEPARTMENT
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HILLSBORO, MO 63050
(636-797-5340) PHONE
(636-797-5565) FAX

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