

ROADWAY IMPROVEMENT PLAN

OLD LEMAY FERRY ROAD AND VOGEL ROAD

JEFFERSON COUNTY, MISSOURI

SIGNALIZATION OF VOGEL ROAD AND OLD LEMAY FERRY ROAD

FEDERAL PROJECT NO. STP-5403(641)

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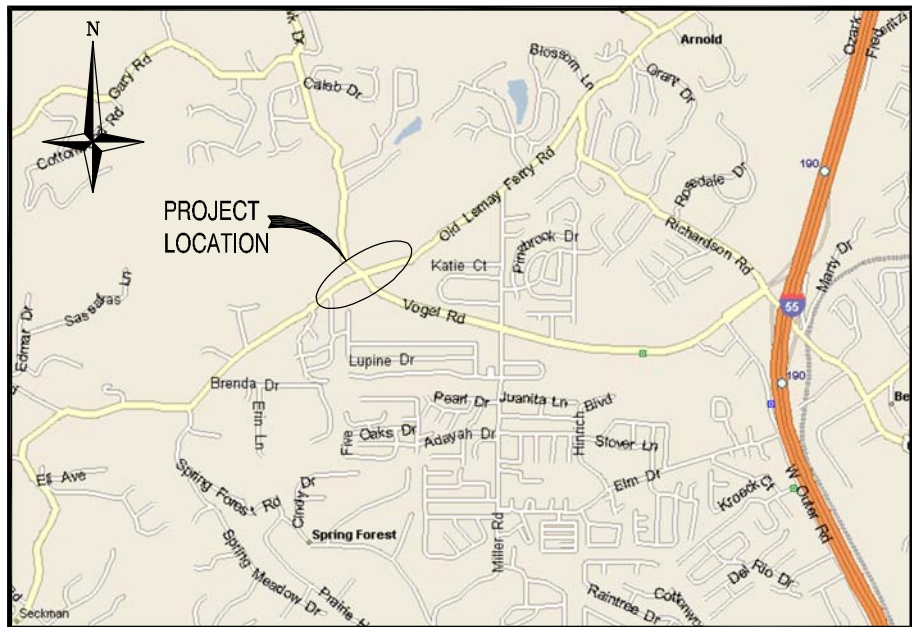
BENCHMARK

5/8" REBAR AND TRAVERSE CAP SOUTHWEST OF THE INTERSECTION OF VOGEL ROAD AND OLD LEMAY FERRY ROAD. ELEVATION IS 598.54 FEET. IT IS 16.5' SSE OF THE BACK OF CURB OF OLD LEMAY FERRY ROAD, 36.9' SW OF THE CENTER OF A GRATE INLET IN OLD LEMAY FERRY ROAD, AND 28.2' EAST OF A WATER METER. THE VERTICAL DATUM IS NAVD88 AS BROADCAST USING THE MODOT VRS NETWORK.

THE LAND TIE FROM THE EXISTING CENTERLINE INTERSECTION OF OLD LEMAY FERRY ROAD AND VOGEL ROAD TO A FOUND STONE AT THE CENTER OF SECTION 36, T. 43 N, R. 5 E IS NORTH 50 DEGREES 25 MINUTES 51 SECONDS EAST, A DISTANCE OF 1265.96 FEET. FESTUS, MO 63028

ADT INFO

LEMAY FERRY NORTH OF VOGEL = 2,867
LEMAY FERRY SOUTH OF VOGEL = 7,417
VOGEL EAST OF LEMAY FERRY = 8,107
VOGEL WEST OF LEMAY FERRY = 3,859



NOT TO SCALE

REMOVAL LEGEND

(TBR) - TO BE REMOVED
(TBR&R) - TO BE REMOVED AND REPLACED
(UIP) - USE IN PLACE
(ATG) - ADJUST TO GRADE
(TBR&R) - TO BE REMOVED AND RELOCATED
PR - PROPOSED
EX - EXISTING

	- REMOVAL ITEM
	- PAVEMENT REMOVAL
	- MISCELLANEOUS REMOVAL
	- TREE/BRUSH REMOVAL BY AREA

RIGHT OF WAY LEGEND

	- EXISTING R, ROW or PRESCRIPTIVE EASEMENT
	- PROPOSED ROW
	- PROPOSED PERMANENT EASEMENT
	- PROPOSED TEMPORARY SLOPE EASEMENT
	- PROPOSED RIGHT OF WAY AREA
	- EXISTING PRESCRIPTIVE EASEMENT AREA TO BE CONVERTED TO PROPOSED RIGHT OF WAY AREA
	- PROPOSED DRAINAGE EASEMENT

PAVEMENT MARKING LEGEND

SWL - SOLID WHITE LINE
SYL - SOLID YELLOW LINE
DSY - DOUBLE SOLID YELLOW
YSD - YELLOW SKIP DASH
WSD - WHITE SKIP DASH
WASD - WHITE ABBREVIATED SKIP DASH
L&S - LETTER & SYMBOLS

PROPOSED LEGEND

(TBR)	- TO BE REMOVED
(TBR&R)	- TO BE REMOVED AND REPLACED
(UIP)	- USE IN PLACE
CONC	- CONCRETE
TEMP	- TEMPORARY
PAV'T	- PAVEMENT
PR	- PROPOSED
EX	- EXISTING
	- PR BIT PAV'T W/ 2" SURFACE COURSE
	- PR PCC ITEM
	- PR BITUMINOUS SHOULDERS
	- PR 2" MILLING & 2" RESURFACING EX PAV'T
	- PR GRADING LIMITS
	- PR EDGE OF 1.5% SHEL
	- ADJACENT PROJECT SEE STP-5403(643)

TRAFFIC CONTROL / STAGING LEGEND

	WORK AREA
	TRAFFIC CONTROL BARREL OR DRUM WATER - C1 WATER
	TYPE III BARRICADE
	TRAFFIC CONTROL SIGN
	OPEN LANE OF TRAFFIC
	FLAGGER

EROSION CONTROL PLAN LEGEND

	SILT FENCE
	TEMPORARY INLET CHECK
	TYPE I TEMPORARY DITCH CHECK
	TYPE II TEMPORARY DITCH CHECK
	AREA TO BE TEMP./PERM. FERTILIZED/MULCHED/SEEDED

LIST OF CONTACTS:	
WATER - C1 WATER	CABLE - LEVEL 3
DONAVAN LARSON	NAME: JERRY SORRENTINO
6645 MOSS HOLLOW ROAD	JERRY.SORRENTINO@LEVEL3.COM
BARNHART, MO 63012	314-242-5664
636-948-2500	
ELECTRIC - AMEREN	GAS - LACLEDE GAS
GARY MARQUART	BRIAN LANGENBACHER
6450 HWY MM	4118 SHREWSBURY AVE
HOUSE SPRINGS, MO 63051	SHREWSBURY, MO 63119
636-671-6151	314-768-7767
TELEPHONE - AT&T	SEWER - ROCK CREEK
GLENN HOGENMILLER	JASON SEGER
122 N. 2ND ST.	4133 WEST OUTER ROAD
FESTUS, MO 63028	ARNOLD, MO 63010
636-931-7525	636-464-3305
CABLE - CHARTER	
DARYL STEFFEN	
815 CHARTER COMMONS DRIVE	
TOWN & COUNTRY, MO 63017	
636-387-6663	

GENERAL NOTES

- ALL WORK SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- ANY WORK INDICATED ON THE PLANS THAT EXTENDS BEYOND THE PROJECT LIMITS IS CONSIDERED INCIDENTAL TO AND A PART OF THE CONSTRUCTION OF THIS PROJECT.
- DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS STATED OTHERWISE ON THE PLANS.
- IF AN OPEN TRENCH CONDITION WILL REMAIN OPEN OVERNIGHT, "PAVEMENT EDGE TREATMENT" SHALL BE PROVIDED IN ACCORDANCE WITH MoDOT STANDARD DRAWING 619.10.
- THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO CONTROL EROSION AND SILTATION INCLUDING, BUT NOT LIMITED TO, SILTATION FABRIC FENCES. CONTROL SHALL COMMENCE WITH GRADING AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND/OR JEFFERSON COUNTY. THE CONTRACTOR'S RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE EROSION CONTROL ITEMS SHOWN ON THE PLANS ARE FOR ESTIMATING PURPOSES ONLY. THE OWNER AND/OR JEFFERSON COUNTY MAY AT THEIR OPTION DIRECT THE CONTRACTOR IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILT OR MUD ON NEW OR EXISTING PAVEMENT SHALL BE REMOVED IMMEDIATELY. ANY DEPOSITING OF SILTS OR MUD IN NEW OR EXISTING STORM SEWERS OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE OWNER AND/OR JEFFERSON COUNTY.
- ALL FILL PLACED UNDER PROPOSED STORM AND SANITARY SEWER, PROPOSED ROADS, AND/OR PAVED AREAS SHALL BE COMPACTED TO 90% OF MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED AASHTO T-180 COMPACTION TEST OR 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99. ALL FILL PLACED IN PROPOSED ROADS SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP. ALL TESTS SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING AND BACK FILLING OPERATIONS. A COPY OF THE GRADING COMPACTION TEST RESULTS SHALL BE PROVIDED TO JEFFERSON COUNTY.
- NO SLOPES SHALL BE STEEPER THAN 3(HORIZONTAL) TO 1 (VERTICAL) EXCEPT AS NOTED ON THE PLANS.
- BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF STORM SEWER STRUCTURES.
- PROVIDE ADEQUATE OFF-STREET PARKING FOR CONSTRUCTION EMPLOYEES. PARKING ON NON-SURFACED AREAS SHALL BE PROHIBITED IN ORDER TO ELIMINATE THE CONDITION WHEREBY MUD FROM CONSTRUCTION AND EMPLOYEE VEHICLES IS TRACKED ONTO THE PAVEMENT CAUSING HAZARDOUS ROADWAY AND DRIVEWAY CONDITIONS.
- ANY DISTURBED ITEM OFF PROJECT PROPERTY (I.E. BUSHES, FENCES, MAILBOXES, ETC.) SHALL BE REPLACED, IN KIND.
- THE OFFSETS TO ALL INLETS AND MANHOLES ARE TO THE CENTER OF THE DRAINAGE STRUCTURE. A CONCENTRIC DRAINAGE STRUCTURE WAS USED TO CALCULATE THIS DISTANCE.
- ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY ATTEMPT TO CONSTRUCT ANY COMPONENT OF THE VARIOUS ROADWAY IMPROVEMENTS.
- SIGNAL AND LIGHTING EQUIPMENT IS SHOWN ON THE ROADWAY PLANS FOR INFORMATION ONLY. SIGNAL AND LIGHTING INFORMATION SHOWN IN THE SIGNAL AND LIGHT PLANS SHALL TAKE PRECEDENCE OVER THESE ITEMS SHOWN ON THE ROADWAY PLANS.
- SYMBOLS, STOP BARS AND YIELD BARS SHALL BE PRE-FORMED TAPE. ALL OTHER PAVEMENT MARKING SHALL BE WATERBORNE PAINT.
- ALL EXISTING CONFLICTING PAVEMENT MARKING SHALL BE REMOVED USING WATER BLASTING OR GRINDING AND SHALL BE INCLUDED IN THE COST OF THE PAVEMENT MARKING PAY ITEM.
- THE CONTRACTOR IS RESPONSIBLE TO REPLACE ANY DISTURBED CONTROL POINTS AND PROVIDE APPROPRIATE DOCUMENTATION TO THE COUNTY. THE COST OF SAID WORK SHALL BE INCLUDED IN THE COST OF CONTRACTOR FURNISHED SURVEYING AND STAKING.
- ANY EXISTING SIGNS SHOWN TO BE REMOVED SHALL BE THE PROPERTY OF THE COUNTY AND SET ASIDE AT THE SITE FOR THE COUNTY TO PICK UP. POSTS TO BE REMOVED FROM THE SITE BY THE CONTRACTOR.

Corporate Engineering
Certificate # 000381



CIVIL ENGINEER
DATE PREPARED

ROUTE	STATE
DISTRICT	SHEET NO.
6	1

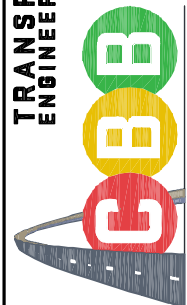
COUNTY	JOB NO.
JEFFERSON	2011-105
CONTRACT ID.	

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
8/19/13	PRELIMINARY APPROVAL
1/24/14	70% SUBMITTAL (TO COUNTY)
4/29/14	PS&E SUBMITTAL (TO COUNTY)

TRANSPORTATION
ENGINEERS+PLANNERS
13409 OLIVE BLVD, SUITE 430
ST. LOUIS, MO 63141
(314) 878-8844
450 COTTONWOOD RD, SUITE B
GLEN CARBON, IL 62034
(618) 656-2612
www.cbbtraffic.com



COVER SHEET
VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

JASON JONAS, P.E.
PUBLIC WORKS DIRECTOR
JEFFERSON COUNTY, MO

DATE



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

ROADWAY ITEMS			
202-20.10	REMOVAL OF IMPROVEMENTS	LS	1
203-10.00	CLASS A EXCAVATION	CUYD	1582
203-60.00	COMPACTING EXCAVATION	CUYD	607
304-01.43	TYPE 1 AGGREGATE FOR BASE (4 IN. THICK)	SQYD	937
401-01.50	TYPE A2 SHOULDER	SQYD	688
401-12.09	BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-1)	TON	565
401-12.11	BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-2)	TON	578
407-10.05	TACK COAT	GAL	253
608-10.00	CONCRETE MEDIAN	SQ YD	37
609-10.52	CURB AND GUTTER TYPE B	FT	262
616-10.05	CONSTRUCTION SIGNS	SQ FT	507
616-10.28	CHANNELIZER	EA	88
616-10.30	TYPE III MOVEABLE BARRICADE	EA	2
618-10.00	MOBILIZATION	LS	1
619-10.00	PAVEMENT EDGE TREATMENT	LF	549
622-10.01	COLDMILLING BITUMINOUS PAVEMENT FOR REMOVAL OF SURFACNG (LESS THAN 3 IN. THICK)	SQ YD	4199
622-99.05	TEMPORARY RAMPS	SQYD	95
627-40.00	CONTRACTOR FURNISHED SURVEYING AND STAKING	LS	1
DRAINAGE ITEMS			
206-30.00	CLASS 3 EXCAVATION	CU YD	135
216-35.00	PARTIAL REMOVAL OF CULVERT CONCRETE	LS	1
609-60.20	FURNISHING TYPE 2 ROCK DITCH LINER	CU YD	99
609-60.40A	FURNISHING TYPE 4 ROCK DITCH LINER	CU YD	42
609-60.42	PLACING TYPE 2 ROCK DITCH LINER	CU YD	99
609-60.44	PLACING TYPE 4 ROCK DITCH LINER	CU YD	42
614-11.20	CURVED VANE GRATE AND FRAME (2 FT. X 2 FT. OR 600MM X 600MM)	EA	1
614-30.11	MANHOLE FRAME AND COVER, TYPE 1B	EA	1
703-40.40	CLASS B1 CONCRETE (BRIDGES AND CULVERTS)	CU YD	19.2
706-10.20	REINFORCING STEEL (BRIDGES AND CULVERTS)	LBS	2930
720-12.00	SELECT GRANULAR BACKFILL FOR STRUCTURAL SYSTEMS	CU YD	37
726-10.18	18 IN. PIPE GROUP A	FT	63
726-10.24	24 IN. PIPE GROUP A	FT	27
726-10.42	42 IN. PIPE GROUP A	FT	37
731-00.60	PRECAST CONCRETE MANHOLE - 60 IN.	FT	7
731-10.22	PRECAST CONCRETE DROP INLET 2 FT X 2 FT	FT	5
731-99.01	DOUBLE CURBE INLET AND TOP	FT	16
732-06.18A	18 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION	EA	2
732-06.42	42 IN. OR ALLOWED SUBSTITUTE GROUP A FLARED END SECTION	EA	1

LANDSCAPING ITEMS			
805-20.00A	SEEDING - WARM SEASON MIXTURES	ACRE	0.3
806-10.17	TEMPORARY SEEDING AND MULCHING	ACRE	0.3
806-10.19	SILT FENCE	LF	559
806-10.21	TYPE I DITCH CHECK	EA	3
806-10.22	TYPE II DITCH CHECK	EA	4
806-10.25	INLET CHECK	EA	4
SIGNING ITEMS			
903-10.10	CONCRETE FOOTING, EMBEDDED	CUYD	0.13
903-12.20	PIPE POST	LB	40
903-12.40	BREAKAWAY ASSEMBLY	EA	1
903-12.50A	U-CHANNEL POST, 3LB	LF	377
903-50.04	TYPE SHR2L-1 SIGN	SQFT	43
903-99.02a	REMOVE EXISTING SIGN	EA	14
903-99.02b	RELOCATE EXISTING SIGN	EA	5
PAVEMENT MARKING			
620-51.30	TYPE 2 PREFORMED MARKING TAPE (GROOVED), LEFT/RIGHT ARROW	EA	9
620-51.40	TYPE 2 PREFORMED MARKING TAPE (GROOVED), 24 IN. WHITE, YIELD LINE TRIANGLES	EA	5
620600B	4 IN. WHITE ACRYLIC WATERBORNE PAVEMENT MARKING PAINT	LF	132
620-60.01B	4 IN. YELLOW ACRYLIC WATERBORNE PAVEMENT MARKING PAINT	LF	2940
620-61.06	ACRYLIC WATERBORNE PAVEMENT MARKING PAINT, 6 IN., WHITE	LF	2438
620-61.22	ACRYLIC WATERBORNE PAVEMENT MARKING PAINT, 12 IN., WHITE	LF	43
620-61.24	ACRYLIC WATERBORNE PAVEMENT MARKING PAINT, 24 IN., WHITE	LF	130
620-99.02	ACRYLIC WATERBORNE PAVEMENT MARKING PAINT, COMBINATION STRAIGHTLEFT/RIGHT ARROW	EA	9
620-99.03	ACRYLIC WATERBORNE PAVEMENT MARKING PAINT, 12 IN, YELLOW	LF	58
LIGHTING			
901-99.03	CONDUIT, 1.5 IN. RIGID, IN TRENCH (AMEREN UE STD)	LF	439

SIGNALS		
902-05.13	SIGNAL HEAD, TYPE 3B, LED	EA 5
902-05.15	SIGNAL HEAD, TYPE 5B, LED	EA 3
902-32.35	POST, TYPE C, 35 FT.	EA 1
902-32.40	POST, TYPE C, 40 FT.	EA 2
902-32.42	POST, TYPE C, 42 FT.	EA 1
902-42.83	CONTROLLER ASSEMBLY HOUSING, NEMA TS2 CONTROLLER	EA 1
902-50.20	CONDUIT, 1", LOOP DETECTOR	LF 178
902-52.00	CONDUIT, 2", IN TRENCH	LF 16
902-53.00	CONDUIT, 3", IN TRENCH	LF 62
902-73.00	CONDUIT, 3", IPUSHED	LF 247
902-82.08	CABLE, #8 AWG 1 CONDUCTOR, POWER	LF 80
902-83.11	CABLE, #16 AWG 7 CONDUCTOR	LF 1430
902-85.00	CABLE, LOOP DETECTOR , IN DUCT	LF 1830
902-85.10	CABLE, LOOP DETECTOR , LEAD-IN	LF 800
902-86.20	POWER SUPPLY ASSEMBLY, TYPE 2	EA 1
902-88.11	PREFORMED, PULLBOX CLASS 2	EA 3
902-88.12	PREFORMED, PULLBOX CLASS 3	EA 1
902-91.00	BASE, CONCRETE	CUYD 14.9

Corporate Engineering
Certificate # 000381

STATE OF MISSOURI

BRIAN E. COURTWRIGHT

NUMBER
PE-2006002617

PROFESSIONAL ENGINEER

DATE PREPARED

ROUTE
6

DISTRICT
6

COUNTY
JEFFERSON

JOB NO.
2011-105

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

PRELIMINARY SUBMITTAL

PRELIMINARY APPROVAL

70% SUBMITTAL (TO COUNTY)

PS&E SUBMITTAL (TO COUNTY)

4" SWL ON RELOCATED VOGEL RD

DATE

6/21/13

8/19/13

1/24/14

4/29/14

10/3/14

TRANSPORTATION
ENGINEERS+PLANNERS

13400 OLIVER BLVD, SUITE 430
ST. LOUIS, MO 63141
(314) 878-6844

450 COTTONWOOD RD, SUITE B
GLEN CARBON, IL 62034
(618) 656-2612
www.cbbrief.com

GOBB

VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

A-SHEET

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

LOCATION	REMOVAL OF IMPROVEMENTS - 1 LUMP SUM								MILLING (SQ YDS)	TEMP RAMP (SQ YD)	EDGE TREATMENT (FT)	TIE BARS (DRILLED & INSTALLED) (FT)	TACK COAT (GAL)	2" BITUMINOUS PAV'T MIX PG 64-22 (BP-1) (TON)
	TREE REMOVAL (AC)	SAWCUT (FT)	PAVEMENT REMOVAL (SQ YDS)	CURB & GUTTER REMOVAL (FT)	INLET REMOVAL (EA)	FES REMOVAL (EA)	CULVERT END SECTION REMOVAL (EA)	STORM SEWER REMOVAL (FT)						
SE QUADRANT 39+67.90 TO 66+82.11 40+05.63 TO 40+20.74	0.15	193 32	176 14	49	2	1	1	80		44	193 32	202 34		
NE QUADRANT 41+39.45 TO 42+42.94		108	21								108	113		
OLD VOGEL RD / RELOCATED VOGEL RD 39+49.66 TO 41+58.10	0.08	216	441					106			216	226		
OLD LEMAY FERRY RD 36+56.14 TO 38+00.00 38+00.00 TO 39+50.00 39+50.00 TO 41+50.00 41+50.00 TO 43+50.00 43+50.00 TO 46+08.73									536 610 811 812 935	44 20		27 31 41 41 47		61 69 91 91 105
VOGEL RD 65+85.75 TO 66+52.99									495	31			25	56
TOTAL =	0.23	549	652	49	2	1	1	186	4199	95	549	575	212	473
FOR INFORMATION ONLY														

LOCATION	WIDENING & PAVING					EDGE			
	4" T-1 AGG FOR BASE (SQ YDS)	6" BITUMINOUS PAV'T MIX PG 64-22 (BP-2) (TON)	8" PAVEMENT BITUMINOUS PAV'T MIX PG 64-22 (BP-2) (TON)	TACK COAT (GAL)	2" BITUMINOUS PAV'T MIX PG 64-22 (BP-1) (TONS)	DOWELLED-ON CONC. MEDIAN (SQ YDS)	5 3/4" TYPE A2 SHLDR (SQ YDS)	CONC. CURB & GUTTER (FT)	TIE BARS (PLACED AND FASTENED) (LBS)
SE QUADRANT 39+67.90 TO 66+82.11 40+05.63 TO 40+20.74	216 14		67 6	7 1	17 1	37	165	151	157
NE QUADRANT 41+39.45 TO 42+42.94	35		16	2	4		352		
OLD VOGEL RD / RELOCATED VOGEL RD 39+49.66 TO 41+58.10	672	210	279	31	70		171	111	116
TOTAL =	937	210	368	41	92	37	688	262	273
578									

EARTHWORK						
STA	to	STA	UNADJUSTED EXCAVATION (CU YD)	EXCAVATION ADJUSTED FOR 25% SHINKAGE (CU YD)	COMPACTING EMBANKMENT (CU YD)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (CU YD)
Lemay Ferry RIGHT						
40+00.00	to	40+50.00	44.0	33.0	1.8	31.2
41+50.00	to	42+00.00	6.8	5.1	57.9	-52.8
Lemay Ferry LEFT						
40+00.00	to	40+50.00	18.0	13.5	169.9	-156.4
40+50.00	to	41+00.00	300.2	225.2	154.3	70.9
41+00.00	to	41+50.00	332.6	249.5	11.6	237.9
41+50.00	to	42+00.00	39.3	29.5	5.0	24.5
Old Vogel Rd RIGHT						
66+50.00	to	67+00.00	10.8	8.1	2.6	5.5
Relocated Vogel Rd						
47+00.00	to	47+50.00	419.0	314.3	77.5	236.8
47+50.00	to	48+00.00	410.5	307.9	126.1	181.8
TOTAL =			1582	1187	607	580

LOCATION		CULVERT EXTENSION			PRECAST DROP INLET			MH W/ F&C TYPE 1-B	PRECAST CONC. MH 60 IN.	END SECTION		PIPE (RCP)			CLASS 3 EXCAV.	GRANULAR BACKFILL	ROCK LINER TYPE 2		ROCK LINER TYPE 4	
					TYPE D							ROCK LINER TYPE 2		ROCK LINER TYPE 4						
		PARTIAL REMOVAL OF CULVERT CONCRETE	CONCRETE	REINFORCEMENT	2'X2'	CURVED VANE G&F	DOUBLE CURB INLET			18"	42"	18"	24"	42"			FURNISH	PLACE	FURNISH	PLACE
#	STA	(LS)	(CY)	(LB)	(FT)	(EA)	(FT)	(EA)	(EA)	(EA)	(FT)	(FT)	(FT)	(CU YDS)	(CU YDS)	(CU YD)	(CU YD)	(CU YD)	(CU YD)	
BRANCH A																				
A1	66+29.51	1	19.2	2930										7	13	84	84			
BRANCH B																		42	42	
B1	40+00.92																			
B2	40+05.44					9.5								22						
B3	40+15.58						1	7.2						19	7					
B4	39+99.12					6.4							22	20						
B5	39+99.90								1				15	18	26					
BRANCH C					4.8	1						27		4	8					
C1	39+73.84																			
BRANCH D										1		63		19	9	15	15			
D1	40+44.12									1										
D2	41+04.12																			
TOTAL =		1	19.2	2930	4.8	1	15.9	1	7.2	2	1	63	27	37	135	37	99	99	42	42

Corporate Engineering
Certificate # 000381



CIVIL ENGINEER
DATE PREPARED

ROUTE STATE
DISTRICT SHEET NO.
6 3

COUNTY
JEFFERSON

JOB NO.
2011-105
CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
8/19/13	PRELIMINARY APPROVAL
1/24/14	70% SUBMITTAL (TO COUNTY)
4/29/14	PS&E SUBMITTAL (TO COUNTY)

TRANSPORTATION
ENGINEERS+PLANNERS

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B-SHEET

VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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

PAVEMENT MARKING										
LOCATION	YELLOW		WHITE							
	4" DSY (FT)	12" SYL (HATCH) (FT)	4" SWL (FT)	6" SWL (FT)	6" WASD (FT)	12" SWL (HATCH) (FT)	24" SWL (STOPBAR) (FT)	YIELD SYMBOL (EA)	LEFT/RIGHT ARROW (EA)	COMB LEFT/RIGHT & THRU ARROW (EA)
OLD LEMAY FERRY ROAD 36+56.14 TO 40+50.00 41+16.33 TO 46+08.73	931 1590	9 49		848 1137	18 18	43	12 35	5	3 2	3 2
VOGEL ROAD 66+02.36 TO 67+85.00	318			341			42		3	3
RELOCATED VOGEL RD 47+72.18 TO 46+96.87	101		132	76			41		1	1
TOTAL =	2940	58	132	2402	36	43	130	5	9	9

2438

EROSION CONTROL						
LOCATION	SEEDING (AC)	TEMP. SEEDING & MULCHING (AC)	SILT FENCE (FT)	INLET CHECK (EA)	DITCH CHECK	
					T-I (EA)	T-II (EA)
SE QUADRANT	0.04	0.04	161	3	1	
NE QUADRANT	0.07	0.07	155		1	2
SW QUADRANT	0.06	0.06	136	1	1	
NW QUADRANT	0.1	0.1	107			2
TOTAL =	0.3	0.3	559	4	3	4

MISCELLANEOUS		
ITEM	QUANTITY	COMMENT
MOBILIZATION	1 LSUM	
CONTRACTOR SURVEYING & STAKING	1 LSUM	

TRAFFIC CONTROL											
LOCATION	CHANNELIZERS	RELOCATE CHANNELIZERS	TYPE III BARRICADES	CONSTRUCTION SIGNS	TEMP 6" SWL	TEMP 6" AWS D	TEMP 12" SWL	TEMP 4" DSY	TEMP WHITE L&S	TEMP 24" SWL (STOPBAR)	TEMP YEILD BARS
	(EA)	(EA)	(EA)	(SQ FT)	(FT)	(FT)	(FT)	(FT)	(SQ FT)	(FT)	(EA)
PHASE I @ INTERSECTION W21-1A (4) W20-1 (4) G20-2 (4)	88			59 144 144						42	42
PHASE II @ INTERSECTION 36+50 TO 40+50 OLD LEMAY 4+50 TO 46+10 OLD LEMAY VOGEL RD		31			533 474 381	18 18 18	42 	738 948 316	124.8 83.2	66	5
PHASE III @ INTERSECTION 36+50 TO 40+50 OLD LEMAY 4+50 TO 46+10 OLD LEMAY VOGEL RD		32	2	16					52		
TOTAL =	88	63	2	507	1388	54	42	2002	260	108	47
	FOR INFO ONLY		FOR INFORMATION ONLY; SEE NOTE ON TRAFFIC CONTROL & STAGING PLAN								

GROUND MOUNTED SIGNS									
LOCATION	DIMENSION (in) x (in)	TYPE SHRZL-1 SIGN (FT)	RELOCATE EX SIGN (EA)	EX SIGN (TBR) (EA)	U-CHANNEL POST (FT)	ROUND PIPE POST 2 1/2" DIA (LBS)	BREAKAWAY ASSEMBLY (EA)	CONCRETE FOOTINGS, EMBEDDED (CU YD)	DESCRIPTION
OLD LEMAY FERRY ROAD 40+19 RT 40+27 RT 40+34 RT 47+00 LT 42+15 LT 41+20 LT 41+14 LT 41+00 LT 40+19 LT 39+88 LT 39+50 LT 39+14 LT	36 x 36 30 x 30 30 x 30 24 x 10 12 x 18 20 x 24	9 7 7 2 1 1 2 2 2 1 1		2 1 1 1 1 1	46 27 35	40 	1 	0.13 	R1-1 "STOP" & STREET SIGNS R1-2 "YIELD" W12-1 "DOUBLE DOWN" W3-3 "SOUTH" W16-9P "AHEAD" W3-1 "STOP AHEAD" "WARNING FIBER OPTIC" MISC SIGNS MISC SIGNS MISC SIGNS R1-1 "STOP" & STREET SIGNS OM-3R "CHEVRONS" "ADOPT-A-ROAD" OM-3R "CHEVRONS"
VOGEL ROAD 69+50 LT 66+43 LT 66+32 LT 66+33 LT 66+25 LT	30 x 30 24 x 10 12 x 18	7 2 1		1 2 2 1	27				W3-3 "SOUTH" W16-9P "AHEAD" OBJECT MARKER R1-1 "STOP" & STREET SIGNS OBJECT MARKER "WARNING FIBER OPTIC"
RELOCATED VOGEL RD 48+18 RT 46+50 45+50	30 x 30 24 x 10 24 x 36 20 x 24	7 2 1 1		 1 1	45 39 39 35				W3-3 "SOUTH" W16-9P "AHEAD" R2-1 30 "SPEED LIMIT 30" "ADOPT-A-ROAD"
TOTAL =		43	5	14	377	40	1	0.13	

Corporate Engineering
Certificate # 000381

STATE OF MISSOURI

BRIAN E. COURTWRIGHT

NUMBER
PE-2006002617

PROFESSIONAL ENGINEER

CIVIL ENGINEER

DATE PREPARED

ROUTE

STATE
MO

DISTRICT
6

SHEET NO.
4

COUNTY
JEFFERSON

JOB NO.
2011-105

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

6/21/13
PRELIMINARY SUBMITTAL

8/19/13
PRELIMINARY APPROVAL

1/24/14
70% SUBMITTAL (TO COUNTY)

4/29/14
PS&E SUBMITTAL (TO COUNTY)

10/3/14
4" SWL ON RELOCATED VOGEL RD

TRANSPORTATION
ENGINEERS+PLANNERS

13400 OLIVER BLVD, SUITE 430
ST. LOUIS, MO 63141
(314) 878-8844
450 COTTONWOOD RD, SUITE B
GLEN CARBON, IL 62034
(618) 656-2612
www.cbbtraffic.com

EBB

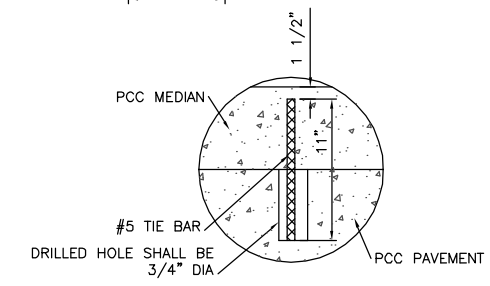
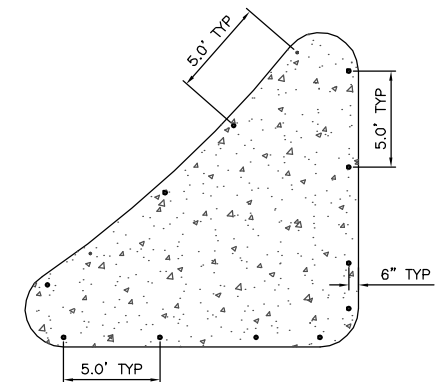
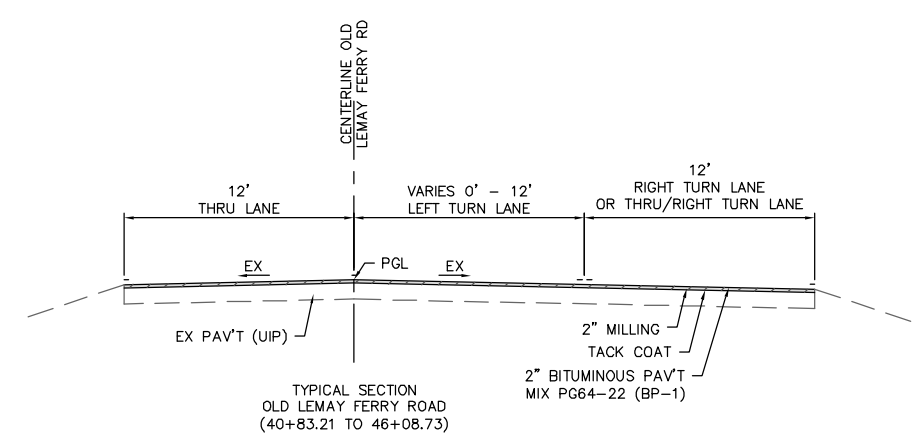
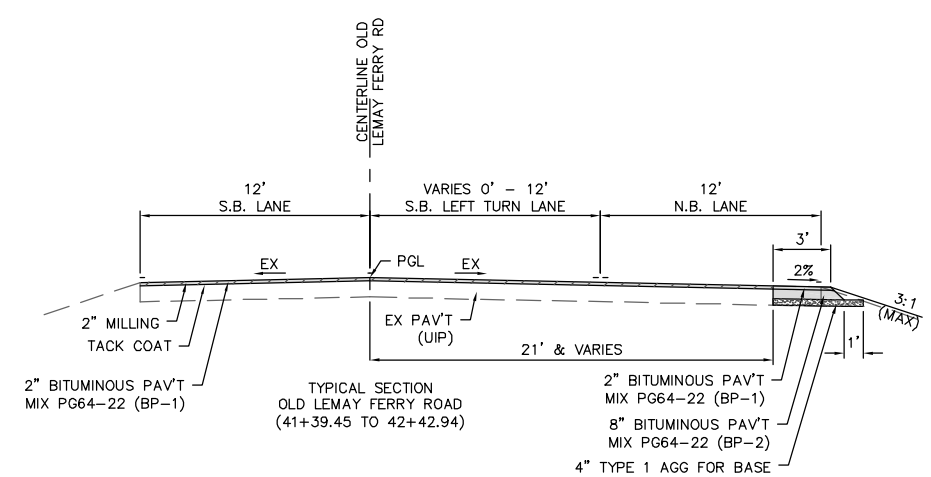
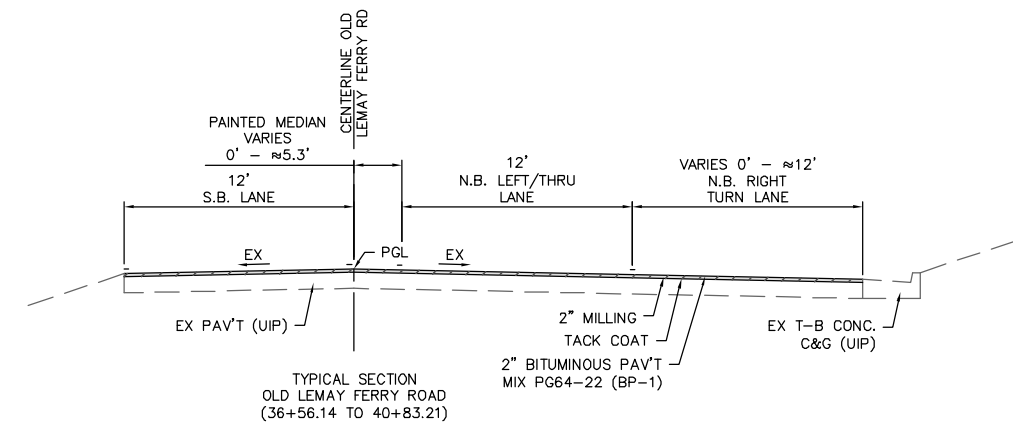
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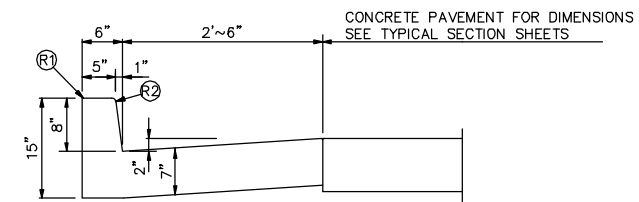
B-SHEET

VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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



DOWELED ON CONCRETE MEDIAN DETAIL
SEE MoDOT STANDARD 608.30 FOR FURTHER INFO



TYPE B
(BARRIER)
CURB & GUTTER

- LEGEND
- (R1) ROUND TO 1" RADIUS. (EXCEPT FOR SAWED JOINTS)
 - (R2) ROUND TO 1" RADIUS.
 - (R3) CONSTRUCT TO 9" RADIUS

Corporate Engineering
Certificate # 000381

STATE OF MISSOURI

BRIAN E. COURTWRIGHT

NUMBER
PE-2006002617

PROFESSIONAL ENGINEER

CIVIL ENGINEER
DATE PREPARED

ROUTE	STATE MO
DISTRICT 6	SHEET NO. 5
COUNTY JEFFERSON	
JOB NO. 2011-105	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
8/19/13	PRELIMINARY APPROVAL
1/24/14	70% SUBMITTAL (TO COUNTY)
4/29/14	PS&E SUBMITTAL (TO COUNTY)

TRANSPORTATION ENGINEERS+PLANNERS

E B B

13400 OLIVE BLVD, SUITE 430
ST. LOUIS, MO 63141
(314) 878-6644

450 COTTONWOOD RD, SUITE B
GLEN CARBON, IL 62034
(618) 656-2612
www.ebbrtraffic.com

TYPICAL SECTIONS

VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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



CIVIL ENGINEER
DATE PREPARED

ROUTE	STATE
DISTRICT	SHEET NO.
6	6

COUNTY
JEFFERSON
JOB NO.
2011-105
CONTRACT ID.

PROJECT NO.

BRIDGE NO.

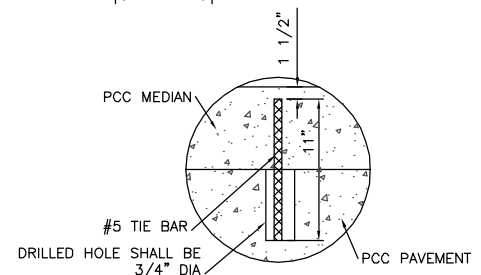
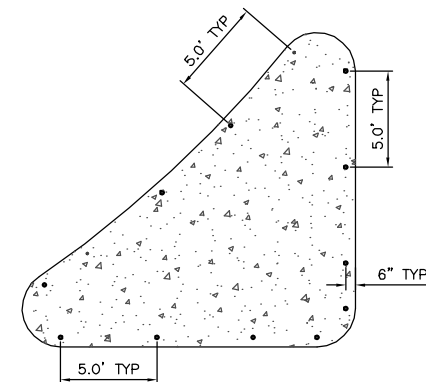
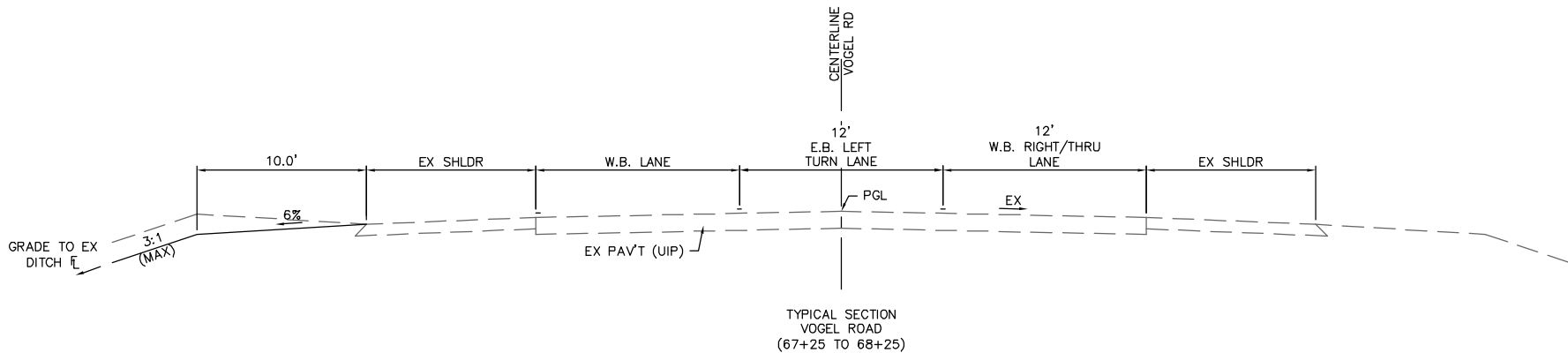
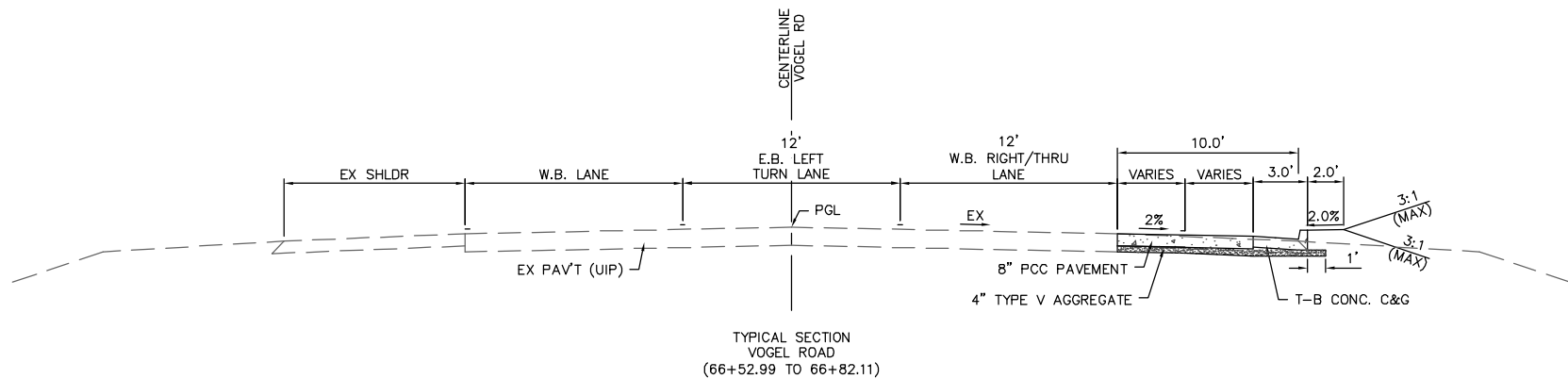
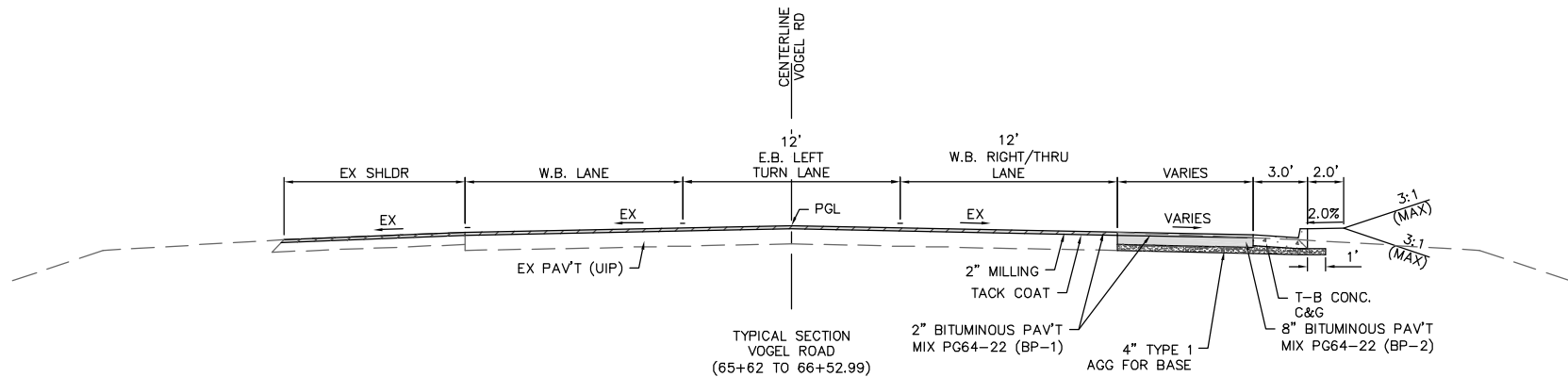
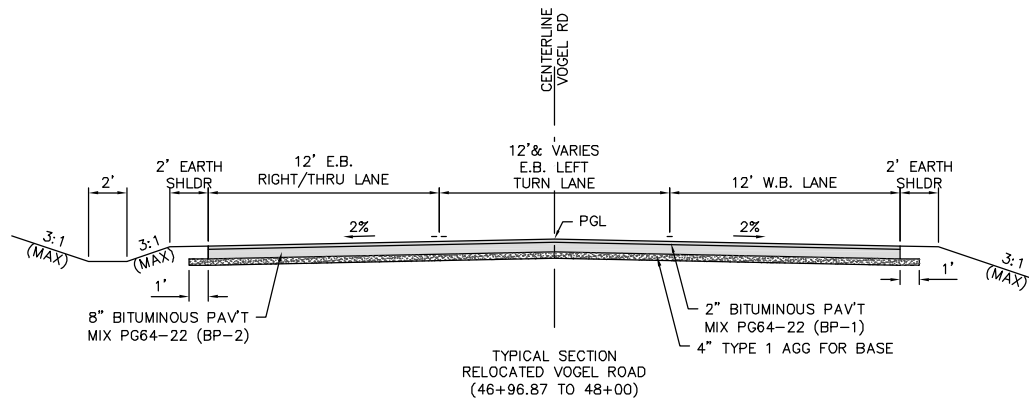
DESCRIPTION	DATE
PRELIMINARY SUBMITTAL	6/21/13
PRELIMINARY APPROVAL	8/19/13
70% SUBMITTAL (TO COUNTY)	1/24/14
PS&E SUBMITTAL (TO COUNTY)	4/29/14

TRANSPORTATION
ENGINEERS+PLANNERS

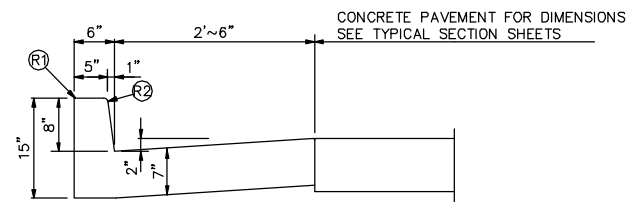
13400 OLIVE BLVD, SUITE 430
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(314) 878-6644
450 COTTONWOOD RD, SUITE B
GLEN CARBON, IL 62234
(618) 656-2612
www.csbtraffic.com

TYPICAL SECTIONS
VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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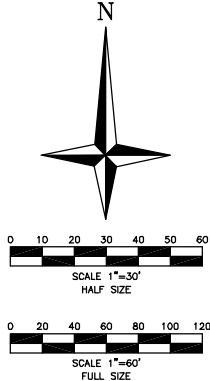
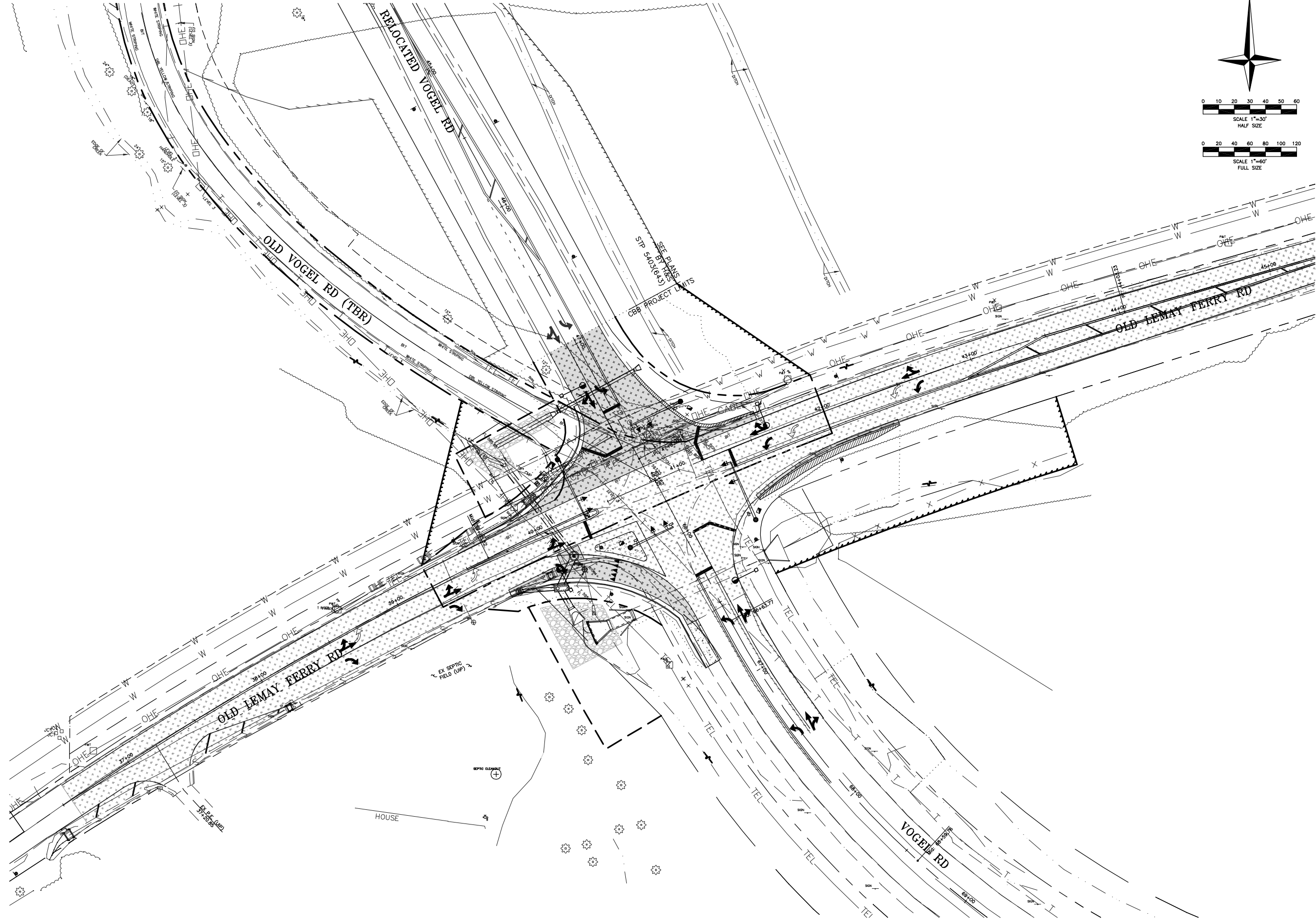


DOWELED ON CONCRETE MEDIAN DETAIL
SEE MoDOT STANDARD 608.30 FOR FURTHER INFO



TYPE B
(BARRIER)
CURB & GUTTER

- LEGEND
- (R1) ROUND TO 1" RADIUS. (EXCEPT FOR SAWED JOINTS)
 - (R2) ROUND TO 1" RADIUS.
 - (R3) CONSTRUCT TO 9" RADIUS



Corporate Engineering
Certificate # 000381

STATE OF MISSOURI
BRIAN E. COURTWRIGHT
NUMBER
PE-2006002617
PROFESSIONAL ENGINEER

CIVIL ENGINEER
DATE PREPARED

ROUTE
DISTRICT
6

STATE
MO
SHEET NO.
7

COUNTY
JEFFERSON

JOB NO.
2011-105
CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
8/19/13	PRELIMINARY APPROVAL
1/24/14	70% SUBMITTAL (TO COUNTY)
4/29/14	PS&E SUBMITTAL (TO COUNTY)

TRANSPORTATION
ENGINEERS+PLANNERS

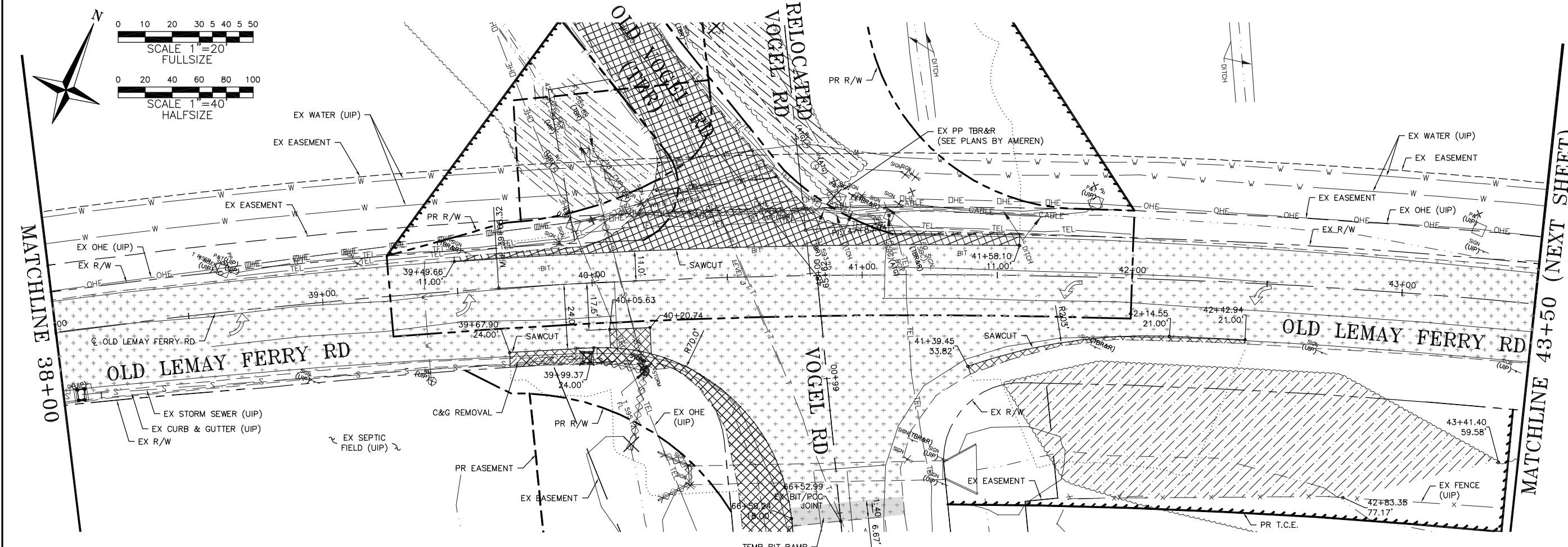
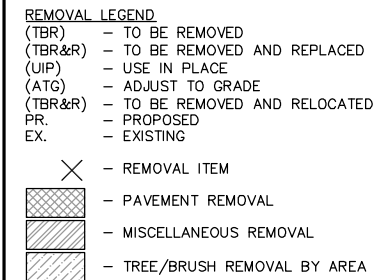
13400 OLIVE BLVD, SUITE 430
ST. LOUIS, MO 63141
(314) 878-6644


GCB

450 COTTONWOOD RD, SUITE B
GLEN CARBON, IL 62034
(618) 656-2612
www.cbtraffic.com

OVERALL
VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

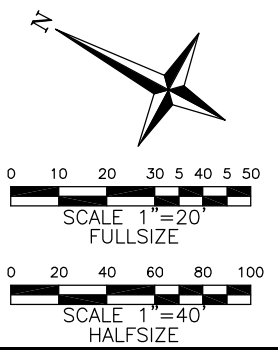
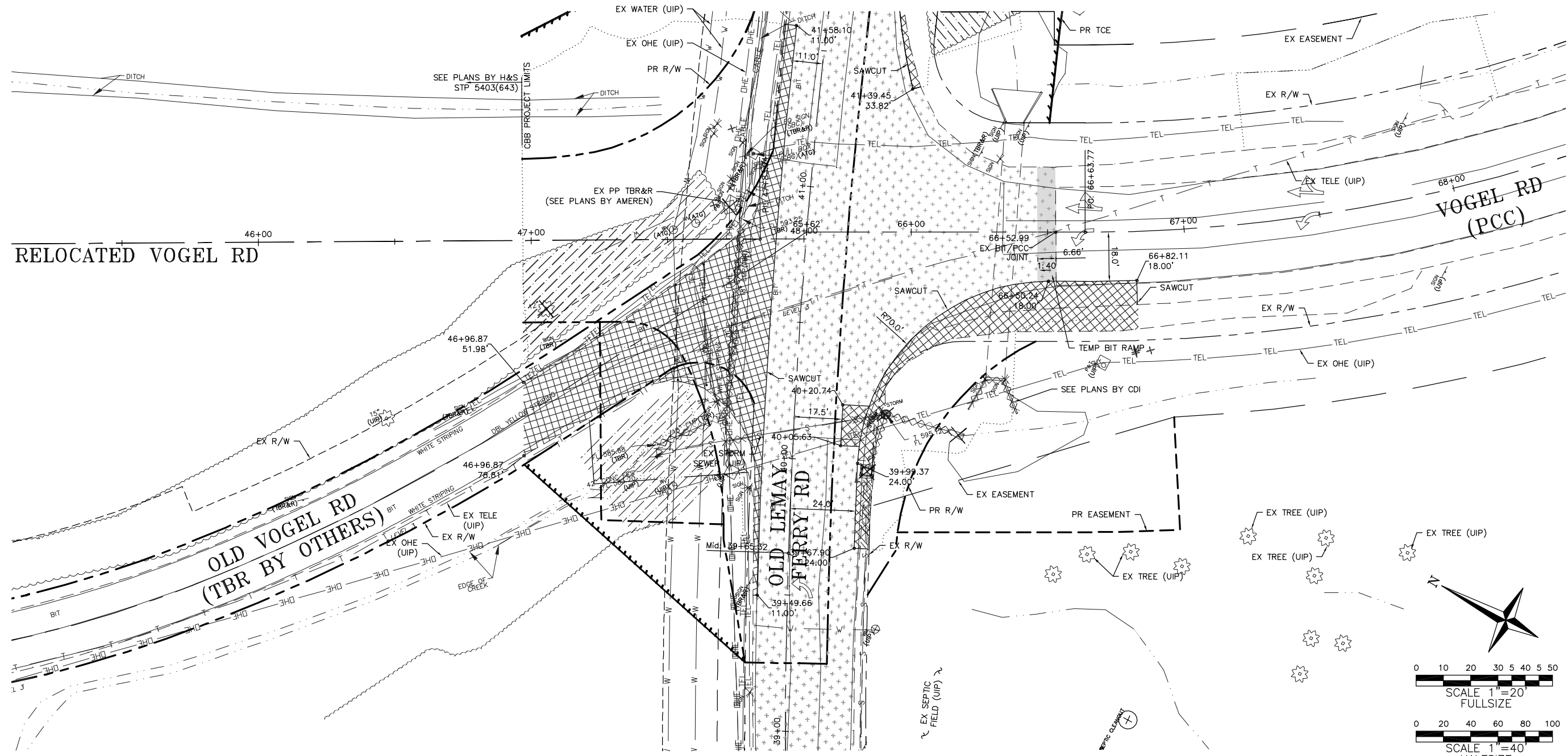
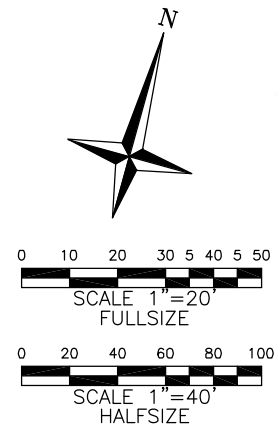
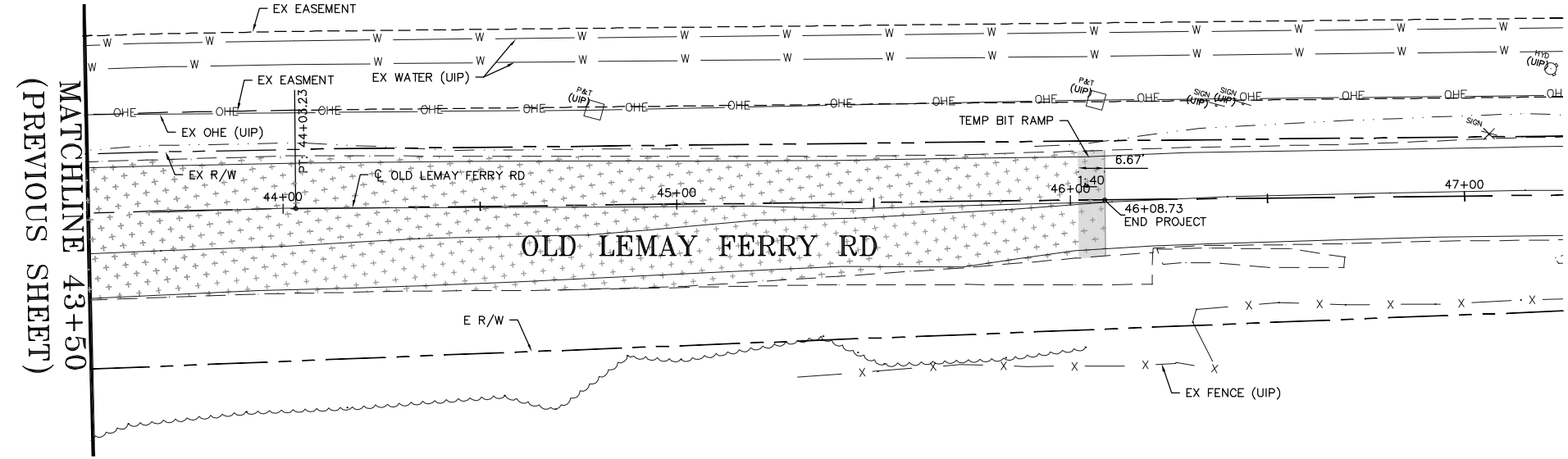
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		TRANSPORTATION ENGINEERS+PLANNERS 12400 OLIVE BLVD SUITE 430 ST. LOUIS, MO 63141 (314) 875-6844 450 COTTONWOOD RD, SUITE B GLEN CARBON, IL 62034 (618) 656-2612 www.cbbrllc.com	
REMOVAL PLAN		VOGEL ROAD & LEMAY FERRY RD JEFFERSON COUNTY, MISSOURI STP-5403(641)	
CIVIL ENGINEER DATE PREPARED _____		STATE OF MISSOURI BRIAN E. COURTWRIGHT NUMBER PE-2006022817 PROFESSIONAL ENGINEER	
ROUTE _____ STATE _____ DISTRICT 6 SHEET NO. 8		COUNTY JEFFERSON JOB NO. 2011-105 CONTRACT ID. _____	
PROJECT NO. _____			
BRIDGE NO. _____			
DESCRIPTION			
DATE			
6/21/13	PRELIMINARY SUBMITTAL		
8/19/13	PRELIMINARY APPROVAL		
1/24/14	70% SUBMITTAL (TO COUNTY)		
4/29/14	PS&E SUBMITTAL (TO COUNTY)		

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

- REMOVAL LEGEND
- (TBR) - TO BE REMOVED
 - (TBR&R) - TO BE REMOVED AND REPLACED
 - (UIP) - USE IN PLACE
 - (ATG) - ADJUST TO GRADE
 - (TBR&R) - TO BE REMOVED AND RELOCATED
 - PR - PROPOSED
 - EX - EXISTING
 - X - REMOVAL ITEM
 - [Pattern] - PAVEMENT REMOVAL
 - [Pattern] - MISCELLANEOUS REMOVAL
 - [Pattern] - TREE/BRUSH REMOVAL BY AREA



Corporate Engineering
Certificate # 000381

STATE OF MISSOURI
BRIAN E. COURTWRIGHT
NUMBER
PE-2006002617
PROFESSIONAL ENGINEER

CIVIL ENGINEER
DATE PREPARED

ROUTE	STATE
6	MO
DISTRICT	SHEET NO.
6	9
COUNTY	JEFFERSON
JOB NO.	2011-105
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

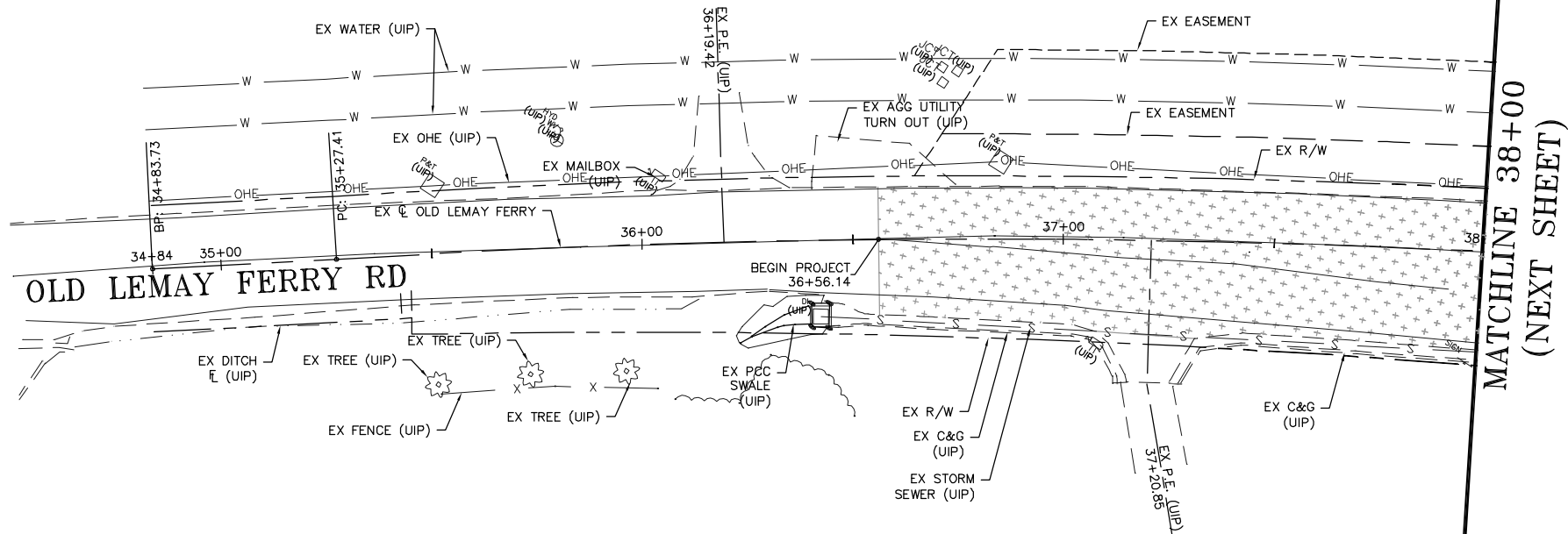
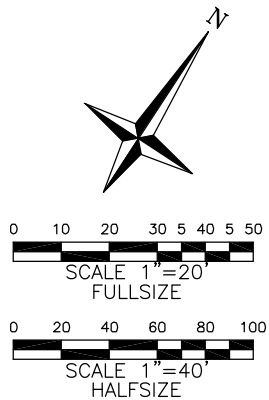
DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
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4/29/14	PS&E SUBMITTAL (TO COUNTY)

TRANSPORTATION ENGINEERS+PLANNERS
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(618) 656-2612
www.cbbtraffic.com

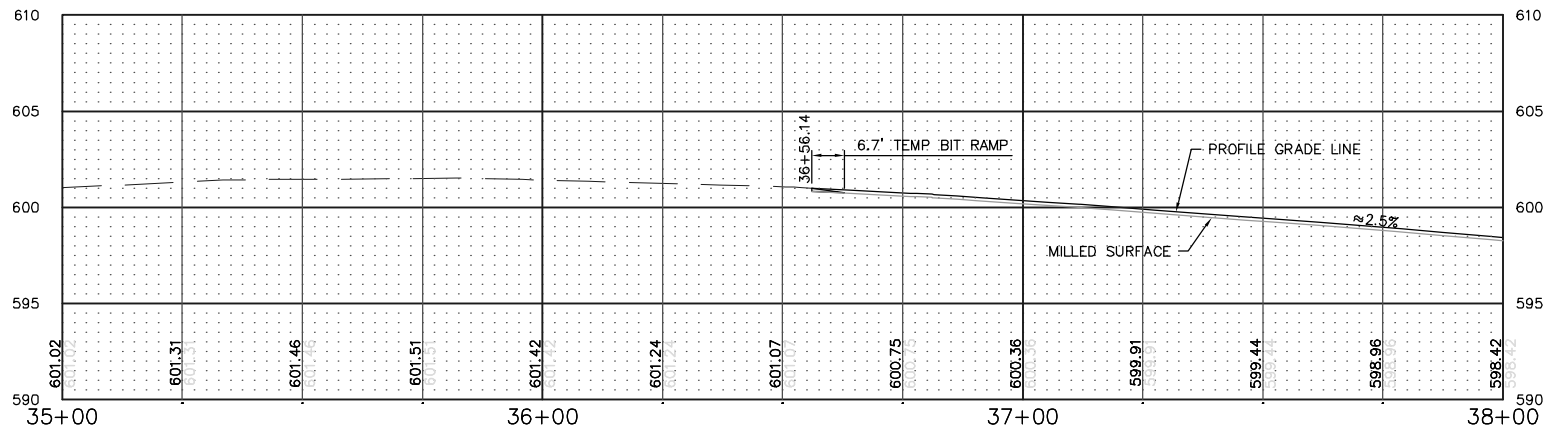
CBB

REMOVAL PLAN
VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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



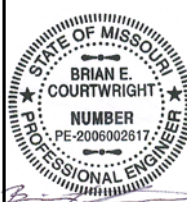
NOTE:
SEE PLANS BY CDI FOR
DRAINAGE ITEMS



OLD LEMAY FERRY

- PROPOSED LEGEND**
- (TBR) - TO BE REMOVED
 - (TBR&R) - TO BE REMOVED AND REPLACED
 - (UIP) - USE IN PLACE
 - CONC - CONCRETE
 - TEMP - TEMPORARY
 - PAV'T - PAVEMENT
 - PR - PROPOSED
 - EX - EXISTING
 - [Pattern] - PR BIT PAV'T W/ 2" SURFACE COURSE
 - [Pattern] - PR PCC ITEM
 - [Pattern] - PR BITUMINOUS SHOULDERS
 - [Pattern] - PR 2" MILLING & 2" RESURFACING EX PAV'T
 - [Pattern] - PR GRADING LIMITS
 - [Pattern] - PR EDGE OF 1.5% SHELF
 - [Pattern] - ADJACENT PROJECT SEE STP-5403(643)

Corporate Engineering
Certificate # 000381



CIVIL ENGINEER
DATE PREPARED

ROUTE	STATE
DISTRICT	SHEET NO.
6	10

COUNTY	JOB NO.
JEFFERSON	2011-105
CONTRACT ID.	

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
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1/24/14	70% SUBMITTAL (TO COUNTY)
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**TRANSPORTATION
ENGINEERS+PLANNERS**

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(314) 878-8844

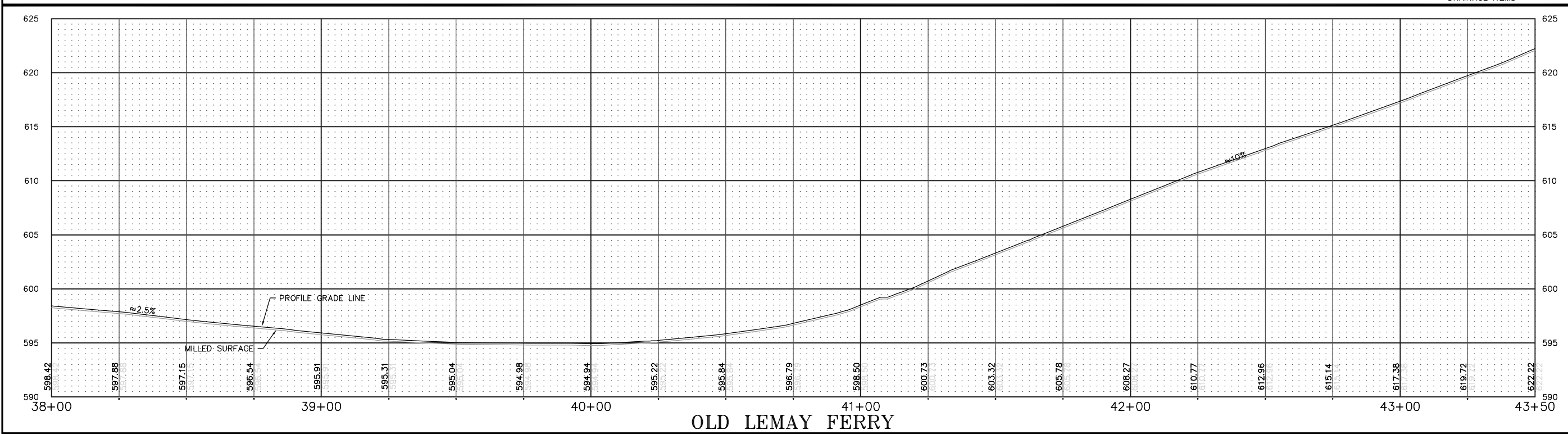
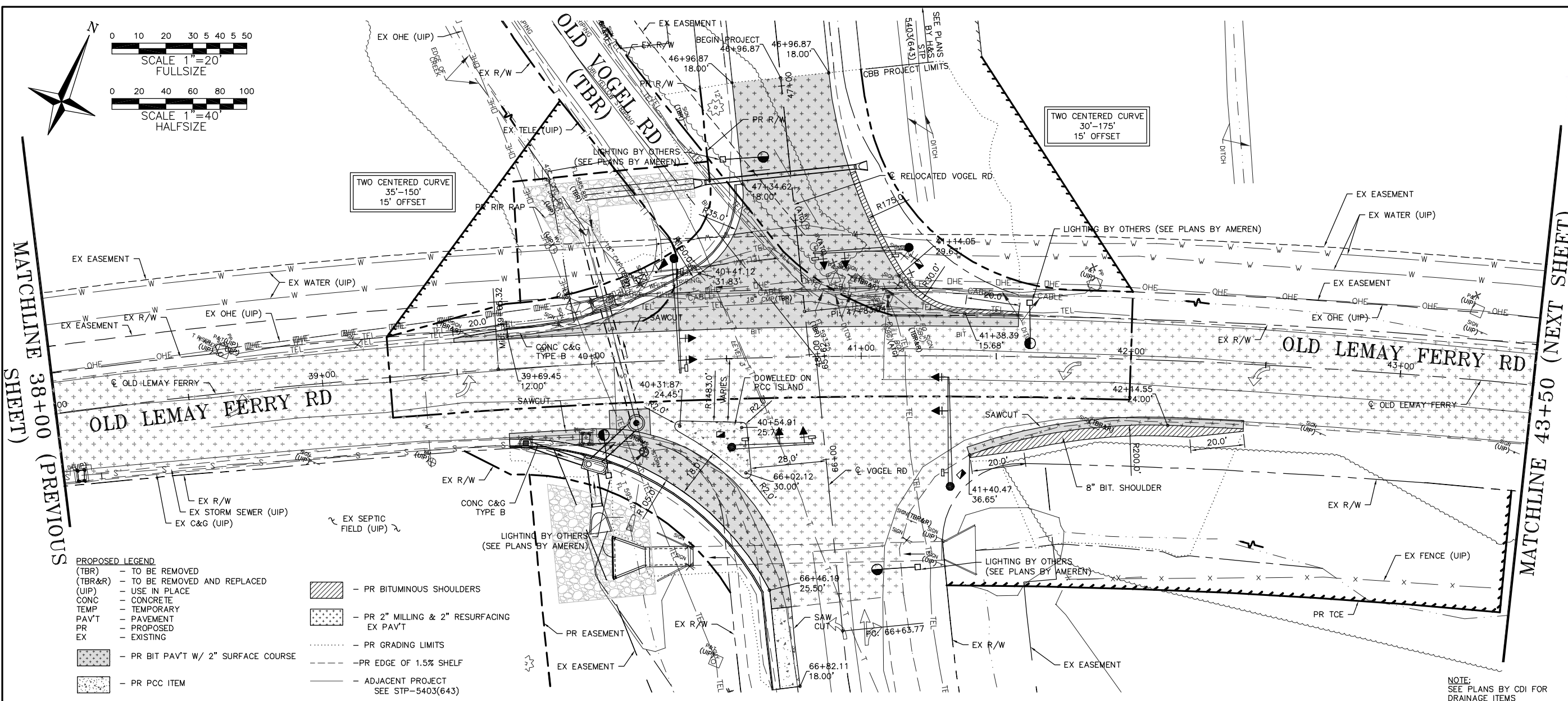
450 COTTONWOOD RD. SUITE B
GLEN CARBON, IL 62034
(618) 656-2612
www.cbbtraffic.com



PLAN/PROFILE

VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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



Corporate Engineering
Certificate # 000381

STATE OF MISSOURI
BRIAN E. COURTWRIGHT
NUMBER
PE-2006002617
PROFESSIONAL ENGINEER

CIVIL ENGINEER
DATE PREPARED

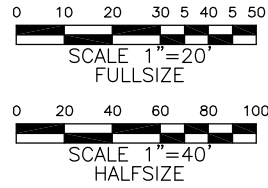
ROUTE	STATE
DISTRICT	SHEET NO.
6	11
COUNTY	
JEFFERSON	
JOB NO.	
2011-105	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
8/19/13	PRELIMINARY APPROVAL
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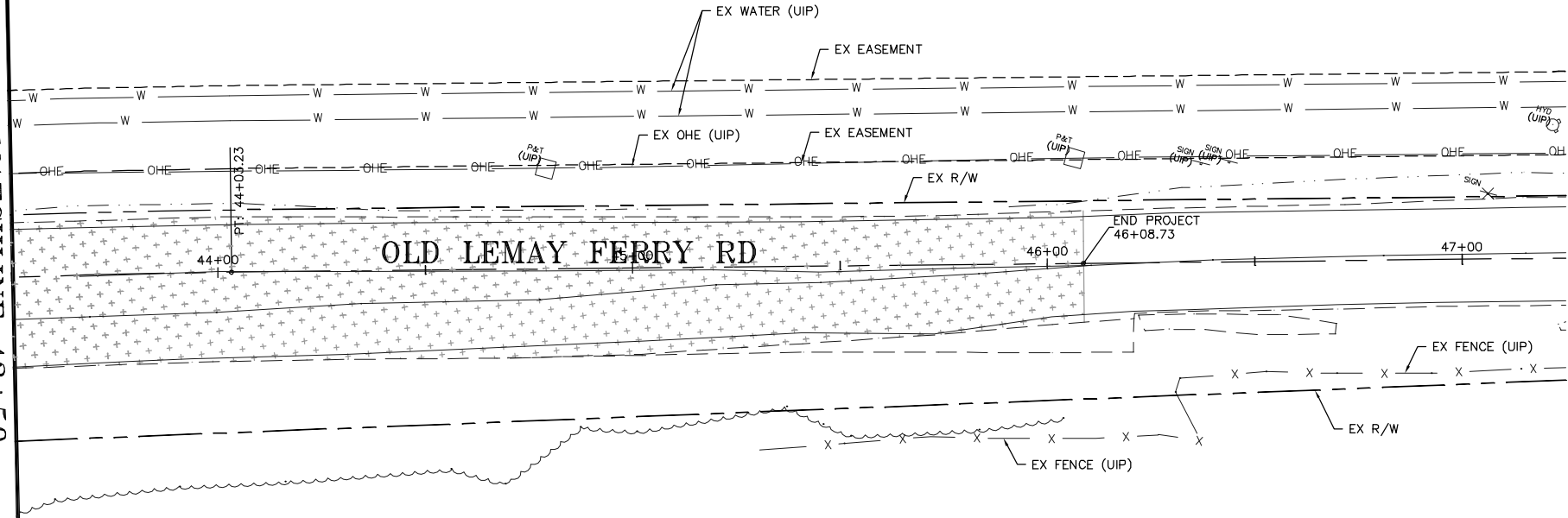
TRANSPORTATION ENGINEERS+PLANNERS
 13400 OLIVE BLVD, SUITE 430
 ST. LOUIS, MO 63141
 (314) 978-8844
 450 COTTONWOOD RD, SUITE B
 GLENACARON, IL 62034
 (618) 656-2612
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PLAN/PROFILE
VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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



MATCHLINE 43+50
(PREVIOUS SHEET)



NOTE:
SEE PLANS BY CDI FOR
DRAINAGE ITEMS

- PROPOSED LEGEND
- (TBR) - TO BE REMOVED
 - (TBR&R) - TO BE REMOVED AND REPLACED
 - (UIP) - USE IN PLACE
 - CONC - CONCRETE
 - TEMP - TEMPORARY
 - PAV'T - PAVEMENT
 - PR - PROPOSED
 - EX - EXISTING
- PR BIT PAV'T W/ 2" SURFACE COURSE
 - PR PCC ITEM
 - PR BITUMINOUS SHOULDERS
 - PR 2" MILLING & 2" RESURFACING EX PAV'T
 - PR GRADING LIMITS
 - PR EDGE OF 1.5% SHELFF
 - ADJACENT PROJECT SEE STP-5403(643)

Corporate Engineering
Certificate # 000381



CIVIL ENGINEER
DATE PREPARED

ROUTE	STATE
DISTRICT	SHEET NO.
6	12

COUNTY
JEFFERSON

JOB NO.
2011-105

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
8/19/13	PRELIMINARY APPROVAL
1/24/14	70% SUBMITTAL (TO COUNTY)
4/29/14	PS&E SUBMITTAL (TO COUNTY)

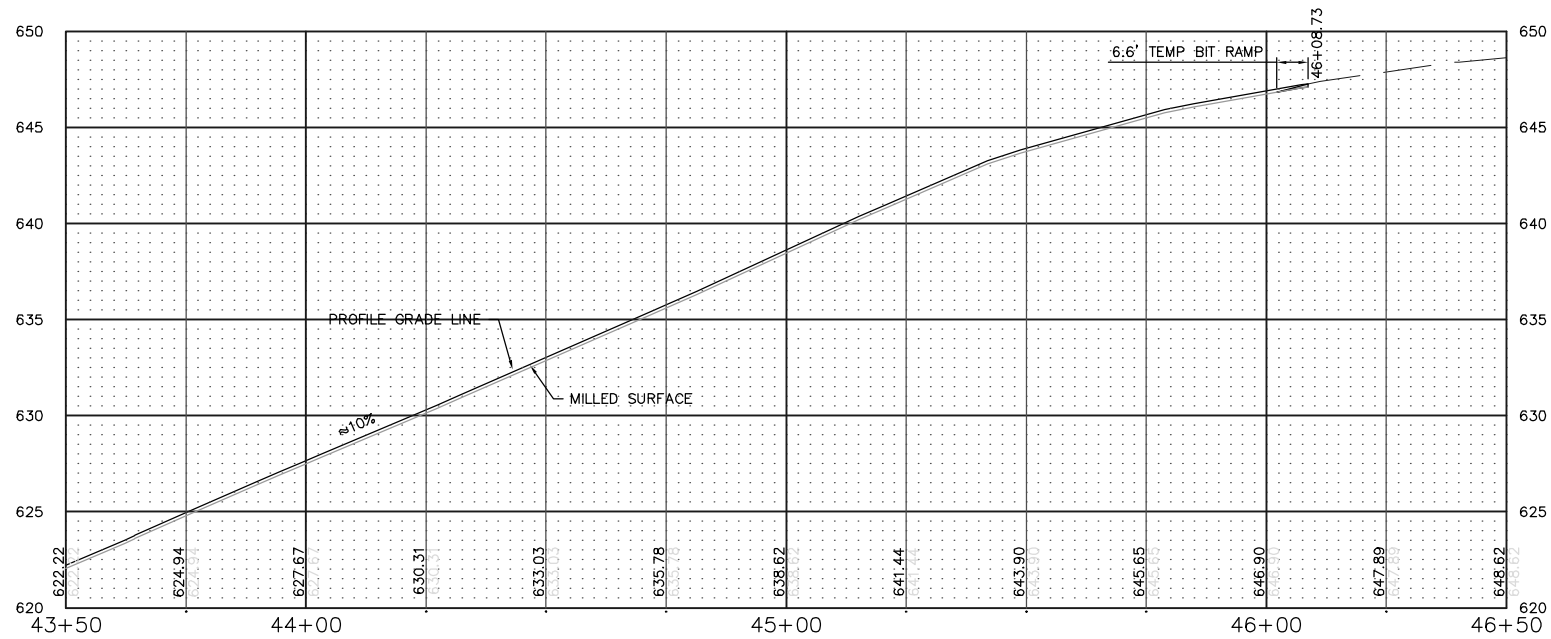
**TRANSPORTATION
ENGINEERS+PLANNERS**

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(314) 878-8844

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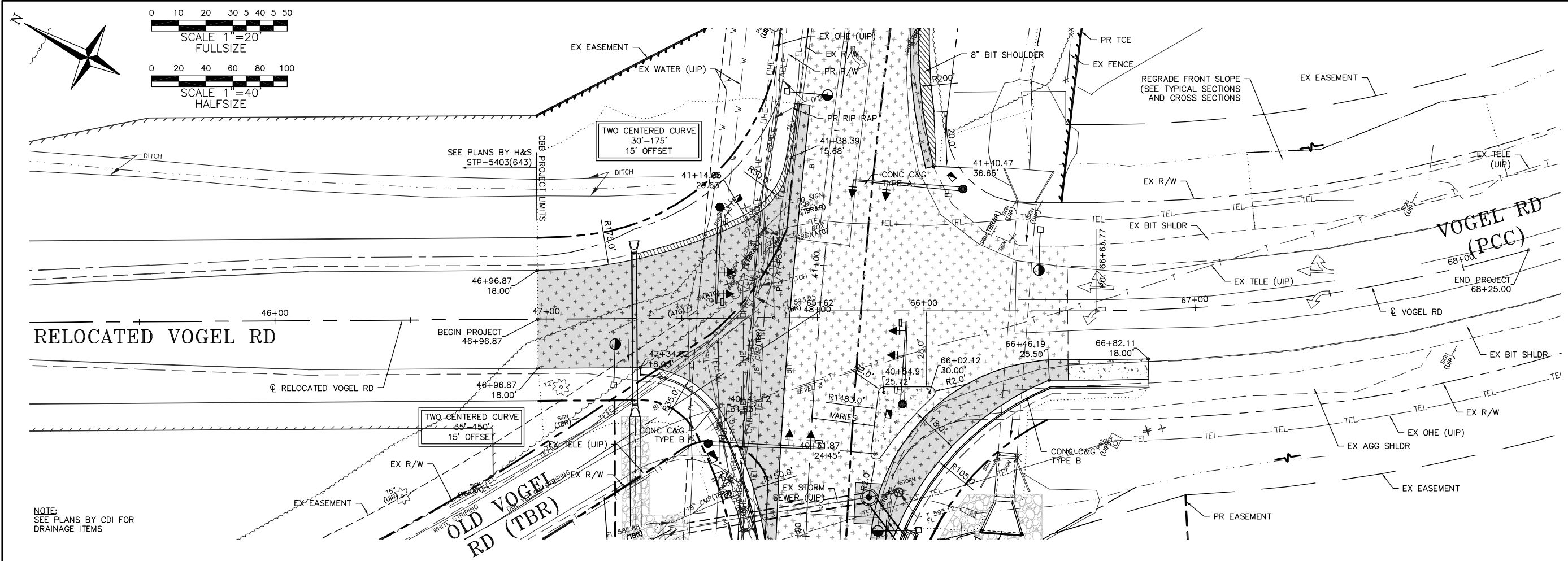
PLAN/PROFILE

VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)



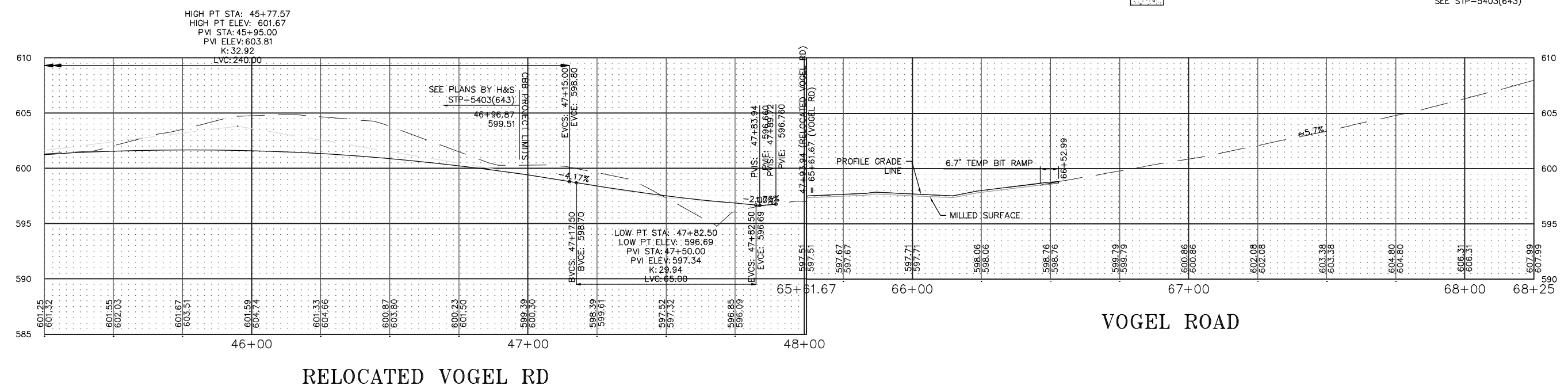
OLD LEMAY FERRY

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NOTE:
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DRAINAGE ITEMS

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 - PAV'T - PAVEMENT
 - PR - PROPOSED
 - EX - EXISTING
 - PR BIT PAV'T W/ 2" SURFACE COURSE
 - PR PCC ITEM
 - PR BITUMINOUS SHOULDERS
 - PR 2" MILLING & 2" RESURFACING EX PAV'T
 - PR GRADING LIMITS
 - PR EDGE OF 1.5% SHELF
 - ADJACENT PROJECT SEE STP-5403(643)



Corporate Engineering
Certificate # 000381

STATE OF MISSOURI
BRIAN E. COURTWRIGHT
NUMBER
PE-2006002617
PROFESSIONAL ENGINEER

CIVIL ENGINEER
DATE PREPARED

ROUTE	STATE
DISTRICT	SHEET NO.
COUNTY	JOB NO.
CONTRACT ID.	PROJECT NO.
BRIDGE NO.	

DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
8/19/13	PRELIMINARY APPROVAL
1/24/14	70% SUBMITTAL (TO COUNTY)
4/29/14	PS&E SUBMITTAL (TO COUNTY)

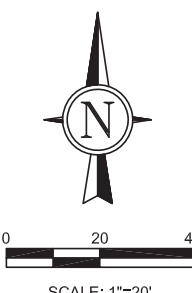
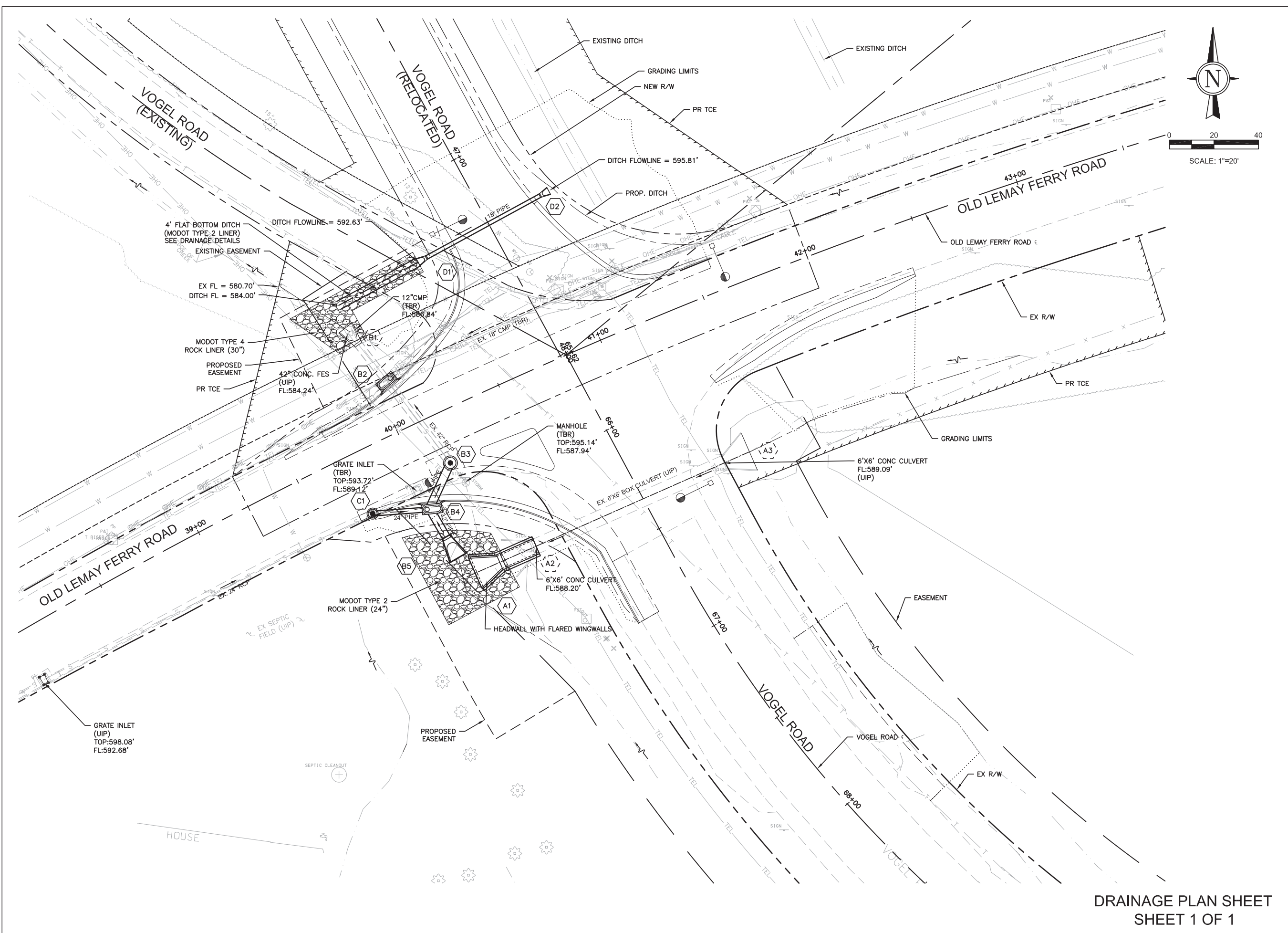
TRANSPORTATION
ENGINEERS+PLANNERS

13409 OLIVE BLVD. SUITE 430
ST. LOUIS, MO 63141
(314) 878-8844
450 COTTONWOOD RD. SUITE B
GLEN CARBON, IL 62034
(618) 555-2612
www.cbbraifc.com

PLAN/PROFILE

VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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



Corporate Engineering
Certificate # 200206804

STATE OF MISSOURI
MARK S. KELLER
NUMBER PE-2010000837
PROFESSIONAL ENGINEER

CIVIL ENGINEER
DATE PREPARED 04/18/2014
ROUTE STATE MO
DISTRICT 6 SHEET NO. 14
COUNTY JEFFERSON
JOB NO. 2011-105
CONTRACT ID.
PROJECT NO. R0800
BRIDGE NO.

DATE	DESCRIPTION

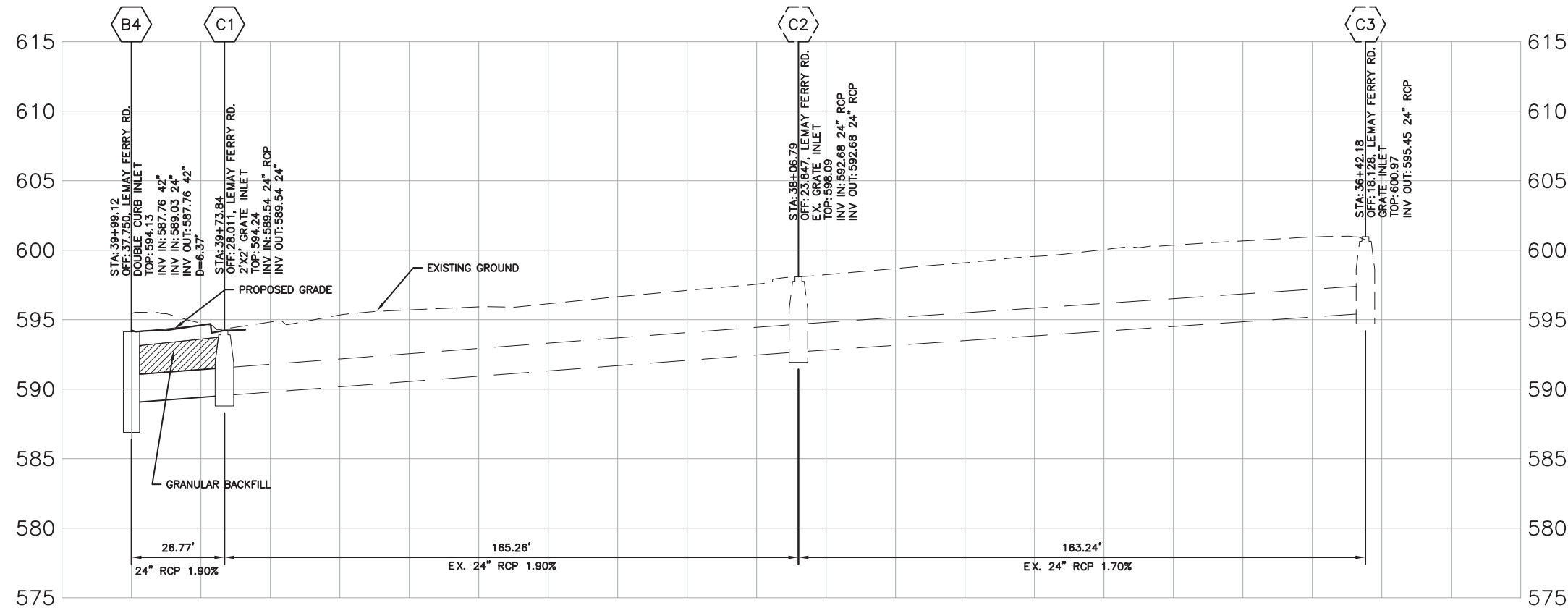
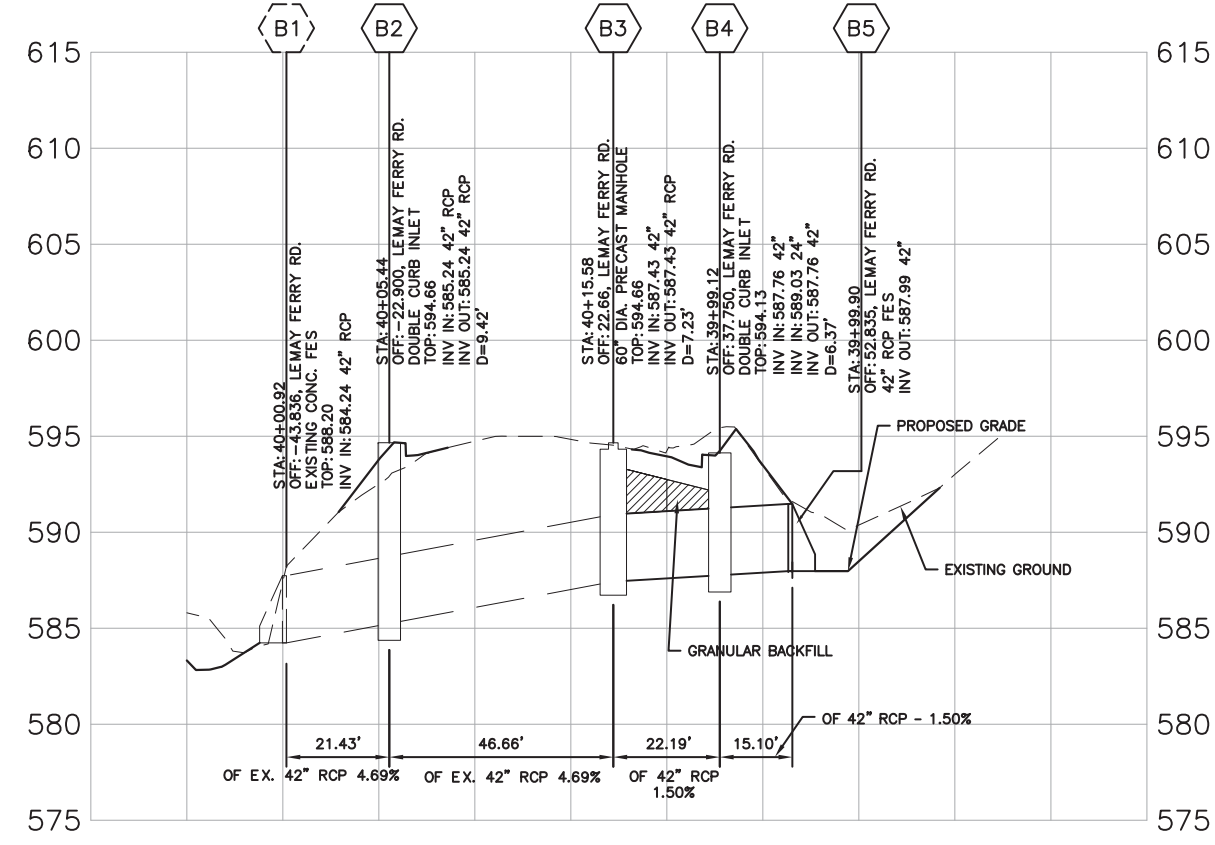
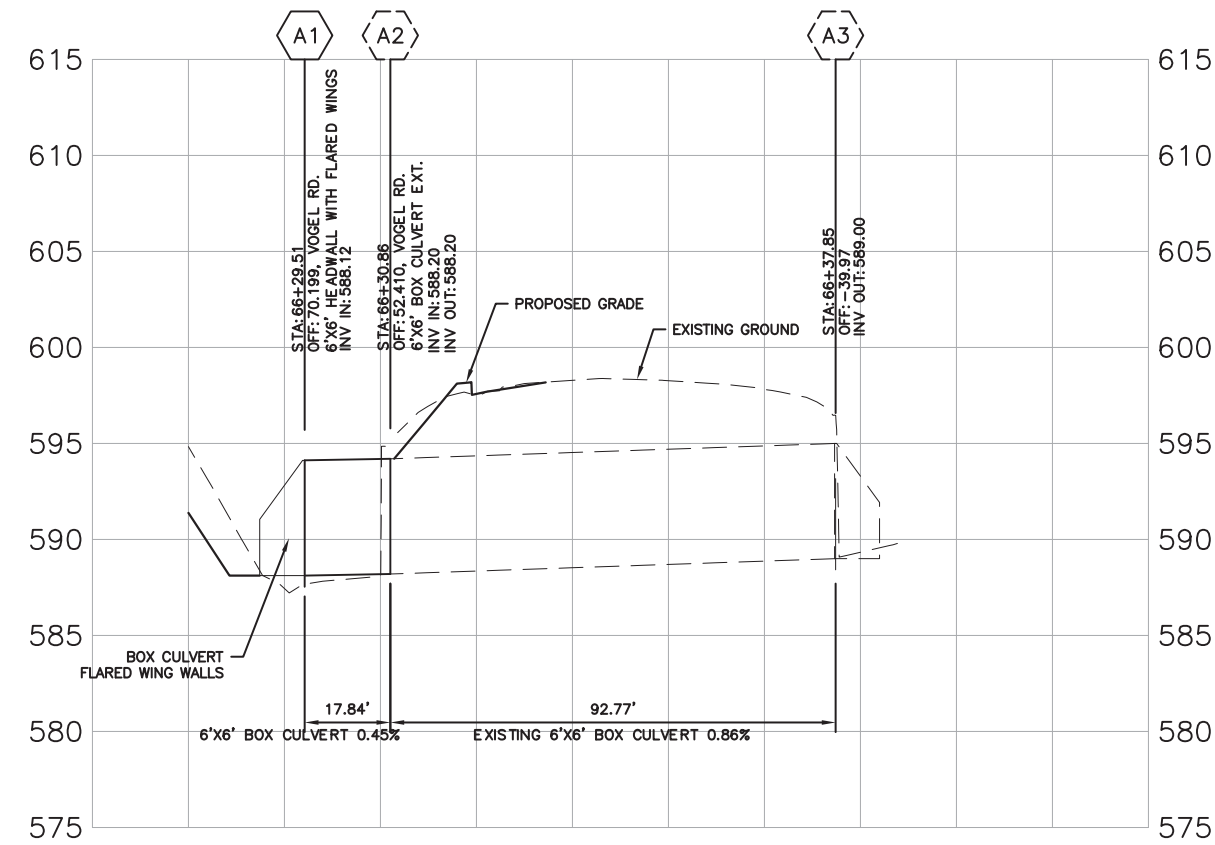
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of Authority #200206804

CDI
CIVIL DESIGN, INC.
WBE / DBE

DRAINAGE PLAN
VOGLE RD. AND OLD LEMAY FERRY RD.
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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

DRAINAGE PLAN SHEET
SHEET 1 OF 1



DRAINAGE PROFILE SHEET
SHEET 1 OF 2

Corporate Engineering
Certificate # 2002006804



CIVIL ENGINEER	
DATE PREPARED 04/18/2014	
ROUTE	STATE
DISTRICT	SHEET NO.
6	15
COUNTY JEFFERSON	
JOB NO. 2011-105	
CONTRACT ID.	
PROJECT NO. R0800	
BRIDGE NO.	

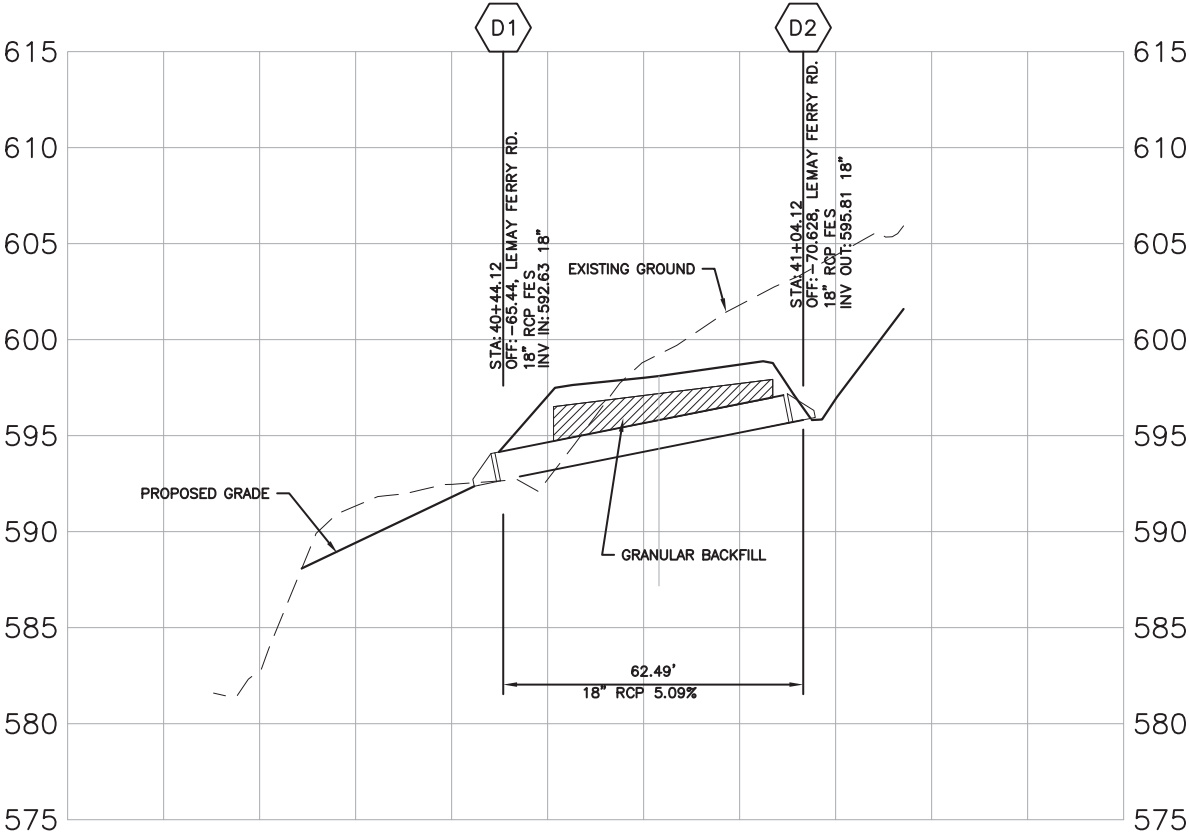
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Missouri State Certificate
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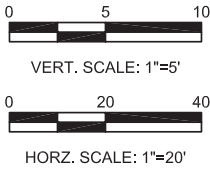
DRAINAGE PROFILE
VOGLE RD. AND OLD LEMAY FERRY RD.
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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



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DRAINAGE PROFILE SHEET
SHEET 2 OF 2

Corporate Engineering
Certificate # 2002006804



CIVIL ENGINEER

DATE PREPARED
04/18/2014

ROUTE STATE
6 MO

DISTRICT SHEET NO.
6 16

COUNTY
JEFFERSON

JOB NO.
2011-105

CONTRACT ID.

PROJECT NO.
R0800

BRIDGE NO.

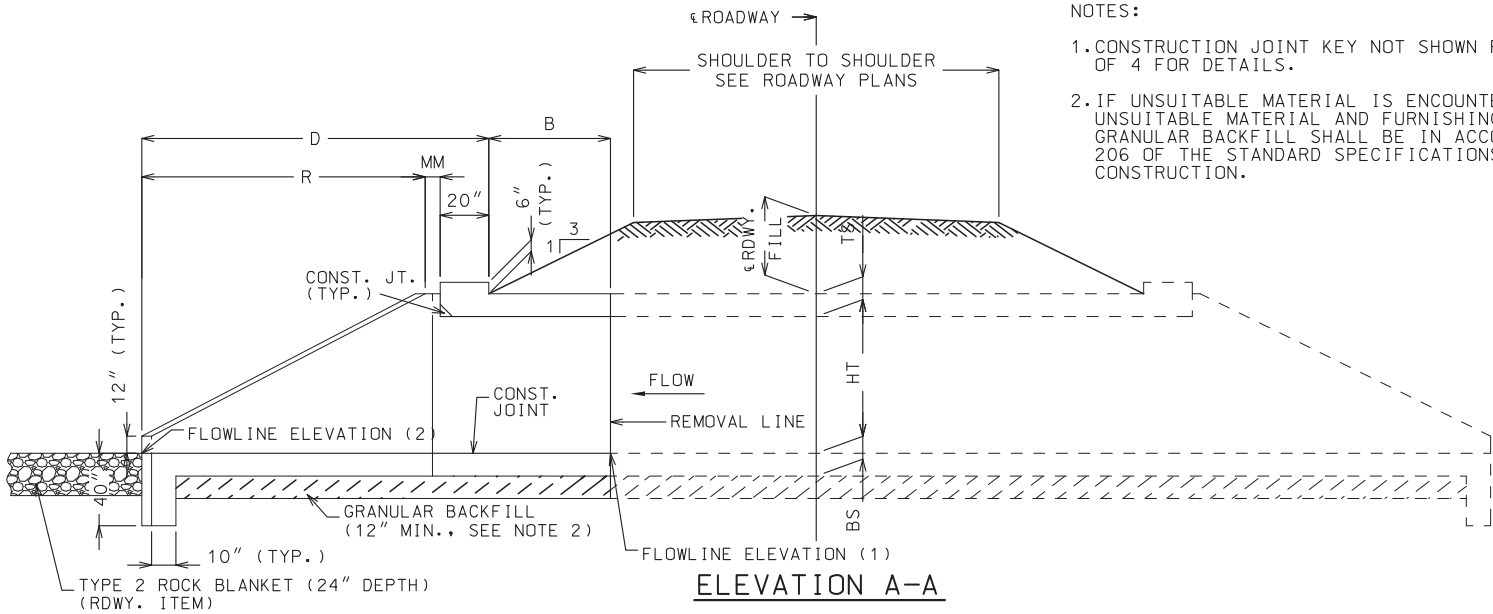
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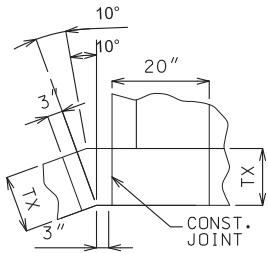
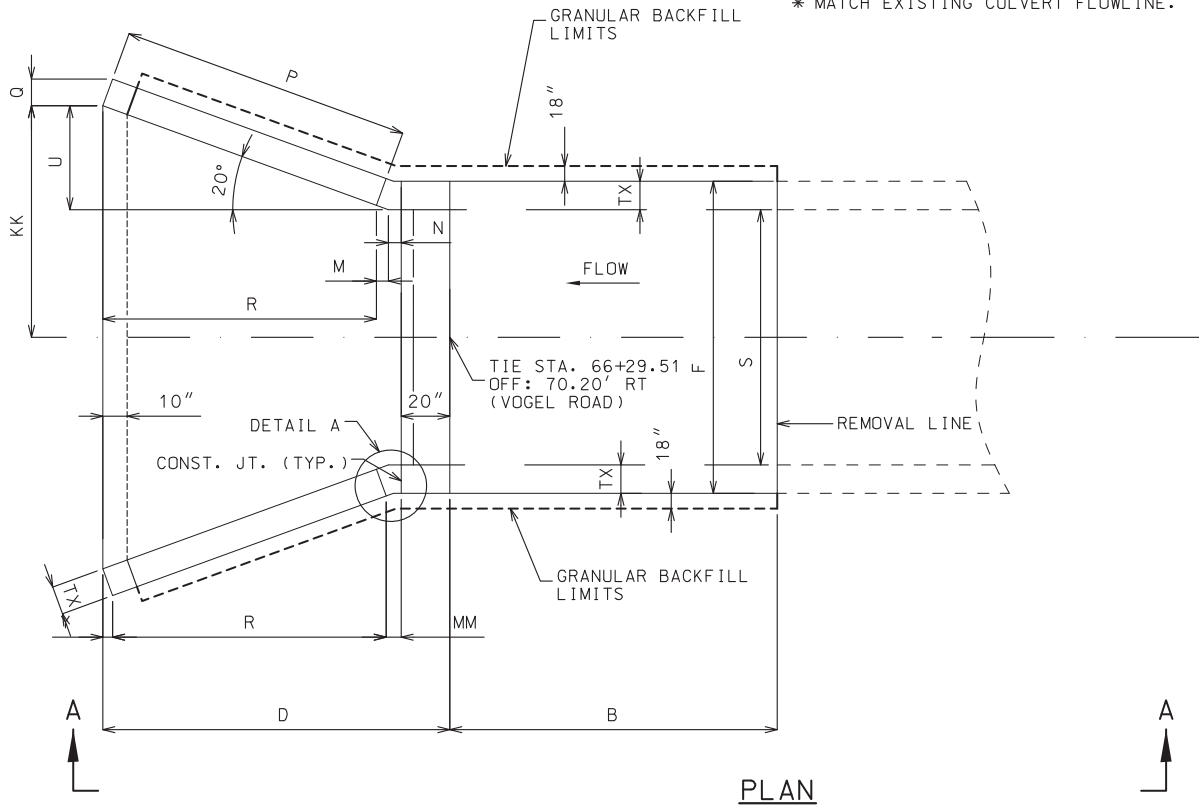
DRAINAGE PROFILE
VOGLE RD. AND OLD LEMAY FERRY RD.
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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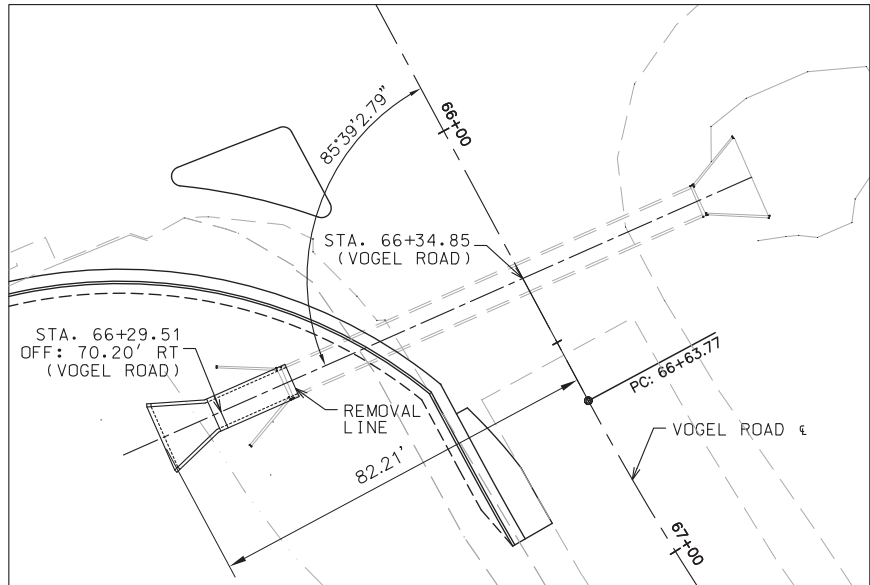


GENERAL DATA TABLE					
VARIABLE	EQUATION	DIM.	VARIABLE	DIMENSION	DIM.
S	---	6'-0"	P	2V(SEC 20°)	144-3/4"
HT	---	6'-0"	Q	TX(COS 20°)	7-1/2"
BS	---	8"	R	P(COS 20°)	136"
TX	---	8"	U	(R + M)(TAN 20°)	51"
TS	---	8"	V	HT + TS - 12"	68"
B	---	16'-2 1/8"	Y	TX(SIN 20°)	2-3/4"
D	Y + R + MM + 20"	164-9/16"	KK	S/2 + U	87"
F	S + 2TX	88"	MM	3" + 3"(COS 20°)	5-13/16"
M	N(COS 20°)	4-1/8"	TOE	MAX{(BS + 12"), 40"}	40"
N	3" + TX(TAN 10°)	4-7/16"	DESIGN FILL		48"
			FLOWLINE ELEV. (1)		588.20 *
			FLOWLINE ELEV. (2)		588.12

* MATCH EXISTING CULVERT FLOWLINE.



HYDROLOGIC DATA	
DRAINAGE AREA = 12.62 ACRES	
DESIGN HIGH WATER ELEV. = 590.22	
DESIGN HIGH WATER FREQUENCY = 50 YEAR	
DESIGN HIGH WATER DISCHARGE = 62.41 CFS	



GENERAL NOTES:

DESIGN SPECIFICATIONS: 2010 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND 2010 INTERIM REVISIONS

DESIGN UNIT STRESSES: CLASS B-I CONCRETE f'_c = 4,000 PSI
REINFORCING STEEL (GRADE 60) f_y = 60,000 PSI

DESIGN LOADS: VEHICULAR = HL-93 MINUS LANE LOAD
EARTH = 120 LB/CF
EQUIVALENT FLUID PRESSURE = 30 LB/CF (MIN.) - 60 LB/CF (MAX.)

FOR REINFORCEMENT DETAILS, SEE SHEET 2 OF 4. FOR SECTION DETAILS, SEE SHEET 3 OF 4. FOR MEMBER THICKNESS, SEE 703.17.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1 1/2", UNLESS NOTED OTHERWISE.

TRAFFIC:

TRAFFIC OVER STRUCTURE TO BE MAINTAINED ON EXISTING ROADWAY DURING CONSTRUCTION.

MISCELLANEOUS:

EXISTING STRUCTURE IS INDICATED BY LIGHT DASHED LINES. HEAVY LINE INDICATE NEW WORK.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD BEFORE ORDERING NEW MATERIAL.

BARS BONDED IN OLD CONCRETE NOT REMOVED SHALL BE CLEANED AND STRIPPED AND EMBEDDED INTO NEW CONCRETE WHERE POSSIBLE. IF LENGTH IS AVAILABLE, OLD BARS SHALL EXTEND INTO NEW CONCRETE AT LEAST 40 DIAMETERS FOR SMOOTH BARS AND 30 DIAMETERS FOR DEFORMED BARS, UNLESS NOTED OTHERWISE.

PROVIDE GRADING OF THE CHANNEL BOTTOM WITHIN THE R/W LIMITS AS NEEDED FOR CULVERT FLOWLINE ELEVATIONS AND TRANSITION OF THE CHANNEL BED TO THE CULVERT OPENINGS. TAPER CHANNEL BANKS TO MATCH ENDS OF THE CULVERT OPENING AS REQUIRED (ROADWAY ITEM).

BOTTOM OF TOP SLAB, TOP OF BOTTOM SLAB, AND INSIDE FACES OF WALLS SHALL BE BUILT FLUSH WITH THE EXISTING STRUCTURE.

PRECAST OPTION:

WHEN ALTERNATE PRECAST CONCRETE BOX CULVERT SECTIONS ARE USED, THE MINIMUM DISTANCE FROM INSIDE FACE OF HEADWALLS TO PRECAST SECTIONS MEASURED ALONG THE SHORTEST WALL SHALL BE 3 FEET. REINFORCEMENT AND DIMENSIONS FOR WINGS AND HEADWALLS SHALL BE IN ACCORDANCE WITH MISSOURI STANDARD PLANS.

ESTIMATED QUANTITIES		FINAL QUANTITIES
CLASS 3 EXCAVATION (CY)	7	
PARTIAL REMOVAL OF CULVERT CONCRETE (LS)	1	
CLASS B-1 CONCRETE (CULVERTS-BRIDGE) (CY)	19.2	
REINFORCING STEEL (CULVERTS-BRIDGE) (LB)	2,930	

NOTES:

FOR DETAILS OF REMOVAL OF EXISTING CULVERT CONCRETE, SEE MODOT STD. 703.38A.

**DRAINAGE DETAIL SHEET
SHEET 1 OF 4**

Corporate Engineering
Certificate # 2002006804



CIVIL ENGINEER

DATE PREPARED
04/18/2014

ROUTE
STATE
MO

DISTRICT
SHEET NO.
6 17

COUNTY
JEFFERSON

JOB NO.
2011-105

CONTRACT ID.

PROJECT NO.
R0800

BRIDGE NO.

DESCRIPTION

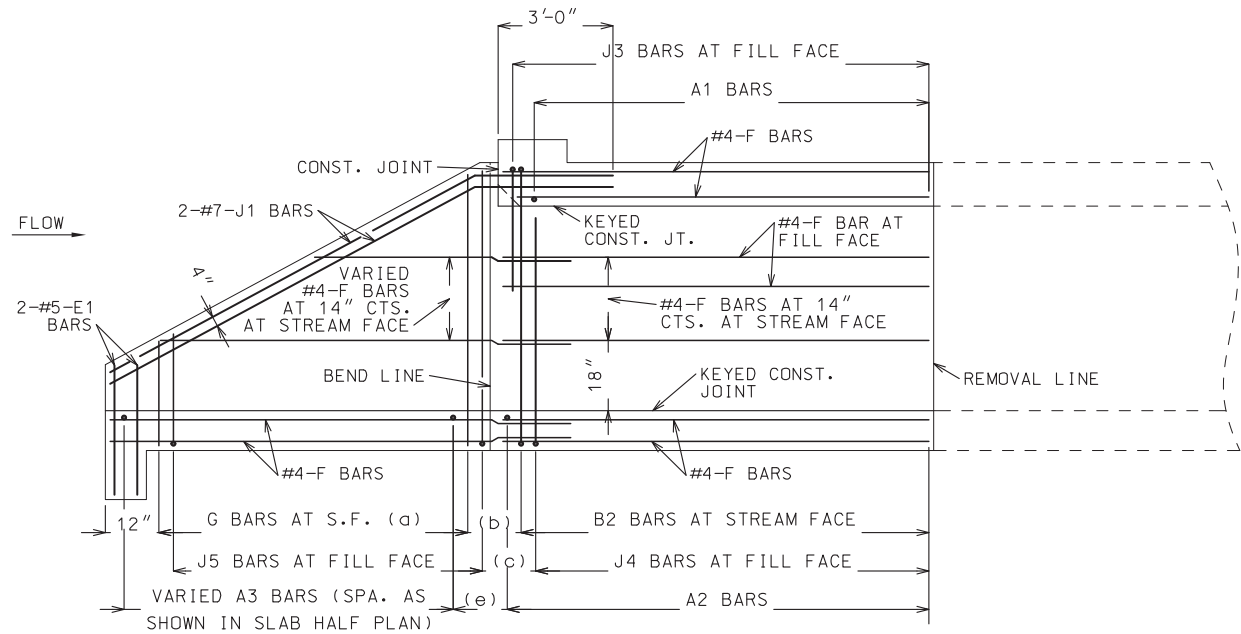
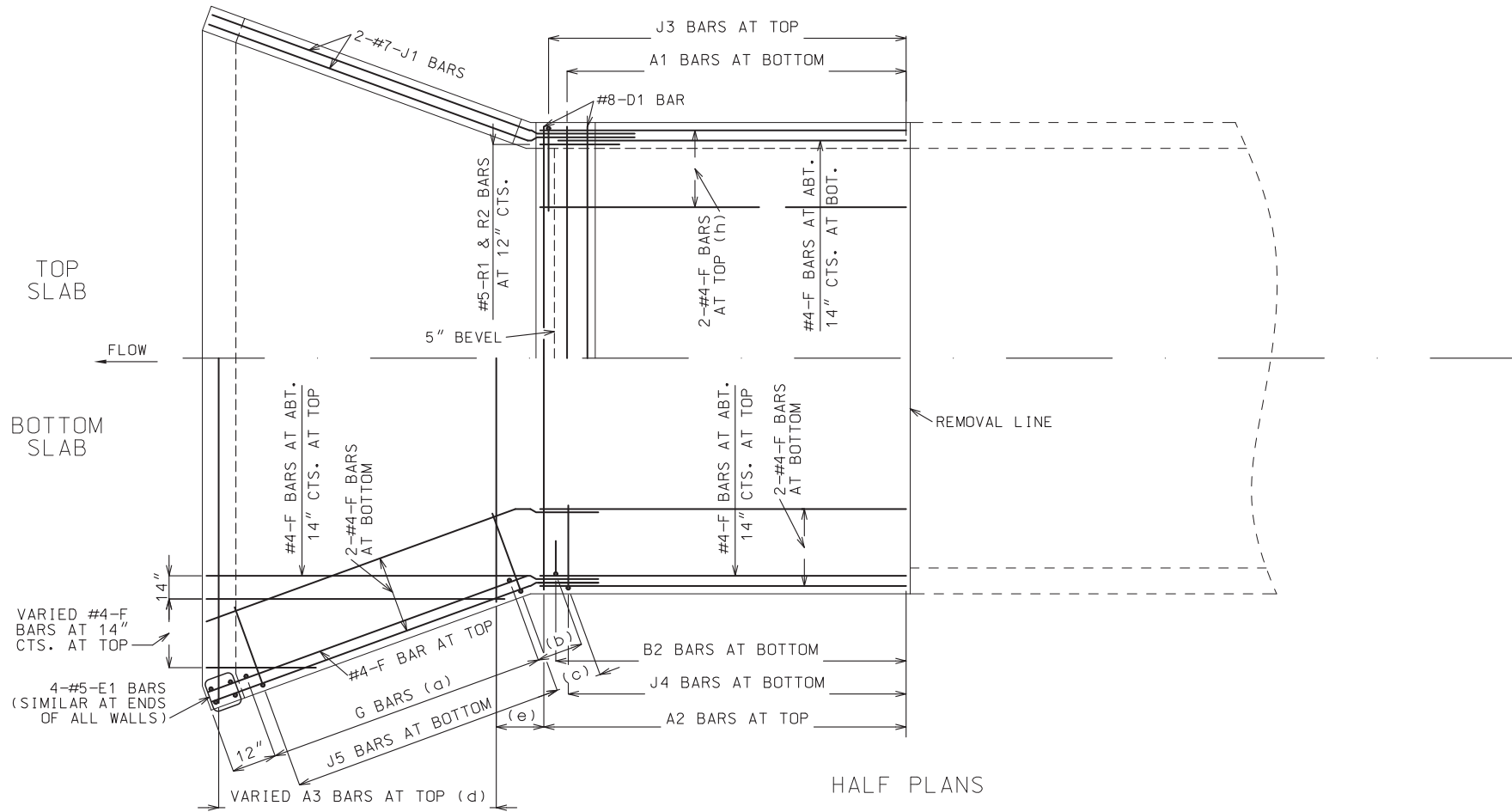
DATE

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**6'X6' CULVERT EXTENSION
DETAILS**
VOGLE RD. AND OLD LEMAY FERRY RD.
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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



DEVELOPED ELEVATION
J1 BARS MAY BE BENT IN FIELD OR SHOP.

SPAN (S) = 6 FT											HEIGHT (HT) = 6 FT										
DESIGN FILL	MEMBER THICKNESS			TOP SLAB BARS								BOTTOM SLAB BARS								WALL BARS	
				A1 BARS				J3 BARS				A2 BARS				J4 BARS					
	TS	BS	TX	SIZE	SPA.	SIZE	SPA.	C1	K2		SIZE	SPA.	SIZE	SPA.	C4	K3		SIZE	SPA.	G1	
										HT=6' 24.1"	HT=7' 27.5"						HT=6' 76"	HT=7' 88"			
4'	8"	8"	8"	4	6"	4	7"	51.3"				5	8"	4	6"	51.3"			5	12"	0

LAYING OUT TRANSVERSE JOINTS

UNLESS SHOWN ON ROADWAY OR BRIDGE PLANS

USE A TRANSVERSE JOINT WHEN BARREL LENGTH IS OVER 80 FEET. USE ADDITIONAL JOINTS TO LIMIT CUT SECTION LENGTH AND END SECTION BARREL LENGTH MEASURED ALONG CENTERLINE OF CULVERT TO 50 FEET.

MINIMUM END SECTION LENGTH SHALL BE 3 FEET MEASURED ALONG THE SHORTEST WALL FROM THE INSIDE FACE OF HEADWALL TO THE TRANSVERSE JOINT.

TO AVOID LOCATING TRANSVERSE JOINTS UNDER A TRAVELED WAY WITH DESIGN FILLS 2 FEET OR LESS THE FOLLOWING SHALL APPLY:

BARREL LENGTH UP TO 90 FEET WITHOUT A TRANSVERSE JOINT

CUT SECTION LENGTHS UP TO 60 FEET

WHEN BARREL AND CUT SECTION LENGTH RESTRICTIONS REQUIRE TRANSVERSE JOINTS TO BE LOCATED UNDER A TRAVELED WAY WITH DESIGN FILLS 2 FEET OR LESS, THE JOINTS SHALL BE LOCATED TO MINIMIZE THE LENGTH OF JOINT UNDER THE TRAVELED WAY.

TRAVELED WAY IS THE ROADWAY WIDTH MINUS SHOULDER WIDTHS.

FOR CUT SECTION DETAILS, SEE 703.16.

GENERAL NOTES:

FOR SECTIONS THRU BARREL, WINGS AND HEADWALLS, SEE SHEET 3 OF 4. FOR BAR SIZES, SPACING AND DIMENSIONS OF ALL REINFORCEMENT EXCEPT J5 BARS, SEE 703.17. FOR J5 BARS, SEE 703.37.

CONSTRUCTION JOINT KEY NOT SHOWN FOR CLARITY IN HALF PLANS AND ELEVATION. SEE SHEET 3 OF 4 FOR DETAILS.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1 1/2".

LAP LONGITUDINAL BARS A MINIMUM OF 23" AT SPLICES.

BEVELED HEADWALL SHALL BE LOCATED AT UPSTREAM END.

(a) SAME SIZE AND SPACING AS B2 BARS

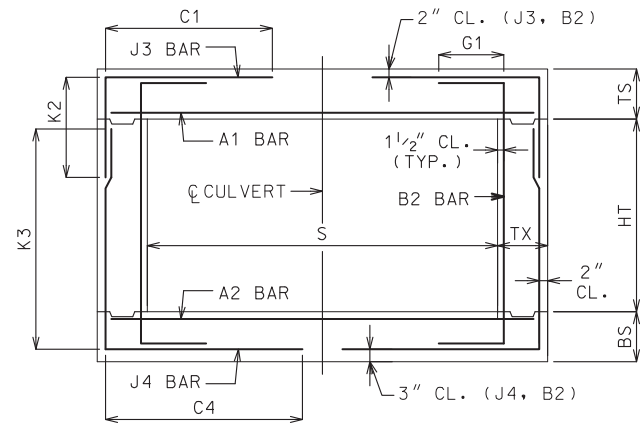
(b) VARIES, 12" MAXIMUM

(c) J4 BAR SPACING

(d) SAME SIZE AND SPACING AS B2 BARS

(e) A2 BAR SPACING

(h) FOR DESIGN FILLS OVER 2'-0"



BAR DIMENSIONS DIAGRAM
SYMMETRICAL ABOUT CULVERT.



CIVIL ENGINEER

DATE PREPARED

04/18/2014

ROUTE

STATE

MO

DISTRICT

SHEET NO.

6 18

COUNTY

JEFFERSON

JOB NO.

2011-105

CONTRACT ID.

PROJECT NO.

R0800

BRIDGE NO.

DESCRIPTION

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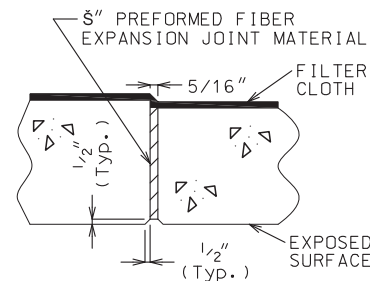
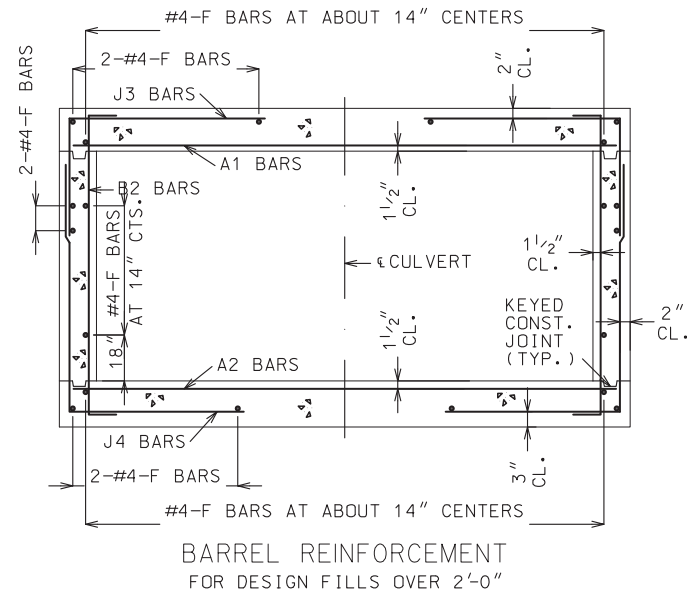
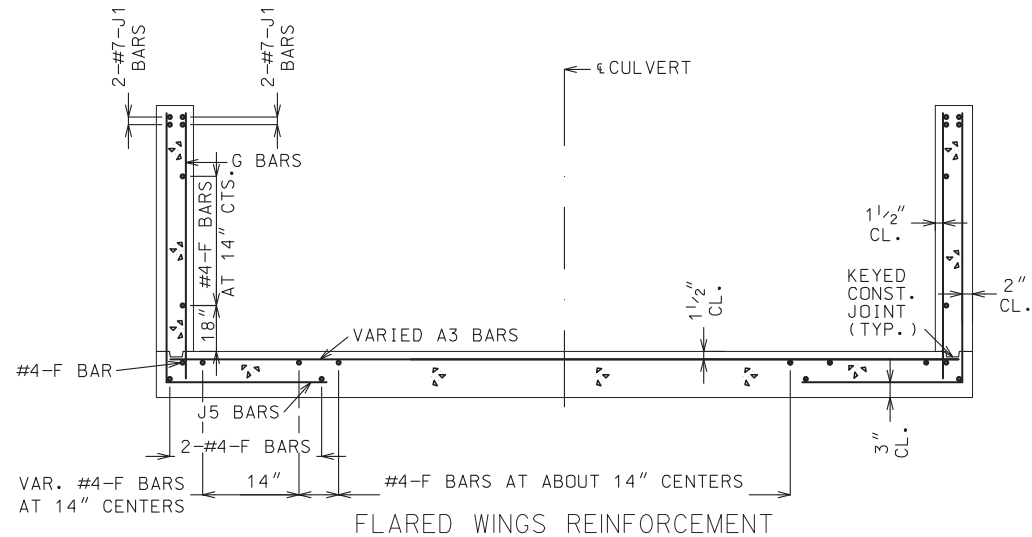
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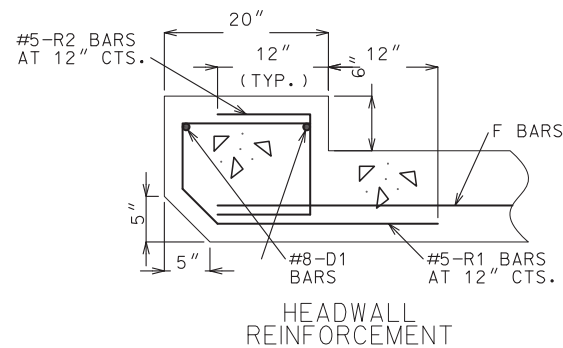
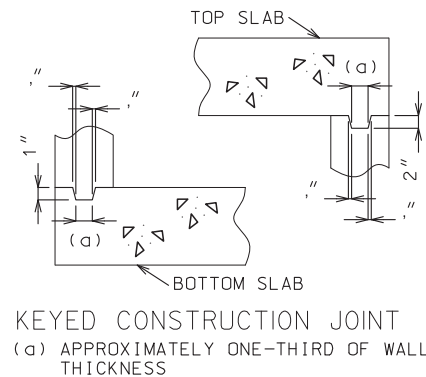
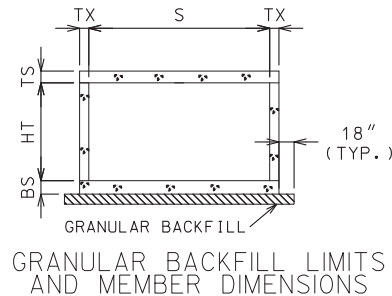


6'X6' CULVERT EXTENSION
DETAILS
VOGLE RD. AND OLD LEMAY FERRY RD.
JEFFERSON COUNTY, MISSOURI
STP-5403(641)



PREFORMED FIBER EXPANSION JOINT MATERIAL SHALL BE SECURELY STITCHED TO ONE FACE OF THE CONCRETE WITH NO. 10 GAGE COPPER WIRE OR NO. 12 GAGE SOFT DRAWN GALVANIZED STEEL WIRE.

FILTER CLOTH 3 FEET IN WIDTH AND DOUBLE THICKNESS SHALL BE CENTERED ON TRANSVERSE JOINTS IN TOP SLAB AND SIDEWALLS WITH EDGES SEALED WITH MASTIC OR TWO SIDED TAPE. FILTER CLOTH SHALL BE A SUBSURFACE DRAINAGE GEOTEXTILE IN ACCORDANCE WITH SECTION 1011 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. COST OF FURNISHING AND INSTALLING FILTER CLOTH WILL BE CONSIDERED COMPLETELY COVERED BY THE CONTRACT UNIT PRICE FOR OTHER ITEMS.



GENERAL NOTES:
FOR MEMBER THICKNESS AND FOR BAR SIZES, SPACING AND DIMENSIONS OF ALL REINFORCEMENT EXCEPT J5 BARS, SEE 703.17. FOR J5 BARS, SEE 703.37.

BARREL AND WINGS SECTIONS ARE SYMMETRICAL ABOUT AND NORMAL TO CULVERT. HEADWALL SECTIONS ARE NORMAL TO LONG DIRECTION OF HEADWALL.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1 1/2".



CIVIL ENGINEER

DATE PREPARED
04/18/2014

ROUTE STATE
MO

DISTRICT SHEET NO.
6 19

COUNTY
JEFFERSON

JOB NO.
2011-105

CONTRACT ID.

PROJECT NO.
R0800

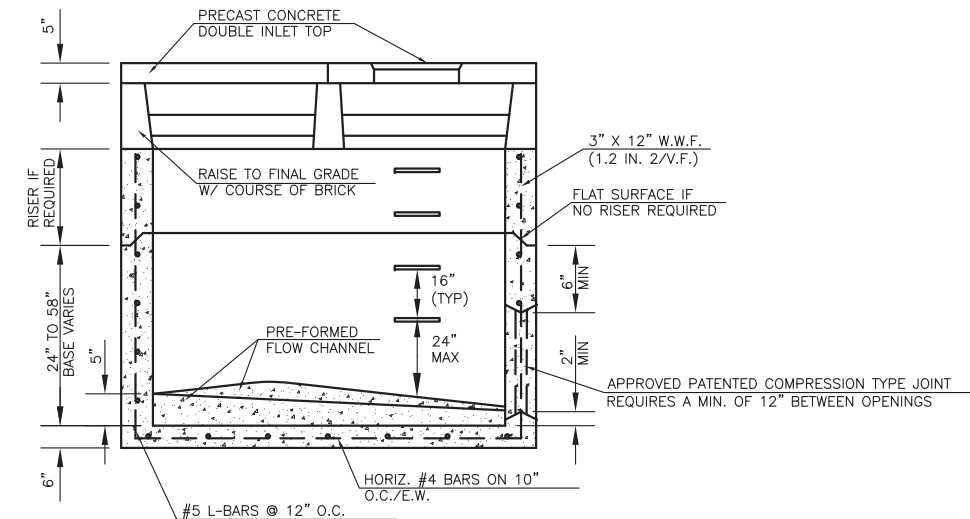
BRIDGE NO.

DATE	DESCRIPTION

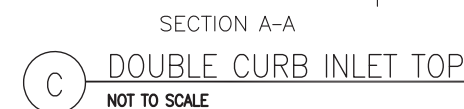
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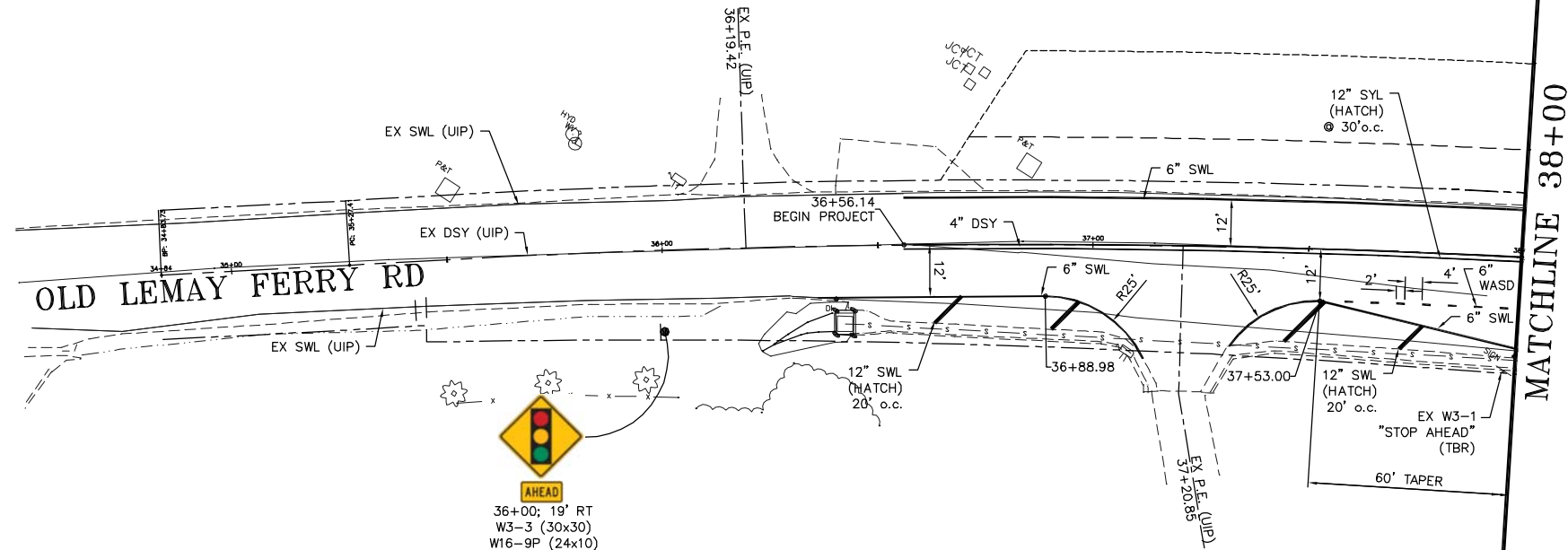
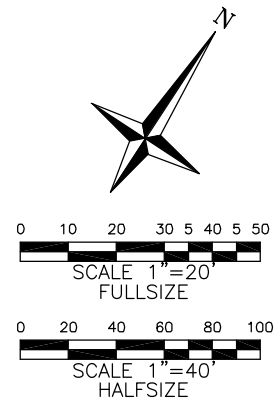
6'X6' CULVERT EXTENSION
DETAILS
VOGLE RD. AND OLD LEMAY FERRY RD.
JEFFERSON COUNTY, MISSOURI
STP-5403(641)



B DOUBLE CURB INLET STRUCTURE
NOT TO SCALE



DRAINAGE DETAIL SHEET
SHEET 4 OF 4



PAVEMENT MARKING LEGEND
SWL - SOLID WHITE LINE
SYL - SOLID YELLOW LINE
DSY - DOUBLE SOLID YELLOW
YSD - YELLOW SKIP DASH
WSD - WHITE SKIP DASH
WASD - WHITE ABBREVIATED SKIP DASH
L&S - LETTER & SYMBOLS

- NOTES
- 1) ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND MISSOURI STANDARD PLANS FOR HIGHWAY CONSTRUCTION.
 - 2) PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
 - 3) EXISTING PAVEMENT MARKINGS WHICH CONFLICT WITH THE PROPOSED STRIPING SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AND SHALL BE INCLUDED IN THE COST OF THE PAVEMENT MARKING PAY ITEM.
 - 4) STOPBARS, SYMBOLS AND ALL LANE LINES SHALL BE WATERBORNE PAINT STRIPING.
 - 5) ALL ARROWS, WORDS AND SYMBOLS SHALL BE WHITE UNLESS OTHERWISE SPECIFIED.
 - 6) REFER TO PLAN SHEETS FOR ADDITIONAL DIMENSIONS. REFER TO TRAFFIC SIGNAL SHEETS FOR EXACT LOCATION OF STOPBARS.
 - 7) STATIONING ON STOPBARS IS TO THE CENTERLINE OF THE STRIPE.
 - 8) ANY EXISTING SIGNS SHOWN TO BE REMOVED SHALL BE THE PROPERTY OF THE COUNTY AND SET ASIDE AT THE SITE FOR THE COUNTY TO PICK UP. POSTS TO BE REMOVED FROM THE SITE BY THE CONTRACTOR.

Corporate Engineering
Certificate # 000381

BRIAN E. COURTWRIGHT
PROFESSIONAL ENGINEER
NUMBER
PE-2006002617

CIVIL ENGINEER
DATE PREPARED

ROUTE	STATE
DISTRICT	SHEET NO.
6	21

COUNTY
JEFFERSON

JOB NO.
2011-105

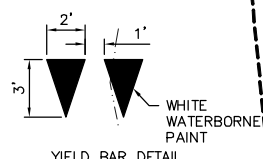
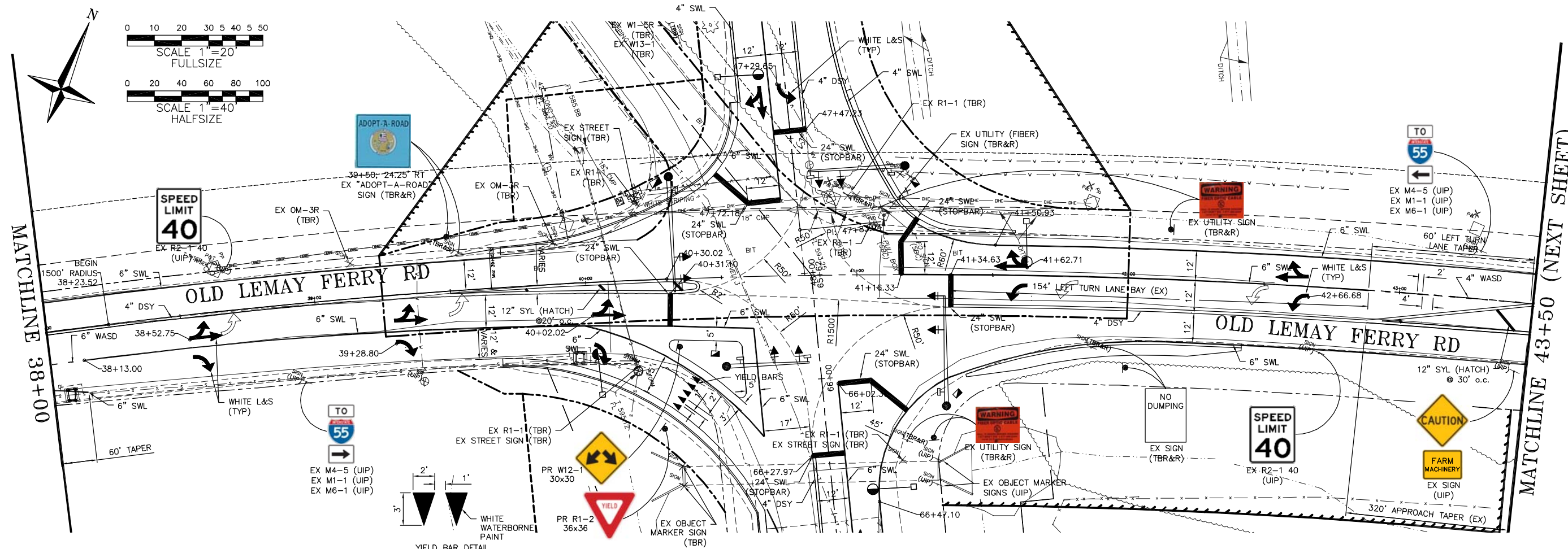
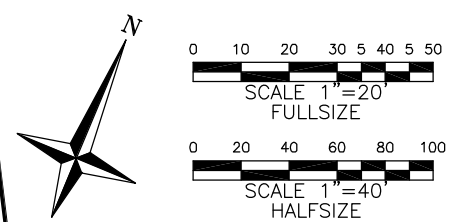
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PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
8/19/13	PRELIMINARY APPROVAL
1/24/14	70% SUBMITTAL (TO COUNTY)
4/29/14	PS&E SUBMITTAL (TO COUNTY)
10/3/14	4" SWL ON RELOCATED VOGEL RD

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

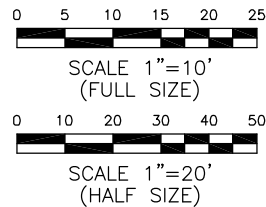


TRANSPORTATION
ENGINEERS+PLANNERS

13400 OLIVE BLVD. SUITE 430
ST. LOUIS, MO 63141
(314) 878-8844
450 COTTONWOOD RD. SUITE B
GLEN CARBON, IL 62034
(618) 956-2612
www.gcbtrf.com

PAVEMENT MARKING PLAN

VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

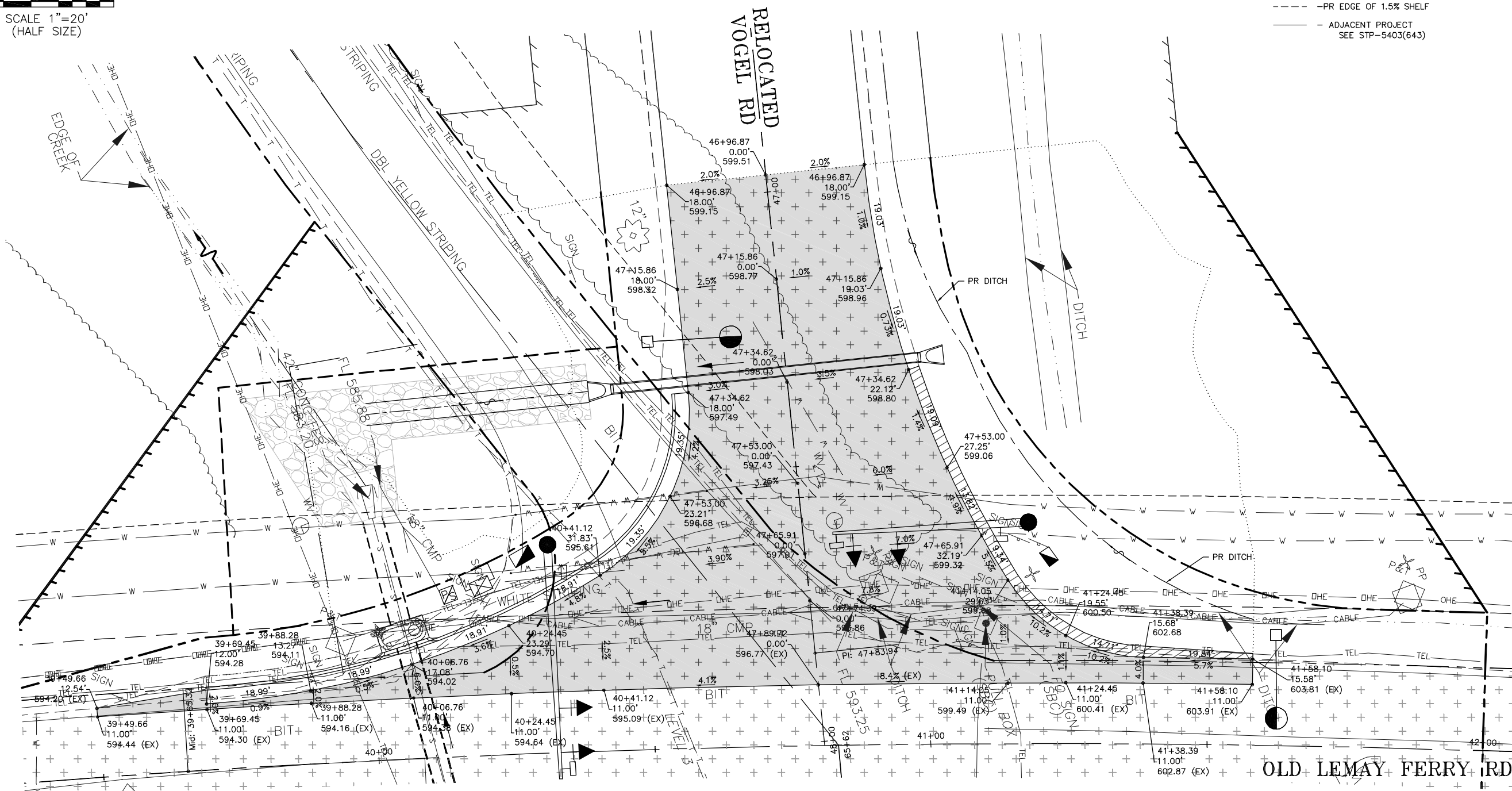


- 1) ELEVATIONS SHOWN ARE AT THE EDGE-OF-PAVEMENT.
- 2) SPACING BETWEEN ELEVATIONS IS TWENTY FEET UNLESS SHOWN OTHERWISE.
- 3) ELEVATIONS MAY BE ADJUSTED IN THE FIELD IF APPROVAL IS FIRST OBTAINED FROM THE ENGINEER.

PROPOSED LEGEND

(TBR)	- TO BE REMOVED
(TBR&R)	- TO BE REMOVED AND REPLACED
(UIP)	- USE IN PLACE
CONC	- CONCRETE
TEMP	- TEMPORARY
PAV'T	- PAVEMENT
PR	- PROPOSED
EX	- EXISTING

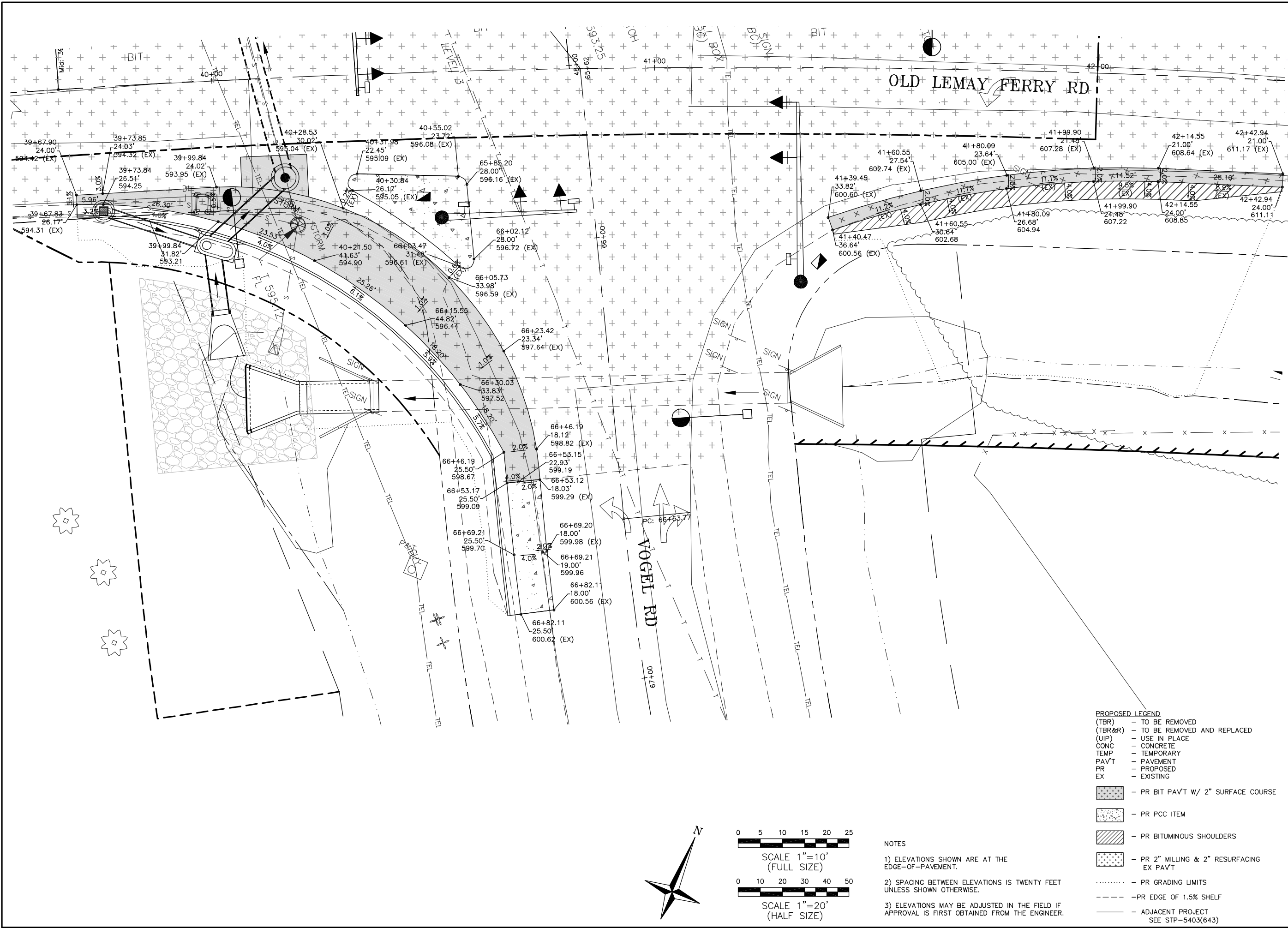
	- PR BIT PAV'T W/ 2" SURFACE COURSE
	- PR PCC ITEM
	- PR BITUMINOUS SHOULDERS
	- PR 2" MILLING & 2" RESURFACING EX PAV'T
.....	- PR GRADING LIMITS
-----	-PR EDGE OF 1.5% SHELFF
—————	- ADJACENT PROJECT SEE STP—5403(643)



DATE	DESCRIPTION
5/21/13	PRELIMINARY SUBMITTAL
3/19/13	PRELIMINARY APPROVAL
1/24/14	70% SUBMITTAL (TO COUNTY)
4/29/14	PS&E SUBMITTAL (TO COUNTY)

WARPING DETAIL

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



- PROPOSED LEGEND**
- (TBR) - TO BE REMOVED
 - (TBR&R) - TO BE REMOVED AND REPLACED
 - (UIP) - USE IN PLACE
 - CONC - CONCRETE
 - TEMP - TEMPORARY
 - PAVT - PAVEMENT
 - PR - PROPOSED
 - EX - EXISTING
 - [Pattern] - PR BIT PAVT W/ 2" SURFACE COURSE
 - [Pattern] - PR PCC ITEM
 - [Pattern] - PR BITUMINOUS SHOULDERS
 - [Pattern] - PR 2" MILLING & 2" RESURFACING EX PAVT
 - [Pattern] - PR GRADING LIMITS
 - [Pattern] - PR EDGE OF 1.5% SHELFF
 - [Pattern] - ADJACENT PROJECT SEE STP-5403(643)

NOTES

1) ELEVATIONS SHOWN ARE AT THE EDGE-OF-PAVEMENT.

2) SPACING BETWEEN ELEVATIONS IS TWENTY FEET UNLESS SHOWN OTHERWISE.

3) ELEVATIONS MAY BE ADJUSTED IN THE FIELD IF APPROVAL IS FIRST OBTAINED FROM THE ENGINEER.

Corporate Engineering
Certificate # 000381

STATE OF MISSOURI
BRIAN E. COURTWRIGHT
NUMBER
PE-2006002617
PROFESSIONAL ENGINEER

CIVIL ENGINEER
DATE PREPARED

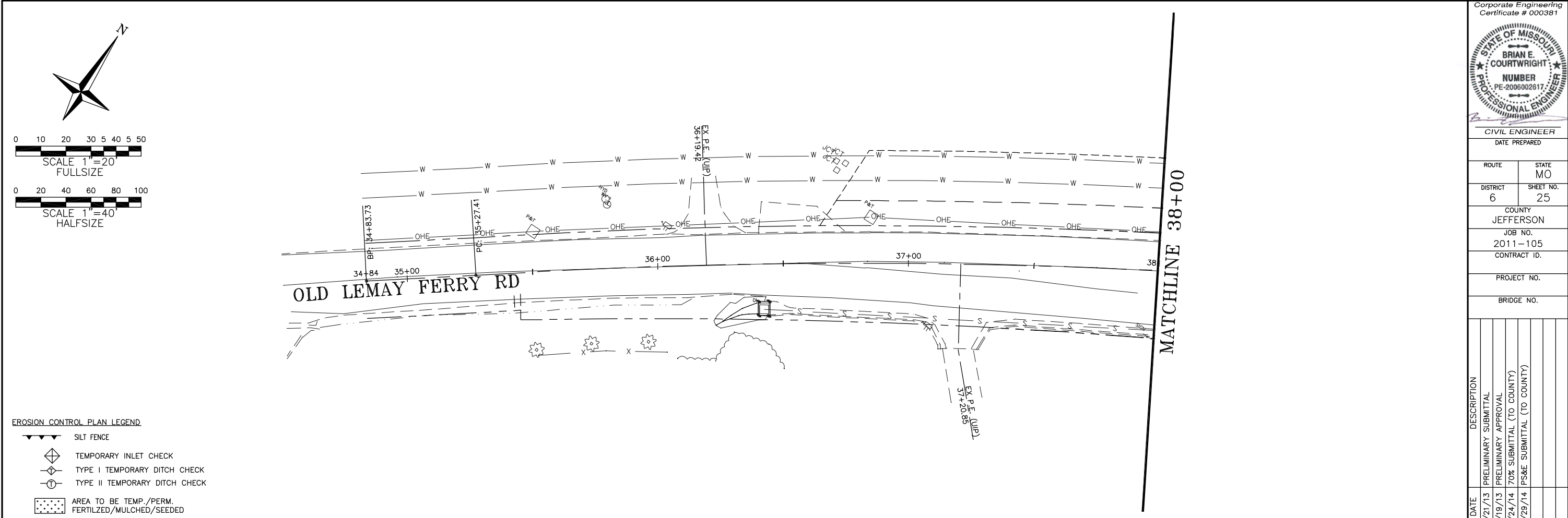
ROUTE	STATE
DISTRICT	SHEET NO.
COUNTY	JOB NO.
JEFFERSON	2011-105
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
8/19/13	PRELIMINARY APPROVAL
1/24/14	70% SUBMITTAL (TO COUNTY)
4/29/14	PS&E SUBMITTAL (TO COUNTY)

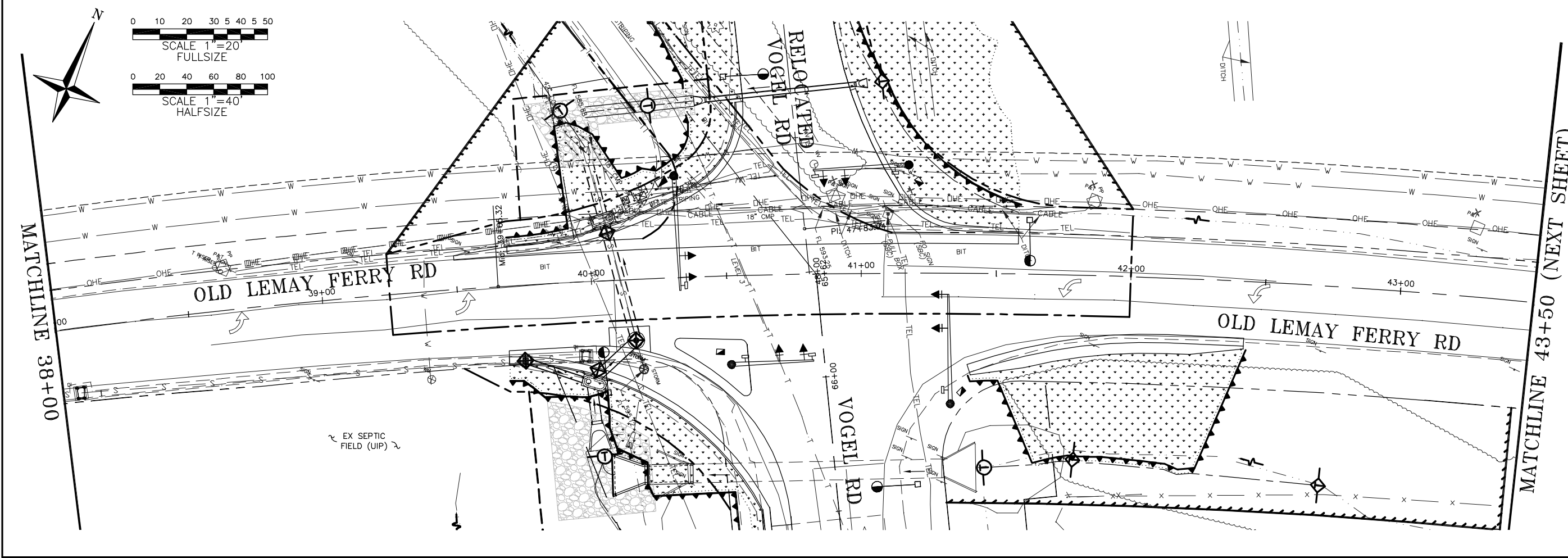
TRANSPORTATION ENGINEERS+PLANNERS
13409 OLIVE BLVD, SUITE 430
ST. LOUIS, MO 63141
(314) 878-6644
450 COTTONWOOD RD, SUITE B
GLEN CARBON, IL 62234
(618) 656-2612
www.cobtraffic.com

WARPPING DETAIL
VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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



- EROSION CONTROL PLAN LEGEND
- ▲▲▲ SILT FENCE
 - ◇ TEMPORARY INLET CHECK
 - ◇ TYPE I TEMPORARY DITCH CHECK
 - ◇ TYPE II TEMPORARY DITCH CHECK
 - ▨ AREA TO BE TEMP./PERM. FERTILIZED/MULCHED/SEEDED



Corporate Engineering
Certificate # 000381

STATE OF MISSOURI
BRIAN E. COURTWRIGHT
NUMBER
PE-2006002617
PROFESSIONAL ENGINEER

CIVIL ENGINEER
DATE PREPARED

ROUTE	STATE
DISTRICT	SHEET NO.
6	25
COUNTY	
JEFFERSON	
JOB NO.	
2011-105	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
8/19/13	PRELIMINARY APPROVAL
1/24/14	70% SUBMITTAL (TO COUNTY)
4/29/14	PS&E SUBMITTAL (TO COUNTY)

TRANSPORTATION ENGINEERS+PLANNERS

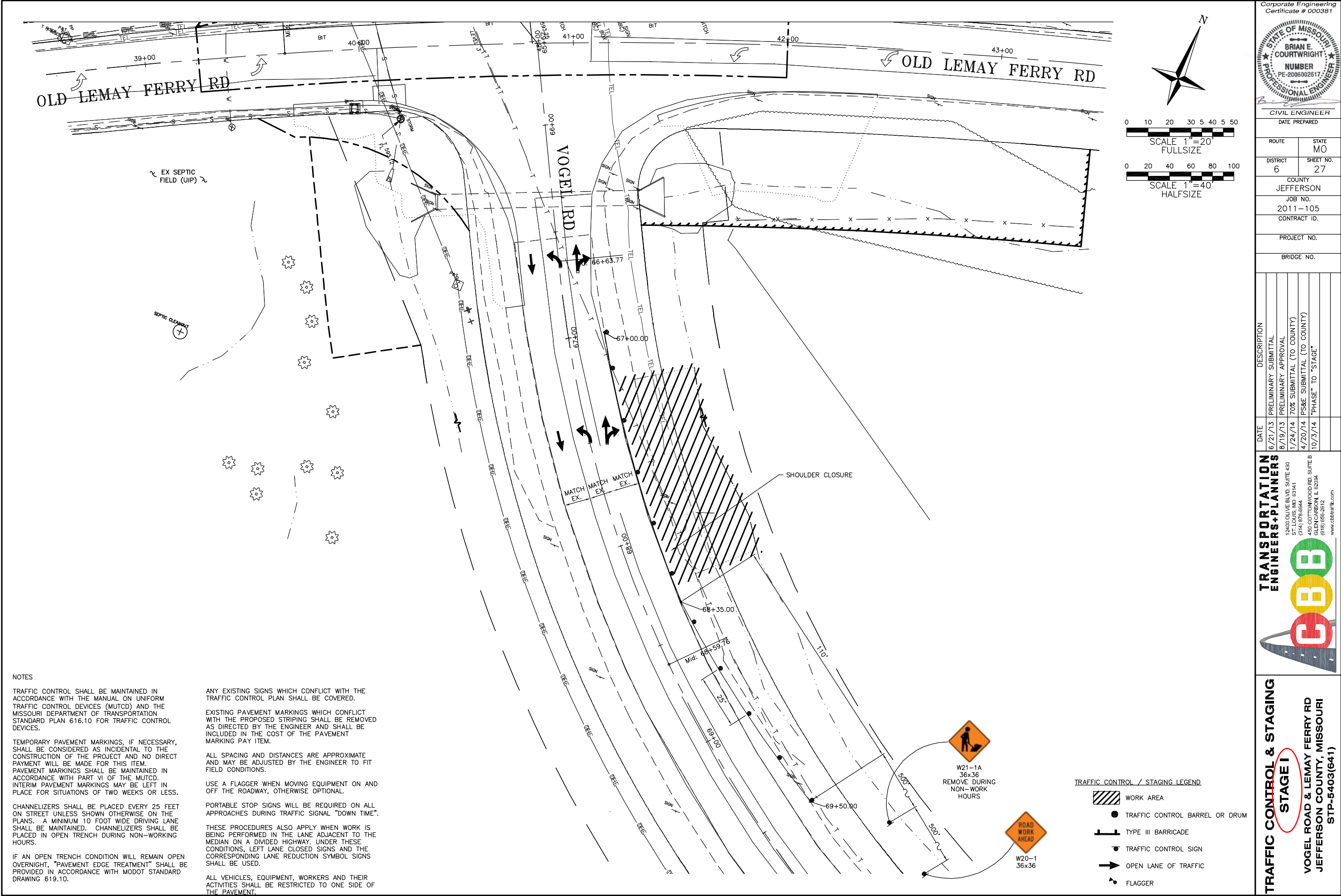
13400 OLIVE BLVD. SUITE 430
ST. LOUIS, MO 63141
(314) 878-8844
450 COTTONWOOD RD. SUITE B
GLEN CARBON, IL 62034
(618) 656-2612
www.cbbrief.com

CBB

EROSION CONTROL PLAN

VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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



NOTES

TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD PLAN 616.10 FOR TRAFFIC CONTROL DEVICES.

TEMPORARY PAVEMENT MARKINGS, IF NECESSARY, SHALL BE CONSIDERED AS INCIDENTAL TO THE CONSTRUCTION OF THE PROJECT AND NO DIRECT PAYMENT WILL BE MADE FOR THIS ITEM. PAVEMENT MARKINGS SHALL BE MAINTAINED IN ACCORDANCE WITH PART VII OF THE MUTCD. INTERIM PAVEMENT MARKINGS MAY BE LEFT IN PLACE FOR SITUATIONS OF TWO WEEKS OR LESS.

CHANNELIZERS SHALL BE PLACED EVERY 25 FEET ON STREET UNLESS SHOWN OTHERWISE ON THE PLANS. A MINIMUM 10 FOOT WIDE DRIVING LANE SHALL BE MAINTAINED. CHANNELIZERS SHALL BE PLACED IN OPEN TRENCH DURING NON-WORKING HOURS.

IF AN OPEN TRENCH CONDITION WILL REMAIN OPEN OVERNIGHT, "PAVEMENT EDGE TREATMENT" SHALL BE PROVIDED IN ACCORDANCE WITH MODOT STANDARD DRAWING 619.10.

ANY EXISTING SIGNS WHICH CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE COVERED.

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USE A FLAGGER WHEN MOVING EQUIPMENT ON AND OFF THE ROADWAY, OTHERWISE OPTIONAL.

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- TRAFFIC CONTROL / STAGING LEGEND**
- WORK AREA
 - TRAFFIC CONTROL BARREL OR DRUM
 - TYPE III BARRICADE
 - TRAFFIC CONTROL SIGN
 - OPEN LANE OF TRAFFIC
 - FLAGGER

Corporate Engineering
Certificate # 000381

STATE OF MISSOURI
BRIAN E. COURTWRIGHT
NUMBER
PE-2006002617
PROFESSIONAL ENGINEER

CIVIL ENGINEER
DATE PREPARED

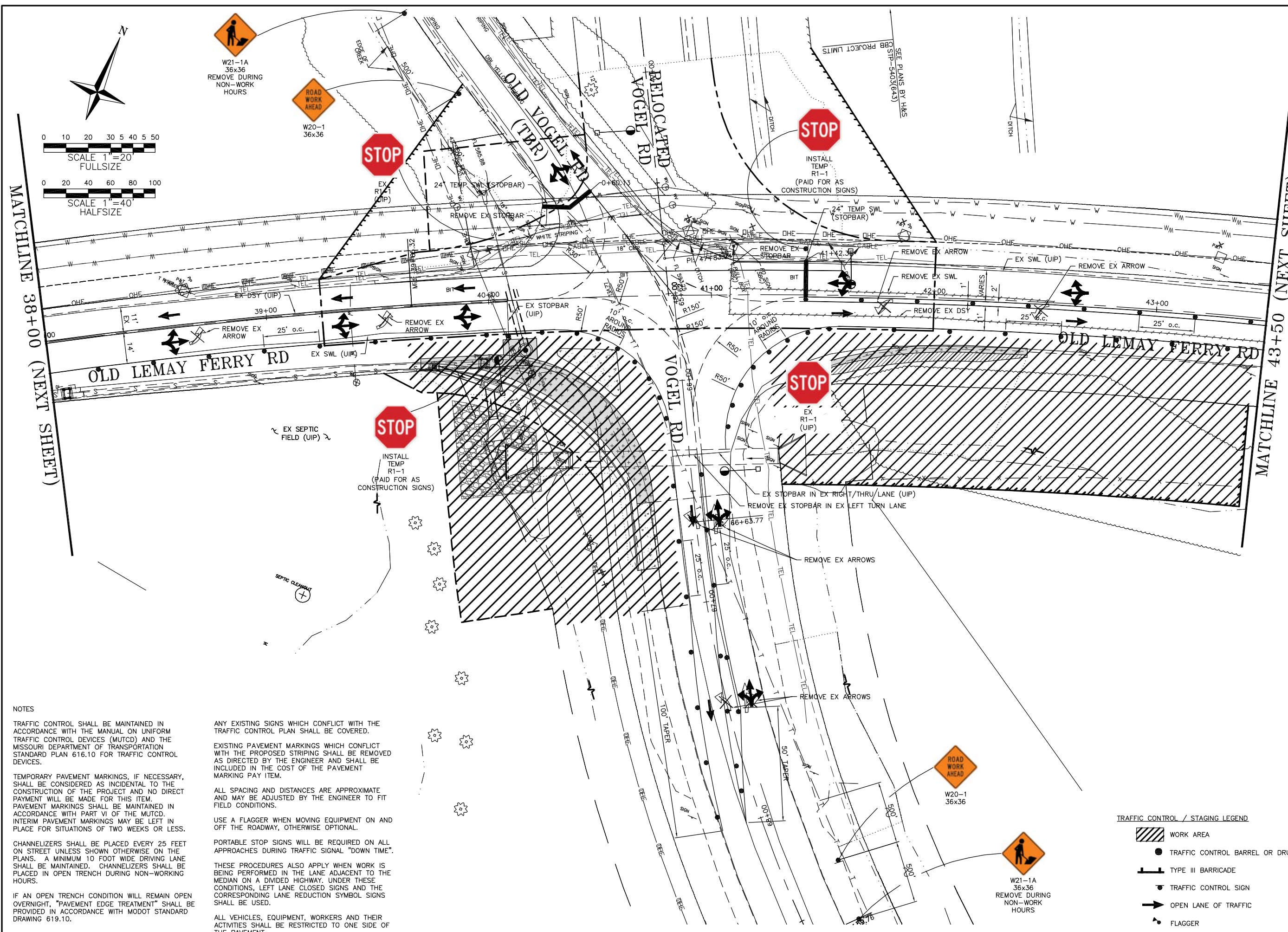
ROUTE	STATE
DISTRICT	SHEET NO.
6	27
COUNTY	
JEFFERSON	
JOB NO.	
2011-105	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
8/19/13	PRELIMINARY APPROVAL
1/24/14	70% SUBMITTAL (TO COUNTY)
4/20/14	PS&E SUBMITTAL (TO COUNTY)
10/3/14	"PHASE" TO "STAGE"

TRANSPORTATION ENGINEERS+PLANNERS
13400 OLIVER BLVD. SUITE 430
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(618) 656-2612
www.cbbtraffic.com

STAGE I
TRAFFIC CONTROL & STAGING
VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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- WORK AREA
 - TRAFFIC CONTROL BARREL OR DRUM
 - TYPE III BARRICADE
 - TRAFFIC CONTROL SIGN
 - OPEN LANE OF TRAFFIC
 - FLAGGER

TRANSPORTATION ENGINEERS+PLANNERS

13400 OLIVE BLVD SUITE 430
ST. LOUIS, MO 63141
(314) 878-8844
450 COTTONWOOD RD SUITE B
GLEN CARBON, IL 62034
(618) 656-2612
www.cbbtraffic.com

Stage II

VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

Corporate Engineering
Certificate # 000381

STATE OF MISSOURI
BRIAN E. COURTWRIGHT
NUMBER
PE-2006002617
PROFESSIONAL ENGINEER

CIVIL ENGINEER
DATE PREPARED

ROUTE	STATE
DISTRICT	SHEET NO.
6	28

COUNTY
JEFFERSON

JOB NO.
2011-105

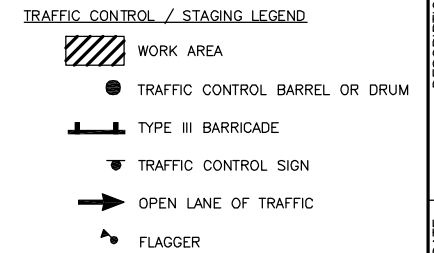
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PROJECT NO.

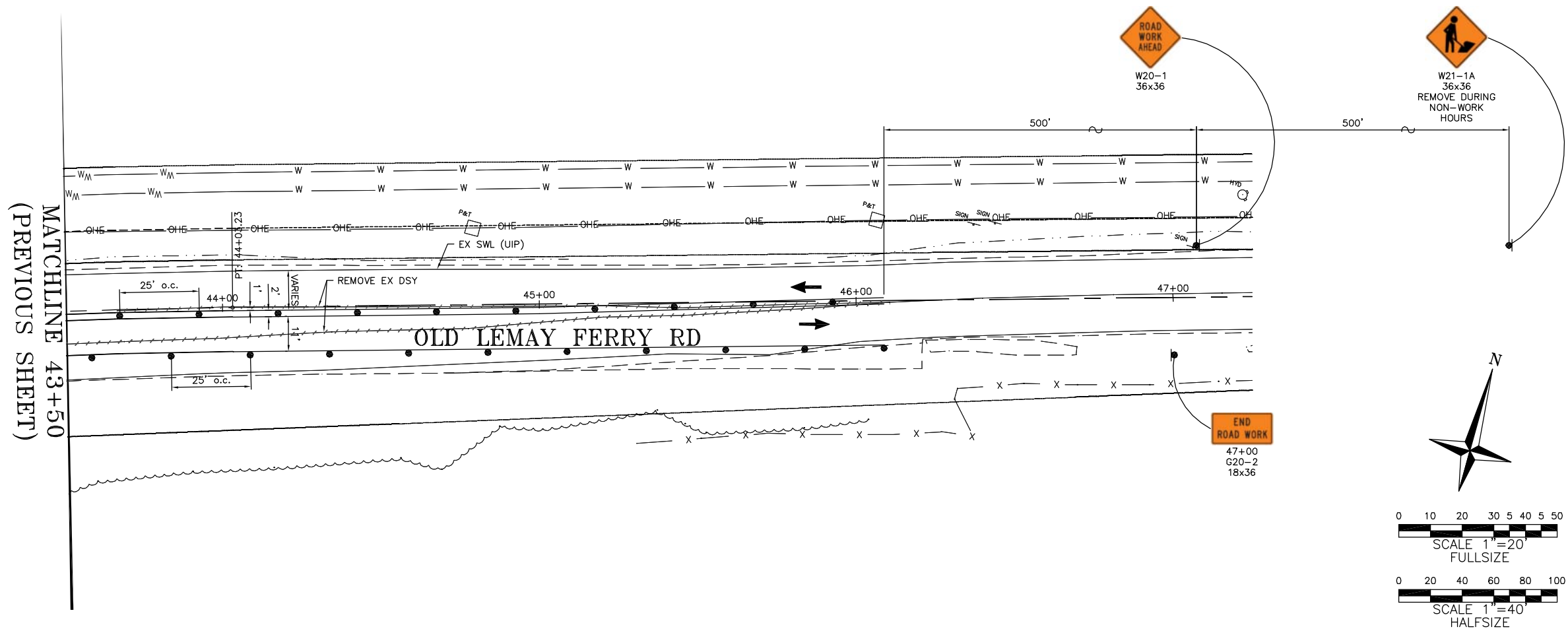
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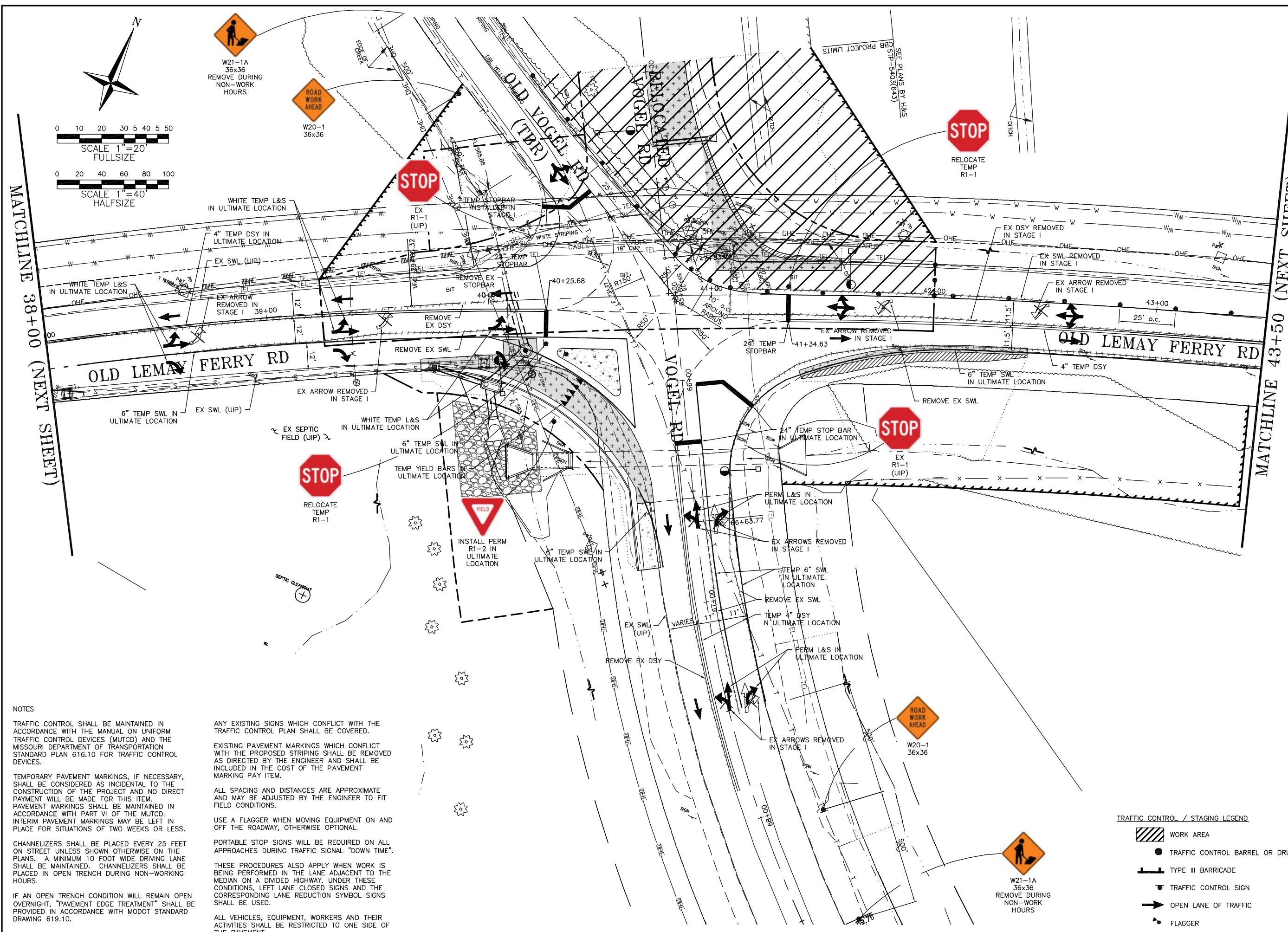
DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
8/19/13	PRELIMINARY APPROVAL
1/24/14	70% SUBMITTAL (TO COUNTY)
4/20/14	PS&E SUBMITTAL (TO COUNTY)
10/3/14	"PHASE" TO "STAGE"

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ACTIVITIES SHALL BE RESTRICTED TO ONE SIDE OF
THE PAVEMENT.





NOTES

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- WORK AREA
 - TRAFFIC CONTROL BARREL OR DRUM
 - TYPE III BARRICADE
 - TRAFFIC CONTROL SIGN
 - OPEN LANE OF TRAFFIC
 - FLAGGER

Corporate Engineering
Certificate # 000381

STATE OF MISSOURI
BRIAN E. COURTWRIGHT
NUMBER
PE-2006002617
PROFESSIONAL ENGINEER

CIVIL ENGINEER
DATE PREPARED

ROUTE
6

STATE
MO

DISTRICT
30

SHEET NO.
30

COUNTY
JEFFERSON

JOB NO.
2011-105

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

PRELIMINARY SUBMITTAL

PRELIMINARY APPROVAL

70% SUBMITTAL (TO COUNTY)

PS&E SUBMITTAL (TO COUNTY)

"PHASE" TO "STAGE"

DATE

6/21/13

8/19/13

1/24/14

4/20/14

10/3/14

TRANSPORTATION
ENGINEERS+PLANNERS

13400 OLIVE BLVD. SUITE 430
ST. LOUIS, MO 63141
(314) 878-8844
450 COTTONWOOD RD. SUITE B
GLENACARON, IL 62034
(618) 656-2612
www.cbbtraffic.com

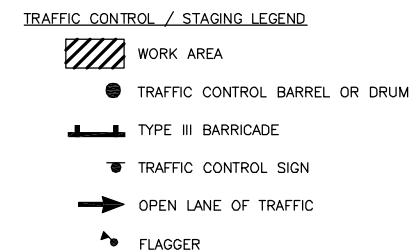
GOBB

TRAFFIC CONTROL & STAGING

Stage III

VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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



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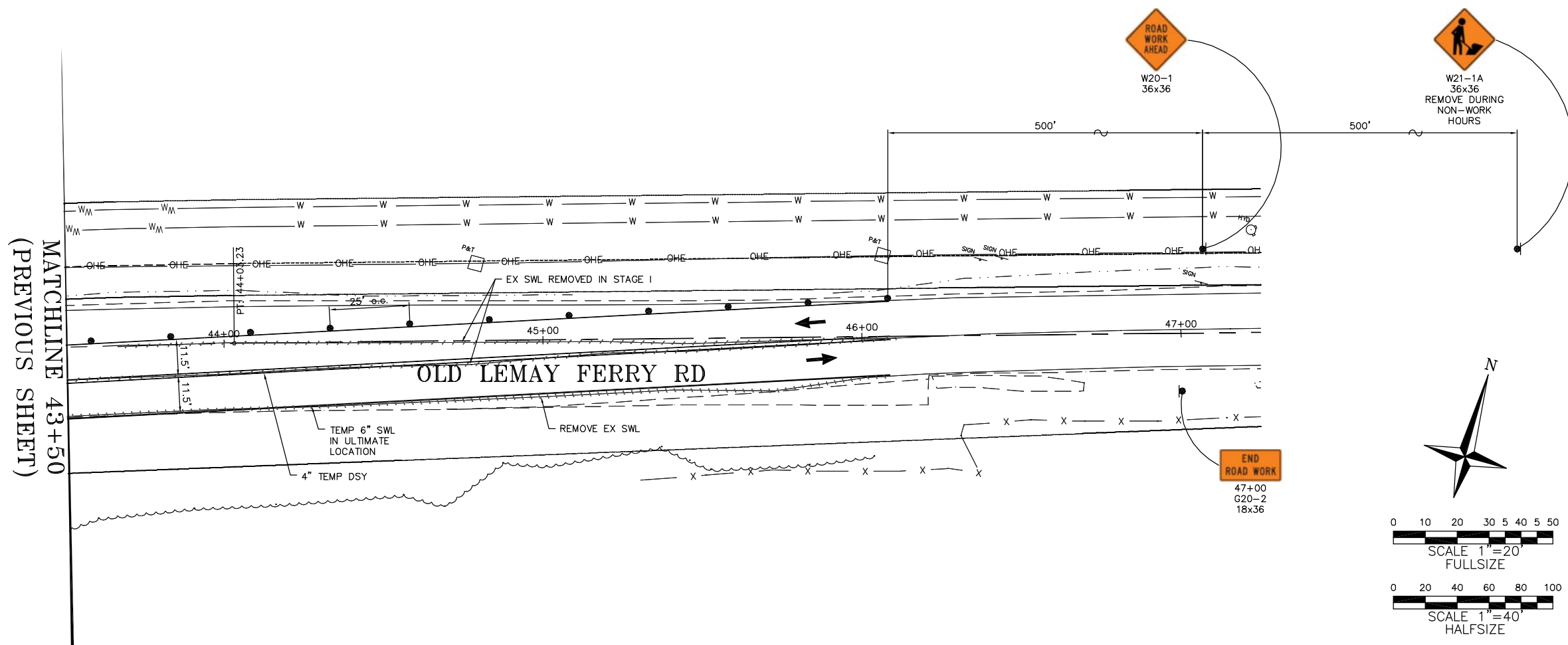
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THE PAVEMENT.



Corporate Engineering
Certificate # 000381



CIVIL ENGINEER
DATE PREPARED

ROUTE	STATE MO
DISTRICT 6	SHEET NO. 31

COUNTY	JEFFERSON
JOB NO.	2011-105
CONTRACT ID.	

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
8/19/13	PRELIMINARY APPROVAL
1/24/14	70% SUBMITTAL (TO COUNTY)
4/120/14	PS&E SUBMITTAL (TO COUNTY)
10/03/14	"PHASE" TO "STAGE"

**TRANSPORTATION
ENGINEERS+PLANNERS**

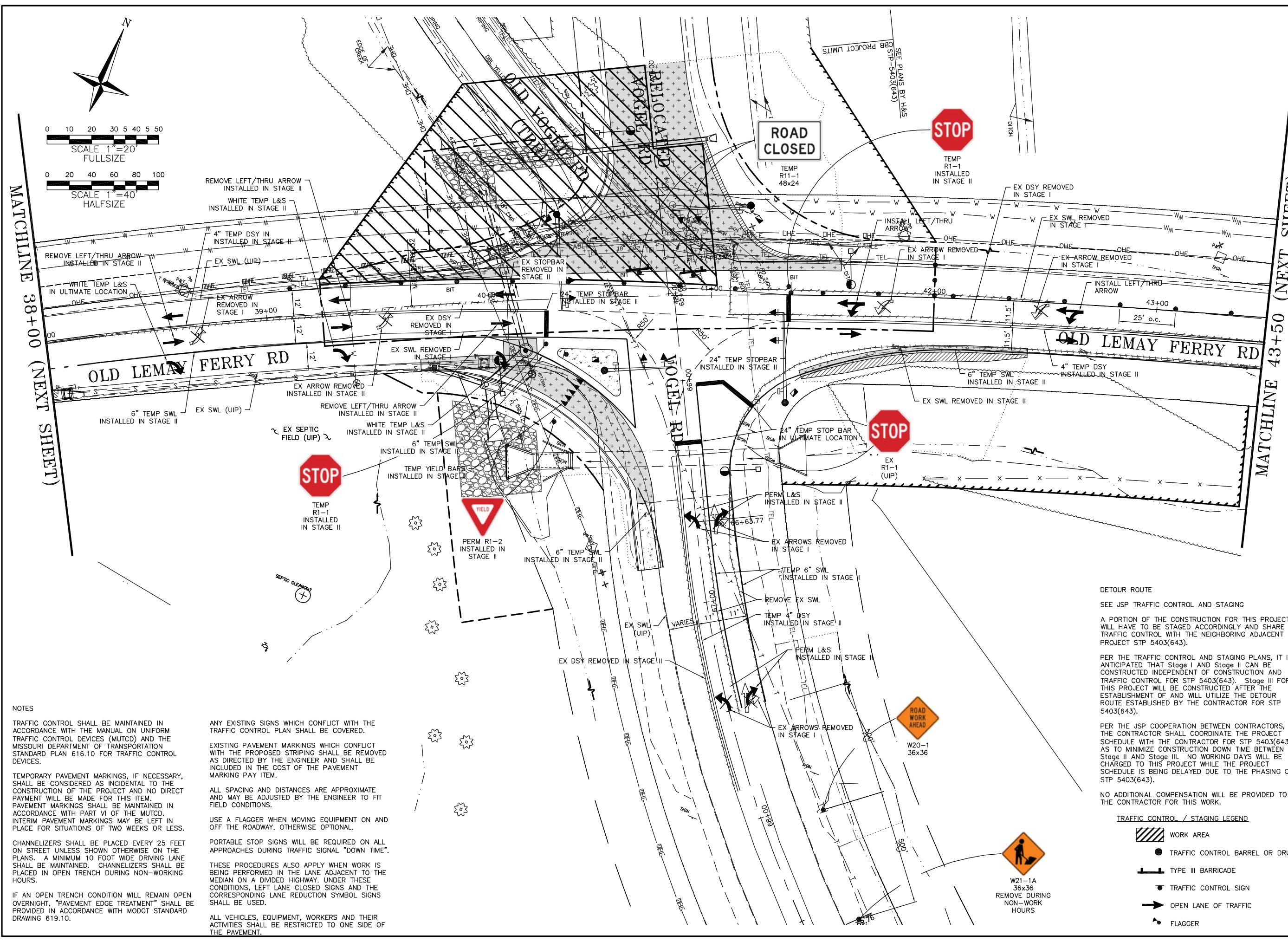
12409 OLIVE BLVD., SUITE 430
ST. LOUIS, MO 63141
(314) 975-0644

450 COTTONWOOD RD., SUITE B
GLENCAIRSON, IL 62534
(618) 656-2612
www.cbbtraffic.com



TRAFFIC CONTROL & STAGING
Stage III
VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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DETOUR ROUTE

SEE JSP TRAFFIC CONTROL AND STAGING

A PORTION OF THE CONSTRUCTION FOR THIS PROJECT WILL HAVE TO BE STAGED ACCORDINGLY AND SHARE TRAFFIC CONTROL WITH THE NEIGHBORING ADJACENT PROJECT STP 5403(643).

PER THE TRAFFIC CONTROL AND STAGING PLANS, IT IS ANTICIPATED THAT Stage I AND Stage II CAN BE CONSTRUCTED INDEPENDENT OF CONSTRUCTION AND TRAFFIC CONTROL FOR STP 5403(643). Stage III FOR THIS PROJECT WILL BE CONSTRUCTED AFTER THE ESTABLISHMENT OF AND WILL UTILIZE THE DETOUR ROUTE ESTABLISHED BY THE CONTRACTOR FOR STP 5403(643).

PER THE JSP COOPERATION BETWEEN CONTRACTORS, THE CONTRACTOR SHALL COORDINATE THE PROJECT SCHEDULE WITH THE CONTRACTOR FOR STP 5403(643) AS TO MINIMIZE CONSTRUCTION DOWN TIME BETWEEN Stage II AND Stage III. NO WORKING DAYS WILL BE CHARGED TO THIS PROJECT WHILE THE PROJECT SCHEDULE IS BEING DELAYED DUE TO THE PHASING OF STP 5403(643).

NO ADDITIONAL COMPENSATION WILL BE PROVIDED TO THE CONTRACTOR FOR THIS WORK.

TRAFFIC CONTROL / STAGING LEGEND

- WORK AREA
- TRAFFIC CONTROL BARREL OR DRUM
- TYPE III BARRICADE
- TRAFFIC CONTROL SIGN
- OPEN LANE OF TRAFFIC
- FLAGGER

Corporate Engineering
Certificate # 000381

STATE OF MISSOURI
BRIAN E. COURTWRIGHT
NUMBER
PE-2006002617
PROFESSIONAL ENGINEER

CIVIL ENGINEER
DATE PREPARED

ROUTE	STATE
DISTRICT	SHEET NO.
COUNTY	JOB NO.
JEFFERSON	2011-105
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
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TRANSPORTATION
ENGINEERS+PLANNERS

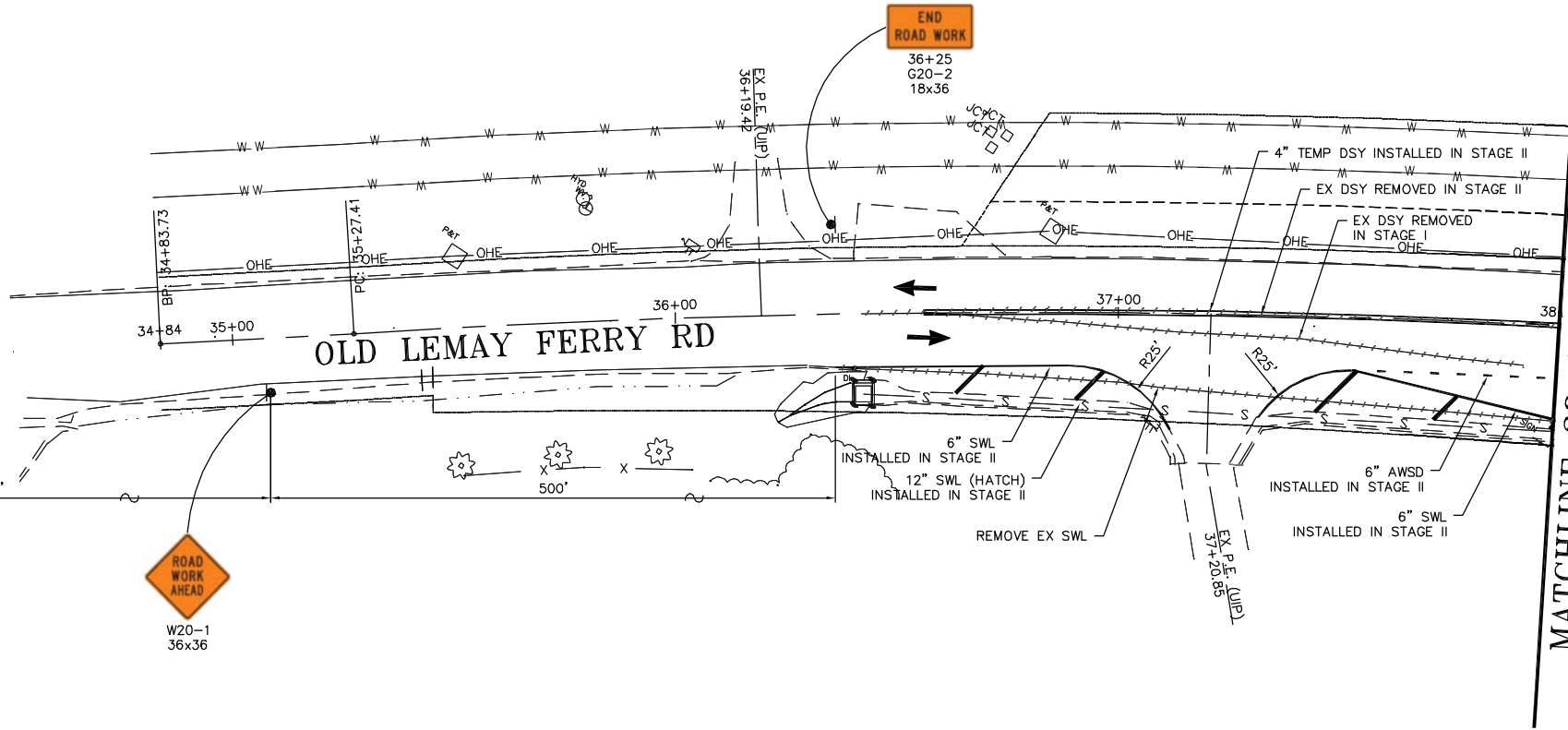
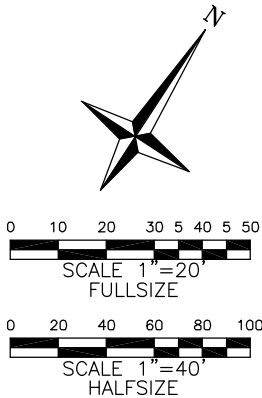
13400 OLIVER BLVD SUITE 430
ST. LOUIS, MO 63141
(314) 878-8844
450 COTTONWOOD RD SUITE B
GLEN CARBON, IL 62034
(618) 556-2612
www.cbbtraffic.com

GOBB

TRAFFIC CONTROL & STAGING
Stage IV - VOGEL RD DETOUR

VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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- TRAFFIC CONTROL / STAGING LEGEND
- WORK AREA
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ALL SPACING AND DISTANCES ARE APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

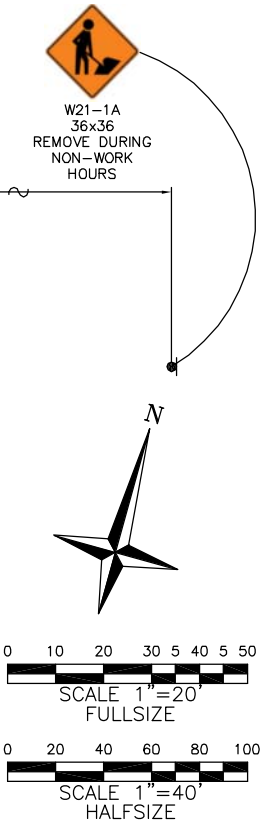
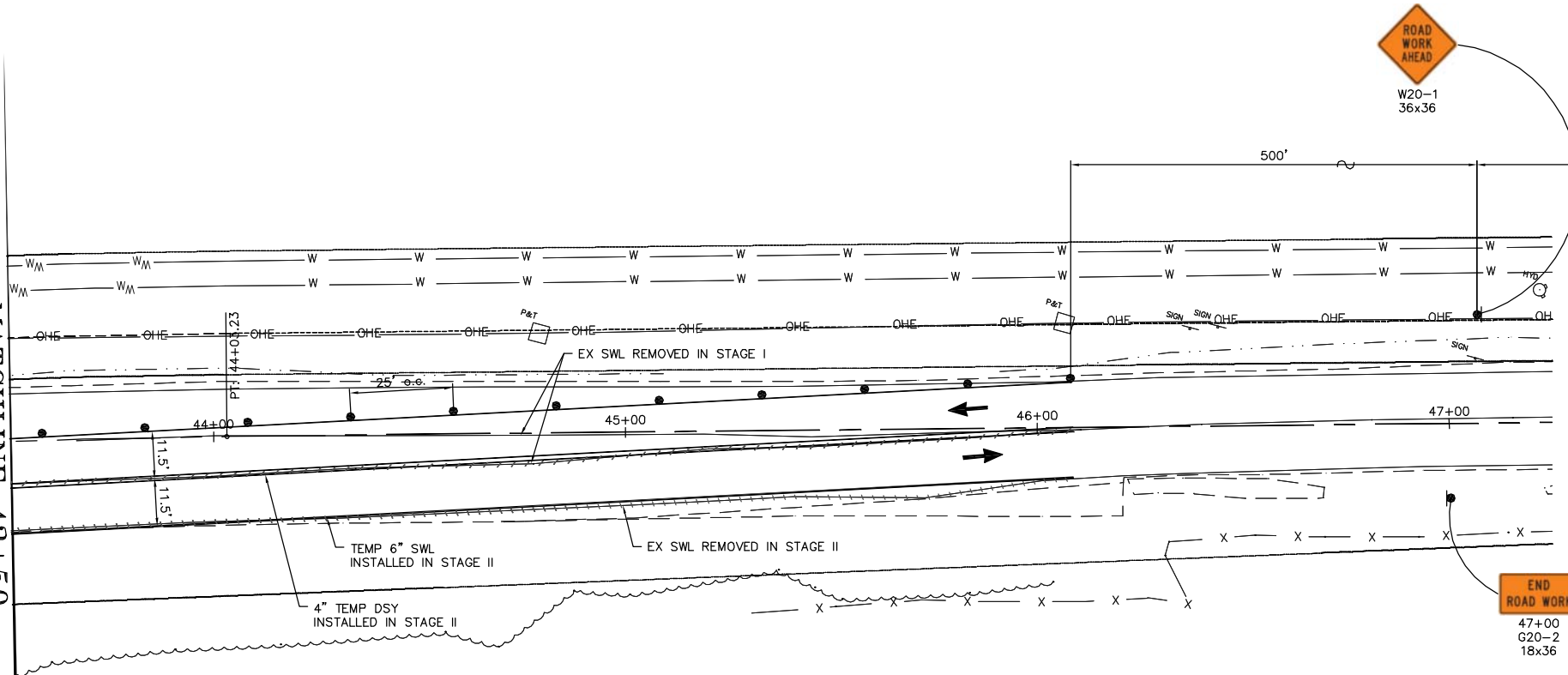
USE A FLAGGER WHEN MOVING EQUIPMENT ON AND OFF THE ROADWAY, OTHERWISE OPTIONAL.

PORTABLE STOP SIGNS WILL BE REQUIRED ON ALL APPROACHES DURING TRAFFIC SIGNAL "DOWN TIME".

THESE PROCEDURES ALSO APPLY WHEN WORK IS BEING PERFORMED IN THE LANE ADJACENT TO THE MEDIAN ON A DIVIDED HIGHWAY. UNDER THESE CONDITIONS, LEFT LANE CLOSED SIGNS AND THE CORRESPONDING LANE REDUCTION SYMBOL SIGNS SHALL BE USED.

ALL VEHICLES, EQUIPMENT, WORKERS AND THEIR ACTIVITIES SHALL BE RESTRICTED TO ONE SIDE OF THE PAVEMENT.

MATCHLINE 43+50
(PREVIOUS SHEET)



Corporate Engineering
Certificate # 000381

Brian E. Courtwright
CIVIL ENGINEER
DATE PREPARED

ROUTE	STATE
DISTRICT	SHEET NO.
6	33
COUNTY	
JEFFERSON	
JOB NO.	
2011-105	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
8/19/13	PRELIMINARY APPROVAL
1/24/14	70% SUBMITTAL (TO COUNTY)
4/20/14	PS&E SUBMITTAL (TO COUNTY)
10/3/14	"PHASE" TO "STAGE"

TRANSPORTATION
ENGINEERS+PLANNERS

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(314) 878-8844
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GLEN CARBON, IL 62034
(618) 656-2612
www.gcbtrf.com

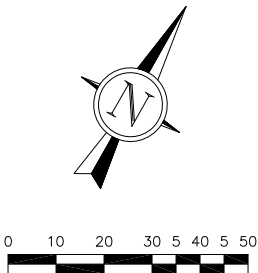
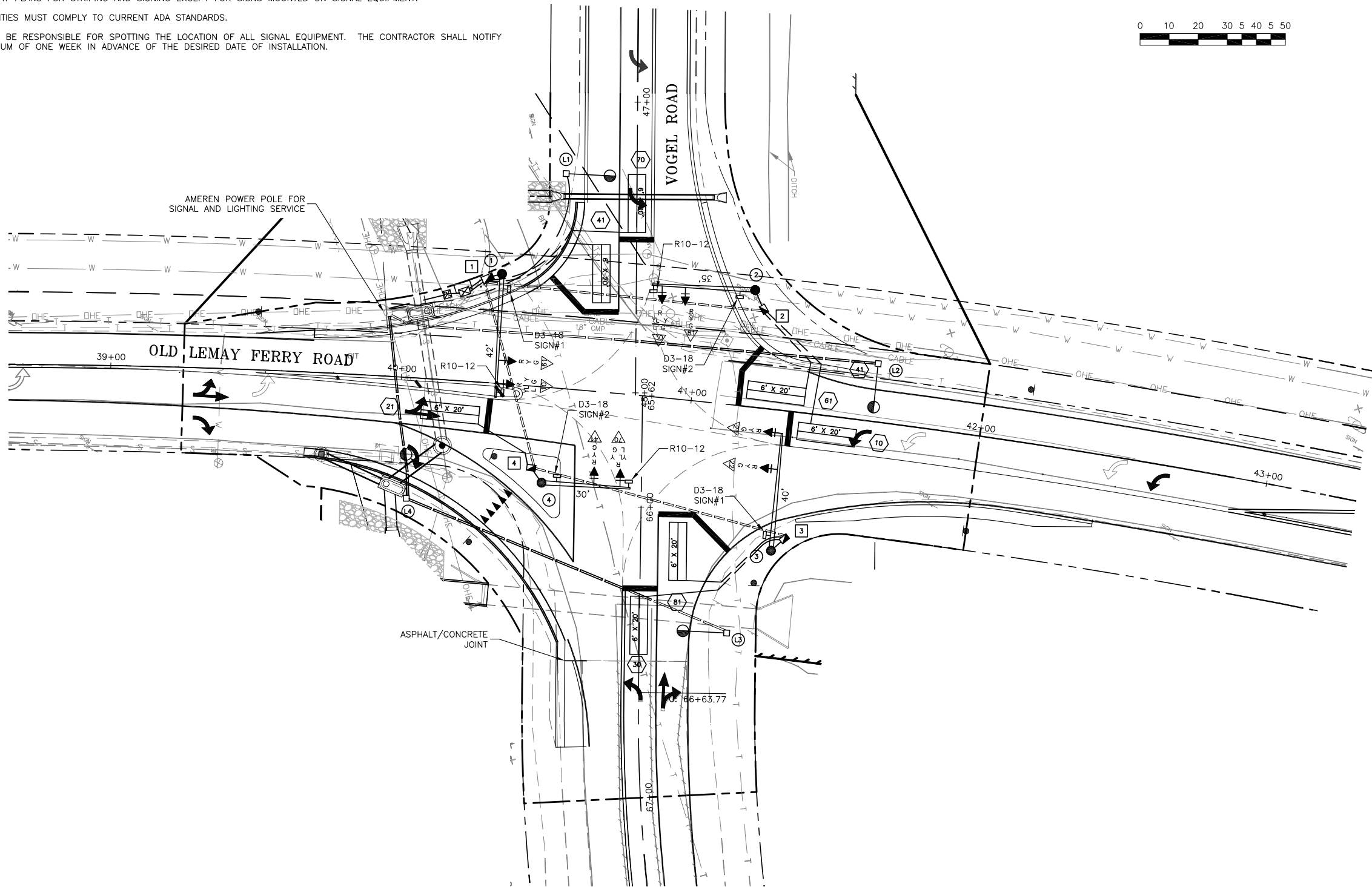
TRAFFIC CONTROL & STAGING
Stage IV - VOGEL RD DETOUR

VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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

GENERAL NOTES:

1. THE INSTALLATION OF THE TRAFFIC SIGNALS SHALL BE IN ACCORDANCE WITH THE MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION'S STANDARD SPECIFICATIONS, 2011 EDITION.
2. EXISTING UNDERGROUND AND OVERHEAD FACILITIES, STRUCTURES AND UTILITIES IF SHOWN ON THESE PLANS, SHALL BE CONSIDERED APPROXIMATE ONLY. VERIFICATION OF THE LOCATIONS OF ALL EXISTING UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE VERIFIED PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. CALL MISSOURI ONE-CALL SYSTEM AT 1-800-DIG-RITE (344-7483).
3. TRAFFIC CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARDS.
4. DIRECTIONAL BORING MAY BE USED INSTEAD OF TRENCHING OR PUSHING CONDUIT, HOWEVER, NO ADDITIONAL PAYMENT WILL BE MADE.
5. THE TRAFFIC SIGNAL CONSTRUCTION SHALL BE COORDINATED WITH THE ROADWAY CONSTRUCTION.
6. REFER TO THE ROADWAY PLANS FOR STRIPING AND SIGNING EXCEPT FOR SIGNS MOUNTED ON SIGNAL EQUIPMENT.
7. ALL PEDESTRIAN FACILITIES MUST COMPLY TO CURRENT ADA STANDARDS.
8. THE CONTRACTOR WILL BE RESPONSIBLE FOR SPOTTING THE LOCATION OF ALL SIGNAL EQUIPMENT. THE CONTRACTOR SHALL NOTIFY THE INSPECTOR A MINIMUM OF ONE WEEK IN ADVANCE OF THE DESIRED DATE OF INSTALLATION.



Corporate Engineering
Certificate # 000381



CIVIL ENGINEER

DATE PREPARED

10/3/14

ROUTE STATE

MO

DISTRICT SHEET NO.

34

COUNTY

JEFFERSON

JOB NO.

105-11

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

1/24/14 1st SUBMITTAL

4/18/14 2nd SUBMITTAL

10/3/14 3rd SUBMITTAL

12/03/14 4th SUBMITTAL

12/03/14 5th SUBMITTAL

12/03/14 6th SUBMITTAL

12/03/14 7th SUBMITTAL

12/03/14 8th SUBMITTAL

12/03/14 9th SUBMITTAL

12/03/14 10th SUBMITTAL

12/03/14 11th SUBMITTAL

12/03/14 12th SUBMITTAL

12/03/14 13th SUBMITTAL

12/03/14 14th SUBMITTAL

12/03/14 15th SUBMITTAL

12/03/14 16th SUBMITTAL

12/03/14 17th SUBMITTAL

12/03/14 18th SUBMITTAL

12/03/14 19th SUBMITTAL

12/03/14 20th SUBMITTAL

12/03/14 21st SUBMITTAL

12/03/14 22nd SUBMITTAL

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12/03/14 26th SUBMITTAL

12/03/14 27th SUBMITTAL

12/03/14 28th SUBMITTAL

12/03/14 29th SUBMITTAL

12/03/14 30th SUBMITTAL

12/03/14 31st SUBMITTAL

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12/03/14 37th SUBMITTAL

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12/03/14 39th SUBMITTAL

12/03/14 40th SUBMITTAL

12/03/14 41st SUBMITTAL

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12/03/14 53rd SUBMITTAL

12/03/14 54th SUBMITTAL

12/03/14 55th SUBMITTAL

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12/03/14 57th SUBMITTAL

12/03/14 58th SUBMITTAL

12/03/14 59th SUBMITTAL

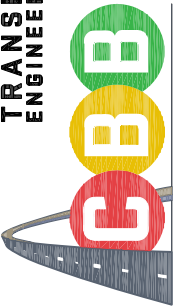
12/03/14 60th SUBMITTAL

12/03/14 61st SUBMITTAL

12/03/14 62nd SUBMITTAL

TRAFFIC SIGNAL PLAN SHEET
OLD LEMAY FERRY ROAD
AND VOGEL ROAD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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CIVIL ENGINEER

DATE PREPARED

10/3/14

ROUTE STATE

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38

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105-11

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DESCRIPTION

1st SUBMITTAL

2nd SUBMITTAL

3rd SUBMITTAL

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4/18/14

10/3/14

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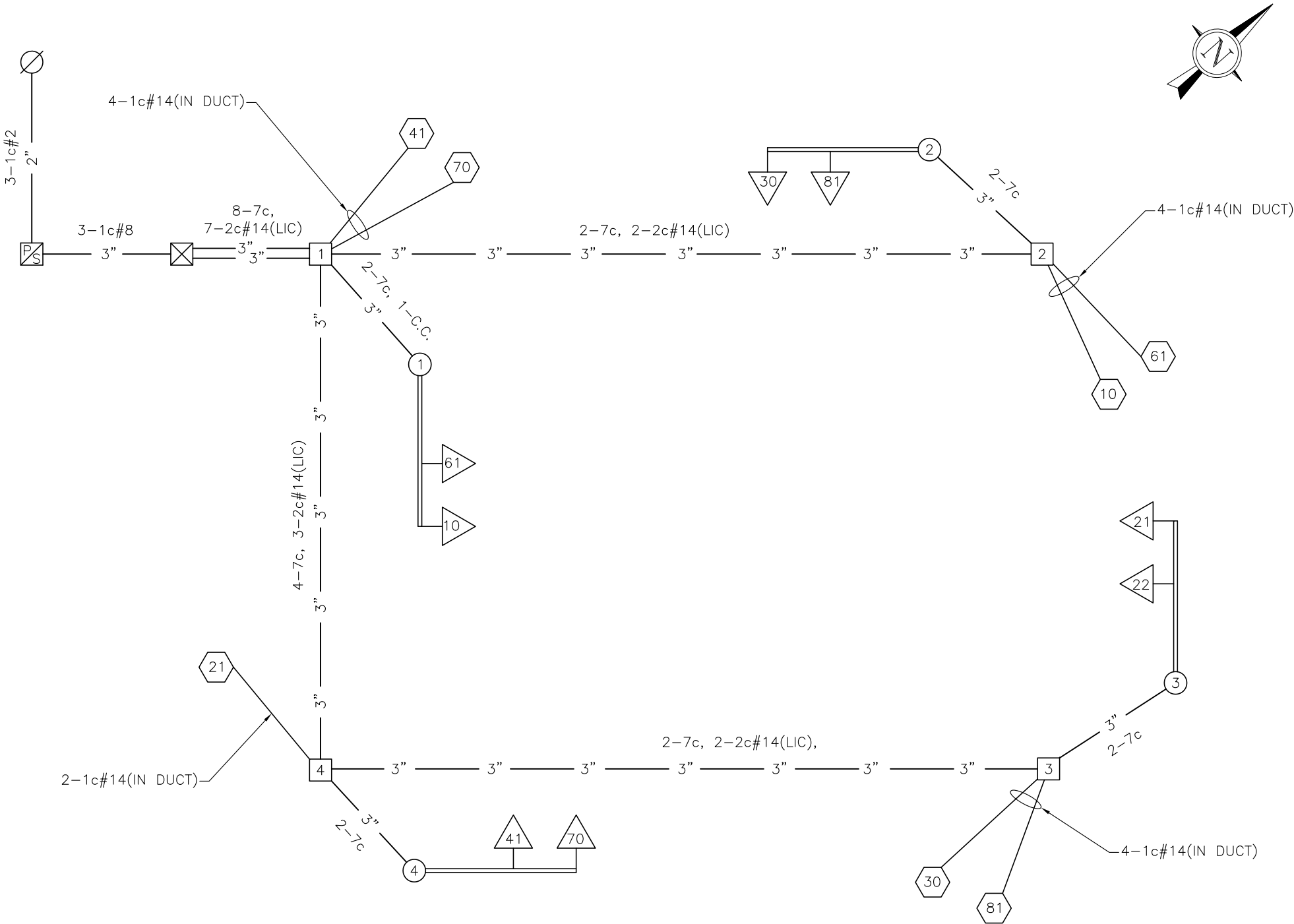
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WIRING DIAGRAM



LEGEND

X" CONDUIT CONTAINING CABLE WITH SIZE

CABLE

X-Xc MULTI-CONDUCTOR CABLE #16 AWG (UNLESS OTHERWISE INDICATED)

LIC #14 AWG DETECTOR LEAD-IN CABLE (2C TWISTED SHIELDED)

CC CAMERA CABLE

X PULL BOX WITH NUMBER

X POST WITH NUMBER

X POST WITH MAST ARM

X POST WITH MAST ARM AND LUMINAIRE

X DETECTOR WITH NUMBER

X SIGNAL HEAD WITH NUMBER

X SIGNAL CONTROLLER

X POWER SOURCE

X LIGHTING CONTROLLER

PS POWER SUPPLY

V VIDEO DETECTION CAMERA

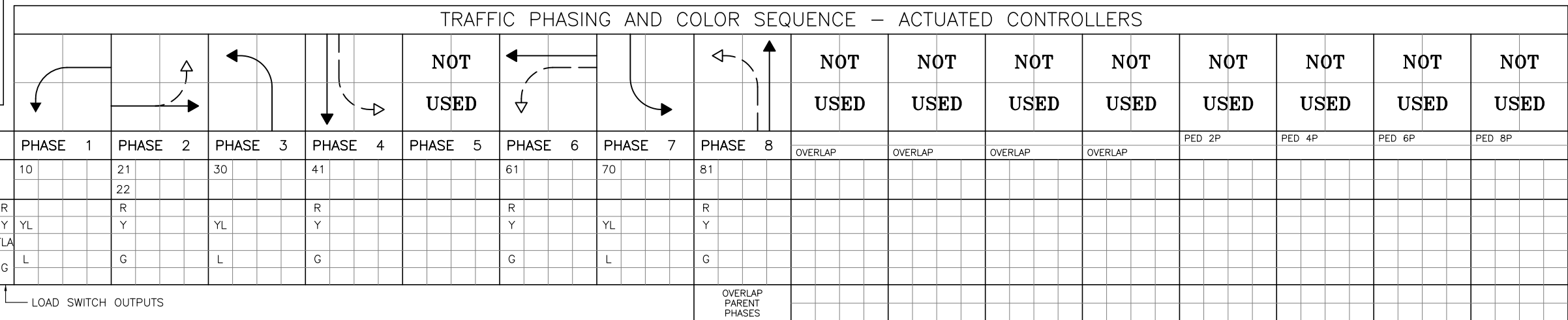
P PREEMPTION DETECTOR

P PEDESTAL MOUNT PREEMPTION CONTROL CABINET

*DASHED OR GRAY LINES INDICATE EXISTING EQUIPMENT

D37D - WIRING DIAGRAM
OLD LEMAY FERRY ROAD
AND VOGEL ROAD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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



IF CALLED, ALL NON-CONFLICTING PHASES SHALL COMBINE AND TIME CONCURRENTLY. TIME TO BE DETERMINED BY THE ENGINEER AT SIGNAL TURN ON AND SET IN THE CONTROLLER BY THE CONTRACTOR.

FLASHING OPERATION	
OLD LEMAY FERRY ROAD	FR
VOGEL ROAD	FR
CONTROLLER TYPE	NEMA Ø8

LEGEND

—▶—	ACTUATED VEHICULAR MOVEMENT
—▷—	PARTIALLY RESTRICTED ACTUATED VEHICULAR MOVEMENT
—▷—	NON-ACTUATED VEHICULAR MOVEMENT
—▷—	PARTIALLY RESTRICTED NON-ACTUATED VEHICULAR MOVEMENT
—▶—	ACTUATED PEDESTRIAN MOVEMENT
—▷—	NON-ACTUATED PEDESTRIAN MOVEMENT
— —	VEHICLE STOPPED
FDW	FLASHING DON'T WALK
R/W	RIGHT OF WAY INTERVAL
DW	DON'T WALK
RRt	RED RIGHT ARROW
YRt	YELLOW RIGHT ARROW
RT.	GREEN RIGHT ARROW
W	WALK
RL	RED LEFT ARROW
YL	YELLOW LEFT ARROW
L	GREEN LEFT ARROW
S	GREEN STRAIGHT AHEAD ARROW
G	CIRCULAR GREEN
Y	CIRCULAR YELLOW
R	CIRCULAR RED
Ø	TRAFFIC PHASE
AO	ALL OTHERS
FR	FLASHING RED
FY	FLASHING YELLOW
FYA	FLASHING ARROW INDICATION
FYL	FLASHING YELLOW LEFT
FYR	FLASHING YELLOW RIGHT

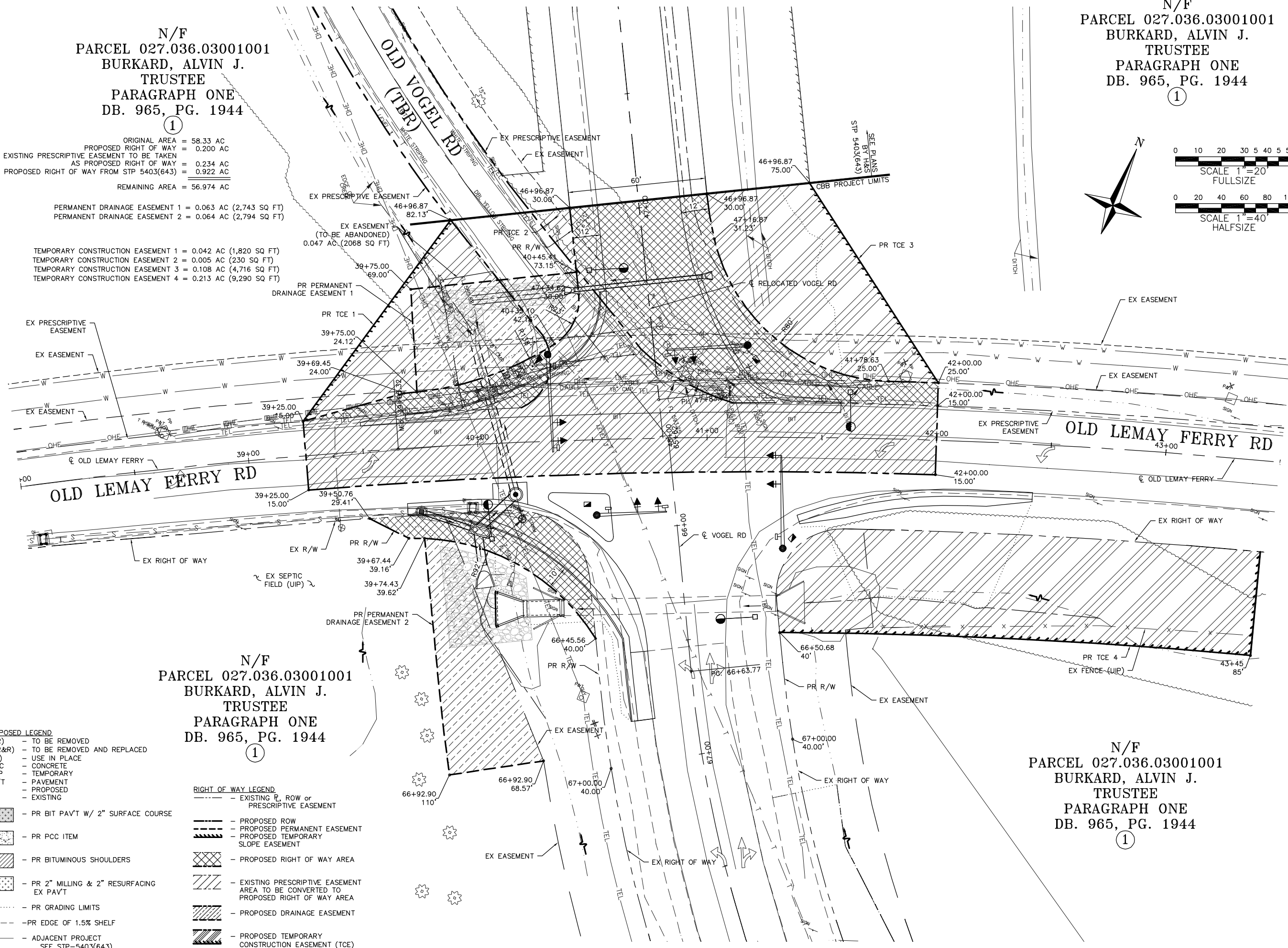
TRAFFIC SIGNAL CONTROL OPERATION

N/F
PARCEL 027.036.03001001
BURKARD, ALVIN J.
TRUSTEE
PARAGRAPH ONE
DB. 965, PG. 1944
①

ORIGINAL AREA = 58.33 AC
PROPOSED RIGHT OF WAY = 0.200 AC
EXISTING PRESCRIPTIVE EASEMENT TO BE TAKEN
AS PROPOSED RIGHT OF WAY = 0.234 AC
PROPOSED RIGHT OF WAY FROM STP 5403(643) = 0.922 AC
REMAINING AREA = 56.974 AC

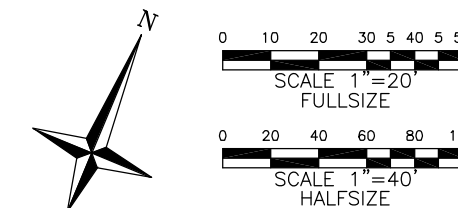
PERMANENT DRAINAGE EASEMENT 1 = 0.063 AC (2,743 SQ FT)
PERMANENT DRAINAGE EASEMENT 2 = 0.064 AC (2,794 SQ FT)

TEMPORARY CONSTRUCTION EASEMENT 1 = 0.042 AC (1,820 SQ FT)
TEMPORARY CONSTRUCTION EASEMENT 2 = 0.005 AC (230 SQ FT)
TEMPORARY CONSTRUCTION EASEMENT 3 = 0.108 AC (4,716 SQ FT)
TEMPORARY CONSTRUCTION EASEMENT 4 = 0.213 AC (9,290 SQ FT)



N/F
PARCEL 027.036.03001001
BURKARD, ALVIN J.
TRUSTEE
PARAGRAPH ONE
DB. 965, PG. 1944
①

N/F
PARCEL 027.036.03001001
BURKARD, ALVIN J.
TRUSTEE
PARAGRAPH ONE
DB. 965, PG. 1944
①



Corporate Engineering
Certificate # 000381



CIVIL ENGINEER
DATE PREPARED

ROUTE STATE
DISTRICT SHEET NO.
6 41

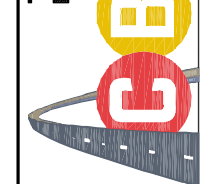
COUNTY
JEFFERSON
JOB NO.
2011-105
CONTRACT ID.

PROJECT NO.

BRIDGE NO.

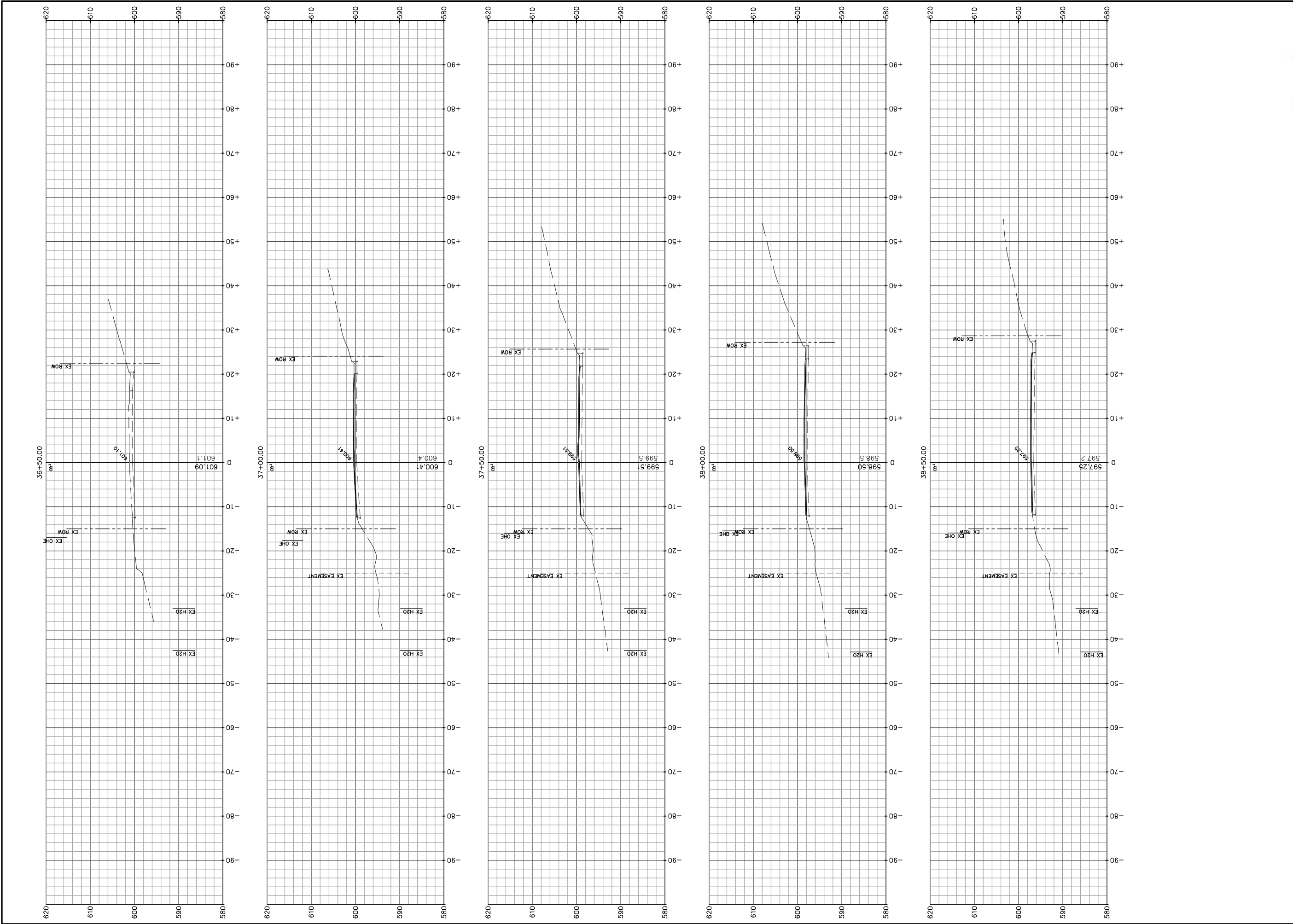
DATE	DESCRIPTION
6/21/13	PRELIMINARY SUBMITTAL
8/19/13	PRELIMINARY APPROVAL
1/24/14	70% SUBMITTAL (TO COUNTY)
4/29/14	PS&E SUBMITTAL (TO COUNTY)

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(618) 555-2612
www.cbbraff.com



APPROVED RIGHT OF WAY
(FOR INFORMATION ONLY)
VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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



Corporate Engineering
Certificate # 000381

CIVIL ENGINEER
DATE PREPARED

ROUTE
6

DISTRICT
6

STATE
MO

SHEET NO.
42

COUNTY
JEFFERSON

JOB NO.
2011-105

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

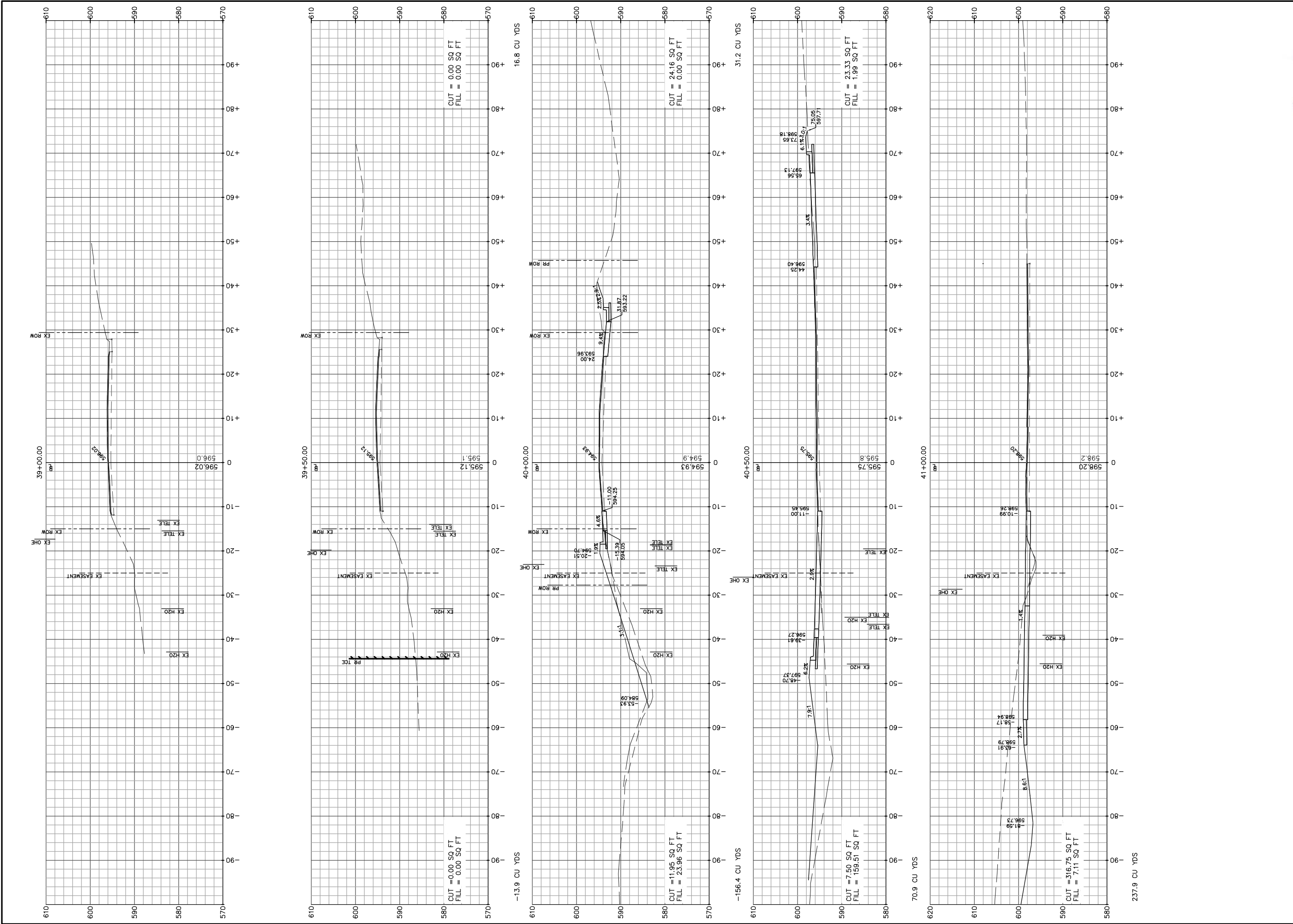
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CROSS SECTION
OLD LEMAY FERRY

VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)

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OLD LEMAY FERRY

VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
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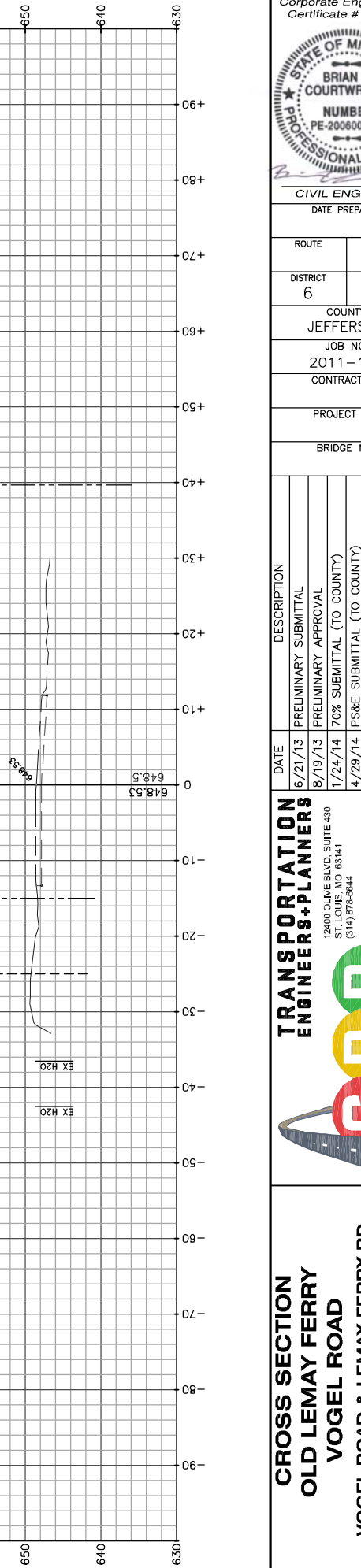
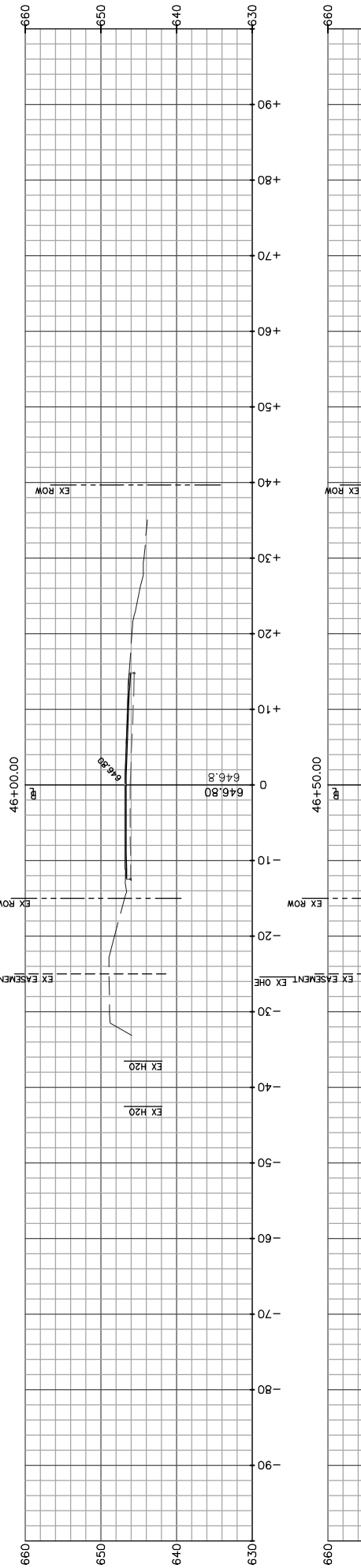
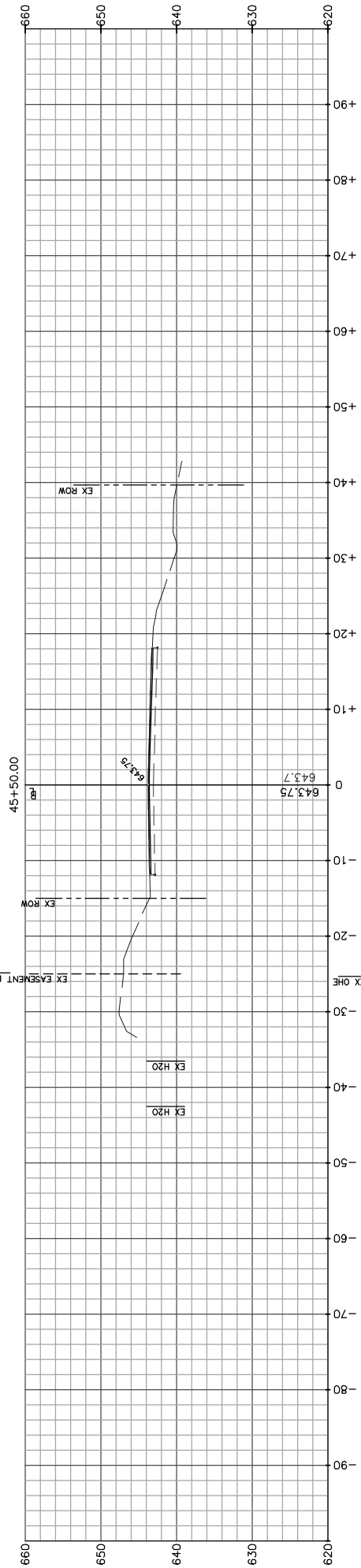
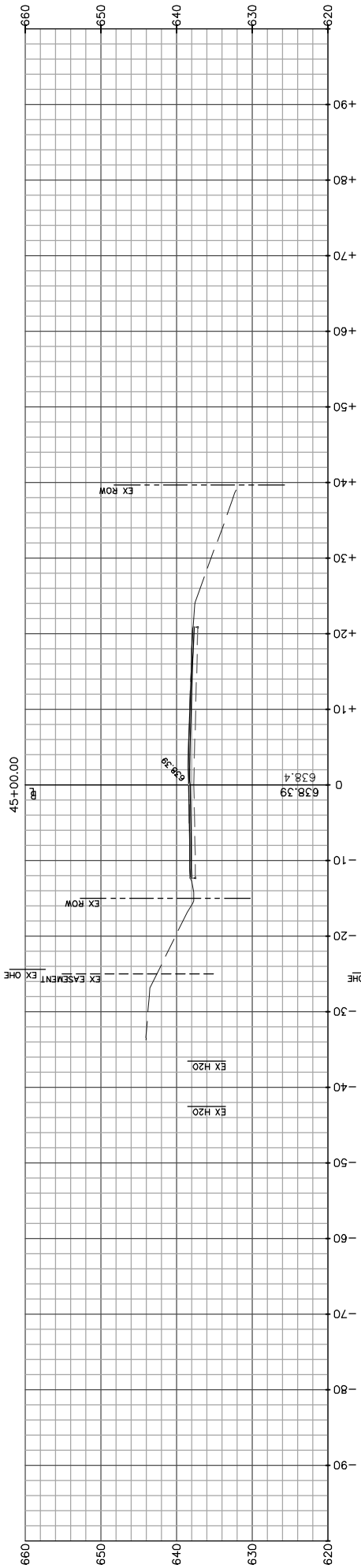
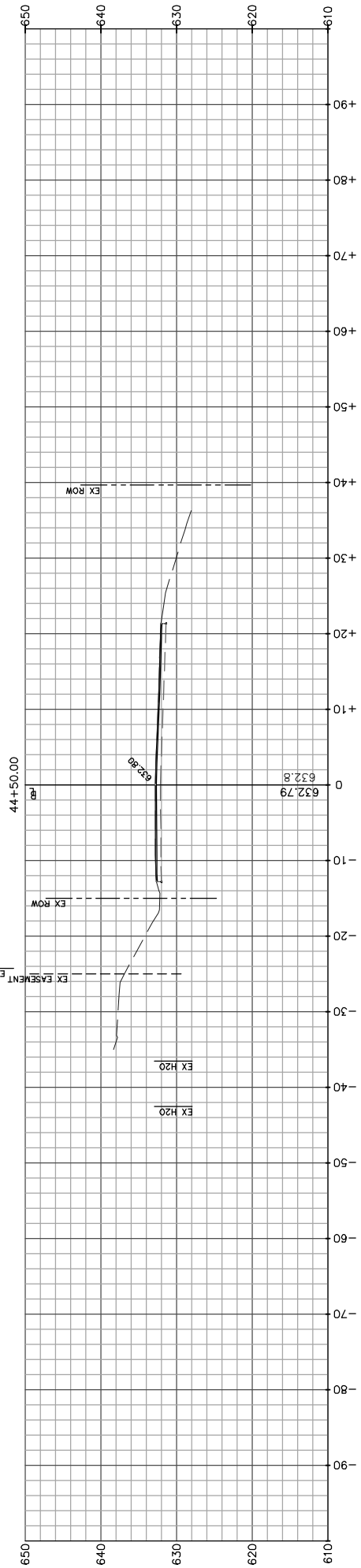
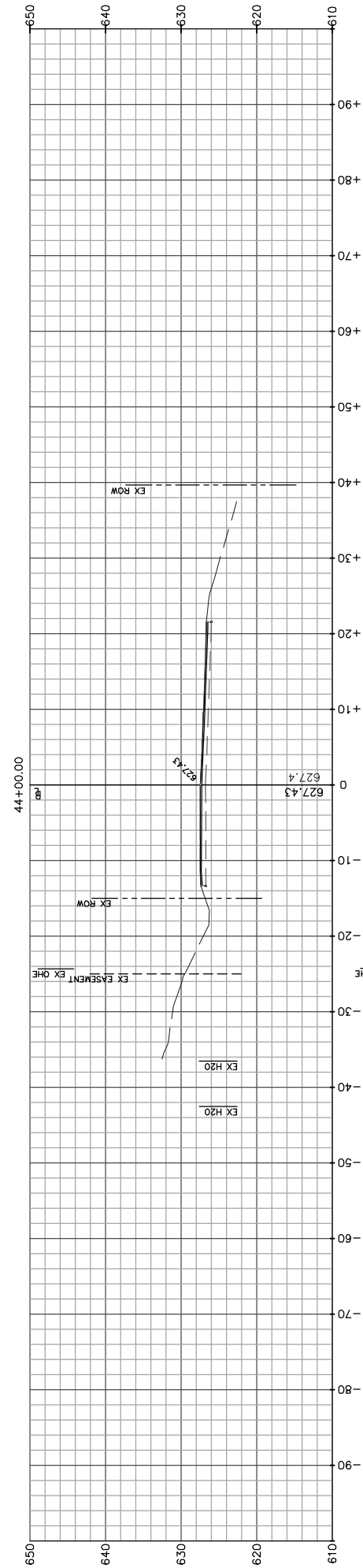
ROUTE	STATE
DISTRICT	SHEET NO.
6	43
COUNTY	
JEFFERSON	
JOB NO.	
2011-105	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

Corporate Engineering
Certificate # 000381

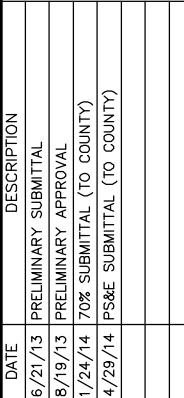
STATE OF MISSOURI
BRIAN E. COURTWRIGHT
NUMBER
PE-2006002617
PROFESSIONAL ENGINEER

CIVIL ENGINEER
DATE PREPARED

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



CROSS SECTION
OLD LEMAY FERRY
VOGEL ROAD
VOGEL ROAD & LEMAY FERRY RD
JEFFERSON COUNTY, MISSOURI
STP-5403(641)



PROJECT NO.

BRIDGE NO.

JOB NO.

CONTRACT ID.

COUNTY

JEFFERSON

RICT	SHEE
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3	4
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DATE	ST
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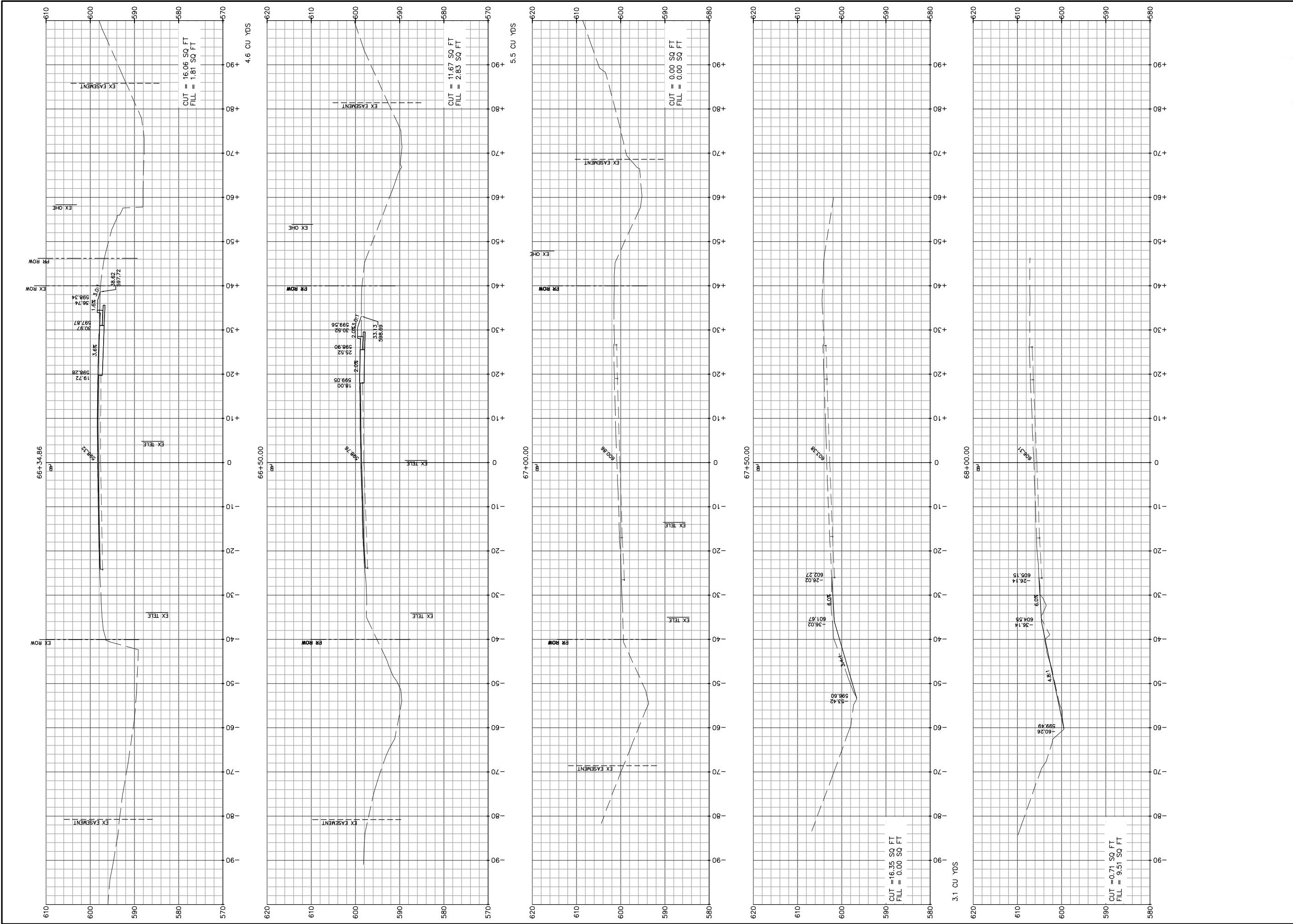
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CIVIL ENGINE



Corporate Engineering
Certificate # 000381

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CROSS SECTION
VOGEL ROAD

VOGEL ROAD & LEMAY FERRY RD
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