DESIGN DESIGNATION

A.A.D.T. - 2026 = 185
A.A.D.T. - 2046 = 204
DD = 53.6%/46.4%
T = 15.42%
V = 55 M.P.H.
D = 53.6% 46.4%

FUNCTIONAL CLASSIFICATION- MAJOR COLLECTOR

TEMPORARY EASEMENTS

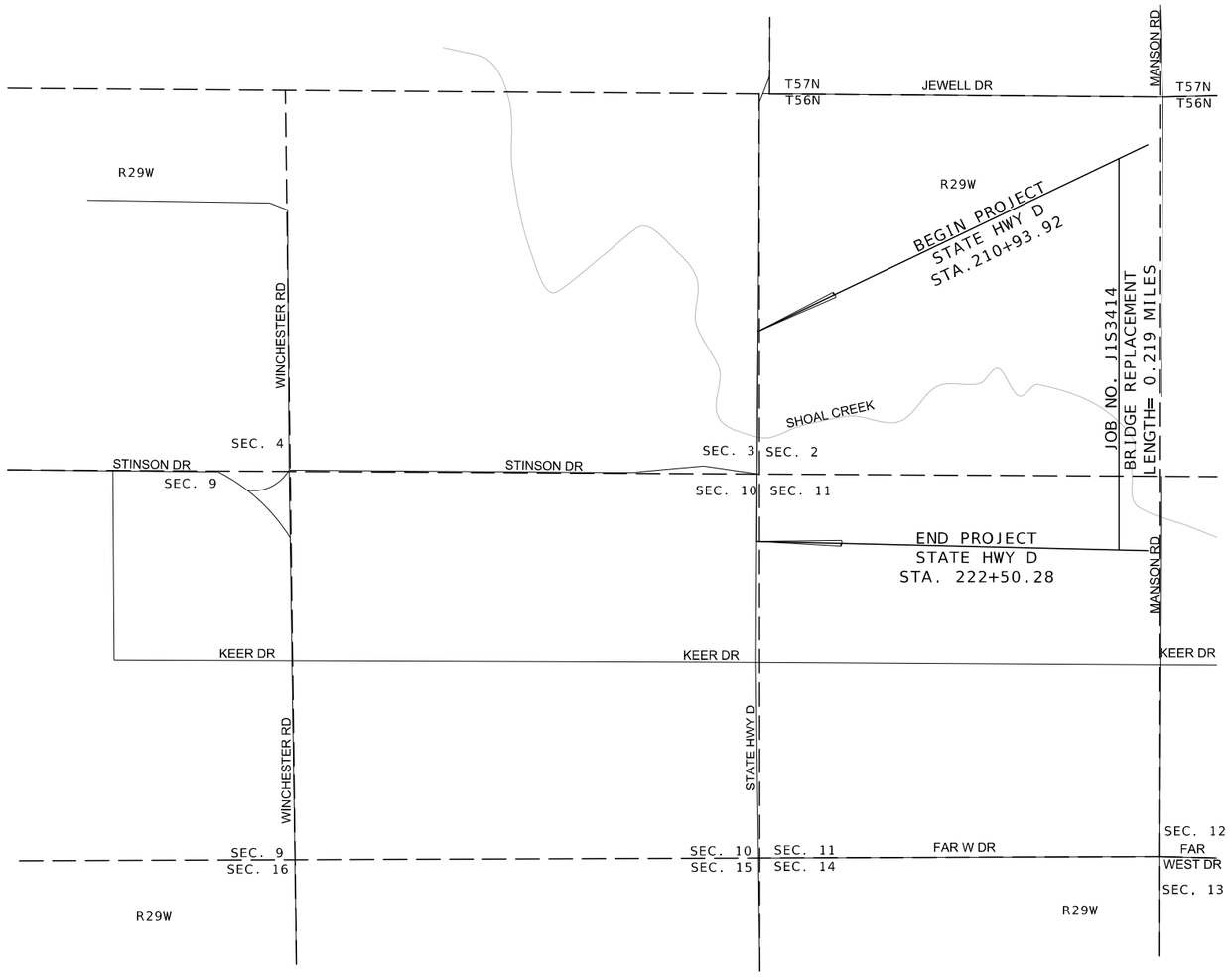
CONVENTIONAL SYMBOLS
(USED IN PLANS)

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
GUARD CABLE		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS	-FO-	-FO-
OVERHEAD CABLE TV	-OTV-	-OTV-
UNDERGROUND CABLE TV	-UTV-	-UTV-
OVERHEAD TELEPHONE	-OT-	-OT-
UNDERGROUND TELEPHONE	-UT-	-UT-
OVERHEAD POWER	-OE-	-OE-
UNDERGROUND POWER	-UE-	-UE-
SANITARY SEWER	-S-	-S-
STORM SEWER	-SS-	-SS-
GAS	-G-	-G-
WATER	-W-	-W-
MANHOLE	SAN	
FIRE HYDRANT	HYD	
WATER VALVE	WV	
WATER METER	WM	
DROP INLET		
DITCH BLOCK		
GROUND MOUNTED SIGN	SIGN	
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL	PED	
FENCE		
CHAIN LINK	-V-	
WOVEN WIRE	-X-	
GATE POST		
BENCHMARK	BM	

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY
CALDWELL COUNTY

LOCATION MAP
SHOWING LOCATION OF CALDWELL COUNTY



THE EXISTENCE AND APPROXIMATE LOCATION OF UTILITY FACILITIES KNOWN TO EXIST, AS SHOWN ON THE PLANS, ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE COMMISSION AT THIS TIME. THIS INFORMATION IS PROVIDED BY THE COMMISSION "AS-IS" AND THE COMMISSION EXPRESSLY DISCLAIMS ANY REPRESENTATION OR WARRANTY AS TO THE COMPLETENESS, ACCURACY, OR SUITABILITY OF THE INFORMATION FOR ANY USE. RELIANCE UPON THIS INFORMATION IS DONE AT THE RISK AND PERIL OF THE USER, AND THE COMMISSION SHALL NOT BE LIABLE FOR ANY DAMAGES THAT MAY ARISE FROM ANY ERROR IN THE INFORMATION. IT IS, THEREFORE, THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE, LOCATION AND STATUS OF ANY FACILITY. SUCH VERIFICATION INCLUDES DIRECT CONTACT WITH THE LISTED UTILITIES.

NOT TO SCALE

INDEX OF SHEETS

LENGTH OF PROJECT

STATE HWY D		
BEGINNING OF PROJECT	STA. 210+93.92	
END OF PROJECT	STA. 222+50.28	
APPARENT LENGTH	1156.36	FEET
EQUATIONS AND EXCEPTIONS:	NONE	
TOTAL CORRECTIONS	0.00	FEET
NET LENGTH OF PROJECT	1156.36	FEET
STATE LENGTH	0.219	MILES
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES	3.24	ACRES

STATE OF MISSOURI
MELISSA ANN WILBERS
NUMBER PE-2007002853
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

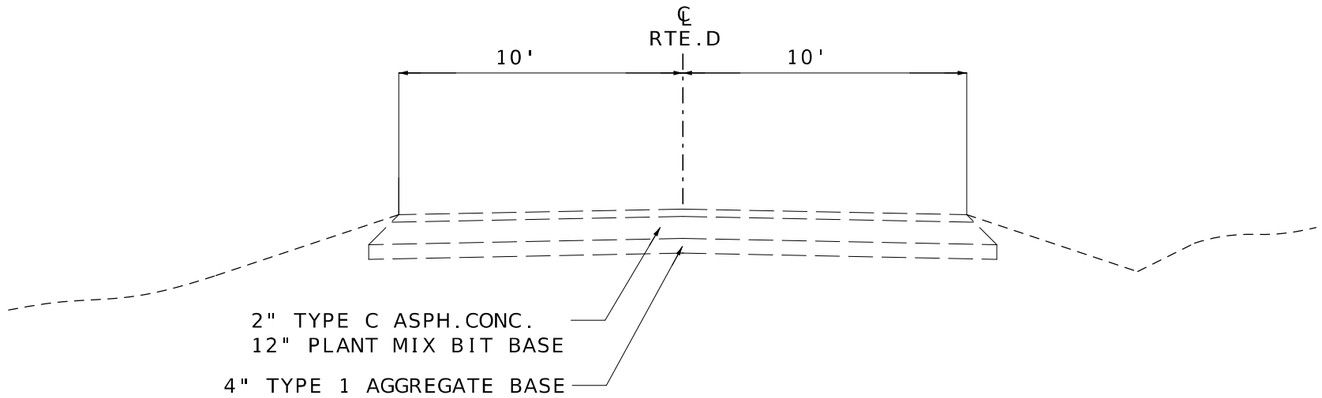
DATE PREPARED: 11/13/2024
ROUTE: D | STATE: MO
DISTRICT: NW | SHEET NO.: 1
COUNTY: CALDWELL
JOB NO.: J1S3414
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

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

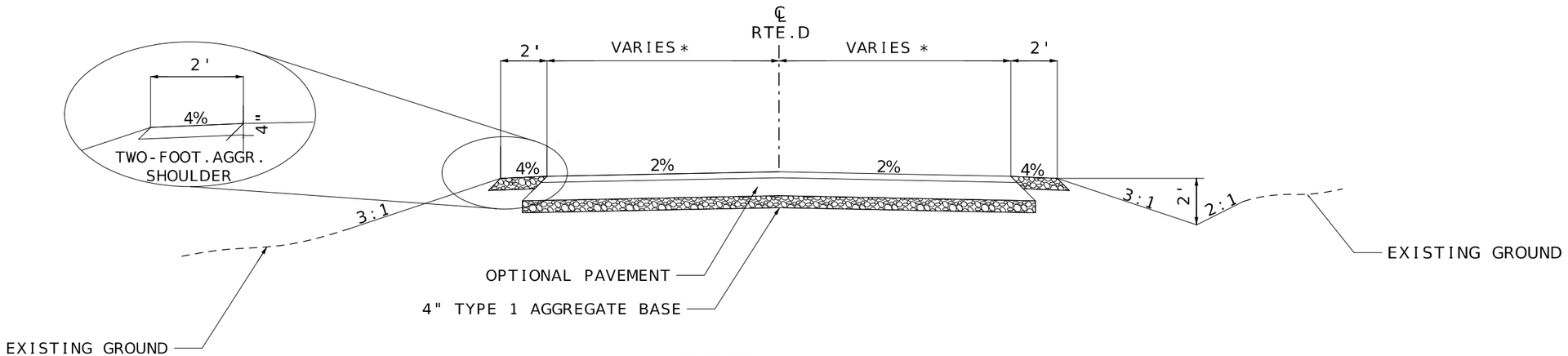
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Bartlett & West
601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTLETTWEST.COM



EXISTING TYPICAL
STA.210+93.92 TO STA.222+50.28 (20'TOP)

OPTIONAL PAVEMENT TABLE	
CONCRETE PAVEMENT 8 IN. NON-REINFORCED, 15' JOINTS ON 4" TYPE 1 AGGREGATE BASE	ASPHALT PAVEMENT 2 IN. BIT. PVM'T BP-1 PG 58-28H ON 8" BIT. BASE PG 64-22 ON 4" TYPE 1 AGGREGATE BASE



PROPOSED TYPICAL
STA.210+93.92 TO STA.214+43.22 (20' TOP)
STA.214+43.22 (20' TOP)TO STA.214+83.22(24' TOP)
STA.214+83.22 TO 215+21.52 (24' TOP)
STA.215+21.52 TO STA.217+54.10 (BRIDGE EXCEPTION)
STA.217+54.10 TO STA.217+92.40(24' TOP)
STA.217+92.40 (24' TOP) TO STA.218+32.40 (20' TOP)
STA.218+32.40 TO STA.222+50.28 (20' TOP)

NOT TO SCALE

TYPICAL SECTIONS
SHEET 1 OF 2

STATE OF MISSOURI
MELISSA ANN WILBERS
NUMBER PE-2007002853
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/25/2024
ROUTE D | STATE MO
DISTRICT NW | SHEET NO. 2
COUNTY CALDWELL
JOB NO. J1S3414
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

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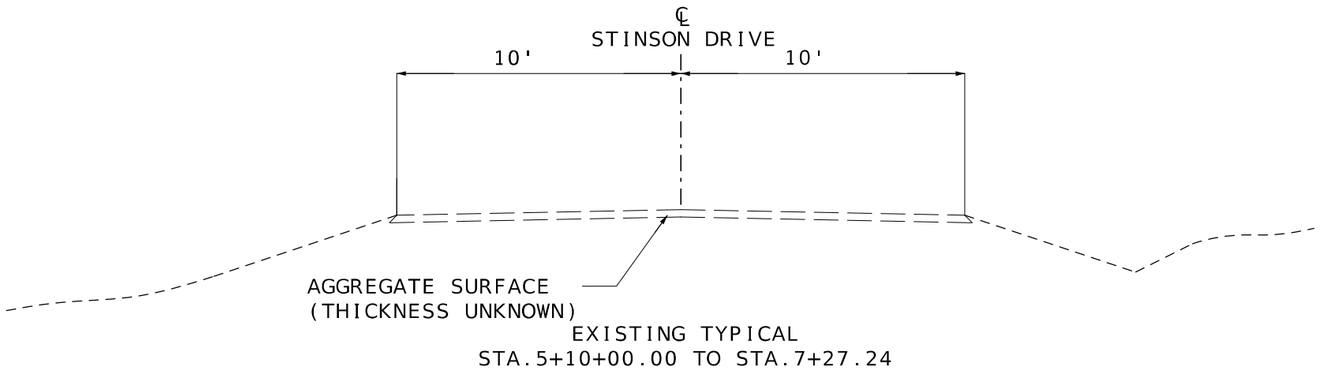
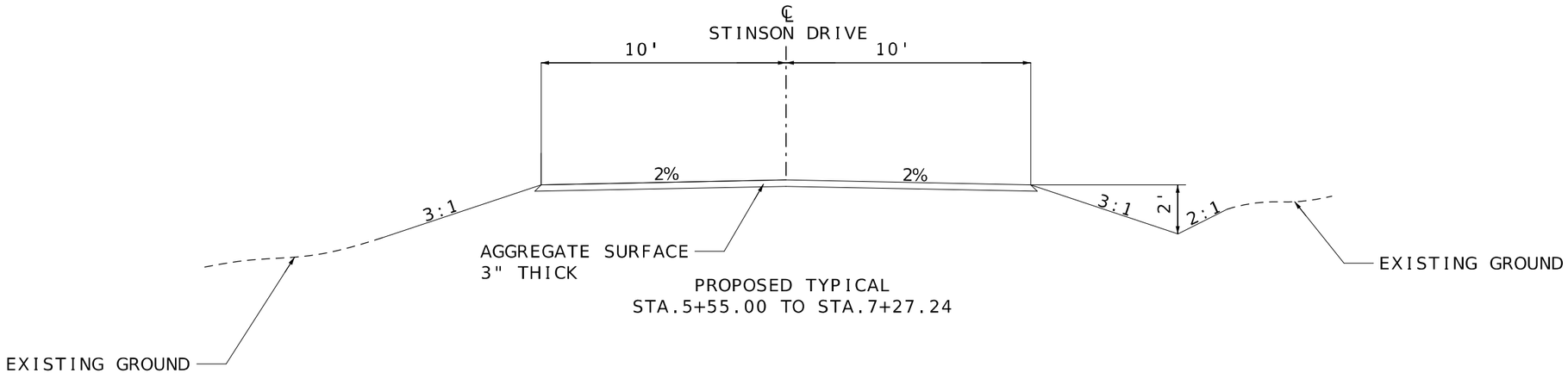
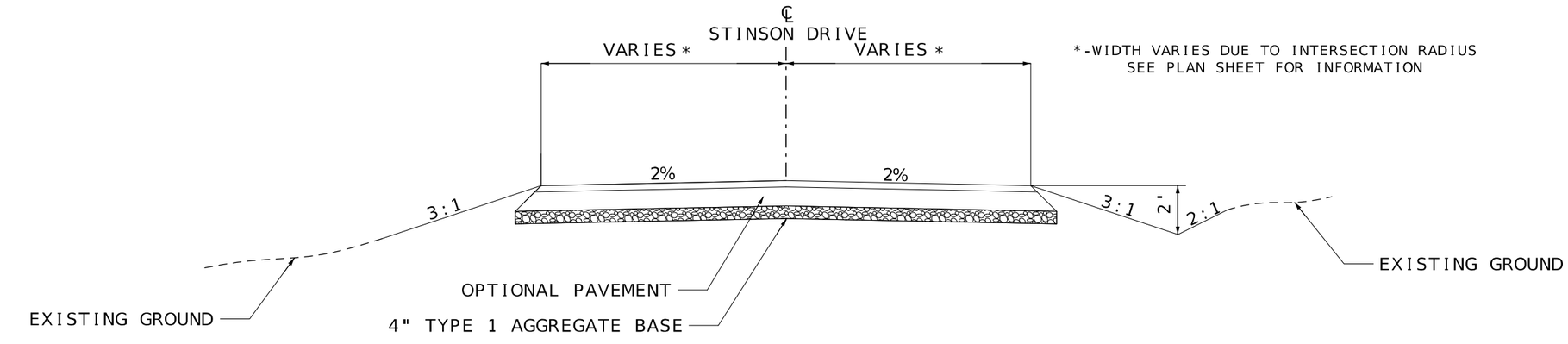


EXISTING TYPICAL
STA.5+10+00.00 TO STA.7+27.24



PROPOSED TYPICAL
STA.5+55.00 TO STA.7+27.24



*-WIDTH VARIES DUE TO INTERSECTION RADIUS
SEE PLAN SHEET FOR INFORMATION

PROPOSED TYPICAL
STA.5+10.00 TO STA.5+55.00

OPTIONAL PAVEMENT TABLE	
CONCRETE PAVEMENT 8 IN. NON-REINFORCED, 15' JOINTS ON 4" TYPE 1 AGGREGATE BASE	ASPHALT PAVEMENT 2 IN. BIT. PVM'T BP-1 PG 58-28H ON 8" BIT. BASE PG 64-22 ON 4" TYPE 1 AGGREGATE BASE

NOT TO SCALE

TYPICAL SECTIONS
SHEET 2 OF 2

STATE OF MISSOURI
MELISSA ANN WILBERS
NUMBER PE-2007002853
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/1/2024

ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
NW	2

COUNTY
CALDWELL

JOB NO.
J1S3414

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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MOBILIZATION
TOTAL = 1 LUMP SUM

ADDITIONAL MOBILIZATION FOR SEEDING
TOTAL = 2 EACH

CONTRACTOR FURNISHED SURVEYING AND STAKING
TOTAL = 1 LUMP SUM

CLEARING AND GRUBBING
1 ACRE

REMOVAL OF IMPROVEMENTS

ROUTE	STA.	STA.	LOCATION	DESCRIPTION	AMOUNT
D	210+93.92	215+28.05	CENTERLINE	PAVEMENT REMOVAL	926.7 SY
D	217+48.35	222+50.28	CENTERLINE	PAVEMENT REMOVAL	1127.0 SY
D	212+85.65	213+15.48	LT	PIPE REMOVAL	6.6 SY
D	218+31.73	218+68.38	RT	PIPE REMOVAL	10.4 SY
D	219+03.54	219+20.08	CL	PIPE REMOVAL	12.2 SY
D	214+85.44	-	RT	SIGN REMOVAL	1 EA.
D	214+87.22	-	LT	SIGN REMOVAL	1 EA.
D	215+06.11	-	RT	SIGN REMOVAL	1 EA.
D	215+06.64	-	LT	SIGN REMOVAL	1 EA.
D	215+26.93	-	LT	SIGN REMOVAL	1 EA.
D	215+27.10	-	RT	SIGN REMOVAL	1 EA.
D	217+48.89	-	RT	SIGN REMOVAL	1 EA.
D	217+49.46	-	LT	SIGN REMOVAL	1 EA.
D	217+68.90	-	RT	SIGN REMOVAL	1 EA.
D	217+70.13	-	LT	SIGN REMOVAL	1 EA.
D	217+93.22	-	LT	SIGN REMOVAL	1 EA.
D	217+94.63	-	RT	SIGN REMOVAL	1 EA.
D	218+45.55	-	RT	FENCE GATE POST REMOVAL	1 EA.
D	218+58.20	-	RT	FENCE GATE POST REMOVAL	1 EA.
D	218+69.20	218+87.75	LT	FENCE REMOVAL	19.0 LF
D	218+87.75	221+61.58	LT	FENCE REMOVAL	274.0 LF
STINSON DR	5+50.84	6+67.14	RT	FENCE REMOVAL	116.0 LF
			TOTAL	1	LUMP SUM

PAVEMENT MARKING (PERMANENT)

ROUTE	LOCATION	STA.	STA.	WATERBORNE PVMNT WITH TYPE P BEADS MARKING PAINT 4" INTERMITTENT YELLOW (LF)
D	CL	210+93.92	222+50.28	289.1
TOTAL				289
PAY TOTAL				289

DRAINAGE

ROUTE	LOCATION	STA	STA	GROUP B PIPES 15" LF	GROUP B PIPES 24" LF	GROUP B PIPES 30" LF	GROUP B FLARED END SECTIONS 15" EACH	GROUP B FLARED END SECTIONS 24" EACH	GROUP B FLARED END SECTIONS 30" EACH	ROCK LINING CY	CLASS 3 EXCAVATION CY
D	RT	212+82.73	213+17.56		28.0			2.0		3.0	22.2
D	RT	217+11.64	218+71.90			154.3			2.0		232.4
D	LT	219+60.80	220+23.93	56.0			2.0				5.0
TOTALS				56.0	28.0	154.3	2.0	2.0	2.0	3.0	259.6
PAY TOTALS				56	28	154	2	2	2	3	260

ROCK FLUMES

ROUTE	STA.	STA.	LOCATION	AREA (SF)	3' WIDE ROCK FLUME (LF)
D	215+06.70	215+09.74	RT	137.5	15.3
D	215+13.59	215+16.58	LT	98.6	11.0
			TOTAL		26.3
			PAY TOTAL		26

OPTIONAL PAVEMENT RTE D & STINSON DRIVE

ROUTE	LOCATION	STA.	STA.	AGGR. BASE TYPE 1 4" THICKNESS SY	OPTIONAL PAVEMENT SY	TWO-FOOT AGGR. SHLDR. 4" THICK SY	GRAVEL (A) OR CR. STONE (B) 3" IN. THICK SY	REMARKS
D	CL	210+93.92	215+01.50	922.0	922.0			RTE D
D	RT	210+93.92	214+83.22			82.1		RTE D
D	LT	210+93.92	214+83.22			82.1		RTE D
D	CL	217+70.90	222+50.28	1208.0	1208.0			RTE D
D	RT	217+92.40	222+50.28			97.3		RTE D
D	LT	218+78.31	222+50.28			81.7		RTE D
STINSON DR	CL	5+10.00	5+55.00	151.9	151.9			STINSON DRIVE
STINSON DR	CL	5+55.00	7+27.24				382.8	STINSON DRIVE
			TOTALS	2281.9	2281.9	343.2	382.8	
			PAY TOTALS	2282	2281.9	343	383	

SEED AND MULCH

LOCATION	COOL SEASON SEEDING ACRES	MULCHING ACRES	TEMPORARY SEED AND MULCH ACRES
NORTH END	0.57	0.57	0.14
SOUTH END	0.94	0.94	0.24
TOTALS	1.51	1.51	0.38
PAY TOTALS	1.5	1.5	0.4

NOTE: TEMPORARY IS 25% OF PERMANENT (ROUNDED TO NEAREST 0.10 ACRE)

TYPE 2 ROCK BLANKET

LOCATION	TYPE 2 ROCK BLANKET (24" THICK) FURNISHING CY	TYPE 2 ROCK BLANKET (24" THICK) PLACING CY	GEOTEXTILE SY
NORTHWEST 1	15.9	15.9	19.8
NORTHWEST 2	118.3	118.3	147.8
NORTHWEST 3	20.6	20.6	25.8
NORTHEAST 1	80.9	80.9	101.1
NORTHEAST 2	24.5	24.5	30.6
SOUTHWEST	170.1	170.1	212.6
SOUTHEAST	133.8	133.8	167.3
TOTALS	564.1	564.1	705.0
USE	564	564	705

SUMMARY OF QUANTITIES
SHEET 1 OF 3

STATE OF MISSOURI
MELISSA ANN WILBERS
NUMBER PE-2007002853
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/21/2024
ROUTE D | STATE MO
DISTRICT NW | SHEET NO. 3
COUNTY CALDWELL
JOB NO. J1S3414
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

Bartlett & West
601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
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IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

EARTHWORK

ROUTE	STA.	STA.	CLASS A EXCAVATION CY	COMPACTING EMBANKMENT CY	EMBANKMENT IN PLACE CY	COMPACTION IN CUT STA	REMARKS
D	210+93.92	215+50.00	495.9	446.3	705.9	1	CONSTRUCTION TO THE NORTH BRIDGE
D	217+00.00	222+50.28	355.9	320.3	5579.2	1	CONSTRUCTION TO THE SOUTH BRIDGE
STINSON DR	5+00.00	7+27.24	153.2	137.9	1005.1		CONSTRUCTION OF STINSON DRIVE
		TOTALS	1005.0	904.5	7290.2	2	
		PAY TOTALS	1005	905	7291	2	

PERMANENT EROSION CONTROL

ROUTE	STA.	STA.	LOC.	FURNISHING TYPE 3 ROCK DITCH LINER CY	PLACING TYPE 3 ROCK DITCH LINER CY	BEDDING MATERIALS FOR ROCK DITCH LINER CY	TYPE 3 TURF REINFORCEMENT MAT SY	TYPE 3B EROSION CONTROL BLANKET SY
D	210+93.92	212+80.77	LT				166	
D	210+93.92	212+90.00	LT					224
D	210+93.92	214+95.32	RT					1040
D	210+93.92	215+10.18	RT				371	
D	213+10.00	215+04.72	LT					485
D	213+23.99	215+04.72	LT				146	
D	214+95.32	215+10.18	RT					56
D	215+04.72	216+12.88	RT					123
D	215+10.18	216+01.09	LT					135
D	216+83.28	219+94.00	RT					1374
D	216+95.96	217+11.64	LT	7	7	2		
D	217+07.55	218+17.96	LT					740
D	217+89.15	219+69.94	RT	99	99	36		
D	218+37.92	218+72.87	LT				167	
D	218+37.92	222+50.28	LT					1022
D	218+45.63	220+17.61	LT					519
D	218+65.42	219+49.04	LT	44	44	16		
D	219+28.71	220+20.56	LT	47	47	17		
D	219+48.83	222+95.04	LT				219	
D	220+06.00	222+50.28	RT					378
D	220+19.02	222+50.28	RT				128	
		TOTALS		197.0	197.0	71.0	1197.0	6096.0
		PAY TOTALS		197	197	71	1197	6096

SIGNS

ROUTE	LOCATION	SIGN SIZE(in)	POST PERF. STEEL SQUARE PSST 2" x 2" 12 GA. LF	POST PERF. STEEL SQUARE DRIVEN POST ANCHOR FOR 2" PSST 12 GA. EACH	POST PERF. STEEL SQUARE PSST 2.5" x 2.5" 12 GA. LF	POST PERF. STEEL SQUARE DRIVEN POST ANCHOR FOR 2.5" PSST 12 GA. EACH	SH-FLAT SF	TYPE 3 OBJECT MARKERS EA	REMARKS
D	N. BRIDGE END	48" x 48"	90	6				6	6 - TYPE 3 OBJECT MARKERS
D	S. BRIDGE END	36" x 36"	90	6				6	6 - TYPE 3 OBJECT MARKERS
D	LEFT SIDE OF STINSON DR.	24" x 24"			15	1	3.33		36" STOP SIGN
		TOTALS	180.0	12.0	15.0	1.0	3.33	12.0	
		PAY TOTALS	180	12	15	1	3	12	

TEMP. EROSION CONTROL

ROUTE	LOC.	STA.	STA.	ROCK DITCH CHECKS LF	SEDIMENT REMOVAL CY	TYPE C BERM LF	REMARKS
D	RT	211+68.88	214+67.97	450	3		3 DEVICES SPACED 150'
D	LT	212+72.82	-	10	1		1 DEVICE UPSTREAM OF CULVERT
D	LT	214+84.63	-	10	1		1 DEVICE DITCH OUTLET
D	CL	215+64.39	216+29.97			150	
D	CL	216+67.97	217+36.28			160	
D	RT	218+21.97	219+54.30	135	10		10 DEVICES SPACED 15'
D	LT	218+67.85	-	10	1		1 DEVICE @ PIPE INLET
D	LT	218+77.19	221+98.35	320	17		17 DEVICES SPACED 20'
D	RT	220+24.82	222+45.48	221	14		14 DEVICES SPACED 17'
			TOTALS	1156.0	47.0	310.0	
			PAY TOTALS	1156	47	310	

NOTE: SEDIMENT REMOVAL IS BASED ON 1 CY PER DITCH CHECK.

SUMMARY OF QUANTITIES
SHEET 2 OF 3

STATE OF MISSOURI
MELISSA ANN WILBERS
NUMBER PE-2007002853
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/1/2024
ROUTE D | STATE MO
DISTRICT NW | SHEET NO. 3
COUNTY CALDWELL
JOB NO. J1S3414
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

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

Bartlett & West
601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
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WARNING SIGNS

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
WO1-1L	48X48	16.00						TURN (SYMBOL LEFT)
WO1-1R	48X48	16.00						TURN (SYMBOL RIGHT)
WO1-2L	48X48	16.00						CURVE (SYMBOL LEFT)
WO1-2R	48X48	16.00						CURVE (SYMBOL RIGHT)
WO1-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT)
WO1-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT)
WO1-4L	48X48	16.00						REVERSE CURVE (SYMBOL LEFT)
WO1-4R	48X48	16.00						REVERSE CURVE (SYMBOL RIGHT)
WO1-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT)
WO1-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT)
WO1-6	60X30	12.50						HORIZONTAL ARROW (SYMBOL)
WO1-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)
WO1-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
WO1-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)
WO1-8	18X24	3.00						CHEVRON (SYMBOL)
WO1-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
WO3-1	48X48	16.00						STOP AHEAD (SYMBOL)
WO3-2	48X48	16.00						YIELD AHEAD (SYMBOL)
WO3-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)
WO3-4	48X48	16.00						BE PREPARED TO STOP
WO3-5	48X48	16.00						SPEED LIMIT AHEAD
WO4-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)
WO4-1R	48X48	16.00						MERGE (SYMBOL FROM RIGHT)
WO4-1aL	48X48	16.00						MERGE (LEFT)
WO4-1aR	48X48	16.00						MERGE (RIGHT)
WO5-1	48X48	16.00						ROAD/BRIDGE/RAMP NARROWS
WO5-3	48X48	16.00						ONE LANE BRIDGE
WO5-5	48X48	16.00						NARROW LANES
WO6-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)
WO6-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)
WO6-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)
WO7-3a	30X24	5.00						NEXT XX MILES (PLAQUE)
WO8-1	48X48	16.00						BUMP
WO8-2	48X48	16.00						DIP
WO8-3	48X48	16.00						PAVEMENT ENDS
WO8-4	48X48	16.00						SOFT SHOULDER
WO8-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)
WO8-6	48X48	16.00						TRUCK CROSSING
WO8-6c	48X48	16.00						TRUCK ENTRANCE
WO8-7	36X36	9.00						LOOSE GRAVEL
WO8-7a	36X36	9.00						FRESH OIL / LOOSE GRAVEL
WO8-9	48X48	16.00						LOW SHOULDER
WO8-11	48X48	16.00						UNEVEN LANES
WO8-12	48X48	16.00						NO CENTER LINE
WO8-15	48X48	16.00						GROOVED PAVEMENT
WO8-15P	30X24	5.00						MOTORCYCLE (PLAQUE)
WO8-17L	48X48	16.00						SHOULDER DROP-OFF (SYMBOL LEFT)
WO8-17R	48X48	16.00						SHOULDER DROP-OFF (SYMBOL RIGHT)
WO8-17P	30X24	5.00						SHOULDER DROP-OFF (PLAQUE)
W10-1	42RND.	9.62						RAILROAD CROSSING
WO12-1	24X24	4.00						DOUBLE DOWN ARROW (SYMBOL)
WO12-2	48X48	16.00						LOW CLEARANCE (SYMBOL)
W012-2x	24X18	3.00						LOW CLEARANCE (PLAQUE)
WO12-2a	84X24	14.00						OVERHEAD LOW CLEARANCE (FEET AND INCHES)
WO12-4	120X60	50.00						LOW CLEARANCE XX FT XX IN XX MILES AHEAD
WO12-5	120X60	50.00						WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD
WO13-1	30X30	6.25						ADVISORY SPEED (PLAQUE)
WO16-2	30X24	5.00						XXX FEET (PLAQUE)
WO16-3	30X24	5.00						X MILE (PLAQUE)
WO20-1	48X48	16.00						ROAD/BRIDGE/RAMP WORK AHEAD
WO20-2	48X48	16.00						DETOUR AHEAD
WO20-3	48X48	16.00	5	80.00			20A,B	ROAD CLOSED AHEAD
WO20-4	48X48	16.00	2	32.00				ONE LANE ROAD AHEAD
WO20-5	48X48	16.00						RIGHT/CENTER/LEFT LANE CLOSED AHEAD
WO20-5a	48X48	16.00						2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
WO20-6a	48X48	16.00						RIGHT/CENTER/LEFT LANE CLOSED
WO20-7a	48X48	16.00						FLAGGER (SYMBOL)
WO21-2	36X36	9.00						FRESH OIL
WO21-5	48X48	16.00						SHOULDER WORK / SHOULDER WORK AHEAD
WO22-1	48X48	16.00						BLASTING ZONE AHEAD
WO22-2	42X36	10.50						TURN OFF 2-WAY RADIO AND PHONE
WO22-3	42X36	10.50						END BLASTING ZONE
GO22-1	21X15	2.19	4	8.76				WET PAINT (ARROW PIVOTS)

GUIDE SIGNS

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
E05-1	36X48	12.00						GORE EXIT
E05-2	48X36	12.00						EXIT OPEN
E05-2a	48X36	12.00						EXIT CLOSED
GO20-1	60X24	10.00						ROAD WORK NEXT XX MILES
GO20-2	48X24	8.00						END ROAD WORK
GO20-4	36X18	4.50						PILOT CAR FOLLOW ME
GO20-4a	42X30	8.75						PILOT CAR IN USE WAIT & FOLLOW
GO20-4a	18X12	1.50						PILOT CAR IN USE WAIT & FOLLOW
GO20-5aP	36X24	6.00						WORK ZONE (PLAQUE)
MO4-8a	24X18	3.00						END DETOUR
MO4-9L	48X36	12.00						DETOUR (LEFT)
MO4-9R	48X36	12.00						DETOUR (RIGHT)
MO4-9P	48X12	4.00						STREET NAME (PLAQUE)
MO4-10L	48X18	6.00						DETOUR ARROW (LEFT)
MO4-10R	48X18	6.00						DETOUR ARROW (RIGHT)

REGULATORY SIGNS

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
R1-1	48X48	13.25						STOP
R1-2	48TRI.	6.93						YIELD
R1-2a	36X36	9.00						TO ONCOMING TRAFFIC (PLAQUE)
R1-3P	30X12	2.50						ALL WAY (PLAQUE)
R2-1	36X48	12.00						SPEED LIMIT XX
R3-1	48X48	16.00						NO RIGHT TURN (SYMBOL)
R3-2	48X48	16.00						NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00						NO TURNS
R3-4	48X48	16.00						NO U-TURN (SYMBOL)
R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25						RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00						DO NOT PASS
R4-2	36X48	12.00						PASS WITH CARE
R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)
R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)
R5-1	30X30	6.25						DO NOT ENTER
R5-1a	36X24	6.00						WRONG WAY
R6-1L	54X18	6.75						ONE WAY ARROW (LEFT)
R6-1R	54X18	6.75						ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00						ONE WAY (LEFT)
R6-2R	24X30	5.00						ONE WAY (RIGHT)
R9-9	24X12	2.00						SIDEWALK CLOSED
R9-11L	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE
R9-11R	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE
R10-6	24X36	6.00						STOP HERE ON RED (45^ ARROW)
R11-2	48X30	10.00	3	30.00			29	ROAD CLOSED
R11-3a	60X30	12.50						ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50	3	37.50			55C	ROAD CLOSED TO THRU TRAFFIC
CONST-3A	60X48	20.00						FINE SIGN
CONST-3X	56X12	4.67						SPEEDING/PASSING (PLATE)

MISCELLANEOUS SIGNS

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
CONST-5	48X36	12.00						POINT OF PRESENCE
CONST-5	96X48	32.00						POINT OF PRESENCE
CONST-8	48X36	12.00						WORK ZONE NO PHONE ZONE

616-10.05 CONSTRUCTION SIGNS	TOTAL
	188.26

616-10.10 RELOCATED SIGNS	TOTAL
	0

EFFECTIVE: 07-01-2024

ITEM NUMBER	TOTAL QTY	DESCRIPTION
6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)
6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
6122020		REPLACEMENT SAND BARREL
6122030		IMPACT ATTENUATOR (RELOCATION)
6123001	2*	TRUCK MOUNTED ATTENUATOR (TMA)
6161008		ADVANCED WARNING RAIL SYSTEM
6161012		BUOYS (BOATS KEEP OUT)
6161013		BUOYS (NO WAKE)
6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
6161025		CHANNELIZER (TRIM LINE)
6161030	8	TYPE III MOVEABLE BARRICADE
6161033		DIRECTION INDICATOR BARRICADE
6161040		FLASHING ARROW PANEL
6161047		TYPE III OBJECT MARKER
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A		CHANGEABLE MESSAGE SIGN WITHOUT COMM. INTERFACE- CONTRACTOR FURNISHED/RETAINED
6161099		CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE- CONTRACTOR FURNISHED/RETAINED
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002		TEMPORARY LONG-TERM RUMBLE STRIPS
6173600D		TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/RETAINED
6173602B		TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/COMMISSION RETAINED
6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6176000B		TEMPORARY TRAFFIC BARRIER COMMISSION FURNISHED/RETAINED
6177000B		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION COMMISSION FURNISHED/RETAINED
6208064A		TEMPORARY RAISED PAVEMENT MARKER
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING

* TMA COST IS INCIDENTAL - NO DIRECT PAY

SUMMARY OF QUANTITIES
SHEET 3 OF 3

STATE OF MISSOURI
MELISSA ANN WILBERS
NUMBER PE-2007002853
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/1/2024

ROUTE	STATE
D	MO

DISTRICT	SHEET NO.
NW	3

COUNTY: CALDWELL
JOB NO.: J1S3414
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

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

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

Bartlett & West
601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTLETTWEST.COM

SW¼ SW¼ SEC. 2
T56N, R29W

GENERAL NOTES

1. RIGHT OF WAY LIMITS FOR THIS PROJECT EXTEND FROM STA. 217+90.04 TO STA. 222+00.00 ALONG ROUTE D, A DISTANCE OF 0.078 MILES,
2. 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.
3. ALL UTILITIES SHALL NOT BE DISTURBED DURING CONSTRUCTION UNLESS OTHERWISE NOTED ON THE PLANS.
4. ALL BEARINGS ARE BASED ON STATE PLANE BEARINGS, WEST ZONE.

CYNTHIA ROSE SHERIDAN
NO R/W TAKING

REMOVE BRIDGE P0428
43' SPAN, 43' SPAN, 100'TRUSS SPAN,31' SPAN
DECK WIDTH IS 22'4"

SHOAL CREEK

NW¼ NW¼ SEC. 11
T56N, R29W

STA. 220+00.00
BUILD 30' WIDE FE
NO SURFACING
9.25 % GRADE
15"X 56' GROUP B PIPE
INCL. 2- GR.B FES

(2) JOHN D. SHERIDAN
SEE SHEET 6 FOR R/W INFO.

TEMP. CONST. ESMT.

(R) ENTRANCE

EXIST. WATERLINE ESM'T.

STA.221+93.92 TO STA.222+50.28
INSTALL 4"YELLOW WATERBORNE MARKING PAINT
(INTERMITTENT STRIPE)

TYPE 2 ROCK BLANKET
ROCK FLUME
TYPE 3 RDL

EXIST. R/W
SECTION LINE
ROUTE D
N90°00'00"E
℄ RTE D

(1) JOHN D. & CYNTHIA ROSE SHERIDAN
SEE SHEET 6 FOR R/W INFO.

STA. 213+00.00
BUILD 20' WIDE FE
NO SURFACING
6.86 % GRADE
24"X 36' GROUP B PIPE
INCL. 2- GR.B FES
INCL. 3 CY ROCK LINING

STA. 217+11.64 48.79' RT TO
STA.218+71.90 39.71' RT
BUILD 30"X 154' GROUP B PIPE
INCL. 1- 20° ELBOW
INCL. 1- 23° ELBOW
INCL. 2 - GR B FES
CL.3 EXC. = 232 CY

STA. 215+21.00 TO STA.217+54.62
BUILD BRIDGE A9604
24' ROADWAY WIDTH W/ TYPE H BARRIER
SKEWED 15° R.A.
PRESTRESSED NU35 GIRDER SPANS
(85'-85'-60')
100 YEAR FLOOD ELEV. - 831.1

SCALE
0 50 100 150

(3) CATHY L. THOMPSON, SAUNDRA M. & RODNEY D. PETERSON
SEE SHEET 6 FOR R/W INFO.

SEE SHEET 14 FOR FINAL EROSION CONTROL

=5+00.00 ℄ STINSON DRIVE
218+44.28 ℄ RTE D
STINSON DRIVE
N84°44'05"W

TEMP. CONST. ESM'T.

SEE SHEET #6 FOR TEMP. CONST. ESM'T. STATIONS AND OFFSETS

IMPROVEMENT BEGINS AT STA. 210+93.92
℄ RTE. D, A POINT LOCATED 609.55' NORTH AND 5,038.52' EAST OF THE SW CORNER OF SECTION 3, T56N, R29W
DOCUMENT 600-59504

IMPROVEMENT ENDS AT STA.222+50.28
℄ RTE. D,A POINT LOCATED 576.58' SOUTH AND 5,015.46' EAST OF THE SOUTHWEST CORNER OF SECTION 3, T56N, R29W.
DOCUMENT 600-59504

SE¼ SE¼ SEC. 3
T56N, R29W

NE¼ NE¼ SEC. 10
T56N, R29W

CLASS A EXCAVATION = 495.9 C.Y.
COMPACTING EMBANKMENT = 446.3 C.Y.
EMBANKMENT IN PLACE = 705.9 C.Y.
COMPACTING IN CUT = 1.0 STA.

FILL EXCEPTION

CLASS A EXCAVATION = 355.9 C.Y.
COMPACTING EMBANKMENT = 320.3 C.Y.
EMBANKMENT IN PLACE = 5579.2 C.Y.
COMPACTING IN CUT = 1.0 STA.

SSD = 522'
K = 84
230.00' V.C.

SSD = 372'
K = 81
425.00' V.C.

SSD = 1,567'
K = 141
100.00' V.C.

830.8 DESIGN FLOOD ELEVATION

814.69 OHW ELEVATION

PROPOSED PROFILE
EXISTING GROUNDLINE
LT DITCH PROFILE
RT DITCH PROFILE
LT DITCH PROFILE
RT DITCH PROFILE

STA. 210+93.92
VPC 211+20.49 EL 830.19
VLP 211+22.37 EL 830.19
VPI 212+35.49 EL 830.17
VPT 213+50.49 EL 833.29
VPI 214+61.54 EL 836.30
VPC 214+11.54 EL 834.95
VPT 215+11.54 EL 837.30
VPC 217+70.05 EL 842.48
STA.5+00.00 = STA. 218+44.28 RTE.D
VPI 219+82.55 EL 846.74
VPT 221+95.05 EL 862.12
STA. 222+50.28

-0.02% +2.71% +2.71% +2.00% +2.00% +7.24% +7.24%

BENCH LEVEL 301
STA.217+47.37
12.42' RIGHT
ELEVATION - 838.802
BENCH LEVEL 302
STA.215+28.52
11.80' LEFT
ELEVATION - 838.762
BENCH LEVEL 303
STA.206+33.95
33.36' RIGHT
ELEVATION - 829.237

50'
10'

DRIVEWAYS

STATION	LOCATION	TYPE	SKEW	GRADE	SURFACE	PIPE	REMARKS
213+00	LT	-	-	6.86%	NO SURFACING	24" X 36' GROUP B PIPE	INCL. 2- GR.B FES
220+00	RT	-	-	9.25%	NO SURFACING	15" X 56' GROUP B PIPE	INCL. 2- GR.B FES

UTILITIES

BRIGHTSPEED
1120 SOUTH TRYON ST.
CHARLOTTE, NC 28203
(833) 363-2360

CLINTON COUNTY PWSD 3
1209 NORTH ASHLAND DR.
CAMERON, MO 64429
(816) 632-2055

FARMERS ELECTRIC COOP
201 WEST BUS.36
CHILLICOTHE, MO 64601
(800) 279-0496

NW ELECTRIC POWER COOP.
1001 WEST GRAND AVE.
CAMERON, MO 64429
(816)632-2121

PLAN & PROFILE
ROUTE D
SHEET 1 OF 2

210+00 211+00 212+00 213+00 214+00 215+00 216+00 217+00 218+00 219+00 220+00 221+00 222+00 223+00

940 930 920 910 900 890 880 870 860 850 840 830 820 810 800 790 780 770 760 750 740 730

STATE OF MISSOURI
MELISSA ANN WILBERS
NUMBER PE-2007002853
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

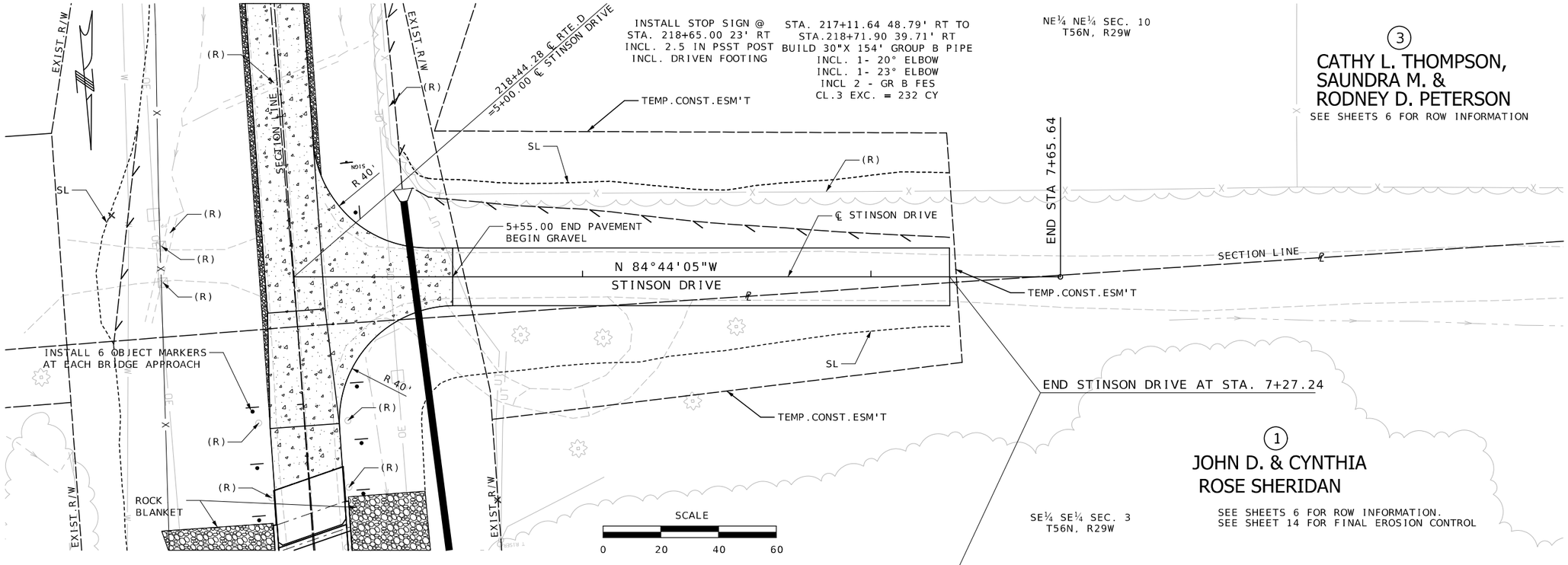
DATE PREPARED 11/6/2024
ROUTE D | STATE MO
DISTRICT NW | SHEET NO. 4
COUNTY CALDWELL
JOB NO. J1S3414
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

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

Bartlett & West
601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTLETTWEST.COM



PLAN & PROFILE
STINSON DRIVE
SHEET 2 OF 2

STATE OF MISSOURI
MELISSA ANN WILBERS
NUMBER PE-2007002853
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/6/2024

ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
NW	5

COUNTY
CALDWELL

JOB NO.
J1S3414

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

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

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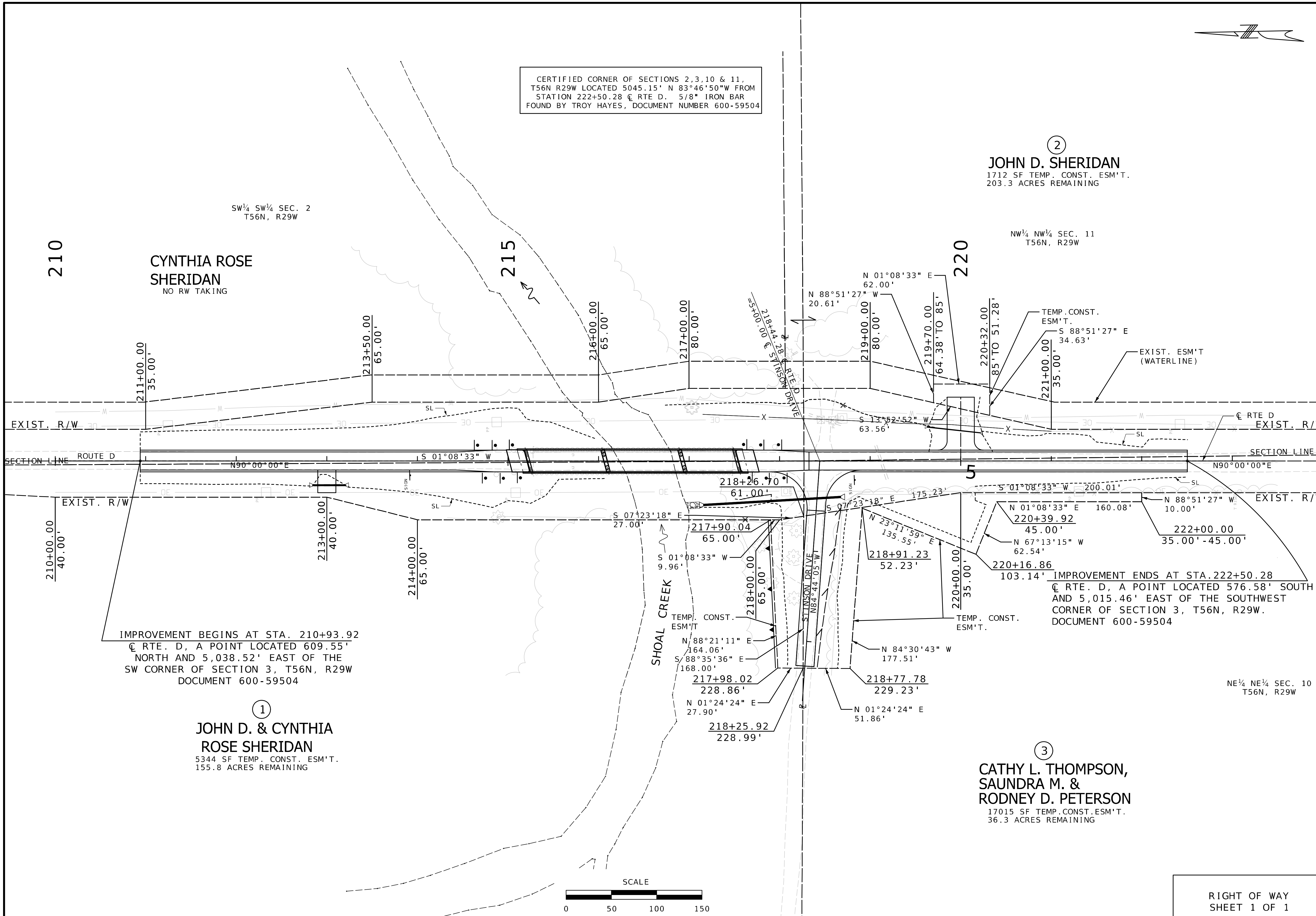


IMPROVEMENT ENDS AT STA.222+50.28
℄ RTE. D, A POINT LOCATED 576.58' SOUTH AND 5,015.46' EAST OF THE SOUTHWEST CORNER OF SECTION 3, T56N, R29W. DOCUMENT 600-59504

IMPROVEMENT BEGINS AT STA. 210+93.92
℄ RTE. D, A POINT LOCATED 609.55' NORTH AND 5,038.52' EAST OF THE SW CORNER OF SECTION 3, T56N, R29W
DOCUMENT 600-59504

CYNTHIA ROSE SHERIDAN
NO RW TAKING

(2)
JOHN D. SHERIDAN
1712 SF TEMP. CONST. ESM'T.
203.3 ACRES REMAINING

(1)
JOHN D. & CYNTHIA ROSE SHERIDAN
5344 SF TEMP. CONST. ESM'T.
155.8 ACRES REMAINING

(3)
CATHY L. THOMPSON, SAUNDRA M. & RODNEY D. PETERSON
17015 SF TEMP.CONST.ESM'T.
36.3 ACRES REMAINING

RIGHT OF WAY
SHEET 1 OF 1

STATE OF MISSOURI
MELISSA ANN WILBERS
NUMBER PE-2007002853
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

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

DATE PREPARED	
11/6/2024	
ROUTE: D	STATE: MO
DISTRICT: NW	SHEET NO.: 6
COUNTY: CALDWELL	
JOB NO.: J1S3414	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION

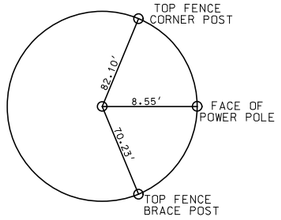
DATE

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

Bartlett & West
601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTLETTWEST.COM

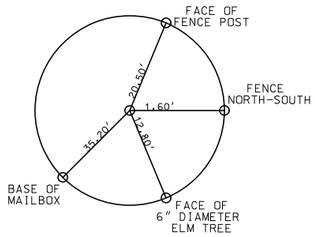
pw://bartwest-pw.bentley.com:bartwest-pw-04/Documents/19000/19421.131 - Caldwell D Bridge Replacement/OpenRoads Designer/plan_sheets/3_Final Plans/006_RW_J1S3414_I50-ROW.dgn 4:53:32 PM 11/6/2024

HCP 100=SET 5/8" REBAR AND ALUMINUM CAP STAMPED BARTLETT AND WEST
STA. 232+27.54
OFF. 27.4631 LT



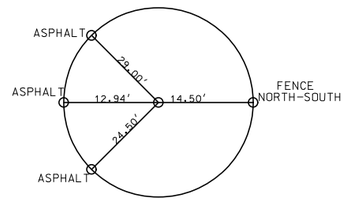
MODIFIED STATE PLAN
N: 1280308.5530
E: 2892750.7340
ELEV: 917.815

BM 300= SET 5/8" REBAR AND ALUMINUM CAP STAMPED BARTLETT AND WEST
STA. 227+42.41
OFF. 33.4218' LT



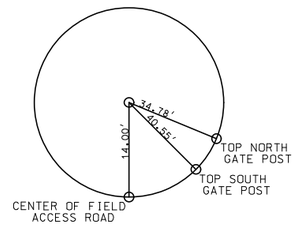
MODIFIED STATE PLAN
N: 1280793.4670
E: 2892766.3650
ELEV: 891.6920

HCP 200=SET 5/8" REBAR AND ALUMINUM CAP STAMPED BARTLETT AND WEST
STA. 223+22.11
OFF. 20.9088' LT.



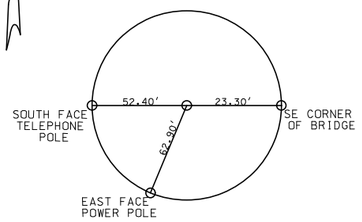
MODIFIED STATE PLAN
N: 1281213.9260
E: 2892762.2350
ELEV: 870.2430

HCP 201=SET 5/8" REBAR AND ALUMINUM CAP STAMPED BARTLETT AND WEST
STA. 218+34.22
OFF. 12.4375' LT



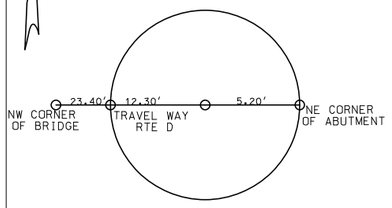
MODIFIED STATE PLAN
N: 1281701.8910
E: 2892763.4940
ELEV: 837.0600

BM 301=SET SQUARE CUT ON TOP OF ABUTMENT SW CORNER BRIDGE
STA. 217+47.37
OFF. 12.4202' RT



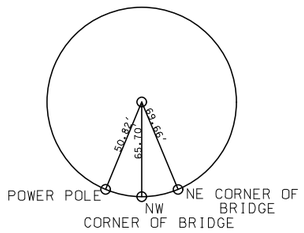
MODIFIED STATE PLAN
N: 1281789.2230
E: 2892740.3731
ELEV: 838.8025

BM 302=SET SQUARE CUT ON TOP OF ABUTMENT NE CORNER BRIDGE
STA. 215+28.52
OFF. 11.7967' LT



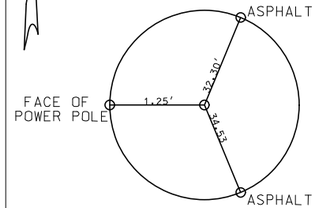
MODIFIED STATE PLAN
N: 1282007.5480
E: 2892768.9490
ELEV: 838.7625

HCP 202=SET 5/8" REBAR AND ALUMINUM CAP STAMPED BARTLETT AND WEST
STA. 214+62.07
OFF. 12.5471' RT



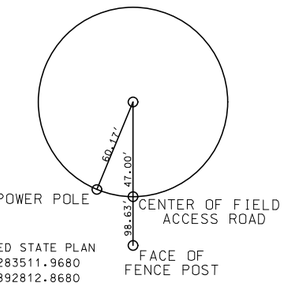
MODIFIED STATE PLAN
N: 1282074.4650
E: 2892745.9350
ELEV: 835.4450

BM 303=SET 5/8" REBAR AND ALUMINUM CAP STAMPED BARTLETT AND WEST
STA. 206+33.95
OFF. 33.3558' RT



MODIFIED STATE PLAN
N: 1282902.8360
E: 2892741.6430
ELEV: 829.2375

HCP 101=SET 5/8" REBAR AND ALUMINUM CAP STAMPED BARTLETT AND WEST
STA. 200+23.52
OFF. 25.7090' LT



MODIFIED STATE PLAN
N: 1283511.9680
E: 2892812.8680
ELEV: 833.3125

MODIFIED STATE PLANE COORDINATES
NAD-83 HORIZONTAL DATUM
NAVD-88 VERTICAL DATUM
WEST ZONE
PROJECTION FACTOR: 1.000083252
GRID FACTOR: 0.999916755

REFERENCE POINTS
SHEET 1 OF 1

STATE OF MISSOURI
MELISSA ANN WILBERS
NUMBER PE-2007002853
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

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

DATE PREPARED
11/1/2024

ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
NW	7

COUNTY
CALDWELL

JOB NO.
J1S3414

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

Bartlett & West
601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTLETTWEST.COM

ALL PROJECT COORDINATES HAVE BEEN PROJECTED FROM THE MISSOURI STATE PLANE COORDINATE (SPC) SYSTEM OF 1983 USING AN AVERAGE PROJECT PROJECTION (GRID TO GROUND) FACTOR. TO GET BACK TO STATE PLANE COORDINATES, MULTIPLY THE PROJECT COORDINATES BY THE AVERAGE GRID FACTOR AS SHOWN IN THE "REFERENCE CONTROL INFORMATION" PORTION OF THIS TABLE.

PROJECT COORDINATE INFORMATION

COORDINATE SYSTEM	MISSOURI STATE PLANE, WEST ZONE
HORIZONTAL DATUM	NAD83
VERTICAL DATUM	NAVD88
GEOID MODEL	GEOID 18
ELEVATIONS DETERMINED BY	BARTLETT & WEST RAN 2-4 HOUR OPUS SOLUTIONS FOR CONTROL POINTS 100 AND 101. OPUS SOLUTIONS WERE AVERAGED AND HELD FOR CONTROL PT 100 AND 101. LEVEL LOOPS WERE RAN FROM CONTROL POINT 100 THRU CONTROL POINTS 101, 200 TO 202 AND BENCHMARKS 300 TO 303.
PROJECT PROJECTION FACTOR	1.000083252

REFERENCE CONTROL INFORMATION

COORDINATE SYSTEM	MO COORDINATE SYSTEM OF 1983
CONTROL STATION	MISSOURI CORS
DESIGNATION	MODOT CAMERON CORS ARP
CORS ID	MOCR
PID	DN6081
LATITUDE	N39°44'48.53544"
LONGITUDE	W94°13'52.22030"
NORTHING (M)	397392.476
EASTING (M)	873039.453
ZONE	WEST
PROJECT AVERAGE GRID FACTOR	0.999916755

EXAMPLE OF PROJECT COORDINATE TO S.P.C.

PROJECT NORTHING X AVERAGE GRID FACTOR
= STATE PLANE NORTHING
PROJECT EASTING X AVERAGE GRID FACTOR
= STATE PLANE EASTING

EXAMPLE: CONTROL POINT #
N . X . = N .
E . X . = E .

LINEAR UNIT CONVERSION

1 METER = 3.280833333 US SURVEY FEET (USFT)

COORDINATE POINT LISTING

SHEET NO	STATION	LOCATION	OFFSET (USFT)	MODIFIED STATE PLANE (GROUND) NORTHING (US SURVEY FT)	EASTING (US SURVEY FT)	ELEVATION (US SURVEY FT)	DESCRIPTION	GPK POINT ID
PROJECT CONTROL POINTS								
4	200+23.52	LEFT	25.71	2892812.8680	1283511.9680	833.312	5/8" REBAR WITH ALUM. CAP	101
5	223+22.11	LEFT	20.91'	2892762.2350	1281213.9260	870.243	5/8" REBAR WITH ALUM. CAP	200
102	N/A	N/A	N/A	2891160.6980	1281795.0140	826.858	5/8" REBAR WITH ALUM. CAP	
ALIGNMENTS								
EXIST_RTE_D							HORIZONTAL ALIGNMENT CHAIN	
BASELINE_STINSON_DRIVE							HORIZONTAL ALIGNMENT CHAIN	

COORDINATE POINTS
SHEET 1 OF 1

STATE OF MISSOURI
MELISSA ANN WILBERS
NUMBER PE-2007002853
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/1/2024
ROUTE D | STATE MO
DISTRICT NW | SHEET NO. 8
COUNTY CALDWELL
JOB NO. J1S3414
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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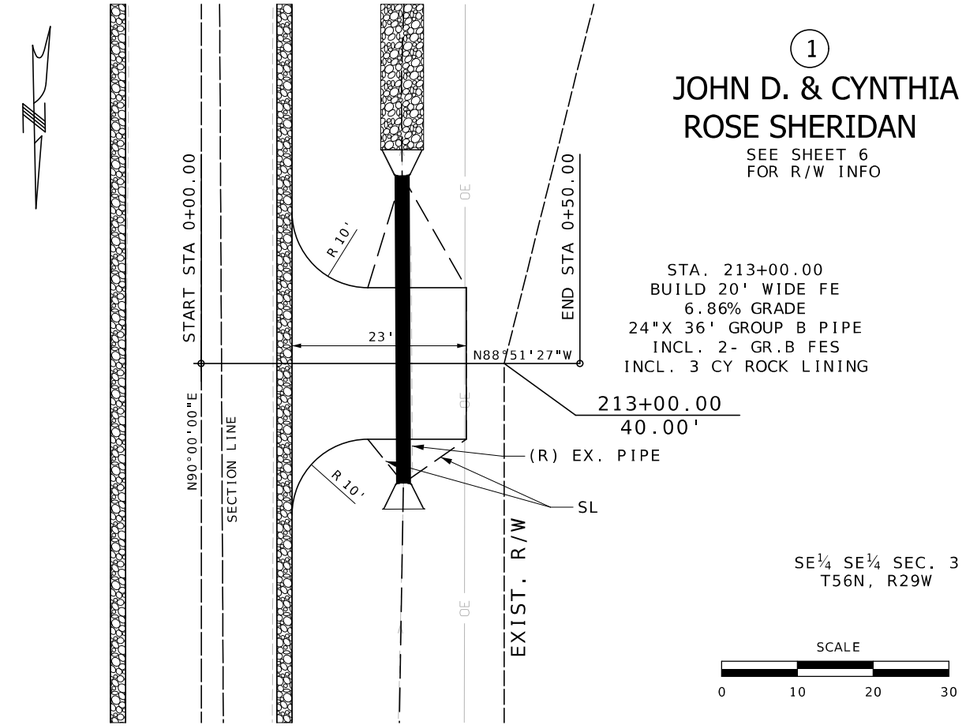


1

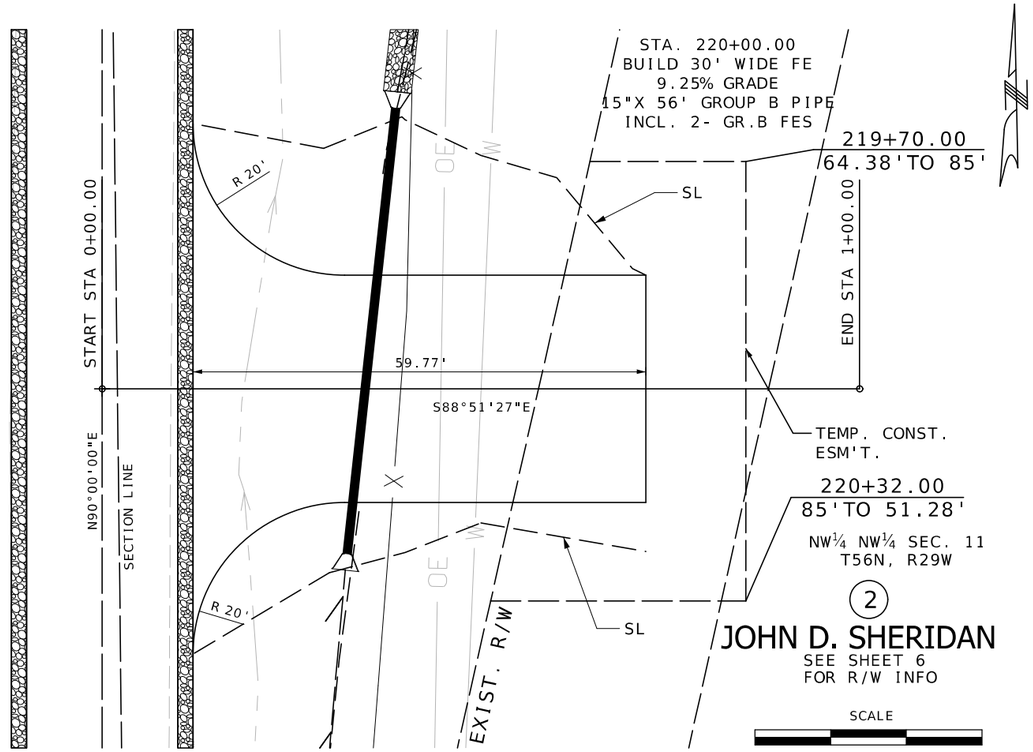
JOHN D. & CYNTHIA ROSE SHERIDAN

SEE SHEET 6
FOR R/W INFO

STA. 213+00.00
BUILD 20' WIDE FE
6.86% GRADE
24"X 36' GROUP B PIPE
INCL. 2- GR.B FES
INCL. 3 CY ROCK LINING

SE¼ SE¼ SEC. 3
T56N, R29W

SCALE
0 10 20 30



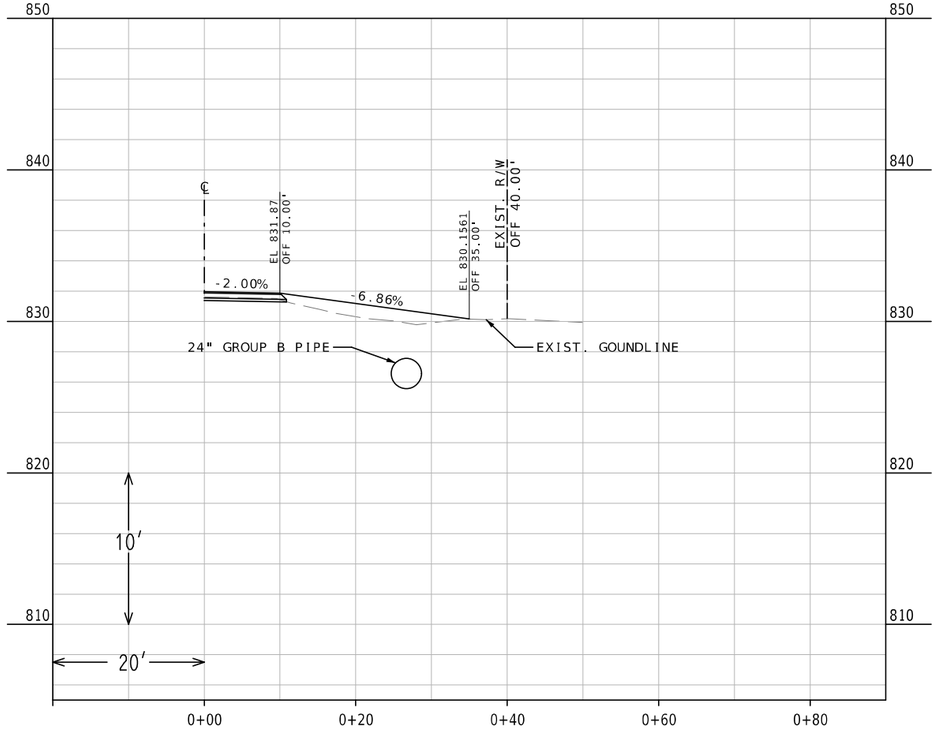
NW¼ NW¼ SEC. 11
T56N, R29W

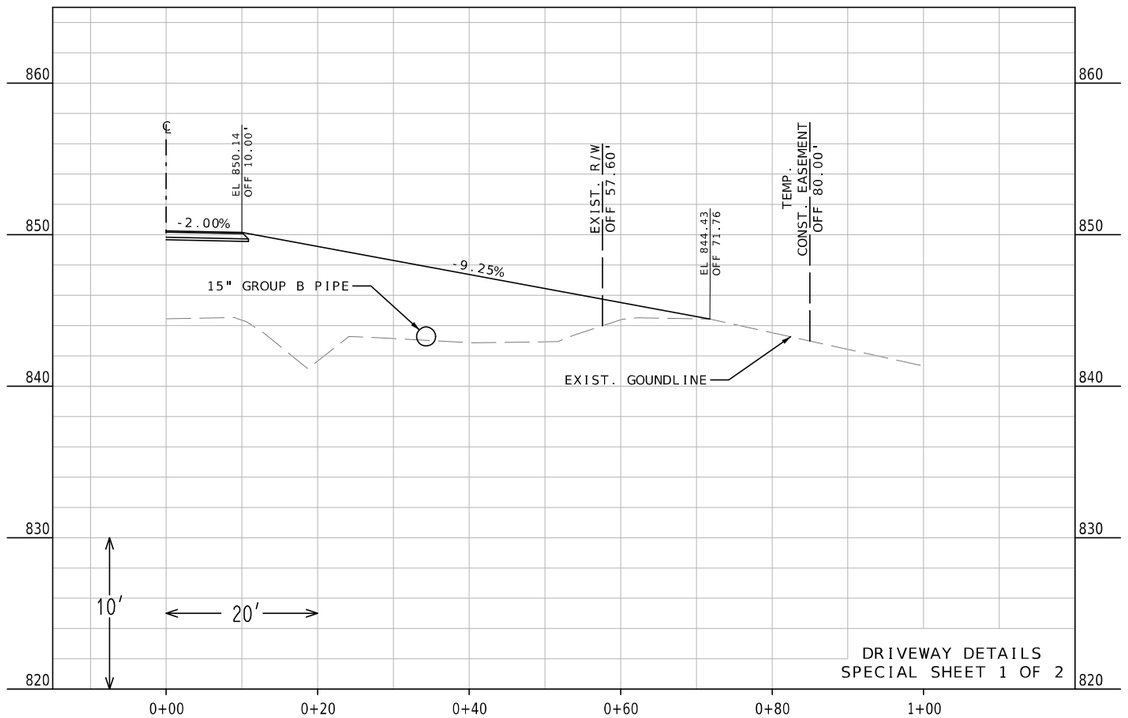
2

JOHN D. SHERIDAN

SEE SHEET 6
FOR R/W INFO

SCALE
0 10 20 30





DRIVEWAY DETAILS
SPECIAL SHEET 1 OF 2

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

STATE OF MISSOURI
MELISSA ANN WILBERS
NUMBER PE-2007002853
PROFESSIONAL ENGINEER

DATE PREPARED
11/1/2024

ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
NW	9

COUNTY
CALDWELL

JOB NO.
J1S3414

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

NO.	DESCRIPTION	DATE

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

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

Bartlett & West
601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
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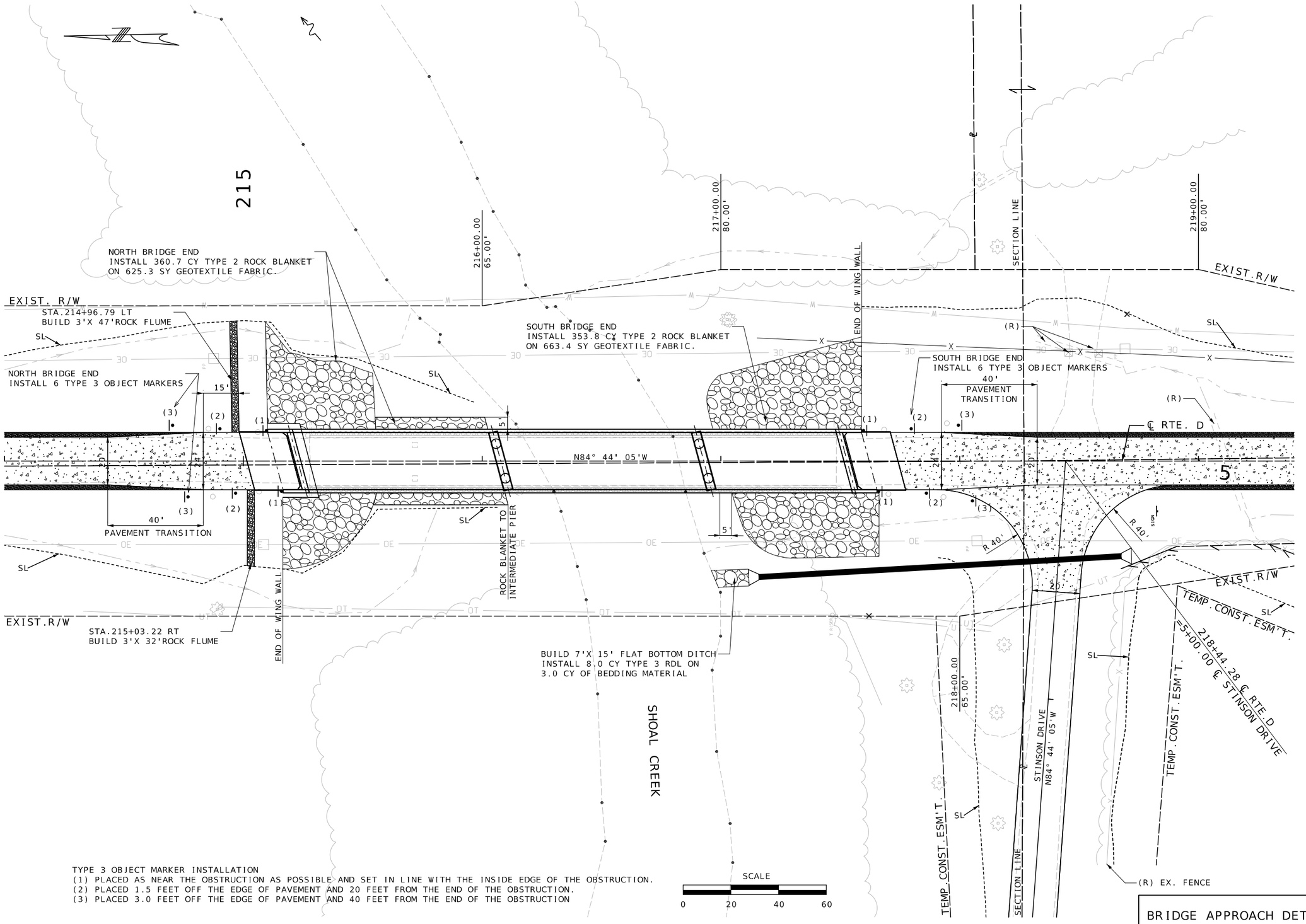

TYPE 3 OBJECT MARKER INSTALLATION
(1) PLACED AS NEAR THE OBSTRUCTION AS POSSIBLE AND SET IN LINE WITH THE INSIDE EDGE OF THE OBSTRUCTION.
(2) PLACED 1.5 FEET OFF THE EDGE OF PAVEMENT AND 20 FEET FROM THE END OF THE OBSTRUCTION.
(3) PLACED 3.0 FEET OFF THE EDGE OF PAVEMENT AND 40 FEET FROM THE END OF THE OBSTRUCTION

BRIDGE APPROACH DETAILS
SPECIAL SHEET 2 OF 2

STATE OF MISSOURI
MELISSA ANN WILBERS
NUMBER PE-2007002853
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/1/2024
ROUTE: D | STATE: MO
DISTRICT: NW | SHEET NO.: 10
COUNTY: CALDWELL
JOB NO.: J1S3414
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DATE	DESCRIPTION

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

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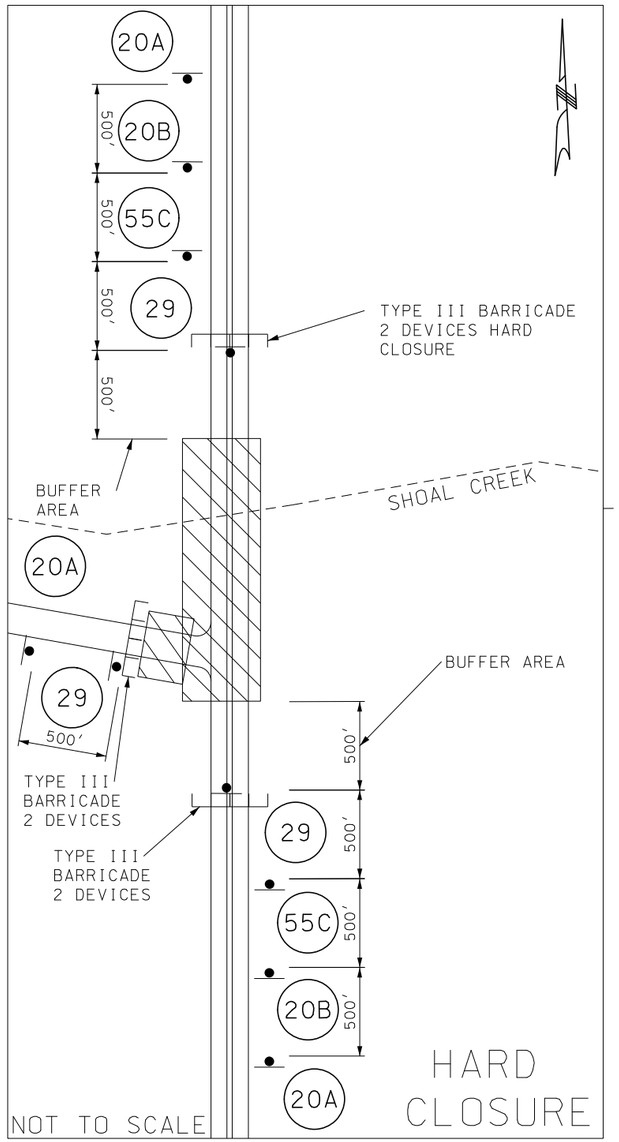
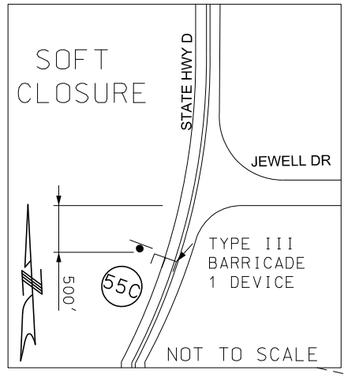


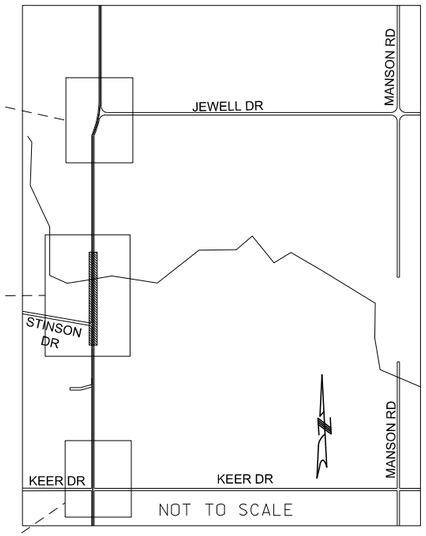


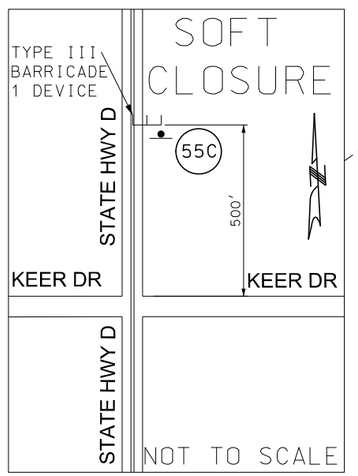
TRAFFIC CONTROL LEGEND

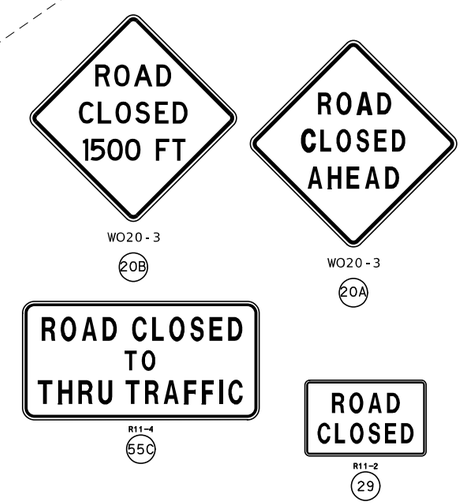
- SIGN (SINGLE SIDED)
- TYPE III MOVEABLE BARRICADE
- WORK AREA

NOTES:

1. SIGN SPACINGS MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.
2. ANY EXISTING SIGNS THAT CONFLICT WITH TRAFFIC CONTROL SHALL BE COVERED OR REMOVED.
3. NO DIRECT PAYMENT WILL BE MADE FOR RELOCATING, COVERING, UNCOVERING, OR REMOVING OF TCP SIGNS.
4. REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKING AS NEEDED.







NOT TO SCALE

TRAFFIC CONTROL
SHEET 1 OF 1

STATE OF MISSOURI
MELISSA ANN WILBERS
NUMBER PE-2007002853
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/13/2024

ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
NW	11

COUNTY: CALDWELL
JOB NO.: J1S3414
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION	DATE

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

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

Bartlett & West
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SW¼ SW¼ SEC. 2
T56N, R29W

CYNTHIA ROSE
SHERIDAN
NO RW TAKING

210

215

220

SECTION LINE

NW¼ NW¼ SEC. 11
T56N, R29W

(2)
JOHN D. SHERIDAN
SEE SHEET 6 FOR R/W INFO.

TEMPORARY EROSION CONTROL LEGEND
- ROCK DITCH CHECK
- TEMPORARY BERM TYPE C
- SILT FENCE

211+00.00
35.00'

ROCK DITCH CHECKS SPACED @ 150'
3 DEVICES

213+50.00
65.00'

OUTLET #1

216+00.00
65.00'

TYPE C BERM
160 LF

217+00.00
80.00'

ROCK DITCH CHECKS
SPACED @ 15'
10 DEVICES

OUTLET #3

219+00.00
80.00'

219+84.00
62.13'TO 85'

220+32.00
85'TO 53.99'

TEMP. CONST. ESM'T.

221+00.00
35.00'

ROCK DITCH CHECKS
SPACED 17'
14 DEVICES

EXIST. R/W

SECTION LINE

ROUTE D

N90°00'00"E

℄ RTE D

SL

ROCK DITCH CHECK IN
UPSTREAM OF CULVERT
1 DEVICE

213+00.00
40.00'

214+00.00
65.00'

OUTLET #2

ROCK DITCH CHECK
@ DITCH OUTLET
1 DEVICE

OUTLET #4

TYPE C BERM
150 LF

SHOAL CREEK

218+00.00
65.00'

218+44.28 ℄ RTE D
N84°44'05"W
1500.00 ℄ STINSON DRIVE

220+00.00
35.00'

TEMP. CONST. ESM'T.

ROCK DITCH CHECKS
SPACED @ 20'
17 DEVICES

ROCK DITCH CHECK
@ PIPE INLET
1 DEVICE

TEMP. CONST. ESM'T.

END STA 7+65.64

IMPROVEMENTS BEGIN AT STA. 210+93.92 ℄ RTE. D

IMPROVEMENTS END AT STA.222+50.28 ℄ RTE. D

(1)
JOHN D. & CYNTHIA
ROSE SHERIDAN
SEE SHEET 6 FOR R/W INFO.

(3)
CATHY L. THOMPSON,
SAUNDRA M. &
RODNEY D. PETERSON
SEE SHEET 6 FOR R/W INFO.

RECEIVING WATERS FOR RUNOFF FROM THE PROJECT IS SHOAL CREEK

SCALE
0 50 100 150

SE¼ SE¼ SEC. 3
T56N, R29W

EROSION CONTROL
CONSTRUCTION PHASE
SHEET 1 OF 2

STATE OF MISSOURI
MELISSA ANN WILBERS
NUMBER PE-2007002853
PROFESSIONAL ENGINEER
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DATE PREPARED
11/13/2024

ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
NW	12

COUNTY
CALDWELL

JOB NO.
J1S3414

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

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

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

Bartlett & West
601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
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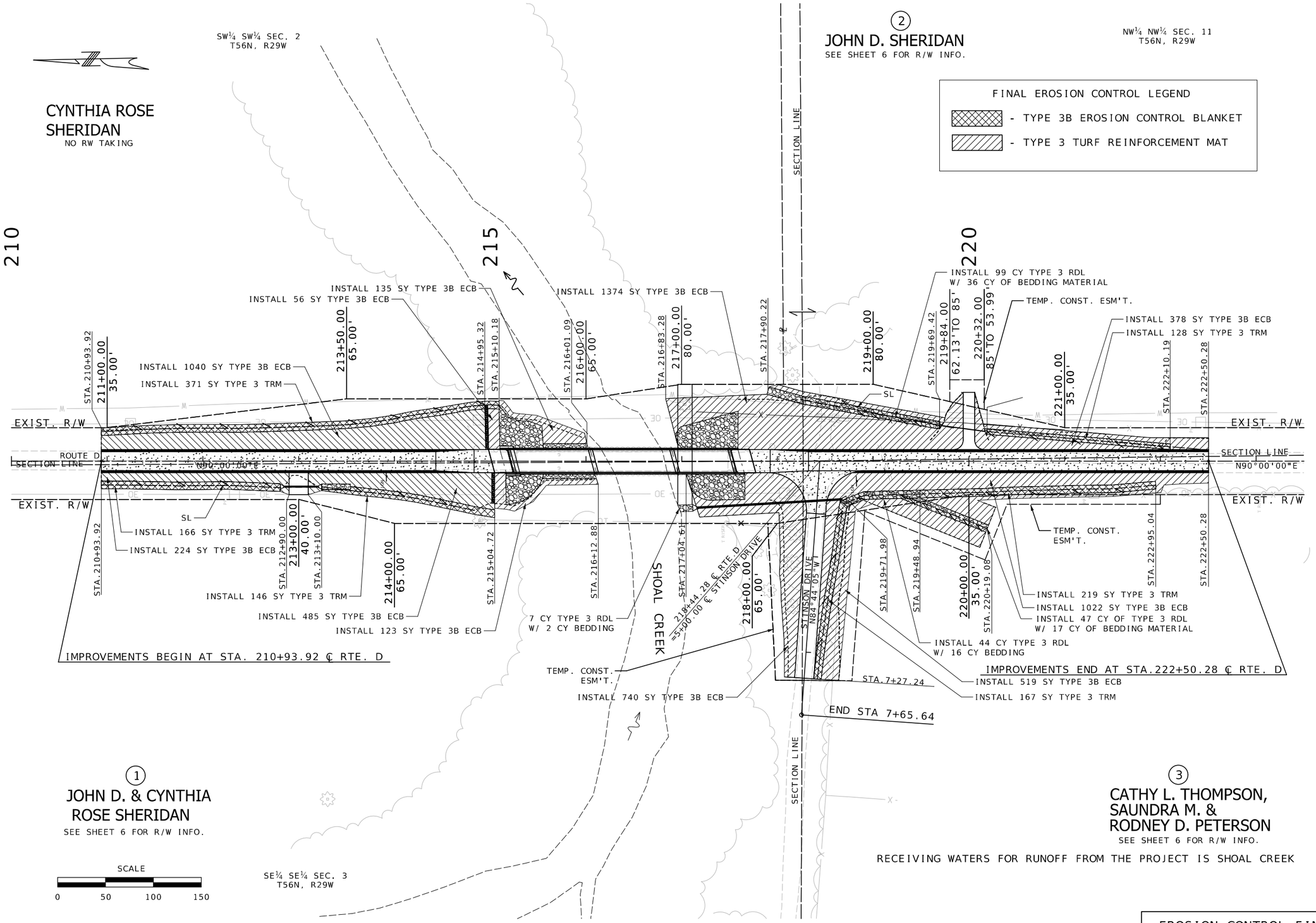

EROSION CONTROL FINAL
SHEET 2 OF 2

STATE OF MISSOURI
MELISSA ANN WILBERS
NUMBER PE-2007002853
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/13/2024
ROUTE: D | STATE: MO
DISTRICT: NW | SHEET NO.: 13
COUNTY: CALDWELL
JOB NO.: J1S3414
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE

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

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

Bartlett & West
601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
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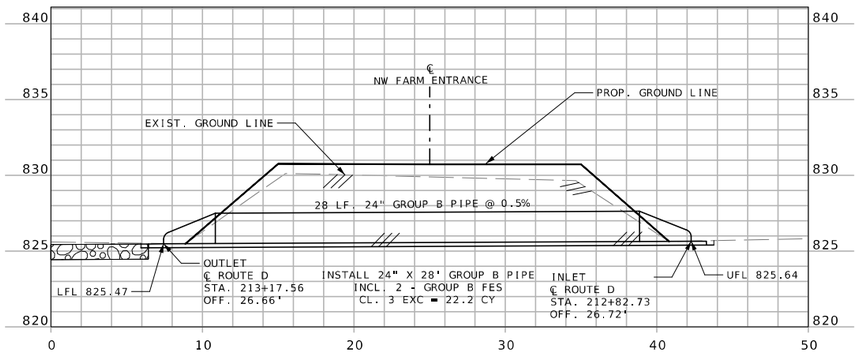
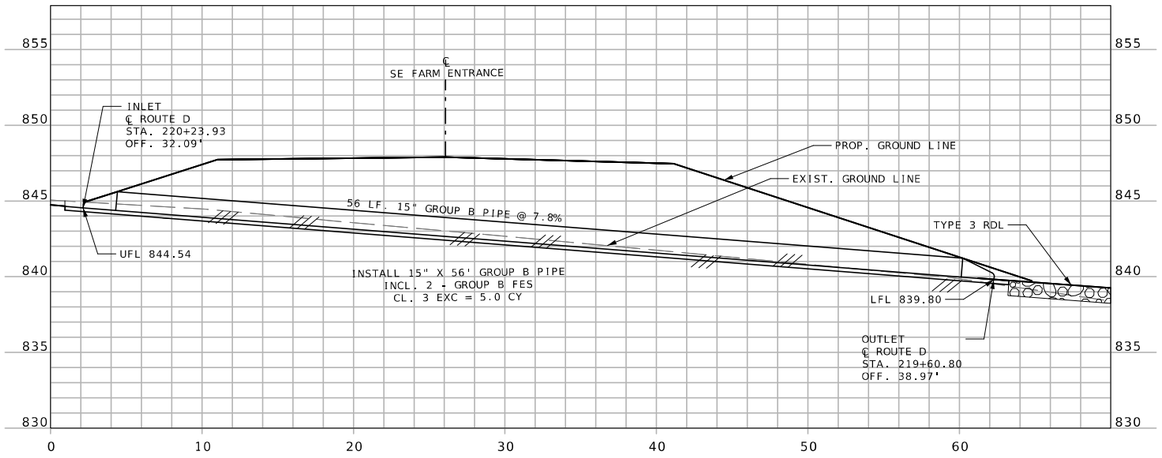
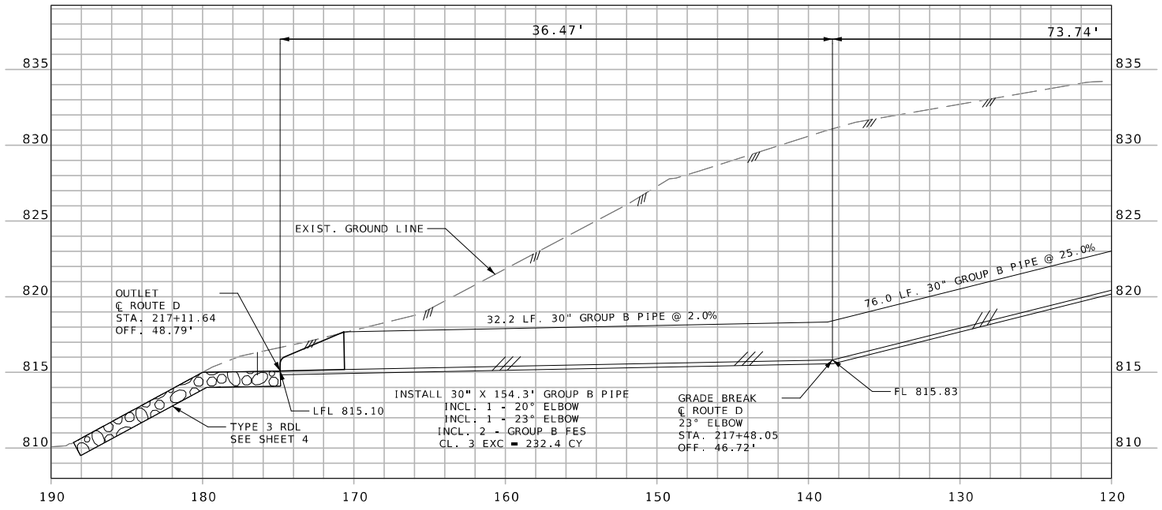


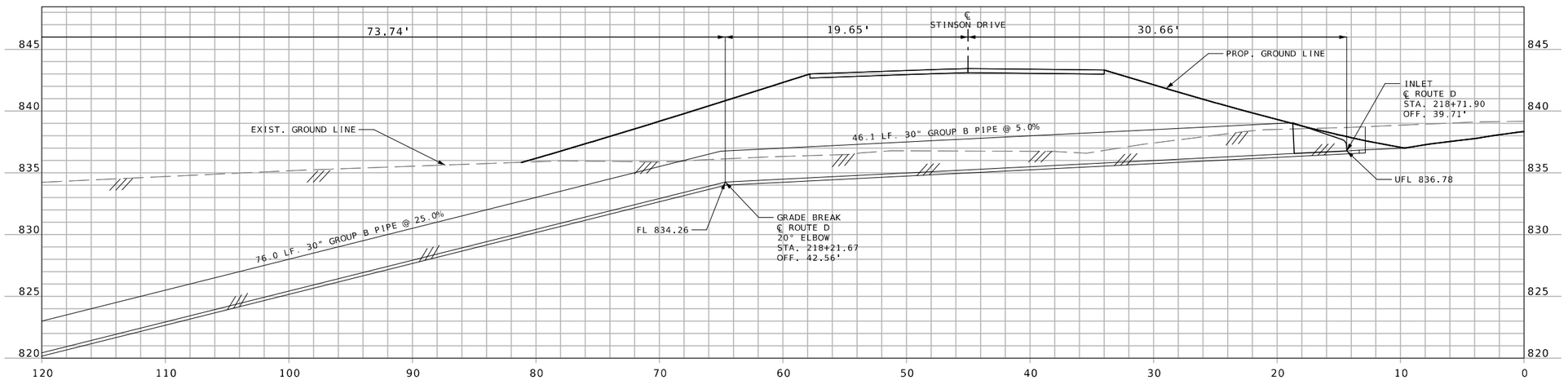
STA 212+82.73 TO 213+17.56



STA 219+60.80 TO 220+23.93



STA 217+11.64 TO STA 217+66.42



STA 217+66.42 TO STA 218+71.90

CULVERT SECTIONS
SHEET 1 OF 1

STATE OF MISSOURI
MELISSA ANN WILBERS
NUMBER PE-2007002853
PROFESSIONAL ENGINEER

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

DATE PREPARED	
11/13/2024	
ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
NW	14
COUNTY	
CALDWELL	
JOB NO.	
J1S3414	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

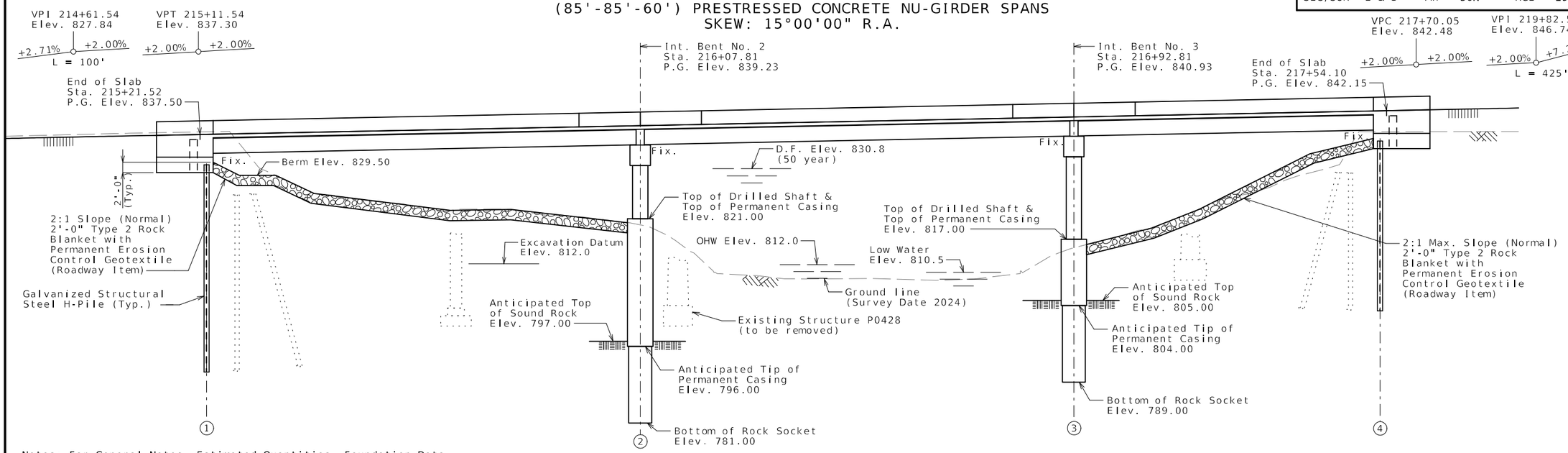
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Bartlett & West
601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTLETTWEST.COM

SEC/SUR 2 & 3 TWP 56N RGE 29W

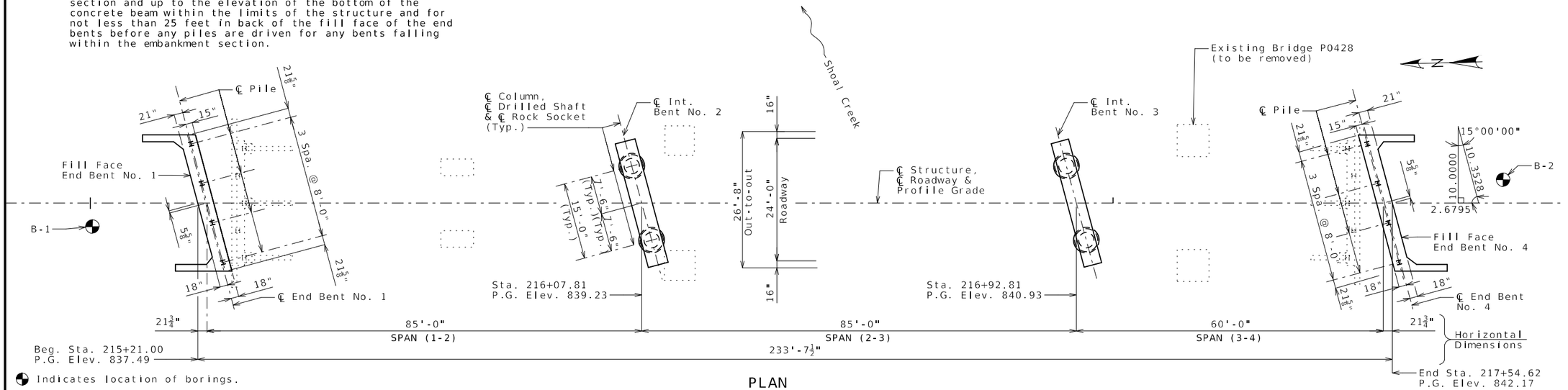
(85'-85'-60') PRESTRESSED CONCRETE NU-GIRDER SPANS
SKEW: 15°00'00" R.A.



GENERAL ELEVATION

Notes: For General Notes, Estimated Quantities, Foundation Data, Estimated Quantities for Slab on Concrete NU-Girder, Hydrologic Data and Location Sketch, see Sheet No. 2.

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.



PLAN

Indicates location of borings.

Notice and Disclaimer Regarding Boring Log Data

The locations of all subsurface borings for this structure are shown on the plan sheet for this structure. 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 department for the design of the project, are shown on Sheet No. 23 and may be included in the Electronic Bridge Deliverables. They will also 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 given to the subsurface data available from the district or elsewhere.

The Commission 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 Commission.

B.M. #100 - Elev. 917.82
Sta. 233+38.90, Offset 211.17' Rt.
Set 5/8" Rebar with Alumninum Cap Stamped MoDOT

B.M. #101 - Elev. 833.31
Sta. 201+35.15, Offset 212.92' Rt.
Set 5/8" Rebar with Alumninum Cap Stamped MoDOT

BRIDGE: ROUTE D OVER SHOAL CREEK

ROUTE D FROM ROUTE HH TO ROUTE 36
ABOUT 3.6 MILES NORTH OF ROUTE HH
BEGINNING STATION 215+21.00

Detailed Oct. 2024
Checked Oct. 2024

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

STATE OF MISSOURI
CHRISTOPHER J. CASWELL
NUMBER PE-028605
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY.

DATE PREPARED
11/8/2024

ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
BR	1

COUNTY
CALDWELL

JOB NO.
J1S3414

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9604

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Bartlett & West
601 MONROE STREET, SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181 - FAX 573-634-7904
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTWEST.COM

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Estimated Quantities

Item		Substr.	Superstr.	Total
Class 1 Excavation	cu. yard	60		60
Removal of Bridges (P0428)	lump sum			1
Bridge Approach Slab (Minor)	sq. yard		109	109
Drilled Shafts (5 ft. 0 in. Dia.)	linear foot	72.0		72.0
Rock Sockets (4 ft. 6 in. Dia.)	linear foot	64.0		64.0
Video Camera Inspection	each	4		4
* Foundation Inspection Holes	linear foot	104.0		104.0
Sonic Logging Testing	each	4		4
Galvanized Structural Steel Piles (12 in.)	linear foot	300		300
Pile Point Reinforcement	each	8		8
Class B Concrete (Substructure)	cu. yard	68.1		68.1
Type H Barrier	linear foot		500	500
Slab on Concrete NU-Girder	sq. yard		689	689
NU 35, Prestressed Concrete NU-Girder	linear foot		689	689
Reinforcing Steel (Bridges)	pound	30,650		30,650
Vertical Drain at End Bents	each			2
Laminated Neoprene Bearing Pad (Tapered)	each		18	18

Notes:

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

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

All reinforcement in the intermediate bent concrete diaphragms except reinforcement embedded in the beam cap is included in the Estimated Quanitites for Slab on Concrete NU-Girder.

All concrete above the intermediate beam cap is included in the Estimated Quantities for Slab on Concrete NU-Girder.

* See Bridge Job Special Provision "Foundation Inspection Holes" for sequence of construction and other Foundation Inspection Hole requirements.

Estimated Quantities for Slab on Concrete NU-Girder

Item		Total
Class B-2 Concrete	cu. yard	218
Reinforcing Steel (Epoxy Coated)	pound	65,330

The table of Estimated Quantities for Slab on Concrete NU-Girder represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab (or with the horizontal dimensions as shown on the plan of slab). Payment for stay-in-place corrugated steel forms, conventional forms, all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

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.

Slab shall be cast-in-place with conventional forms or stay-in-place corrugated steel forms. Precast prestressed panels will not be permitted.

Foundation Data

Type	Design Data		Bent Number 1	2	3	4
Load Bearing Pile	Pile Type and Size		HP 12x53	-	-	HP 12x53
	Number	ea	4	-	-	4
	Approximate Length Per Each	ft	41	-	-	34
	Pile Point Reinforcement	ea	All	-	-	All
	Min. Galvanized Penetration	ft	Full Length	-	-	Full Length
	Pile Driving Verification Method		DF	-	-	DF
	Resistance Factor		0.40	-	-	0.40
	Minimum Nominal Axial Compressive Resistance	kip	575	-	-	485
Rock Socket	Number	ea	-	2	2	-
	Layer 1: Foundation Material		-	Weak Rock	Weak Rock	-
	Layer 1: Elevation Range	ft	-	796-793	804-801	-
	Layer 1: Minimum Nominal Axial Compressive Resistance (Side Resistance)	ksf	-	3.0	5.2	-
	Layer 1: Resistance Factor (Side Resistance)		-	0.16	0.16	-
	Layer 2: Foundation Material		-	Rock	Rock	-
	Layer 2: Elevation Range	ft	-	793-766	801-783	-
	Layer 2: Minimum Nominal Axial Compressive Resistance (Side Resistance)	ksf	-	19.8	19.8	-
	Layer 2: Resistance Factor (Side Resistance)		-	0.16	0.16	-
	Minimum Nominal Axial Compressive Resistance (Tip Resistance)	ksf	-	95	56	-
	Resistance Factor (Tip Resistance)	ksf	-	0.34	0.34	-

Note: The table of Rock Socket values represent the design values used in preparing the plan details for the rock socket foundations. Foundation Inspection Holes cored and logged by the contractor will be utilized by the engineer to confirm or update the design values. See Bridge Job Special Provision "Foundation Inspection Holes" for additional information.

DF = FHWA-modified Gates Dynamic Pile Formula

Load Bearing Pile:
Minimum Nominal Axial Compressive Resistance = Maximum Factored Loads/Resistance Factor

All piles shall be galvanized down to the minimum galvanized penetration (elevation).

Pile point reinforcement need not be galvanized. Shop drawings will not be required for pile point reinforcement.

HP piles are anticipated to be driven to refusal on rock. Review all borings for depth of rock and restrict driving as appropriate to comply with hard rock driving criteria in accordance with Sec 702. When pile refusal on rock occurs, as approved by the engineer, the minimum nominal axial compressive resistance is verified and no additional pile driving verification method is required.

Rock Socket (Drilled Shafts):
Minimum Nominal Axial Compressive Resistance (Side Resistance + Tip Resistance) = Maximum Factored Loads/Resistance Factors

The tip of casing shall not extend into the rock socket elevation range reported in the Foundation Data table without approval by the engineer.

General Notes:

Design Specifications:
2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)
2023 AASHTO Guide Specifications for LRFD Seismic Bridge Design (3rd Ed.)
Seismic Design Category = A (Nonseismic)

Design Loading:
Vehicular = HL-93
Future Wearing Surface = 35 lb/sf
Earth = 120 lb/cf
Equivalent Fluid Pressure = 45 lb/cf (Min.)
Superstructure: Simply-Supported, Non-Composite for dead load, Continuous Composite for live load.

Design Unit Stresses:
Class B Concrete (Substructure) f'c = 3,000 psi
Class B-1 Concrete (Barrier) f'c = 4,000 psi
Class B-2 Concrete (Drilled Shafts & Rock Sockets; Superstructure, except Prestressed Girders and Barrier) f'c = 4,000 psi
Reinforcing Steel (ASTM A615 Grade 60) fy = 60,000 psi
Structural Steel HP Pile (ASTM A709 Grade 50) fy = 50,000 psi

For prestressed girder stresses, see Sheets No. 9 thru 12.

Neoprene Pads:
Neoprene bearing pads shall be 60 durometer and shall be in accordance with Sec 716.

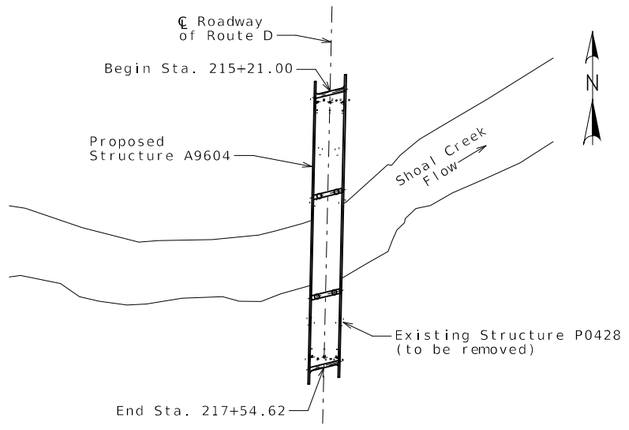
Joint Filler:
All joint filler shall be in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

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

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

Hydrologic Data

Drainage Area = 128 mi² (Lt. Hilly)
Design Flood Frequency = 50 years
Design Flood Discharge = 15,300 cfs
Design Flood (D.F.) Elevation = 830.8
Base Flood (100-year)
Base Flood Elevation = 831.1
Base Flood Discharge = 17,600 cfs
Estimated Backwater = 0.3 ft
Average Velocity thru Opening = 5.4 ft/s
Freeboard (50-year)
Freeboard = 2.6 ft
Roadway Overtopping
Overtopping Flood Discharge = 13,100 cfs
Overtopping Flood Frequency = 25 years
25-year Flood Elevation = 830.4



LOCATION SKETCH

STATE OF MISSOURI
CHRISTOPHER J. CRISWELL
NUMBER PE-2008005
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/8/2024
ROUTE D | STATE MO
DISTRICT BR | SHEET NO. 2
COUNTY CALDWELL
JOB NO. J1S3414
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9604

DESCRIPTION | DATE

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

Bartlett & West
601 MONROE STREET, SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181 - FAX 573-634-7904
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTWEST.COM

Detailed Oct. 2024
Checked Oct. 2024

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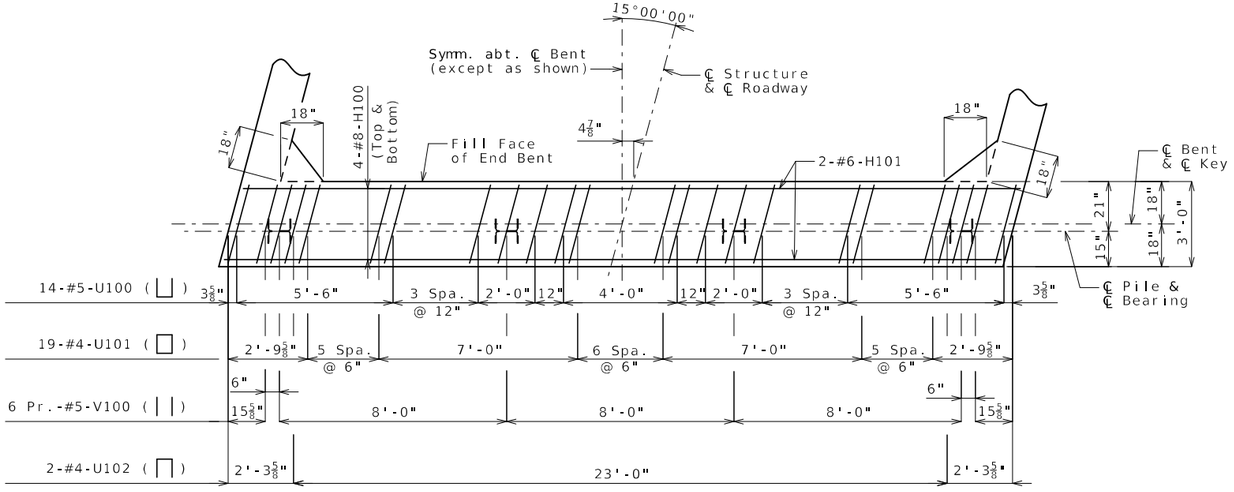
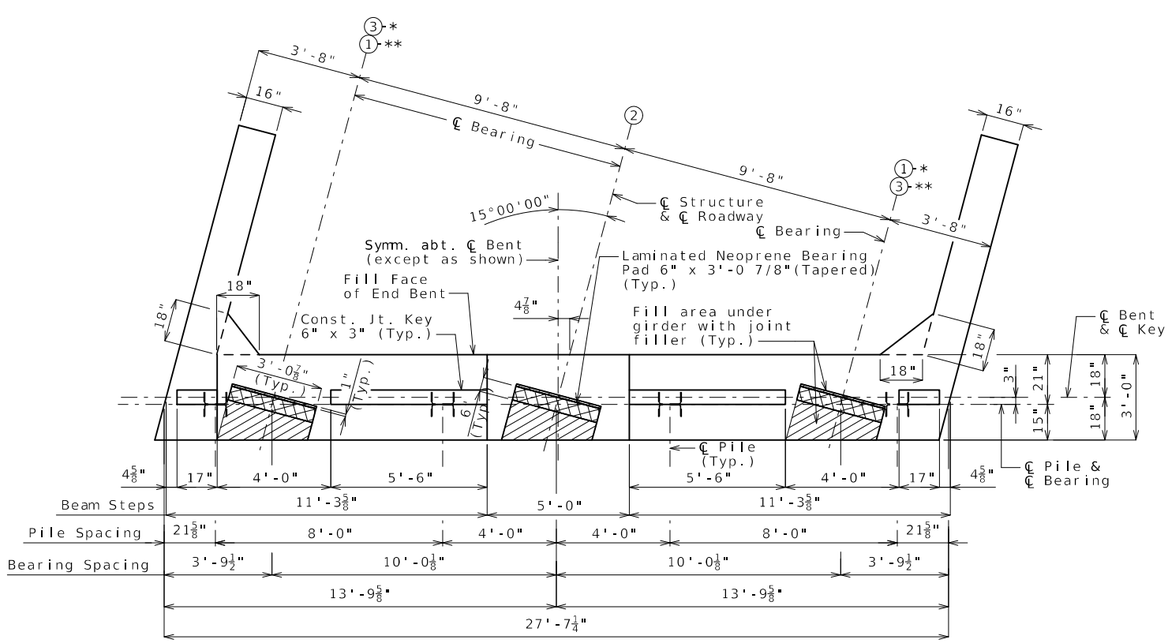
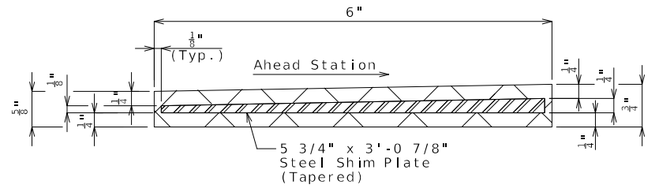


PART PLAN SHOWING REINFORCEMENT

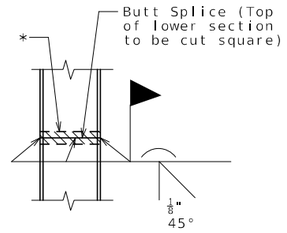
Note: Steps and keys not shown for clarity.



PLAN OF BEAM SHOWING DIMENSIONS



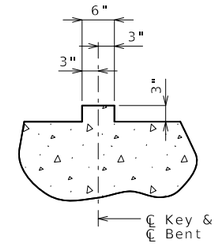
DETAILS OF 6" x 3'-0 7/8" LAMINATED NEOPRENE BEARING PADS (TAPERED)



STEEL PILE SPLICE

(If required)

* Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.



SECTION THRU KEY

Notes:

For details at End Bent not shown, see Sheets No. 4 and 5.

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

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

The U bars and pairs of V bars shall be placed parallel to centerline of roadway.

* - End Bent No. 1
** - End Bent No. 4

Substructure Quantity Table for Bents No. 1 & 4			
Item		End Bent No. 1 Quantity	End Bent No. 4 Quantity
Class 1 Excavation	cu. yard	30	30
Galvanized Structural Steel Piles (12 in.)	linear foot	164	136
Pile Point Reinforcement	each	4	4
Class B Concrete (Substructure)	cu. yard	12.2	12.2

Note: These quantities are included in the Estimated Quantities table on Sheet No. 2.

DETAILS OF END BENTS NO. 1 & 4

Detailed Oct. 2024
Checked Oct. 2024

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

STATE OF MISSOURI
CHRISTOPHER J. CRISWELL
NUMBER PE-028605
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

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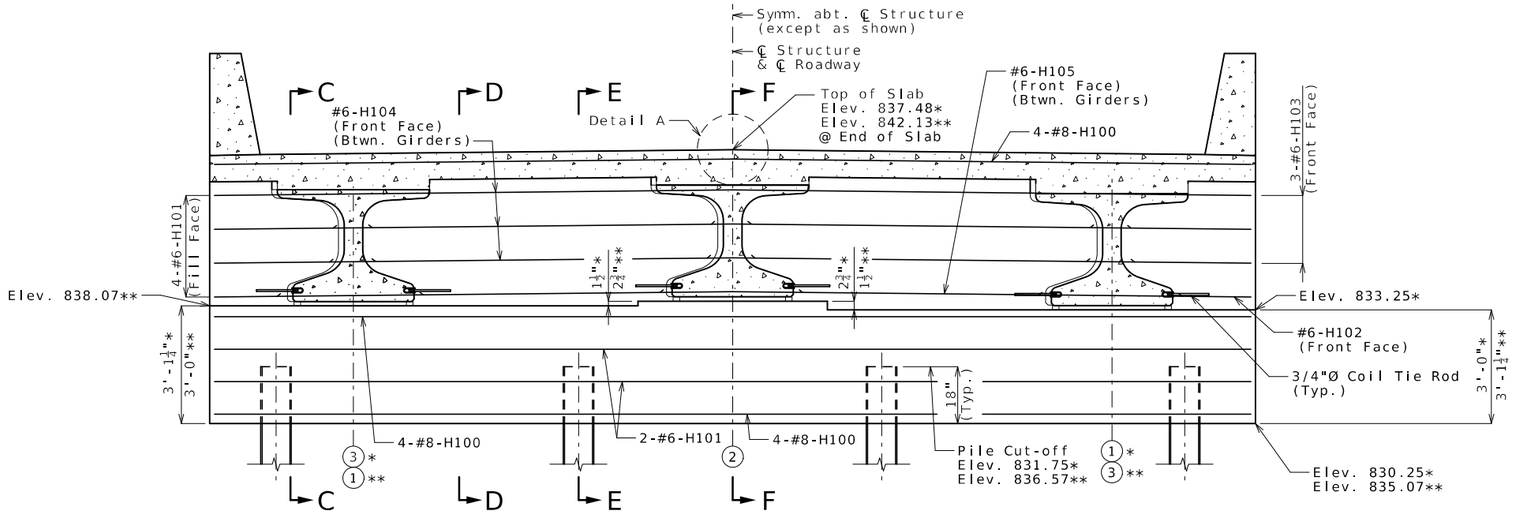
DATE PREPARED: 11/8/2024
ROUTE: D | STATE: MO
DISTRICT: BR | SHEET NO.: 3
COUNTY: CALDWELL
JOB NO.: J1S3414
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9604

DESCRIPTION | DATE

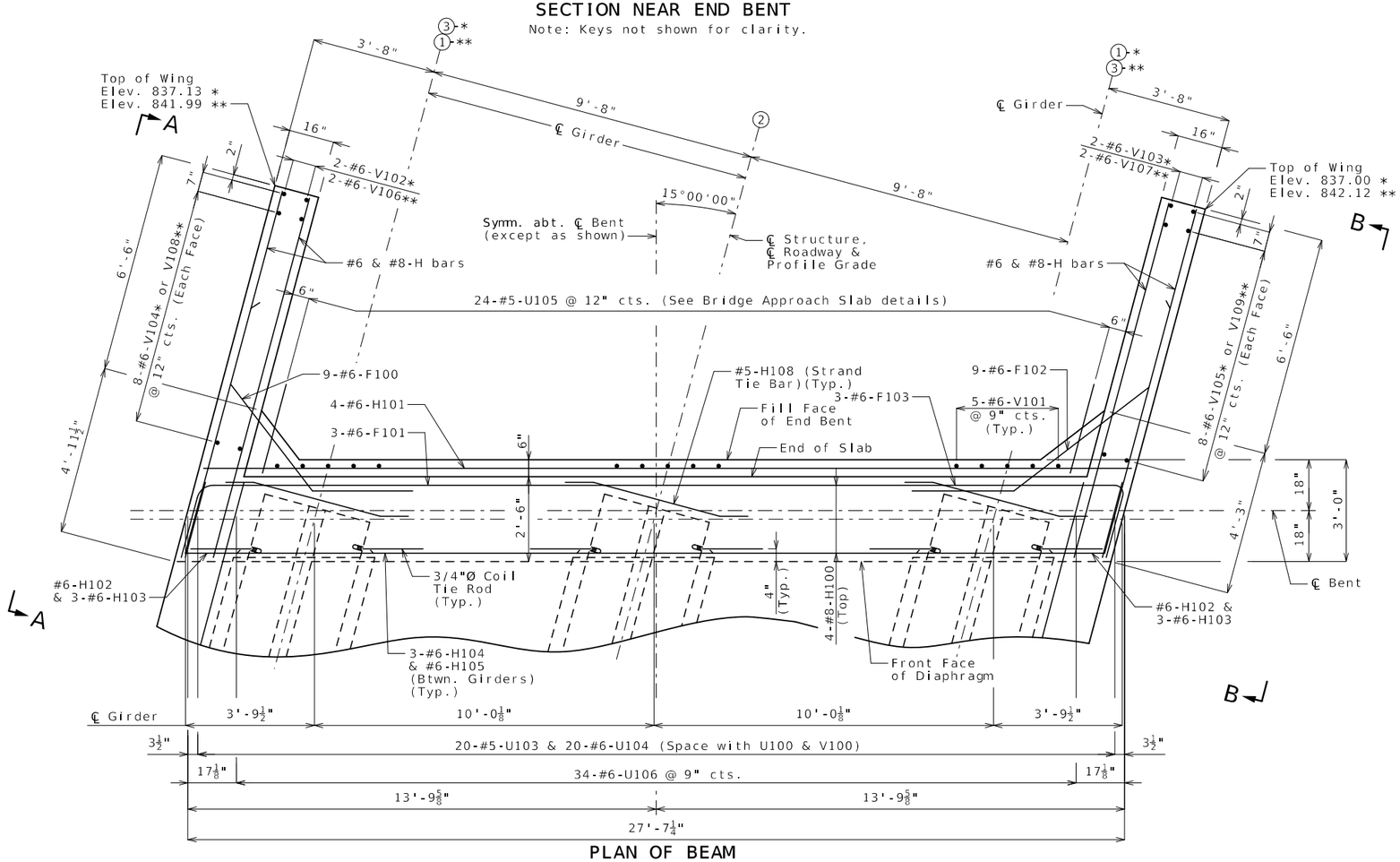
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Bartlett & West
601 MONROE STREET, SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181 - FAX 573-634-7904
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTWEST.COM

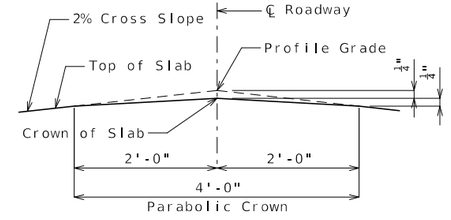


SECTION NEAR END BENT

Note: Keys not shown for clarity.



PLAN OF BEAM



DETAIL A

Notes:

For details of End Bents not shown, see Sheets No. 3 and 5.

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

For Elevations A-A and B-B and Sections C-C thru F-F, see Sheet No. 5.

The #6-F100 & #6-F102 bars shall be bent in field to clear girders.

For location of Coil Tie Rods and #5-H108 (Strand Tie Bar), see Sheets No. 9 thru 12.

For details of Bridge Approach Slab, see Sheet No. 19.

Strands at end of the girders shall be field bent or, if necessary, cut in field to maintain 1 1/2-inch minimum clearance to fill face of end bent.

The U bars shall be placed parallel to centerline of roadway.

* - End Bent No. 1
** - End Bent No. 4

DETAILS OF END BENTS NO. 1 & 4

Detailed Oct. 2024
Checked Oct. 2024

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

Sheet No. 4 of 23

STATE OF MISSOURI
CHRISTOPHER J. CRISWELL
NUMBER PE-028605
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/8/2024

ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
BR	4

COUNTY CALDWELL
JOB NO. J1S3414
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9604

DESCRIPTION | DATE

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

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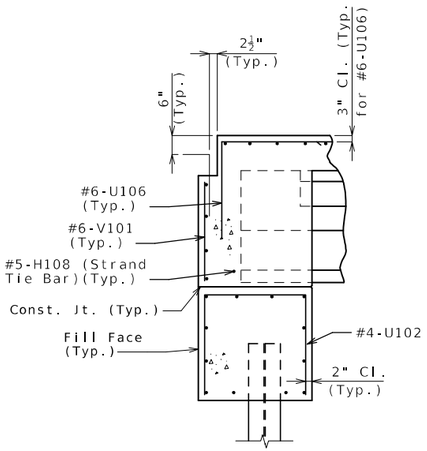
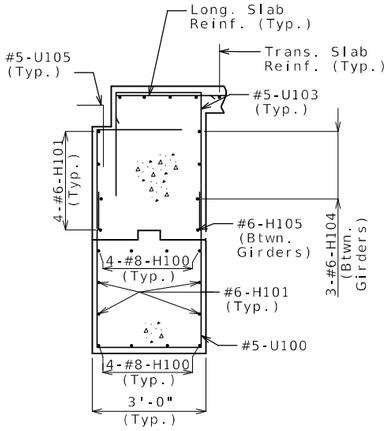
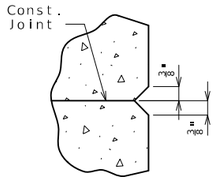


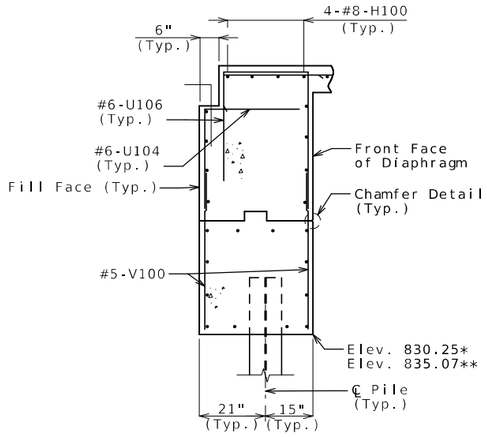
SECTION C-C



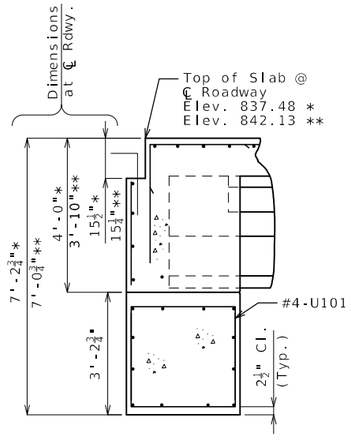
SECTION D-D



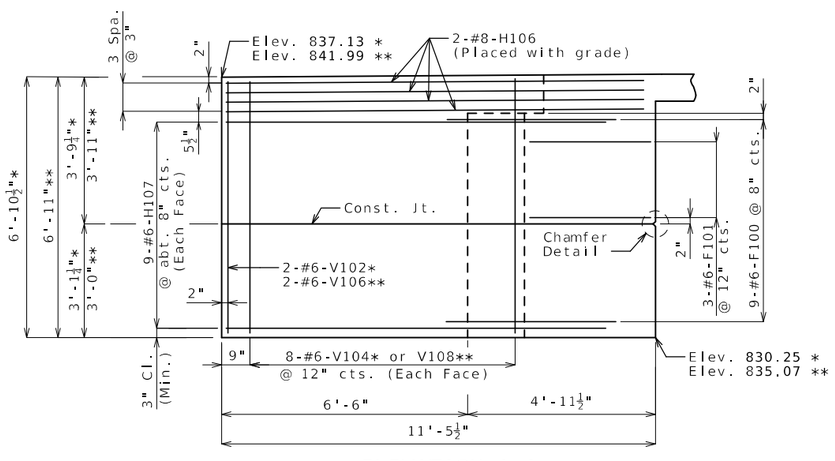
CHAMFER DETAIL



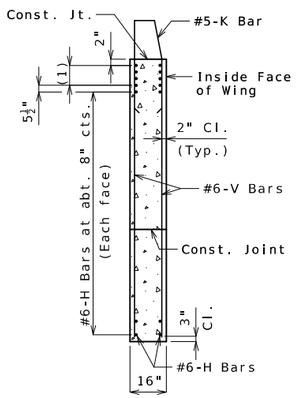
SECTION E-E



SECTION F-F

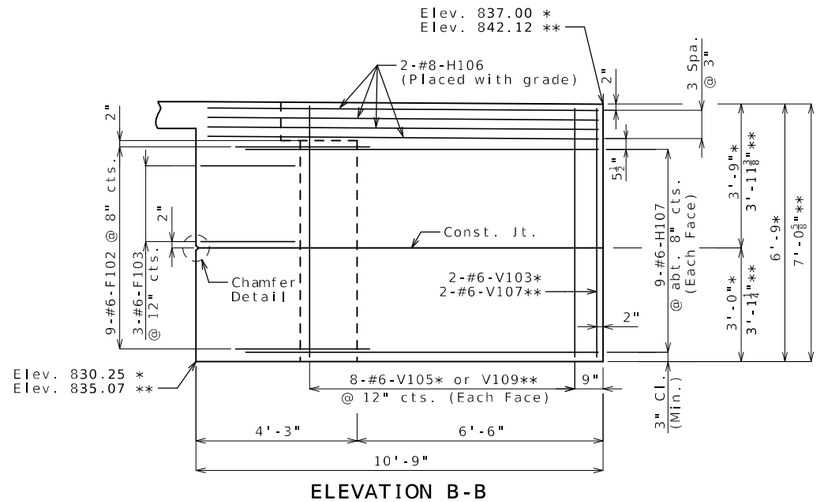


ELEVATION A-A



TYPICAL SECTION THRU WING

(1) #8-H Bars at 3" cts. (Each face)(Place with grade)



ELEVATION B-B

Notes:

For reinforcement of the Type H Barrier not shown, see Sheet No. 18.

For details of End Bents not shown, see Sheets No. 3 and 4.

For details of Bridge Approach Slab, see Sheet No. 19.

* - End Bent No. 1
** - End Bent No. 4

DETAILS OF END BENTS NO. 1 & 4

Detailed Oct. 2024
Checked Oct. 2024

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

STATE OF MISSOURI
CHRISTOPHER J. CRISWELL
NUMBER PE-2009005
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/8/2024

ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
BR	5

COUNTY: CALDWELL
JOB NO.: J1S3414
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9604

DESCRIPTION	DATE

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

Bartlett & West
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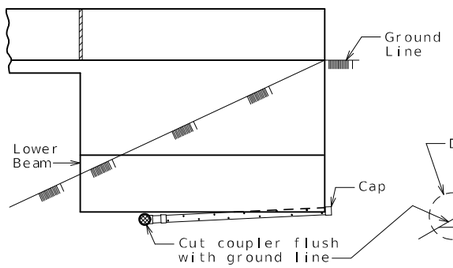
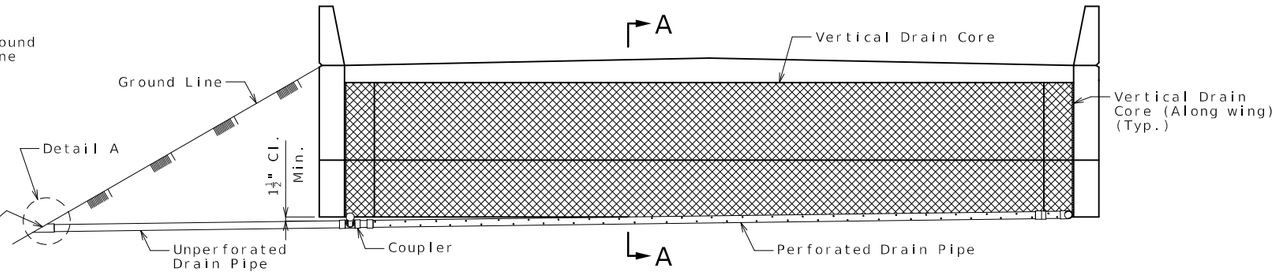
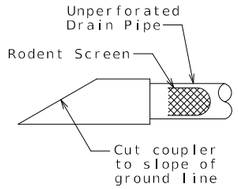


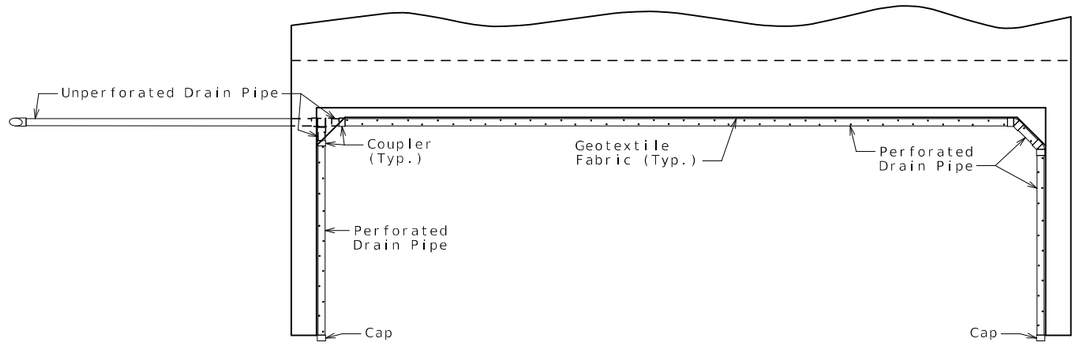
ELEVATION OF WING



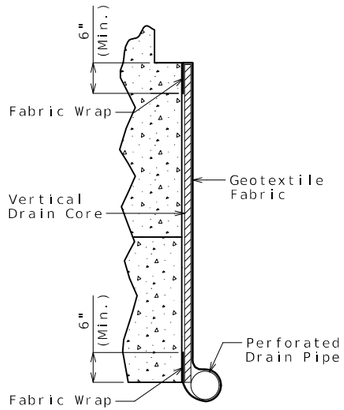
ELEVATION OF END BENT



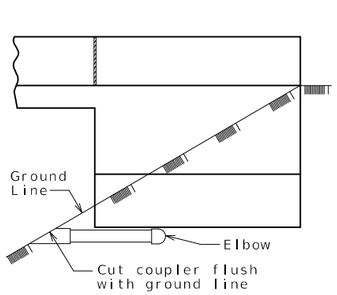
DETAIL A



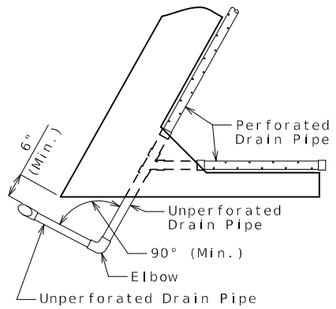
PLAN OF END BENT



PART SECTION A-A
(Section thru wing similar)



ELEVATION OF WING



PART PLAN

OPTIONAL TURNED DRAIN
(Use only when straight drain is not practical.)

General Notes:

All drain pipe shall be sloped 1 to 2 percent.

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

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

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

VERTICAL DRAIN AT END BENTS
(Squared end bent shown, skewed end bent similar)

Detailed Oct. 2024
Checked Oct. 2024

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

DATE PREPARED 11/8/2024

ROUTE	STATE
D	MO

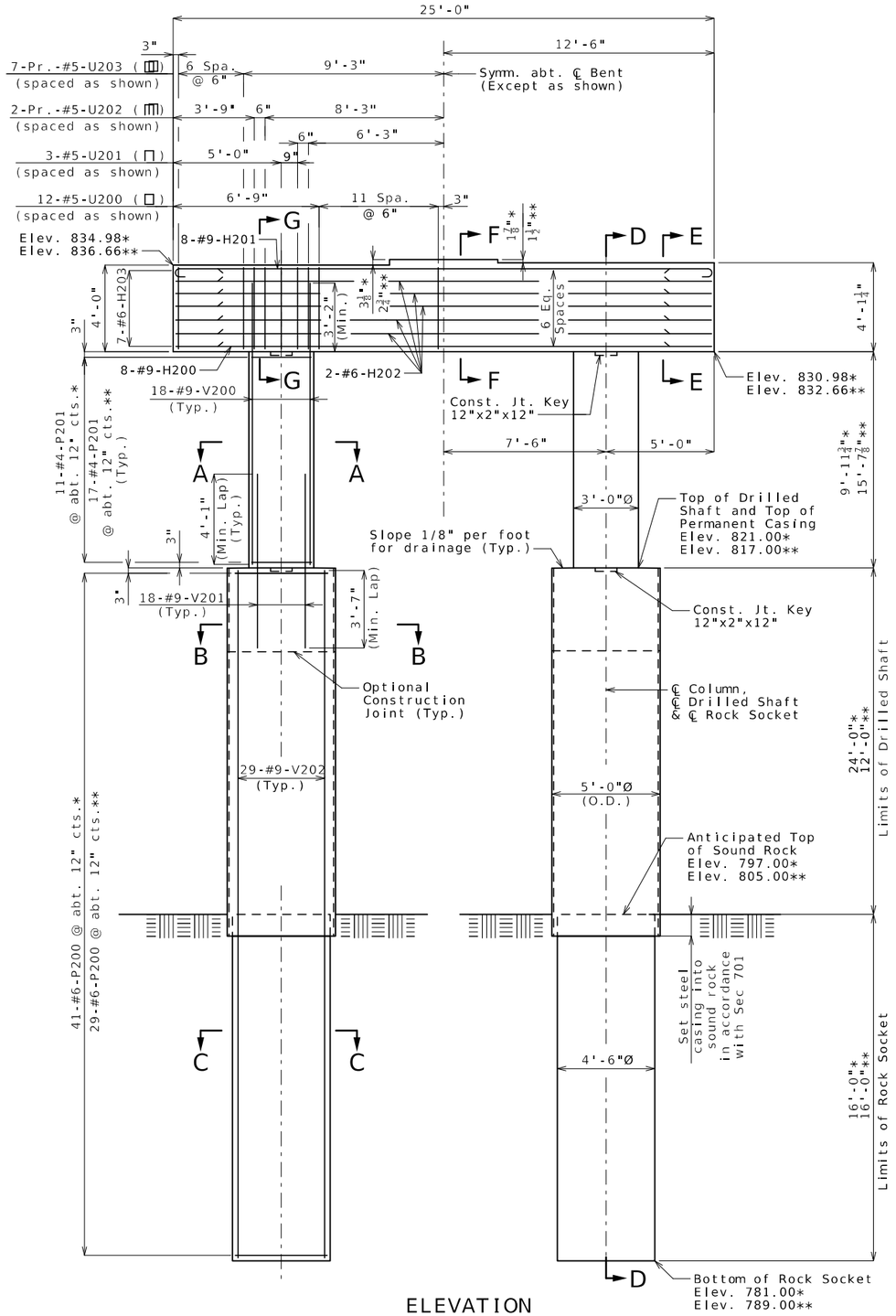
DISTRICT	SHEET NO.
BR	6

COUNTY: CALDWELL
JOB NO.: J1S3414
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9604

DESCRIPTION | DATE

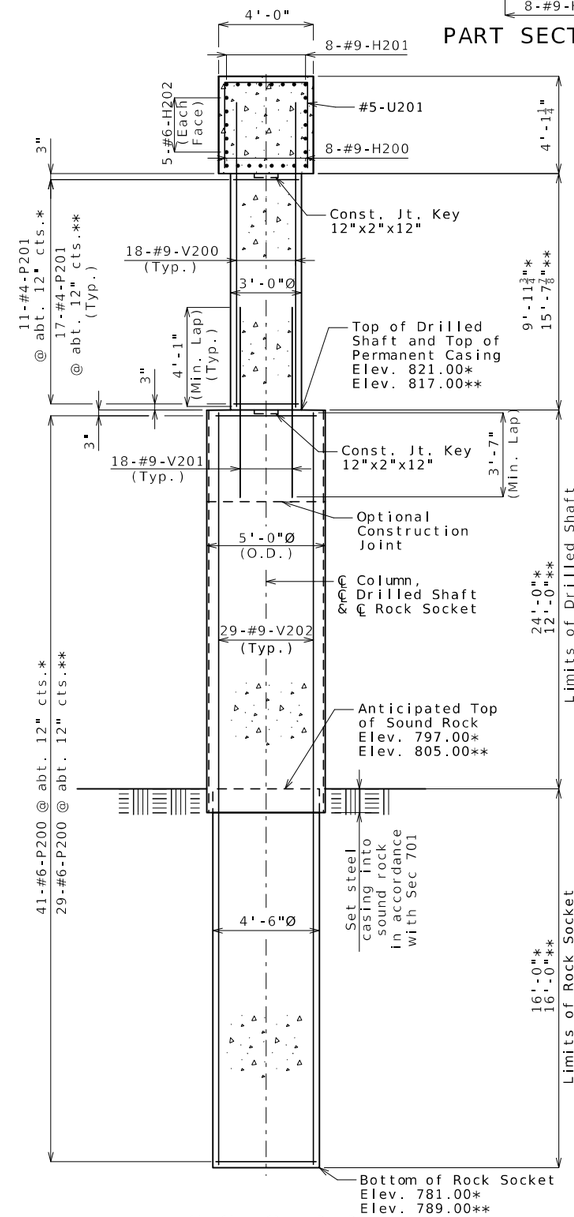
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Bartlett & West
601 MONROE STREET, SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181 - FAX 573-634-7904
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTWEST.COM

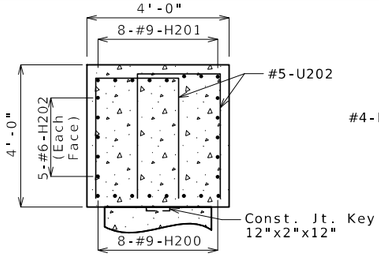


ELEVATION

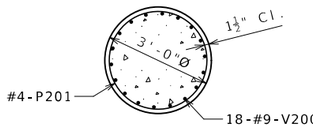
Note: Key not shown for clarity.



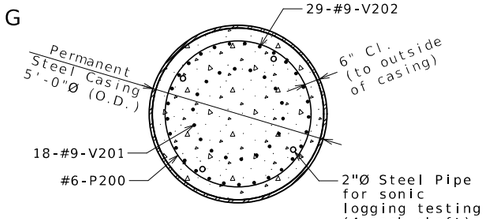
SECTION D-D



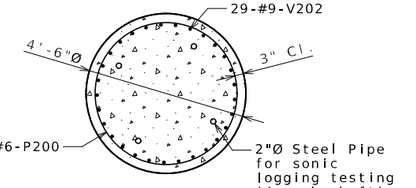
PART SECTION G-G



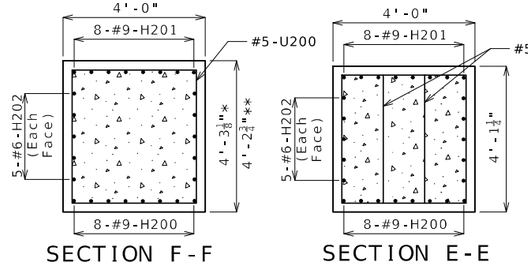
SECTION A-A



SECTION B-B



SECTION C-C



SECTION F-F SECTION E-E

Notes:

Work this sheet with Sheet No. 8.

An additional 4 feet has been added to the V202 bar length and four additional #6-P200 bars have been added per shaft in the quantities, if required, for possible change in drilled shaft or rock socket length. The additional V-bar length shall be cut off or included in the reinforcement lap if not required. The additional P bars shall be spaced similarly to that shown in elevation, if required, or to a lesser spacing if not required, but not less than 6" cts.

Sonic logging testing shall be performed on all drilled shafts and rock sockets.

Thickness of permanent steel casing shall be in accordance with Sec 701.

All reinforcement in drilled shafts and rock sockets is included in the substructure quantities.

Column or dowel reinforcement shall be placed prior to pouring drilled shaft concrete in the area of the lap. Dowel bar or column reinforcement shall not be inserted after drilled shaft pour is complete.

Remove sediment laitance and weak concrete to sound concrete prior to setting column reinforcement if optional construction joint is used.

* - Intermediate Bent No. 2
** - Intermediate Bent No. 3

DETAILS OF INTERMEDIATE BENTS NO. 2 & 3

Detailed Oct. 2024
Checked Oct. 2024

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

STATE OF MISSOURI
CHRISTOPHER J. CRISWELL
NUMBER PE-2008005
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/8/2024

ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
BR	7

COUNTY CALDWELL

JOB NO. J1S3414

CONTRACT ID.

PROJECT NO.

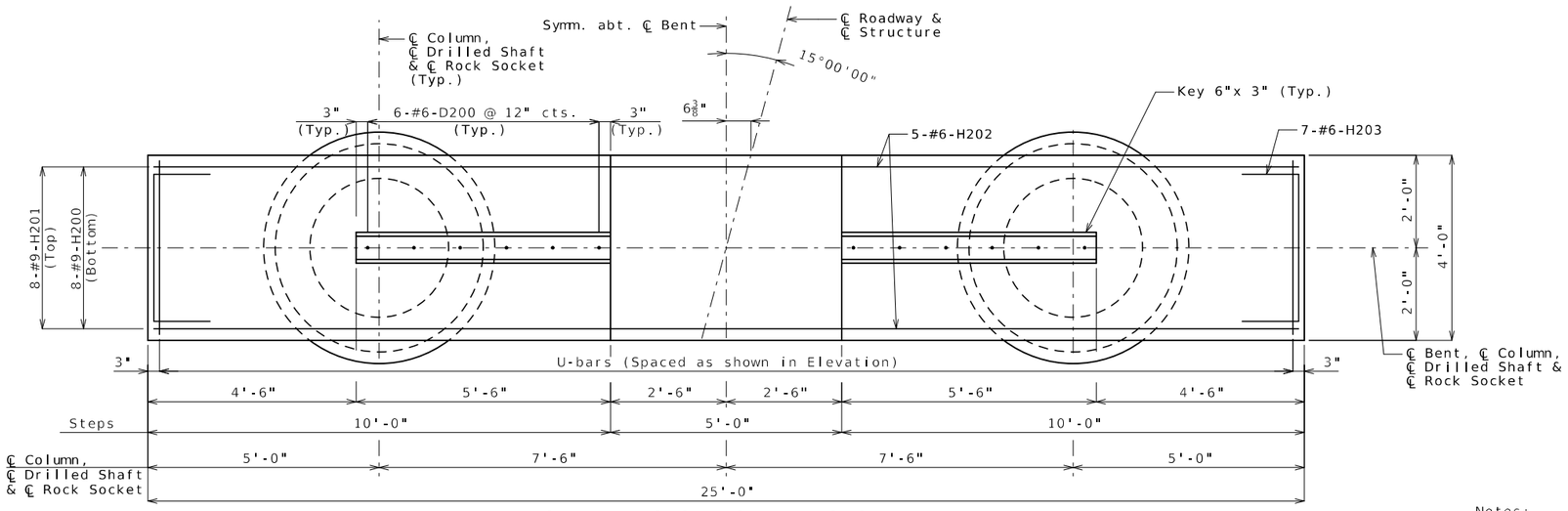
BRIDGE NO. A9604

DATE	DESCRIPTION

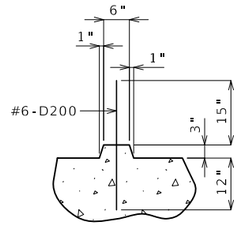
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

Bartlett & West
601 MONROE STREET, SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181 - FAX 573-634-7904
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTWEST.COM



PLAN OF BEAM SHOWING REINFORCEMENT

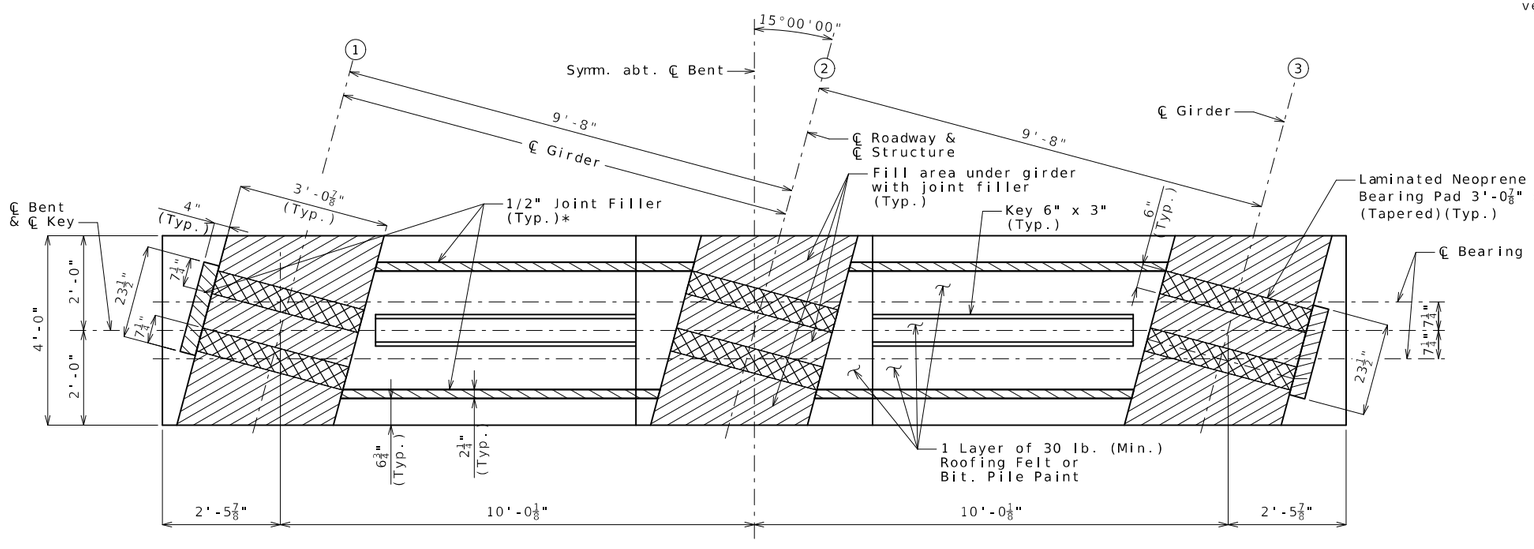


SECTION THRU KEY

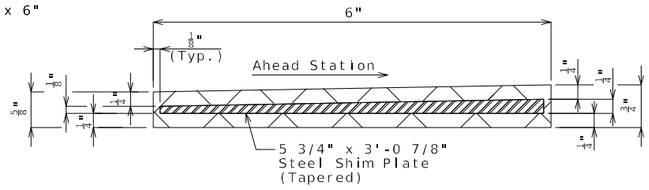
Notes:

Work this sheet with Sheet No. 7.

* For steps 2 inches or more, use 2 1/4 x 1/2 inch joint filler up vertical face.



PLAN OF BEAM



DETAILS OF 6" x 3'-0 7/8"
LAMINATED NEOPRENE BEARING PADS (TAPERED)

Substructure Quantity Table for Bents No. 2 & 3			
Item		Int. Bt. No. 2 Quantity	Int. Bt. No. 3 Quantity
Drilled Shafts (5 ft. 0 in. Dia.)	linear foot	48.0	24.0
Rock Sockets (4 ft. 6 in. Dia.)	linear foot	32.0	32.0
Video Camera Inspection	each	2	2
Sonic Logging Testing	each	2	2
Foundation Inspection Holes	linear foot	52.0	52.0
Class B Concrete (Substructure)	cu. yard	20.4	23.3
Reinforcing Steel (Bridges)	pound	16,400	14,250

These quantities are included in the Estimated Quantities table on Sheet No. 2.

The cost of any required excavation to the top of the drilled shafts will be considered completely covered by the contract unit price for other items.

DETAILS OF INTERMEDIATE BENTS NO. 2 & 3

Detailed Oct. 2024
Checked Oct. 2024

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

STATE OF MISSOURI
CHRISTOPHER J. CRISWELL
NUMBER PE-028605
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

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

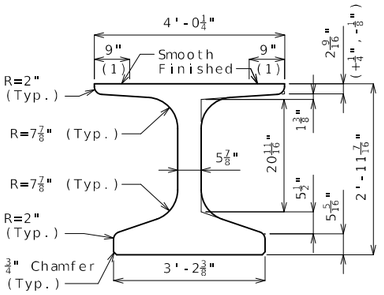
DATE PREPARED 11/8/2024
ROUTE D | STATE MO
DISTRICT BR | SHEET NO. 8
COUNTY CALDWELL
JOB NO. J1S3414
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9604

DESCRIPTION | DATE

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

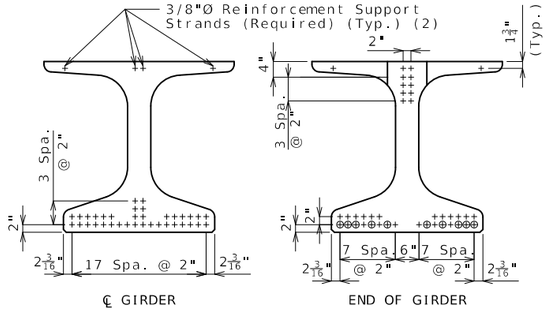
Bartlett & West
601 MONROE STREET, SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181 - FAX 573-634-7904
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTWEST.COM

(1) Fabricator shall apply a bond breaker to this region.



DIMENSIONS

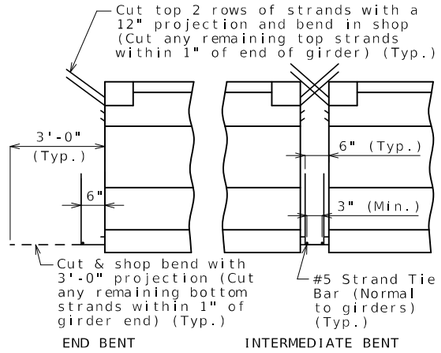
(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.



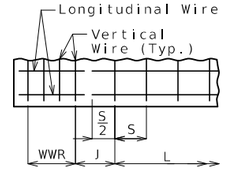
STRAND ARRANGEMENT

\+ Indicates prestressing strand.

o Indicates cut & shop bend with 3'-0" projection.



STRANDS AT GIRDER ENDS



WELDED WIRE PLACEMENT

S = Vertical wire spacing

L = Length of WWR mats

J = Distance between WWR mats

Bill of Reinforcing Steel

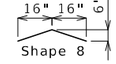
Bars Each Girder

No.	Size/Mark		Length	Shape
106	3	G1	2'-10"	8
2	4	G3	4'-0"	20
2	4	G4	2'-3"	20
2	4	G5	2'-9"	20
4	4	G6	Varies	20

Welded Wire Each Girder

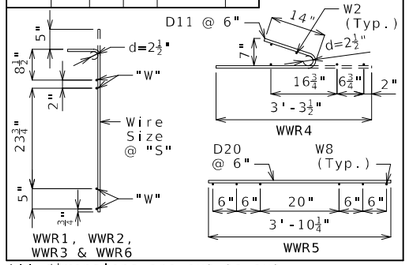
Mark	Size	S	W	L	J
WWR1	D31	4"	W12	13'-0"	4"
WWR2	D31	8"	W12	12'-8"	***
WWR3	D31	12"	W12	28'-0"	--
WWR6	D31	2"	W12	16"	4"

Bending Diagrams



Shape 20

*** 8½"*
4¾"**



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

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

All bar reinforcement shall be Grade 60.

WWR shall not be epoxy coated.

G4 and G5 not required for interior girders. G3 and G6 not required for exterior girders of intermediate spans. Half no. of G3, G4, G5 and G6 not required for ext. girders of end spans.

General Notes:

Concrete for prestressed beams shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 36 strands, 0.6"Ø Grade 270, with an initial prestress force of 1582 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

Exterior and interior girders are the same except: coil ties and top flange blockout.

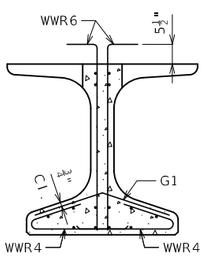
The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. 14.

For location of coil ties at concrete diaphragms and integral bents, see Sheets No. 4 and 13.

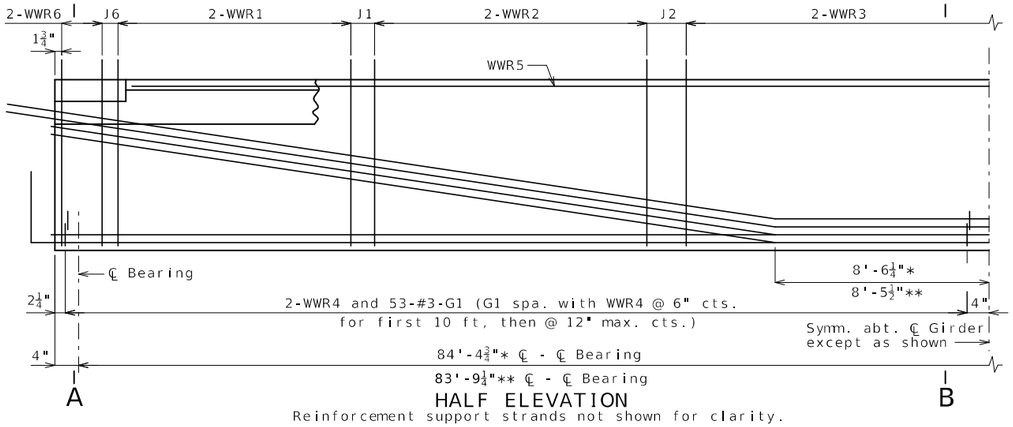
Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.

* Span (1-2)
** Span (2-3)



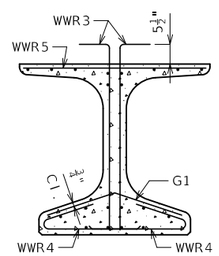
SECTION A-A

Strands not shown for clarity.



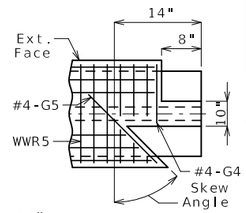
HALF ELEVATION

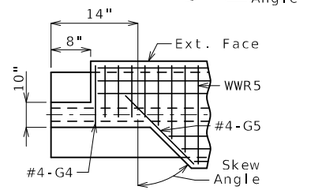
Reinforcement support strands not shown for clarity.



SECTION B-B

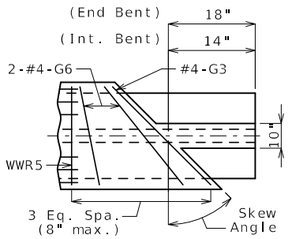
Strands not shown for clarity.





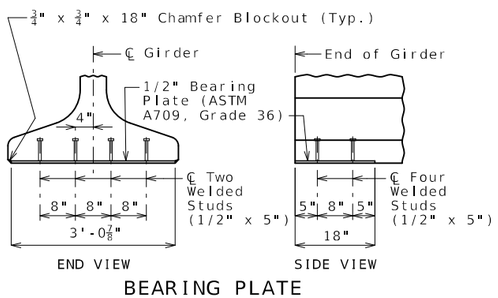
LEFT EXTERIOR GIRDER AT INTERMEDIATE BENT

Rotate 180° for right ext.

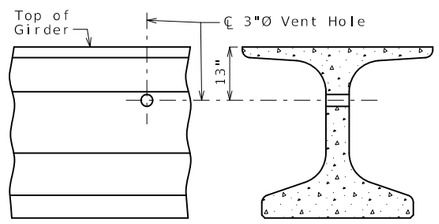


INTERIOR GIRDER AT ALL BENTS & EXTERIOR GIRDER AT END BENT

TOP FLANGE BLOCKOUT

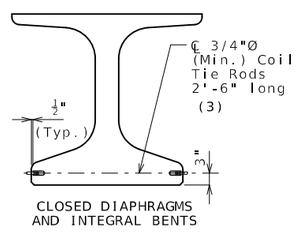


BEARING PLATE



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.



CLOSED DIAPHRAGMS AND INTEGRAL BENTS

COIL TIES

Exclude coil tie at exterior face of exterior girders except at integral end bents.

(3) 2'-0" at exterior face of exterior girders at end bents

NU-GIRDERS - SPANS (1-2) AND (2-3)

Detailed Oct. 2024
Checked Oct. 2024

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

pw://bartwest-pw.bentley.com:bartwest-pw-04/Documents/19000/19421.131 - Caldwell D Bridge Replacement/OpenRoads Designer/plan_sheets/A9604/B_A9604_009_J1S3414_PSI_06_NU_WWR_3 (1)_Span 1-2 and 2-3.dgn

STATE OF MISSOURI
CHRISTOPHER J. CASWELL NUMBER PE-028605
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/8/2024

ROUTE D | STATE MO

DISTRICT BR | SHEET NO. 9

COUNTY CALDWELL

JOB NO. J1S3414

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9604

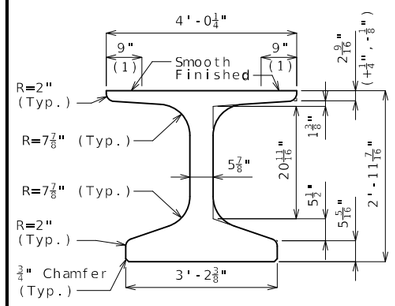
DESCRIPTION | DATE

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

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

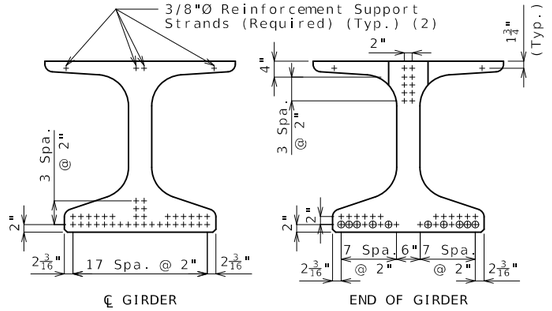
Bartlett & West
601 MONROE STREET, SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181 - FAX 573-634-7904
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTWEST.COM

(1) Fabricator shall apply a bond breaker to this region.



DIMENSIONS

(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.

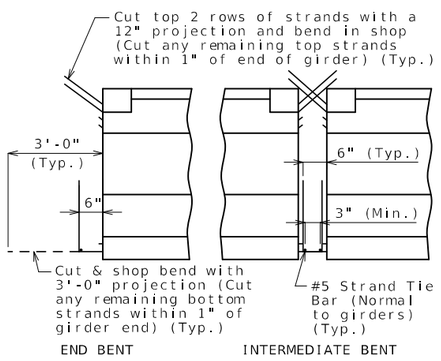


℄ GIRDER END OF GIRDER

STRAND ARRANGEMENT

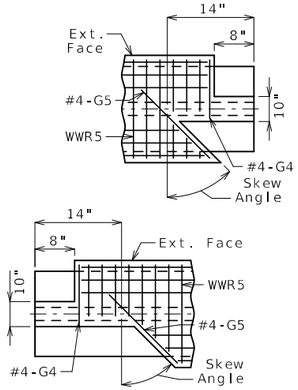
\+ Indicates prestressing strand.

o Indicates cut & shop bend with 3'-0" projection.



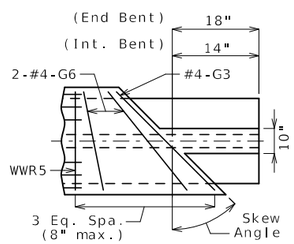
END BENT INTERMEDIATE BENT

STRANDS AT GIRDER ENDS



LEFT EXTERIOR GIRDER AT INTERMEDIATE BENT

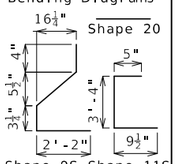
Rotate 180° for right ext.



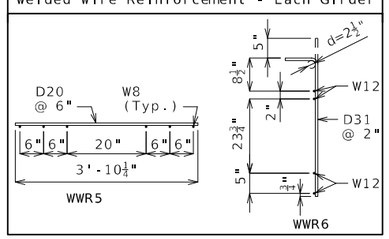
INTERIOR GIRDER AT ALL BENTS & EXTERIOR GIRDER AT END BENT

TOP FLANGE BLOCKOUT

Bill of Reinforcing Steel - Each Girder				
No.	Size/ Mark	Length	Shape	Bending Diagrams
262	5 B1	4'-4"	11S	
282	4 D1	4'-0"	9S	
2	4 G3	4'-0"	20	
2	4 G4	2'-3"	20	
2	4 G5	2'-9"	20	
4	4 G6	Varies	20	



Welded Wire Reinforcement - Each Girder



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

Minimum clearance to reinforcing shall be one inch.

All bar 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.

G4 and G5 not required for interior girders. G3 and G6 not required for exterior girders of intermediate spans. Half no. of G3, G4, G5 and G6 not required for ext. girders of end spans.

General Notes:

Concrete for prestressed girders shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 36 strands, 0.6"Ø Grade 270, with an initial prestress force of 1582 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

Exterior and interior girders are the same except: coil ties and top flange blockout.

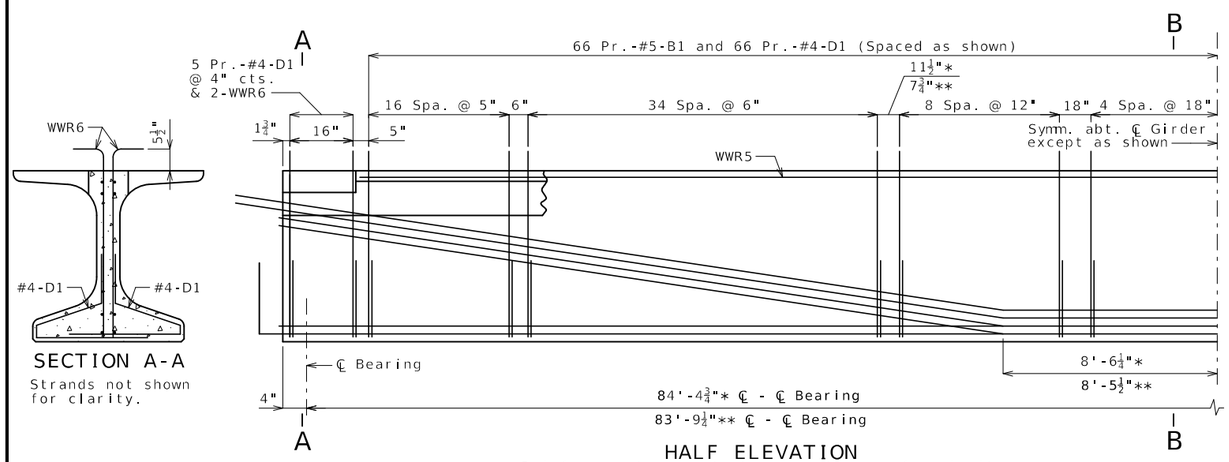
The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. 14.

For location of coil ties at concrete diaphragms and integral bents, see Sheets No. 4 and 13.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.

* Span (1-2)
** Span (2-3)



SECTION A-A

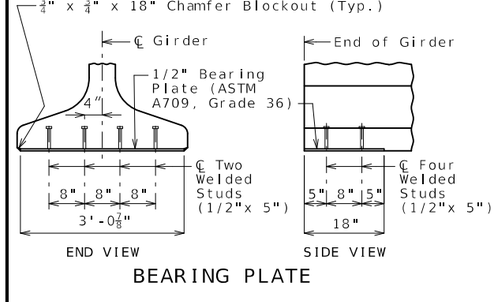
Strands not shown for clarity.

HALF ELEVATION

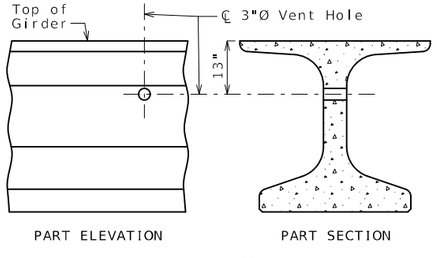
Reinforcement support strands not shown for clarity.

SECTION B-B

Strands not shown for clarity.



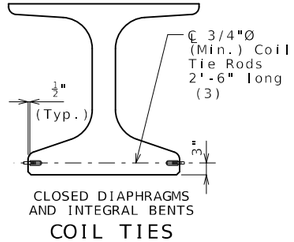
BEARING PLATE



PART ELEVATION PART SECTION

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.



CLOSED DIAPHRAGMS AND INTEGRAL BENTS

COIL TIES

Exclude coil tie at exterior face of exterior girders except at integral end bents.

(3) 2'-0" at exterior face of exterior girders at end bents

NU-GIRDERS (ALTERNATE REINFORCEMENT) - SPANS (1-2) AND (2-3)

Detailed Oct. 2024
Checked Oct. 2024

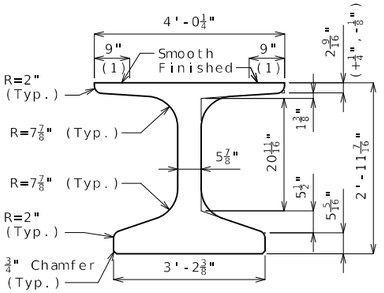
Note: This drawing is not to scale. Follow dimensions.

DATE PREPARED 11/8/2024
ROUTE D | STATE MO
DISTRICT BR | SHEET NO. 10
COUNTY CALDWELL
JOB NO. J1S3414
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9604

DESCRIPTION | DATE

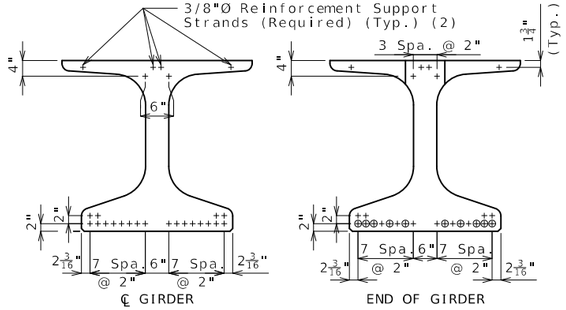
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)
Bartlett & West
601 MONROE STREET, SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181 - FAX 573-634-7904
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTWEST.COM

(1) Fabricator shall apply a bond breaker to this region.



DIMENSIONS

(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.

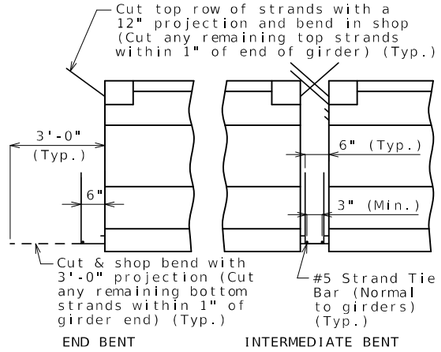


℄ GIRDER END OF GIRDER

STRAND ARRANGEMENT

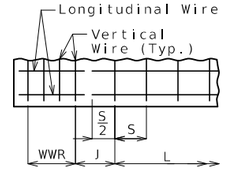
\+ Indicates prestressing strand.

o Indicates cut & shop bend with 3'-0" projection.



END BENT INTERMEDIATE BENT

STRANDS AT GIRDER ENDS



WELDED WIRE PLACEMENT

S = Vertical wire spacing

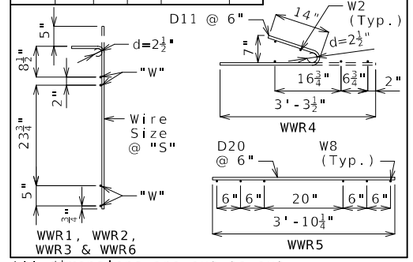
L = Length of WWR mats

J = Distance between WWR mats

Bill of Reinforcing Steel

Bars Each Girder					Bending Diagrams
No.	Size/Mark		Length	Shape	
82	3	G1	2'-10"	8	16" 16" 6" Shape 8
2	4	G3	4'-0"	20	
2	4	G4	2'-3"	20	
2	4	G5	2'-9"	20	
4	4	G6	Varies	20	Shape 20

Welded Wire Each Girder						
Mark	Size	S	W	L	J	
WWR1	D31	4"	W12	9'-0"	6½"	
WWR2	D31	8"	W12	10'-0"	8"	
WWR3	D31	12"	W12	16'-0"	--	
WWR6	D31	2"	W12	16"	4"	



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.

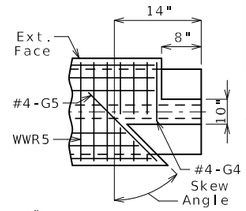
Actual bar lengths are measured along centerline of bar to the nearest inch.

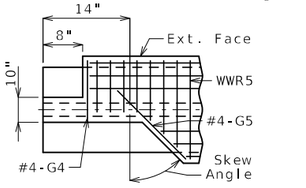
Minimum clearance to reinforcing shall be 1", unless otherwise shown.

All bar reinforcement shall be Grade 60.

WWR shall not be epoxy coated.

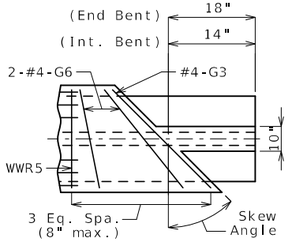
G4 and G5 not required for interior girders. Half no. of G3, G4, G5 and G6 not required for ext. girders of end spans.





LEFT EXTERIOR GIRDER AT INTERMEDIATE BENT

Rotate 180° for right ext.



INTERIOR GIRDER AT ALL BENTS & EXTERIOR GIRDER AT END BENT

TOP FLANGE BLOCKOUT

General Notes:

Concrete for prestressed beams shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 22 strands, 0.6"Ø Grade 270, with an initial prestress force of 967 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

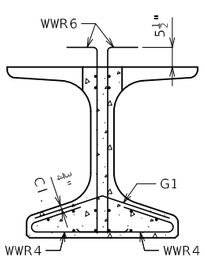
Exterior and interior girders are the same except: coil ties and top flange blockout.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. 14.

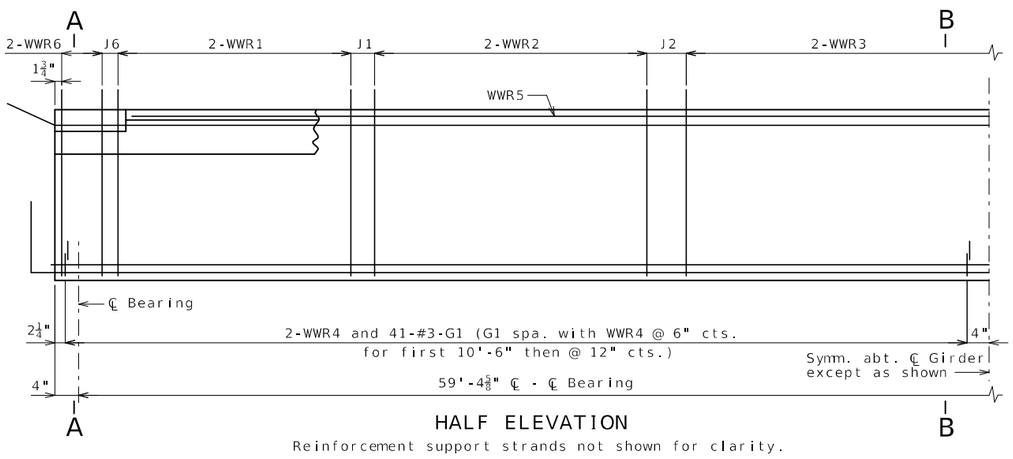
For location of coil ties at concrete diaphragms and integral bents, see Sheets No. 4 and 13.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.



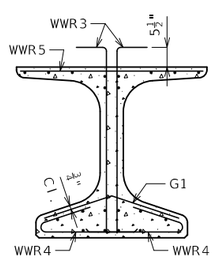
SECTION A-A

Strands not shown for clarity.



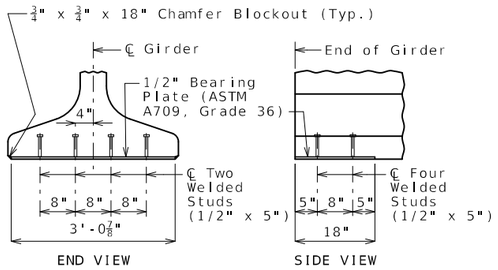
HALF ELEVATION

Reinforcement support strands not shown for clarity.

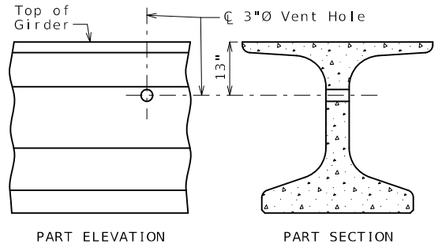


SECTION B-B

Strands not shown for clarity.



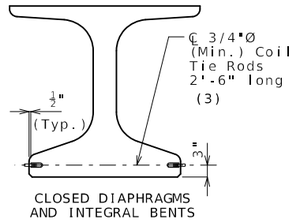
BEARING PLATE



PART ELEVATION PART SECTION

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.



CLOSED DIAPHRAGMS AND INTEGRAL BENTS

COIL TIES

Exclude coil tie at exterior face of exterior girders except at integral end bents.

(3) 2'-0" at exterior face of exterior girders at end bents

NU-GIRDERS - SPAN (3-4)

Detailed Oct. 2024
Checked Oct. 2024

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

pw://bartwest-pw.bentley.com:bartwest-pw-04/Documents/19000/19421.131 - Caldwell D Bridge Replacement/OpenRoads Designer/plan_sheets/A9604/B_A9604_011_J1S3414_PSI_06_NU_WWR_3 (1)_Span 3-4.dgn

STATE OF MISSOURI
CHRISTOPHER J. CRISWELL
NUMBER PE-2008605
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/8/2024

ROUTE D | STATE MO

DISTRICT BR | SHEET NO. 11

COUNTY CALDWELL

JOB NO. J1S3414

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9604

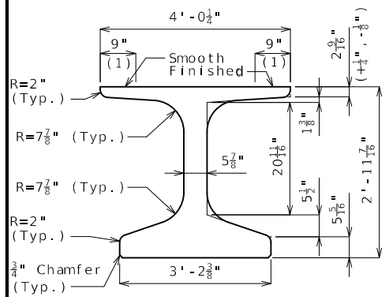
DESCRIPTION | DATE

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

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

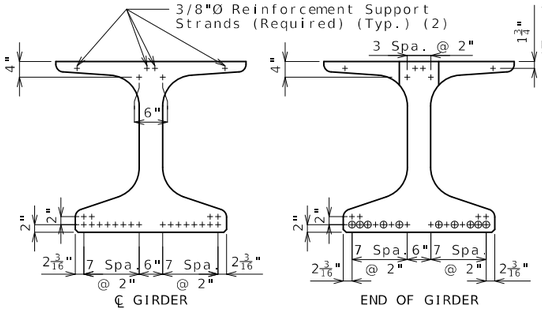
Bartlett & West
601 MONROE STREET, SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181 - FAX 573-634-7904
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTWEST.COM

(1) Fabricator shall apply a bond breaker to this region.



DIMENSIONS

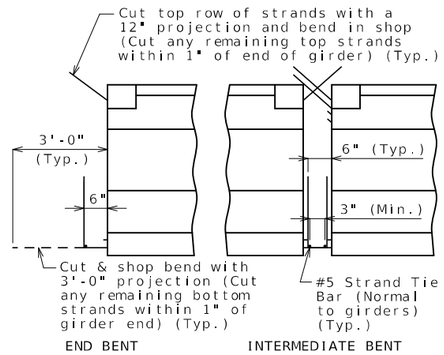
(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about ℄ Girder. May be moved laterally in pairs.



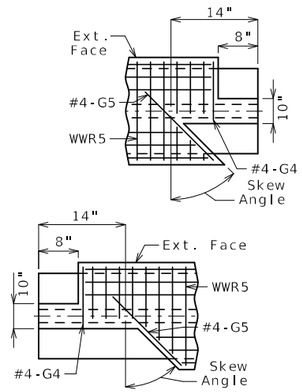
STRAND ARRANGEMENT

\+ Indicates prestressing strand.

o Indicates cut & shop bend with 3'-0" projection.

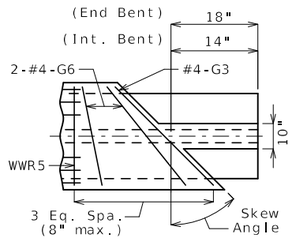


STRANDS AT GIRDER ENDS



LEFT EXTERIOR GIRDER AT INTERMEDIATE BENT

Rotate 180° for right ext.

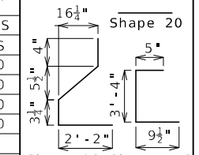


INTERIOR GIRDER AT ALL BENTS & EXTERIOR GIRDER AT END BENT

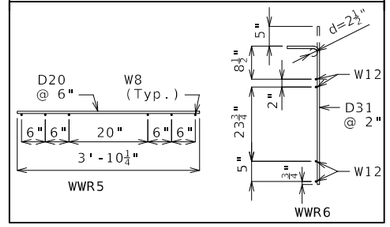
TOP FLANGE BLOCKOUT

Bill of Reinforcing Steel - Each Girder			
No.	Size/ Mark	Length	Shape
182	5 B1	4'-4"	11S
202	4 D1	4'-0"	9S
2	4 G3	4'-0"	20
2	4 G4	2'-3"	20
2	4 G5	2'-9"	20
4	4 G6	Varies	20

Bending Diagrams



Welded Wire Reinforcement - Each Girder



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

Minimum clearance to reinforcing shall be one inch.

All bar 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.

G4 and G5 not required for interior girders. Half no. of G3, G4, G5 and G6 not required for ext. girders of end spans.

General Notes:

Concrete for prestressed girders shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

Use 22 strands, 0.6"Ø Grade 270, with an initial prestress force of 967 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

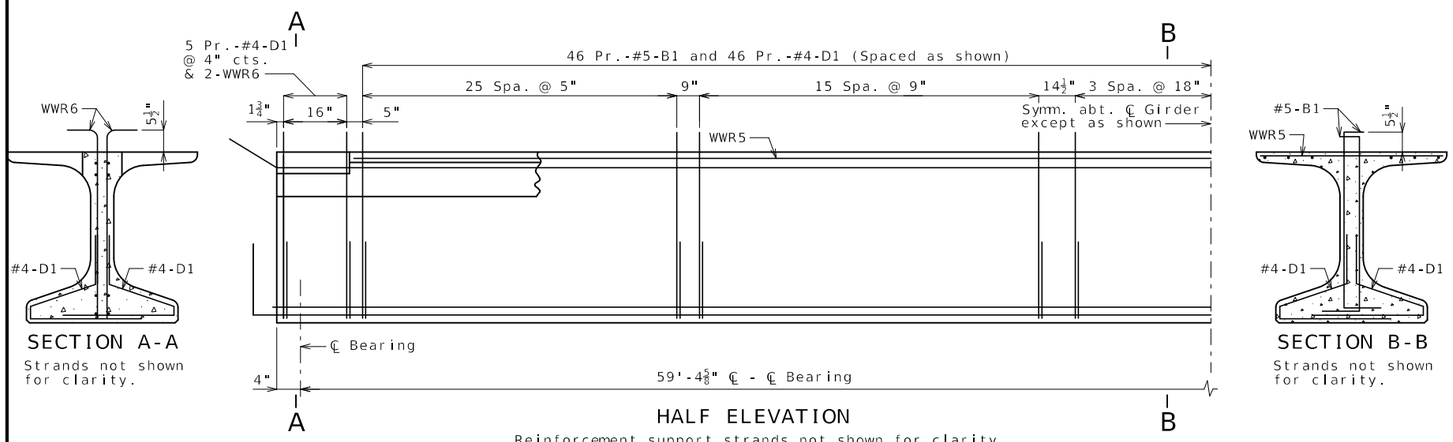
Exterior and interior girders are the same except: coil ties and top flange blockout.

The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength. Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. 14.

For location of coil ties at concrete diaphragms and integral bents, see Sheets No. 4 and 13.

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.



SECTION A-A

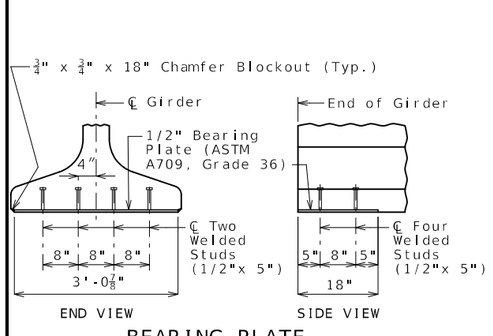
Strands not shown for clarity.

SECTION B-B

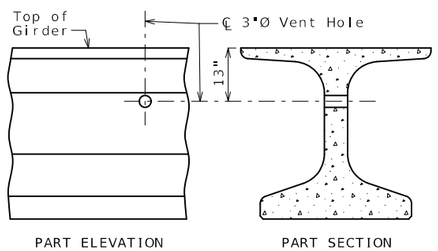
Strands not shown for clarity.

HALF ELEVATION

Reinforcement support strands not shown for clarity.

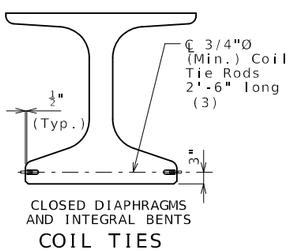


BEARING PLATE



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.



CLOSED DIAPHRAGMS AND INTEGRAL BENTS

COIL TIES

Exclude coil tie at exterior face of exterior girders except at integral end bents.

(3) 2'-0" at exterior face of exterior girders at end bents

NU-GIRDERS (ALTERNATE REINFORCEMENT) - SPAN (3-4)

Detailed Oct. 2024
Checked Oct. 2024

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

STATE OF MISSOURI
CHRISTOPHER J. CRISWELL
NUMBER PE-028605
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

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

DATE PREPARED 11/8/2024

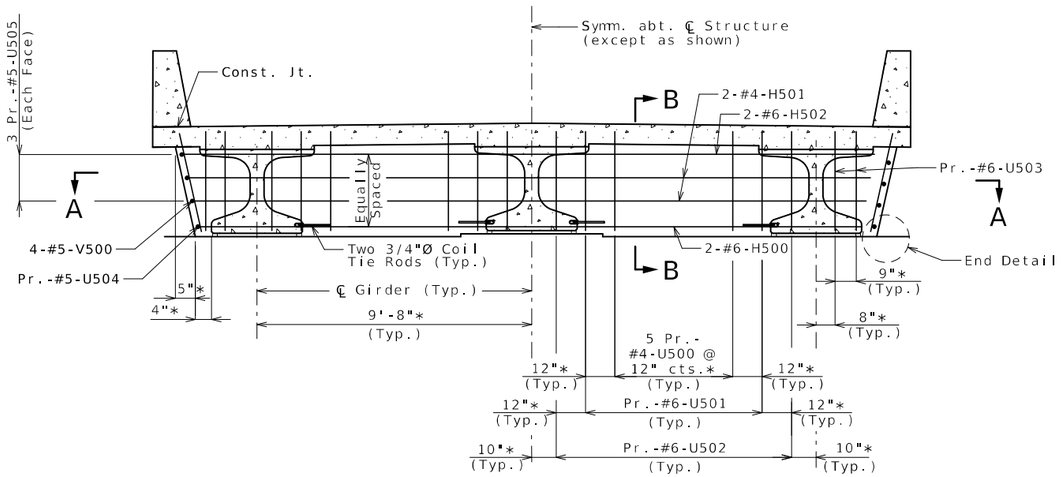
ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
BR	12

COUNTY: CALDWELL
JOB NO.: J1S3414
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9604

DESCRIPTION	DATE

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

Bartlett & West
601 MONROE STREET, SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181 - FAX 573-634-7904
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTWEST.COM



SECTION NEAR INTERMEDIATE BENT

* Normal to centerline of girders.
Note: Keys not shown for clarity.

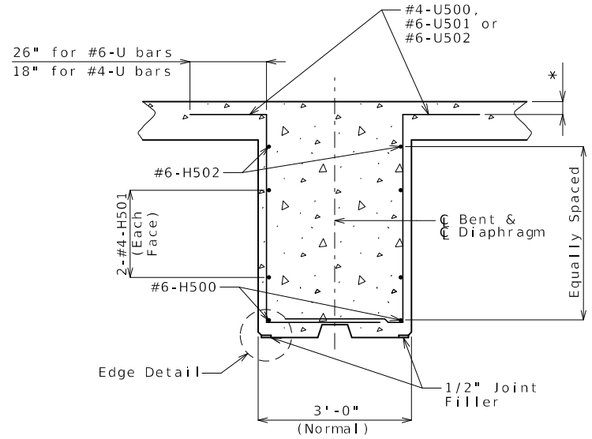
Notes:

For location of Strand Tie Bars, see Sheets No. 9 thru 12.

For location and details of Coil Tie Rods, see Sheets No. 9 thru 12.

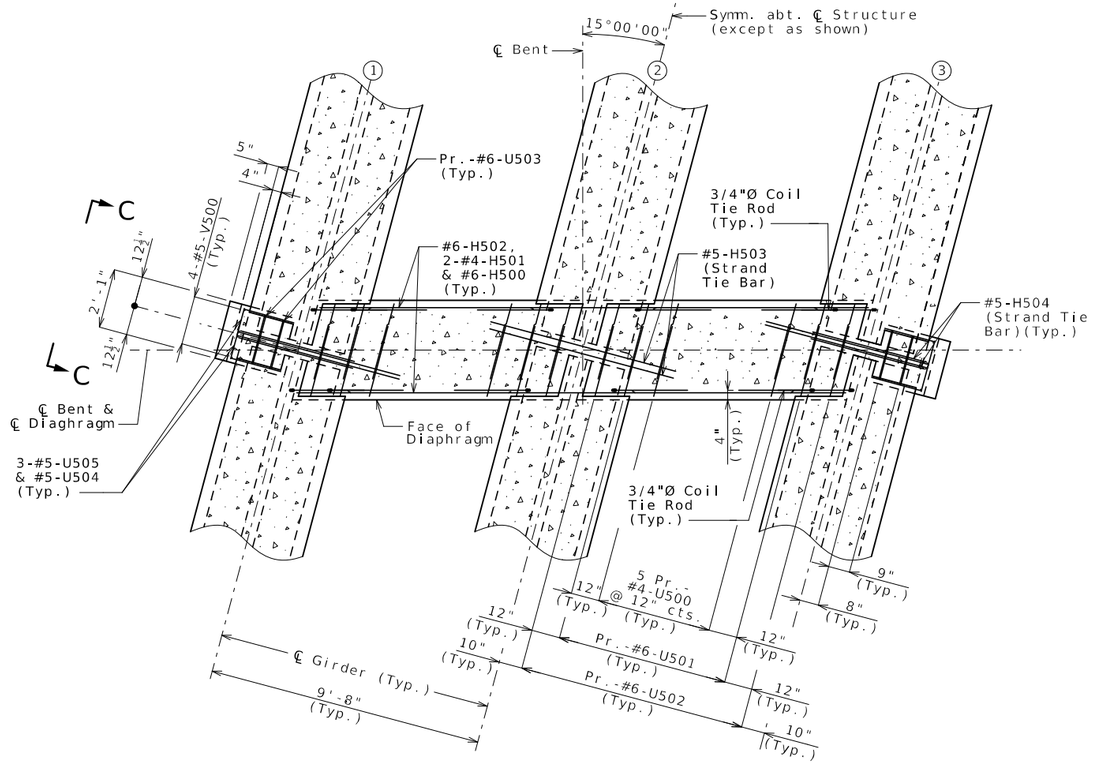
Diaphragms at intermediate bents shall be built vertical.

All U-bars in diaphragms are to be placed parallel to ℄ Girders.

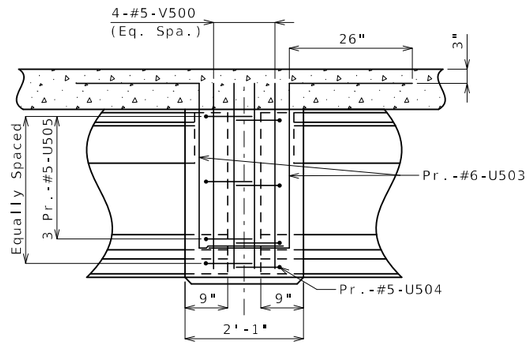


(*) 3" cl. for #6-U bars
3¼" cl. for #4-U bars

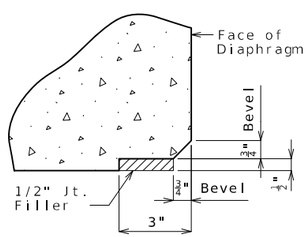
SECTION B-B



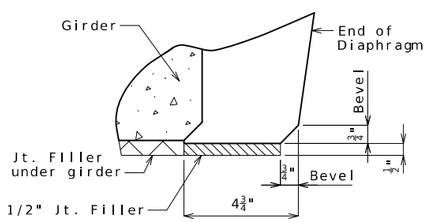
SECTION A-A



ELEVATION C-C



EDGE DETAIL



END DETAIL

DETAILS OF CONCRETE DIAPHRAGMS AT INTERMEDIATE BENTS NO. 2 & 3

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

Detailed Oct. 2024
Checked Oct. 2024

DATE PREPARED 11/8/2024
ROUTE D | STATE MO
DISTRICT BR | SHEET NO. 13
COUNTY CALDWELL
JOB NO. J1S3414
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9604

DESCRIPTION | DATE

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

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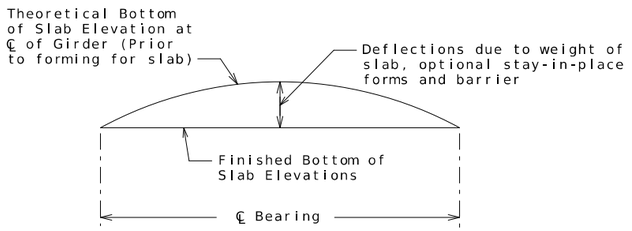
Theoretical Bottom of Slab Elevations at Centerline of Girder (Prior to forming for slab) (Estimated at 90 days)*

Girder Number	Span (1-2) (84'-4½" ℄ Brg. - ℄ Brg.)										
	℄ Brg.	.10	.20	.30	.40	.50	.60	.70	.80	.90	℄ Brg.
1	836.57	836.79	837.01	837.21	837.40	837.58	837.74	837.89	838.02	838.14	838.26
2	836.80	837.02	837.24	837.45	837.65	837.82	837.98	838.13	838.25	838.37	838.48
3	836.68	836.90	837.11	837.32	837.51	837.68	837.84	837.99	838.12	838.24	838.36

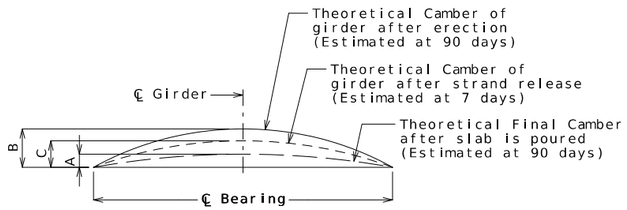
Girder Number	Span (2-3) (83'-9" ℄ Brg. - ℄ Brg.)										
	℄ Brg.	.10	.20	.30	.40	.50	.60	.70	.80	.90	℄ Brg.
1	838.28	838.50	838.71	838.91	839.10	839.28	839.44	839.58	839.72	839.84	839.96
2	838.51	838.72	838.93	839.15	839.34	839.52	839.68	839.82	839.94	840.06	840.18
3	838.39	838.60	838.81	839.01	839.20	839.38	839.54	839.69	839.82	839.94	840.06

Girder Number	Span (3-4) (59'-4½" ℄ Brg. - ℄ Brg.)				
	℄ Brg.	.25	.50	.75	℄ Brg.
1	839.98	840.31	840.62	840.91	841.17
2	840.21	840.54	840.85	841.13	841.40
3	840.09	840.41	840.72	841.01	841.28

* Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoretical dead load deflections due to weight of slab, optional stay-in-place forms and barrier.



TYPICAL SLAB ELEVATIONS DIAGRAM



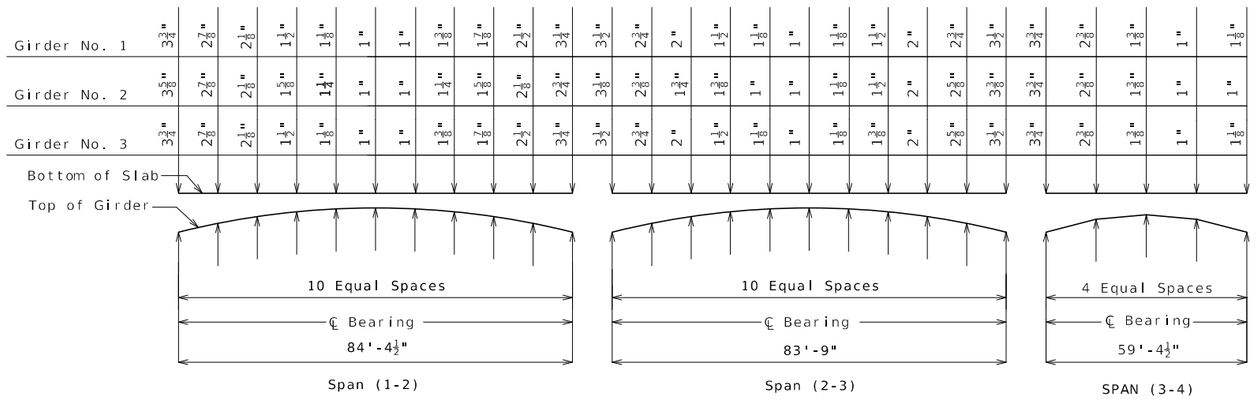
Girder	Span (1-2) & (2-3)			Span (3-4)		
	A	B	C	A	B	C
Exterior	2½"	4⅜"	3"	1"	1½"	1"
Interior	2¼"			1"		

Conversion Factors for Girder Camber (Estimated at 90 days):

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.

GIRDER CAMBER DIAGRAM



THEORETICAL SLAB HAUNCHING DIAGRAM (ESTIMATED AT 90 DAYS)

Notes:

If girder camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an adjustment of the slab haunches, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. The haunch shall be limited to ensure the projecting girder reinforcement is embedded into the slab at least 2 inches. 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 NU-Girder.

STATE OF MISSOURI
CHRISTOPHER J. CALDWELL
NUMBER PE-2008605
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/8/2024
ROUTE D | STATE MO
DISTRICT BR | SHEET NO. 14
COUNTY CALDWELL
JOB NO. J1S3414
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9604

DESCRIPTION	DATE

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

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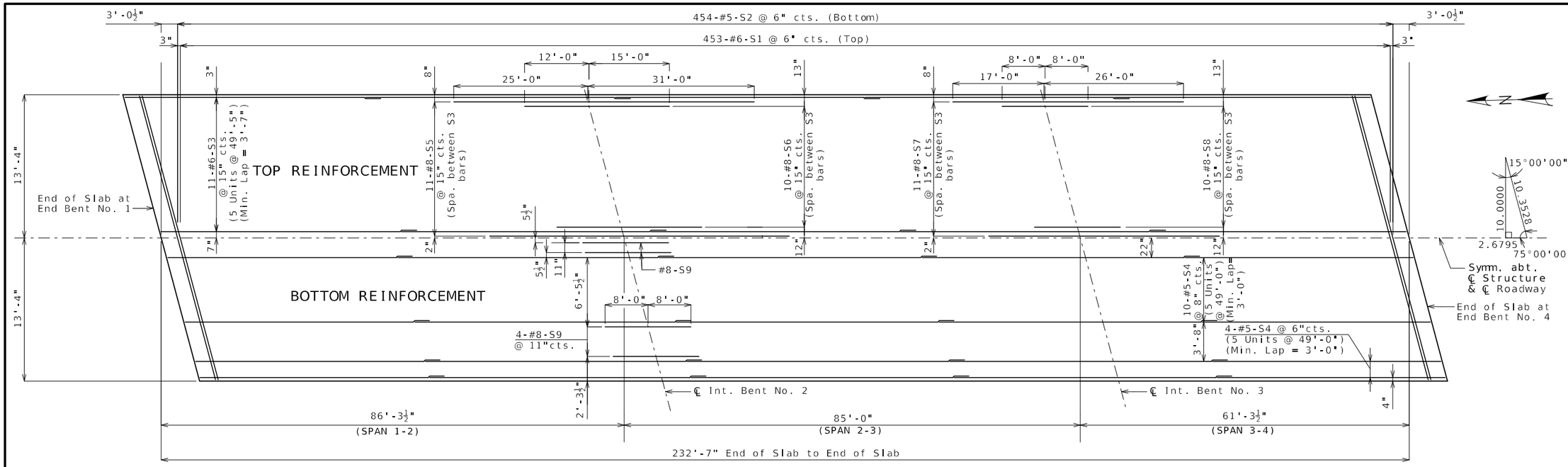
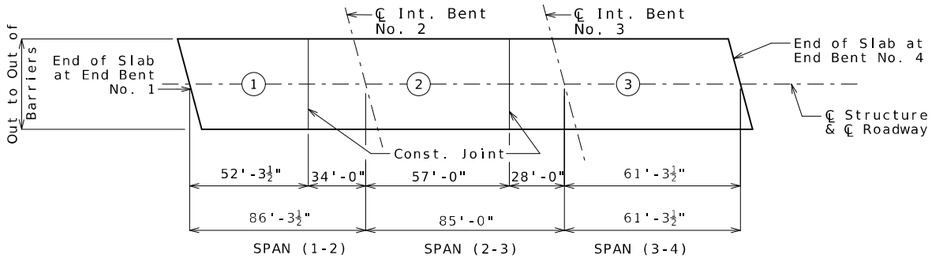


PLAN OF SLAB SHOWING REINFORCEMENT



	Sequence of Pours			Min. Rate of Pour Cu. Yds./Hr.
	Direction (Up grade from End Bent No. 1 toward End Bent No. 4)			With Retarder
Basic Sequence	1	2	3	25
	End to 2	1 to 3	2 to End	
Alternate pours to the basic sequence are subject to the approval of the engineer in accordance with Sec 703.				
Alternate A Pours	1 + 2		3	25
	End to 3		2 to End	
Alternate B Pours	1 + 2 + 3			25
	End Bent No. 1 to End Bent No. 4			

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

Notes:

Longitudinal slab dimensions are measured horizontally.

For Section Thru Slab and Slab Construction Joint Details, see Sheet No. 16.

For Theoretical Bottom of Slab Elevations, Theoretical Slab Haunching Diagram and Girder Camber Diagram, see Sheet No. 14.

For details and reinforcement of Type H Barrier not shown, see Sheets No. 17 and 18.

STATE OF MISSOURI
CHRISTOPHER J. CRISWELL
NUMBER PE-028605
PROFESSIONAL ENGINEER
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DATE PREPARED 11/8/2024
ROUTE D | STATE MO
DISTRICT BR | SHEET NO. 15
COUNTY CALDWELL
JOB NO. J1S3414
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9604

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
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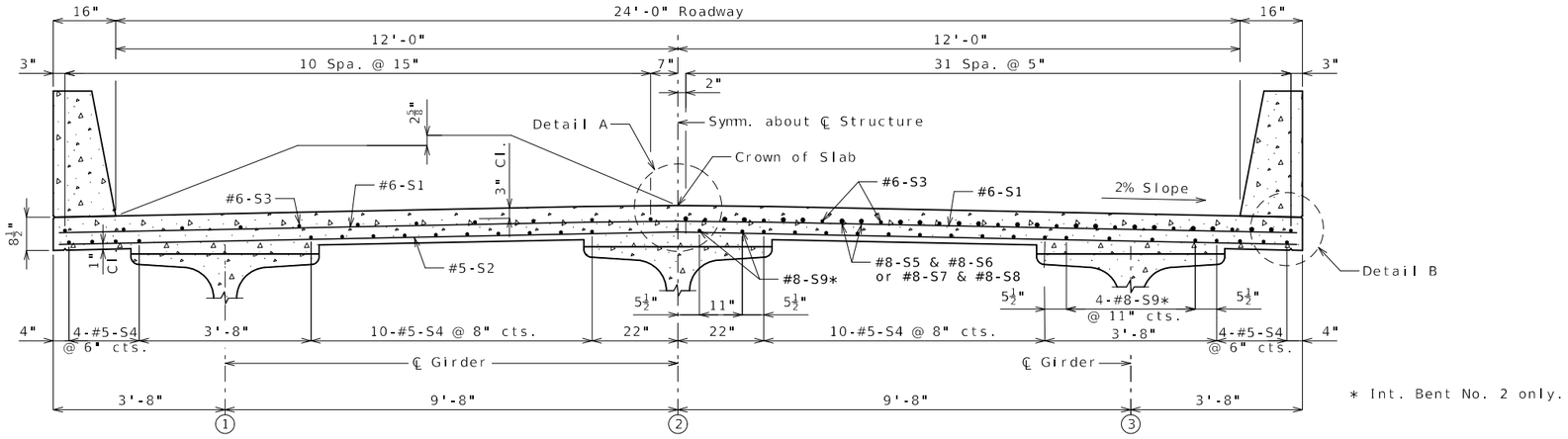
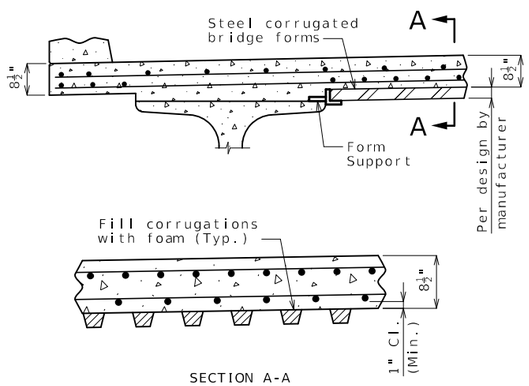
pw://bartwest-pw.bentley.com:bartwest-pw-04/Documents/19000/19421.131 - Caldwell D Bridge Replacement/OpenRoads Designer/plan_sheets/A9604/B_A9604_015_J1S3414_slab_plan1.dgn 4:59:33 PM 11/8/2024



HALF SECTION NEAR MIDSPAN

HALF SECTION NEAR INTERMEDIATE BENT

SECTION THRU SLAB



SECTION A-A

OPTIONAL STAY-IN-PLACE FORM DETAILS

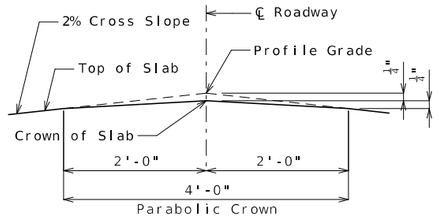
Stay-In-Place Forms:

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

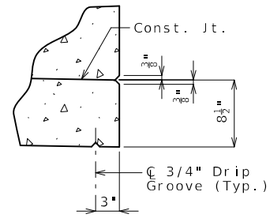
Corrugations of stay-in-place forms shall be filled with an expanded polystyrene material. The polystyrene material shall be placed in the forms with an adhesive in accordance with the manufacturer's recommendations.

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

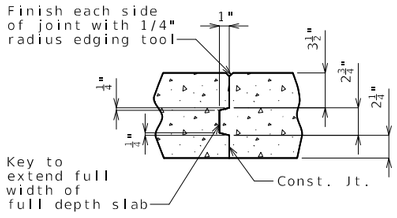
The design of stay-in-place corrugated steel forms is per manufacturer which shall be in accordance with Sec 703 for falsework and forms. Maximum actual weight of corrugated steel forms allowed shall be 4 psf assumed for girder loading.



DETAIL A

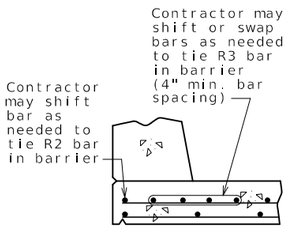


DETAIL B



FULL DEPTH SLAB

SLAB CONSTRUCTION JOINT



OPTIONAL SHIFTING TOP BARS AT BARRIER

Notes:

For reinforcement of barrier not shown, see Sheet No. 17.

For Theoretical Bottom of Slab Elevations, Girder Camber Diagram and Theoretical Slab Haunching Diagram, see Sheet No. 14.

For Plan of Slab Showing Reinforcement, see Sheet No. 15.

SLAB DETAILS

Detailed Oct. 2024
Checked Oct. 2024

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

DATE PREPARED 11/8/2024
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DISTRICT BR | SHEET NO. 16
COUNTY CALDWELL
JOB NO. J1S3414
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9604

DESCRIPTION | DATE

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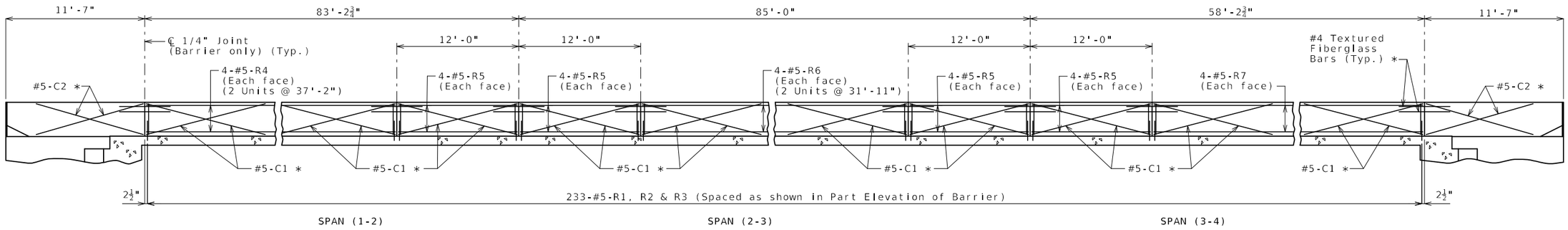
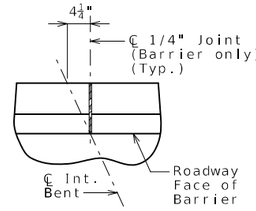


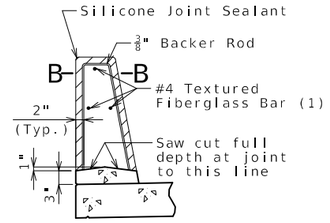
ELEVATION OF BARRIER

(Left barrier shown, right barrier similar)

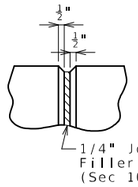
Longitudinal dimensions are horizontal.



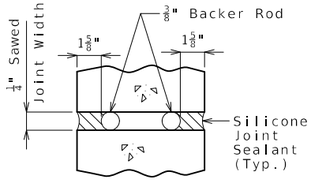
PART PLAN SHOWING JOINT LOCATION



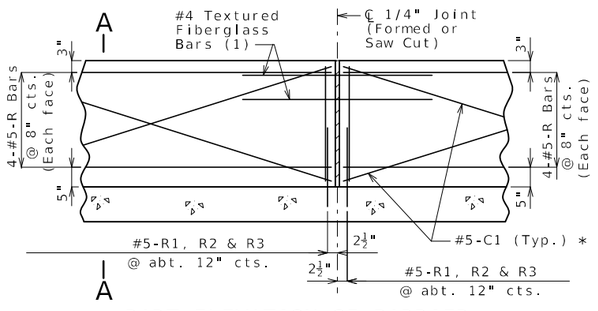
SECTION THRU SAW CUT JOINT



PART ELEVATION AT FORMED JOINT

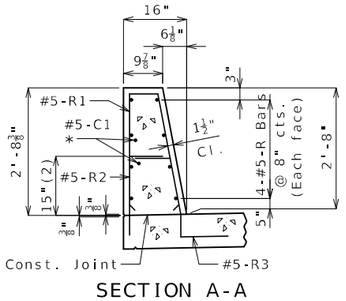


SECTION B-B



PART ELEVATION OF BARRIER

(1) Four feet long, centered on joint, slip-formed option only

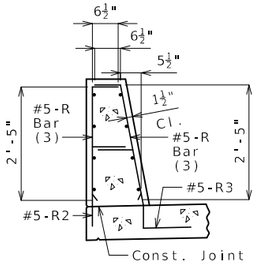


SECTION A-A

Use a minimum lap of 3'-1" for #5 horizontal barrier bars.

The cross-sectional area above the slab is 2.89 square feet.

(2) To top of bar



R-BAR PERMISSIBLE ALTERNATE SHAPE

(3) The R1 bar may be separated into two bars as shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)

General Notes:

* Slip-formed option only.

Conventional forming or slip forming may be used. Saw cut joints may be used with conventional forming.

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

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

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

Concrete in barrier shall be Class B-1.

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

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

Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

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

TYPE H BARRIER

Detailed Oct. 2024
Checked Oct. 2024

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

pw://bartwest-pw.bentley.com:bartwest-pw-04/Documents/19000/19421.131 - Caldwell D Bridge Replacement/OpenRoads Designer/plan_sheets/A9604/B_A9604_017_J1S3414_BAR06_H_elev_3.dgn

STATE OF MISSOURI
CHRISTOPHER J. CRISWELL
NUMBER PE-026605
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 11/8/2024

ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
BR	17

COUNTY CALDWELL

JOB NO. J1S3414

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9604

DESCRIPTION	DATE

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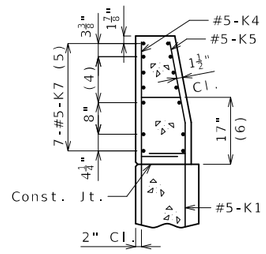
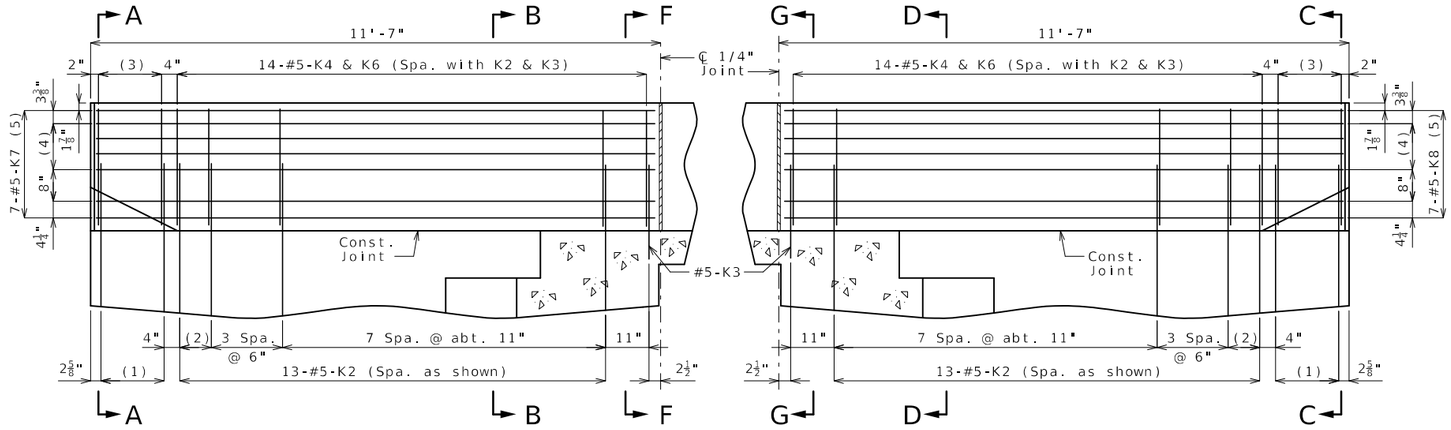
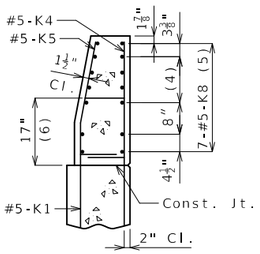


SECTION A-A



PART ELEVATION



SECTION C-C

(1) 5-#5-K1 @ 4" cts.

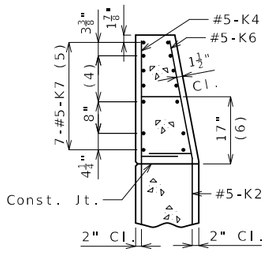
(2) 2 Spaces @ 4"

(3) 5-#5-K4 and 5-#5-K5, spaced with K1

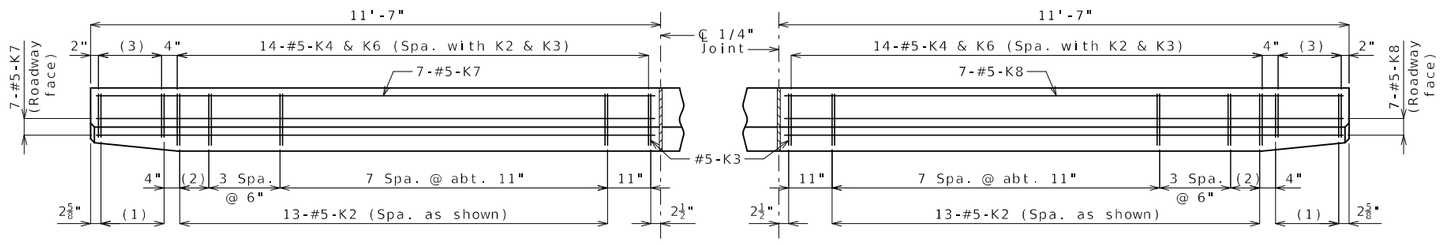
(4) 3 Spaces @ $3\frac{13}{16}$"

(5) Spaced as shown, each face

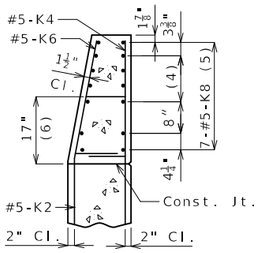
(6) To top of bar



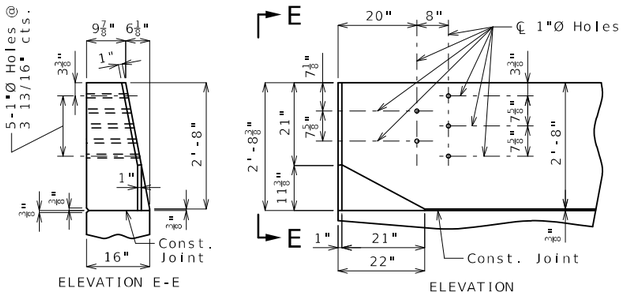
SECTION B-B

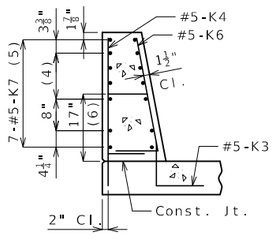


PART PLAN

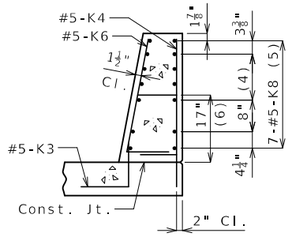


SECTION D-D

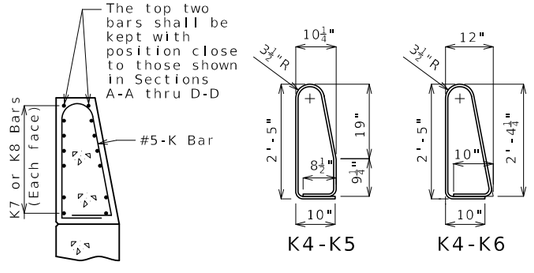




SECTION F-F



SECTION G-G

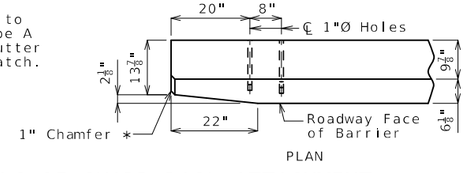


PERMISSIBLE ALTERNATE SHAPES

(Other K bars not shown for clarity)

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

All dimensions are out to out.



DETAILS OF GUARD RAIL ATTACHMENT

General Notes:

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

Reinforcing Steel:

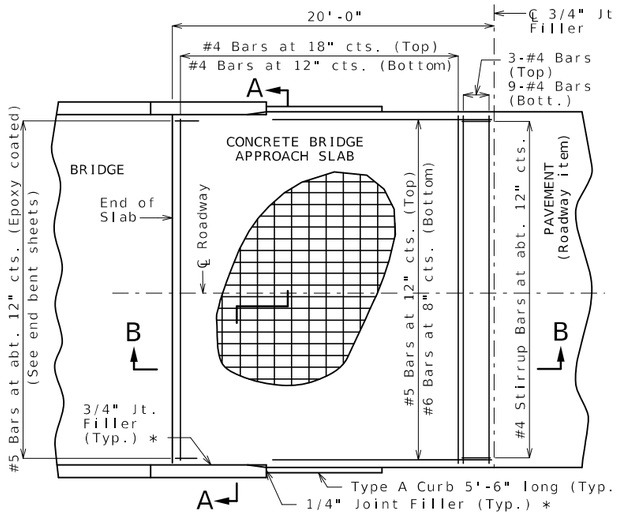
Minimum clearance to reinforcing steel shall be 1 1/2" except as shown for bars embedded into end bent.

TYPE H BARRIER AT END BENTS

(Left barrier shown, right barrier similar)

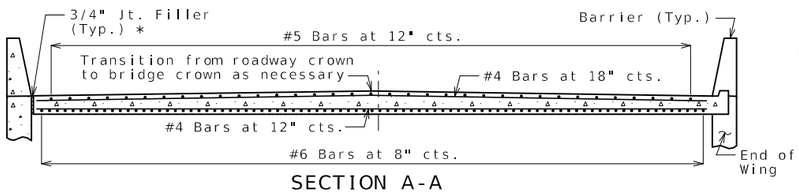
Detailed Oct. 2024
Checked Oct. 2024

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



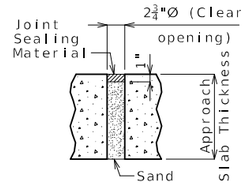
PART PLAN OF SQUARED STRUCTURE

(Skewed structure similar)



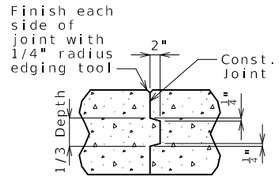
SECTION A-A

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

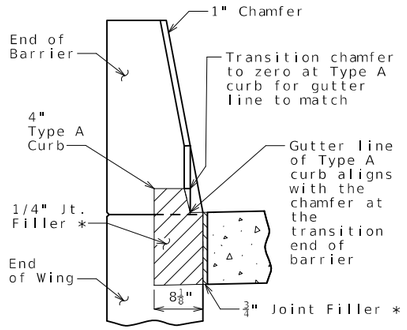


UNDERSEAL ACCESS HOLE DETAIL

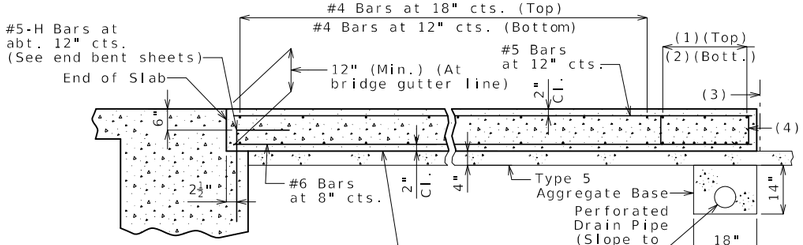
(If required)



CONSTRUCTION JOINT DETAIL



SECTION BETWEEN CURB AND BARRIER



(1) 3-#4 Bars

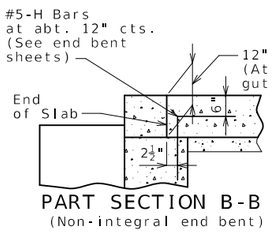
(2) 9-#4 Bars

(3) ℄ 3/4" Jt. Filler

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

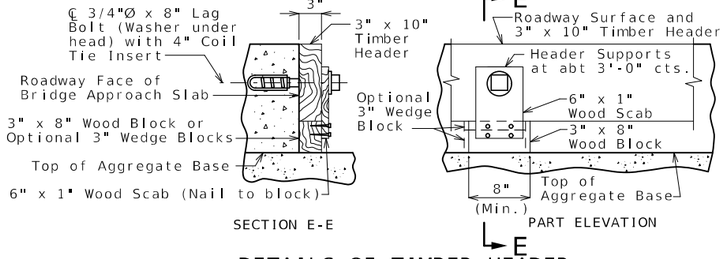
SECTION B-B

(Integral end bent)



PART SECTION B-B

(Non-integral end bent)



SECTION E-E

PART ELEVATION

DETAILS OF TIMBER HEADER

Remove timber header when concrete pavement is placed.

OPTIONAL CONCRETE SLAB

Notes For Concrete Slab Only:

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

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

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

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

The reinforcing steel in the bridge approach slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 23 inches for #4 bars, or by mechanical bar splice.

Mechanical bar splices shall be in accordance with Sec 710.

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

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

See Missouri Standard Plan 609.00 for details of Type A curb.

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

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

General Notes:

Contractor shall have the option to construct either slab except as noted.

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

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

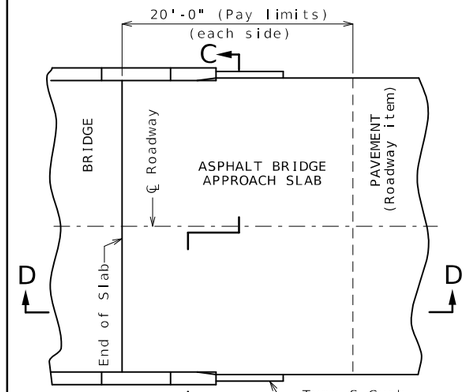
☐ Concrete Bridge Approach Slab

☐ Asphalt Bridge Approach Slab

Notes For Asphalt Slab Only:

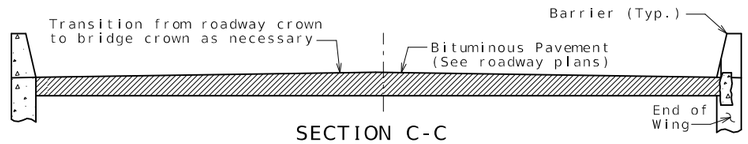
Payment for furnishing all materials, labor and excavation necessary to construct the asphalt bridge approach slab, including tack, curb, and Type 5 aggregate base within the pay limits shown, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab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

Application of tack is required between lifts per Sec 403.



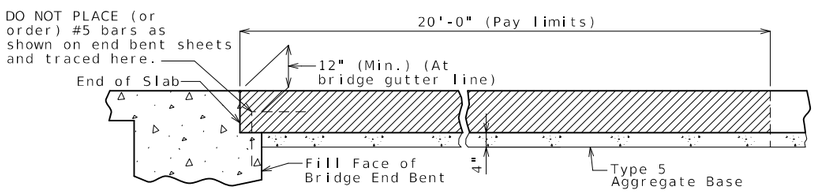
PART PLAN

(Squared structure shown, skewed structure similar)

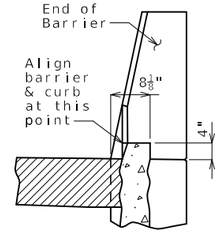


SECTION C-C

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



SECTION D-D



4" TYPE S CURB

See Missouri Standard Plan 609.00 for details of Type S curb.

OPTIONAL ASPHALT SLAB (NOT ALLOWED WITH CONCRETE PAVEMENT)

BRIDGE APPROACH SLAB (MINOR)

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

Detailed Oct. 2024
Checked Oct. 2024

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

pw://bartwest-pw.bentley.com:bartwest-pw-04/Documents/19000/19421.131 - Caldwell D Bridge Replacement/OpenRoads Designer/plan_sheets/A9604/B_A9604_019_J1S3414_APP07_minor_ORD.dgn

STATE OF MISSOURI
CHRISTOPHER J. CASWELL
NUMBER PE-028605
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 11/8/2024

ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
BR	19

COUNTY: CALDWELL

JOB NO.: J1S3414

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.: A9604

DESCRIPTION	DATE

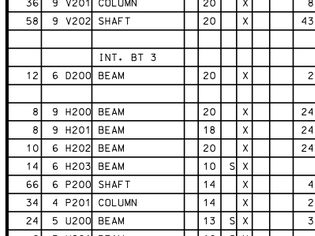
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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

Bartlett & West
601 MONROE STREET, SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181 - FAX 573-634-7904
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTWEST.COM

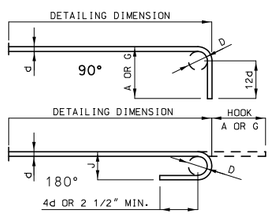
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK NO. MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT. IN.	C FT. IN.	D FT. IN.	E FT. IN.	F FT. IN.	H FT. IN.	K FT. IN.	NOMINAL LENGTH FT. IN.	ACTUAL LENGTH FT. IN.	WEIGHT LBS.
			SUBSTRUCTURE																
12	6	D200	BEAM		20		X			2 6.000							2 6	2 6	45
			INT. BT 2																
8	9	H200	BEAM		20		X			24 9.000							24 9	24 9	673
8	9	H201	BEAM		18		X			24 9.000							27 3	27 3	741
10	6	H202	BEAM		20		X			24 9.000							24 9	24 9	372
14	6	H203	BEAM		10	S	X				22.000	3 7.000					7 3	6 11	145
90	6	P200	SHAFT		14		X			4 0.000	3 2.000						15 7	15 7	2107
22	4	P201	COLUMN		14		X			2 9.000	2 1.000						10 8	10 8	157
24	5	U200	BEAM		13	S	X			3 9.000	3 9.000	3 9.000	3 9.000				15 11	15 7	390
6	5	U201	BEAM		10	S	X				3 9.000	3 9.000					11 3	11 1	69
8	5	U202	BEAM		10	S	X				3 9.000	2 6.000					10 0	9 10	82
28	5	U203	BEAM		13	S	X			2 6.000	3 9.000	2 6.000	3 9.000				13 5	13 1	382
36	9	V200	COLUMN		20		X			13 4.000							13 4	13 4	1632
36	9	V201	COLUMN		20		X			8 0.000							8 0	8 0	979
58	9	V202	SHAFT		20		X			43 9.000							43 9	43 9	8628
			INT. BT 3																
12	6	D200	BEAM		20		X			2 6.000							2 6	2 6	45
8	9	H200	BEAM		20		X			24 9.000							24 9	24 9	673
8	9	H201	BEAM		18		X			24 9.000							27 3	27 3	741
10	6	H202	BEAM		20		X			24 9.000							24 9	24 9	372
14	6	H203	BEAM		10	S	X				22.000	3 7.000					7 3	6 11	145
66	6	P200	SHAFT		14		X			4 0.000	3 2.000						15 7	15 7	1545
34	4	P201	COLUMN		14		X			2 9.000	2 1.000						10 8	10 8	242
24	5	U200	BEAM		13	S	X			3 9.000	3 9.000	3 9.000	3 9.000				15 11	15 7	390
6	5	U201	BEAM		10	S	X				3 9.000	3 9.000					11 3	11 1	69
8	5	U202	BEAM		10	S	X				3 9.000	2 6.000					10 0	9 10	82
28	5	U203	BEAM		13	S	X			2 6.000	3 9.000	2 6.000	3 9.000				13 5	13 1	382
36	9	V200	COLUMN		20		X			19 0.000							19 0	19 0	2326
36	9	V201	COLUMN		20		X			8 0.000							8 0	8 0	979
58	9	V202	SHAFT		20		X			31 9.000							31 9	31 9	6261
			SUPERSTRUCT																
			END BENT 1																
9	6	F100	WING BRACE	E	15	S				2 2.875	4 6.000	14.000	11.125	8.500	21.375	16.375	7 11	7 10	106
3	6	F101	DIAPH.	E	15					2 9.625	5 6.000			2 8.500	8.750		8 4	8 2	37
9	6	F102	WING BRACE	E	15	S				2 2.875	5 9.000	14.000	8.500	11.125	16.375	21.375	9 2	9 1	123
3	6	F103	DIAPH.	E	21					2 9.625	5 6.000			2 8.500	8.750		8 4	8 1	36
12	8	H100	BEAM/DIAPH.	E	20					27 4.000							27 4	27 4	876
8	6	H101	BEAM/DIAPH.	E	20					27 4.000							27 4	27 4	328
2	6	H102	DIAPHRAGM	E	17					22.000							2 6	2 6	8
6	6	H103	DIAPHRAGM	E	20					3 1.000							3 1	3 1	28
6	6	H104	DIAPHRAGM	E	20					5 9.000							5 9	5 9	52
2	6	H105	DIAPHRAGM	E	20					6 5.000							6 5	6 5	19
16	8	H106	WING	E	20					10 6.000							10 6	10 6	449
36	6	H107	WING	E	20					9 8.000							9 8	9 8	523
3	5	H108	STRAND TIE	E	20					5 9.000							5 9	5 9	18
14	5	U100	BEAM	E	10	S					5 8.000	2 10.125					14 2	14 0	204
19	4	U101	BEAM	E	13	S				2 10.125	2 8.000	2 10.125	2 8.000				11 9	11 6	146
2	4	U102	BEAM	E	10	S					2 8.000	2 10.125					8 2	8 0	11
20	5	U103	DIAPHRAGM	E	10	S					3 5.000	2 3.875					9 2	8 11	186
20	6	U104	DIAPHRAGM	E	19	S				2 8.000	2 10.125						5 6	5 4	160
24	5	U105	DIAPHRAGM	E	19	S				2 0.000	15.000						3 3	3 2	79
34	6	U106	DIAPHRAGM	E	19	S				3 2.000	4 6.000						7 8	7 6	383
12	5	V100	BEAM	E	20					5 8.000							5 8	5 8	71
15	6	V101	DIAPHRAGM	E	20					2 5.000							2 5	2 5	54
2	6	V102	WING	E	20					6 7.000							6 7	6 7	20
2	6	V103	WING	E	20					6 6.000							6 6	6 6	20
16	6	V104	WING	E	20			V	2	6 7.000							6 7	6 7	
			INCREMENT =							6 9.000							6 9	6 9	160
			0.250 INCH																
16	6	V105	WING	E	20			V	2	6 6.000							6 6	6 6	
			INCREMENT =							6 8.000							6 8	6 8	158
			0.250 INCH																
			END BENT 4																
9	6	F100	WING BRACE	E	15	S				2 2.875	4 6.000	14.000	11.125	8.500	21.375	16.375	7 11	7 10	106
3	6	F101	DIAPH.	E	15					2 9.625	5 6.000				8.750	8 5	8 4	8 2	37
9	6	F102	WING BRACE	E	15	S				2 2.875	5 9.000	14.000	8.500	11.125	16.375	21.375	9 2	9 1	123
3	6	F103	DIAPH.	E	21					2 9.625	5 6.000				8.750	8 5	8 4	8 1	36
12	8	H100	BEAM/DIAPH.	E	20					27 4.000							27 4	27 4	876
8	6	H101	BEAM/DIAPH.	E	20					27 4.000							27 4	27 4	328
2	6	H102	DIAPHRAGM	E	17					22.000							2 6	2 6	8
6	6	H103	DIAPHRAGM	E	20					3 1.000							3 1	3 1	28
6	6	H104	DIAPHRAGM	E	20					5 9.000							5 9	5 9	52
2	6	H105	DIAPHRAGM	E	20					6 5.000							6 5	6 5	19
16	8	H106	WING	E	20					10 6.000							10 6	10 6	449
36	6	H107	WING	E	20					9 8.000							9 8	9 8	523
3	5	H108	STRAND TIE	E	20					5 9.000							5 9	5 9	18
14	5	U100	BEAM	E	10	S					5 8.000	2 10.125					14 2	14 0	204
19	4	U101	BEAM	E	13	S				2 10.125	2 8.000	2 10.125	2 8.000				11 9	11 6	146
2	4	U102	BEAM	E	10	S					2 8.000	2 10.125					8 2	8 0	11
20	5	U103	DIAPHRAGM	E	10	S					3 5.000	2 3.875					9 2	8 11	186
20	6	U104	DIAPHRAGM	E	19	S				2 8.000	2 10.125						5 6	5 4	160
24	5	U105	DIAPHRAGM	E	19	S				2 0.000	15.000						3 3	3 2	79
34	6	U106	DIAPHRAGM	E	19	S				3 2.000	4 6.000						7 8	7 6	383
12	5	V100	BEAM	E	20					5 8.000							5 8	5 8	71
15	6	V101	DIAPHRAGM	E	20					2 5.000							2 5	2 5	54
2	6	V106	WING	E	20					6 8.000							6 8	6 8	20
2	6	V107	WING	E	20					6 9.000							6 9	6 9	20
16	6	V108	WING	E	20			V	2	6 8.000							6 8	6 8	
			INCREMENT =							6 6.000							6 6	6 6	158
			0.250 INCH																
16	6	V109	WING	E	20			V	2	6 9.000							6 9	6 9	
			INCREMENT =							6 7.000							6 7	6 7	160
			0.250 INCH																



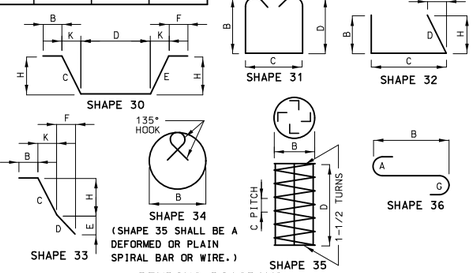
STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK	135° HOOK	
		HOOK A OR G	HOOK A OR G	APPROX. H
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	12"	8"	4 1/2"

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

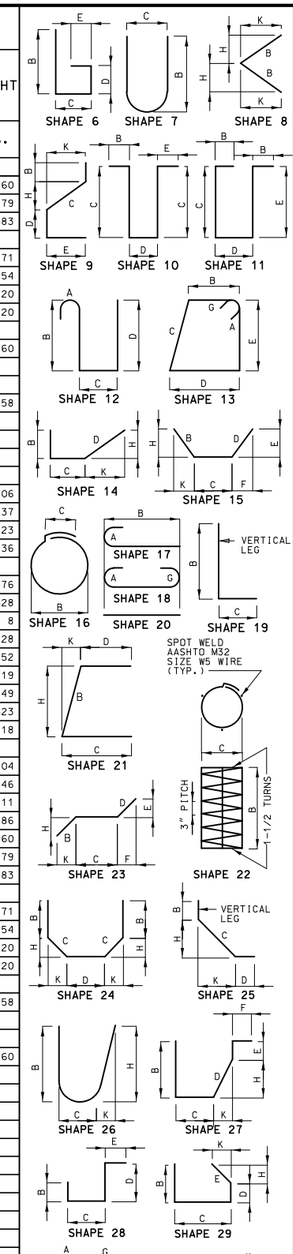


END HOOK DIMENSIONS				
BAR SIZE	D (IN.)	ALL GRADES		
		180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#3	2 1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	12"
#7	5 1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9 1/2"	15"	11 3/4"	19"
#10	10 3/4"	17"	13 1/4"	22"
#11	12"	19"	14 3/4"	2'-0"
#14	18 1/4"	2'-3"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



BENDING DIAGRAMS



STATE OF MISSOURI
CHRISTOPHER J. CRISWELL
NUMBER PE-028605
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

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

DATE PREPARED: 11/8/2024
ROUTE: D | STATE: MO
DISTRICT: BR | SHEET NO.: 20
COUNTY: CALDWELL
JOB NO.: J1S3414
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.: A9604

DATE	DESCRIPTION

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

Bartlett & West
601 MONROE STREET, SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181 - FAX 573-634-7904
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTWEST.COM

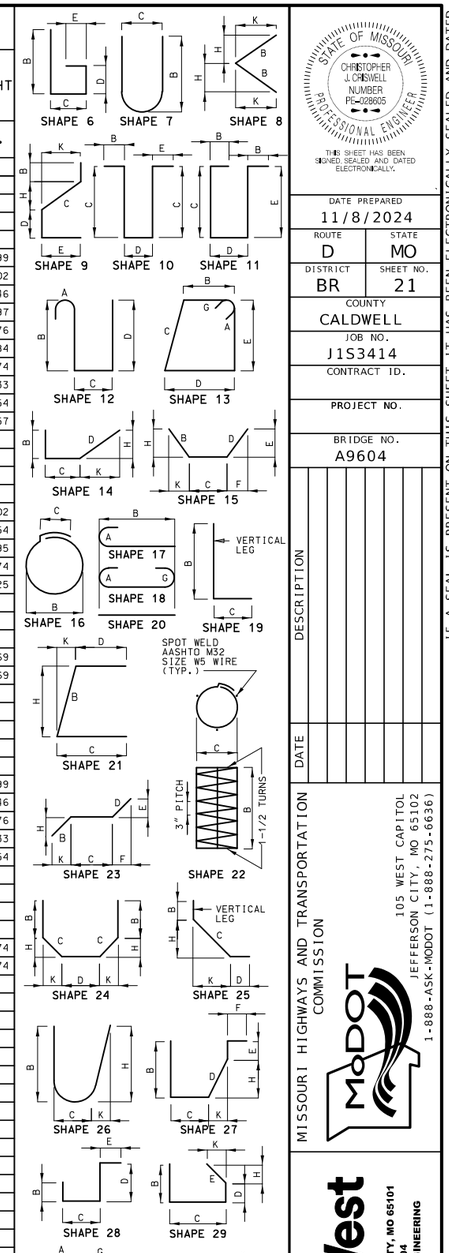
Detailed Oct. 2024
Checked Oct. 2024

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

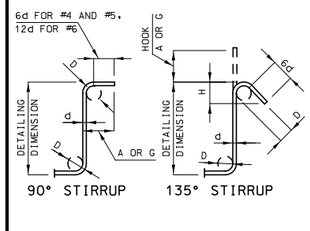
BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT. IN.	C FT. IN.	D FT. IN.	E FT. IN.	F FT. IN.	H FT. IN.	K FT. IN.	NOMINAL LENGTH FT. IN.	ACTUAL LENGTH FT. IN.	WEIGHT LBS.
		INT. DIAPH.																
		BT. 2 & 3																
8	6 H500	DIAPH.	E	20					6 5.000							6 5	6 5	77
16	4 H501	DIAPH.	E	20					9 3.000							9 3	9 3	99
8	6 H502	DIAPH.	E	20					8 9.000							8 9	8 9	105
4	5 H503	STRAND TIE	E	20					5 6.000							5 6	5 6	23
8	5 H504	STRAND TIE	E	23	S				15.000	3 3.000				3.875	14.500	4 6	4 6	38
40	4 U500	DIAPH.	E	28	S					2 5.000	3 4.000	18.000				7 3	7 1	189
16	6 U501	DIAPH.	E	28	S					2 10.000	3 1.000	2 2.000				8 1	7 9	186
16	6 U502	DIAPH.	E	28	S					2 10.000	2 9.000	2 2.000				7 9	7 5	178
16	6 U503	DIAPH.	E	28	S					21.000	2 11.000	2 2.000				6 10	6 6	156
8	5 U504	DIAPH.	E	19	S				4 10.000	13.000						5 11	5 10	49
24	5 U505	DIAPH.	E	11	S					17.000	13.000	4 5.000				6 11	6 9	169
16	5 V500	DIAPH.	E	20					3 8.000							3 8	3 8	61
		SLAB																
453	6 S1	SLAB	E	20					27 4.000							27 4	27 4	18598
454	5 S2	SLAB	E	20					27 4.000							27 4	27 4	12943
110	6 S3	SLAB	E	20					49 5.000							49 5	49 5	8165
140	5 S4	SLAB	E	20					49 0.000							49 0	49 0	7155
22	8 S5	SLAB	E	20					56 0.000							56 0	56 0	3289
20	8 S6	SLAB	E	20					27 0.000							27 0	27 0	1442
22	8 S7	SLAB	E	20					43 0.000							43 0	43 0	2526
20	8 S8	SLAB	E	20					16 0.000							16 0	16 0	854
12	8 S9	SLAB	E	20					16 0.000							16 0	16 0	513
		TYPE H																
		BARRIER																
20	5 K1	BARRIER	E	27	S				3 8.000	9.250	5.375	3 2.750		5.250	1.000	8 1	7 11	165
52	5 K2	BARRIER	E	27	S				3 8.000	9.250	14.500	2 5.750		14.250	2.750	8 2	7 11	429
4	5 K3	BARRIER	E	27	S				22.500	9.250	14.500	7.750	12.000	14.250	2.750	5 6	5 3	22
76	5 K4	BARRIER	E	19	S				2 5.000	10.000						3 3	3 2	251
20	5 K5	BARRIER	E	14	S				8.250	9.500	19.625			6.000	18.750	3 1	3 0	63
56	5 K6	BARRIER	E	21	S				2 4.875	10.000				2 4.250	6.000	3 3	3 1	180
28	5 K7	BARRIER	E	20					11 4.000							11 4	11 4	331
28	5 K8	BARRIER	E	20					11 4.000							11 4	11 4	331
466	5 R1	BARRIER	E	14	S				2 5.000	6.500	2 5.500			2 5.000	5.500	5 5	5 3	2552
466	5 R2	BARRIER	E	19	S				20.500	9.500						2 6	2 5	1175
466	5 R3	BARRIER	E	27	S					9.500	15.250	5.000	12.000	15.000	3.000	3 6	3 4	1620
32	5 R4	BARRIER	E	20					37 2.000							37 2	37 2	1240
64	5 R5	BARRIER	E	20					11 8.000							11 8	11 8	779
32	5 R6	BARRIER	E	20					31 11.000							31 11	31 11	1065
16	5 R7	BARRIER	E	20					45 11.000							45 11	45 11	766
		SLIP FORM																
40	5 C1	SLIP FORM	E	20					12 0.000							12 0	12 0	501
8	5 C2	SLIP FORM	E	20					8 9.000							8 9	8 9	73

NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT. IN.	C FT. IN.	D FT. IN.	E FT. IN.	F FT. IN.	H FT. IN.	K FT. IN.	NOMINAL LENGTH FT. IN.	ACTUAL LENGTH FT. IN.	WEIGHT LBS.
		TOTALS																
4																		399
4			E															602
5																		1846
5			E															33097
6																		4776
6			E															31784
8			E															11274
9																		23633
		TOTAL																30654
		TOTAL	E															76757
		Slab on																
		NU-Girder																
4			E															602
5			E															21554
6			E															31895
8			E															11274
		TOTAL																65325
		Barrier																
5			E															10969
		TOTAL	E															10969
		Reinforcing																
		Steel																
		(Bridges)																
4																		399
5																		1846
6																		4776
9																		23633
		TOTAL																30654
		Slip Form																
		Option																
5			E															574
		TOTAL																574

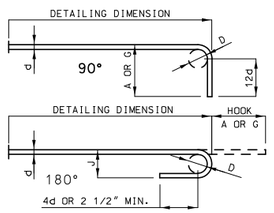


BENDING DIAGRAMS



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

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



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

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.
HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.
E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.
NO. EA. = NUMBER OF BARS OF EACH LENGTH.
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)
ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.
PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.
FOUR ANGLE OR CHANNEL SPACERS ARE REQUIRED FOR EACH COLUMN SPIRAL. SPACERS ARE TO BE PLACED ON INSIDE OF SPIRALS. LENGTH AND WEIGHT OF COLUMN SPIRALS DO NOT INCLUDE SPLICES OR SPACERS.
REINFORCING STEEL (GRADE 60) FY = 60,000 PSI.

Detailed Oct. 2024
Checked Oct. 2024

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

STATE OF MISSOURI
CHRISTOPHER J. CRISWELL
NUMBER PE-028605
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

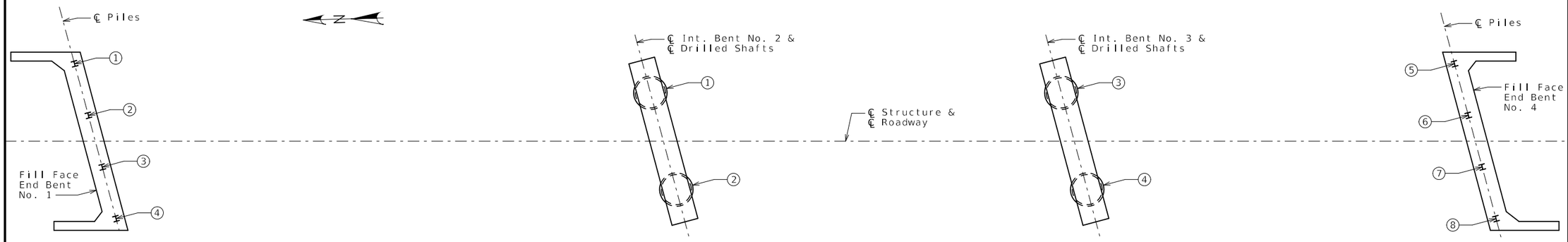
DATE PREPARED 11/8/2024
ROUTE D | STATE MO
DISTRICT BR | SHEET NO. 21
COUNTY CALDWELL
JOB NO. J1S3414
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9604

DESCRIPTION | DATE

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

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

Bartlett & West
601 MONROE STREET, SUITE 201 - JEFFERSON CITY, MO 65101
PHONE 573-634-3181 - FAX 573-634-7904
CERTIFICATE OF AUTHORITY NO. 000167 - ENGINEERING
WWW.BARTWEST.COM



PART PLAN SHOWING NUMBERING FOR RECORDING AS-BUILT PILE AND DRILLED SHAFT DATA

As-Built Pile Data

Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
			End Bent No. 1
1			
2			
3			
4			
			End Bent No. 4
5			
6			
7			
8			

As-Built Drilled Shaft Data

Shaft No.	Top of Sound Rock (Elev.)	Tip of Casing (Elev.)	Bottom of Rock Socket (Elev.)	Remarks
				Int. Bent No. 2
1				
2				
				Int. Bent No. 3
3				
4				

Note:
Indicate in remarks column:
A. Pile type and grade
B. Batter
C. Driven to practical refusal

This sheet to be completed by MoDOT construction personnel.

Detailed Oct. 2024
Checked Oct. 2024

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

STATE OF MISSOURI
CHRISTOPHER J. CRISWELL
NUMBER PE-028605
PROFESSIONAL ENGINEER
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DATE PREPARED 11/8/2024
ROUTE D | STATE MO
DISTRICT BR | SHEET NO. 22
COUNTY CALDWELL
JOB NO. J1S3414
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A9604

DESCRIPTION | DATE

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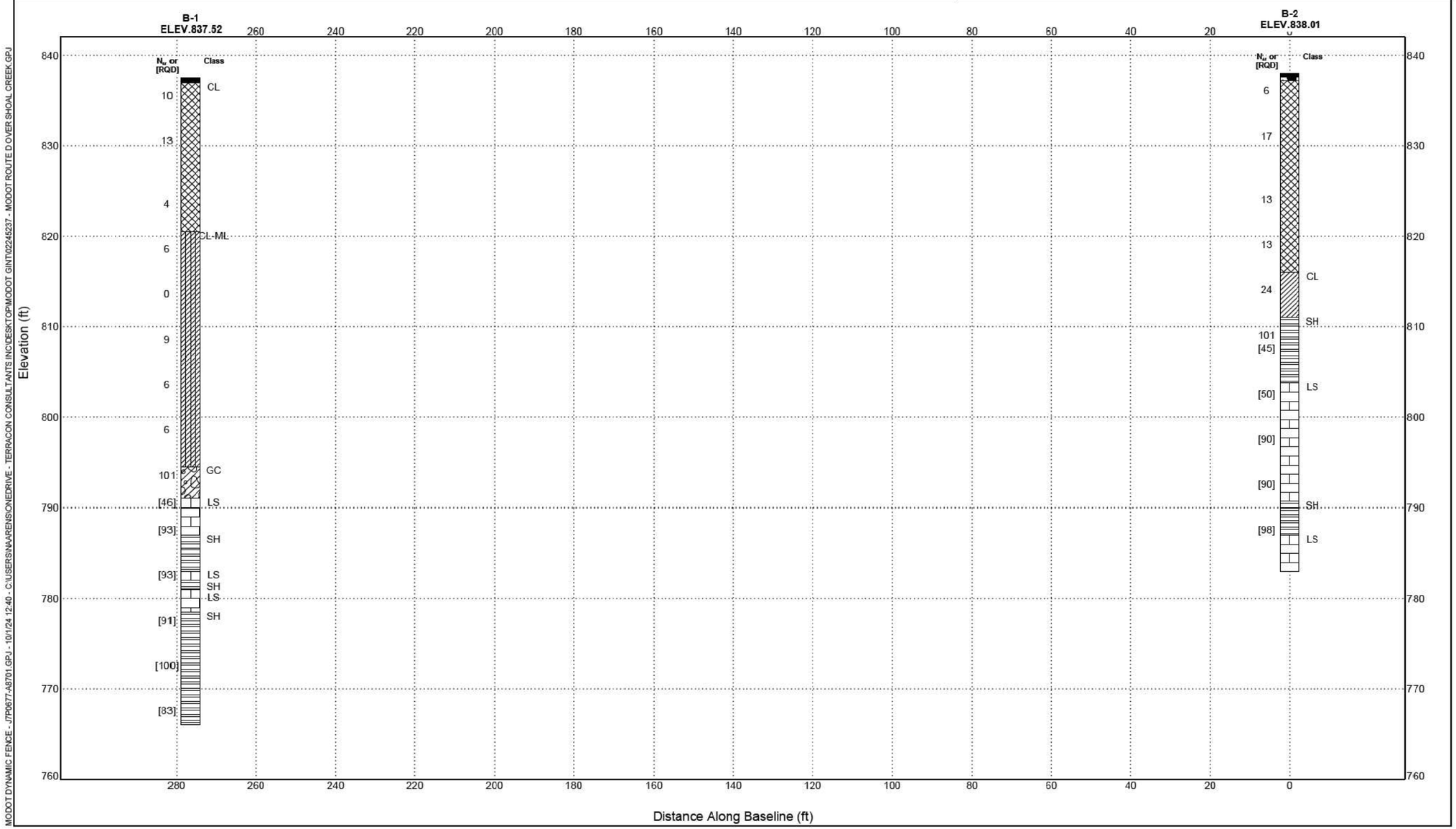
Terracon Consultants

SUBSURFACE DIAGRAM

PROJECT NAME MoDOT Emergency Bridge Replacement
PROJECT LOCATION State Highway D over Shoal Creek
CLIENT Missouri Department of Transportation (MODOT)
PROJECT NUMBER J1S3414

Asphalt
USCS Clayey Gravel
USCS Well-graded Gravel
Fill (made ground)
Limestone
USCS Low Plasticity Clay
USCS Low Plasticity Silty Clay
Shale



BORING DATA

Note: For locations of borings, see Sheet No. 1.

Detailed Oct. 2024
Checked Oct. 2024

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

pw://bartwest-pw.bentley.com:bartwest-pw-04/Documents/19000/19421.131 - Caldwell D Bridge Replacement/OpenRoads Designer/plan_sheets/A9604/B_A9604_023_J1S3414_BOR01_BoringLogTemplate_0.dgn

MODOT DYNAMIC FENCE - J7P0677-A8701.GPJ - 10/1/24 12:40 - C:\USERS\NAARENS\ONEDRIVE - TERRACON CONSULTANTS INC\DESKTOP\MODOT GINT\02245237 - MODOT ROUTE D OVER SHOAL CREEK.GPJ

STATE OF MISSOURI
CHRISTOPHER J. CASWELL
NUMBER PE-028605
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
11/8/2024

ROUTE	STATE
D	MO
DISTRICT	SHEET NO.
BR	23

COUNTY
CALDWELL

JOB NO.
J1S3414

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A9604

DESCRIPTION	DATE

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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