DESIGN DESIGNATION

A.A.D.T. - 2026 = 2774
A.A.D.T. - 2036 = 3064
D.H.V. = 9.35%
T = 5.80%
V = 55 M.P.H.
D = 50.0%
FUNCTIONAL CLASSIFICATION-MINOR COLLECTOR

NO NEW RIGHT OF WAY

CONVENTIONAL SYMBOLS
(USED IN PLANS)

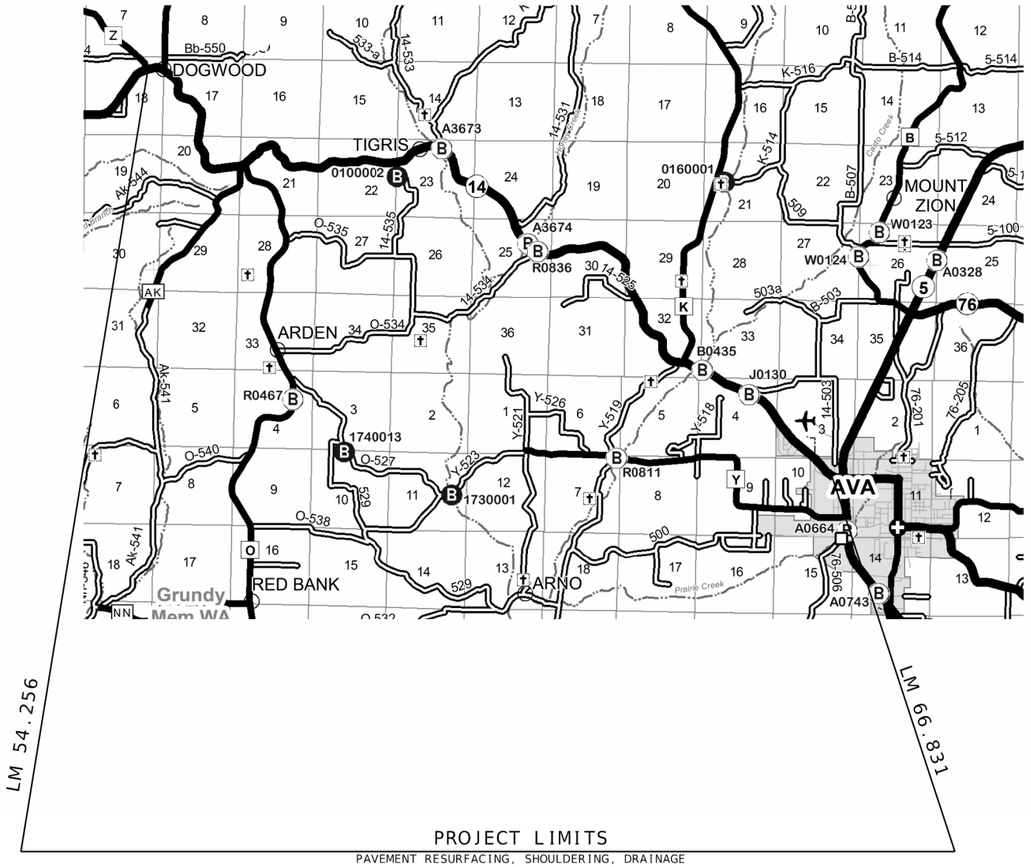
	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
GUARD CABLE		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS	-FO-	-FO-
OVERHEAD CABLE TV	-OTV-	-OTV-
UNDERGROUND CABLE TV	-UTV-	-UTV-
OVERHEAD TELEPHONE	-OT-	-OT-
UNDERGROUND TELEPHONE	-UT-	-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	DI	
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
DOUGLAS COUNTY

DOUGLAS COUNTY





PROJECT LIMITS
PAVEMENT RESURFACING, SHOULDERING, DRAINAGE AND RUMBLE STRIPS

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.

INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (3 SHEETS)	2
QUANTITIES (QU) (6 SHEETS)	3
PLAN SHEETS	4-25
SPECIAL SHEETS (SS)	26-34
TRAFFIC CONTROL SHEETS (TC)	35-38
EROSION CONTROL SHEETS (EC)	39-40
SIGNING (SN)	41-45
CULVERT SECTIONS (CS)	46-70
BRIDGE DRAWINGS (B)	
A36731	1
B04351	1-2

LENGTH OF PROJECT

BEGINNING OF PROJECT	LM 54.256	
END OF PROJECT	LM 66.831	
APPARENT LENGTH	12.575	MILES
EQUATIONS AND EXCEPTIONS:		
LM 64.469 = LM 64.498	- 0.029	MILES
TOTAL CORRECTIONS	- 0.029	MILES
NET LENGTH OF PROJECT	12.546	MILES
STATE LENGTH	12.546	MILES
FOR INFORMATION ONLY ESTIMATED DISTURBED ACRES	30.4	ACRE

STATE OF MISSOURI
ERIC BRADLEY WARNER E-30103
REGISTERED PROFESSIONAL ENGINEER

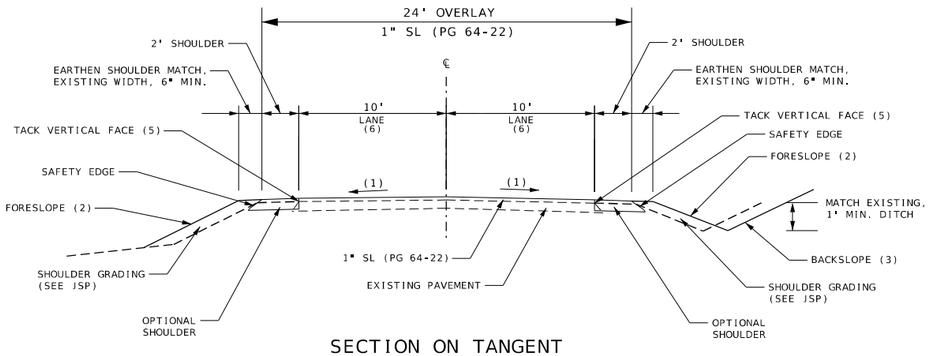
DATE PREPARED: 08/27/2026
ROUTE: 14 | STATE: MO
DISTRICT: SE | SHEET NO.: 1
COUNTY: DOUGLAS
JOB NO.: J9P3808
CONTRACT ID.:
PROJECT NO.:
BRIDGE NO.:

DESCRIPTION | DATE

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

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

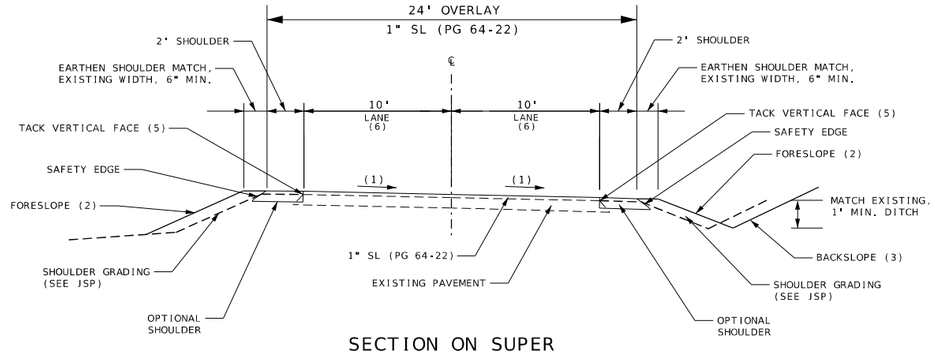


SECTION ON TANGENT

TYPICAL SECTION RTE 14

LOG MILE 54.256 TO LOG MILE 66.580

PAVEMENT EXCEPTION LOG MILE 64.469 - 64.498

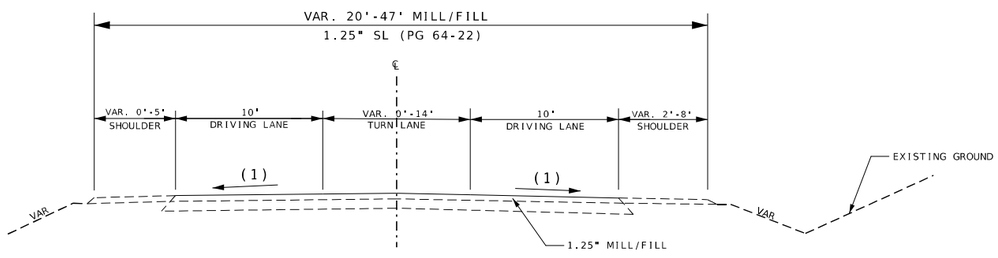


SECTION ON SUPER

TYPICAL SECTION RTE 14

LOG MILE 54.256 TO LOG MILE 66.580

PAVEMENT EXCEPTION LOG MILE 64.469 - 64.498



SECTION ON TANGENT

TYPICAL SECTION RTE 14

LOG MILE 66.580 TO LOG MILE 66.831 EB

OPTIONAL SHOULDER
4" PMBB (BIT. BASE) PG64-22 OR 4" PCC
OR 4" RCC

OPTIONAL SHOULDER PG64-22	2.067 TON/CY
BITUMINOUS PAVEMENT MIXTURE PG64-22 (SURFACE LEVELING)	2.034 TON/CY
TACK COAT	0.08 GAL/SY
TACK COAT (MILLED SURFACES)	0.10 GAL/SY

(1) MATCH EXISTING TRAVELWAY CROSS-SLOPE

(2) MATCH EXISTING SLOPE. (NOT TO EXCEED 2:1, EXCEPT AS APPROVED BY ENGINEER)

(3) THE BACKSLOPE SHALL BE EXCAVATED ONLY TO THE EXTENT NECESSARY TO CONFORM WITH THE LINES AND GRADES OF THE TYPICAL SECTION. THE BACKSOPE SHALL NOT BE EXCAVTED FOR THE SOLE PURPOSE OF GENERATING EMBANKMENT MATERIAL.

(4) IN ORDER TO MAINTAIN THE DRAINAGE PATTERN, DITCHES SHALL BE GRADED TO MATCH THE EXISTING DEPTH AND WITDH.

(5) PROVIDE A CLEAN AND STRAIGHT VERTICAL EDGE PRIOR TO PLACEMENT OF SHOULDER BASE AT NO DIRECT PAY. METHOD TO PROVIDE CLEAN AND STRAIGHT EDGE SHALL BE APPROVED BY ENGINEER PRIOR TO BEGINNING OPERATION.

(6) IN CURVE SECTIONS, EXISTING LANE WIDTH MAY BE GREATER THAN 10' DUE TO CURVE WIDENING. PLACE 2' SHOULDER OUTSIDE OF EXISTING WIDENING IN CURVE SECTIONS.

STATE OF MISSOURI
ERIC WRAPE
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	2

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

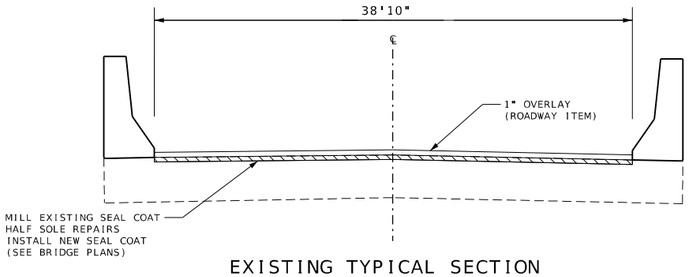
PROJECT NO.

BRIDGE NO.

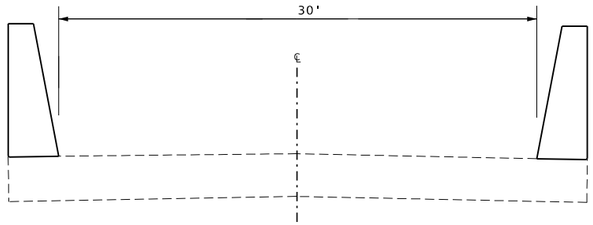
DESCRIPTION	DATE

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

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

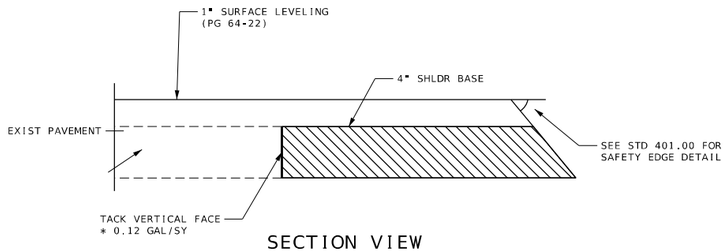


EXISTING TYPICAL SECTION
BEAVER CREEK
BR # A36731
LOG MILE 59.382



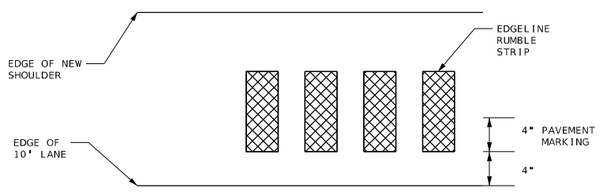
EXISTING TYPICAL SECTION
COWSKIN CREEK
BR # B04351
PAVEMENT EXCEPTION LOG MILE 64.469 - 64.498

EXISTING BRIDGE TYPICAL

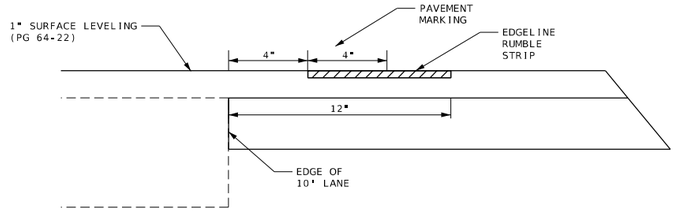


SECTION VIEW
SHOULDER DETAIL

DETAIL
SHOULDER RUMBLE STRIP LOCATION



TOP ELEVATION
EDGELINE RUMBLE STRIP RTE 14



SECTION VIEW
EDGELINE RUMBLE STRIP RTE 14

TYPICAL SHOULDER DETAIL

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS

TYPICAL SECTION
SHEET 2 OF 3

STATE OF MISSOURI
ERIC BRUCE NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	2

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

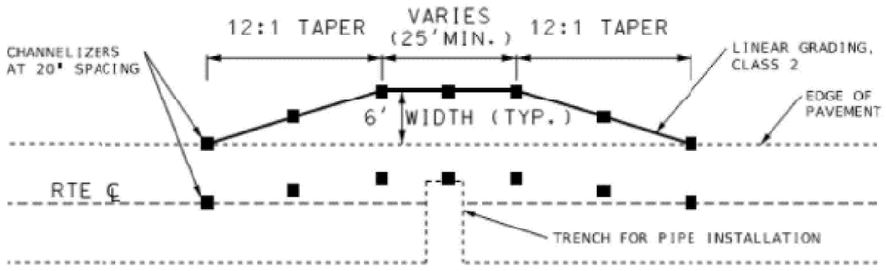
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

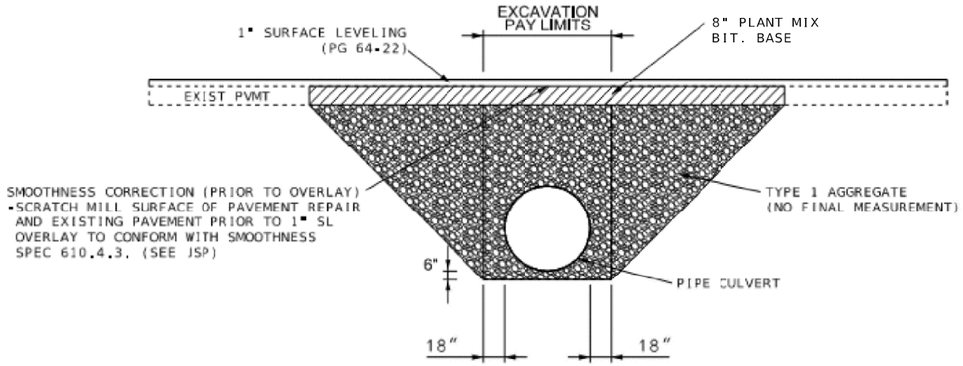
TEMPORARY WIDENING FOR CULVERT REPLACEMENT



TOP ELEVATION
LINEAR GRADING, CLASS 2

- FOR USE WITH TWO-WAY ONE-LANE FLAGGING OPERATION
- SURFACE WITH 6" GRAVEL A OR CRUSHED STONE B AT NO DIRECT PAY
- GRADING REQUIRED TO CONSTRUCT TEMPORARY WIDENING TO BE PAID AS LINEAR GRADING, CLASS 2.
- NO DIRECT PAY FOR MAINTAINING AND REMOVAL OF TEMPORARY WIDENING.
- MAINTAIN A MINIMUM TRAVELWAY WIDTH OF 12'

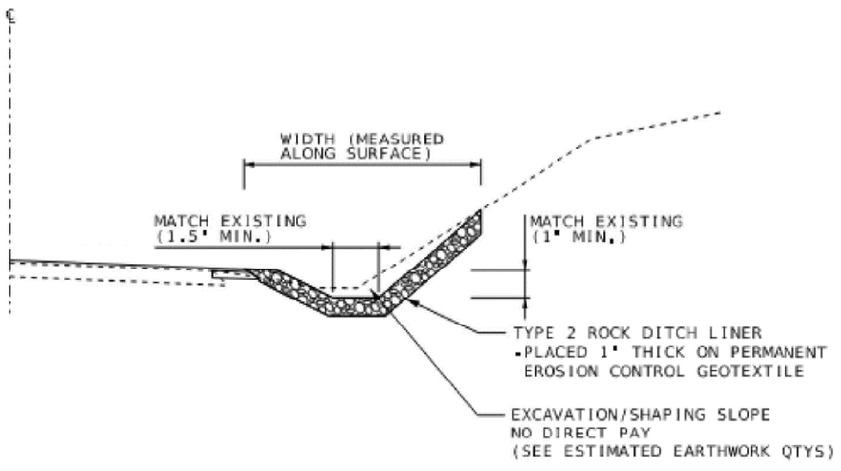
PIPE INSTALLATION FOR REPLACEMENT OF CULVERT



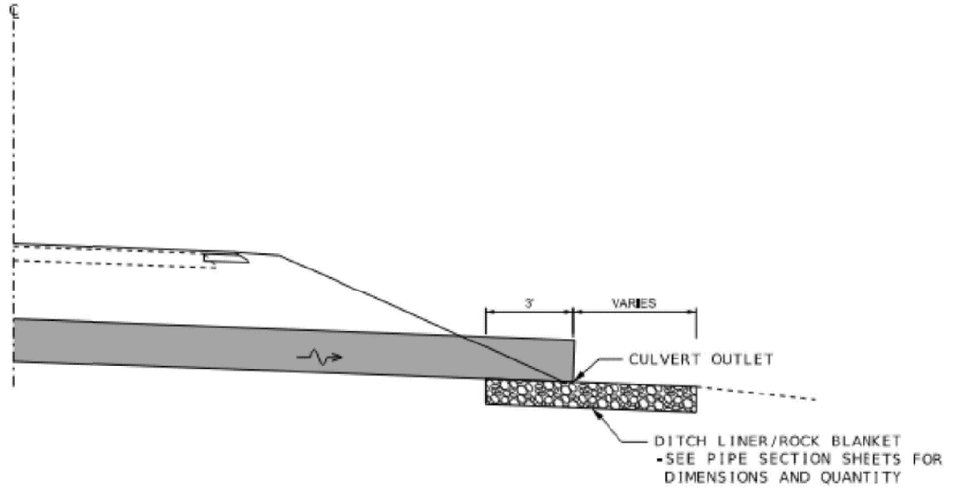
TYPICAL SECTION
CULVERTS

- PAY LIMITS FOR EXCAVATION BEGIN 6" BELOW PIPE CULVERT AND EXTEND VERTICALLY UPWARD FROM 18" EITHER SIDE OF PIPE CULVERT
- BACKFILL WITH TYPE 1 AGGREGATE BENEATH ROADWAY. (NO FINAL MEASUREMENT)(SEE JSP FOR PAY).
- BACKFILL FORESLOPES WITH EARTHEN FILL BEYOND THE LIMITS OF THE PAVED SHOULDER. (NO DIRECT PAY)
- OMIT 8" BIT PVMT. AT AGGREGATE ENTRANCES.
- EXCAVATION BEYOND THE NEATLINES AT NO DIRECT PAY.

TYPE 2 ROCK DITCH LINER



ROCK LINING AT CULVERT OUTLET



TYPICAL SECTION
SHEET 3 OF 3

STATE OF MISSOURI
ERIC GRAFE
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	2

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing Inc.

REMOVAL OF IMPROVEMENTS		
LOG MILE	LOCATION	DESCRIPTION
54.543	LT	REMOVE AND REPLACE ASSEMBLY M1-5/M1-5A/M6-1P/M6-3P
54.554	RT	REMOVE AND REPLACE ASSEMBLY M1-5/M3-2P
54.611	LT	REMOVE AND REPLACE SIGN D1-2A
54.841	RT	REMOVE AND REPLACE W1-8D
54.855	RT	REMOVE AND REPLACE W1-8D
54.870	RT	REMOVE AND REPLACE W1-8D
54.883	RT	REMOVE AND REPLACE W1-8D
54.897	RT	REMOVE AND REPLACE W1-8D
54.911	RT	REMOVE AND REPLACE W1-8D
54.922	RT	REMOVE AND REPLACE W1-8D
54.936	RT	REMOVE AND REPLACE W1-8D
54.950	RT	REMOVE AND REPLACE W1-8D
54.969	RT	REMOVE AND REPLACE W1-8D
54.982	RT	REMOVE AND REPLACE W1-8D
54.997	RT	REMOVE AND REPLACE W1-8D
55.011	RT	REMOVE AND REPLACE W1-8D
55.620	RT	REMOVE AND REPLACE ASSEMBLY W1-5/W13-1P
55.951	RT	REMOVE AND REPLACE W1-8D
55.965	RT	REMOVE AND REPLACE W1-8D
55.979	RT	REMOVE AND REPLACE W1-8D
55.994	RT	REMOVE AND REPLACE W1-8D
56.007	RT	REMOVE AND REPLACE W1-8D
56.022	RT	REMOVE AND REPLACE W1-8D
56.041	RT	REMOVE AND REPLACE W1-8D
56.054	RT	REMOVE AND REPLACE W1-8D
56.070	RT	REMOVE AND REPLACE W1-8D
56.090	RT	REMOVE AND REPLACE W1-8D
56.106	RT	REMOVE AND REPLACE W1-8D
56.121	RT	REMOVE AND REPLACE W1-8D
56.140	RT	REMOVE AND REPLACE W1-8D
56.153	RT	REMOVE AND REPLACE W1-8D
56.312	RT	REMOVE AND REPLACE ASSEMBLY M1-5A/M1-5A/M2-1P
56.427	RT	REMOVE AND REPLACE S3-1
56.466	RT	REMOVE AND REPLACE ASSEMBLY M1-5/M1-5A/M6-1P/M6-3P
57.199	LT	REMOVE AND REPLACE W1-8D
57.213	LT	REMOVE AND REPLACE W1-8D
LOCATIONS AND QUANTITIES ARE APPROXIMATE FOLLOW SEC 202.30		

REMOVAL OF IMPROVEMENTS		
LOG MILE	LOCATION	DESCRIPTION
57.226	LT	REMOVE AND REPLACE W1-8D
57.239	LT	REMOVE AND REPLACE W1-8D
57.255	LT	REMOVE AND REPLACE W1-8D
57.268	LT	REMOVE AND REPLACE W1-8D
57.270	RT	REMOVE AND REPLACE W1-8D
57.278	RT	REMOVE AND REPLACE W1-8D
57.285	RT	REMOVE AND REPLACE W1-8D
57.299	RT	REMOVE AND REPLACE W1-8D
57.313	RT	REMOVE AND REPLACE W1-8D
57.327	RT	REMOVE AND REPLACE W1-8D
57.342	RT	REMOVE AND REPLACE W1-8D
57.356	RT	REMOVE AND REPLACE W1-8D
57.370	RT	REMOVE AND REPLACE W1-8D
57.389	RT	REMOVE AND REPLACE W1-8D
57.404	RT	REMOVE AND REPLACE W1-8D
57.420	RT	REMOVE AND REPLACE W1-8D
57.628	RT	REMOVE AND REPLACE S3-1
57.685	RT	REMOVE AND REPLACE ASSEMBLY W1-4L/W13-1P
58.281	RT	REMOVE AND REPLACE OM3-R
58.283	LT	REMOVE AND REPLACE OM3-R
58.832	RT	REMOVE AND REPLACE ASSEMBLY W1-4L/W13-1P
59.103	LT	REMOVE AND REPLACE ASSEMBLY W1-4L/W13-1P
59.787	RT	REMOVE AND REPLACE ASSEMBLY W1-2L/W13-1P
59.970	LT	REMOVE AND REPLACE ASSEMBLY W1-2R/W13-1P
60.953	LT	REMOVE AND REPLACE ASSEMBLY W2-2/W13-1P
61.978	LT	REMOVE AND REPLACE OM3-R
62.073	RT	REMOVE AND REPLACE ASSEMBLY W1-2R/W13-1P
63.205	RT	REMOVE AND REPLACE ASSEMBLY W1-5/W13-1P
65.685	RT	REMOVE AND REPLACE OM3-R
65.685	LT	REMOVE AND REPLACE OM3-R
66.076	RT	REMOVE AND REPLACE OM3-R
66.081	LT	REMOVE AND REPLACE OM3-R
66.278	RT	REMOVE AND REPLACE S3-1
66.364	RT	REMOVE AND REPLACE ASSEMBLY R2-1/I4-2A
54.767	CL	18" CLAY PIPE
56.984	CL	18" CLAY PIPE
LOCATIONS AND QUANTITIES ARE APPROXIMATE FOLLOW SEC 202.30		

REMOVAL OF IMPROVEMENTS		
LOG MILE	LOCATION	DESCRIPTION
57.030	CL	18" CLAY PIPE
57.173	CL	18" CMP PIPE
57.276	CL	18" CLAY PIPE
57.482	CL	18" CLAY PIPE
57.728	CL	15" CMP/CLAY PIPE
57.823	CL	18" CLAY PIPE
57.980	CL	18" CLAY PIPE
57.991	CL	18" CLAY PIPE
58.337	CL	18" CMP PIPE
58.743	CL	18" CMP PIPE
58.844	CL	24" CLAY PIPE
59.803	CL	18" CMP/CLAY PIPE
60.030	CL	24" CLAY PIPE
60.254	CL	18" CLAY PIPE
60.327	CL	18" CLAY PIPE
60.565	CL	18" CLAY PIPE
60.627	CL	18" CLAY PIPE
60.717	CL	18" CLAY PIPE
60.774	CL	18" CMP/ CLAY PIPE
60.920	CL	18" CLAY PIPE
61.439	CL	24" CMP PIPE
61.439	RT/LT	PARTIAL HEADWALL REMOVAL
61.511	CL	18" CMP/ CLAY PIPE
61.577	CL	18" CMP/ CLAY PIPE
61.656	CL	18" CLAY PIPE
61.751	CL	18" CMP/ CLAY PIPE
61.789	CL	18" CLAY PIPE
61.865	CL	18" CLAY PIPE
61.921	CL	18" CLAY PIPE
62.094	CL	18" CLAY PIPE
62.136	CL	18" CLAY PIPE
62.183	CL	18" CLAY PIPE
62.244	CL	18" CLAY PIPE
62.271	CL	18" CLAY PIPE
62.449	CL	18" CLAY PIPE
62.716	CL	15" CLAY PIPE
LOCATIONS AND QUANTITIES ARE APPROXIMATE FOLLOW SEC 202.30		

REMOVAL OF IMPROVEMENTS		
LOG MILE	LOCATION	DESCRIPTION
62.777	CL	15" CLAY PIPE
62.968	CL	18" CLAY PIPE
63.111	CL	18" CLAY PIPE
63.510	CL	18" CLAY PIPE
63.672	CL	15" CMP PIPE
63.762	CL	18" CLAY PIPE
63.913	CL	18" CLAY PIPE
64.049	CL	18" CLAY PIPE
66.102	CL	18" CMP PIPE
66.102	CL	HEADWALL REMOVAL BOTH SIDES
59.329	RT & LT	GUARDRAIL REMOVAL
59.416	RT & LT	GUARDRAIL REMOVAL
64.457	RT & LT	GUARDRAIL REMOVAL
64.519	RT & LT	GUARDRAIL REMOVAL
LOCATIONS AND QUANTITIES ARE APPROXIMATE FOLLOW SEC 202.30		
LUMP SUM - 1		

CONTRACTOR FURNISHED SURVEYING AND STAKING
LUMP SUM - 1

MOBILIZATION
LUMP SUM -1

SUMMARY OF QUANTITIES
SHEET 1 OF 6

STATE OF MISSOURI
ERIC GRAFE
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

DRAINAGE STRUCTURES

PIPE NO.	LOG MILE	LOC	15" GROUP B PIPE (LF)	18" GROUP B PIPE (LF)	24" GROUP B PIPE (LF)	LINEAR GRADING CLASS 2 (STA)	CLASS 3 EXCAVATION (CY)	FLOWABLE BACKFILL (CY)	MISC. TYPE 1 AGGREGATE FOR PIPE CULVERTS (CY)	PLANT MIX BITUMINOUS BASE (8 IN.) 2.045 TON/CY (TON)	FURNISHING TYPE 2 ROCK BLANKET (CY)	PLACING TYPE 2 ROCK BLANKET (CY)	FURNISHING TYPE 2 ROCK DITCH LINER (CY)	PLACING TYPE 2 ROCK DITCH LINER (CY)	EROSION CONTROL GEOTEXTILE (SY)	FULL DEPTH PAVEMENT REPAIR SAW CUT (LF)	REMARKS
1	55.767	CL		53.0		3.4	35.0	3.3	27.0	10.0	18.3	18.3			27.6	40.0	
2	56.984	CL		48.0		3.4	37.0		27.0	20.0			3.0	3.0	8.9	40.0	
3	57.030	CL		48.0		3.4	34.5		27.0	20.0			4.5	4.5	13.3	40.0	
4	57.116	CL															PIPE 4 - UIP
5	57.173	CL		53.0		3.4	40.0	1.2	32.0	10.0	4.7	4.7	3.0	3.0	16.0	40.0	
6	57.276	CL		44.0		3.4	27.5	1.0	19.0	10.0	9.7	9.7			14.2	40.0	
7	57.482	CL		47.0		3.4	25.0		17.0	10.0			6.0	6.0	17.8	40.0	
8	57.728	CL		43.0		3.4	20.0		12.0	10.0			6.6	6.6	19.6	40.0	
9	57.823	CL		40.0		3.4	21.4		13.0	10.0			4.8	4.8	14.3	40.0	
10	57.980	CL		49.0		3.4	23.5		15.0	10.0			6.6	6.6	19.6	40.0	
11	57.991	CL		53.0		3.4	30.2	2.3	22.0	10.0	3.6	3.6	3.9	3.9	22.3	40.0	
11A	58.337	CL		44.0		3.4	34.7		26.7	10.0	8.3	8.3	1.8	1.8	17.8	40.0	
12	58.743	CL		45.0		3.4	23.6		16.0	10.0			5.4	5.4	16.0	40.0	
13	58.844	CL			38.0	3.4	31.5	5.0	23.0	10.0	7.1	7.1	3.0	3.0	19.6	40.0	
14	59.803	CL		38.0		3.4	23.8		16.0	10.0			6.0	6.0	17.8	40.0	
15	60.030	CL			49.0	3.4	31.6		24.0	10.0			7.2	7.2	21.4	40.0	
16	60.254	CL		39.0		3.4	22.7		15.0	10.0			6.6	6.6	19.6	40.0	
16A	60.327	CL		40.0		3.4	25.5		17.5	10.0			6.0	6.0	17.8	40.0	
17	60.565	CL		46.0		3.4	33.0		25.0	20.0	6.0	6.0			17.8	40.0	
18	60.627	CL		45.0		3.4	22.2		14.0	10.0			6.6	6.6	19.6	40.0	
19	60.717	CL		39.0		3.4	20.5		13.0	10.0			4.8	4.8	14.3	40.0	
20	60.774	CL		40.0		3.4	23.2		15.0	10.0			6.0	6.0	17.8	40.0	
21	60.920	CL		47.0		3.4	31.4	1.0	23.0	10.0	12.0	12.0			17.8	40.0	
22	61.439	CL			43.0	3.4	25.2		17.0	10.0			7.2	7.2	21.4	40.0	
23	61.511	CL		41.0		3.4	19.3		11.0	10.0	5.7	5.7			16.9	40.0	
24	61.577	CL		39.0		3.4	21.7		14.0	10.0			7.2	7.2	21.4	40.0	
25	61.656	CL		39.0		3.4	20.7		13.0	10.0			5.4	5.4	16.0	40.0	
26	61.751	CL		46.0		3.4	24.4		18.0	20.0			6.9	6.9	20.4	40.0	
27	61.789	CL		39.0		3.4	23.5		16.0	10.0			6.0	6.0	17.8	40.0	
28	61.865	CL		46.0		3.4	24.0		16.0	10.0			6.0	6.0	17.8	40.0	
29	61.921	CL		48.0		3.4	21.4		13.0	10.0			6.6	6.6	19.6	40.0	
30	62.094	CL		42.0		3.4	23.0		15.0	10.0			4.8	4.8	14.3	40.0	
31	62.136	CL		45.0		3.4	26.5		19.0	10.0			6.0	6.0	17.8	40.0	
32	62.183	CL		62.0		3.4	41.0	2.5	33.0	20.0	2.4	2.4	3.0	3.0	19.6	40.0	
33	62.244	CL		43.0		3.4	26.4		18.0	10.0			5.4	5.4	16.0	40.0	
34	62.271	CL		43.0		3.4	24.4		16.0	10.0			5.4	5.4	16.0	40.0	
35	62.449	CL		47.0		3.4	23.5		18.0	10.0			4.8	4.8	14.3	40.0	
36	62.716	CL	43.0			3.4	21.4		13.0	10.0			6.0	6.0	17.8	40.0	
37	62.777	CL	36.0			3.4	18.9		11.0	10.0			6.6	6.6	19.6	40.0	
38	62.968	CL		40.0		3.4	22.4		14.0	10.0			6.0	6.0	17.8	40.0	
39	63.111	CL		42.0		3.4	28.9		21.0	10.0			6.0	6.0	17.8	40.0	
40	63.510	CL		40.0		3.4	29.2		21.0	20.0			5.4	5.4	16.0	40.0	
41	63.672	CL		34.0		3.4	18.0		10.0	10.0			5.4	5.4	16.0	40.0	
42	63.762	CL		35.0		3.4	23.0		15.0	10.0			4.8	4.8	14.3	40.0	
43	63.913	CL		46.0		3.4	34.0		26.0	20.0			6.0	6.0	17.8	40.0	
44	64.049	CL		42.0		3.4	23.5		18.0	20.0			6.6	6.6	19.6	40.0	
44A	66.102	CL			41.0	3.4	30.2		22.2	10.0			7.2	7.2	21.3	40.0	
	TOTAL		79	1760	171	156.4	1212.3	16.3	847.4	540	77.8	77.8	226.5	226.5	818.2	1840	
	PAY TOTAL		79	1760	171	157	1213	17	848	540	78	78	227	227	819	1840	

SUMMARY OF QUANTITIES
SHEET 2 OF 6

STATE OF MISSOURI
ERIC BRADY HUMASON
E-30103
ENGINEER PROFESSIONAL STAMP

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

SEEDING

LOG MILE	LOG MILE	LOCATION	MULCHING (ACRE)	SEEDING - COOL SEASON GRASSES (ACRE)	TEMPORARY SEEDING (ACRE)	DESCRIPTION
54.256	66.831	LT AND RT	45.6	30.4	15.2	10' OFF ON BOTH SIDES OF ROAD
TOTAL			45.6	30.4	15.2	

ADDITIONAL MOBILIZATION FOR SEEDING

3 OCCURANCES
LOCATIONS TO BE DETERMINED BY THE ENGINEER

MAILBOX POSTS

LOG MILE	LOC	MISC. WOOD POST 4" X 4" (LF)	REMARKS
54.28	RT	6	
54.3	RT	6	
54.37	RT	6	
54.45	RT	6	
55.1	LT	6	
55.485	RT	18	
55.5	RT	36	
56.25	LT	6	
56.25	RT	6	
56.43	LT	6	
56.7	RT	18	
57.7	RT	6	
57.8	RT	6	
61.92	RT	12	
62.62	RT	6	
62.65	RT	6	
66.35	LT	6	
66.4	RT	12	
	LT / RT	120	ADD QUANTITY - USE AS DIRECTED BY ENGINEER
TOTALS		294	
PAY TOTALS		294	
LOG MILE LOCATIONS ARE APPROXIMATE - MAY BE FIELD ADJUSTED BY ENGINEER			

EROSION CONTROL

LOG MILE	LOG MILE	SILT FENCE (LF)	SEDIMENT REMOVAL (CY)	ROCK DITCH CHECK (LF)	ALTERNATE DITCH CHECK (LF)	DESCRIPTION
54.256	66.831	5000	200	5000	2500	
SUBTOTAL		5000	200	5000	2500	USE AS DIRECTED BY ENGINEER
TOTAL		5000	200	5000	2500	

BITUMINOUS SHOULDER RUMBLE STRIP

LOG MILE	LOG MILE	LOC	LENGTH (FT)	BITUMINOUS SHOULDER RUMBLE STRIP (STA)	EXCEPTIONS (STA)
54.256	66.831	RT	66396	664	-4.0
54.256	66.831	LT	66396	664	-6.0
TOTAL			132792	1328	-10.0
PAY TOTAL			132792	1328	

SHOULDER GRADING

LM	LM	LOC	MISC. SHOULDER GRADING (STA)	REMARKS
54.256	66.580	LT	650.7	
54.256	66.580	RT	650.7	
54.256	66.580	RT/LT	-7.5	OMIT GRADING AT 5 PAVED ENTRANCES
59.067	59.111	LT	-2.4	OMIT GRADING AT ROCK WEDGE AT TIGRIS CREEK
	TOTAL		1291.5	

TEMPORARY PAVEMENT MARKING

LOG MILE	LOG MILE	LOC	4" SOLID WHITE EDGE LINE (LF)	4" SOLID YELLOW CENTERLINE (LF)	24" SOLID WHITE STOP BAR (LF)	REMARKS
59.300	59.500	CL	1050	2100	24	
64.400	64.600	CL	1050	2100	24	
TOTAL			2100	4200	48	
PAY TOTAL			2100	4200	48	
TEMPORARY PAVEMENT MARKING PAINT MAY BE USED AS DIRECTED BY THE ENGINEER						
NO DIRECT PAY FOR REMOVAL						

ESTIMATED EARTHWORK QUANTITY

LOG MILE	LOG MILE	LOCATION	CUT (CY)	FILL (CY)	DESCRIPTION
54.256	66.831	RT/LT	4500-5500	9500-10500	SHLDR GRADING
54.256	66.831	RT/LT	300-350	100-300	PERMANENT EROSION CONTROL
TOTAL			5500 TO 6700	9600-10800	USE AS DIRECTED BY ENGINEER
			NO DIRECT PAY	NO DIRECT PAY	

SUMMARY OF QUANTITIES
SHEET 3 OF 6

STATE OF MISSOURI
ERIC [illegible]
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED 07/29/2026
ROUTE 14 | STATE MO
DISTRICT SE | SHEET NO. 3
COUNTY DOUGLAS
JOB NO. J9P3808
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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

COLDMILLING AND SMOOTHNESS CORRECTION PRIOR TO OVERLAY

DESC.	LOG MILE	LOC	LENGTH (FT)	WIDTH (FT)	MISC. SMOOTHNESS CORRECTION (SY)
PIPE 1	55.767	CL	10	24	26.7
PIPE 2	56.984	CL	20	24	53.3
PIPE 3	57.030	CL	20	24	53.3
PIPE 4 - UIP	57.116	CL			
PIPE 5	57.173	CL	10	24	26.7
PIPE 6	57.276	CL	10	24	26.7
PIPE 7	57.482	CL	10	24	26.7
PIPE 8	57.728	CL	10	24	26.7
PIPE 9	57.823	CL	10	24	26.7
PIPE 10	57.980	CL	10	24	26.7
PIPE 11	57.991	CL	10	24	26.7
PIPE 11A	58.337	CL	10	24	26.7
PIPE 12	58.743	CL	10	24	26.7
PIPE 13	58.844	CL	10	24	26.7
PIPE 14	59.803	CL	10	24	26.7
PIPE 15	60.030	CL	10	24	26.7
PIPE 16	60.254	CL	10	24	26.7
PIPE 16A	60.327	CL	10	24	26.7
PIPE 17	60.565	CL	20	24	53.3
PIPE 18	60.627	CL	10	24	26.7
PIPE 19	60.717	CL	10	24	26.7
PIPE 20	60.774	CL	10	24	26.7
PIPE 21	60.920	CL	10	24	26.7
PIPE 22	61.439	CL	10	24	26.7
PIPE 23	61.511	CL	10	24	26.7
PIPE 24	61.577	CL	10	24	26.7
PIPE 25	61.656	CL	10	24	26.7
PIPE 26	61.751	CL	20	24	53.3
PIPE 27	61.789	CL	10	24	26.7
PIPE 28	61.865	CL	10	24	26.7
PIPE 29	61.921	CL	10	24	26.7
PIPE 30	62.094	CL	10	24	26.7
PIPE 31	62.136	CL	10	24	26.7
PIPE 32	62.183	CL	20	24	53.3
PIPE 33	62.244	CL	10	24	26.7
PIPE 34	62.271	CL	10	24	26.7
PIPE 35	62.449	CL	10	24	26.7
PIPE 36	62.716	CL	10	24	26.7
PIPE 37	62.777	CL	10	24	26.7
PIPE 38	62.968	CL	10	24	26.7
PIPE 39	63.111	CL	10	24	26.7
PIPE 40	63.510	CL	20	24	53.3
PIPE 41	63.672	CL	10	24	26.7
PIPE 42	63.762	CL	10	24	26.7
PIPE 43	63.913	CL	20	24	53.3
PIPE 44	64.049	CL	20	24	53.3
PIPE 44A	66.102	CL	10	24	26.7
	TOTAL				1441.0
	PAY TOTAL				1441

GUARDRAIL

LM	LM	LOC	MGS GUARDRAIL 8 FT POSTS (LF)	TYPE A CRASHWORTHY END TERMINAL (MASH) (EACH)	MGS BRIDGE APPROACH TRANSITION SECTION (EACH)	MODIFIED SHAPING SLOPES CLASS III (LF)	REMARKS
56.917	57.043	LT	665	1		670	GUARDRAIL EXTENSION, TIE INTO EXISTING
59.300	59.372	LT	187.5	1	1	220	BEAVER CREEK
59.300	59.372	RT	187.5	1	1	220	BEAVER CREEK
59.430	59.475	LT	187.5	1	1	220	BEAVER CREEK
59.430	59.475	RT	187.5	1	1	220	BEAVER CREEK
64.320	64.350	RT	187.5	1	1	220	COWSKIN CREEK
64.320	64.350	LT	187.5	1	1	220	COWSKIN CREEK
64.420	64.450	RT	187.5	1	1	220	COWSKIN CREEK
64.420	64.450	LT	187.5	1	1	220	COWSKIN CREEK
	SUBTOTAL		2165	9	8	2430	
	PAY TOTAL		2165	9	8	2430	

PAVEMENT MARKING

BEGIN LOG MILE	END LOG MILE	LOC	4 IN. WHITE CLASS 1 PAVEMENT MARKING PAINT (18-MIL, TYPE P BEADS) (LF)	4 IN. YELLOW CLASS 1 PAVEMENT MARKING PAINT (18-MIL, TYPE P BEADS) (LF)	PREFORMED THERMOPLASTIC PAVEMENT MARKING, 24 IN. WHITE (LF)	PREFORMED THERMOPLASTIC PAVEMENT MARKING, 24 IN. YELLOW (LF)	LEFT ARROW PREFORMED THERMOPLASTIC (EACH)	REMARKS
54.256	66.83'	CL	131781	130044	30	35	1	MATCH EXISTING
TOTAL			131781	130044	30	35	1	
PAY TOTAL			131781	130044	30	35	1	

ROCK WEDGE REPAIR

LOG MILE	LOG MILE	LOCATION	SEPARATION GEOTEXTILE (SY)	FURNISHING TYPE 2 ROCK BLANKET (CY)	TYPE 2 ROCK BLANKET (CY)	LINEAR GRADING CLASS 2 (STA)	DESCRIPTION
59.067	59.111	LT	110	176	176	2.5	
TOTAL			110	176	176	2.5	

NOTE: SEE SPECIAL SHEET 7 OF 9

ENTRANCE AGGREGATE

DESC.	LOG MILE	LOG MILE	LOC	GRAVEL A OR CRUSHED STONE B (TON)	REMARKS
9 - NON PAVED COUNTY ROADS	54.256	66.831	RT/LT	13.5	
100 - NON PAVED PRIVATE ENTRANCES	54.256	66.831	RT/LT	150	
	TOTAL			163.5	
	PAY TOTAL			164	

SUMMARY OF QUANTITIES
SHEET 4 OF 6

ERIC KRAFT NUMBER E-30103
STATE OF MISSOURI
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED 07/29/2026
ROUTE 14 | STATE MO
DISTRICT SE | SHEET NO. 3
COUNTY DOUGLAS
JOB NO. J9P3808
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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

BASE AND PAVEMENT

LOG MILE	LOG MILE	LOC	COLDMILLING BIT PVMT 3" THICK OR LESS (SY)	TACK COAT (0.08 GAL/SY) (GAL)	NON TRACKING TACK COAT (0.10 GAL/SY) (GAL)	PRIME COAT (0.35 GAL/SY) (GAL)	MODIFIED COLDMILLING (DEPTH TRANSITIONS) (SY)	BITUMINOUS PAVEMENT MIXTURE PG64-22 (SURFACE LEVELING) 2.034 TON/CY (TON)	PLANT MIX BITUMINOUS BASE (PMBB) PG64-22 2.045 TON/CY (TON)	TYPE 1 AGGREGATE FOR BASE (9 IN. THICK) (SY)	MISC. (RIGID GEOGRID TO ENHANCE AGGREGATE OR ROCK BASE) (SY)	SEPARATION GEOTEXTILE (SY)	HIGH FLOAT EMULSION - CHFRS-2P, SEAL COAT (0.3 GAL/SY) (GAL)	SEAL COAT AGGREGATE, GRADE A1 (SY)	REMARKS
54.256	54.265	CL					111.1								BEGIN PROJECT DEPTH TRANSITION
54.256	66.577	CL		13868.2				9794.5							OVERLAY
56.667	57.377	CL											2999.0	9996.8	CHIP SEAL 1
58.800	59.100	CL											1267.2	4224.0	CHIP SEAL 2
59.300	59.500	CL							14.5	42.7	53.3	53.3			MODIFIED APPROACH REPAIR AT BEAVER CREEK (BOTH ENDS)
64.400	64.600	CL					266.7								COWSKIN CREEK DEPTH TRANSITION
66.577	66.589	CL					208.4								OVERLAY TO MILL FILL DEPTH TRANSITION
66.589	66.831	CL	4827.1		482.7			340.9							MILL/FILL FROM DEPTH TRANSITION TO RTE 5 SHOULDER POINT
54.256	66.831	LT / RT					460.0								5 - STATE LETTER RTE INTERSECTIONS
66.350		LT				179.2		9.6							SADDLE CLUB ENTRANCE
SUBTOTAL			4827.1	13868.2	482.7	179.2	1046.2	10145.0	14.5	42.7	53.3	53.3	4266.2	14220.8	
PAY TOTAL			4828	13869	483	180	1047	10145	15	43	54	54	4267	14221	

PAVEMENT FOR SHOULDER BASE

DESC.	LOG MILE	LOG MILE	LOC	LENGTH (FT)	WIDTH (FT)	THICKNESS (IN)	PLANT MIX BITUMINOUS BASE (PMBB) PG64-22 2.045 TON/CY (TON)	ALTERNATIVE 1: ROLLER COMPACTED CONCRETE (RCC) (CY)	ALTERNATIVE 2: PORTLAND CEMENT CONCRETE PAVEMENT (PCCP) (CY)	TACK COAT (GAL)
2' SHOULDER	54.256	64.831	RT	66396	2	4	3352.6	1639.4	1639.4	295.1
SAFETY EDGE FOR SHOULDERS (20%)	54.256	64.831	RT				670.52	327.9	327.9	
2' SHOULDER	54.256	64.831	LT	66396	2	4	3352.6	1639.4	1639.4	295.1
SAFETY EDGE FOR SHOULDERS (20%)	54.256	64.831	LT				670.52	327.9	327.9	
					TOTAL		8046.24	SEE JSP	SEE JSP	590.2
					PAY TOTAL		8047	SEE JSP	SEE JSP	591

SUMMARY OF QUANTITIES
SHEET 5 OF 6

STATE OF MISSOURI
ERIC WADE MUNGER
E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	3

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NO.	DESCRIPTION
WARNING SIGNS								
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	4	64.00			12	SIGNAL AHEAD (SYMBOL)
WO3-4	48X48	16.00						BE PREPARED TO STOP
WO3-5	48X48	16.00	4	64.00			3	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	2	32.00			43	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)
WO12-2x	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	35	560.00	3	48.00	2	ROAD/BRIDGE/RAMP WORK AHEAD
WO20-2	48X48	16.00						DETOUR AHEAD
WO20-3	48X48	16.00						ROAD CLOSED AHEAD
WO20-4	48X48	16.00	33	528.00	3	48.00	7	ONE LANE ROAD AHEAD
WO20-5	48X48	16.00	2	32.00				RIGHT/CENTER/LEFT LANE CLOSED AHEAD
WO20-5a	48X48	16.00						2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
WO20-6a	48X48	16.00	2	32.00			6	RIGHT/CENTER/LEFT LANE CLOSED
WO20-7a	48X48	16.00	27	432.00	3	48.00	8	FLAGGER (SYMBOL)
WO21-2	36X36	9.00						FRESH OIL
WO21-5	48X48	16.00	2	32.00			5	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	2	4.38				WET PAINT (ARROW PIVOTS)

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NO.	DESCRIPTION
GUIDE SIGNS								
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	2	20.00			1	ROAD WORK NEXT XX MILES
GO20-2	48X24	8.00	2	16.00			26	END ROAD WORK
GO20-4	36X18	4.50						PILOT CAR FOLLOW ME
GO20-4a	42X30	8.75	5	43.75			58	PILOT CAR IN USE WAIT & FOLLOW
GO20-4a	18X12	1.50	14	21.00			58	PILOT CAR IN USE WAIT & FOLLOW
GO20-4a	24X18	3.00	100	300.00			60	PILOT CAR IN USE WAIT & FOLLOW
GO20-5aP	36X24	6.00	4	24.00			54	WORK ZONE (PLAQUE)
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								
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	4	48.00			4	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	4	24.00			47	STOP HERE ON RED (45^ ARROW)
R11-2	48X30	10.00						ROAD CLOSED
R11-3a	60X30	12.50						ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50						ROAD CLOSED TO THRU TRAFFIC
CONST-3A	60X48	20.00						FINE SIGN
CONST-3X	56X12	4.67						SPEEDING/PASSING (PLATE)
MISCELLANEOUS SIGNS								
CONST-5	48X36	12.00						POINT OF PRESENCE
CONST-5								
CONST-8	48X36	12.00	2	24.00			59	WORK ZONE NO PHONE ZONE

616-10.05 CONSTRUCTION SIGNS	TOTAL 2302
616-10.10 RELOCATED SIGNS	TOTAL 144

ITEM NUMBER	TOTAL QTY	EFFECTIVE: 07-01-2025 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)
6122040	4	WORK ZONE CRASH CUSHION (NARROW)
6122041	4	WORK ZONE CRASH CUSHION (RELOCATION)
6123001		TRUCK MOUNTED ATTENUATOR (TMA)
6161012		BUOYS (BOATS KEEP OUT)
6161013		BUOYS (NO WAKE)
6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
6161020		CHANNELIZER (DRUM-LIKE)
6161022		CHANNELIZER (CONE)
6161025	100	CHANNELIZER (TRIM-LINE)
6161026		CHANNELIZER (VERTICAL PANEL)
6161030		TYPE 3 MOVEABLE BARRICADE
6161033		DIRECTION INDICATOR BARRICADE
6161040	3	FLASHING ARROW PANEL
6161047		TYPE 3 OBJECT MARKER
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A	2	CHANGEABLE MESSAGE SIGN WITHOUT COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
6161099		CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
6162000A	2	WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002	4	TEMPORARY LONG-TERM RUMBLE STRIPS
6173600D	1513	TEMPORARY TRAFFIC BARRIER, CONTRACTOR FURNISHED/RETAINED
6173700B		TEMP. TRAFFIC BARRIER ANCHORED, CONTRACTOR FURNISHED/RETAINED
6173706		TEMP. TRAFFIC BARRIER STIFFNESS TRANSITION CONTRACTOR FURNISHED/RETAINED
6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION, CONTRACTOR FURNISHED/RETAINED
6175010A	1513	RELOCATING TEMPORARY TRAFFIC BARRIER
6175011B		RELOCATING TEMP. TRAFFIC BARRIER ANCHORED
6175013		RELOCATING TEMP. TRAFFIC BARRIER STIFFNESS
6175020A		RELOCATING TEMP. TRAFFIC BARRIER HEIGHT
6208064A		TEMPORARY RAISED PAVEMENT MARKER
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING

NOTES:

REFER TO STANDARD
PLANS SECTION 616.20E
FOR TEMPORARY TRAFFIC
CONTROL FOR TWO-LANE ROADWAYS

SUMMARY OF QUANTITIES
SHEET 6 OF 6

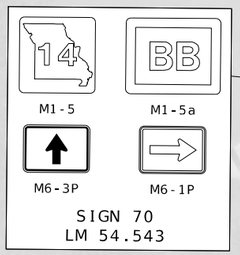
STATE OF MISSOURI
ERIC GRAFE
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED 07/29/2026
ROUTE 14 | STATE MO
DISTRICT SE | SHEET NO. 3
COUNTY DOUGLAS
JOB NO. J9P3808
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

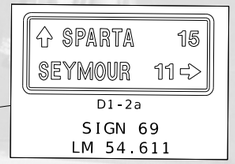
DESCRIPTION | DATE | NO.

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWEngineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

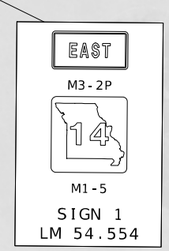


RTE BB



MO 14

MO14 RTE BB INTERSECTION
LM 54.535



LM 54.500

RTE Z

MO14 RTE Z INTERSECTION
LM 54.280

BEGIN PROJECT LM 54.256



SIGN 2
LM 54.841

SIGN 3
LM 54.855

SIGN 4
LM 54.870

SIGN 5
LM 54.883

SIGN 6
LM 54.897

SIGN 7
LM 54.911

SIGN 8
LM 54.922

SIGN 9
LM 54.936

SCALE

0 100 200 300 400 500

PLAN SHEET
SHEET 1 OF 22

STATE OF MISSOURI
ERIC GRANT MONTAGH
E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	4

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

MO 14

SIGN 14
LM 55.011

SIGN 13
LM 54.997

SIGN 12
LM 54.982

SIGN 11
LM 54.969

SIGN 10
LM 54.950

LM 55.000

LM 55.500

W1-8D
SIGNS 10-14

SCALE
0 100 200 300 400 500

PLAN SHEET
SHEET 2 OF 22

STATE OF MISSOURI
ERIC KRAFT
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	5

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

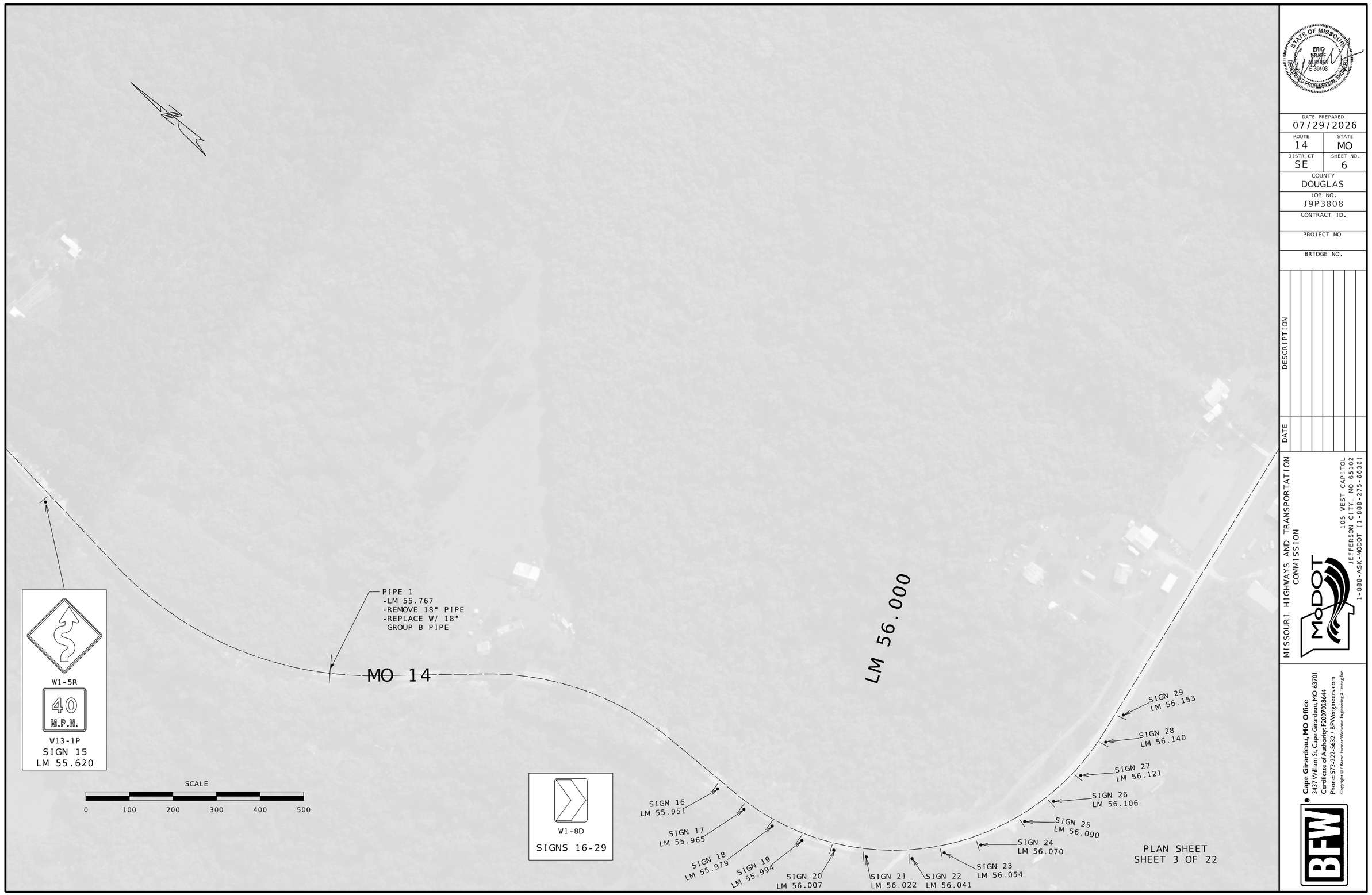
BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.



STATE OF MISSOURI
ERIC KRAFT
NUMBER E-30108
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	6

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

BEGIN CHIP AND SEAL
IMPROVEMENTS
LM 56.667

LM 56.500

MO14 RTE AK INTERSECTION
LM 56.480

MO 14

MO14 RTE O INTERSECTION
LM 56.549

RTE AK

RTE O

JCT
M2-1P
O
AK
M1-5a
M1-5a
SIGN 30
LM 56.312

S3-1
SIGN 31
LM 56.427

14
AK
M1-5
M1-5a
M6-3P
M6-1P
SIGN 32
LM 56.466

SCALE
0 100 200 300 400 500

PLAN SHEET
SHEET 4 OF 22

STATE OF MISSOURI
ERIC BRIAN NUMBER E-30103 REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	7

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © Bacon Farmer Workman Engineering & Testing, Inc.

BEGIN GUARDRAIL EXTENSION
LM 56.917

TIE INTO EXISTING GUARDRAIL
LM 57.043

PIPE 2
-LM 56.984
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 3
-LM 57.030
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

LM 57.000

MO 14

PIPE 4 - UIP
-LM 57.116

W1-8D
SIGNS 63-68

LM 57.500

END CHIP AND SEAL
IMPROVEMENTS
LM 57.377

SIGN 68
LM 57.199

SIGN 67
LM 57.213

SIGN 66
LM 57.226

SIGN 65
LM 57.239

SIGN 64
LM 57.255

SIGN 63
LM 57.268

PIPE 5
-LM 57.173
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 6
-LM 57.276
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 7
-LM 57.482
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

SIGN 33
LM 57.270

SIGN 35
LM 57.285

SIGN 36
LM 57.299

SIGN 37
LM 57.313

SIGN 38
LM 57.327

SIGN 39
LM 57.342

SIGN 40
LM 57.356

SIGN 41
LM 57.370

SIGN 42
LM 57.389

SIGN 43
LM 57.404

SIGN 44
LM 57.420

S3-1
SIGN 34
LM 57.278

W1-8D
SIGNS 33,
35-44

SCALE
0 100 200 300 400 500

PLAN SHEET
SHEET 5 OF 22

STATE OF MISSOURI
ERIC WRAFF
NUMBER E-30109
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	8

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

LM 58.000

MO 14

PIPE 10
-LM 57.980
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 11
-LM 57.991
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

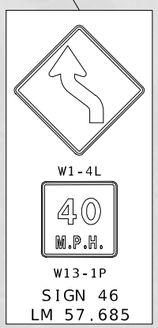
PIPE 9
-LM 57.823
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 8
-LM 57.728
-REMOVE 15" PIPE
-REPLACE W/ 15"
GROUP B PIPE



S3-1

SIGN 45
LM 57.628



W1-4L

W13-1P

SIGN 46
LM 57.685

SCALE

0 100 200 300 400 500

PLAN SHEET
SHEET 6 OF 22

STATE OF MISSOURI
ERIC KRAFT
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	9

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

LM 58.500

OM3-R
SIGN 62
LM 58.283

MO 14

PIPE 11A
-LM 58.337
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

OM3-R
SIGN 47
LM 58.281

SCALE
0 100 200 300 400 500

PLAN SHEET
SHEET 7 OF 22

STATE OF MISSOURI
ERIC BRIAN NORMAN E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	10

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

P:\2026\Roads\Douglas\14\Plan\SHEETS\J9P3808 Plan Sheet 7.dgn 7/29/2026 7:36:40 AM

MO14 COUNTY ROAD 535 INTERSECTION
LM 58.748

LM 59.000

BEGIN CHIP AND SEAL
IMPROVEMENTS
LM 58.800

W1-4L

40
M.P.H.

W13-1P

SIGN 61
LM 59.103

INSTALL ROCK WEDGE
SEE SPECIAL SHEET 7 OF 9
LM 59.067 - LM 59.111

MO 14

PIPE 12
-LM 58.743
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 13
-LM 58.844
-REMOVE 24" PIPE
-REPLACE W/ 24"
GROUP B PIPE

COUNTY ROAD 535

W1-4L

40
M.P.H.

W13-1P

SIGN 48
LM 58.832

END CHIP AND SEAL
IMPROVEMENTS
LM 59.100

SCALE

0 100 200 300 400 500

PLAN SHEET
SHEET 8 OF 22

STATE OF MISSOURI
ERIC GRAPE
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	11

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

© 2026 Missouri Department of Transportation | DO NOT POST TO THE PUBLIC PLANS OR WEBSITE

COUNTY ROAD 533

MO14 COUNTY ROAD 533 INTERSECTION
LM 59.478

LM 59.500

MO 14

BEAVER CREEK

PIPE 14
-LM 59.803
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

STRUCTURE: A36731
MILL, CHIP SEAL, AND OVERLAY
GUARDRAIL UPGRADES
LM 59.382

SIGN 49
LM 59.787

SCALE

0 100 200 300 400 500

PLAN SHEET
SHEET 9 OF 22



DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	12

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

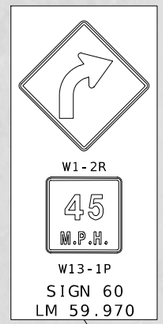
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.



SIGN 60
LM 59.970

LM 60.000

MO 14

PIPE 15
-LM 60.030
-REMOVE 24" PIPE
-REPLACE W/ 24"
GROUP B PIPE

PIPE 16
-LM 60.254
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 16A
-LM 60.327
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

SCALE

0 100 200 300 400 500

PLAN SHEET
SHEET 10 OF 22

STATE OF MISSOURI
ERIC
GRAPE
NUMBER
E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	13

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

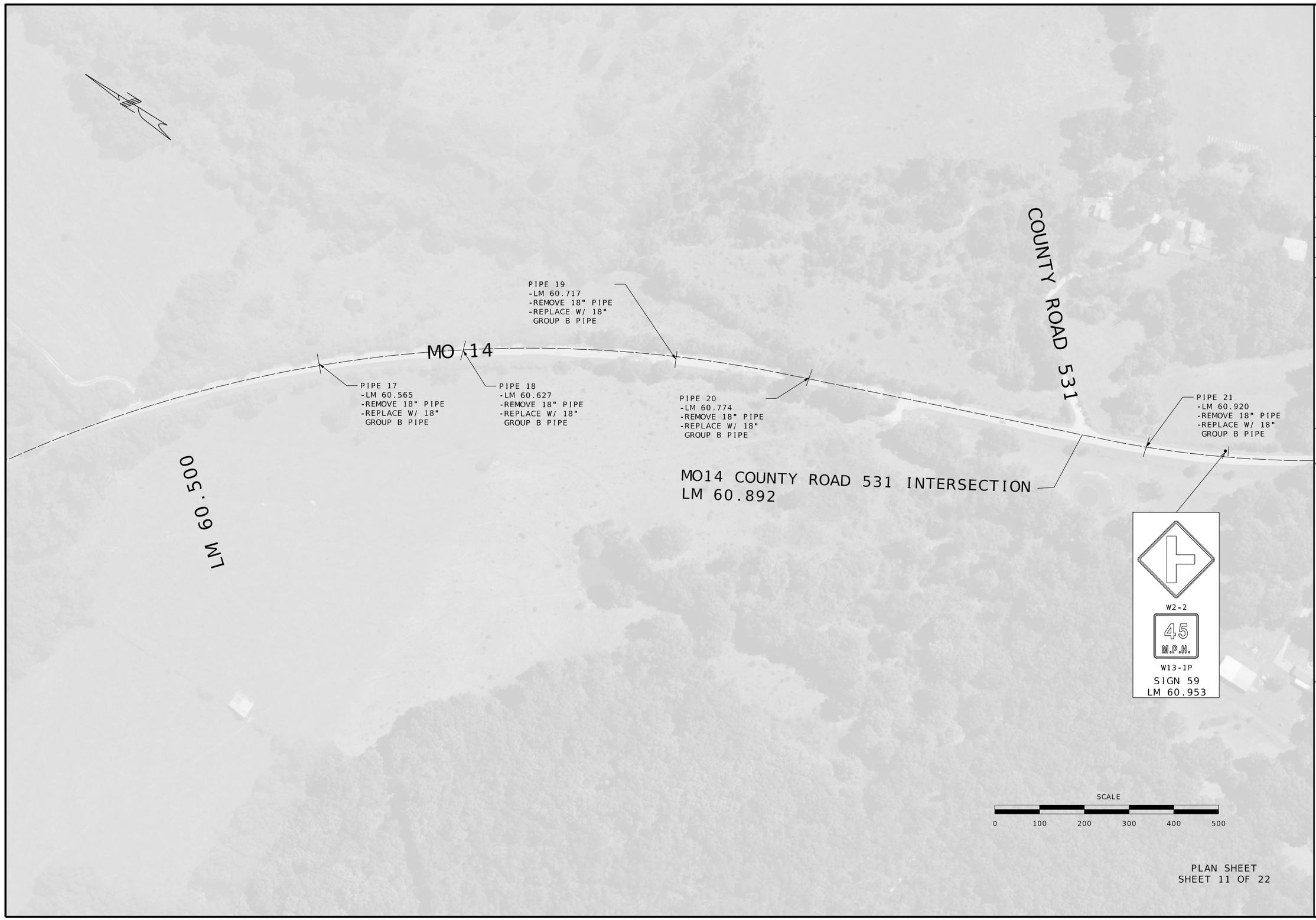
BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing Inc.



PLAN SHEET
SHEET 11 OF 22

ERIC KRAFT
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER
STATE OF MISSOURI

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	14

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

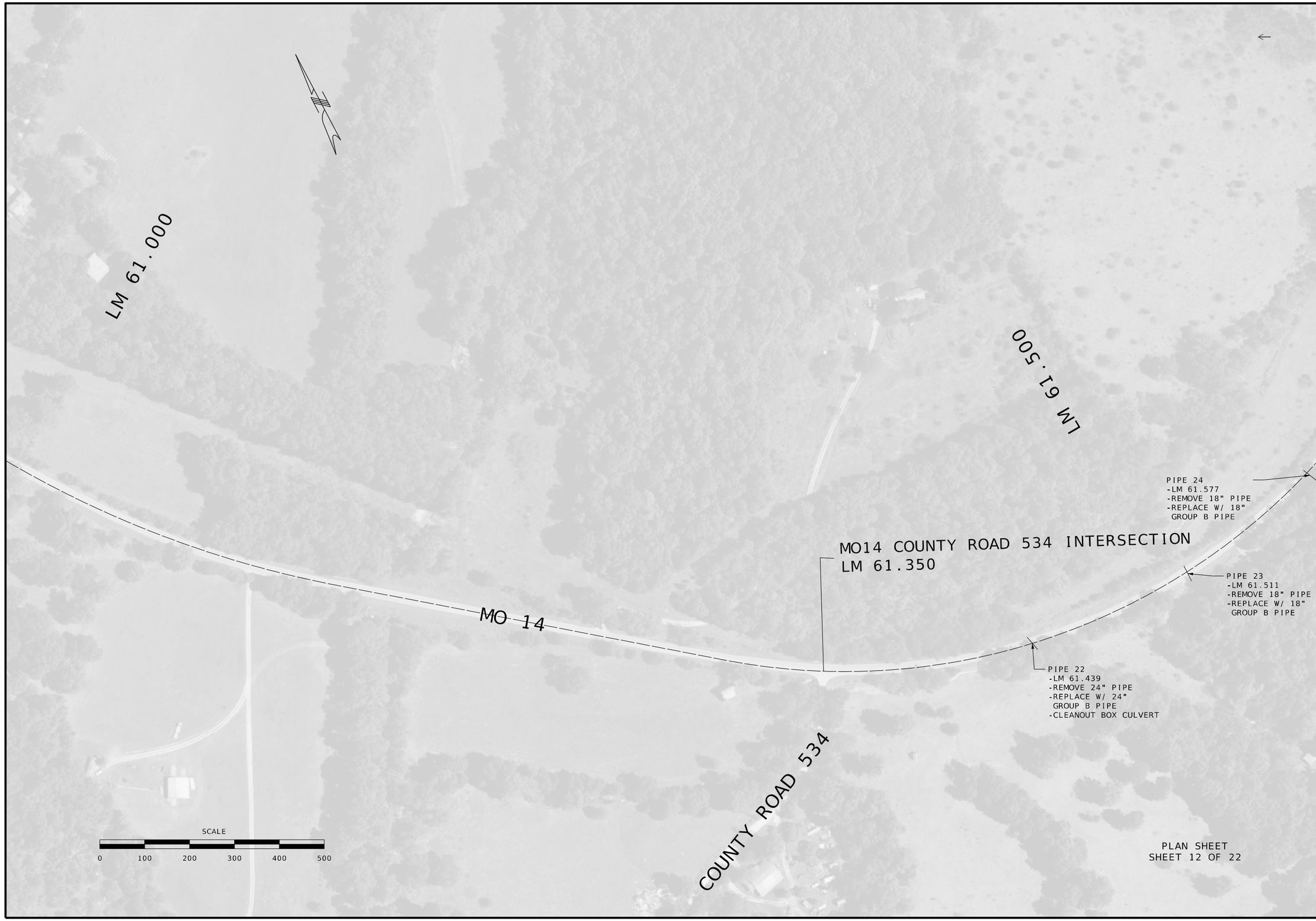
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.



STATE OF MISSOURI
ERIC KRAFT MARSH
E-39103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	15

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

LM 62.000

PIPE 26
-LM 61.751
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 27
-LM 61.789
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 25
-LM 61.656
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 28
-LM 61.865
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

MO 14

OM3-R
SIGN 58
LM 61.978

W1-2R

50
M.P.H.

W13-1P
SIGN 50
LM 62.073

PIPE 31
-LM 62.136
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 29
-LM 61.921
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 30
-LM 62.094
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

SCALE
0 100 200 300 400 500

PLAN SHEET
SHEET 13 OF 22

STATE OF MISSOURI
ERIC WRAPE
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	16

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

PIPE 35
-LM 62.449
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

MO 14

LM 62.500

PIPE 33
-LM 62.244
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 34
-LM 62.271
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 32
-LM 62.183
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 36
-LM 62.716
-REMOVE 15" PIPE
-REPLACE W/ 15"
GROUP B PIPE

PIPE 37
-LM 62.777
-REMOVE 15" PIPE
-REPLACE W/ 15"
GROUP B PIPE

COUNTY ROAD 14-525

SCALE
0 100 200 300 400 500

PLAN SHEET
SHEET 14 OF 22

STATE OF MISSOURI
ERIC BRADY MORGAN
E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	17

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

LM 63.000

MO14 COUNTY ROAD 14-525 INTERSECTION
LM 62.785

MO14 COUNTY ROAD 14-525 INTERSECTION
LM 63.061

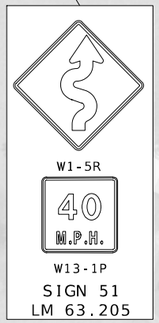
MO 14

COUNTY ROAD 14-525

COUNTY ROAD 14-525

PIPE 38
-LM 62.968
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 39
-LM 63.111
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE



SIGN 51
LM 63.205

SCALE

0 100 200 300 400 500

PLAN SHEET
SHEET 15 OF 22

STATE OF MISSOURI
ERIC J. GRAPE
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	18

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

LM 63.500

MO 14

PIPE 42
-LM 63.762
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 41
-LM 63.672
-REMOVE 15" PIPE
-REPLACE W/ 15"
GROUP B PIPE

PIPE 43
-LM 63.913
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

PIPE 40
-LM 63.510
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

SCALE

0 100 200 300 400 500

PLAN SHEET
SHEET 16 OF 22

STATE OF MISSOURI
ERIC KRAFT
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	19

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

LM 64.000

RTE K

LM 64.500

STRUCTURE: B04351
END POST MODIFICATIONS BOTH ENDS
GUARDRAIL UPGRADES
LM 64.351

MO14 COUNTY ROAD 519 INTERSECTION
LM 64.144

MO14 RTE K INTERSECTION
LM 64.212

MO 14

PIPE 44
-LM 64.049
-REMOVE 18" PIPE
-REPLACE W/ 18"
GROUP B PIPE

COUNTY ROAD 519

COWSKIN CREEK

SCALE
0 100 200 300 400 500

PLAN SHEET
SHEET 17 OF 22

STATE OF MISSOURI
ERIC BRADLEY NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	20

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

SCALE

0 100 200 300 400 500

PLAN SHEET
SHEET 18 OF 22

STATE OF MISSOURI
ERIC BRADLEY MORRIS
E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	21

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

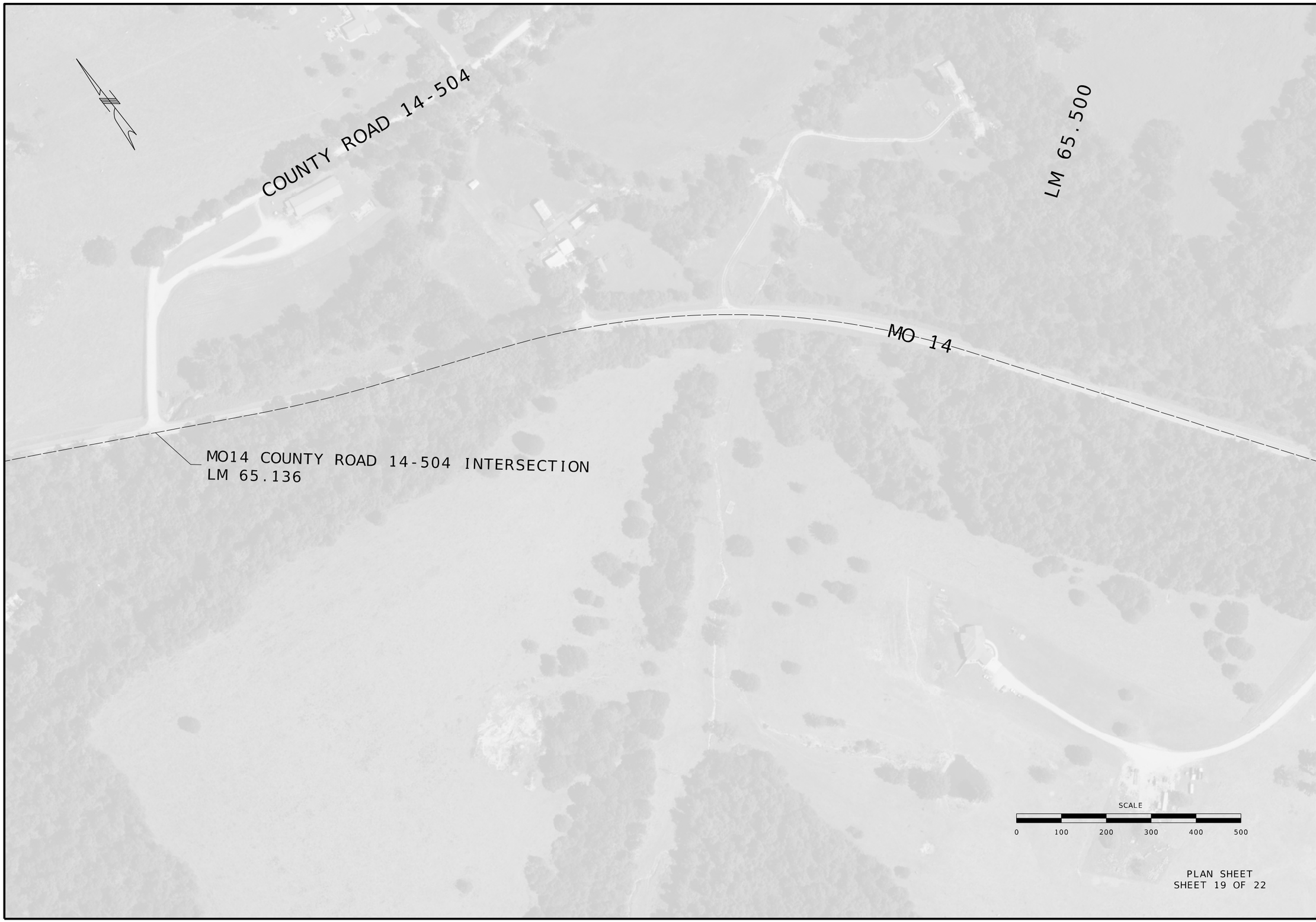
BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.



PLAN SHEET
SHEET 19 OF 22

ERIC BRYANT MOMSER E-30103 STATE OF MISSOURI REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	22

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

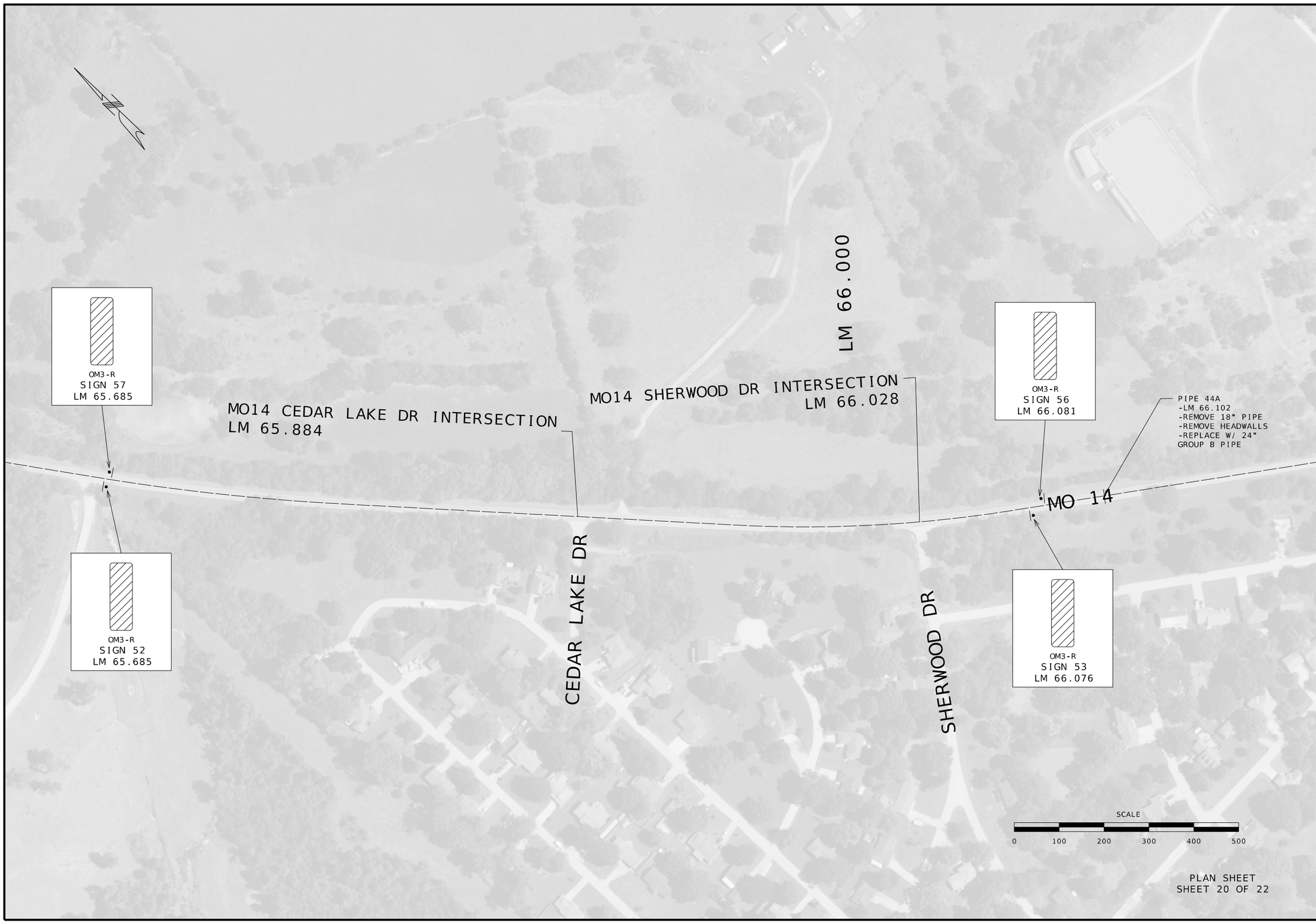
BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.



STATE OF MISSOURI
ERIC SCHAFE
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	23

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

SADDLE CLUB RD

LM 66.500

MO 5

MO14 SADDLE CLUB RD INTERSECTION
LM 66.349

OVERLAY TRANSITION TO MILL/FILL
SEE SPECIAL SHEET 9 OF 9
LM 66.577 - LM 68.589

MO 14



S3-1

SIGN 54
LM 66.278



R2-1



I4-2a

SIGN 55
LM 66.364

SCALE

0 100 200 300 400 500

PLAN SHEET
SHEET 21 OF 22



DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	24

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.



ERIC WAYNE WORKMAN
NUMBER E-30103
STATE OF MISSOURI
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	25

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

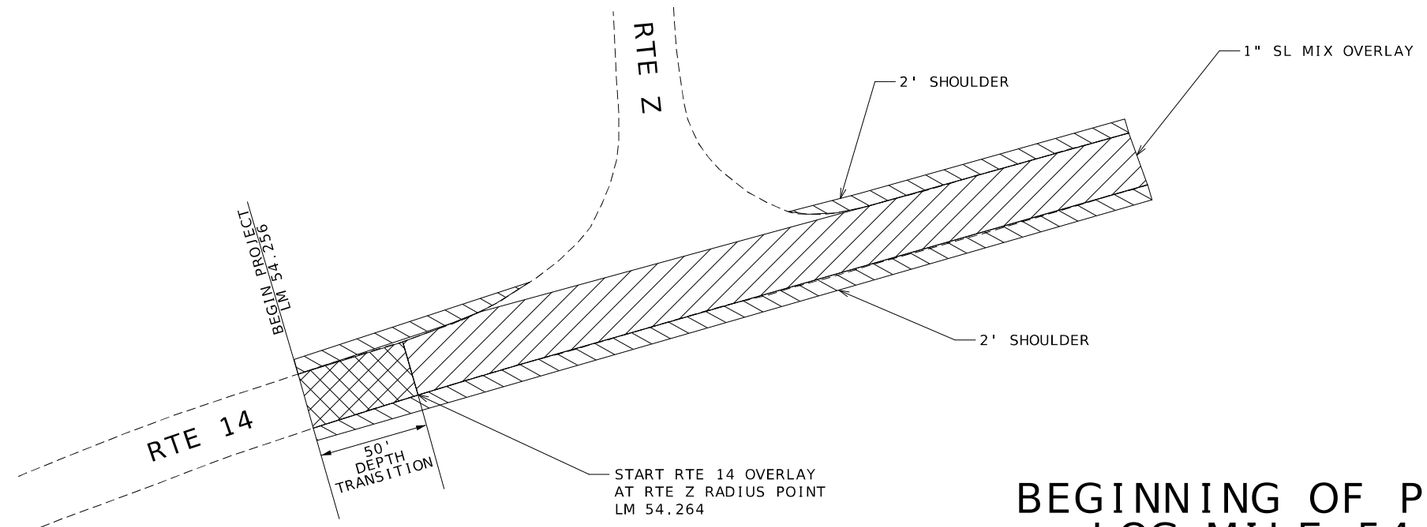
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

PLAN VIEW

MODIFIED COLDMILLING

OVERLAY

2' SHOULDER WITH OVERLAY



NOTES:

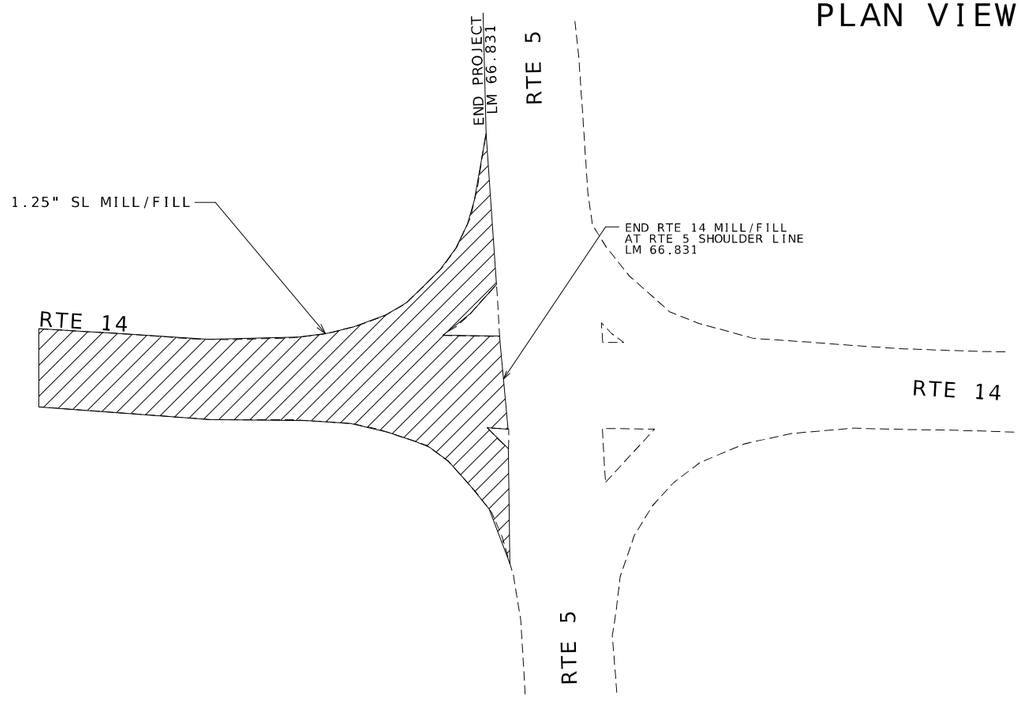
ALL GRADING NECESSARY FOR THE PROPER CONSTRUCTION OF HOT MIX AND AGGREGATE APRONS SHALL BE CONSIDERED INCIDENTAL WORK AND AT NO DIRECT PAY.

THE WIDTH OF ALL HOT MIX AND AGGREGATE APRONS MAY BE ADJUSTED BY THE ENGINEER AS NECESSARY TO OBTAIN SUITABLE TRANSITIONS.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

BEGINNING OF PROJECT
LOG MILE 54.256

PLAN VIEW



MILL/FILL

END OF PROJECT
LOG MILE 66.831

SPECIAL SHEET
SHEET 1 OF 9

STATE OF MISSOURI
ERIC KRAFFT WORKMAN E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED 07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	26

COUNTY: DOUGLAS

JOB NO.: J9P3808

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

DESCRIPTION	DATE

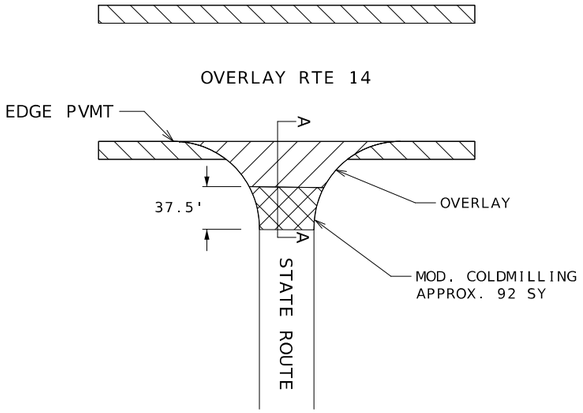
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

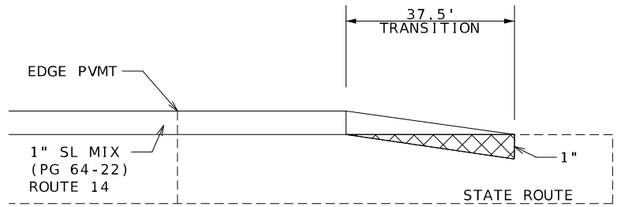
Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

STATE ROUTE TRANSITIONS



PLAN VIEW



TYPICAL
SECTION A-A

STATE ROUTES

ROUTE Z - LM 54.280
ROUTE BB - LM 54.535
ROUTE AK - LM 56.480
ROUTE O - LM 56.549
TOURE K - LM 64.212

MODIFIED
COLDMILLING

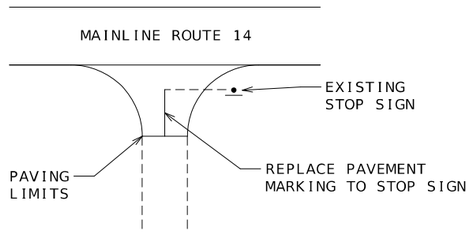
OVERLAY

2' SHOULDER
WITH OVERLAY

NOTES:

THE WIDTH OF ALL HOT MIX AND AGGREGATE APRONS MAY BE ADJUSTED BY THE ENGINEER AS NECESSARY TO OBTAIN SUITABLE TRANSITIONS.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.



PAVEMENT MARKING
TYPICAL APPLICATION
STATE ROUTES

SPECIAL SHEET
SHEET 2 OF 9

STATE OF MISSOURI
ERIC
KRAFE
NUMBER
E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	27

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

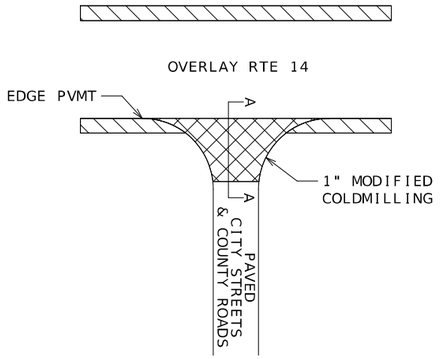
BRIDGE NO.

DESCRIPTION	DATE

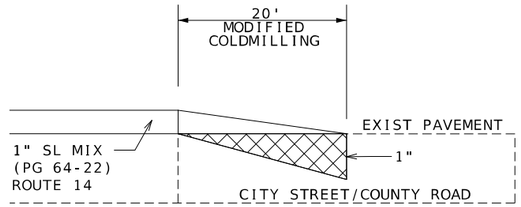
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing Inc.



PLAN VIEW



TYPICAL
SECTION A-A

PAVED COUNTY ROADS/CITY STREETS



MODIFIED
COLDMILLING



MILL/FILL



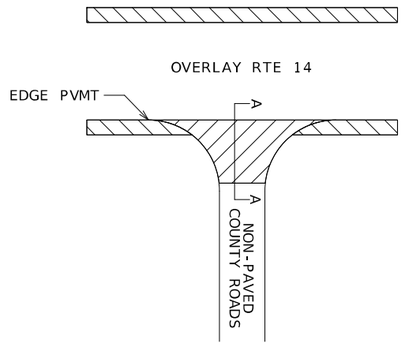
2' SHOULDER
WITH OVERLAY

NOTES:

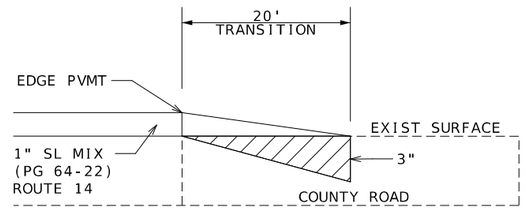
ALL GRADING NECESSARY FOR THE PROPER CONSTRUCTION OF HOT MIX AND AGGREGATE APRONS SHALL BE CONSIDERED INCIDENTAL WORK AND AT NO DIRECT PAY.

THE WIDTH OF ALL HOT MIX AND AGGREAGTE APRONS MAY BE ADJUSTED BY THE ENGINEER AS NECESSARY TO OBTAIN SUITABLE TRANSITIONS.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.



PLAN VIEW



TYPICAL
SECTION A-A

NON-PAVED COUNTY ROADS



DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	28

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

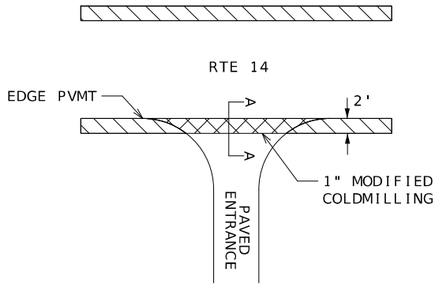
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

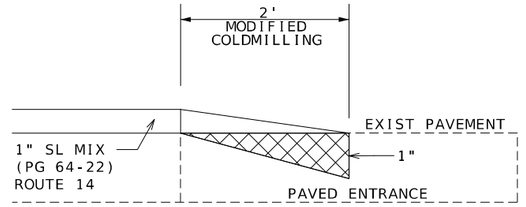
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

PRIVATE ENTRANCE TYPES AND TRANSITIONS



PLAN VIEW FOR PAVED
PRIVATE AND COMMERCIAL ENTRANCES



TYPICAL
SECTION A-A

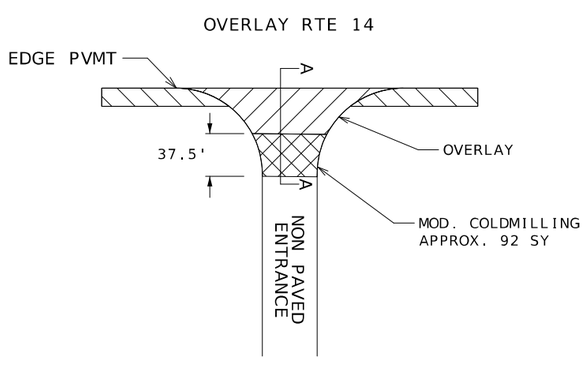
PAVED PRIVATE ENTRANCES

MODIFIED
COLDMILLING

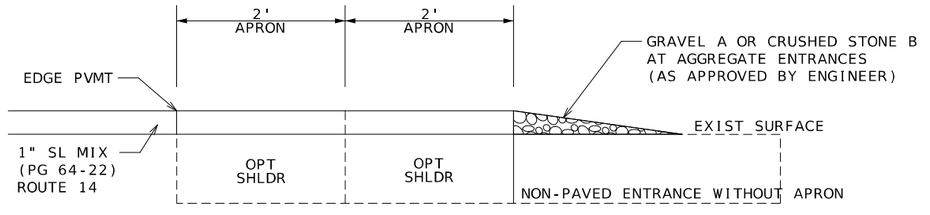
ENTRANCE APRON

2' SHOULDER
WITH OVERLAY

GRAVEL A OR
CRUSHED STONE B



PLAN VIEW



TYPICAL
SECTION A-A

* WIDEN OPTIONAL SHOULDER AN ADDITIONAL 2'
TO CREATE ASPHALT APRON AT PRIVATE ENTRANCES.
TIE INTO EXISTING ENTRANCE GRADE.
AS DIRECTED BY ENGINEER.

NOTES:

THE WIDTH OF ALL HOT MIX AND AGGREGATE
APRONS MAY BE ADJUSTED BY THE ENGINEER
AS NECESSARY TO OBTAIN SUITABLE TRANSITIONS.

REMOVE EXISTING 2' PAVED APRON AND REPLACE WITH
OPTIONAL SHOULDER AND 2' GRAVEL A OR CRUSHED STONE B

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

NON-PAVED PRIVATE ENTRANCES WITH AND WITHOUT EXIST. 2' PAVED APRON

** OMIT ENTRANCES THROUGH MILL/FILL SECTIONS

SPECIAL SHEET
SHEET 4 OF 9

STATE OF MISSOURI
ERIC
WRAPE
NUMBER
E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	29

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

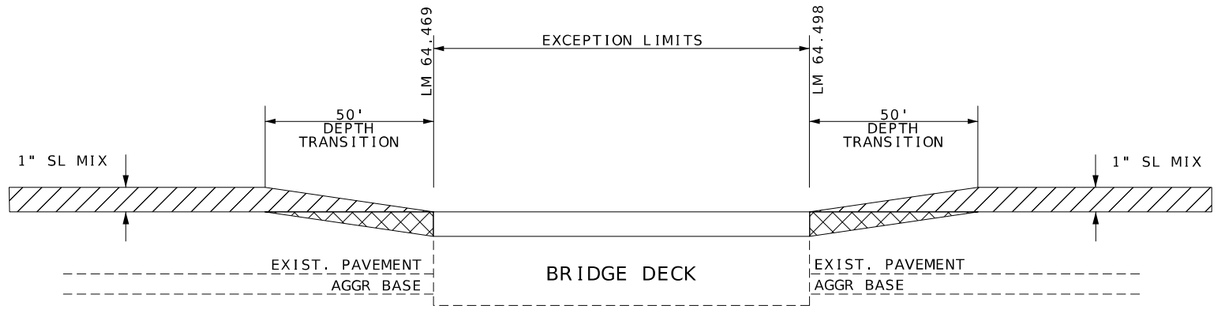
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

MODIFIED
COLDMILLING

OVERLAY

NOTES:

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.



TYPICAL SECTION AT BRIDGE
B04351 - LM 64.480

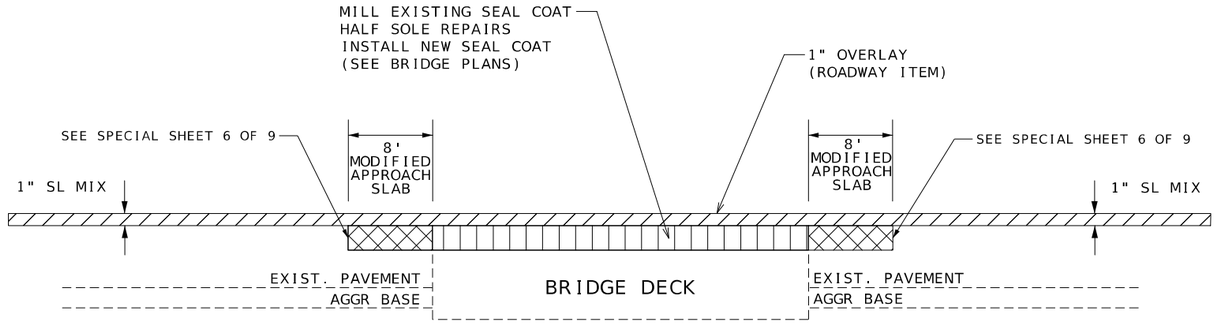
MODIFIED
APPROACH

OVERLAY

MILL
CHIP SEAL
OVERLAY
HALF SOLE REPAIRS

NOTES:

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.



TYPICAL SECTION AT BRIDGE
A36731 - LM 59.382

BRIDGE APPROACH TRANSITIONS

SPECIAL SHEET
SHEET 5 OF 9

STATE OF MISSOURI
ERIC GRAFE NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	30

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

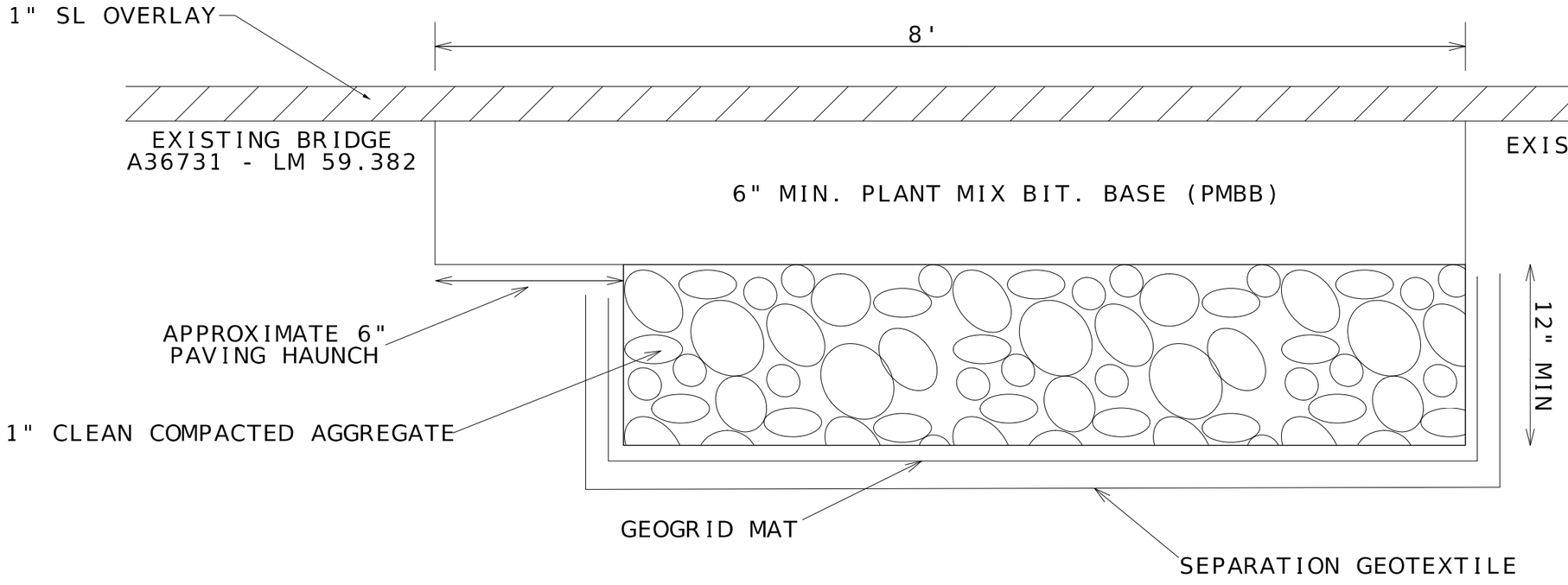
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS



MODIFIED ASPHALT BRIDGE APPROACH DETAIL

SPECIAL SHEET
SHEET 6 OF 9

STATE OF MISSOURI
ERIC KRAFT
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO

DISTRICT	SHEET NO.
SE	31

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

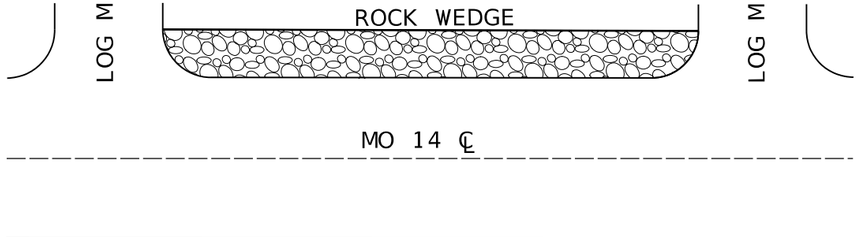
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

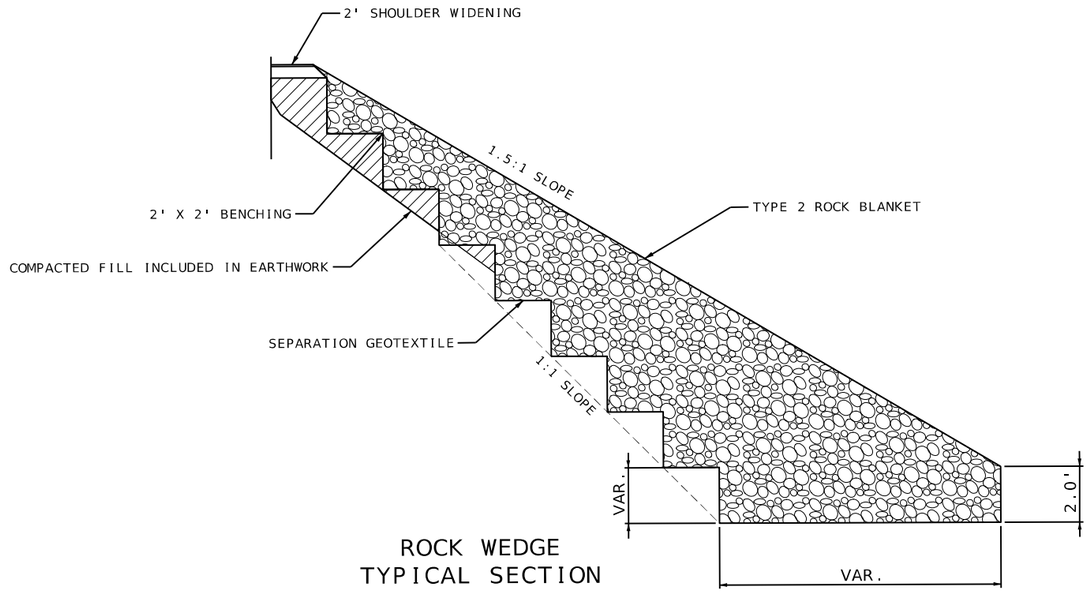
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFVengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.



ROCK WEDGE LIMITS



ROCK WEDGE
TYPICAL SECTION

ROCK WEDGE DETAIL

SPECIAL SHEET
SHEET 7 OF 9

ERIC KRAFT
NUMBER E-30103
STATE OF MISSOURI
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	32

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

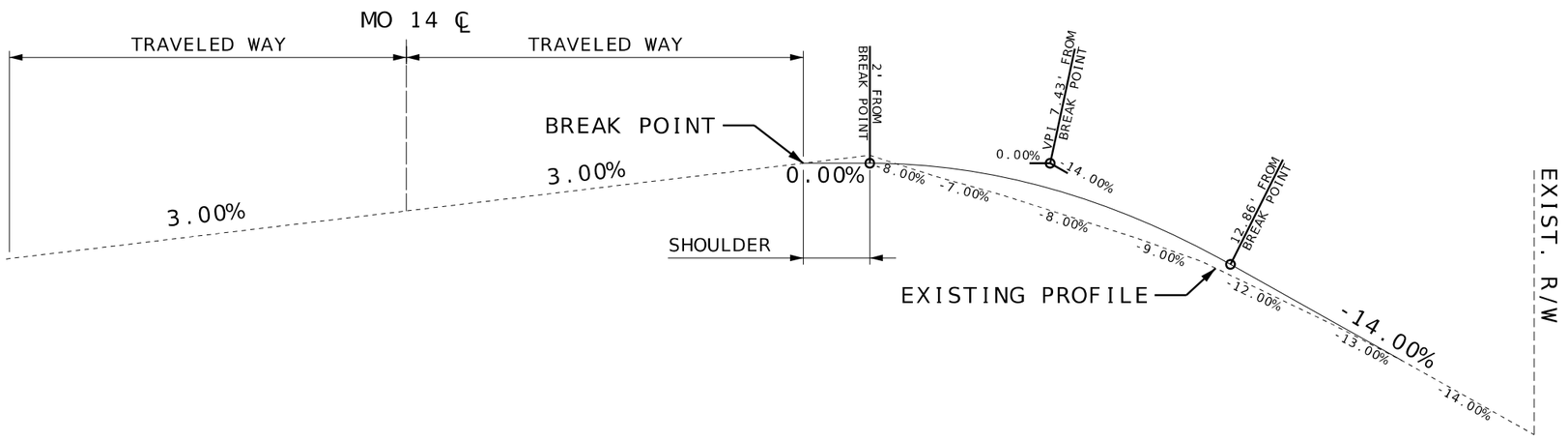
DESCRIPTION	DATE

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

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

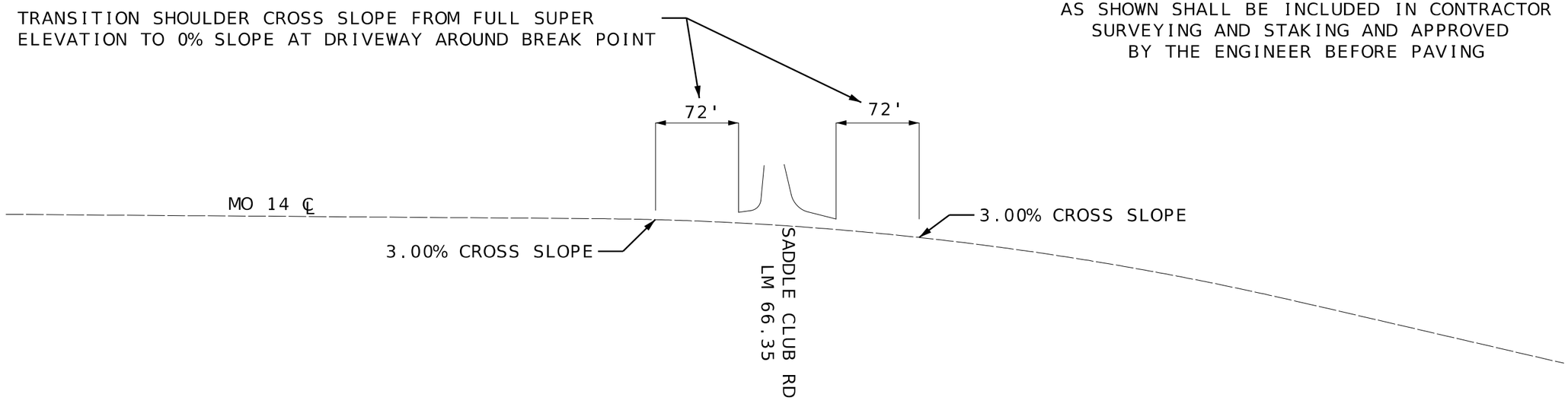
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

SADDLE CLUB RD ENTRANCE PROFILE



ALL SURVEYING AND STAKING REQUIRED TO CONSTRUCT THE MODIFIED ENTRANCE PROFILE AS SHOWN SHALL BE INCLUDED IN CONTRACTOR SURVEYING AND STAKING AND APPROVED BY THE ENGINEER BEFORE PAVING

TRANSITION SHOULDER CROSS SLOPE FROM FULL SUPER ELEVATION TO 0% SLOPE AT DRIVEWAY AROUND BREAK POINT



SADDLE CLUB ENTRANCE DETAIL

SPECIAL SHEET
SHEET 8 OF 9

STATE OF MISSOURI
ERIC BRAFFE NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

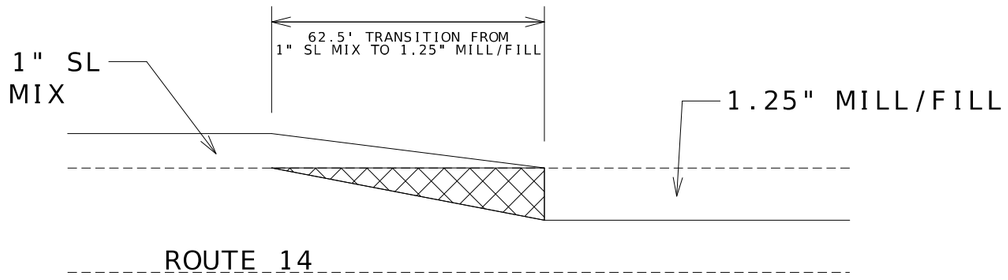
DATE PREPARED 07/29/2026
ROUTE 14 | STATE MO
DISTRICT SE | SHEET NO. 33
COUNTY DOUGLAS
JOB NO. J9P3808
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DATE	DESCRIPTION

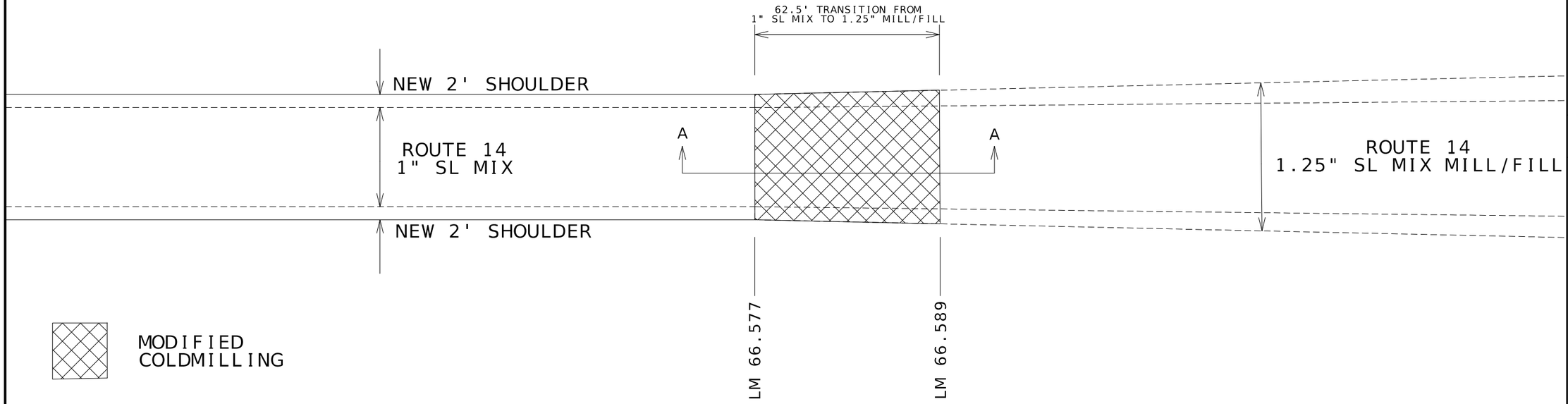
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.



A-A SECTION



MODIFIED
COLDMILLING

NOTES

THE WIDTH OF ALL
HOT MIX AND AGGREGATE
APRONS MAY BE ADJUSTED
BY THE ENGINEER AS NECESSARY
TO OBTAIN SUITABLE TRANSITIONS.

DEPTH TRANSITION DETAIL

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

SPECIAL SHEET
SHEET 9 OF 9

STATE OF MISSOURI
ERIC
KRAFT
NUMBER
E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	34

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

NOT TO SCALE



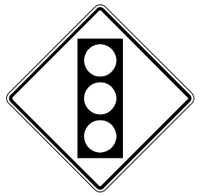
W020-1

(2)



W020-4

(7)



W03-3

(12)

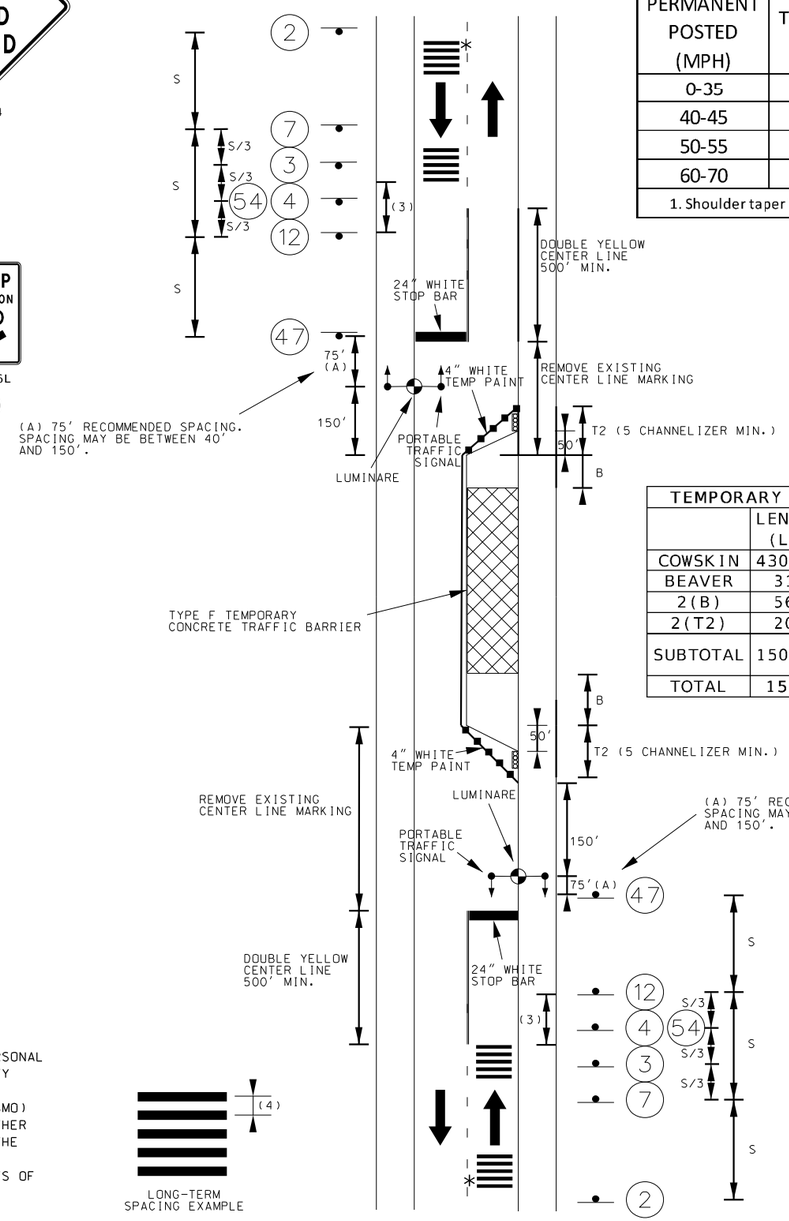


R10-6L

(47)

SPEED (MPH)	SIGN SPACING (FT.)	TAPER LENGTH (FT.)		OPTIONAL	CHANNELIZER SPACING (FT.)	
PERMANENT POSTED (MPH)	TWO-LANE TWO-WAY (S)	SHOULDER (1) (T1)	LANE (2) (T2)	BUFFER LENGTH (FT.) (B)	TAPERS	BUFFER/ WORK AREAS
0-35	200	35	100	280	25	40
40-45	350	35	100	400	25	80
50-55	500	35	100	560	25	80
60-70	1000	35	100	840	25	120

1. Shoulder taper length based on 10 ft (standard shoulder width) offset. 2. Lane taper length based on 12 ft (standard lane width) offset.



TYPE OF ROADWAY	SIGN HEIGHT (MINIMUM)	MAXIMUM WORK ZONE LENGTH (L)
URBAN	1' PORTABLE 7' POST	1 MI.
RURAL TWO-LANE TWO-WAY ROADWAY	1' PORTABLE 5' POST	3 MI.

TEMP. LONG-TERM RUMBLE STRIPS		
SPEED MPH	DISTANCE (3)	SPACING (4)
0-45 (OPTIONAL)	120 FT	10-12 FT
50-55	160 FT	10-12 FT
60-70	200 FT	10-12 FT
* SECOND SET OF TEMPORARY RUMBLES OPTIONAL		

TEMPORARY TRAFFIC BARRIERS		
	LENGTH (LF)	REMARKS
COWSKIN	430.34	
BEAVER	315	
2(B)	560	35 MPH ZONE
2(T2)	200	
SUBTOTAL	1505.3	BARRIERS IN 12.5' SECTIONS
TOTAL	1513	

NOTES:

REFER TO STANDARD PLANS SECTION 616.20E FOR TEMPORARY TRAFFIC CONTROL FOR TWO-LANE ROADWAYS

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- WORK ZONE CRASH CUSHION
- CHANNELIZER
- 24" WHITE STOP BAR
- PORTABLE TRAFFIC SIGNAL & LUMINARE
- WORK AREA
- TEMPORARY LONG-TERM RUMBLE STRIPS



W3-5

(3)



R2-1

(4)



GO20-5aP

(54)

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

LANE CLOSURE ON TWO-LANE HIGHWAYS USING TRAFFIC CONTROL SIGNALS

TRAFFIC CONTROL
SHEET 1 OF 4

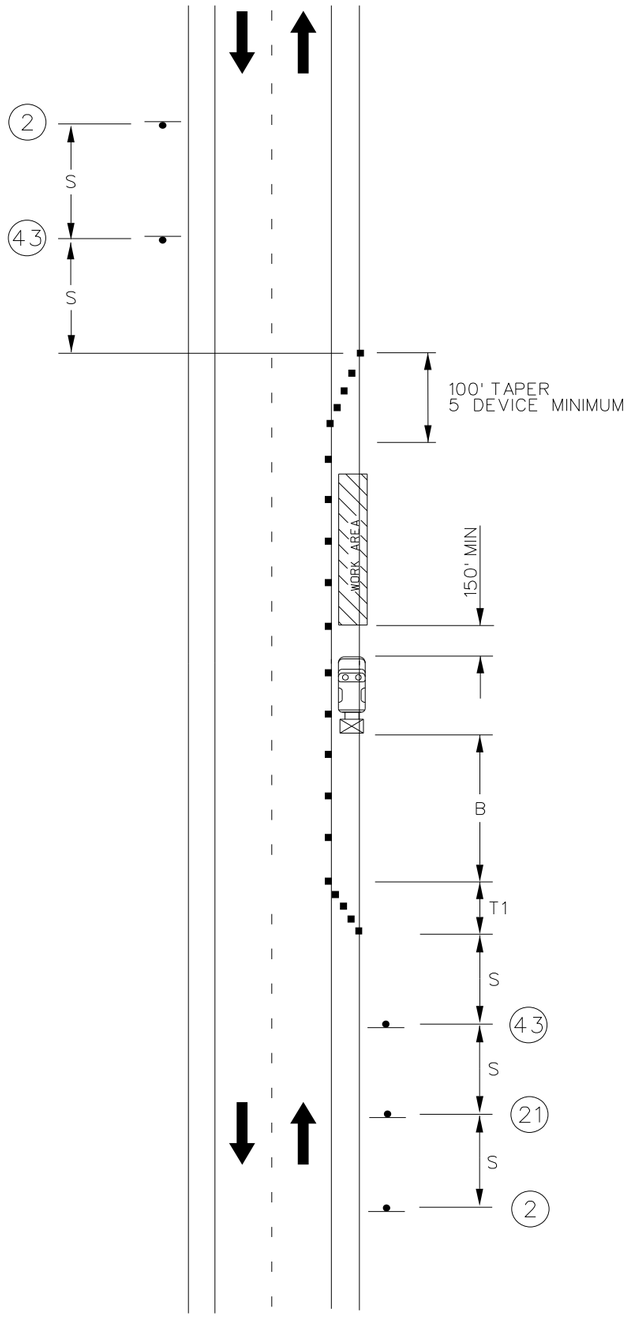
STATE OF MISSOURI
ERIC KRAFT NUMBER E-30103 REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED 07/29/2026
ROUTE 14 | STATE MO
DISTRICT SE | SHEET NO. 35
COUNTY DOUGLAS
JOB NO. J9P3808
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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing Inc.



SHOULDER WORK
WITH MINOR ENCROACHMENT
ON DIVIDED OR UNDIVIDED HIGHWAY

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

LONGITUDINAL BUFFER SPACE (B)	
PERMANENT POSTED (MPH)	BUFFER SPACE
0-35	250
40-45	360
50-55	495
60-70	730

TAPER LENGTHS AND SPACING OF CHANNELIZING DEVICES			
PERMANENT POSTED SPEED LIMIT (MPH)	TAPER LENGTH SHOULDER (T1)	MAX CHANNELIZER SPACING (FT)	
		TAPERS	BUFFER / WORK AREAS
0-35	70	35	40
40-45	150	40	80
50-55	185	50	80
60-70	235	60	120

NOTES:

DIMENSIONS IN FEET UNLESS OTHERWISE NOTED.

(1) SPACING BETWEEN SIGNS AND SPACING BETWEEN LAST SIGN AND FLAGGER, BEGINNNING OF TAPER, OR SIGNED CONDITION

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

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- FLAGGER
- CHANNELIZER
- WORK AREA
- PROTECTIVE VEHICLE WITH TMA AND FLASHING ARROW PANEL



WO20-1
(2)

BRIDGE
OR
RAMP



WO21-5
(21)



WO5-1
(43)

BRIDGE
OR
RAMP

GENERAL NOTES:

1. SEE STANDARD PLAN 616.10 FOR DETAILS AND ITEMS NOT SHOWN

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

3. NO DIRECT PAYMENT WILL BE MADE FOR RELOCATING, COVERING, UNCOVERING OR REMOVING SIGNS.

4. REFER TO STANDARD PLAN 616.20E FOR ADDITIONAL TEMPORARY TRAFFIC CONTROL.

5. CONES ALLOWABLE FOR DAYTIME OPERATIONS ONLY.

6. LOCATE FLASHING ARROW PANELS AT BEGINNING OF TAPER WHEN FEASIBLE. ARROW PANELS ARE ALWAYS LOCATED BEHIND CHANNELIZERS OR CONES.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS

TRAFFIC CONTROL
SHEET 2 OF 4

STATE OF MISSOURI
ERIC KRAFFT
NUMBER E-30109
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	36

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

NOT TO SCALE

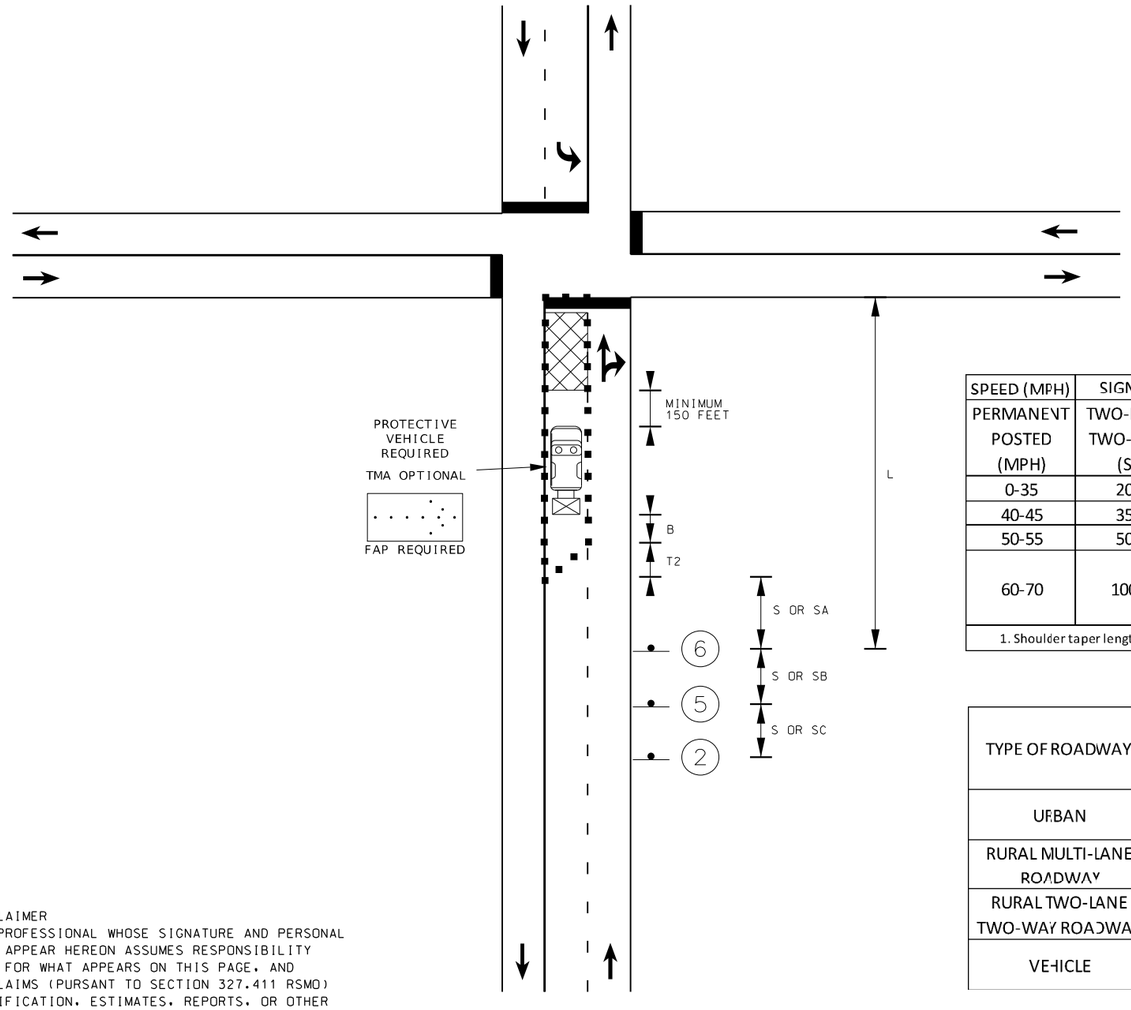


TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER
- 24" WHITE STOP BAR
- PROTECTIVE VEHICLE
- WORK AREA
- TRUCK/TRAILER MOUNTED ATTENUATOR (TMA)

NOTES:

REFER TO STANDARD PLANS SECTION 616.20E FOR TEMPORARY TRAFFIC CONTROL FOR TWO-LANE ROADWAYS



SPEED (MPH)	SIGN SPACING (FT.)		TAPER LENGTH (FT.)		RECOMMENDED	CHANNELIZER SPACING (FT.)	
PERMANENT POSTED (MPH)	TWO-LANE TWO-WAY (S)	MULTI-LANE (S)	SHOULDER (1) (T1)	LANE (2) (T2)	BUFFER LENGTH (FT.) (B)	TAPERS	BUFFER/ WORK AREAS
0-35	200	200	-	245	250	35	40
40-45	350	500	-	540	360	40	80
50-55	500	1000	-	660	495	50	80
60-70	1000	SA-1000 SB-1500 SC-2640	-	840	730	60	120

1. Shoulder taper length based on 10 ft (standard shoulder width) offset. 2. Lane taper length based on 12 ft (standard lane width) offset.

TYPE OF ROADWAY	SIGN HEIGHT (MINIMUM)	MAXIMUM WORK ZONE LENGTH (L)
URBAN	1' PORTABLE 7' POST	1 MI.
RURAL MULTI-LANE ROADWAY	1' PORTABLE 7' POST	2 MI.
RURAL TWO-LANE TWO-WAY ROADWAY	1' PORTABLE 5' POST	3 MI.
VEHICLE	48 INCHES RECOMMENDED	-

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATIONARY LEFT LANE CLOSURE AT AN INTERSECTION

STATE OF MISSOURI
ERIC GRAPE
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED 07/29/2026
ROUTE 14 | STATE MO
DISTRICT SE | SHEET NO. 37
COUNTY DOUGLAS
JOB NO. J9P3808
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)

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.



WO20-1

(2)



WO20-5

(5)



WO20-6a

(6)

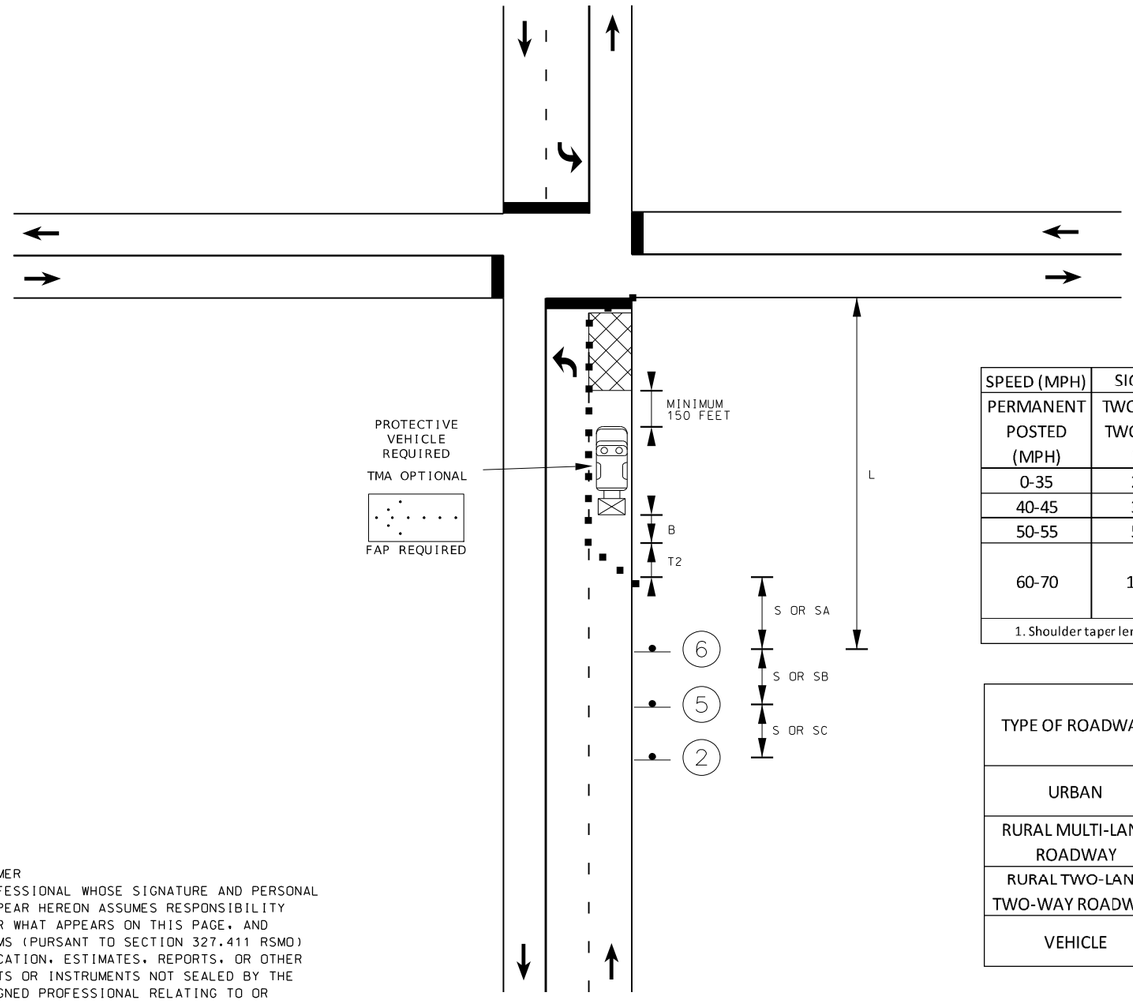
NOTES:

REFER TO STANDARD PLANS SECTION 616.20E FOR TEMPORARY TRAFFIC CONTROL FOR TWO-LANE ROADWAYS

NOT TO SCALE

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER
- 24" WHITE STOP BAR
- PROTECTIVE VEHICLE
- WORK AREA
- TRUCK/TRAILER MOUNTED ATTENUATOR (TMA)



SPEED (MPH)	SIGN SPACING (FT.)		TAPER LENGTH (FT.)		RECOMMENDED	CHANNELIZER SPACING (FT.)	
PERMANENT POSTED (MPH)	TWO-LANE TWO-WAY (S)	MULTI-LANE (S)	SHOULDER (1) (T1)	LANE (2) (T2)	BUFFER LENGTH (FT.) (B)	TAPERS	BUFFER/ WORK AREAS
0-35	200	200	-	245	250	35	40
40-45	350	500	-	540	360	40	80
50-55	500	1000	-	660	495	50	80
60-70	1000	SA-1000 SB-1500 SC-2640	-	840	730	60	120

1. Shoulder taper length based on 10 ft (standard shoulder width) offset. 2. Lane taper length based on 12 ft (standard lane width) offset.

TYPE OF ROADWAY	SIGN HEIGHT (MINIMUM)	MAXIMUM WORK ZONE LENGTH (L)
URBAN	1' PORTABLE 7' POST	1 MI.
RURAL MULTI-LANE ROADWAY	1' PORTABLE 7' POST	2 MI.
RURAL TWO-LANE TWO-WAY ROADWAY	1' PORTABLE 5' POST	3 MI.
VEHICLE	48 INCHES RECOMMENDED	-

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
ERIC KRAFT
NUMBER E-30108
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	38

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

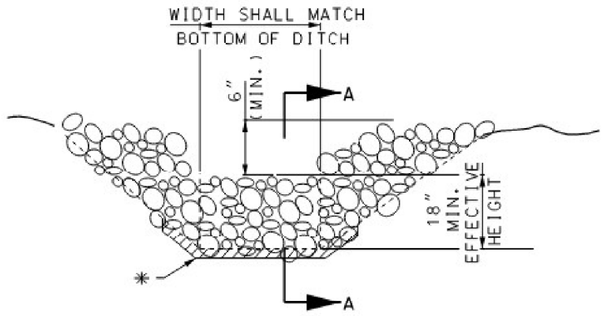
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

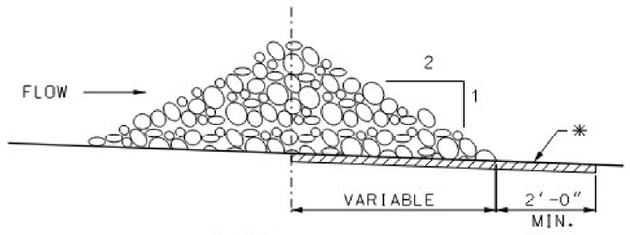
Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

STATIONARY RIGHT LANE CLOSURE AT AN INTERSECTION

ROCK DITCH CHECK



END VIEW



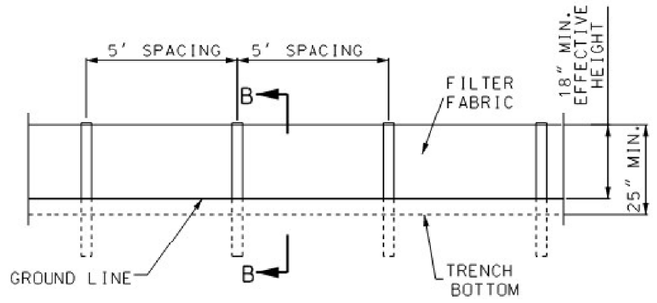
SECTION A-A

* GEOTEXTILE LINING MAY BE INSTALLED AS REQUIRED BY THE ENGINEER.

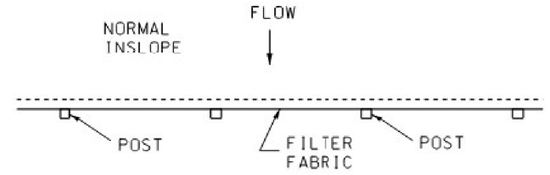
NOTE:

ROCK DITCH CHECK IN THE CLEAR ZONE SHALL BE REMOVED OR LEVELED (IF ALLOWABLE) AFTER THE VEGETATION HAS SUFFICIENTLY MATURED TO PROTECT THE DITCH OR SWALE.

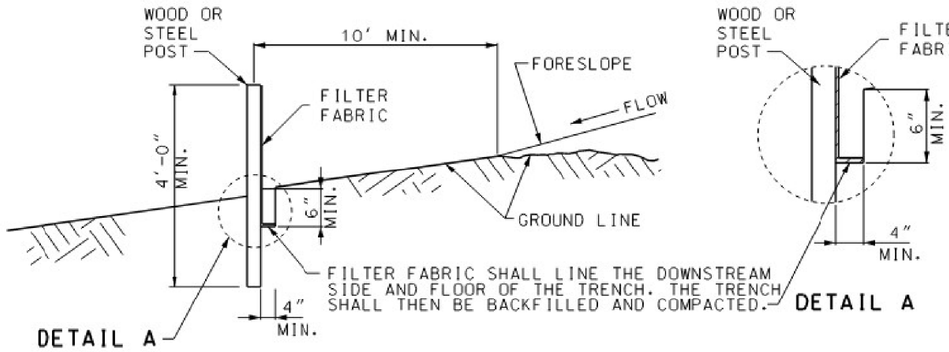
SILT FENCE



ELEVATION DETAIL
FABRIC SILT FENCE



PLAN VIEW



TYPICAL B-B

EROSION CONTROL PLACEMENT EXAMPLE

(R) ROCK DITCH CHECK

SILT FENCE

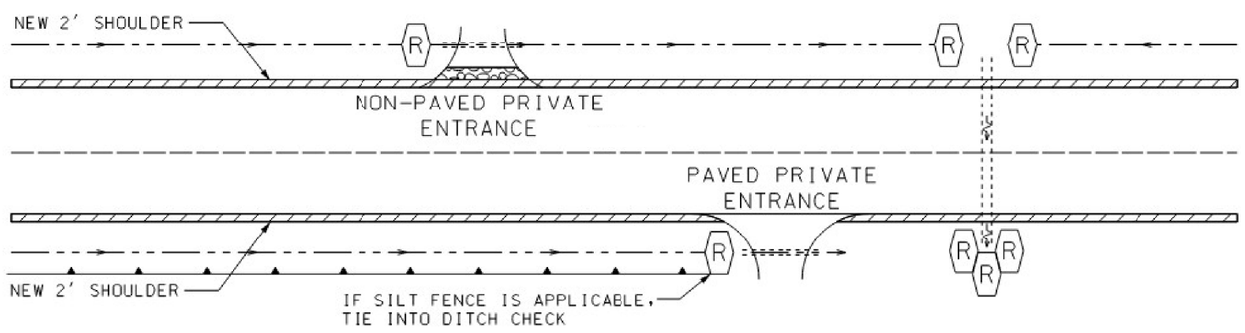
NOTE:

INSTEAD OF SILT FENCE ACROSS DITCHES AND DRAINS, USE DITCH CHECKS.

TIE SILT FENCE INTO SEDIMENT TRAP WHEN DITCH IS NOT DEFINED.

FOR DITCH CHECK SPACING ALONG SLOPED RUNS REFER TO STANDARD PLAN 806.10.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.



PLAN VIEW

STATE OF MISSOURI
ERIC KRAPF
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

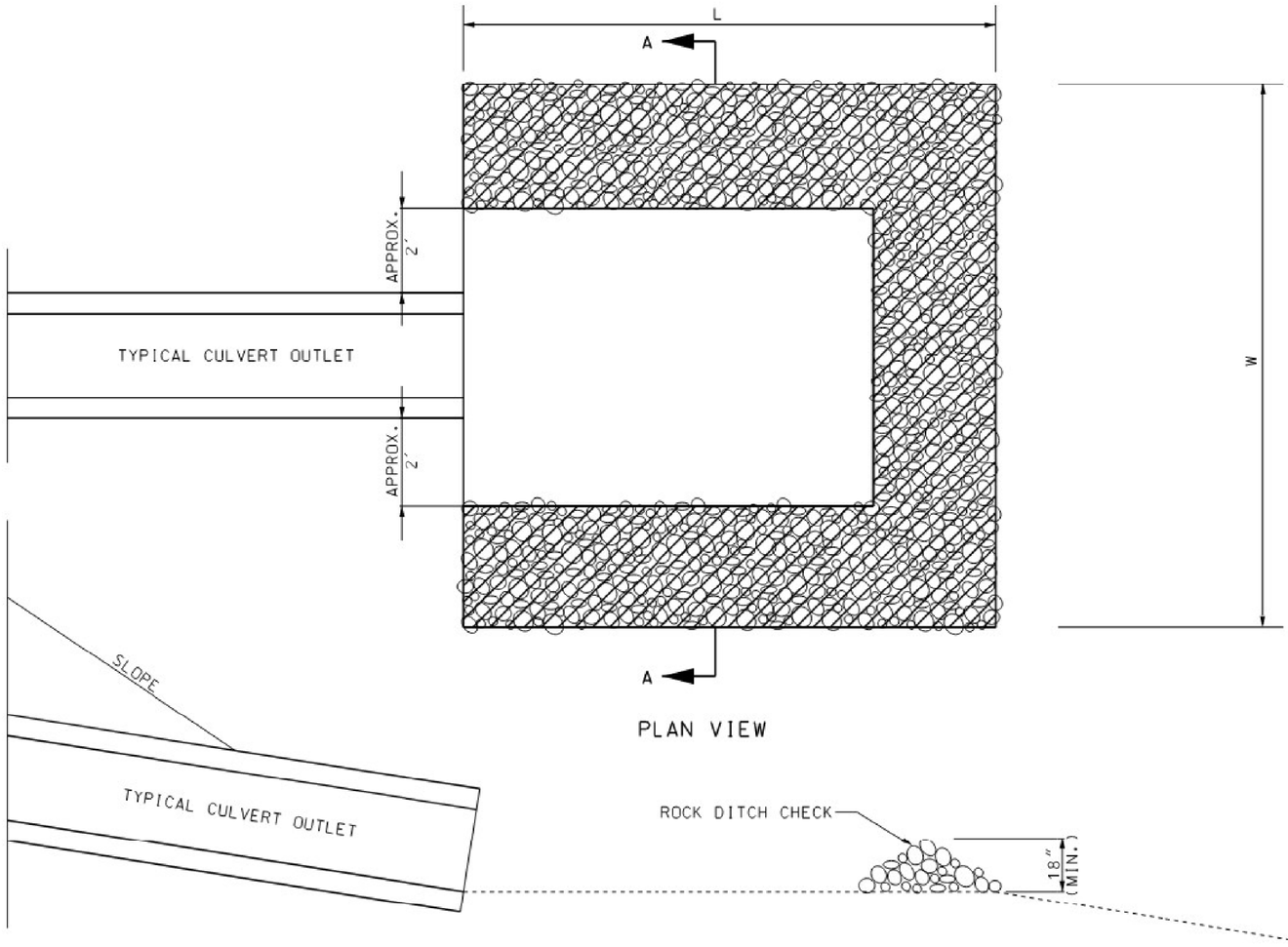
DATE PREPARED 07/29/2026
ROUTE 14 | STATE MO
DISTRICT SE | SHEET NO. 39
COUNTY DOUGLAS
JOB NO. J9P3808
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © Bacon Farmer Workman Engineering & Testing, Inc.

ROCK DITCH CHECK AT OUTLET



PLAN VIEW

PROFILE VIEW

NOTE:

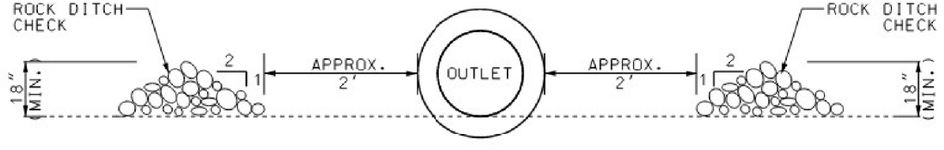
USE IN LOCATIONS WHERE WATER EXITS THE RIGHT OF WAY, AS DIRECTED BY THE ENGINEER

TO BE L=W AS LONG AS THE DIMENSIONS STAY WITHIN ROW

ROCK DITCH TRAPS IN THE CLEAR ZONE SHALL BE REMOVED OR LEVELED (IF ALLOWABLE) AFTER THE VEGETATION HAS SUFFICIENTLY MATURED TO PROTECT THE DITCH OR SWALE.

SEE STD. 806.10 FOR ADDITIONAL DETAILS

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.



SECTION A-A

EROSION CONTROL
SHEET 2 OF 2

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

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

STATE OF MISSOURI
ERIC GRAPE
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED 07/29/2026
ROUTE 14 | STATE MO
DISTRICT SE | SHEET NO. 40
COUNTY DOUGLAS
JOB NO. J9P3808
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION	DATE

SIGNS						CONCRETE FOOTINGS EMBEDDED	STRUCTURAL STEEL POSTS*						PIPE POSTS*					BACKING BARS**				U-CHANNEL POST	PERFORATED SQUARE STEEL TUBE													REMARKS AND OTHER REQUIRED ITEMS
902 SIGNAL SIGNS TABULATED ON D-37A SHEET																						2-INCH POST						2.5-INCH POST						BREAK-AWAY	
																									ANCHORS						ANCHORS			
SIGN NO.	SIGN SIZE	STATION OR LOG MILE	HORIZ CLEAR IF NOT STD	LOCATION	SIGN DTL SHT NO.	ITEM NO. 9031010	POST DES NO.	POST NO. 1	POST NO. 2	POST NO. 3	LBS PER FT	TOTAL ITEM NO. 9031210	PIPE SIZE	POST NO. 1	POST NO. 2	LBS PER FT	TOTAL ITEM NO. 9031220	2" X 3/8" BARS AT 2.55 LBS/FT NO.	LGTH	TOTAL	TOTAL	ITEM NO. 9031250A	POST NO. 1	POST NO. 2	TOTAL ITEM NO. 9031270A	DRIVEN 12 GA. ITEM NO. 9031271A	DRIVEN 7 GA. ITEM NO. 9031273A	CONCRETE 7 GA. ITEM NO. 9031274	POST NO. 1	POST NO. 2	TOTAL ITEM NO. 9031280	2.25" INSERT (6 FT) ITEM NO. 9031272A	DRIVEN 7 GA. ITEM NO. 9031281A	CONCRETE 7 GA. ITEM NO. 9031285	ITEM NO. 9031241	
						CY		LF	LF	LF		LBS	IN	LF	LF		LBS	EACH	IN.	LF	LBS	LF	LF	LF	LF	EACH	EACH	EACH	EACH	EACH	LF	EACH	EACH	EACH	EACH	
1	ASSEMB	54.554		RT																			11		11			1							
2	18X24	54.841		RT																			10		10			1							
3	18X24	54.855		RT																			10		10			1							
4	18X24	54.870		RT																			10		10			1							
5	18X24	54.883		RT																			10		10			1							
6	18X24	54.897		RT																			10		10			1							
7	18X24	54.911		RT																			10		10			1							
8	18X24	54.922		RT																			10		10			1							
9	18X24	54.936		RT																			10		10			1							
10	18X24	54.950		RT																			10		10			1							
11	18X24	54.969		RT																			10		10			1							
12	18X24	54.982		RT																			10		10			1							
13	18X24	54.997		RT																			10		10			1							
14	18X24	55.011		RT																			10		10			1							
15	ASSEMB	55.620		RT																										14.5		15			1	
16	18X24	55.951		RT																			11		11			1							
17	18X24	55.965		RT																			11		11			1							
18	18X24	55.979		RT																			11		11			1							
19	18X24	55.994		RT																			11		11			1							
20	18X24	56.007		RT																			11		11			1							
21	18X24	56.022		RT																			11		11			1							
22	18X24	56.041		RT																			11		11			1							
23	18X24	56.054		RT																			11		11			1							
24	18X24	56.070		RT																			11		11			1							
25	18X24	56.090		RT																			11		11			1							
26	18X24	56.106		RT																			11		11			1							
27	18X24	56.121		RT																			11		11			1							
28	18X24	56.140		RT																			11		11			1							
29	18X24	56.153		RT																			11		11			1							
30	ASSEMB	56.312		RT														2	72	6	15.3									12		12			1	
31	36X36	56.427		RT																			12.5		13			1							
32	ASSEMB	56.466		RT														4	144	12	30.6									10.5		11			1	
33	18X24	57.270		RT																			9		9			1							
34	36X36	57.278		RT																			12.5		13			1							
35	18X24	57.285		RT																			11		11			1							
36	18X24	57.299		RT																			11		11			1							
37	18X24	57.313		RT																			11		11			1							
38	18X24	57.327		RT																			11		11			1							
39	18X24	57.342		RT																			11		11			1							
40	18X24	57.356		RT																			11		11			1							
41	18X24	57.370		RT																			11		11			1							
42	18X24	57.404		RT																			11		11			1							
43	18X24	57.389		RT																			11		11			1							
44	18X24	57.420		RT																			11		11			1							
45	36X36	57.628		RT																			12.5		13			1							
46	ASSEMB	57.685		RT																										14.5		15			1	
47	12X36	58.281		RT																			10		10			1							
48	ASSEMB	58.832		RT																										13.5		14			1	
49	ASSEMB	59.787		RT																										14.5		15			1	
50	ASSEMB	62.073		RT																										13.5		14			1	
51	ASSEMB	63.205		RT																										13.5		14			1	
52	12X36	65.685		RT																			10		10			1							
53	12X36	66.076		RT																			10		10			1							
54	36X36	66.278		RT																			12.5		13			1							
55	ASSEMB	66.364		RT																										13		13			1	
56	12X36	66.081		LT																			10		10			1							
57	12X36	65.685		LT																			10		10			1							
58	12X36	61.978		LT																			10		10			1							
59	ASSEMB	60.953		LT																										13.5		14			1	
60	ASSEMB	59.970		LT																										13.5		14			1	
				SUBTOTAL 1																	46				572			49			151				11	
				TOTAL 1																	**				572			49			151				11	

*BREAKAWAY ASSEMBLY IS INCIDENTAL FOR STRUCTURAL STEEL AND PIPE POSTS.
**BACKING BARS ARE TOTALED WITH STRUCTURAL STEEL OR PIPE POSTS.

ROUND PIPE POST AND FOOTING DATA TABLE

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

STRUCTURAL STEEL POST AND FOOTING DATA TABLE

POST DES. NO.	NOM. SIZE	POST WEIGHT LBS/FT	POST WEIGHT LBS/IN	STUB LENGTH	FOOTING DIA.	FOOTING LEVEL GROUND DEPTH	FOOTING LEVEL GROUND C.Y.	FOOTING 6:1 GRADE DEPTH	FOOTING 6:1 GRADE C.Y.	FOOTING 4:1 GRADE DEPTH	FOOTING 4:1 GRADE C.Y.	FOOTING 3:1 OR 2:1 GRADE DEPTH	FOOTING 3:1 OR 2:1 GRADE C.Y.
1	W6	9.0	0.75	3'-0"	15"	3'-0"	0.14	3'-2"	0.15	3'-3"	0.16	3'-6"	0.17
2	W6	15.0	1.25	4'-0"	24"	4'-0"	0.47	4'-2"	0.50	4'-3"	0.51	4'-6"	0.54
3	W8	18.0	1.50	4'-6"	28"	4'-6"	0.71	4'-8"	0.73	4'-9"	0.74	5'-0"	0.78
4	W10	22.0	1.83	5'-0"	36"	5'-0"	1.31	5'-2"	1.36	5'-3"	1.39	5'-6"	1.45
5	W10	26.0	2.17	5'-0"	36"	5'-0"	1.31	5'-3"	1.37	5'-5"	1.43	5'-9"	1.52
6	W12	35.0	2.92	5'-6"	36"	5'-6"	1.44	5'-9"	1.52	5'-11"	1.56	6'-3"	1.65

SIGNING SHEET
SHEET 1 OF 5

D-29

EFFECTIVE: 07-01-2024



DATE PREPARED
08/27/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	41

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright (c) Bacon Farmer Workman Engineering & Testing, Inc.

SIGNS						CONCRETE FOOTINGS EMBEDDED	STRUCTURAL STEEL POSTS*						PIPE POSTS*					BACKING BARS**				U-CHANNEL POST	PERFORATED SQUARE STEEL TUBE														BREAK-AWAY ASSEMBLY	REMARKS AND OTHER REQUIRED ITEMS
902 SIGNAL SIGNS TABULATED ON D-37A SHEET																						2-INCH POST						2.5-INCH POST									
																									ANCHORS						ANCHORS				ANCHORS		
SIGN NO.	SIGN SIZE	STATION OR LOG MILE	HORIZ CLEAR IF NOT STD	LOCATION	SIGN DTL SHT NO.	ITEM NO. 9031010	POST DES NO.	POST NO. 1	POST NO. 2	POST NO. 3	LBS PER FT	TOTAL ITEM NO. 9031210	PIPE SIZE	POST NO. 1	POST NO. 2	LBS PER FT	TOTAL ITEM NO. 9031220	2" X 3/8" BARS AT 2.55 LBS/FT NO.	LGTH	TOTAL	TOTAL	ITEM NO. 9031250A	POST NO. 1	POST NO. 2	TOTAL ITEM NO. 9031270A	DRIVEN 12 GA. ITEM NO. 9031271A	DRIVEN 7 GA. ITEM NO. 9031273A	CONCRETE 7 GA. ITEM NO. 9031274	POST NO. 1	POST NO. 2	TOTAL ITEM NO. 9031280	2.25" INSERT (6 FT) ITEM NO. 9031272A	DRIVEN 7 GA. ITEM NO. 9031281A	CONCRETE 7 GA. ITEM NO. 9031285	ITEM NO. 9031241	
						CY		LF	LF	LF		LBS	IN	LF	LF		LBS	EACH	IN.	LF	LBS	LF	LF	LF	EACH	EACH	EACH									EACH	
61	ASSEMB	59.103		LT																																	
62	12X36	58.283		LT																																	
63	18X24	57.268		LT																		10		10			1									
64	18X24	57.255		LT																		11		11			1									
65	18X24	57.239		LT																		11		11			1									
66	18X24	57.226		LT																		11		11			1									
67	18X24	57.213		LT																		11		11			1									
68	18X24	57.199		LT																		11		11			1									
69	84X30	54.611		LT																		12	12	24			2									
70	ASSEMB	54.543		LT														4	144	12	30.6								10.5		11			1			
SUBTOTAL 2																					31			131			9			25			2			
SUBTOTAL 1																					46			572			49			151			11			
TOTALS 1 & 2																					**			703			58			176			13			

*BREAKAWAY ASSEMBLY IS INCIDENTAL FOR STRUCTURAL STEEL AND PIPE POSTS.
**BACKING BARS ARE TOTALED WITH STRUCTURAL STEEL OR PIPE POSTS.

ROUND PIPE POST AND FOOTING DATA TABLE

NOM. SIZE	WEIGHT		STUB LENGTH	FOOTING		CONCRETE
(IN.)	LBS/FT	LBS/IN		DIA.	DEPTH	C.Y.
2½	5.79	0.48	4'- 3¾"	12"	4~6"	0.13
4	10.79	0.90	5'- 3¾"	18"	5~6"	0.36

STRUCTURAL STEEL POST AND FOOTING DATA TABLE

POST DES. NO.	NOM. SIZE	POST WEIGHT LBS/FT	POST WEIGHT LBS/IN	POST STUB LENGTH	FOOTING DIA.	FOOTING LEVEL GROUND DEPTH	FOOTING LEVEL GROUND C.Y.	FOOTING 6:1 GRADE DEPTH	FOOTING 6:1 GRADE C.Y.	FOOTING 4:1 GRADE DEPTH	FOOTING 4:1 GRADE C.Y.	FOOTING 3:1 OR 2:1 GRADE DEPTH	FOOTING 3:1 OR 2:1 GRADE C.Y.
1	W6	9.0	0.75	3'-0"	15"	3'-0"	0.14	3'-2"	0.15	3'-3"	0.16	3'-6"	0.17
2	W6	15.0	1.25	4'-0"	24"	4'-0"	0.47	4'-2"	0.50	4'-3"	0.51	4'-6"	0.54
3	W8	18.0	1.50	4'-6"	28"	4'-6"	0.71	4'-8"	0.73	4'-9"	0.74	5'-0"	0.78
4	W10	22.0	1.83	5'-0"	36"	5'-0"	1.31	5'-2"	1.36	5'-3"	1.39	5'-6"	1.45
5	W10	26.0	2.17	5'-0"	36"	5'-0"	1.31	5'-3"	1.37	5'-5"	1.43	5'-9"	1.52
6	W12	35.0	2.92	5'-6"	36"	5'-6"	1.44	5'-9"	1.52	5'-11"	1.56	6'-3"	1.65

SIGNING SHEET
SHEET 2 OF 5

D-29

EFFECTIVE: 07-01-2024



DATE PREPARED
08/27/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	42

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

STANDARD SIGN ASSEMBLIES

SIGN, TYPE, DESIGNATION, SIZE & NUMBER OF EACH

SIGN NO.	STATION OR LOG MILE	LOCATION	M1-5	M3-2P	W1-8D	W1-5R	W13-1P	M1-5a	M1-5a	M2-1P	S3-1	M6-1P	M6-3P	OM3-R	W1-4L	W1-2L	W13-1P	W1-2R	W13-1P	I4-2a	R2-1	W2-2	D1-2a	M1-5a
1	54.554	RT	1	1																				
2	54.841	RT			1																			
3	54.855	RT			1																			
4	54.870	RT			1																			
5	54.883	RT			1																			
6	54.897	RT			1																			
7	54.911	RT			1																			
8	54.922	RT			1																			
9	54.936	RT			1																			
10	54.950	RT			1																			
11	54.969	RT			1																			
12	54.982	RT			1																			
13	54.997	RT			1																			
14	55.011	RT			1																			
15	55.620	RT				1	1																	
16	55.951	RT			1																			
17	55.965	RT			1																			
18	55.979	RT			1																			
19	55.994	RT			1																			
20	56.007	RT			1																			
21	56.022	RT			1																			
22	56.041	RT			1																			
23	56.054	RT			1																			
24	56.070	RT			1																			
25	56.090	RT			1																			
26	56.106	RT			1																			
27	56.121	RT			1																			
28	56.140	RT			1																			
29	56.153	RT			1																			
30	56.312	RT						1	1	1														
31	56.427	RT									1													
32	56.466	RT	1						1			1	1											
33	57.270	RT			1																			
34	57.278	RT									1													
35	57.285	RT			1																			
36	57.299	RT			1																			
37	57.313	RT			1																			
38	57.327	RT			1																			
39	57.342	RT			1																			
40	57.356	RT			1																			
41	57.370	RT			1																			
42	57.389	RT			1																			
43	57.404	RT			1																			
44	57.420	RT			1																			
45	57.628	RT									1													
46	57.685	RT					1								1									
47	58.281	RT												1										
48	58.832	RT					1								1									
49	59.787	RT														1	1							
50	62.073	RT																1	1					
51	63.205	RT				1	1																	
52	65.685	RT												1										
53	66.076	RT												1										
54	66.278	RT									1													
55	66.364	RT																		1	1			
56	66.081	LT												1										
57	65.685	LT												1										
58	61.978	LT												1										
59	60.953	LT															1					1		
60	59.970	LT															1	1						
	SUBTOTAL 1		2	1	38	2	4	1	2	1	4	1	1	6	2	1	3	2	1	1	1	1	0	0

SIGN SUMMARY

EFFECTIVE: 10-01-2016

STANDARD OR SPECIAL SIGN DESIGNATION	SIGN DTL. SHT. NO.	NO. EACH	SIGN SIZE	TYPE & SQUARE FEET: FLAT SHEET SH ITEM NO. 9035004A	FLAT SHEET FLUORESCENT SHF* ITEM NO. 9035069A	STRUCTURAL ST ITEM NO. 9035011A
M1-5		2	24X24	8		
M3-2P		1	24X12	2		
W1-8D		38	18X24		114	
W1-5R		2	36X36		18	
W13-1P (40 MPH)		4	24X24		16	
M1-5A (RTE O)		1	24X24	4		
M1-5A (RTE AK)		2	30X24	10		
M2-1P		1	21X15	2.19		
S3-1		4	36X36	36		
M6-1P		1	21X15	2.19		
M6-3P		1	21X15	2.19		
OM3-R		6	12X36		18	
W1-4L		2	36X36		18	
W1-2L		1	36X36		9	
W13-1P (45 MPH)		3	24X24		12	
W1-2R		2	36X36		18	
W13-1P (50 MPH)		1	24X24		4	
I4-2a		1	48X24	8		
R2-1		1	36X48	12		
W2-2		1	36X36		9	
D1-2a		0	84X30			
M1-5A (RTE BB)		0	30X24			
SUBTOTAL 1				86.57	236	0

*ORANGE, YELLOW AND YELLOW-GREEN

SIGNING SHEET
SHEET 3 OF 5

D-30

STATE OF MISSOURI
ERIC WAYNE GRAPE
NUMBER E-30133
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED 07/29/2026

ROUTE	STATE
14	MO

DISTRICT	SHEET NO.
SE	43

COUNTY: DOUGLAS

JOB NO.: J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

STANDARD SIGN ASSEMBLIES

SIGN, TYPE, DESIGNATION, SIZE & NUMBER OF EACH

SIGN NO.	STATION OR LOG MILE	LOCATION	M1-5	M3-2P	W1-8D	W1-5R	W13-1P	M1-5a	M1-5a	M2-1P	S3-1	M6-1P	M6-3P	OM3-R	W1-4L	W1-2L	W13-1P	W1-2R	W13-1P	I4-2a	R2-1	W2-2	D1-2	M1-5a
61	59.103	LT					1								1									
62	58.283	LT												1										
63	57.268	LT			1																			
64	57.255	LT			1																			
65	57.239	LT			1																			
66	57.226	LT			1																			
67	57.213	LT			1																			
68	57.199	LT			1																			
69	54.611	LT																					1	
70	54.543	LT	1									1	1											1
SUBTOTAL 2			1	0	6	0	1	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	1	1
SUBTOTAL 1			2	1	38	3	5	1	2	1	2	1	2	7	1	1	2	2	1	1	1	1	0	0
TOTAL 1+2			3	1	44	3	6	1	2	1	2	2	3	8	2	1	2	2	1	1	1	1	1	1

SIGN SUMMARY

EFFECTIVE: 10-01-2016

STANDARD OR SPECIAL SIGN DESIGNATION	SIGN DTL. SHT. NO.	NO. EACH	SIGN SIZE	TYPE & SQUARE FEET: FLAT SHEET SH ITEM NO. 9035004A	FLAT SHEET FLUORESCENT SHF* ITEM NO. 9035069A	STRUCTURAL ST ITEM NO. 9035011A
M1-5		1	24X24	4		
M3-2P			24X12			
W1-8D		6	18X24		18	
W1-5R			36X36			
W13-1P (40 MPH)		1	24X24	4		
M1-5A (RTE O)			24X24			
M1-5A (RTE AK)			30X24			
M2-1P			21X15			
S3-1			36X36			
M6-1P		1	21X15	2.19		
M6-3P		1	21X15	2.19		
OM3-R		1	12X36		3	
W1-4L		1	36X36		9	
W1-2L			36X36			
W13-1P (45 MPH)			24X24			
W1-2R			36X36			
W13-1P (50 MPH)			24X24			
I4-2a			48X24			
R2-1			36X48			
W2-2			36X36			
D1-2		1	84X30			17.5
M1-5A (RTE BB)		1	30X24	5		
SUBTOTAL 2				17.38	30	17.5
SUBTOTAL 1				90.76	233	0
TOTAL 1+2				109	263	18

*ORANGE, YELLOW AND YELLOW-GREEN

SIGNING SHEET
SHEET 4 OF 5

D-30

STATE OF MISSOURI
ERIC BRANT HUMPHREY E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED 07/29/2026

ROUTE	STATE
14	MO

DISTRICT	SHEET NO.
SE	44

COUNTY: DOUGLAS

JOB NO.: J9P3808

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)

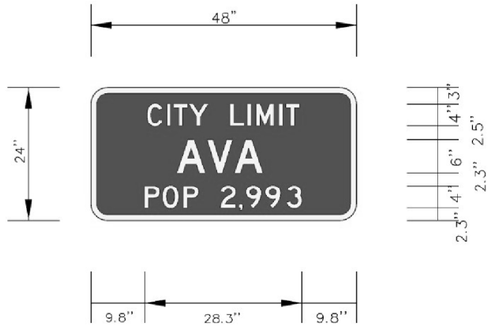
Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

SIGN NO.	69
LOG MILE	54.611
ROADWAY	RTE 14



BORDER
R=2.3"
TH=0.8"

SIGN NO.	55
LOG MILE	66.364
ROADWAY	RTE 14



BORDER
R=2 in
TH=0.8 in

SIGNING SHEET
SHEET 5 OF 5

D-31

STATE OF MISSOURI
ERIC BRADY NOLASH
E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	45

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

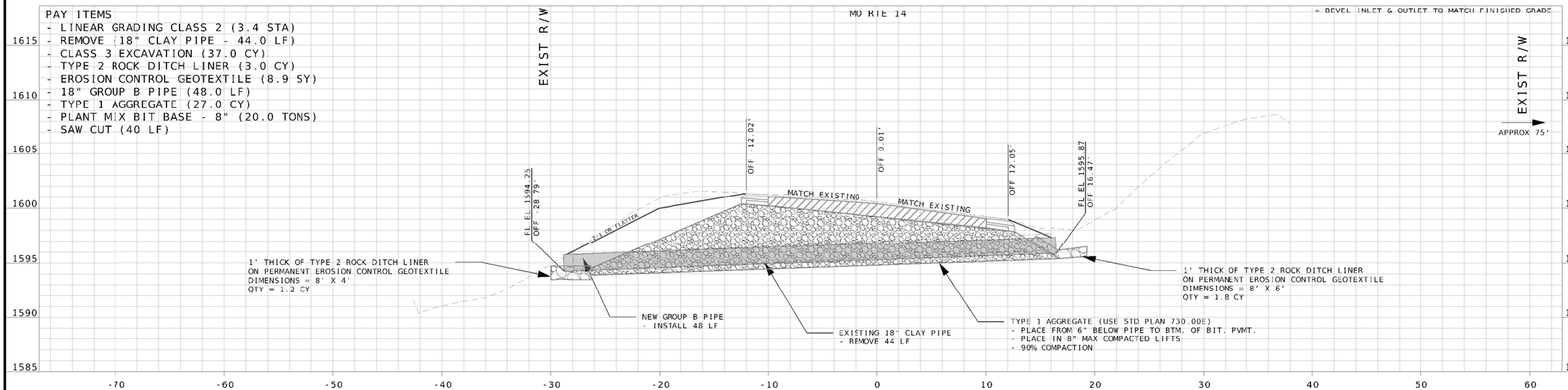
DESCRIPTION	DATE

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

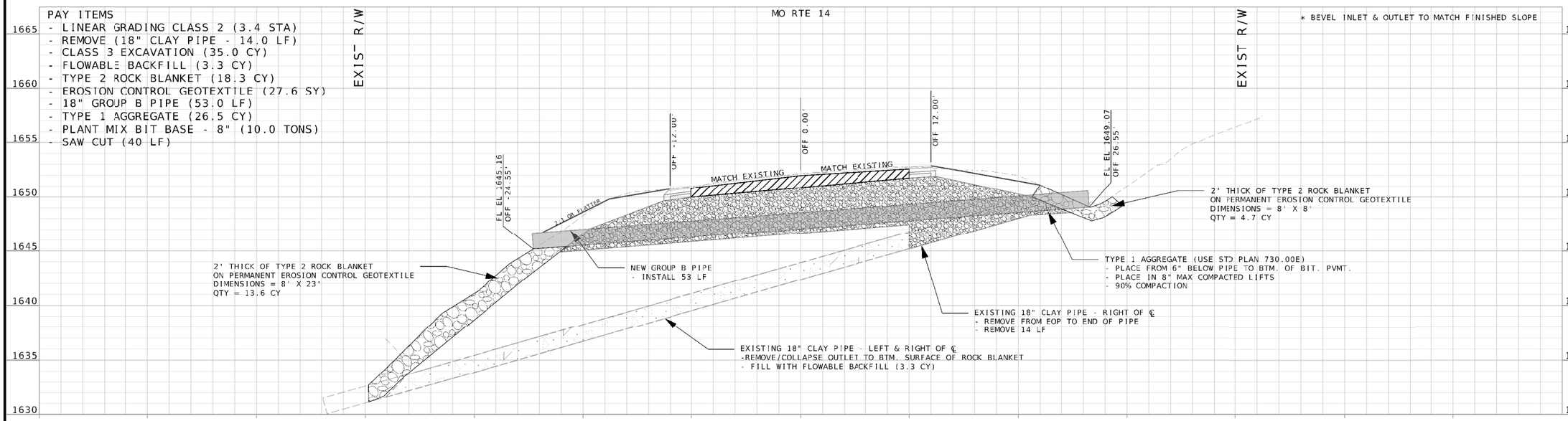
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 44.0 LF)
- CLASS 3 EXCAVATION (37.0 CY)
- TYPE 2 ROCK DITCH LINER (3.0 CY)
- EROSION CONTROL GEOTEXTILE (8.9 SY)
- 18" GROUP B PIPE (48.0 LF)
- TYPE 1 AGGREGATE (27.0 CY)
- PLANT MIX BIT BASE - 8" (20.0 TONS)
- SAW CUT (40 LF)



PIPE 2 - LM 56.984

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 14.0 LF)
- CLASS 3 EXCAVATION (35.0 CY)
- FLOWABLE BACKFILL (3.3 CY)
- TYPE 2 ROCK BLANKET (18.3 CY)
- EROSION CONTROL GEOTEXTILE (27.6 SY)
- 18" GROUP B PIPE (53.0 LF)
- TYPE 1 AGGREGATE (26.5 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 1 - LM 55.767

CULVERT SECTIONS
SHEET 1 OF 25

ERIC M. TAPE
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER
STATE OF MISSOURI

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	46

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

STATE OF MISSOURI
ERIC KRAFT
NUMBER E-30108
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	47

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

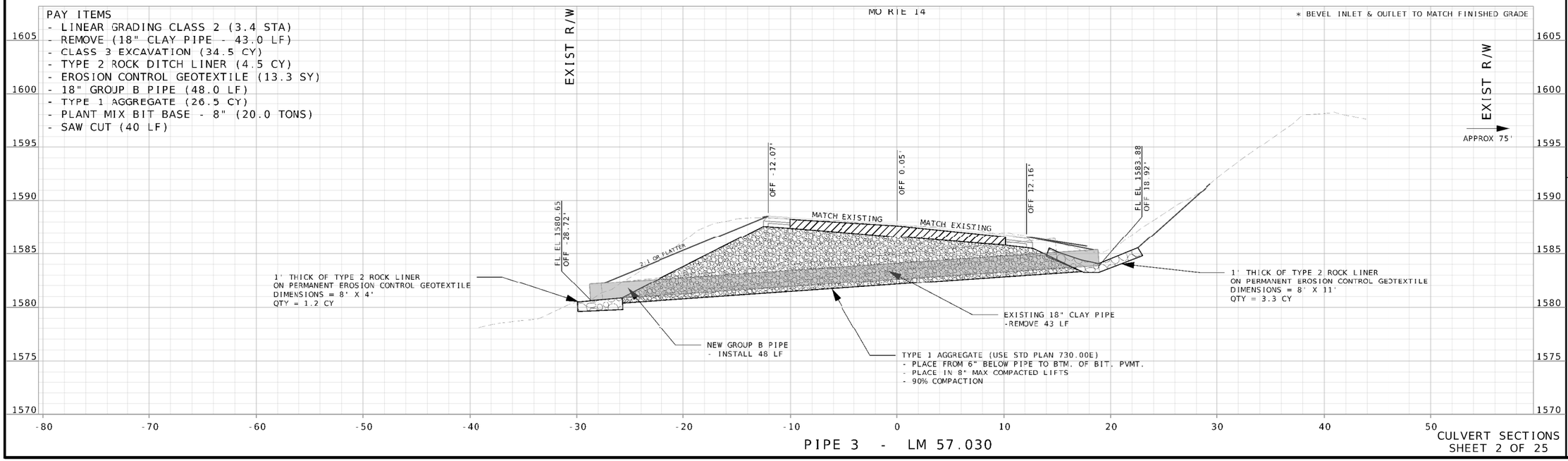
BRIDGE NO.

DESCRIPTION	DATE

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

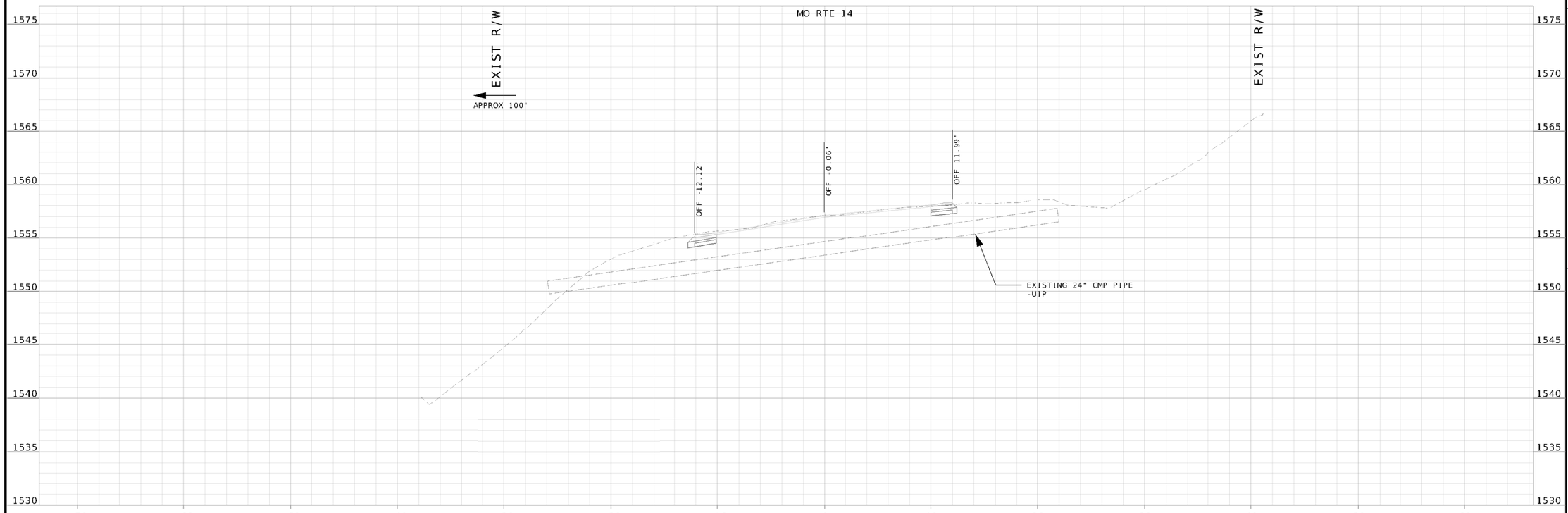
Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 43.0 LF)
- CLASS 3 EXCAVATION (34.5 CY)
- TYPE 2 ROCK DITCH LINER (4.5 CY)
- EROSION CONTROL GEOTEXTILE (13.3 SY)
- 18" GROUP B PIPE (48.0 LF)
- TYPE 1 AGGREGATE (26.5 CY)
- PLANT MIX BIT BASE - 8" (20.0 TONS)
- SAW CUT (40 LF)



PIPE 3 - LM 57.030

CULVERT SECTIONS
SHEET 2 OF 25



PIPE 4 - LM 57.116 - UIP

CULVERT SECTIONS
SHEET 3 OF 25

STATE OF MISSOURI
ERIC BRUCE NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	48

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

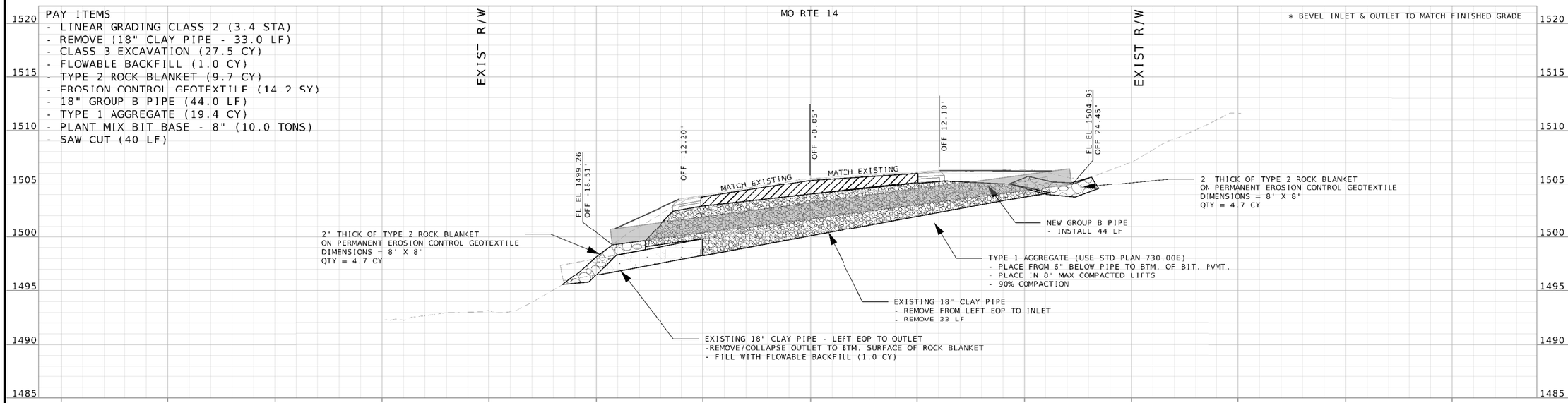
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

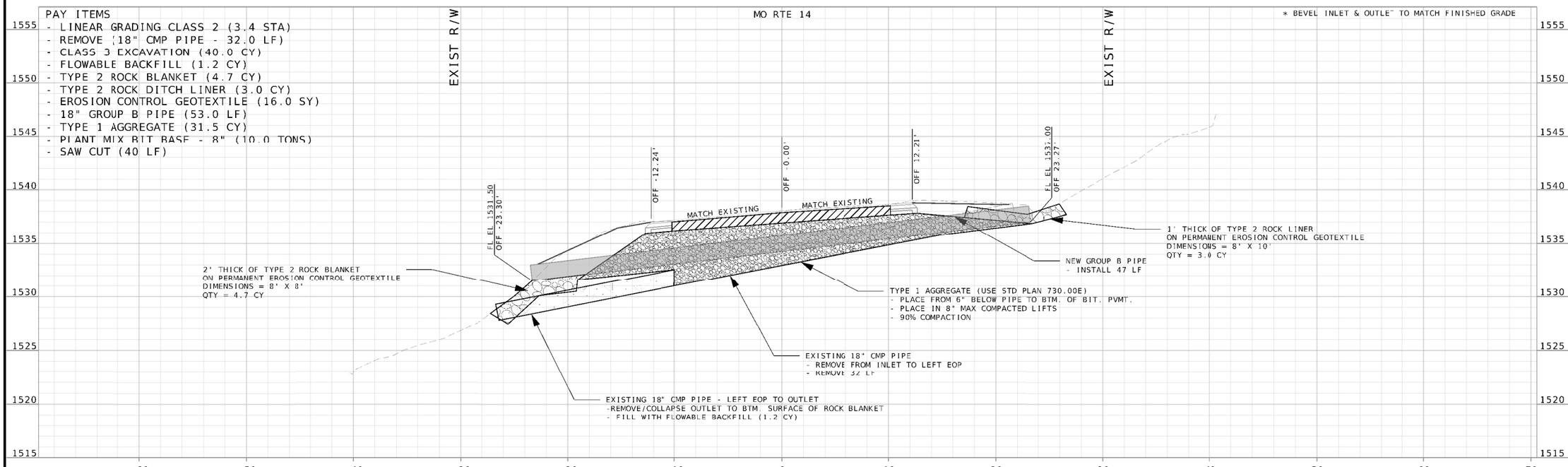
Copyright © / Bacon Farmer Workman Engineering & Testing Inc.

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 33.0 LF)
- CLASS 3 EXCAVATION (27.5 CY)
- FLOWABLE BACKFILL (1.0 CY)
- TYPE 2 ROCK BLANKET (9.7 CY)
- EROSION CONTROL GEOTEXTILE (14.2 SY)
- 18" GROUP B PIPE (44.0 LF)
- TYPE 1 AGGREGATE (19.4 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 6 - LM 57.276

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CMP PIPE - 32.0 LF)
- CLASS 3 EXCAVATION (40.0 CY)
- FLOWABLE BACKFILL (1.2 CY)
- TYPE 2 ROCK BLANKET (4.7 CY)
- TYPE 2 ROCK DITCH LINER (3.0 CY)
- EROSION CONTROL GEOTEXTILE (16.0 SY)
- 18" GROUP B PIPE (53.0 LF)
- TYPE 1 AGGREGATE (31.5 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 5 - LM 57.173

CULVERT SECTIONS
SHEET 4 OF 25

STATE OF MISSOURI
ERIC KRAPF
NUMBER E-30102
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	49

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

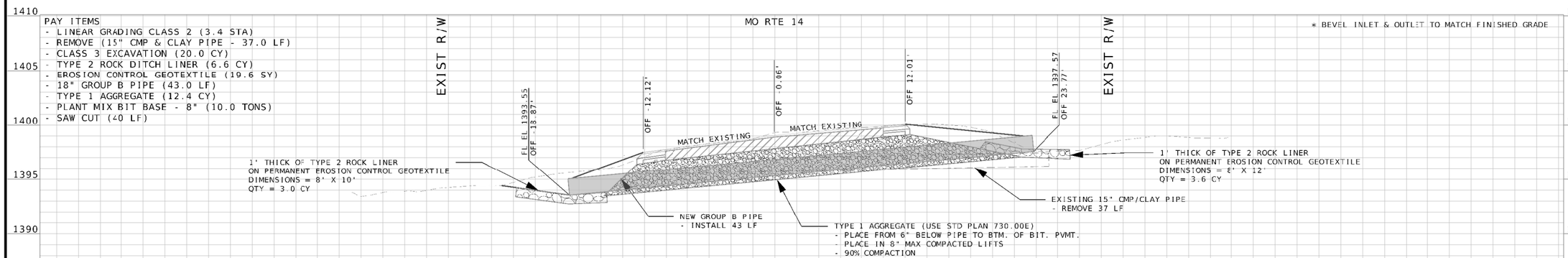
DESCRIPTION	DATE

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

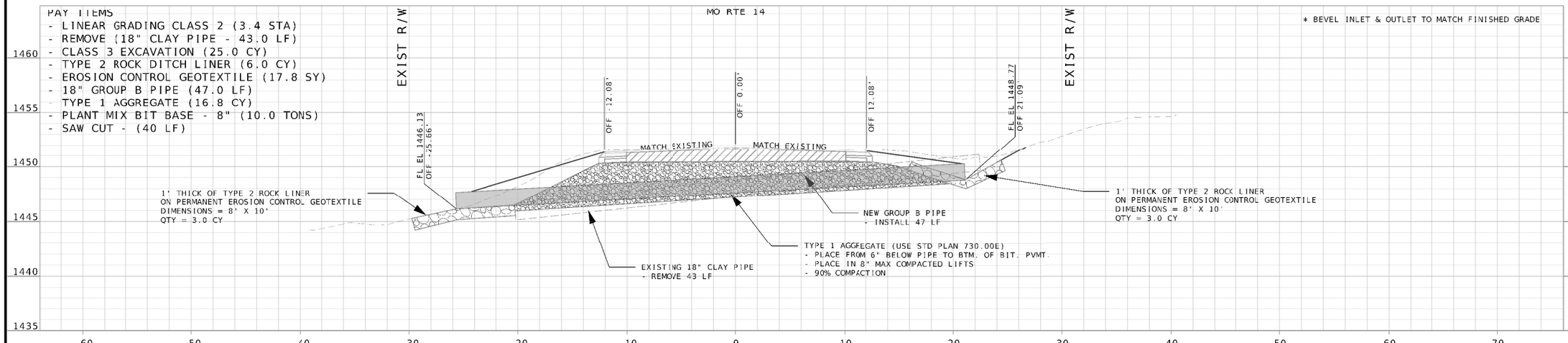
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (15" CMP & CLAY PIPE - 37.0 LF)
- CLASS 3 EXCAVATION (20.0 CY)
- TYPE 2 ROCK DITCH LINER (6.6 CY)
- EROSION CONTROL GEOTEXTILE (19.6 SY)
- 18" GROUP B PIPE (43.0 LF)
- TYPE 1 AGGREGATE (12.4 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 8 - LM 57.728

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 43.0 LF)
- CLASS 3 EXCAVATION (25.0 CY)
- TYPE 2 ROCK DITCH LINER (6.0 CY)
- EROSION CONTROL GEOTEXTILE (17.8 SY)
- 18" GROUP B PIPE (47.0 LF)
- TYPE 1 AGGREGATE (16.8 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT - (40 LF)



PIPE 7 - LM 57.482

CULVERT SECTIONS
SHEET 5 OF 25

ERIC BRIANT NUMBER E-30103 REGISTERED PROFESSIONAL ENGINEER STATE OF MISSOURI

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	50

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

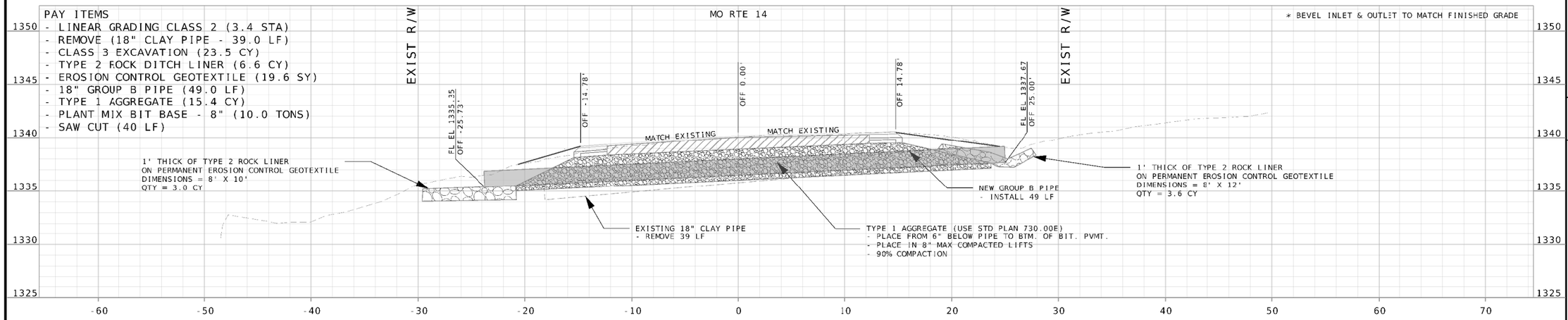
BRIDGE NO.

DESCRIPTION	DATE

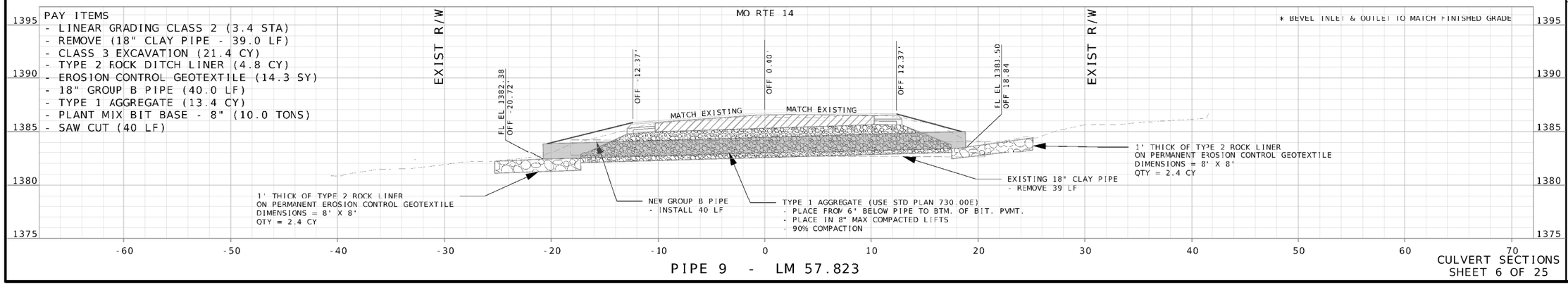
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.



PIPE 10 - LM 57.980



PIPE 9 - LM 57.823

CULVERT SECTIONS
SHEET 6 OF 25

STATE OF MISSOURI
ERIC BRIAN WINTER
E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	51

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

STATE OF MISSOURI
ERIC KRAUSE
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	52

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

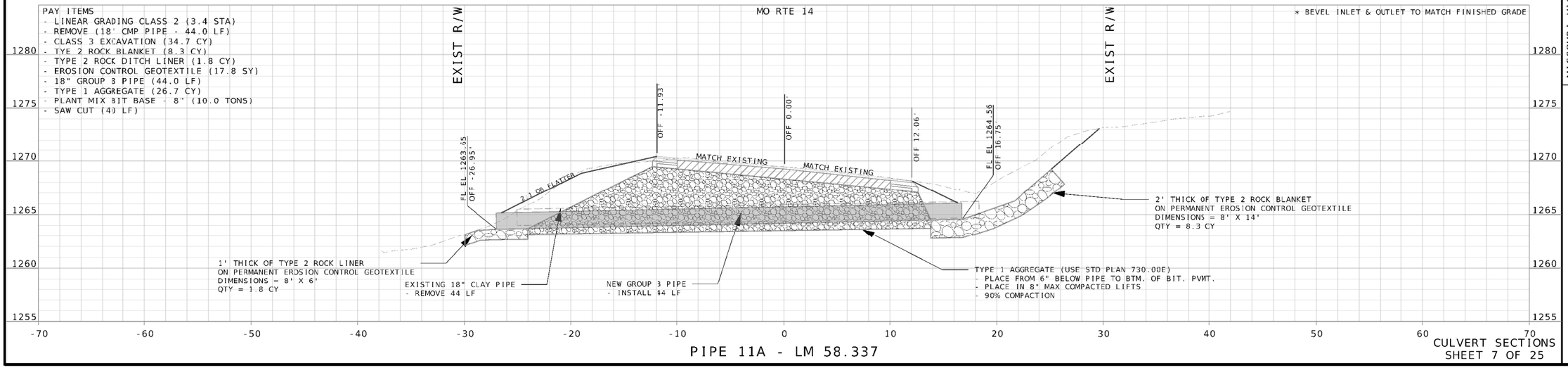
DESCRIPTION	DATE

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

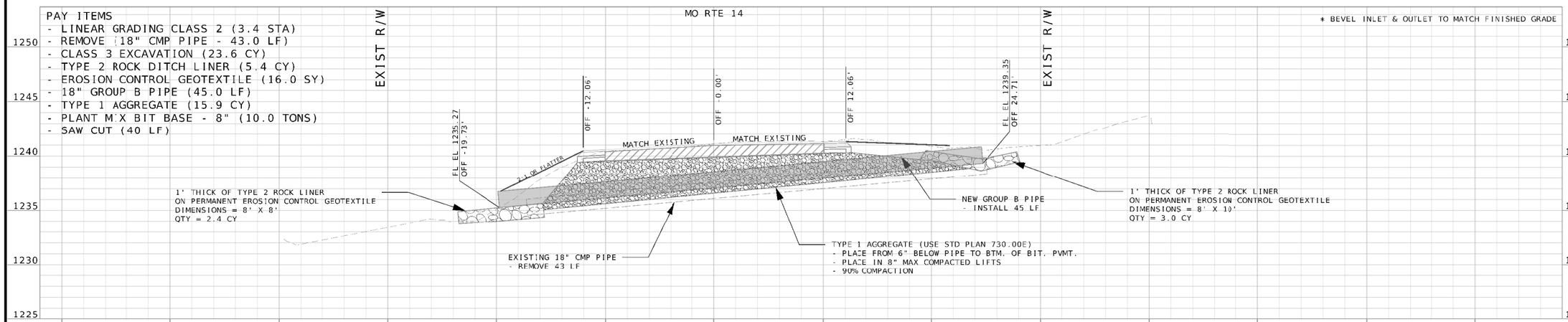
SEE FOLLOWING CULVERT SECTION SHEET (8 OF 25)
FOR PROPER PIPE SEQUENCING



PIPE 11A - LM 58.337

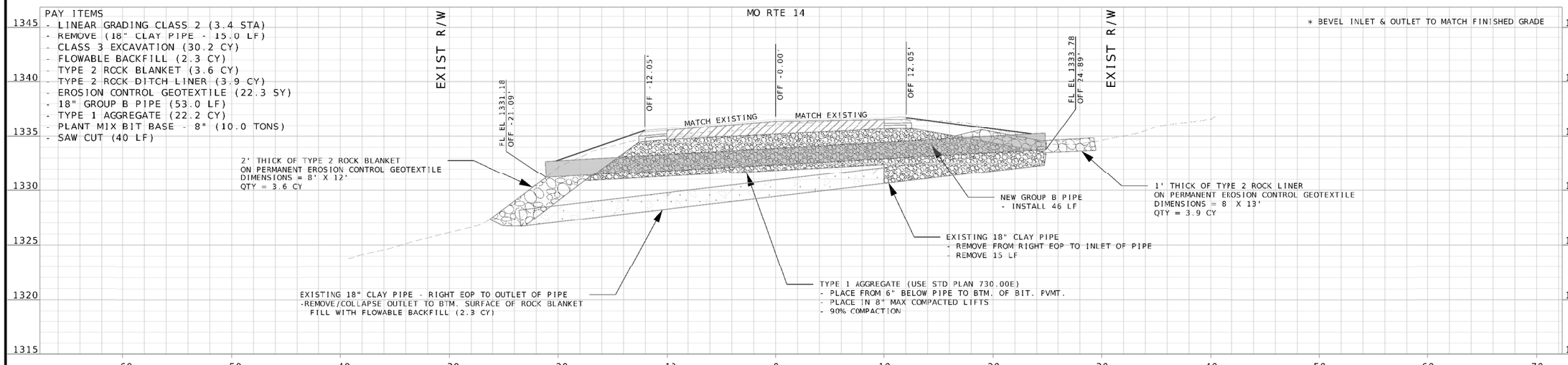
CULVERT SECTIONS
SHEET 7 OF 25

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CMP PIPE - 43.0 LF)
- CLASS 3 EXCAVATION (23.6 CY)
- TYPE 2 ROCK DITCH LINER (5.4 CY)
- EROSION CONTROL GEOTEXTILE (16.0 SY)
- 18" GROUP B PIPE (45.0 LF)
- TYPE 1 AGGREGATE (15.9 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 12 - LM 58.743

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 15.0 LF)
- CLASS 3 EXCAVATION (30.2 CY)
- FLOWABLE BACKFILL (2.3 CY)
- TYPE 2 RCCK BLANKET (3.6 CY)
- TYPE 2 RCCK DITCH LINER (3.9 CY)
- EROSION CONTROL GEOTEXTILE (22.3 SY)
- 18" GROUP B PIPE (53.0 LF)
- TYPE 1 AGGREGATE (22.2 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 11 - LM 57.991

CULVERT SECTIONS
SHEET 8 OF 25

STATE OF MISSOURI
ERIC BRAFFORD NUMBER E-30108
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	53

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

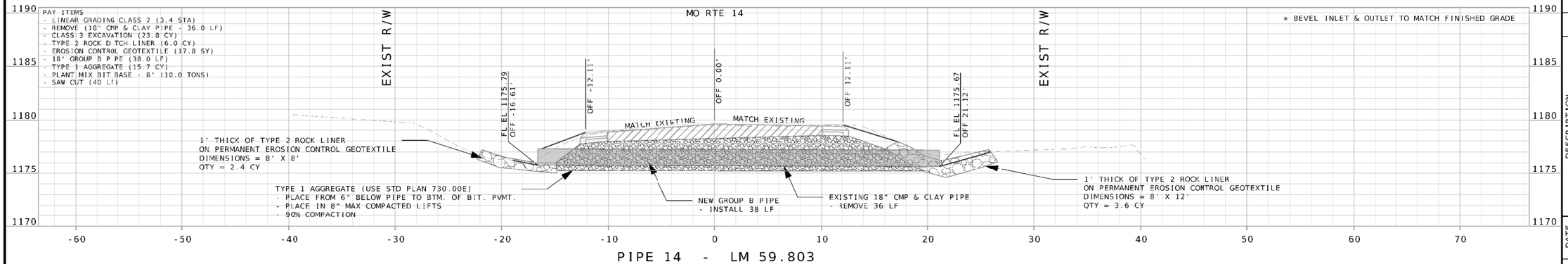
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MoDOT

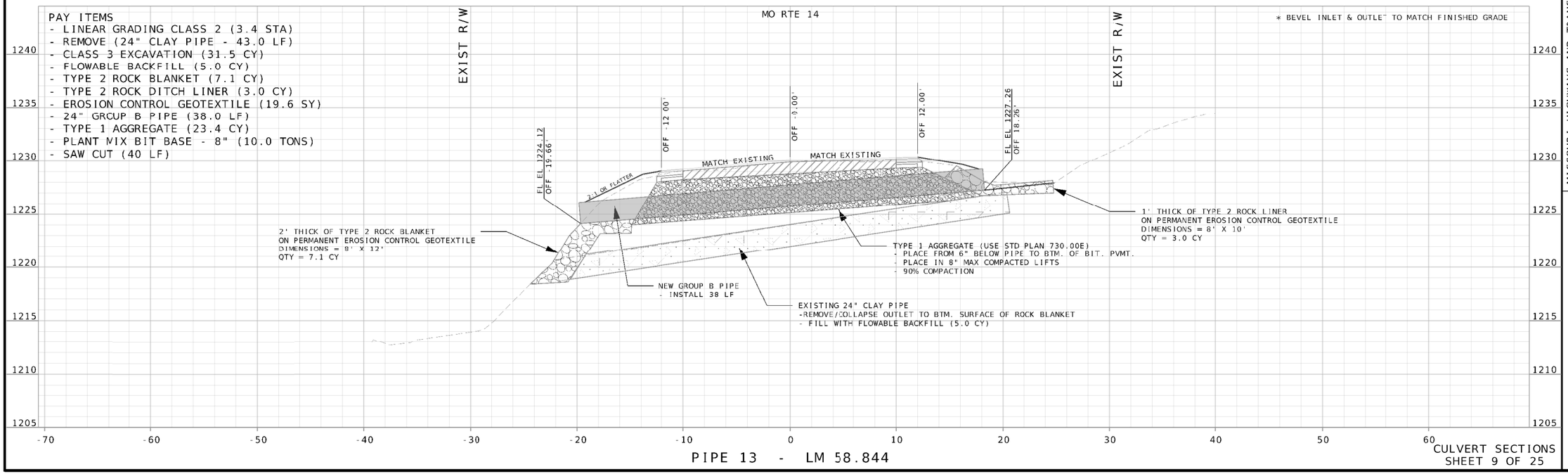
Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

BFW



PIPE 14 - LM 59.803



PIPE 13 - LM 58.844

CULVERT SECTIONS
SHEET 9 OF 25

STATE OF MISSOURI
ERIC KRAFT
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	54

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

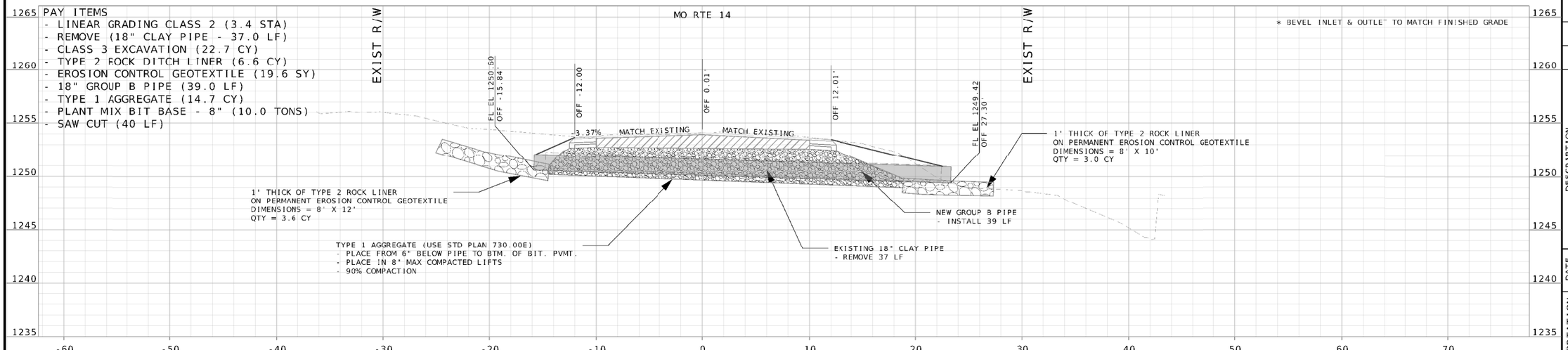
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

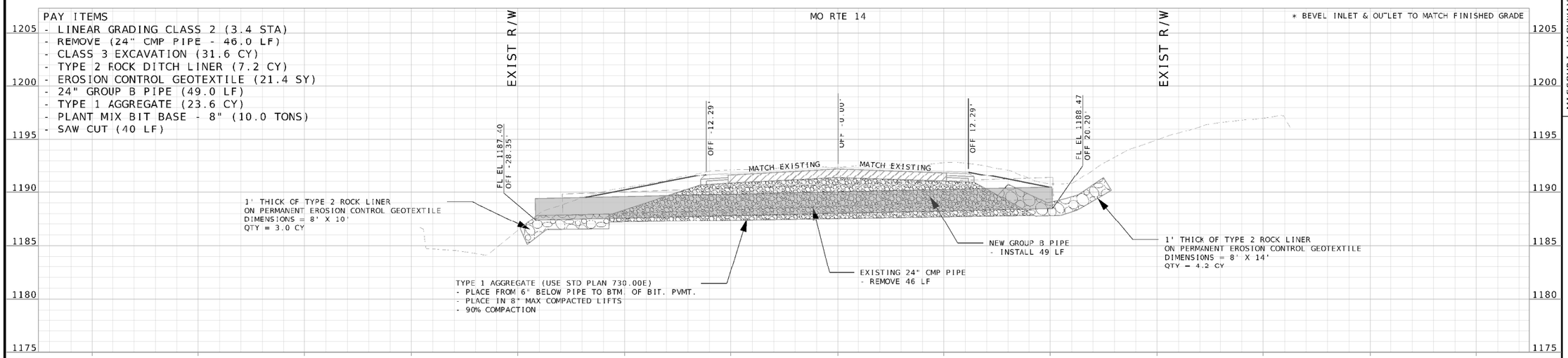
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 37.0 LF)
- CLASS 3 EXCAVATION (22.7 CY)
- TYPE 2 ROCK DITCH LINER (6.6 CY)
- EROSION CONTROL GEOTEXTILE (19.6 SY)
- 18" GROUP B PIPE (39.0 LF)
- TYPE 1 AGGREGATE (14.7 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 16 - LM 60.254

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (24" CMP PIPE - 46.0 LF)
- CLASS 3 EXCAVATION (31.6 CY)
- TYPE 2 ROCK DITCH LINER (7.2 CY)
- EROSION CONTROL GEOTEXTILE (21.4 SY)
- 24" GROUP B PIPE (49.0 LF)
- TYPE 1 AGGREGATE (23.6 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 15 - LM 60.030

CULVERT SECTIONS
SHEET 10 OF 25

STATE OF MISSOURI
ERIC KRAFT MUMFORD
E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	55

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

STATE OF MISSOURI
ERIC WRAPE NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	56

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

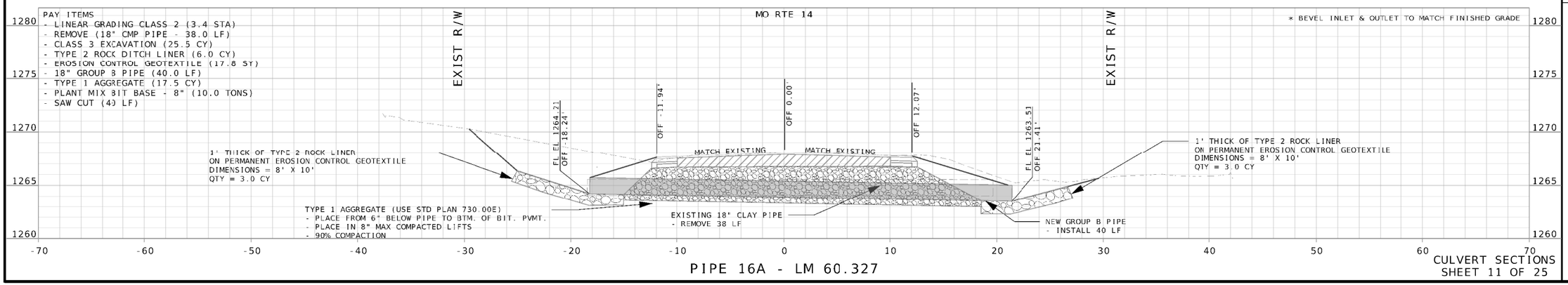
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

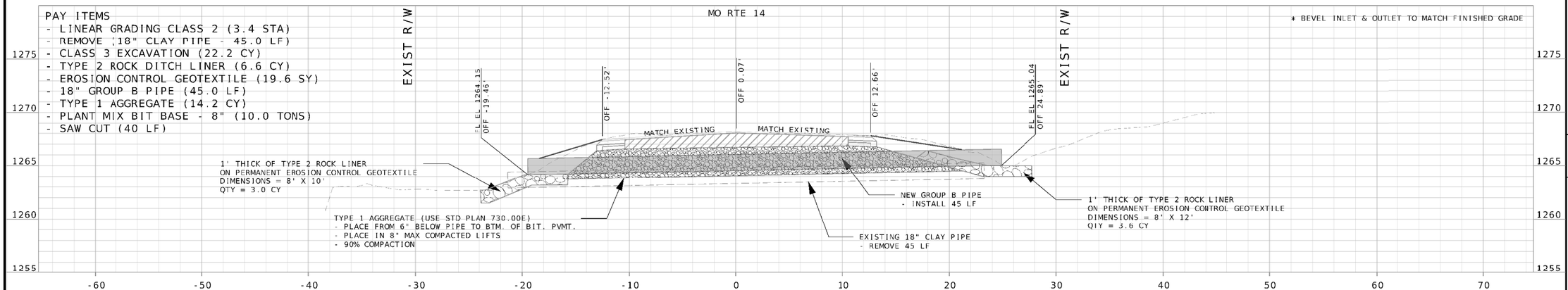
PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CMP PIPE - 38.0 LF)
- CLASS 3 EXCAVATION (25.5 CY)
- TYPE 2 ROCK DITCH LINER (6.0 CY)
- EROSION CONTROL GEOTEXTILE (17.8 SY)
- 18" GROUP B PIPE (40.0 LF)
- TYPE 1 AGGREGATE (17.5 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 16A - LM 60.327

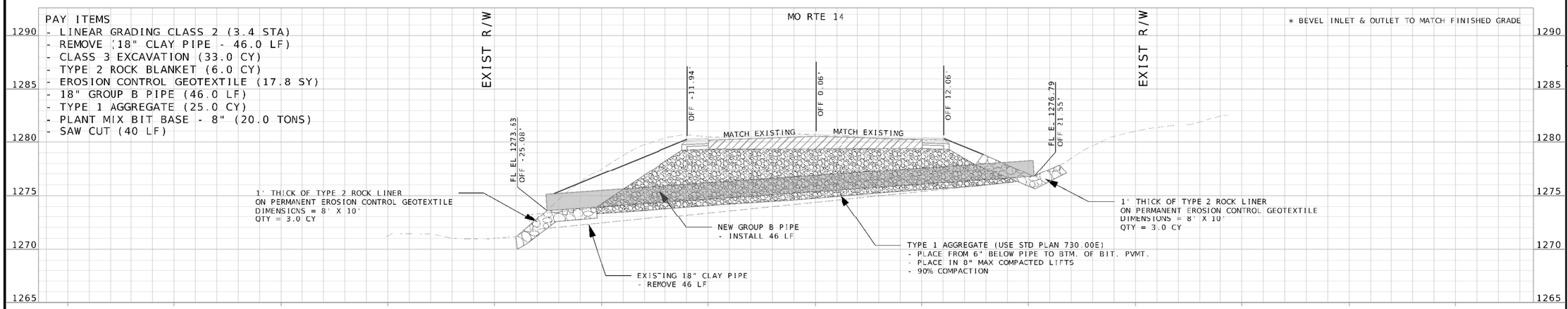
CULVERT SECTIONS
SHEET 11 OF 25

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 45.0 LF)
- CLASS 3 EXCAVATION (22.2 CY)
- TYPE 2 ROCK DITCH LINER (6.6 CY)
- EROSION CONTROL GEOTEXTILE (19.6 SY)
- 18" GROUP B PIPE (45.0 LF)
- TYPE 1 AGGREGATE (14.2 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 18 - LM 60.627

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 46.0 LF)
- CLASS 3 EXCAVATION (33.0 CY)
- TYPE 2 ROCK BLANKET (6.0 CY)
- EROSION CONTROL GEOTEXTILE (17.8 SY)
- 18" GROUP B PIPE (46.0 LF)
- TYPE 1 AGGREGATE (25.0 CY)
- PLANT MIX BIT BASE - 8" (20.0 TONS)
- SAW CUT (40 LF)



PIPE 17 - LM 60.565

CULVERT SECTIONS
SHEET 12 OF 25

STATE OF MISSOURI
ERIC
BRYAN
NYMEYER
E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	57

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

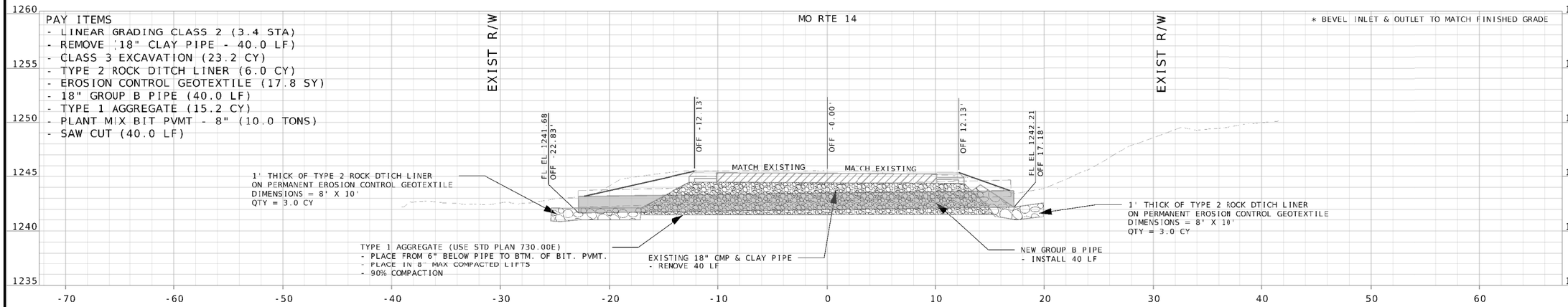
MoDOT

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © Bacon Farmer Workman Engineering & Testing Inc.

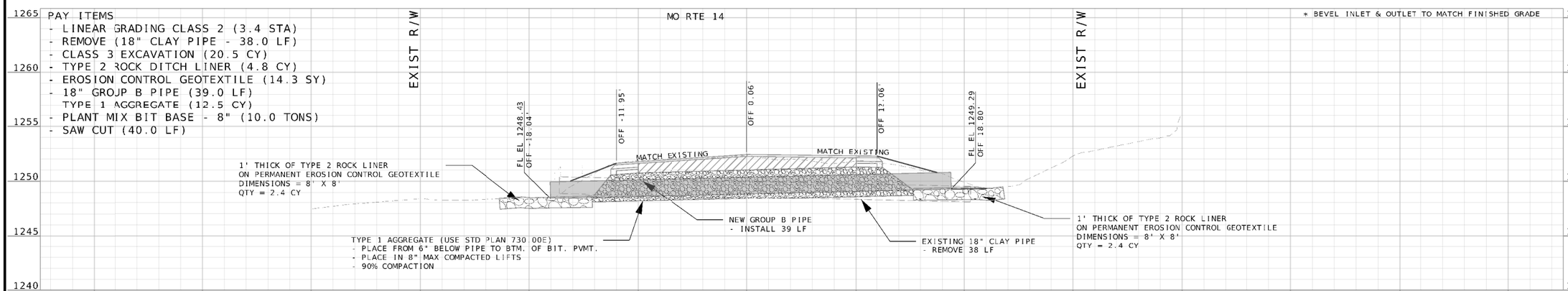
BFW

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 40.0 LF)
- CLASS 3 EXCAVATION (23.2 CY)
- TYPE 2 ROCK DITCH LINER (6.0 CY)
- EROSION CONTROL GEOTEXTILE (17.8 SY)
- 18" GROUP B PIPE (40.0 LF)
- TYPE 1 AGGREGATE (15.2 CY)
- PLANT MIX BIT PVMT - 8" (10.0 TONS)
- SAW CUT (40.0 LF)



PIPE 20 - LM 60.774

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 38.0 LF)
- CLASS 3 EXCAVATION (20.5 CY)
- TYPE 2 ROCK DITCH LINER (4.8 CY)
- EROSION CONTROL GEOTEXTILE (14.3 SY)
- 18" GROUP B PIPE (39.0 LF)
- TYPE 1 AGGREGATE (12.5 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40.0 LF)



PIPE 19 - LM 60.717

CULVERT SECTIONS
SHEET 13 OF 25

ERIC BRIAN WORKMAN E-30103 REGISTERED PROFESSIONAL ENGINEER STATE OF MISSOURI

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	58

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

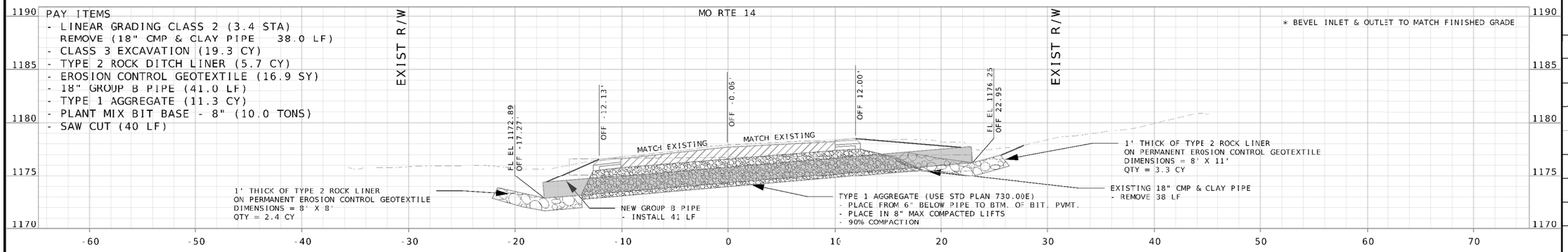
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Cape Girardeau, MO Office
3437 William St; Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

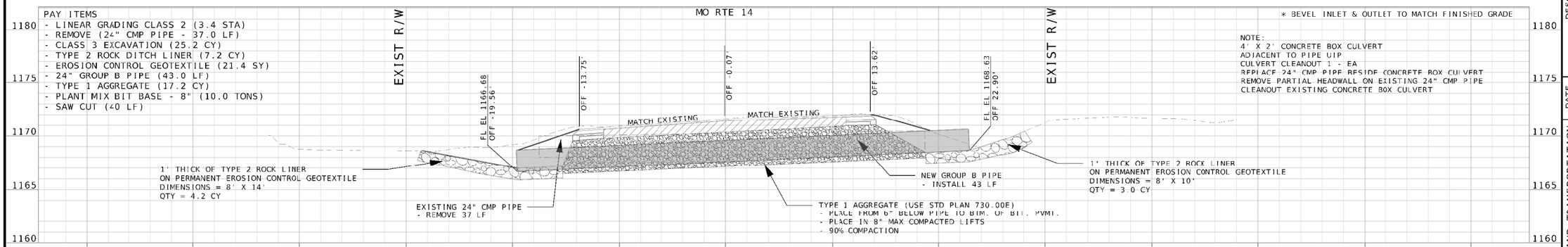
Copyright © / Bacon Farmer Workman Engineering & Testing Inc.

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CMP & CLAY PIPE 38.0 LF)
- CLASS 3 EXCAVATION (19.3 CY)
- TYPE 2 ROCK DITCH LINER (5.7 CY)
- EROSION CONTROL GEOTEXTILE (16.9 SY)
- 18" GROUP B PIPE (41.0 LF)
- TYPE 1 AGGREGATE (11.3 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



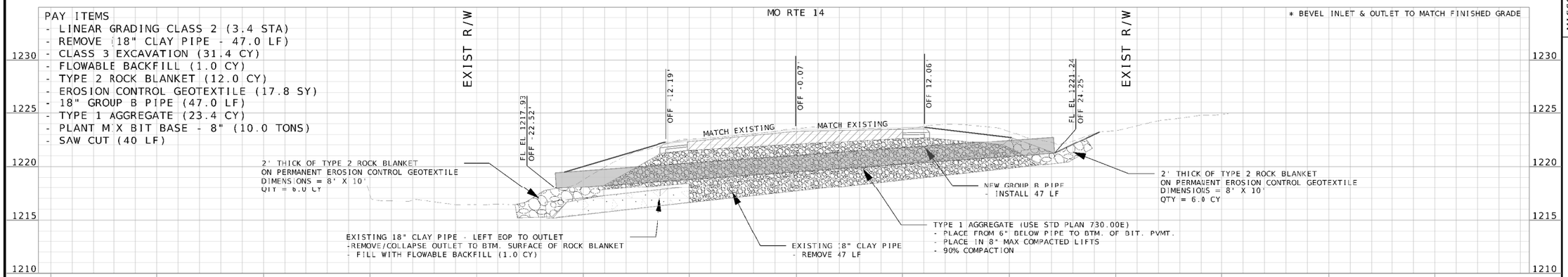
PIPE 23 - LM 61.511

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (24" CMP PIPE - 37.0 LF)
- CLASS 3 EXCAVATION (25.2 CY)
- TYPE 2 ROCK DITCH LINER (7.2 CY)
- EROSION CONTROL GEOTEXTILE (21.4 SY)
- 24" GROUP B PIPE (43.0 LF)
- TYPE 1 AGGREGATE (17.2 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 22 - LM 61.439

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 47.0 LF)
- CLASS 3 EXCAVATION (31.4 CY)
- FLOWABLE BACKFILL (1.0 CY)
- TYPE 2 ROCK BLANKET (12.0 CY)
- EROSION CONTROL GEOTEXTILE (17.8 SY)
- 18" GROUP B PIPE (47.0 LF)
- TYPE 1 AGGREGATE (23.4 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 21 - LM 60.920

CULVERT SECTIONS
SHEET 14 OF 25

STATE OF MISSOURI
ERIC WAYNE NUMAS
E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	59

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

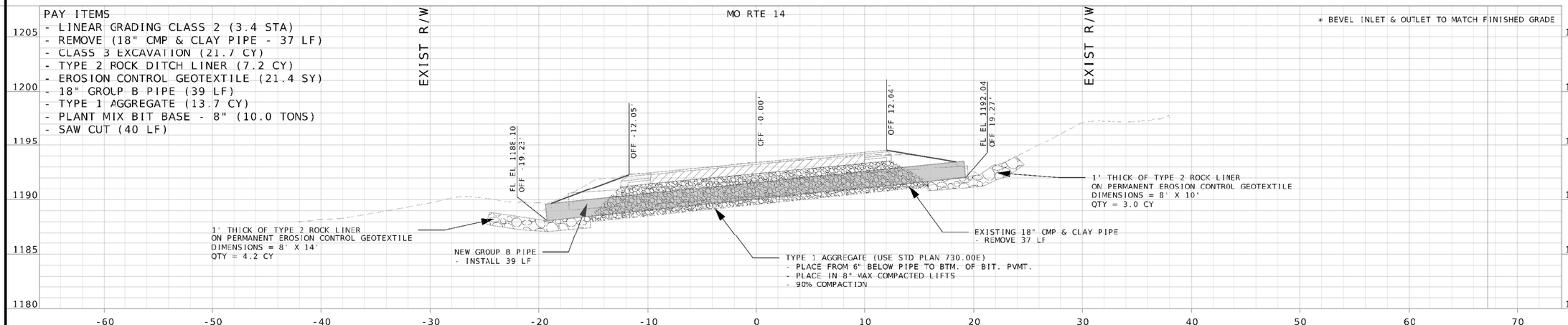
MoDOT

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

BFW

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CMP & CLAY PIPE - 37 LF)
- CLASS 3 EXCAVATION (21.7 CY)
- TYPE 2 ROCK DITCH LINER (7.2 CY)
- EROSION CONTROL GEOTEXTILE (21.4 SY)
- 18" GROUP B PIPE (39 LF)
- TYPE 1 AGGREGATE (13.7 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 24 - LM 61.577

CULVERT SECTIONS
SHEET 15 OF 25

STATE OF MISSOURI
ERIC KRAFF NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	60

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

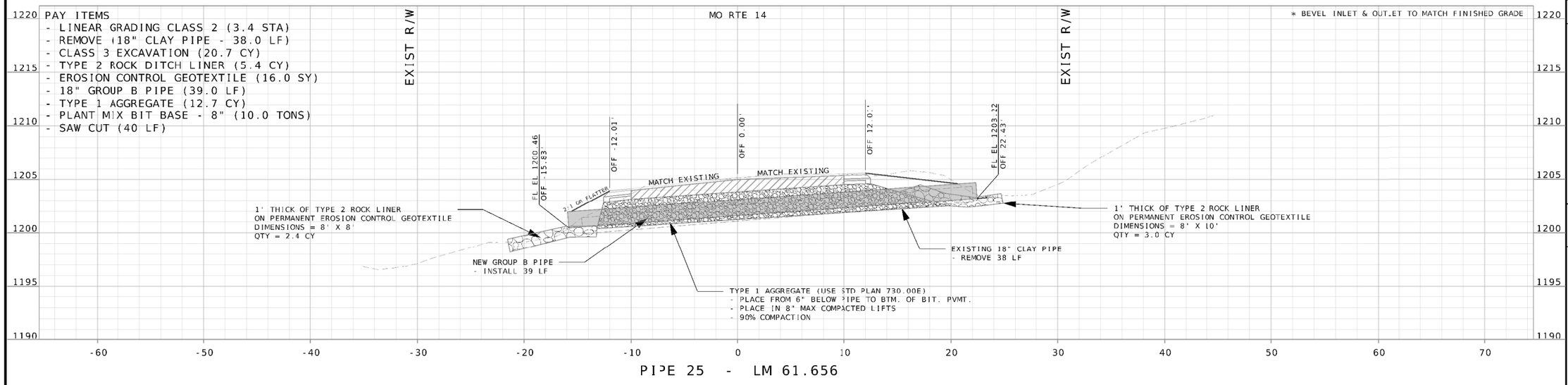
DESCRIPTION	DATE

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing Inc.

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE 18" CLAY PIPE - 38.0 LF)
- CLASS 3 EXCAVATION (20.7 CY)
- TYPE 2 ROCK DITCH LINER (5.4 CY)
- EROSION CONTROL GEOTEXTILE (16.0 SY)
- 18" GROUP B PIPE (39.0 LF)
- TYPE 1 AGGREGATE (12.7 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 25 - LM 61.656

CULVERT SECTIONS
SHEET 16 OF 25

STATE OF MISSOURI
ERIC BRYANT NUMBER E-30103
PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	61

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

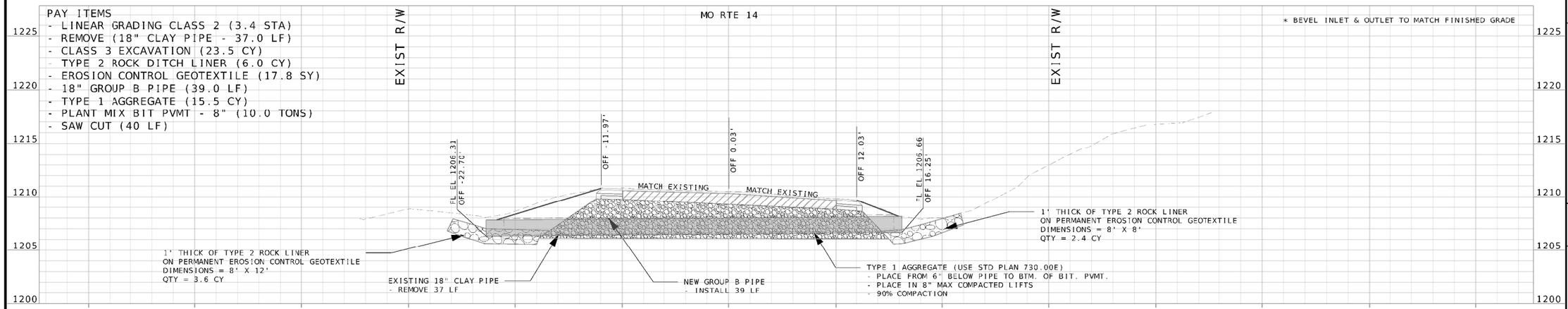
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

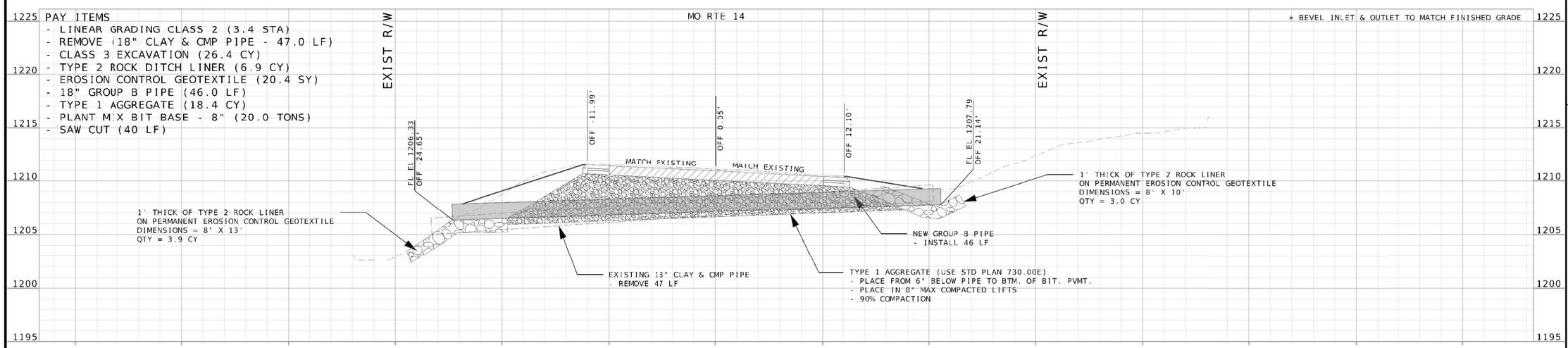
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 37.0 LF)
- CLASS 3 EXCAVATION (23.5 CY)
- TYPE 2 ROCK DITCH LINER (6.0 CY)
- EROSION CONTROL GEOTEXTILE (17.8 SY)
- 18" GROUP B PIPE (39.0 LF)
- TYPE 1 AGGREGATE (15.5 CY)
- PLANT MIX BIT PVMT - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 27 - LM 61.789

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY & CMP PIPE - 47.0 LF)
- CLASS 3 EXCAVATION (26.4 CY)
- TYPE 2 ROCK DITCH LINER (6.9 CY)
- EROSION CONTROL GEOTEXTILE (20.4 SY)
- 18" GROUP B PIPE (46.0 LF)
- TYPE 1 AGGREGATE (18.4 CY)
- PLANT MIX BIT BASE - 8" (20.0 TONS)
- SAW CUT (40 LF)



PIPE 26 - LM 61.751

CULVERT SECTIONS
SHEET 17 OF 25

STATE OF MISSOURI
ERIC BRUCE NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	62

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

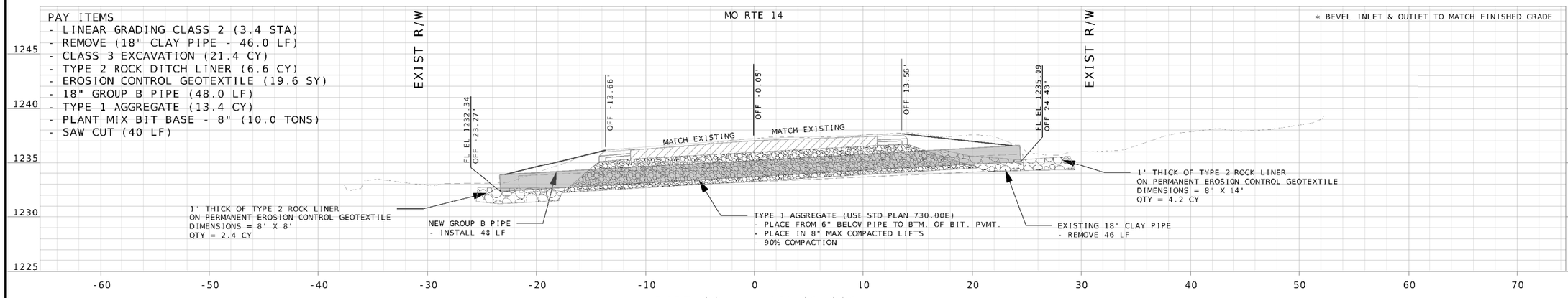
DESCRIPTION	DATE

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

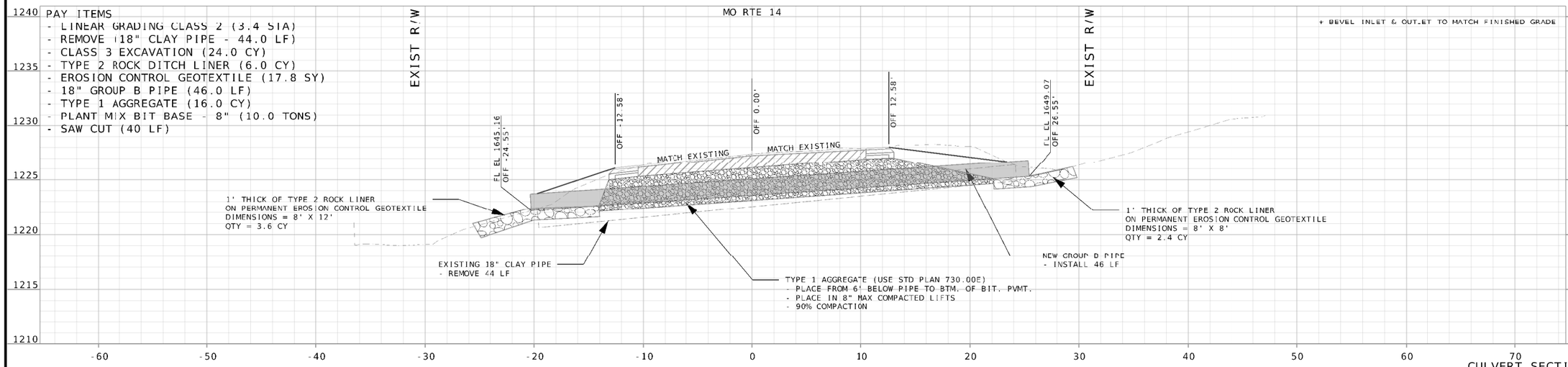
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 46.0 LF)
- CLASS 3 EXCAVATION (21.4 CY)
- TYPE 2 ROCK DITCH LINER (6.6 CY)
- EROSION CONTROL GEOTEXTILE (19.6 SY)
- 18" GROUP B PIPE (48.0 LF)
- TYPE 1 AGGREGATE (13.4 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 29 - LM 61.921

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 44.0 LF)
- CLASS 3 EXCAVATION (24.0 CY)
- TYPE 2 ROCK DITCH LINER (6.0 CY)
- EROSION CONTROL GEOTEXTILE (17.8 SY)
- 18" GROUP B PIPE (46.0 LF)
- TYPE 1 AGGREGATE (16.0 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 28 - LM 61.865

CULVERT SECTIONS
SHEET 18 OF 25

STATE OF MISSOURI
ERIC GRAFE NUMBER E-30108
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	63

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

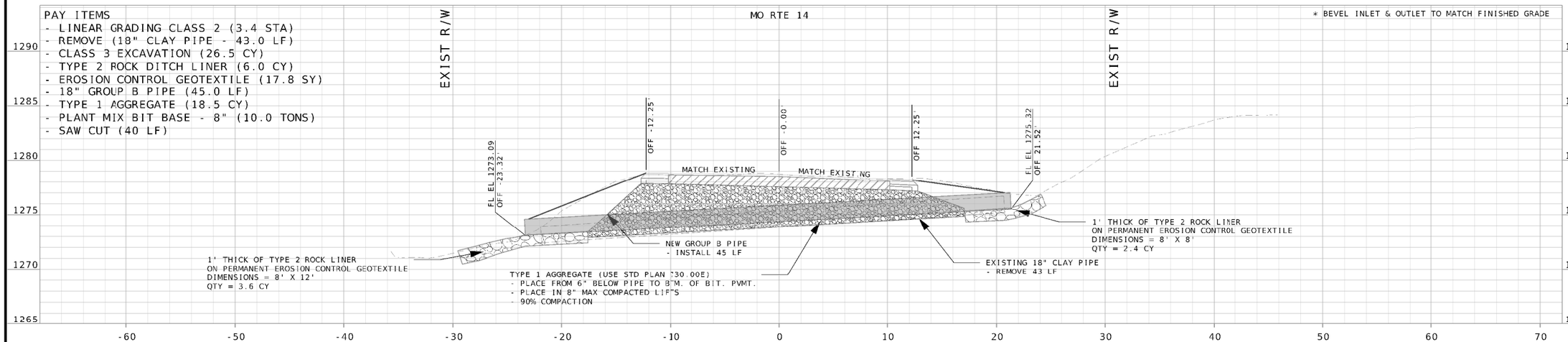
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
PO BOX 270
JEFFERSON CITY, MO 65102
1-888-ASK MODOT (1-888-275-6636)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

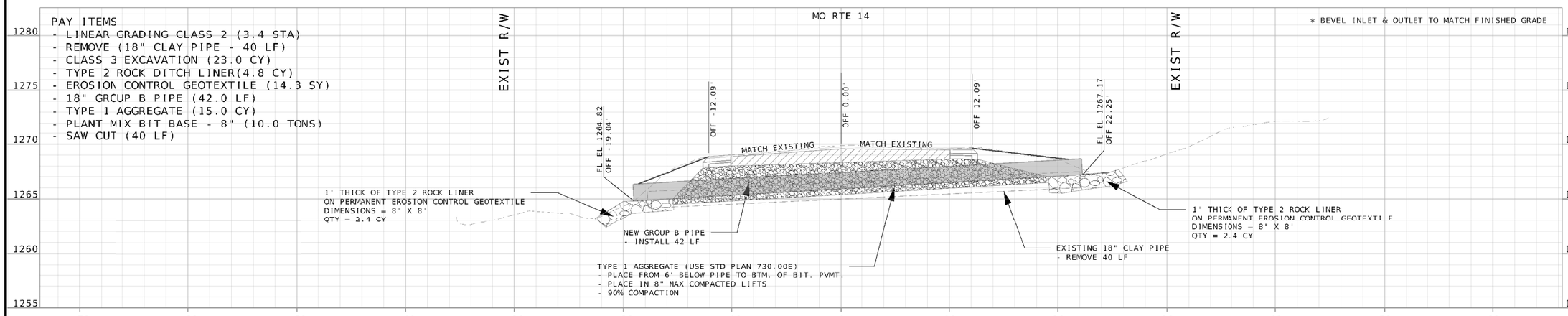
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 43.0 LF)
- CLASS 3 EXCAVATION (26.5 CY)
- TYPE 2 ROCK DITCH LINER (6.0 CY)
- EROSION CONTROL GEOTEXTILE (17.8 SY)
- 18" GROUP B PIPE (45.0 LF)
- TYPE 1 AGGREGATE (18.5 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 31 - LM 62.136

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 40 LF)
- CLASS 3 EXCAVATION (23.0 CY)
- TYPE 2 ROCK DITCH LINER(4.8 CY)
- EROSION CONTROL GEOTEXTILE (14.3 SY)
- 18" GROUP B PIPE (42.0 LF)
- TYPE 1 AGGREGATE (15.0 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 30 - LM 62.094

CULVERT SECTIONS
SHEET 19 OF 25

STATE OF MISSOURI
ERIC KRAFT
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	64

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

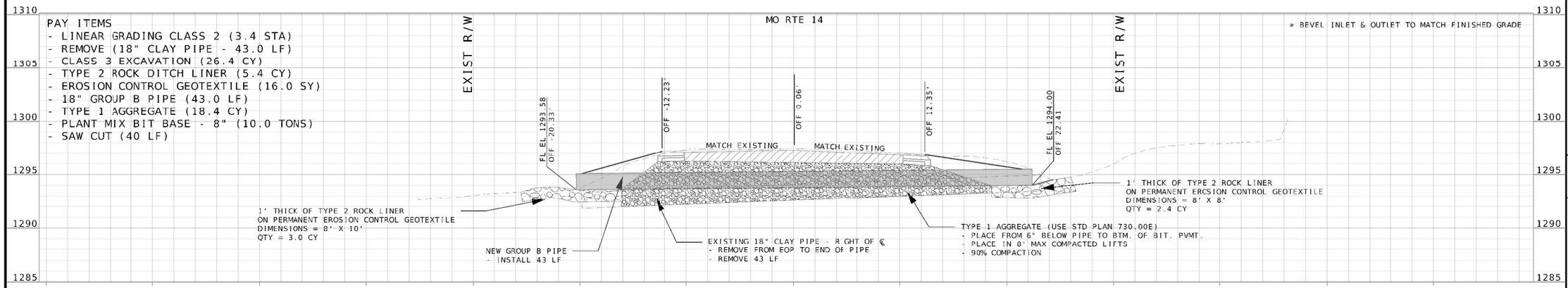
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

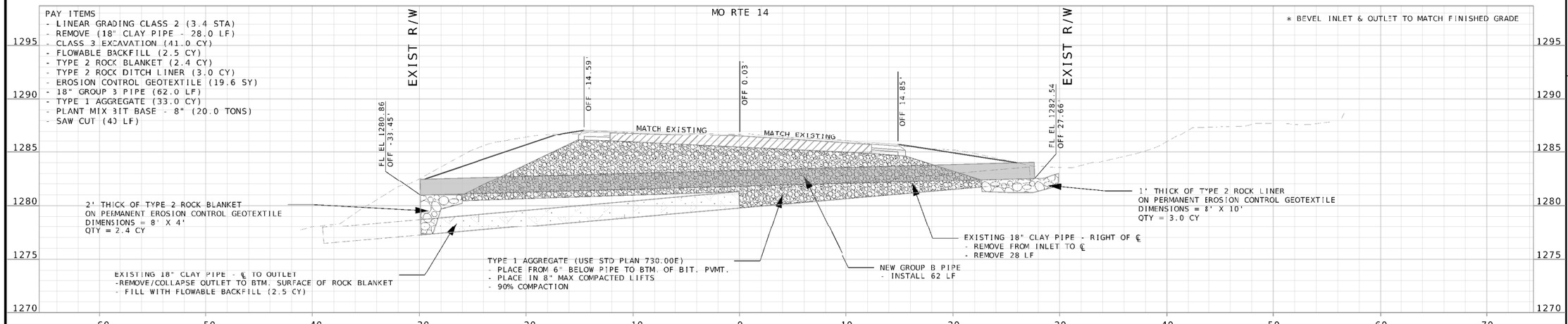
Copyright © / Bacon Farmer Workman Engineering & Testing Inc.

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 43.0 LF)
- CLASS 3 EXCAVATION (26.4 CY)
- TYPE 2 ROCK DITCH LINER (5.4 CY)
- EROSION CONTROL GEOTEXTILE (16.0 SY)
- 18" GROUP B PIPE (43.0 LF)
- TYPE 1 AGGREGATE (18.4 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 33 - LM 62.244

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 28.0 LF)
- CLASS 3 EXCAVATION (41.0 CY)
- FLOWABLE BACKFILL (2.5 CY)
- TYPE 2 ROCK BLANKET (2.4 CY)
- TYPE 2 ROCK DITCH LINER (3.0 CY)
- EROSION CONTROL GEOTEXTILE (19.6 SY)
- 18" GROUP 3 PIPE (62.0 LF)
- TYPE 1 AGGREGATE (33.0 CY)
- PLANT MIX BIT BASE - 8" (20.0 TONS)
- SAW CUT (40 LF)



PIPE 32 - LM 62.183

CULVERT SECTIONS
SHEET 20 OF 25

STATE OF MISSOURI
ERIC BRAFFET
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	65

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

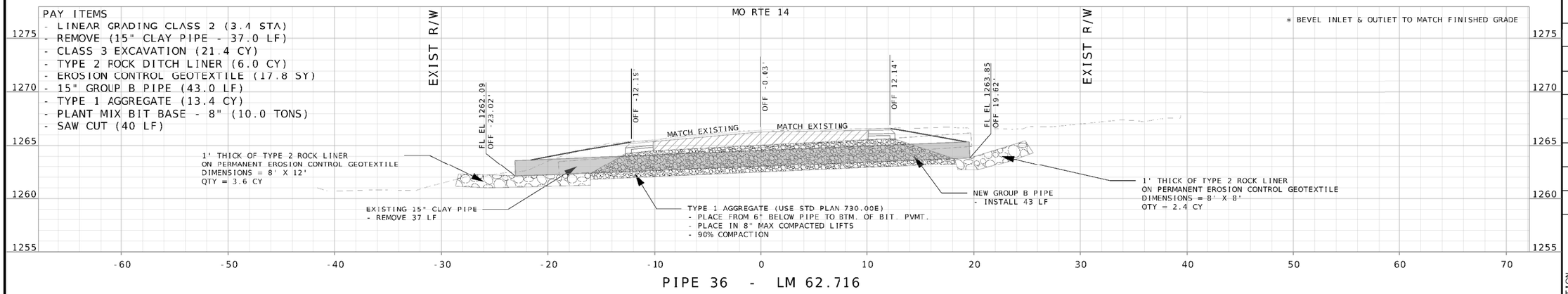
BRIDGE NO.

DESCRIPTION	DATE

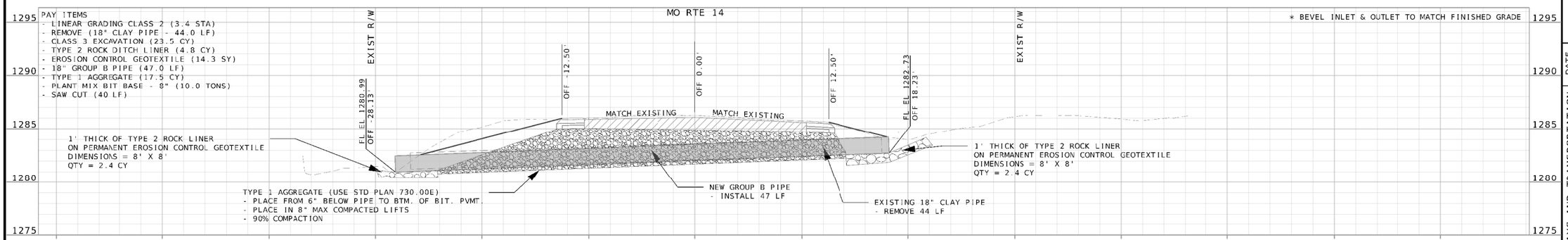
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK MODOT (1-888-275-6636)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

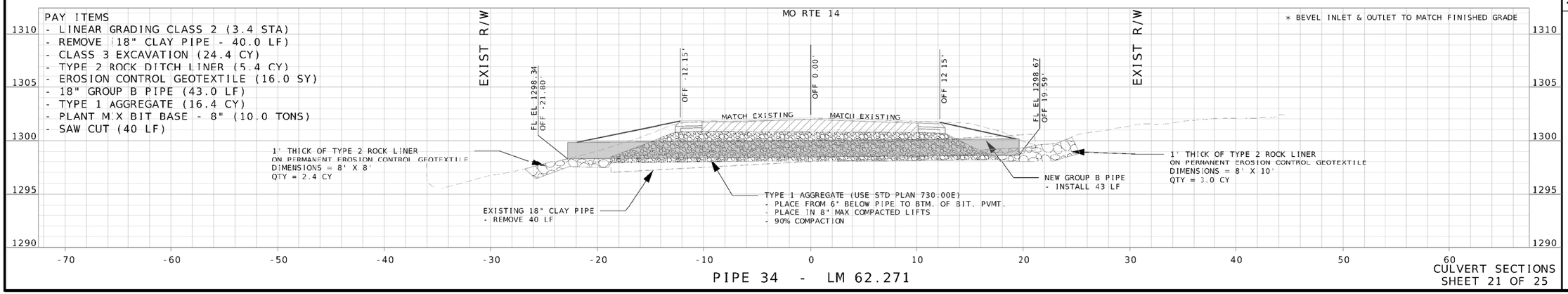
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.



PIPE 36 - LM 62.716



PIPE 35 - LM 62.449



PIPE 34 - LM 62.271

CULVERT SECTIONS
SHEET 21 OF 25

STATE OF MISSOURI
ERIC WAYNE GRAPE
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	66

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

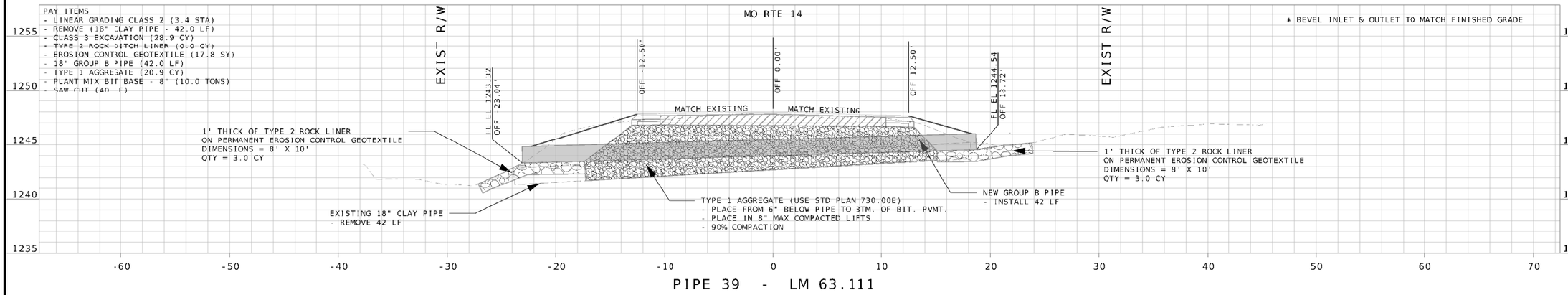
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MoDOT

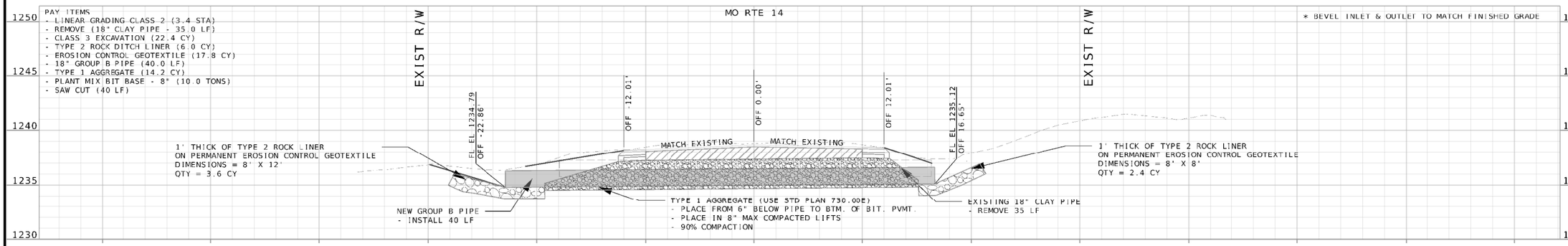
Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © Bacon Farmer Workman Engineering & Testing, Inc.

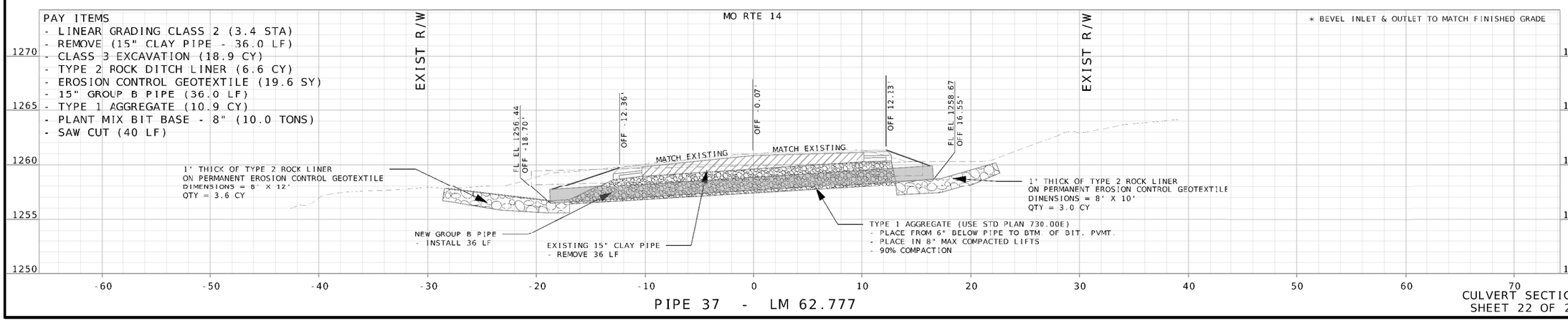
BFW



PIPE 39 - LM 63.111



PIPE 38 - LM 62.968



PIPE 37 - LM 62.777

CULVERT SECTIONS
SHEET 22 OF 25

STATE OF MISSOURI
ERIC WRAFF
NUMBER E-30108
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	67

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

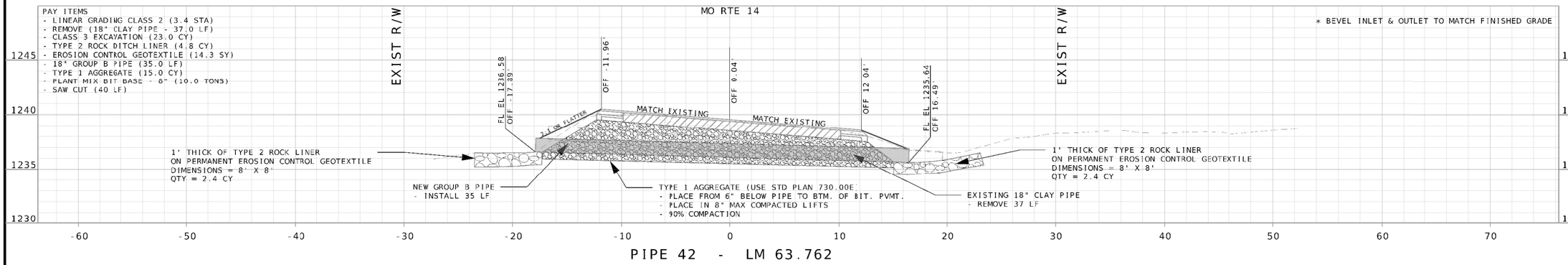
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

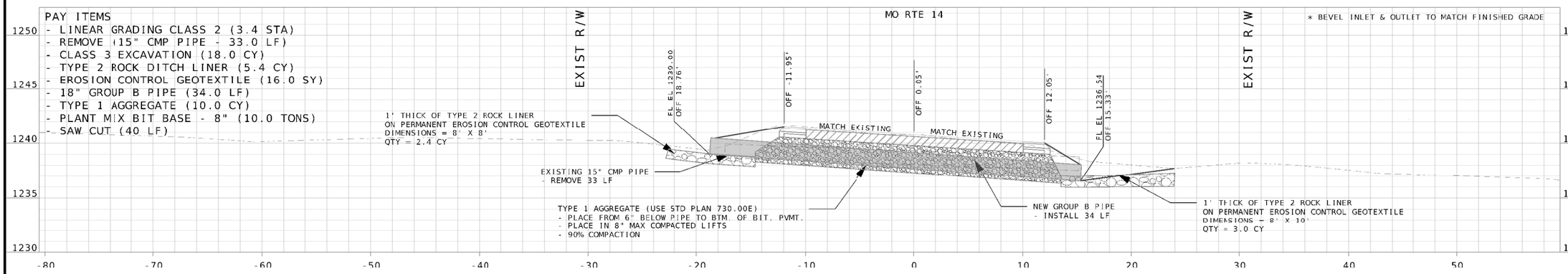
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

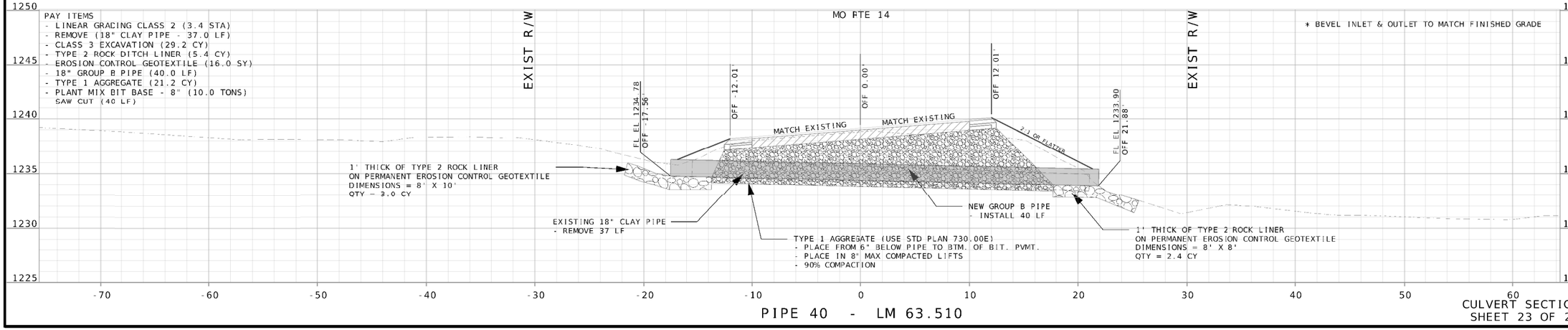
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.



PIPE 42 - LM 63.762



PIPE 41 - LM 63.672



PIPE 40 - LM 63.510

CULVERT SECTIONS
SHEET 23 OF 25

STATE OF MISSOURI
ERIC GRAPE
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	68

COUNTY
DOUGLAS

JOB NO.
J9P3808

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)

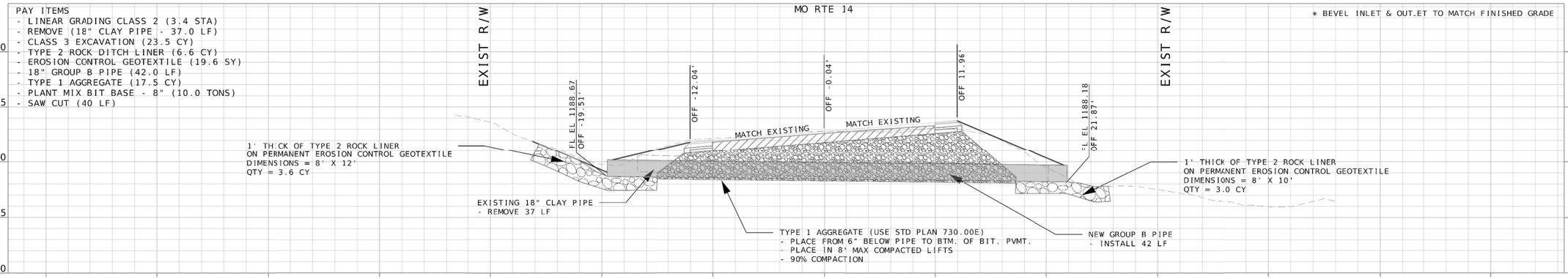
MoDOT

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

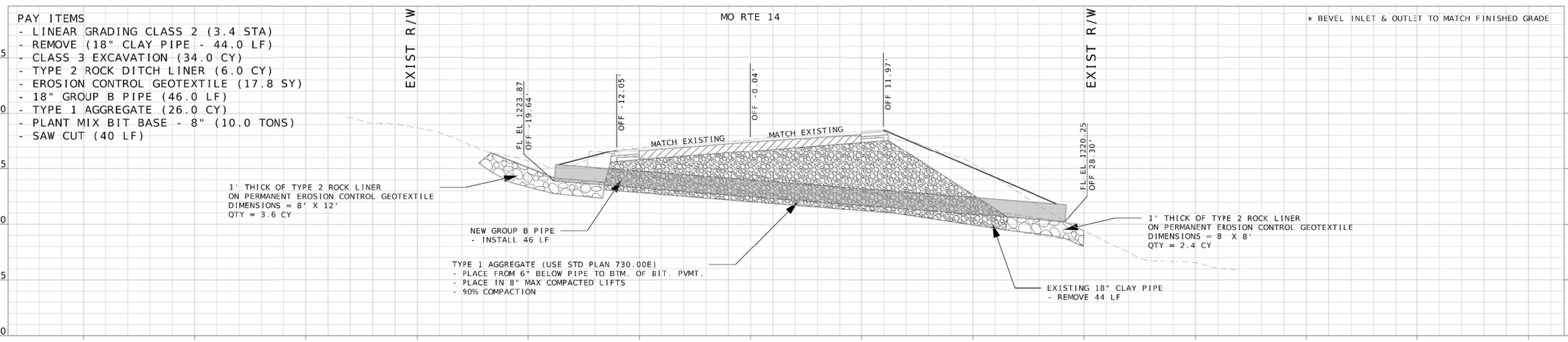
BFW

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 37.0 LF)
- CLASS 3 EXCAVATION (23.5 CY)
- TYPE 2 ROCK DITCH LINER (6.6 CY)
- EROSION CONTROL GEOTEXTILE (19.6 SY)
- 18" GROUP B PIPE (42.0 LF)
- TYPE 1 AGGREGATE (17.5 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 44 - LM 64.049

PAY ITEMS
- LINEAR GRADING CLASS 2 (3.4 STA)
- REMOVE (18" CLAY PIPE - 44.0 LF)
- CLASS 3 EXCAVATION (34.0 CY)
- TYPE 2 ROCK DITCH LINER (6.0 CY)
- EROSION CONTROL GEOTEXTILE (17.8 SY)
- 18" GROUP B PIPE (46.0 LF)
- TYPE 1 AGGREGATE (26.0 CY)
- PLANT MIX BIT BASE - 8" (10.0 TONS)
- SAW CUT (40 LF)



PIPE 43 - LM 63.913

CULVERT SECTIONS
SHEET 24 OF 25

STATE OF MISSOURI
ERIC KRAFFT
NUMBER E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	69

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

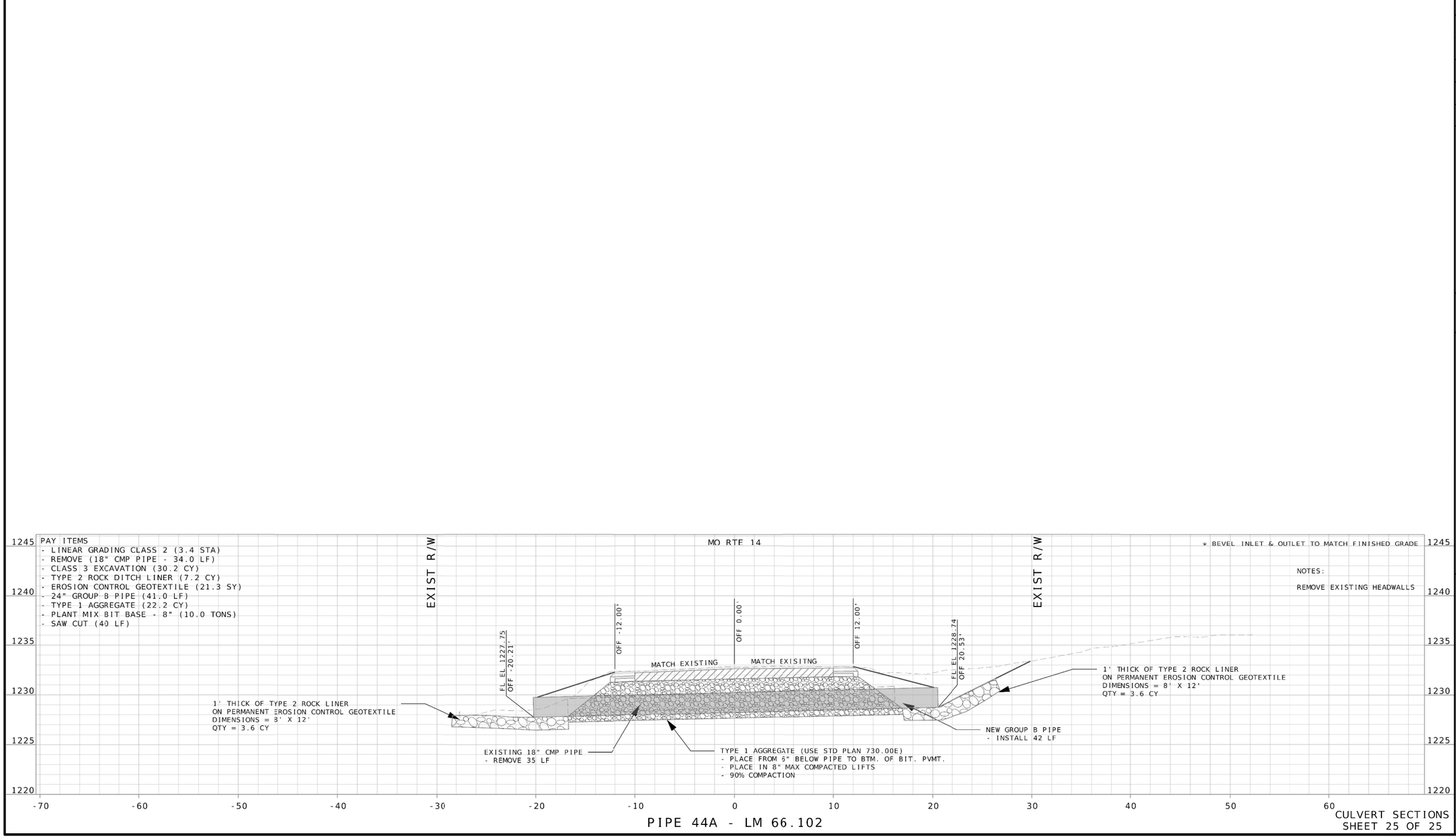
BRIDGE NO.

DESCRIPTION	DATE

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

Copyright © / Bacon Farmer Workman Engineering & Testing Inc.



PIPE 44A - LM 66.102

CULVERT SECTIONS
SHEET 25 OF 25

STATE OF MISSOURI
ERIC MICHAEL WILLIAMS
E-30103
REGISTERED PROFESSIONAL ENGINEER

DATE PREPARED
07/29/2026

ROUTE	STATE
14	MO
DISTRICT	SHEET NO.
SE	70

COUNTY
DOUGLAS

JOB NO.
J9P3808

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

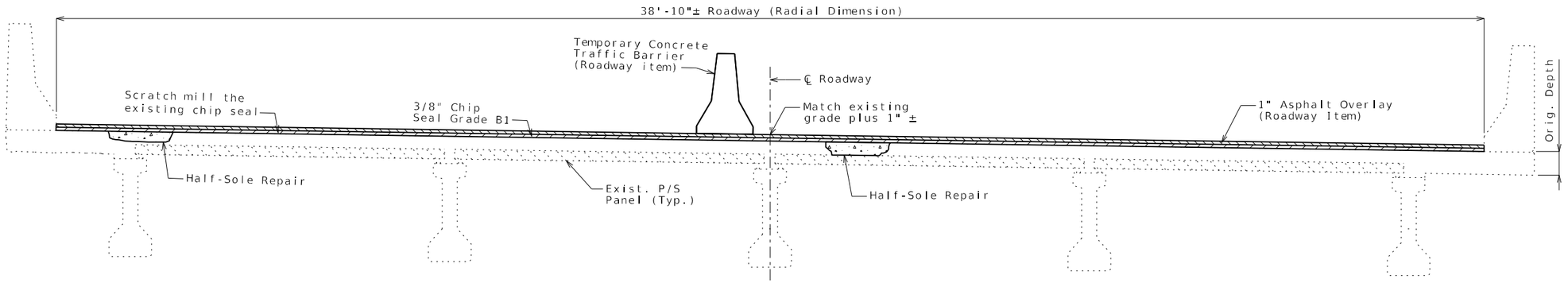
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com

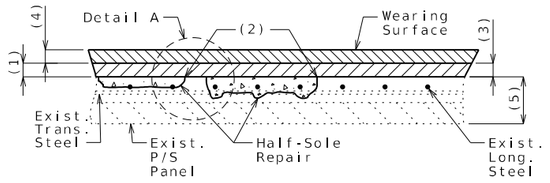
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

SEC/SUR 23 TWP 27N RGE 17W

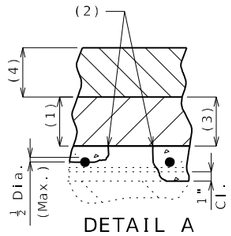
U.I.P. AND REHABILITATE EXISTING (6@52') PRESTRESSED CONCRETE I-GIRDER SPANS (SKEW: 10° R.A.)



TYPICAL SECTION THRU EXISTING DECK



HALF-SOLE REPAIR



DETAIL A

Clearance around top bar and around bottom bar at the intersection of top bar shall be required when more than half the diameter of the top bar is exposed.

(1) Removal of existing 3/8" ± chip seal.

(2) 1" vertical side shall be established outside the deteriorated area.

(3) 3/8" minimum chip seal Grade B1.

(4) 1" Asphalt Wearing Surface (Roadway Item).

(5) Original depth of deck.

Estimated Quantities

Item		Total
Removal of Seal Coat or Polymer Wearing Surface	sq. foot	12,245
Emulsified Asphalt, Seal Coat	gallon	544
Seal Coat Aggregate, Grade B1	sq. yard	1361
Half-Sole Repair	sq. foot	750

General Notes:

Design Specifications:

2002 AASHTO LFD (17th Ed.) Standard Specifications
Bridge Deck Rating = 6

Design Loading:

HS20-44 (1977 thru 1982 Interims)

Design Unit Stresses:

Class B-2 Concrete (Half-Sole Repair) f'c = 4,000 psi

Miscellaneous:

Roadway surfacing adjacent to bridge ends shall match new bridge wearing surface (roadway item).

All concrete repairs shall be in accordance with Sec 704, unless otherwise noted.

Outline of existing work is indicated by light dashed lines. Heavy lines indicate new work.

The contractor shall exercise care to ensure spillage over joint edges is prevented and that a neat line is obtained along any terminating edge of the wearing surface.

In order to maintain grade and a minimum thickness of wearing surface as shown on plans it may be necessary to use additional quantities of wearing surface at various locations throughout the structure. The cost of furnishing and installing the wearing surface will be considered completely covered in the contract unit price, including all additional labor, materials or equipment for variations in thickness of wearing surface.

Traffic Handling:

Traffic to be maintained on structure during construction. See roadway plans for traffic control.

REPAIRS TO BRIDGE: ROUTE 14 OVER BIG BEAVER CREEK

ROUTE 14 FROM ROUTE O TO ROUTE K
ABOUT 2.8 MILES EAST OF ROUTE O
BEGINNING STATION 545+79.20 ± (Match Existing)

FREDERICK A. MENSAH
NUMBER PE-2022039709
STATE OF MISSOURI PROFESSIONAL ENGINEER

DATE PREPARED 06-25-2026
ROUTE 14 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY DOUGLAS
JOB NO. J9P3808
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A36731

DESCRIPTION | DATE

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: E2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

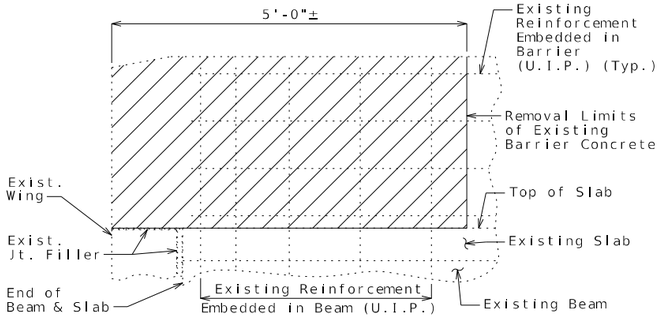
Detailed Apr. 2026
Checked Apr. 2026

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

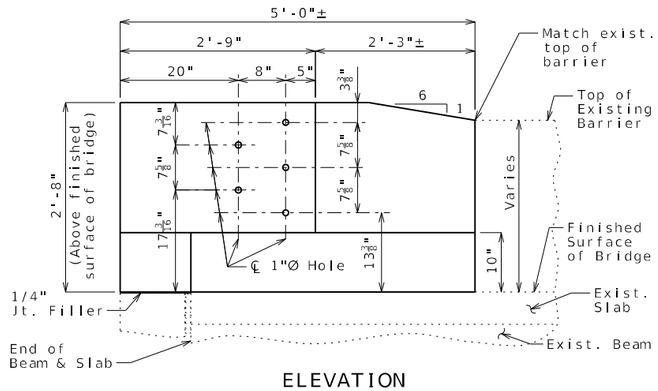
$FILE$ $TIME$ $DATE$

SEC/SUR 33 TWP 27N RGE 16W

U.I.P. & REHABILITATE EXISTING (70'-0", 90'-0") SIMPLE PRESTRESSED CONCRETE SPREAD BOX BEAM SPANS

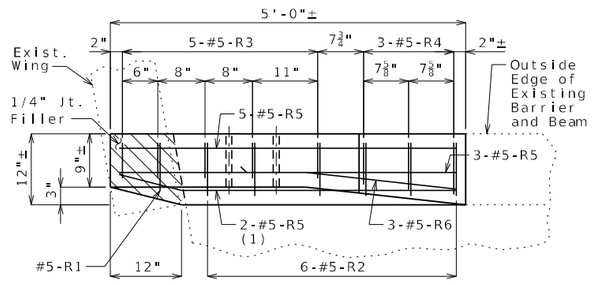


PART ELEVATION SHOWING CONCRETE REMOVAL

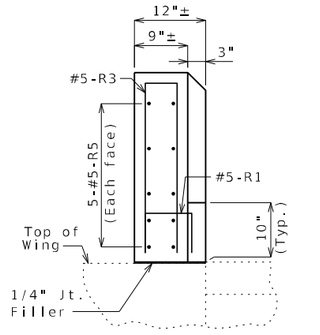


ELEVATION

Estimated Quantities		
Item		Total
Barrier End Modification	each	4



PLAN (3)



ELEVATION A-A

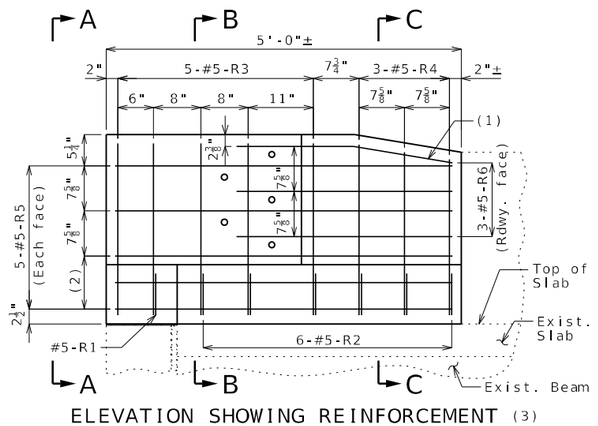
(1) Bend in field.

(2) 2 Spa. @ 4½"

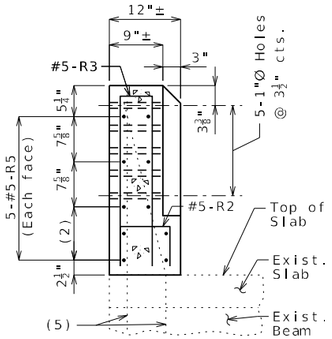
(3) Existing reinforcement not shown for clarity.

(4) Existing longitudinal reinforcement not shown for clarity.

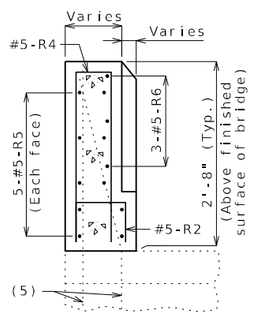
(5) Existing reinforcement embedded in beam (U.I.P.) (Bend in field as needed) (Typ.)



ELEVATION SHOWING REINFORCEMENT (3)



SECTION B-B (4)



SECTION C-C (4)

General Notes:

Design Specifications:
2002 AASHTO LFD (17th Ed.) Standard Specifications

Design Unit Stresses:
Class B-1 Concrete f'c = 4,000 psi
Reinforcing Steel (ASTM A615 Grade 60) fy = 60,000 psi

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

Miscellaneous:
One lane of traffic shall remain open during construction. See roadway plans for traffic control.

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

Outline of existing work is indicated by light dashed lines. Heavy lines indicate new work.

All reinforcement in barrier end modification shall be epoxy coated.

Bars bonded in existing concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, existing bars shall extend into new concrete at least 40 diameters for plain bars and 30 diameters for deformed bars, unless otherwise noted.

The area exposed by the removal of concrete and not covered with new concrete shall be coated with a qualified special mortar in accordance with Sec 704.

Cost of removing existing barrier concrete, and cost of furnishing and installing new concrete, new reinforcing steel, and any other work incidental to the barrier end modification, complete in place, will be considered completely covered by the contract unit price for Barrier End Modification.

REPAIRS TO BRIDGE:
ROUTE 14 OVER COWSKIN CREEK
ROUTE 14 FROM ROUTE K TO ROUTE 5
ABOUT 0.3 MILES EAST OF ROUTE K
BEGINNING STATION 99+85.25± (MATCH EXISTING)

BARRIER MODIFICATION FOR GUARDRAIL ATTACHMENT

Detailed Mar. 2026
Checked Mar. 2026

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

$FILE$ $TIME$ $DATE$

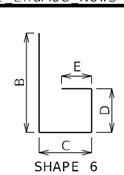
STATE OF MISSOURI
FREDERICK A. MENSAH
NUMBER PE-2022039709
PROFESSIONAL ENGINEER

DATE PREPARED 06-25-2026
ROUTE 14 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY DOUGLAS
JOB NO. J9P3808
CONTRACT ID.
PROJECT NO.
BRIDGE NO. B04351

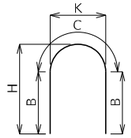
DESCRIPTION | DATE

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

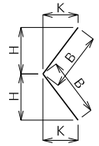
Cape Girardeau, MO Office
3437 William St, Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © Bacon Farmer Workman Engineering & Testing, Inc.



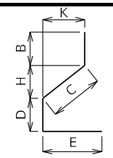
SHAPE 6
or 6S



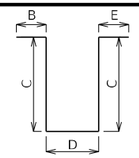
SHAPE 7



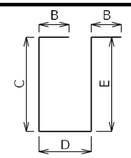
SHAPE 8
or 8S



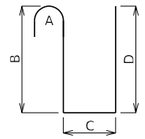
SHAPE 9
or 9S



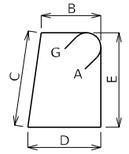
SHAPE 10
or 10S



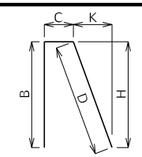
SHAPE 11
or 11S



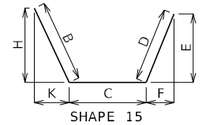
SHAPE 12



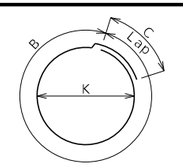
SHAPE 13S



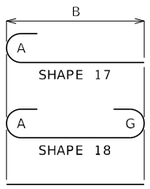
SHAPE 14
or 14S



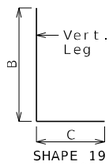
SHAPE 15
or 15S



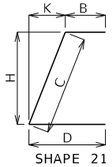
SHAPE 16



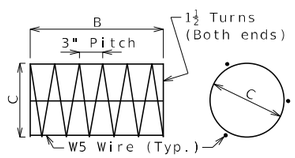
SHAPE 17
SHAPE 18
SHAPE 20



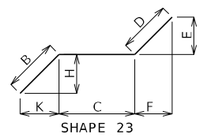
SHAPE 19
or 19S



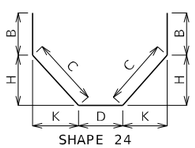
SHAPE 21
or 21S



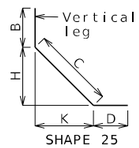
SHAPE 22



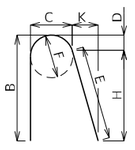
SHAPE 23
or 23S



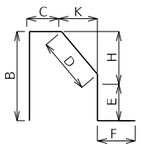
SHAPE 24
or 24S



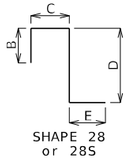
SHAPE 25
or 25S



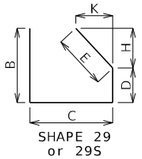
SHAPE 26



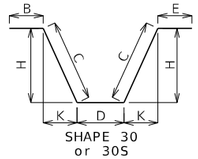
SHAPE 27S



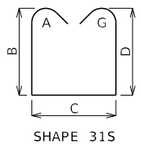
SHAPE 28
or 28S



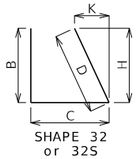
SHAPE 29
or 29S



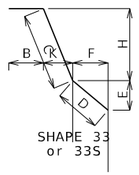
SHAPE 30
or 30S



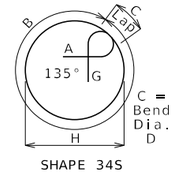
SHAPE 31S



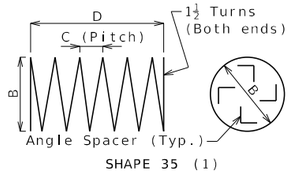
SHAPE 32
or 32S



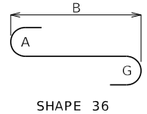
SHAPE 33
or 33S



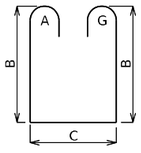
C = Bend Dia. D
SHAPE 34S



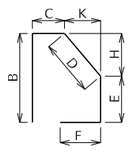
SHAPE 35 (1)



SHAPE 36



SHAPE 37S

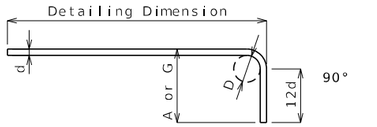


SHAPE 38S

Finished Bend Diameters D and Hook Dimensions

Standard Pin Bend Shapes

Size	Case	D	A or G		J
			90°	180°	180°
#4	1	3"	8"	6"	4"
#5	1	3¾"	10"	7"	5"
#6	1	4½"	12"	8¼"	6"
#7	2	5¼"	14"	9¾"	7"
	3	7"	15"	11½"	8¾"
#8	2	6"	16"	11"	8"
	3	8"	17"	13¼"	10"
#9	1	9½"	19½"	15½"	11¾"
#10	1	10¾"	22"	17½"	13¼"
#11	1	12"	24½"	19½"	14⅞"
#14	1	18¼"	31¼"	27½"	21⅝"
#18	1	24"	41½"	36¼"	28½"

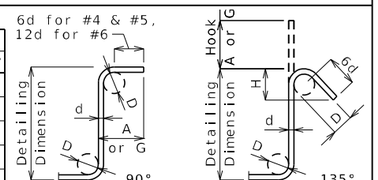


Stirrup Pin Bend Shapes (S)

Size	Case	D	A or G			H	J
			90°	135°	180°	135°	180°
#4	2	2"	4½"	4½"	5"	2⅞"	3"
	3	3"	5"	5¼"	6"	3"	4"
#5	2	2½"	5¾"	5¾"	5¾"	3⅝"	3¾"
	3	3¾"	6¼"	6½"	7"	3⅞"	5"
#6	1	4½"	12"	7¾"	8¼"	4⅝"	6"

Applicable for all grades of steel.

Case 1 applies to all reinforcement. Case 2 applies to all reinforcement except for galvanized bars. Case 3 applies to galvanized bars only.



BENDING DIAGRAMS

Nominal lengths are based on out to out dimensions shown in bending diagrams and are listed to the nearest inch for fabricator's use. Actual lengths are measured along centerline bar to the nearest inch. Weights are based on actual lengths.

Reinforcing steel (ASTM A615 Grade 60) fy = 60,000 psi

Codes: C = Required coatings, where E = Epoxy Coated and G = Galvanized.

SH = Required shape, see bending diagrams.

V = Sets of varied bars and number of bars of each length. Bar dimensions vary in equal increments between dimensions shown on this line and the following line and the actual length dimension shown on this line and the following line vary by the specified increment.

All dimensions are out to out.

Shapes ending with an S shall be bent in accordance with stirrup pin bend shapes.

Unless otherwise noted, finished bending diameter D is the same for all bends of a shape.

(1) Shall be a deformed or plain spiral bar or wire.

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 Totals (Pounds)

	Size	Substructure		Superstructure			Entire Bridge	
		Plain	Epoxy	Slab	Barrier	Slip Form	Plain	Epoxy
By Size	4	0	0	0	0	0	0	0
	5	0	0	0	453	0	0	453
	6	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0
By Type		0	0	0	453	0	0	453

All superstructure reinforcing steel shall be epoxy coated unless otherwise specified.

Bill of Reinforcing Steel

No. Req.	Size/ Mark	Location	Codes			Dimensions B	C	D	E	F	H	K	Nom. Length	Actual Length	Weight
						ft in.	ft in.	ft in.	ft in.	ft in.	ft in.	ft in.	ft in.	ft in.	lb
		End Post Mod.													
4	5 R1	MODIFIED END	E	10S			7.00	8.00					1 10	1 7	7
24	5 R2	MODIFIED END	E	10S			7.00	9.00					1 11	1 8	42
20	5 R3	MODIFIED END	E	10S			2 5.00	6.00					5 4	5 1	106
12	5 R4	MODIFIED END	E	10S	4		2 4.75	7.00					5 5	5 2	
		Incr. = 2.000"					2 2.25	8.50					5 1	4 10	63
40	5 R5	MODIFIED END	E	20		4 9.00							4 9	4 9	198
12	5 R6	MODIFIED END	E	15S		11.25	2 1.50				1.25	11.25	3 1	2 11	37

BENDING DIAGRAMS AND REINFORCING STEEL TOTALS

Detailed Mar. 2026
Checked Mar. 2026

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

STATE OF MISSOURI PROFESSIONAL ENGINEER
FREDERICK A. MENSAH
NUMBER PE-2022039709

DATE PREPARED 06-25-2026
ROUTE 14 | STATE MO
DISTRICT BR | SHEET NO. 2
COUNTY DOUGLAS
JOB NO. J9P3808
CONTRACT ID.
PROJECT NO.
BRIDGE NO. B04351

DESCRIPTION | DATE

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

Cape Girardeau, MO Office
3437 William St. Cape Girardeau, MO 63701
Certificate of Authority: F2007028644
Phone: 573-222-5632 / BFWengineers.com
Copyright © / Bacon Farmer Workman Engineering & Testing, Inc.

$FILE$ $TIME$ $DATE$