

Foundation Data				
Type	Design Data	Bent Number		
		1	2	3
Load Bearing Pile	Pile Type and Size	HP 12x53	--	HP 12x53
	Number	ea 7	--	7
	Approximate Length Per Each	ft 21	--	17
	Pile Point Reinforcement	ea 7	--	7
	Min. Galvanized Penetration (Elev.)	ft Full Length	--	Full Length
	Pile Driving Verification Method	DT	--	DT
	Resistance Factor	0.65	--	0.65
Rock Socket	Minimum Nominal Axial Compressive Resistance	kip 270	--	402
	Number	ea --	3	--
	Foundation Material	--	Limestone	--
	Elevation Range	ft --	576.3-568.3	--
	Minimum Nominal Axial Compressive Resistance (Side Resistance)	ksf --	22.4	--
Minimum Nominal Axial Compressive Resistance (Tip Resistance)	ksf --	400	--	

DT = Dynamic Testing

Load Bearing Piles:

$$\text{Minimum Nominal Axial Compressive Resistance} = \frac{\text{Maximum Factored Loads}}{\text{Resistance Factor}}$$

Rock Socket (Drilled Shafts):

$$\text{Minimum Nominal Axial Compressive Resistance} = \frac{\text{Maximum Factored Loads}}{\text{Resistance Factors}}$$

Driven Piles:

Prebore for piles at End Bents No. 1 and No. 3 to elevations 579.00 and 576.80, respectively.

All piles shall be galvanized full length.

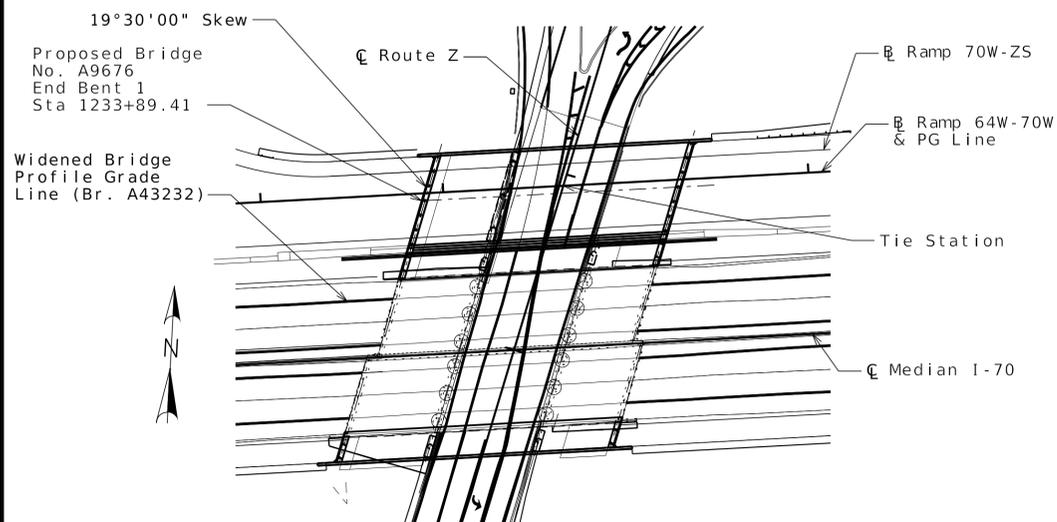
Manufactured pile point reinforcement shall be used on all piles in this structure.

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

Prebore holes shall be backfilled with sand (or other approved material), in accordance with Sec 702, before piles are driven to bearing.

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

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



LOCATION SKETCH

General Notes:

Design Specifications:

2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)
Seismic Design Category = A (Seismic Details plus Abutment Seismic Design)

Design Loading:

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

Design Unit Stresses:

Class B Concrete (Substructure) $f'c = 3,000$ psi
Class B-2 Concrete (Drilled Shafts & Rock Sockets) $f'c = 4,000$ psi
Class B-1 Concrete (Barrier) $f'c = 4,000$ psi
Class B-2 Concrete (Superstructure, except Prestressed Girders and Barrier) $f'c = 4,000$ psi
Reinforcing Steel (Grade 60) $fy = 60,000$ psi
Structural Steel HP Pile (ASTM A709 Grade 50) $fy = 50,000$ psi
For prestressed girder stresses, see Sheets No. 15 & 16.

Neoprene Pads:

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

Pile Protective Coatings :

Piles shall be galvanized in accordance with Sec. 702 and Sec. 1081.

Joint Filler:

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

Reinforcing Steel:

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

All exposed substructure elements will contain epoxy coated reinforcing.

Traffic Handling:

Vertical clearance for Route Z traffic during construction shall be 15 ft. minimum over all lanes of live traffic as shown in each phase of the Maintenance of Traffic plans.

Structure to be closed during construction. Traffic to be maintained on other structures during construction. See Maintenance of Traffic Plans for traffic control.

Concrete Protective Coatings:

Protective coating for concrete bents and piers (Epoxy) shall be applied to all exposed substructure surfaces in accordance with MoDOT EPG Sec. 711.

Miscellaneous:

High strength bolts, nuts and washers will be sampled for quality assurance as specified in Sec 106.

Stay-In-Place Forms:

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

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

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

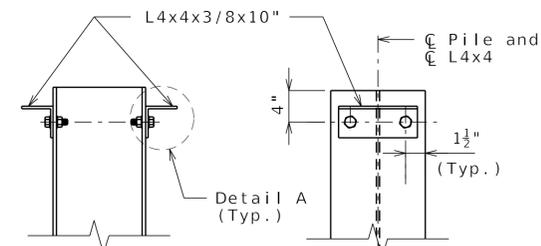
The design of stay-in-place corrugated steel forms is per manufacturer which shall be in accordance with Sec 703 for falsework and forms. Maximum actual weight of corrugated steel forms allowed shall be 4 psf assumed for girder loading.

Aesthetics:

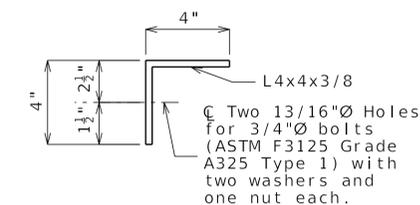
Aesthetic Stain shall be applied to the vertical faces of the exterior barrier, deck and Prestressed Concrete Girders as shown on the plans in accordance with Sec 711. The color of the stain shall be opaque gray, matching Sherwin Williams exterior satin latex paint, color "7066 Gray Matters".

Standard Plans:

609.00R
617.10N
706.35H

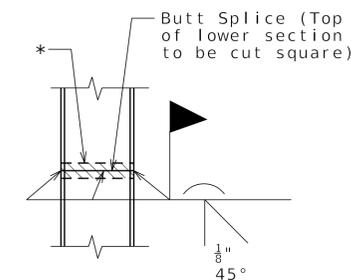


DETAILS OF HP PILE ANCHORS



DETAIL A

Angles shall be coated with a minimum of two coats of non-aluminum epoxy mastic primer to provide a dry film thickness of 4 mils minimum, 8 mils maximum, or galvanized in accordance with Sec 1081. Bolts, washers and nuts shall be galvanized in accordance with AASHTO M 232 (ASTM A153), Class C.



STEEL PILE SPLICE
(If required)

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

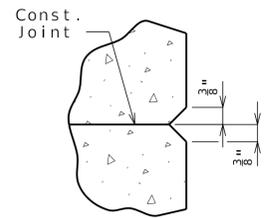
Detailed Nov 2025
Checked Nov 2025

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

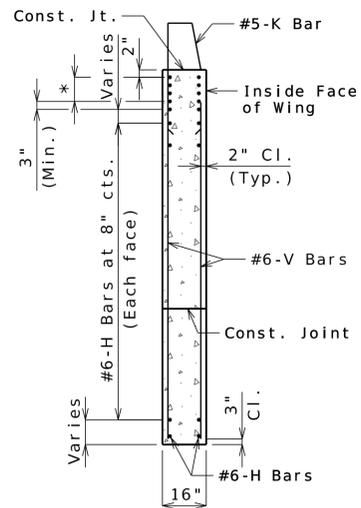
Sheet 3 of 33

GENERAL NOTES

DATE PREPARED 12/5/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. A9676-03
COUNTY ST. CHARLES	
JOB NO. JST0020	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A9676	
DESCRIPTION	DATE
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	
715 KIRK DRIVE KANSAS CITY, MO 64105-1310 CERTIFICATE OF AUTHORITY NO. 001270 601 HONOR ST. SUITE 201 - JEFFERSON CITY, MO 65102 PHONE 872-653181 CERTIFICATE OF AUTHORITY NO. 001270 ENGINEERING WWW.BARTLETTWEST.COM	

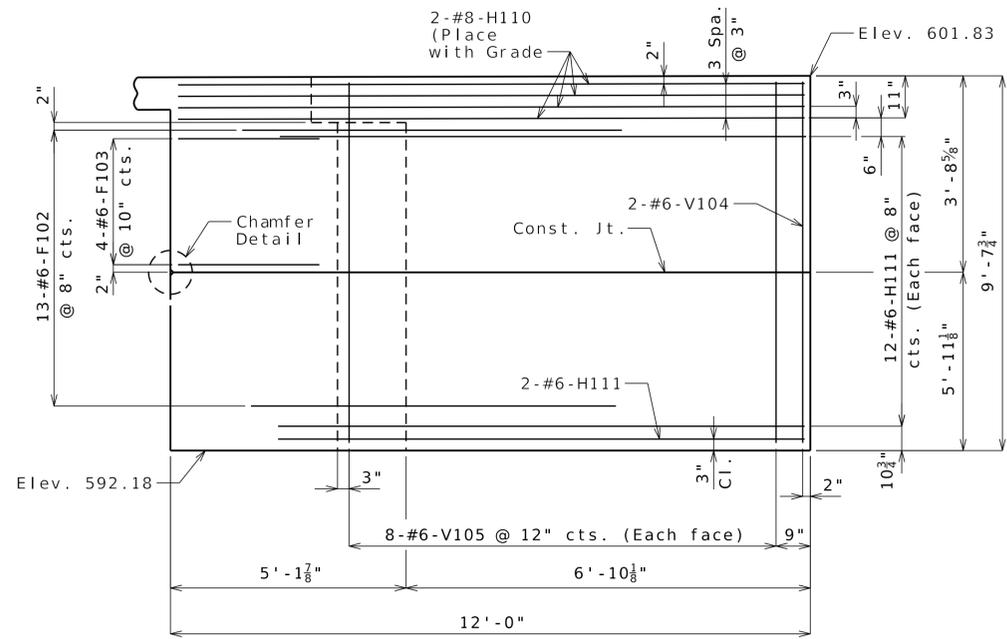


CHAMFER DETAIL

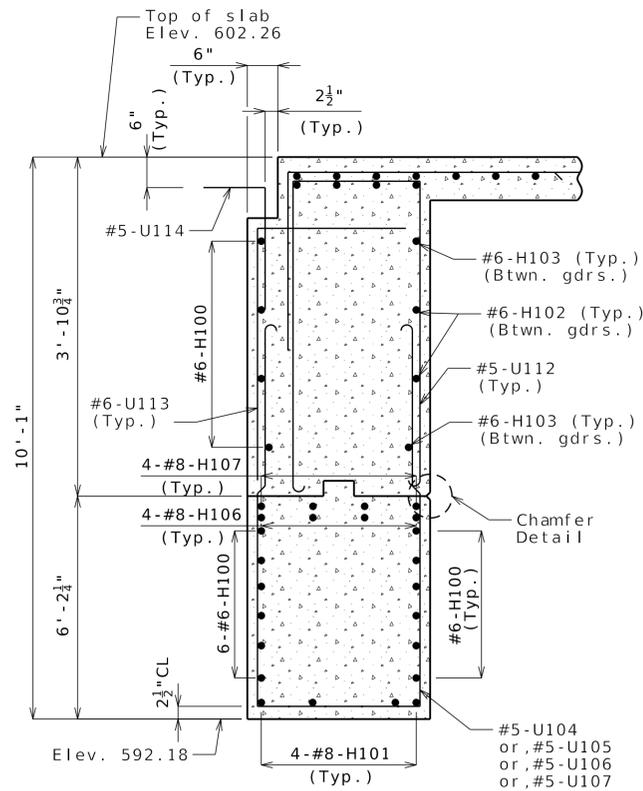


TYPICAL SECTION THRU WING

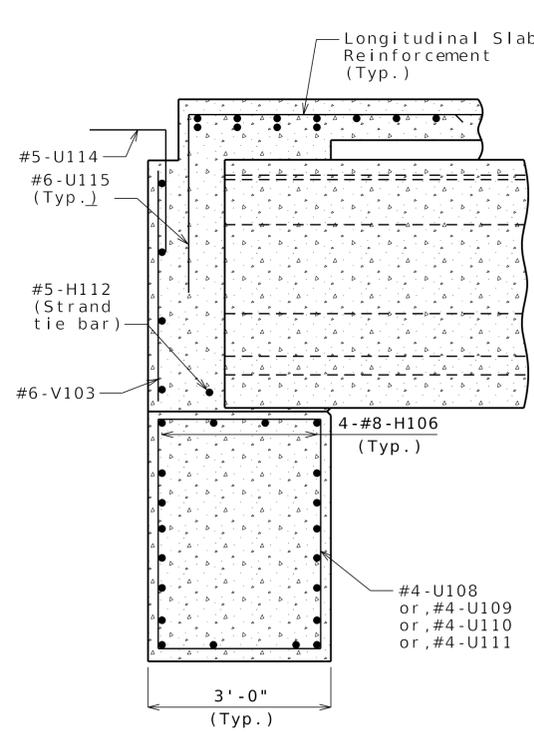
* #8-H Bars at 3" cts. (Each face)(Place with grade)



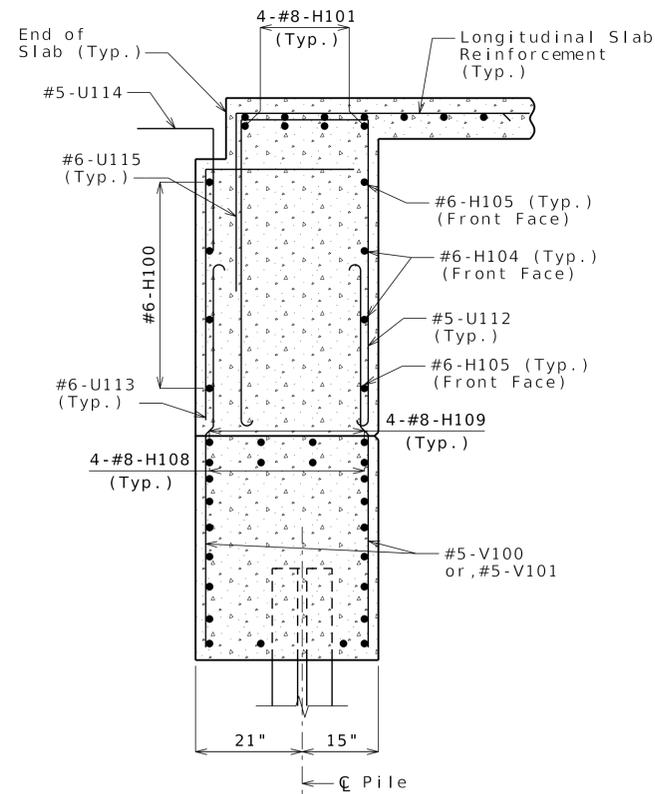
ELEVATION E-E



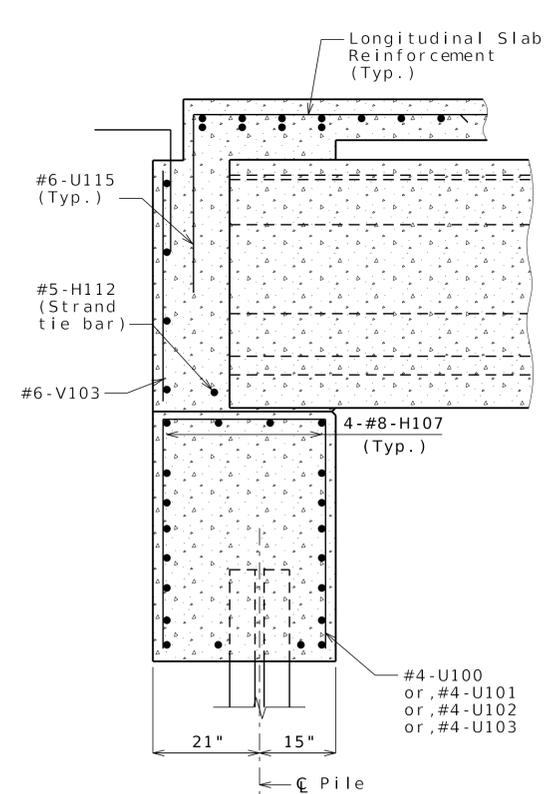
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

General Notes:

Work this sheet with Sheets No. 4 & 5.

For reinforcement of the barrier, see Sheet No. 23.

DETAILS OF END BENT NO. 1

Detailed Nov 2025
Checked Nov 2025

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

Sheet 6 of 33

DATE PREPARED 12/5/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. A9676-06
COUNTY ST. CHARLES	
JOB NO. JST0020	
CONTRACT ID.	

PROJECT NO.
BRIDGE NO. A9676

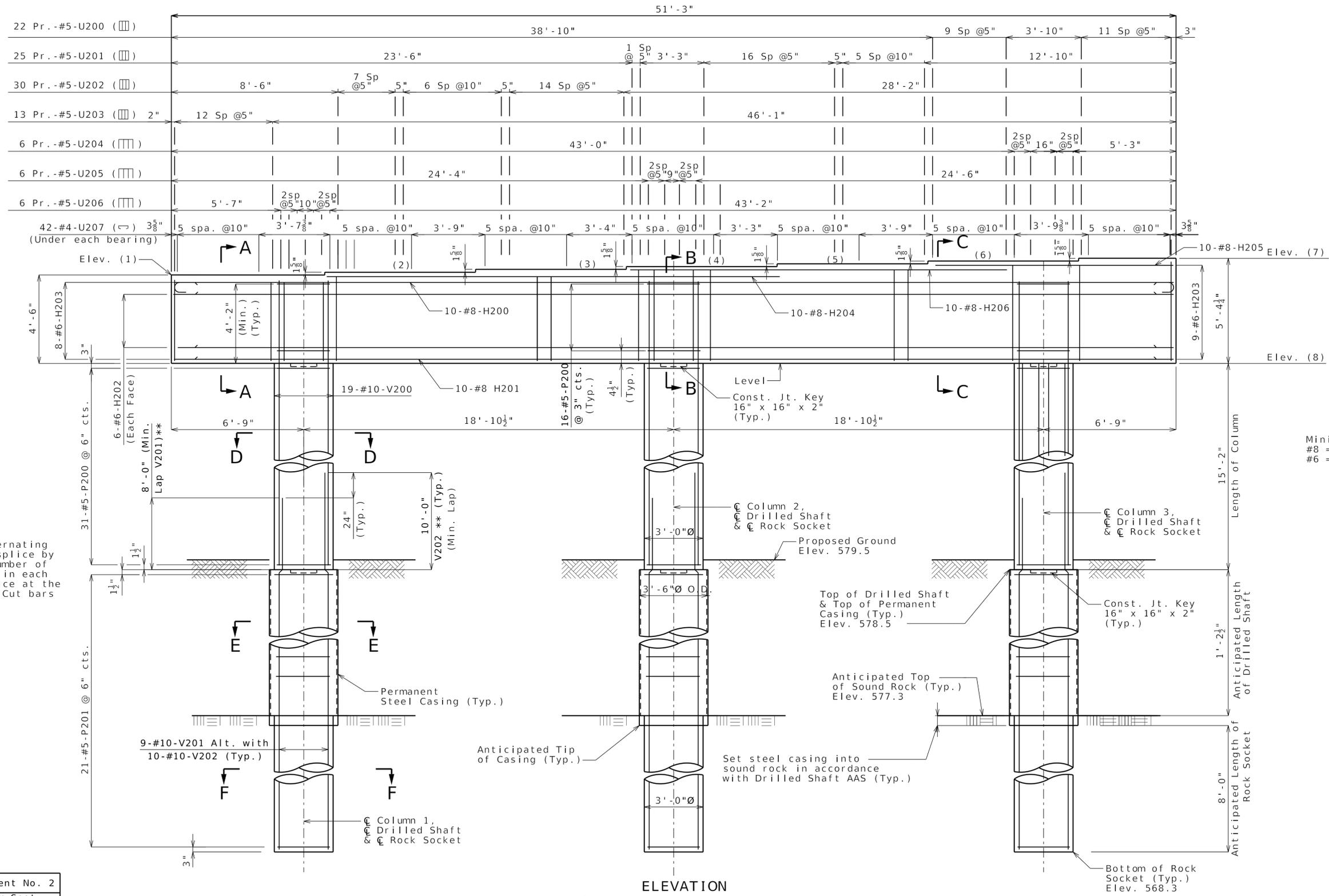
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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JEFFERSON CITY, MO 65102
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715 KIRK DRIVE
KANSAS CITY, MO 64105-1310
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NO. 001270

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PHONE 872-653181
FAX 872-653181
WWW.BARTLETTWEST.COM



** Stagger alternating V201 and V202 splice by 24". For odd number of bars, two bars in each column may splice at the same location. Cut bars as needed.

Minimum Lap
#8 = 6'-2"
#6 = 4'-8"

Elevation No.	Int. Bent No. 2 Beam Seat Elevation
(1)	598.16
(2)	598.30
(3)	598.44
(4)	598.58
(5)	598.72
(6)	598.86
(7)	599.00
(8)	593.66

General Notes:

- Work this sheet with Sheets No.9 and 10.
- Drilled shafts shall be constructed and inspected in accordance with the Bridge Geotechnical Memo and the project Drilled Shaft Construction AAS.
- Thickness of permanent steel casing shall be in accordance with Drilled Shaft Construction AAS.

ELEVATION

- Beam keys not shown for clarity.
- An additional 4 feet has been added to V-bar and additional 24-#5-P201 bars have been added for possible change in drilled shaft or rock socket length.
- The additional V-bar length shall be cut off or included in the reinforcement lap if not required. The P bars shall be spaced similarly to that shown in Elevation, if required, or a lesser spacing if not required but not less than 6-inch centers.

- Sonic logging testing shall be performed on all drilled shafts and rock sockets.
- The tip of casing shall not extend into the rock socket elevation range reported in the Foundation Data table without approval by the engineer.

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

Sheet 8 of 33

DETAILS OF INTERMEDIATE BENT NO. 2

Detailed Nov 2025
Checked Nov 2025

DATE PREPARED 12/5/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. A9676-08
COUNTY ST. CHARLES	
JOB NO. JST0020	
CONTRACT ID.	

PROJECT NO.
BRIDGE NO. A9676

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

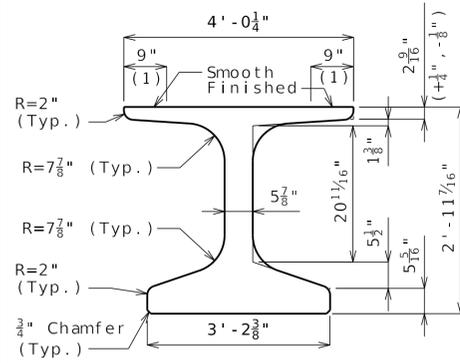
105 WEST CAPITOL
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CERTIFICATE OF AUTHORITY
NO. 001270

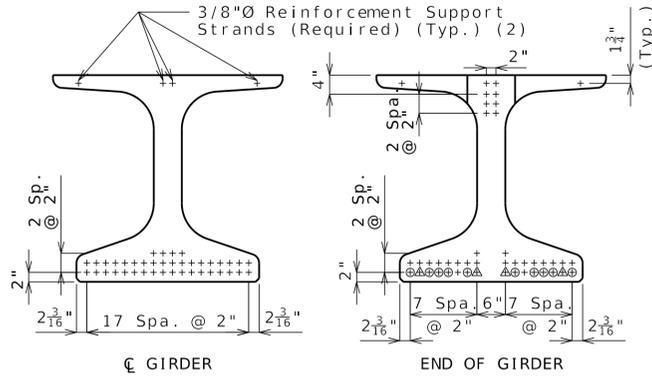
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PHONE 877-653-5181
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(1) Fabricator shall apply a bond breaker to this region.

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

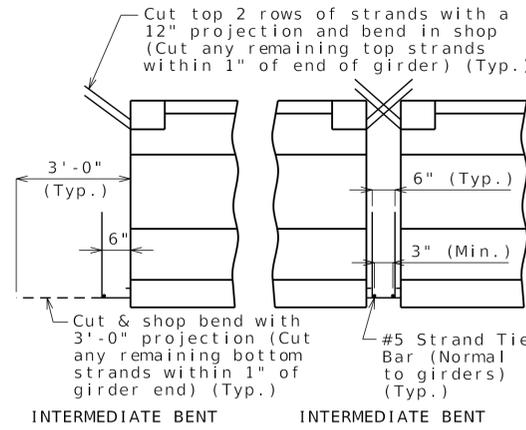


DIMENSIONS

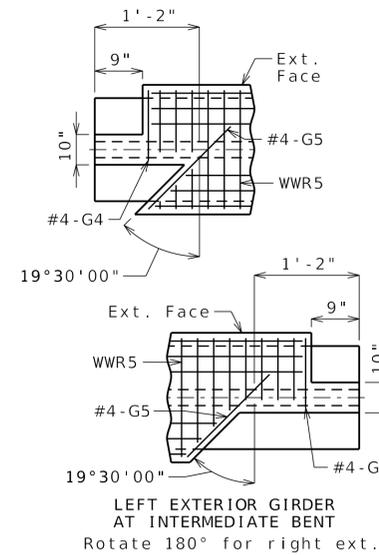


STRAND ARRANGEMENT

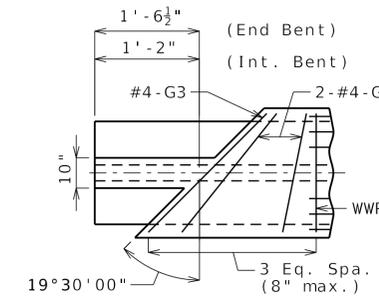
+ Indicates prestressing strand.
 ○ Indicates cut & shop bend with 3'-0" projection.
 △ Indicates debonded for 8'-0" from end of girder



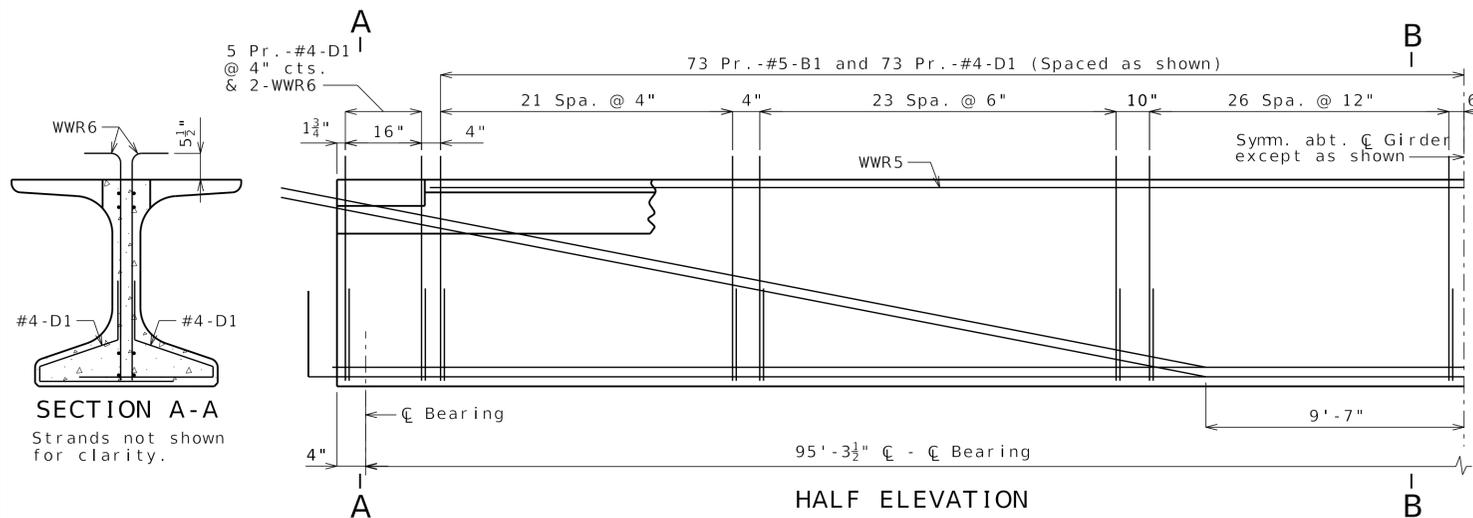
STRANDS AT GIRDER ENDS



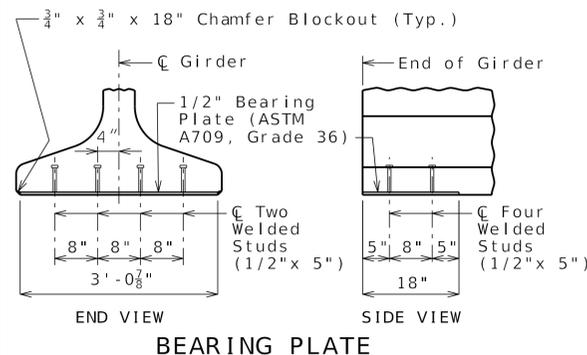
LEFT EXTERIOR GIRDER AT INTERMEDIATE BENT
 Rotate 180° for right ext.



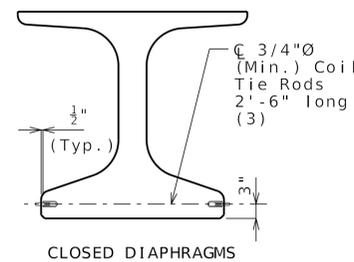
INTERIOR GIRDER AT ALL BENTS TOP FLANGE BLOCKOUT



HALF ELEVATION
 Reinforcement support strands not shown for clarity.



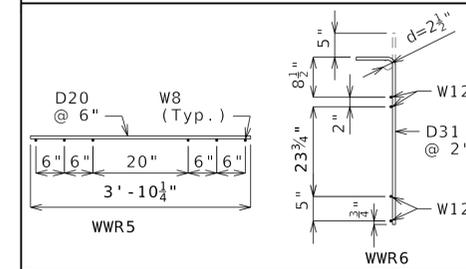
BEARING PLATE



COIL TIES
 Exclude coil tie at exterior face of exterior girders.
 (3) 1'-11" at exterior face of exterior girders at end bents

Bill of Reinforcing Steel - Each Girder				
No.	Size/Mark	Length	Shape	Bending Diagrams
292	5 B1	4'-4"	11S	Shape 20
312	4 D1	4'-0"	9S	
2	4 G3	4'-1"	20	Shape 9S Shape 11S
2	4 G4	2'-3"	20	
2	4 G5	2'-10"	20	
4	4 G6	Varies	20	

Welded Wire Reinforcement - Each Girder



All dimensions are out to out.

Hooks and bends shall be in accordance with the CRS1 Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

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

Minimum clearance to reinforcing shall be one inch.

All bar reinforcement shall be Grade 60.

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

All B1 bars shall be epoxy coated.

G4 and G5 not required for interior girders. G3 and G6 not required for exterior girders of intermediate spans.

General Notes:

Concrete for prestressed girders shall be Class A-1 with $f'c = 8500$ psi and $f'ci = 6500$ psi.

Use 40 strands, 0.6"Ø Grade 270, with an initial prestress force of 1758 kips.

Pretensioned members shall be in accordance with Sec 1029.

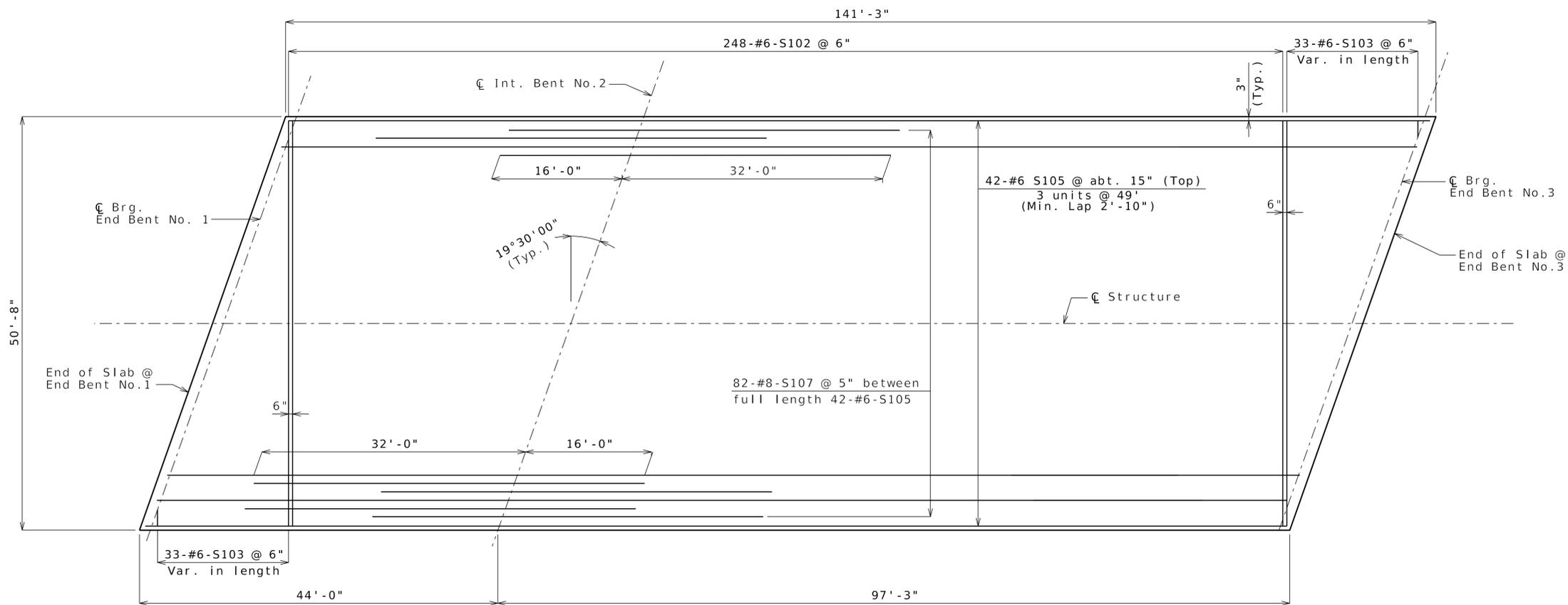
Fabricator shall be responsible for location and design of lifting devices.

Exterior and interior girders are the same except: coil ties, top flange blockout, application of bond breaker, coil inserts for slab drains, holes for intermediate diaphragms.

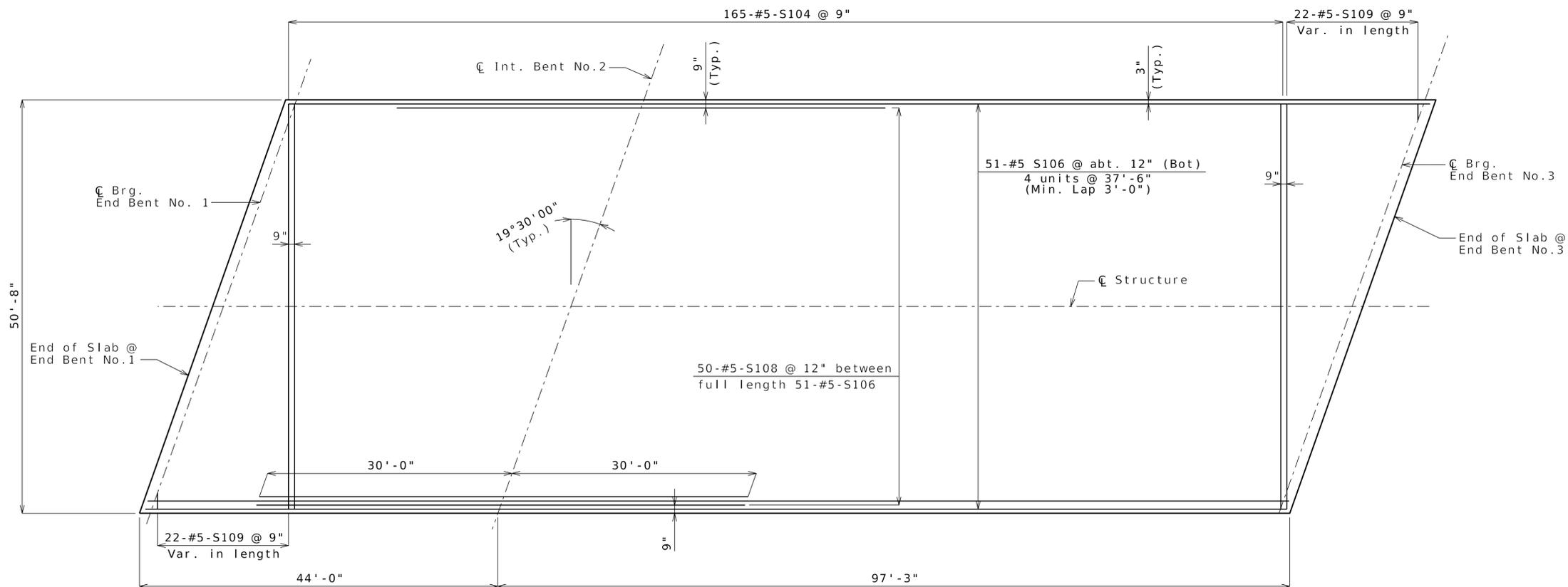
For Girder Camber Diagram, see Sheet No. 18.

For location of coil ties at concrete diaphragms and integral bents, see Sheets No. 12 and 17.

DATE PREPARED 12/5/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. A9676-16
COUNTY ST. CHARLES	
JOB NO. JST0020	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A9676	
DESCRIPTION	DATE
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	
IMPROVE 70 <small>ALTERNATIVE</small>	
<small>105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)</small>	
<small>715 KIRK DRIVE KANSAS CITY, MO 64105-1310 CERTIFICATE OF AUTHORITY NO. 001270</small>	



TOP REINFORCING PLAN
Longitudinal dimensions are horizontal.



BOTTOM REINFORCING PLAN
Longitudinal dimensions are horizontal.

Notes:
 Longitudinal slab dimensions are measured horizontally.
 For Section Thru Slab and Slab Pouring Sequence, see Sheet No. 20.
 For Details and Reinforcement of Safety Barrier Curb not shown, see Sheets No. 21 & 22.
 For Theoretical Slab Haunching Diagram, see Sheet No. 18.
 For Theoretical Bottom of Slab Elevations, see Sheet No. 18.
 Laps not shown for clarity.

DATE PREPARED 12/5/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. A9676-19
COUNTY ST. CHARLES	
JOB NO. JST0020	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A9676	

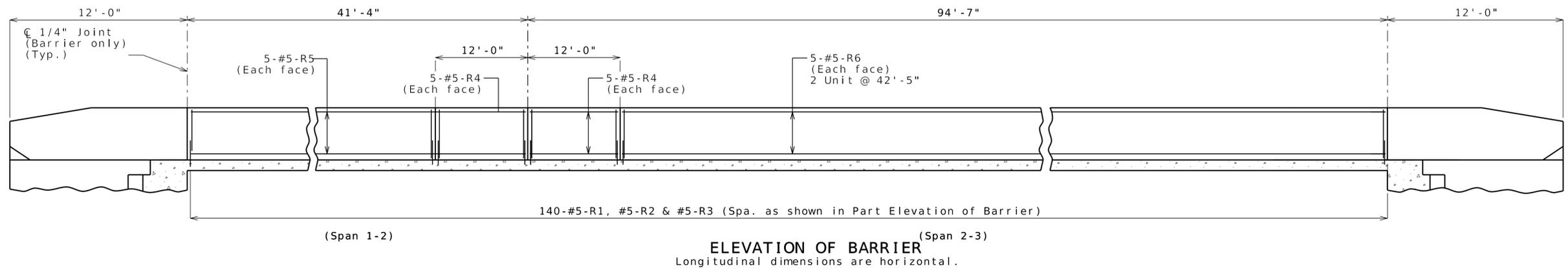
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

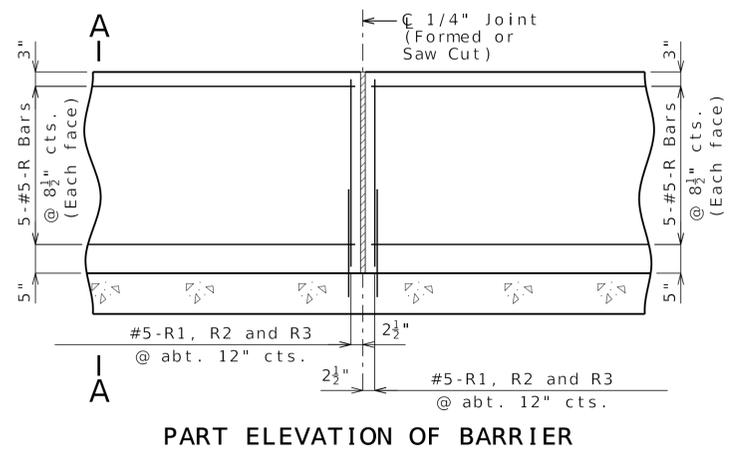
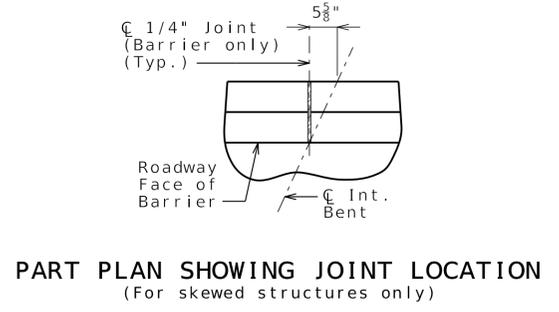
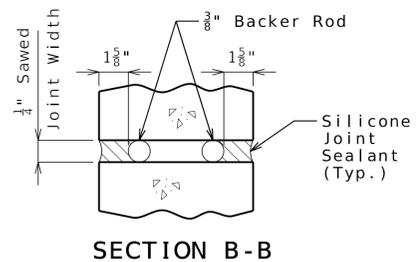
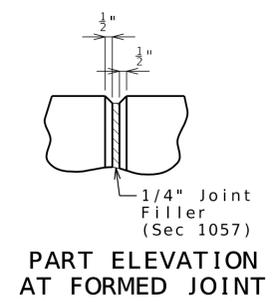
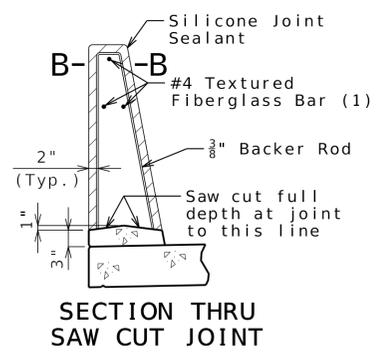
105 WEST CAPITOL
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CERTIFICATE OF AUTHORITY
NO. 001270

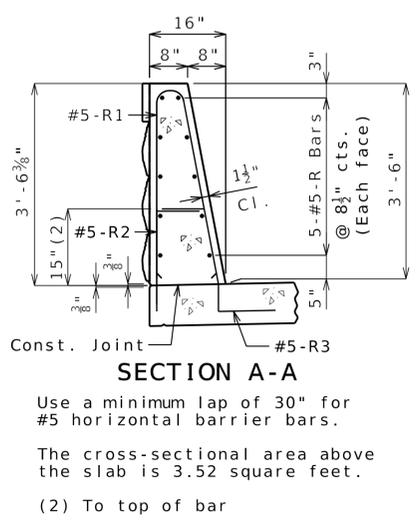
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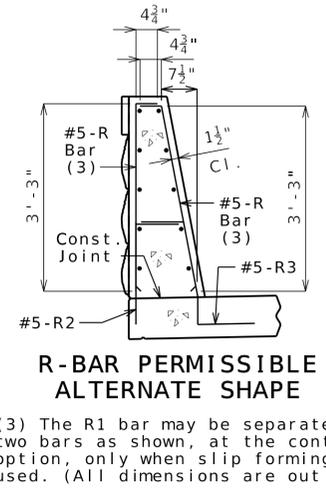
Minimum Lap
#5 = 2'-6"



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



Use a minimum lap of 30" for #5 horizontal barrier bars.
The cross-sectional area above the slab is 3.52 square feet.
(2) To top of bar



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

General Notes:

- Conventional forming only may be used. Saw cut joints may be used with conventional forming.
- Top of barrier shall be built parallel to grade and barrier joints (except at end bents) normal to grade.
- All exposed edges of barrier shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.
- Concrete in barrier shall be Class B-1.
- Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides.
- Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.
- Plastic waterstop shall not be used with saw cut joints.

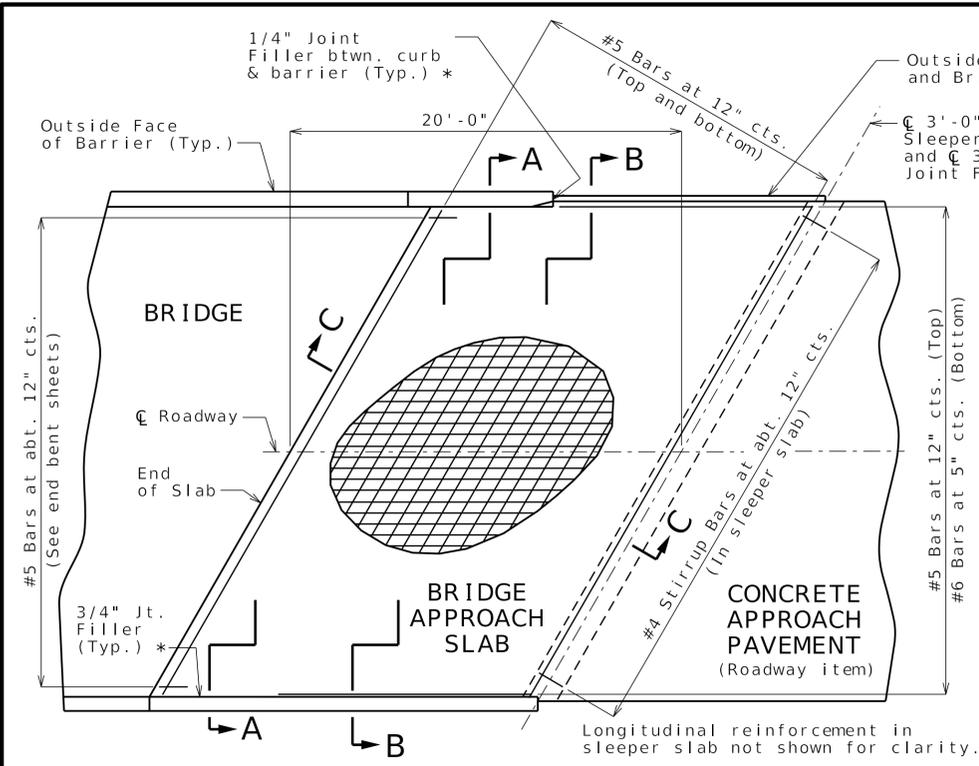
DATE PREPARED 12/5/2025	
ROUTE I - 70	STATE MO
DISTRICT BR	SHEET NO. A9676-21
COUNTY ST. CHARLES	
JOB NO. JST0020	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A9676	
DESCRIPTION	DATE
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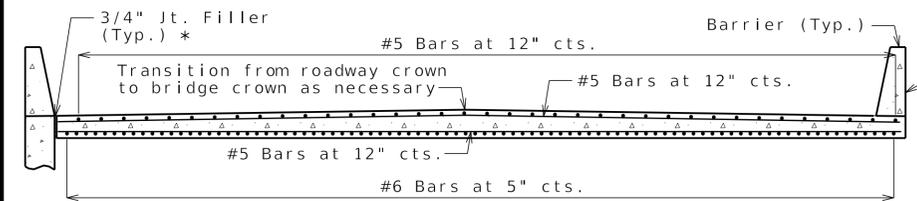
Note: This drawing is not to scale. Follow dimensions.

Sheet 21 of 33

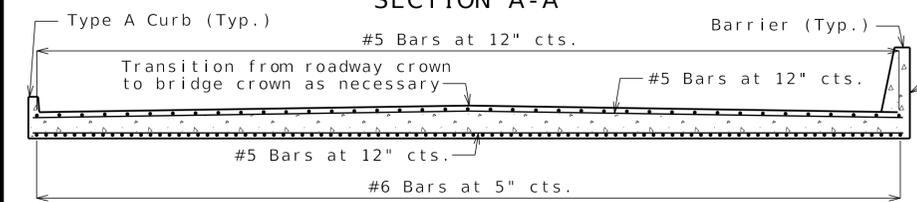
TYPE D BARRIER (LEFT)



PART PLAN SHOWING REINFORCEMENT

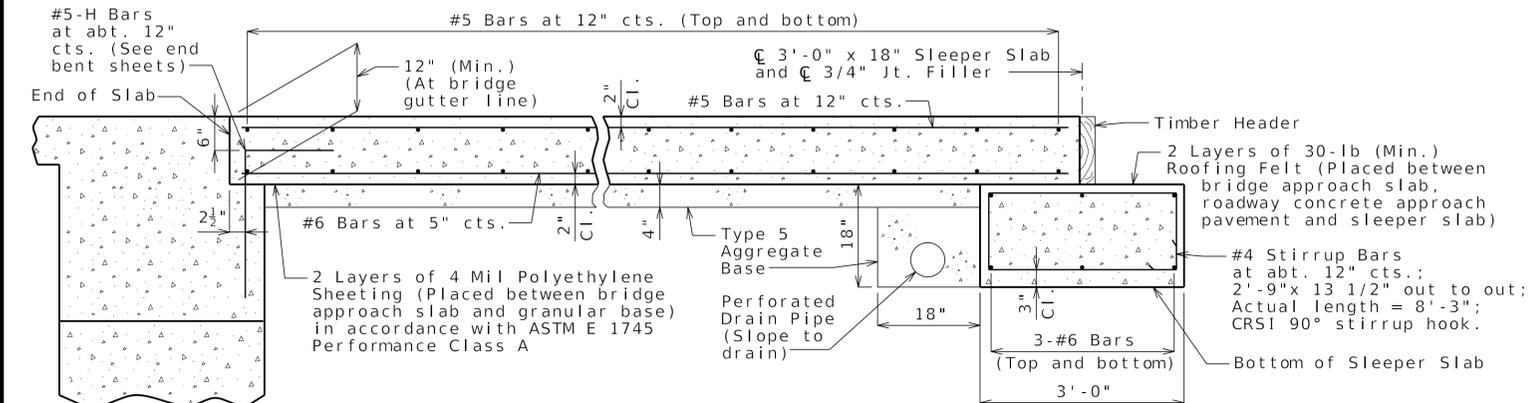


SECTION A-A

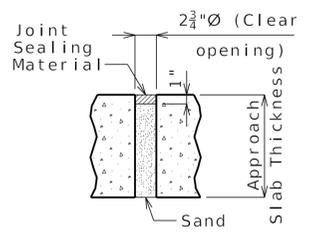


SECTION B-B

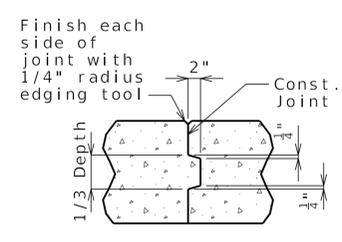
With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.



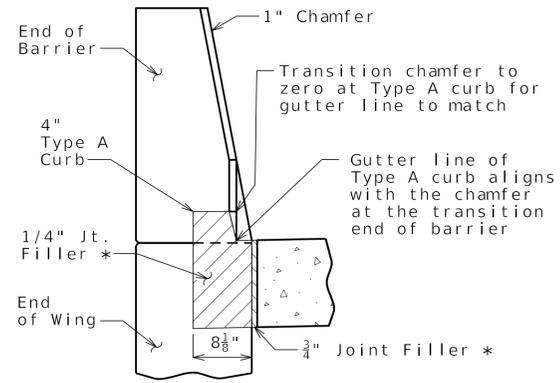
SECTION C-C



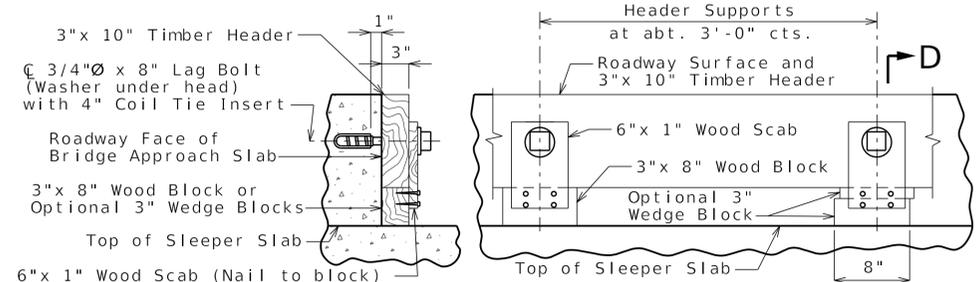
UNDERSEAL ACCESS HOLE DETAIL
(If required)



CONSTRUCTION JOINT DETAIL



SECTION BETWEEN CURB AND BARRIER



DETAILS OF TIMBER HEADER

Remove timber header when concrete pavement is placed.

BRIDGE APPROACH SLAB (MAJOR)

General Notes:

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

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

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

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

The reinforcing steel in the bridge approach slab and the sleeper slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 29 inches for #5 bars and 44 inches for #6 bars, or by mechanical bar splice.

Mechanical bar splices shall be in accordance with Sec 710.

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

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

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

For concrete approach pavement details, see roadway plans.

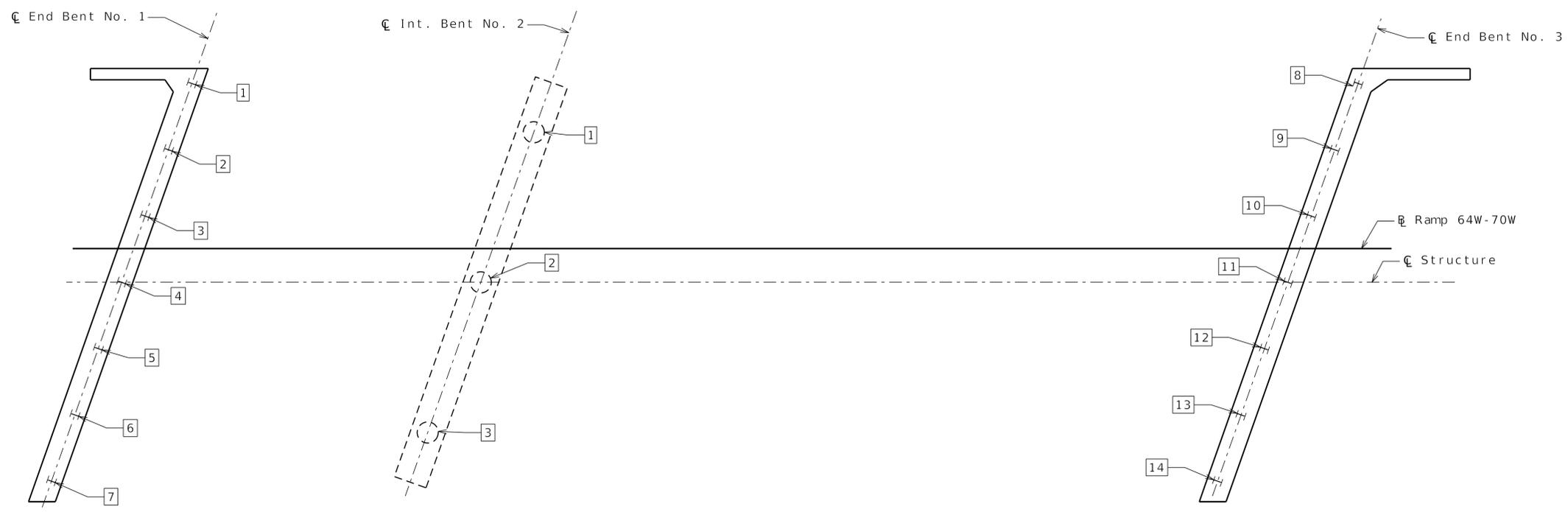
See Missouri Standard Plan 609.00 for details of Type A curb.

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

DATE PREPARED 12/5/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. A9676-24
COUNTY ST. CHARLES	
JOB NO. JST0020	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A9676	
DESCRIPTION	
DATE	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	
105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
715 KIRK DRIVE KANSAS CITY, MO 64105-1310 CERTIFICATE OF AUTHORITY NO. 001270	

Bill of Reinforcing Steel															
No. Req.	Size/Mark	Location	Codes			Dimensions							Nom. Length ft in.	Actual Length ft in.	Weight lb
			C	SH	V	B ft in.	C ft in.	D ft in.	E ft in.	F ft in.	H ft in.	K ft in.			
		END BENT 1													
4	6 F101	DIA	E	32			5 7.000	2 9.000				2 7.125	11.000	8 4 8 1	49
13	6 F102	WING BRACE	E	23		20.000	4 7.500	20.000	16.250	11.500	16.250	11.500		7 12 7 10	153
4	6 F103	DIA	E	14			5 7.000	2 9.000				2 7.125	11.000	8 4 8 3	50
16	6 H100	BEAM/DIA	E	20		53 6.000								53 6 53 6	1286
8	8 H101	BEAM / SLAB	E	20		53 6.000								53 6 53 6	1143
12	6 H102	DIA FF	E	20		611.000								6 11 6 11	125
12	6 H103	DIA FF	E	20		4 0.000								4 0 4 0	72
4	6 H104	DIA FF	E	20		3 3.000								3 3 3 3	20
4	6 H105	DIA FF	E	20		22.000								1 10 1 10	11
4	8 H106	BEAM TOP	E	20		22 9.000								22 9 22 9	243
4	8 H107	BEAM TOP	E	20		21 7.000								21 7 21 7	231
4	8 H108	BEAM TOP	E	20		21 8.000								21 8 21 8	231
4	8 H109	BEAM TOP	E	20		6 2.000								6 2 6 2	66
8	8 H110	WING WALL	E	20		11 0.000								11 0 11 0	235
26	6 H111	WING WALL	E	20		9 7.000								9 7 9 7	374
7	5 H112	STRAND TIE	E	23		15.000	3 2.375	15.000	14.125	5.000	5.000	14.125		5 8 5 7	41
1	4 U100	BEAM	E	10			6 5.000	2 9.000						15 7 15 4	10
5	4 U101	BEAM	E	10			6 2.000	2 9.000						15 14 10	50
6	4 U102	BEAM	E	10			5 11.000	2 9.000						14 7 14 4	57
4	4 U103	BEAM	E	10			5 8.000	2 9.000						14 13 10	37
10	5 U104	BEAM	E	31		7 9.000	2 9.000	7 9.000						19 5 19 2	200
9	5 U105	BEAM	E	31		8 0.000	2 9.000	8 0.000						19 11 19 8	185
8	5 U106	BEAM	E	31		8 3.000	2 9.000	8 3.000						20 5 20 2	168
4	5 U107	BEAM	E	31		8 6.000	2 9.000	8 6.000						20 11 20 8	86
10	4 U108	BEAM	E	13		2 9.000	5 8.000	2 9.000	5 8.000					17 7 17 3	115
6	4 U109	BEAM	E	13		2 9.000	5 11.000	2 9.000	5 11.000					18 11 17 9	71
9	4 U110	BEAM	E	13		2 9.000	6 2.000	2 9.000	6 2.000					18 7 18 3	110
5	4 U111	BEAM	E	13		2 9.000	6 5.000	2 9.000	6 5.000					19 11 18 9	63
36	5 U112	DIA	E	31		3 6.000	2 4.000	3 6.000						10 6 10 3	385
36	6 U113	DIA	E	19		2 7.000	2 9.000							5 4 5 2	279
52	5 U114	APPR TIE	E	19		2 0.000	15.000							3 3 3 1	167
68	6 U115	DIA/SLAB	E	19		210.000	4 6.000							7 4 7 2	732
4	5 V100	BEAM	E	17		7 9.000								8 4 8 4	35
6	5 V101	BEAM	E	17		8 6.000								9 1 9 1	57
		V102 NOT USED													
35	6 V103	DIA	E	20		2 7.000								2 7 2 7	136
2	6 V104	WING WALL	E	20		9 3.000								9 3 9 3	28
16	6 V105	WING WALL	E	20		9 3.000								9 3 9 3	222
		INT BENT 2													
10	8 H200	BEAM TOP	E	18		51								52 10 52 10	1411
10	8 H201	BEAM BOT	E	20		51								51 51	1362
12	6 H202	BEAM SIDE	E	20		51								51 51	919
17	6 H203	BEAM	E	10			12.000	3 3.000						5 3 4 11	126
10	8 H204	BEAM TOP	E	20		21 7.000								21 7 21 7	576
10	8 H205	BEAM TOP	E	20		12 2.000								12 2 12 2	325
10	8 H206	BEAM TOP	E	20		21 7.000								21 7 21 7	576
44	5 U200	BEAM	E	13		2 4.000	4 10.000	2 4.000	4 10.000					15 3 14 10	681
50	5 U201	BEAM	E	13		2 4.000	4 8.000	2 4.000	4 8.000					14 11 14 6	756
60	5 U202	BEAM	E	13		2 4.000	4 4.000	2 4.000	4 4.000					14 3 13 10	866
26	5 U203	BEAM	E	13		2 4.000	4 3.000	2 4.000	4 3.000					14 1 13 8	371
12	5 U204	BEAM	E	11			4 10.000	2 4.000	4 10.000					12 11 9	147
12	5 U205	BEAM	E	11			4 8.000	2 4.000	4 8.000					11 8 11 5	143
12	5 U206	BEAM	E	11			4 3.000	2 4.000	4 3.000					10 10 10 7	132
42	4 U207	BEAM	E	18		3 3.000								4 3 4 3	119
36	8 D200	KEY	E	20		2 6.000								2 6 2 6	240
141	5 P200	COLUMN	E	34 S		711.000	3.750			2 6.000				8 11 8 11	1311
87	5 P201	DRILL/ROCK	E	34 S		711.000	3.750			2 6.000				8 11 8 11	809
57	10 V200	COLUMN	E	20		19 2.000								19 2 19 2	4701
27	10 V201	DRILL/ROCK	E	20		22								22 22	2556
30	10 V202	DRILL/ROCK	E	20		24								24 24	3098

Bill of Reinforcing Steel															
No. Req.	Size/Mark	Location	Codes			Dimensions							Nom. Length ft in.	Actual Length ft in.	Weight lb
			C	SH	V	B ft in.	C ft in.	D ft in.	E ft in.	F ft in.	H ft in.	K ft in.			
		END BENT 3													
4	6 F301	DIA	E	14			5 7.000	2 9.000						2 7.125	11.000
13	6 F302	WING BRACE	E	23		20.000	6 5.250	20.000	11.500	16.250	11.500	16.250		9 9 9 9	190
4	6 F303	DIA	E	32			5 7.000	2 9.000						2 7.125	11.000
16	6 H300	BEAM/DIA	E	20		53 6.000								53 6 53 6	1286
8	8 H301	BEAM / SLAB	E	20		53 6.000								53 6 53 6	1143
12	6 H302	DIA FF	E	20		611.000								6 11 6 11	125
12	6 H303	DIA FF	E	20		4 0.000								4 0 4 0	72
4	6 H304	DIA FF	E	20		3 3.000								3 3 3 3	20
4	6 H305	DIA FF	E	20		22.000								1 10 1 10	11
4	8 H306	BEAM TOP	E	20		22 9.000								22 9 22 9	243
4	8 H307	BEAM TOP	E	20		21 7.000								21 7 21 7	231
4	8 H308	BEAM TOP	E	20		21 8.000								21 8 21 8	231
4	8 H309	BEAM TOP	E	20		6 2.000								6 2 6 2	66
8	8 H310	WING WALL	E	20		11 9.000								11 9 11 9	251
26	6 H311	WING WALL	E	20		10 6.000								10 6 10 6	410
7	5 H312	STRAND TIE	E	23		15.000	3 2.375	15.000	14.125	5.000	5.000	14.125		5 8 5 7	41
1	4 U300	BEAM	E	10			6 8.000	2 9.000						16 15 10	11
5	4 U301	BEAM	E	10			6 3.000	2 9.000						15 3 15 0	50
6	4 U302	BEAM	E	10			6 0.000	2 9.000						14 9 14 6	58
4	4 U303	BEAM	E	10			5 8.000	2 9.000						14 13 10	37
10	5 U304	BEAM	E	31		7 9.000	2 9.000	7 9.000						19 5 19 2	200
9	5 U305	BEAM	E	31		8 1.000	2 9.000	8 1.000						20 1 19 10	186
8	5 U306	BEAM	E	31		8 5.000	2 9.000	8 5.000						20 9 20 6	171
4	5 U307	BEAM	E	31		8 9.000	2 9.000	8 9.000						21 5 21 2	88
10	4 U308	BEAM	E	13		2 9.000	5 8.000	2 9.000	5 8.000					17 7 17 3	115
6	4 U309	BEAM	E	13		2 9.000	6 0.000	2 9.000	6 0.000					18 3 17 11	72
9	4 U310	BEAM	E	13		2 9.000	6 3.000	2 9.000	6 3.000					18 9 18 5	111
5	4 U311	BEAM	E	13		2 9.000	6 8.000	2 9.000	6 8.000						



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

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

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
			End Bent No. 3
8			
9			
10			
11			
12			
13			
14			

As-Built Drilled Shaft Data				
Shaft No.	Top of Sound Rock (Elev.)	Tip of Casing (Elev.)	Bottom of Rock Socket (Elev.)	Remarks
				Intermediate Bent No. 2
1				
2				
3				

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

This sheet to be completed by the design-builder.

AS-BUILT PILE AND DRILLED SHAFT DATA

DATE PREPARED 12/5/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. A9676-29
COUNTY ST. CHARLES	
JOB NO. JST0020	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A9676	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

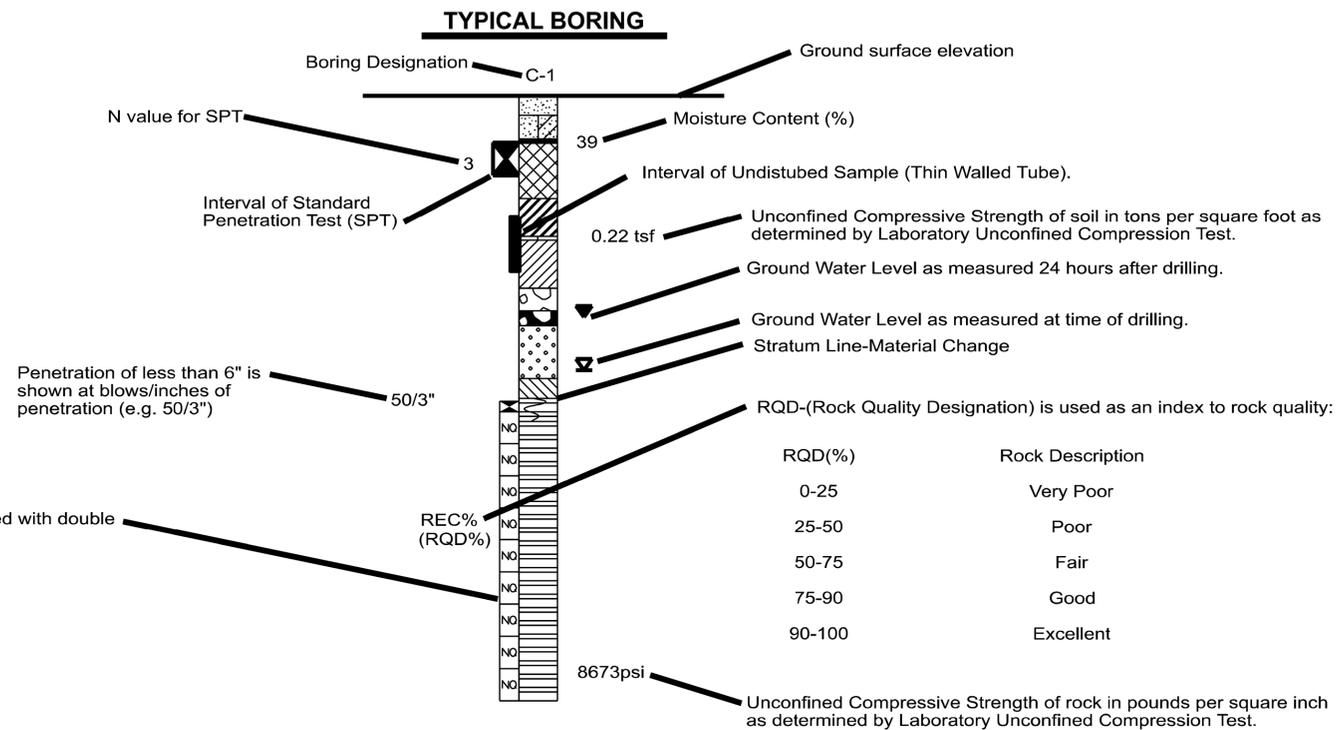
105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)

715 KIRK DRIVE
 KANSAS CITY, MO 64105-1310
 CERTIFICATE OF AUTHORITY
 NO. 001270

HNTB

601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
 PHONE 872-633181
 CERTIFICATE OF AUTHORITY NO. 001270
 WWW.BARTLETTWEST.COM

Bartlett & West



RQD(%)	Rock Description
0-25	Very Poor
25-50	Poor
50-75	Fair
75-90	Good
90-100	Excellent

KEY TO BORING LOG SYMBOLS

<p>LITHOLOGIC SYMBOLS (Unified Soil Classification System)</p> <ul style="list-style-type: none"> Lean Clay (CL) Fat Clay (CH) Lean to Fat Clay Low Plastic Silt (ML) Poorly Graded Sand (SP) Well Graded Sand (SW) Clayey Sand (SC) Poorly Graded Gravel (GP) Boulders Clayey Gravel (GC) Gravel with Fat Clay (GP-GC) Asphalt Fill Topsoil Concrete Peat Poorly Graded Sand with Clayey Sand (SP-SC) 	<p>LITHOLOGIC SYMBOLS (Rock)</p> <ul style="list-style-type: none"> Coal Dolomite Limestone Sandstone Shale Gypsum Weathered Limestone Weathered Shale Gypsiferous Shale
<p>DRILLING METHODS</p> <ul style="list-style-type: none"> Core Barrel Hollow Stem Auger Rotary Solid Stem Auger 	<p>SAMPLER SYMBOLS</p> <ul style="list-style-type: none"> Auger Cuttings Grab Modified California Sampler NQ Rock Core NX Core Barrel Standard Penetration Test Shelby Tube
<p>ABBREVIATIONS</p> <ul style="list-style-type: none"> HSA - Hollow Stem Auger SSA - Solid Stem Auger ST - Shelby Tube SPT - Standard Penetration Test NATD - None At Time of Drilling N/A - Not Available 	

Detailed Nov 2025
Checked Nov 2025

Note: For locations of borings, see Sheet No. 2.
Note: This drawing is not to scale. Follow dimensions.
Sheet 31 of 33

BORING DATA (2 OF 2)

DATE PREPARED 12/5/2025	
ROUTE I - 70	STATE MO
DISTRICT BR	SHEET NO. A9676 - 31
COUNTY ST. CHARLES	
JOB NO. JST0020	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO. A9676	
DESCRIPTION	DATE
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	
105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
 715 KIRK DRIVE KANSAS CITY, MO 64105-1310 CERTIFICATE OF AUTHORITY NO. 001270	 601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101 CERTIFICATE OF AUTHORITY NO. 001270 www.bartlettwest.com

<p>BENCHMARK 100 74 /5/8x24_ROD_W/CAP</p> <p>SIGN POST</p> <p>NORTH = 1081423.367 EAST = 723104.330 ELEV. = 599.597</p>			<p>BENCHMARK 113 74 /5/8x24_ROD_W/CAP</p> <p>NORTH = 1078977.686 EAST = 728186.747 ELEV. = 623.007</p>	<p>BENCHMARK 114 74 /5/8x24_ROD_W/CAP</p> <p>SOUTH EDGE OF ASPHALT ROAD</p> <p>NORTH = 1082531.641 EAST = 727818.620 ELEV. = 633.117</p>	<p>BENCHMARK 115 74 /5/8x24_ROD_W/CAP</p> <p>SOUTH EDGE OF ASPHALT ROAD</p> <p>NORTH = 1082444.293 EAST = 729392.876 ELEV. = 619.994</p>	
<p>BENCHMARK 116 74 /5/8x24_ROD_W/CAP</p> <p>NORTH = 1082653.370 EAST = 723222.089 ELEV. = 605.972</p>		<p>BENCHMARK 200 75 -BM 2IN SQ CUT</p> <p>NORTH = 1078971 EAST = 728573 ELEV. = 613.97</p>	<p>BENCHMARK 208 75 -BM 2IN SQ CUT</p> <p>MAG NAIL IN FOGLINE</p> <p>NORTH = 1082525 EAST = 721080 ELEV. = 597.57</p>	<p>BENCHMARK 209 75 -BM 2IN SQ CUT</p> <p>NORTH = 1082558 EAST = 721763 ELEV. = 599.72</p>	<p>BENCHMARK 210 74 /5/8x24_ROD_W/CAP</p> <p>MAG NAIL IN TOP OF GUARD POST</p> <p>NORTH = 1082628.386 EAST = 722867.362 ELEV. = 604.348</p>	<p>BENCHMARK 211 75 -BM 2IN SQ CUT</p> <p>MAG NAIL IN FOGLINE</p> <p>NORTH = 1082667 EAST = 723955 ELEV. = 602.59</p>
<p>BENCHMARK 212 75 -BM 2IN SQ CUT</p> <p>MAG NAIL IN FOGLINE</p> <p>NORTH = 1082716 EAST = 724964 ELEV. = 610.96</p>	<p>BENCHMARK 213 75 -BM 2IN SQ CUT</p> <p>SOUTH EDGE OF ASPHALT ROAD</p> <p>NORTH = 1082709 EAST = 726010 ELEV. = 622.86</p>	<p>BENCHMARK 214 75 -BM 2IN SQ CUT</p> <p>MAG NAIL IN FOGLINE</p> <p>NORTH = 1082643 EAST = 727148 ELEV. = 631.52</p>	<p>BENCHMARK 215 74 /5/8x24_ROD_W/CAP</p> <p>SOUTH EDGE OF ASPHALT ROAD</p> <p>NORTH = 1082500.421 EAST = 728168.824 ELEV. = 626.184</p>	<p>BENCHMARK 216 75 -BM 2IN SQ CUT</p> <p>TELEPHONE PEDESTAL</p> <p>NORTH = 1082415 EAST = 729223 ELEV. = 616.20</p>	<p>BENCHMARK 217 75 -BM 2IN SQ CUT</p> <p>NORTH = 1082396 EAST = 730135 ELEV. = 612.21</p>	
	<p>BENCHMARK 220 75 -BM 2IN SQ CUT</p> <p>WATER VALVE</p> <p>NORTH = 1080588 EAST = 726887 ELEV. = 602.07</p>			<p>BENCHMARK 228 75 -BM 2IN SQ CUT</p> <p>MAG NAIL IN FOGLINE</p> <p>NORTH = 1084862 EAST = 722908 ELEV. = 656.76</p>	<p>BENCHMARK 229 74 /5/8x24_ROD_W/CAP</p> <p>NORTH = 1083775.980 EAST = 723240.823 ELEV. = 619.275</p>	

DATE PREPARED	
12/5/2025	
ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	A9676-32

COUNTY	
ST. CHARLES	
JOB NO.	
JST0020	
CONTRACT ID.	

PROJECT NO.	
BRIDGE NO.	
A9676	

DESCRIPTION	
DATE	

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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



HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105-1310
CERTIFICATE OF AUTHORITY
NO. 001270

Bartlett & West
601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101
PHONE: 872-653181
CERTIFICATE OF AUTHORITY
NO. 001270

Detailed Nov 2025
Checked Nov 2025

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

Sheet 32 of 33

SURVEY CONTROL POINTS

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

PROJECT COORDINATE INFORMATION

COORDINATE SYSTEM MISSOURI STATE PLANE, EAST ZONE

HORIZONTAL DATUM NAD83 (2011)

VERTICAL DATUM NAVD88

GEOID MODEL GEOID 18

ELEVATIONS DETERMINED BY BARTLETT & WEST USED OPUS SOLUTIONS FOR THE HORIZONTAL COORDINATES AND HELD THE OPUS VERTICAL ELEVATION FOR PRIMARY CONTROL POINTS 1 THRU 3. A DIGITAL LEVEL LOOP WAS USED FOR THE REMAINING PRIMARY CONTROL POINTS, AND VERTICAL CONTROL POINTS

PROJECT PROJECTION FACTOR 1.0000878

REFERENCE CONTROL INFORMATION

COORDINATE SYSTEM MISSOURI COORDINATE SYSTEM OF 1983

CONTROL STATION MISSOURI CORS

DESIGNATION MODOT OFALLON CORS ARP

CORS_ID MOOF

PID DM4688

LATITUDE N38° 45' 14.06179"

LONGITUDE W91° 41' 44.78025"

NORTHING (M) 324131.153

EASTING (M) 232983.488

ZONE EAST

PROJECT AVERAGE GRID FACTOR 0.99991221

EXAMPLE OF PROJECT COORDINATE TO S.P.C.

PROJECT NORTHING X AVERAGE GRID FACTOR = STATE PLANE NORTHING

PROJECT EASTING X AVERAGE GRID FACTOR = STATE PLANE EASTING

EXAMPLE: CONTROL POINT #___

N _____ X _____ = N _____

E _____ X _____ = E _____

LINEAR UNIT CONVERSION

1 METER = 3.280833333 US SURVEY FEET (USFT)

COORDINATE POINT LISTING								
SHEET NO	STATION	LOCATION	OFFSET (USFT)	MODIFIED STATE PLANE (GROUND)			DESCRIPTION	GPK POINT ID
				NORTHING (US SURVEY FT)	EASTING (US SURVEY FT)	ELEVATION (US SURVEY FT)		
PROJECT CONTROL POINTS								
	STA 1272+83.75	I-70	1286.86' RT.	1081423.367	723104.330	599.60	74 /5/8x24_ROD_W/CAP	BM-100
	STA 41+40.91	I-64	626.94' RT.	1078977.686	728186.747	623.01	74 /5/8x24_ROD_W/CAP	BM-113
	STA 1320+80.05	I-70	129.99' RT.	1082531.641	727818.620	633.12	74 /5/8x24_ROD_W/CAP	BM-114
	STA 1336+56.72	I-70	125.22' RT.	1082444.293	729392.876	620.00	74 /5/8x24_ROD_W/CAP	BM-115
	STA 1274+58.72	RAMP 70E-64E	57.46' LT.	1082653.370	723222.089	605.97	74 /5/8x24_ROD_W/CAP	BM-116
	STA 44+49.76	I-64	394.74' RT.	1078971	728573	613.97	75 -BM 2IN SQ CUT	BM-200
	STA 1253+21.17	I-70	78.18' RT.	1082525	721080	597.57	75 BM 2IN SQ CUT	BM-208
	STA 1260+04.89	I-70	81.53' RT.	1082558	721763	599.72	75 -BM 2IN SQ CUT	BM-209
	STA 1271+12.53	RAMP 70E-64E	6.49' RT.	1082628.386	722867.362	604.35	74 /5/8x24_ROD_W/CAP	BM-210
	STA 389+85.81	US-61 S	98.77' LT.	1082667	723955	602.59	75 -BM 2IN SQ CUT	BM-211
	STA 1292+13.84	I-70	73.52' RT.	1082716	724964	610.96	75 -BM 2IN SQ CUT	BM-212
	STA 1302+63.42	I-70	57.72' RT.	1082709	726010	622.86	75 -BM 2IN SQ CUT	BM-213
	STA 1313+59.87	RAMP 61S-70E	22.92' LT.	1082643	727148	631.52	75 -BM 2IN SQ CUT	BM-214
	STA 1324+31.47	I-70	140.70' RT.	1082500.421	728168.824	626.19	74 /5/8x24_ROD_W/CAP	BM-215
	STA 1334+88.64	I-70	164.71' RT.	1082415	729223	616.20	75 -BM 2IN SQ CUT	BM-216
	STA 1344+00.30	I-70	130.222' RT	1082396	730135	612.21	75 -BM 2IN SQ CUT	BM-217
	STA 21+33.02	I-64	225.33' RT.	1080588	726887	602.07	75 -BM 2IN SQ CUT	BM-220
	STA 364+97.19	US-61	64.17' RT.	1084862	722908	656.76	75 -BM 2IN SQ CUT	BM-228
	STA 376+31.63	US-61 S	59.50' RT.	1083775.980	723240.823	619.28	74 /5/8x24_ROD_W/CAP	BM-229

DATE PREPARED 12/5/2025

ROUTE I-70 STATE MO

DISTRICT BR SHEET NO. A9676-33

COUNTY ST. CHARLES

JOB NO. JST0020

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9676

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

MoDOT

IMPROVE 70 ALLIANCE

HNTB 715 KIRK DRIVE KANSAS CITY, MO 64105-1310 CERTIFICATE OF AUTHORITY NO. 001270

Bartlett & West 601 MONROE ST. SUITE 201 - JEFFERSON CITY, MO 65101 PHONE 872-003181 ENGINEERING CERTIFICATE OF AUTHORITY NO. 001270 WWW.BARTLETTWEST.COM