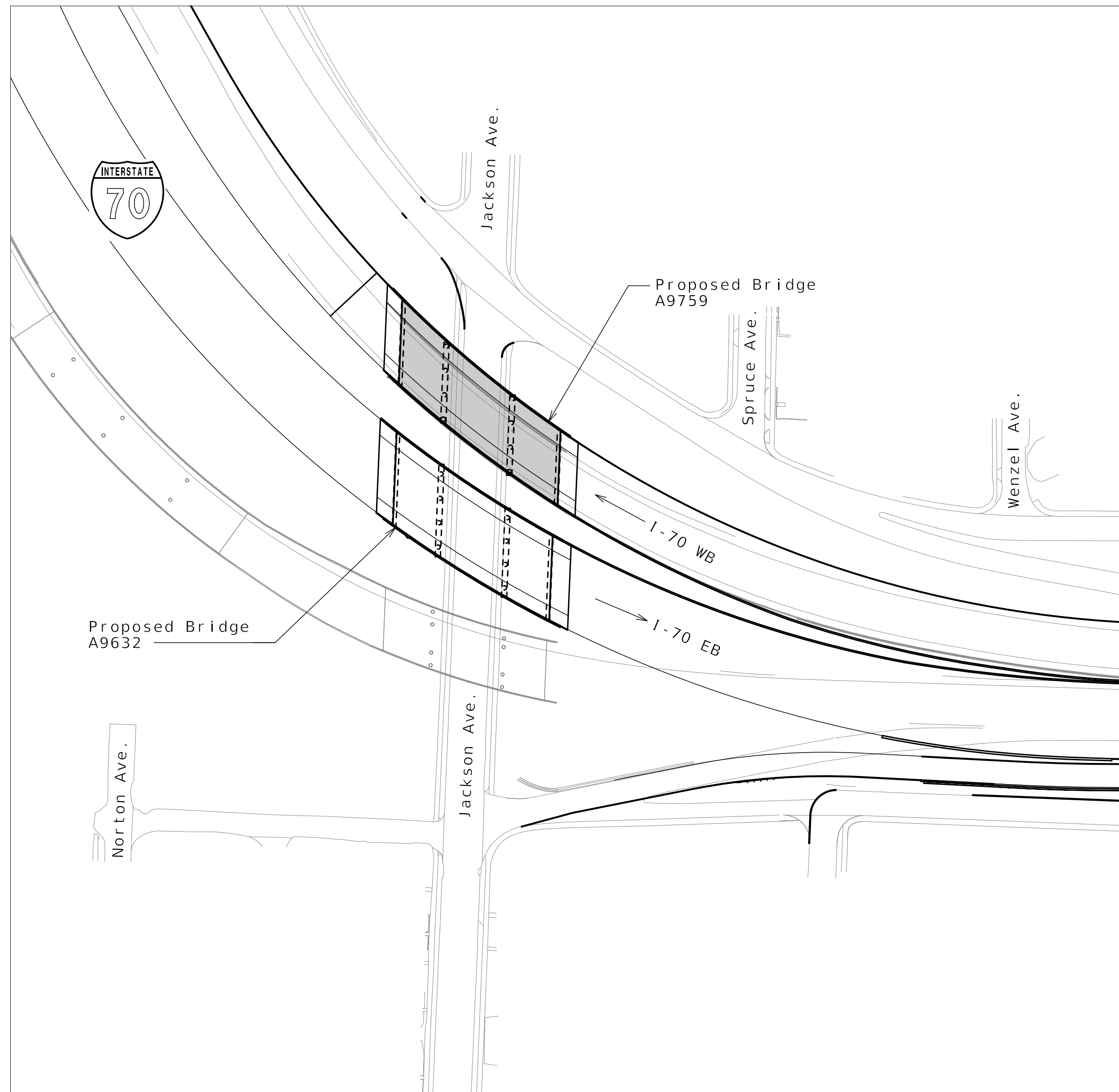


Van W. Robbins
11-13-25

Note:
See Civil Package 2: Early Grading for project reference points and project coordinate points.

DATE PREPARED 11/13/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. B27-01
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	

BRIDGE NO.
A9759



LOCATION SKETCH

INDEX OF DRAWINGS

- B27-01 Title Sheet and Index
- B27-02 General Plan and Elevation
- B27-03 General Notes
- B27-04 Substructure Layout
- B27-05 Details of End Bent No. 1
- B27-06 Details of End Bent No. 1
- B27-07 Details of End Bent No. 1
- B27-08 Vertical Drain at End Bents
- B27-09 Details of Intermediate Bent No. 2
- B27-10 Details of Intermediate Bent No. 2
- B27-11 Details of Intermediate Bent No. 3
- B27-12 Details of Intermediate Bent No. 3
- B27-13 Details of End Bent No. 4
- B27-14 Details of End Bent No. 4
- B27-15 Details of End Bent No. 4
- B27-16 Framing Plan
- B27-17 NU-Girders - Span (1-2) and (3-4)
- B27-18 NU-Girders - Span (2-3)
- B27-19 NU-Girder Details
- B27-20 Concrete Diaphragm at Intermediate Bents
- B27-21 Camber Diagram & Theoretical Slab Haunching Diagram
- B27-22 Theoretical Bottom of Slab Elevations
- B27-23 Slab Plan Showing Top Reinforcement
- B27-24 Slab Plan Showing Bottom Reinforcement
- B27-25 Slab Details
- B27-26 Slab Curve Ordinates
- B27-27 Type D Barrier
- B27-28 Type D Barrier at End Bents
- B27-29 Light Blister Details
- B27-30 Form Liner and Aesthetic Stain Details
- B27-31 Details of Conduit System on Structure
- B27-32 Bridge Approach Slab (Major)
- B27-33 As-Built Pile and Drilled Shaft Data
- B27-34 Boring Logs
- B27-35 Boring Logs
- B27-36 Boring Logs
- B27-37 Boring Logs
- B27-38 Boring Logs
- B27-39 Boring Logs
- B27-40 Boring Logs
- B27-41 Boring Logs

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CLARKSON RADMACHER JOINT VENTURE

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

Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

BRIDGE: ROUTE I-70 WB OVER JACKSON AVE.

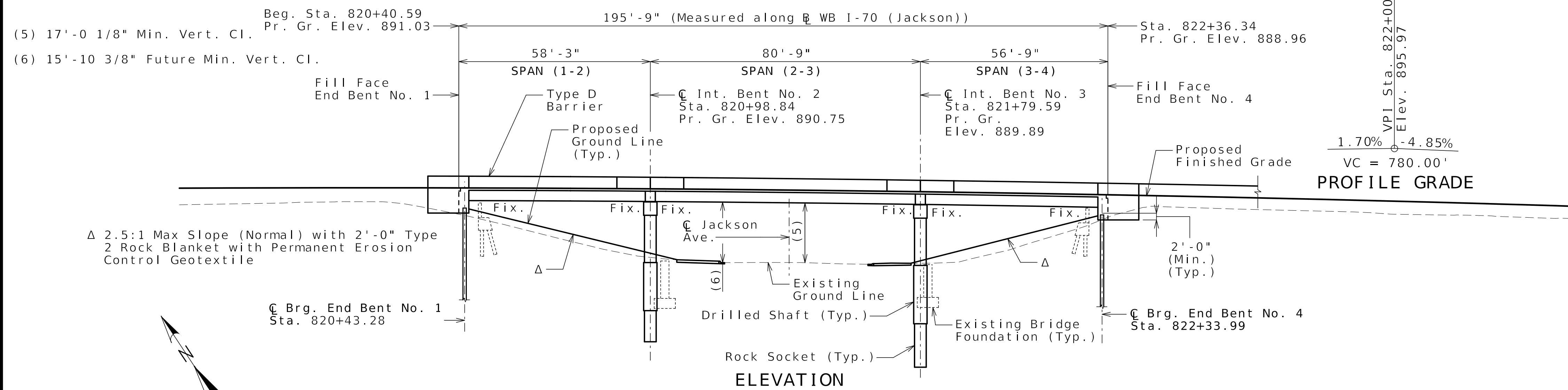
ROUTE I-70 WB FROM ROUTE 40 TO ROUTE I-670
ABOUT 1.3 MILES WEST OF ROUTE 40
BEGINNING STATION 820+40.59

Detailed JUL 2025
Checked AUG 2025

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

Sheet No. B27-01 of B27-41

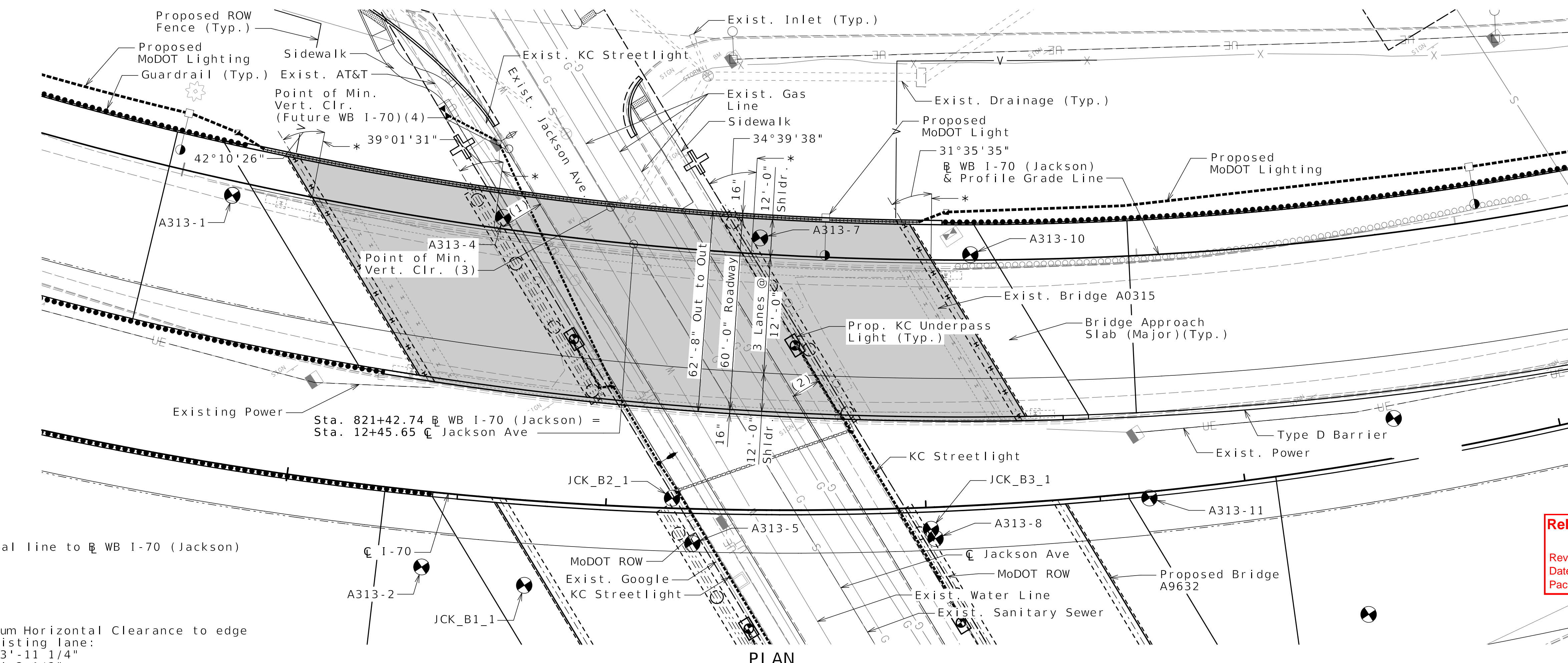
(58.3'-80.8'-56.8') Prestressed Concrete NU Girder Spans



CURVE DATA

CURVE WB I-70 (JACKSON)

PI	= 823+39.12
PC	= 817+41.40
PT	= 828+29.90
Δ	= 58°50'09.9" (LT)
D	= 5°24'18.9"
L	= 1,088.50'
T	= 597.72'
R	= 1,060.00'



* Radial line to WB I-70 (Jackson)

Minimum Horizontal Clearance to edge of existing lane:
(1) 13'-11 1/4"
(2) 9'-3 1/2"

⊕ Indicates location of borings.

Notice and Disclaimer Regarding Boring Log Data

The locations of all subsurface borings performed by the design-build team for this structure are shown on the plan sheets for this structure. The logs for all locations indicated are provided on Sheets No. B27-34 thru B27-41. Laboratory test results, rock core photographs and other information obtained at these borings are available in the corresponding Foundation Recommendations Memo prepared by HNTB. By the nature of the exploration process, the information gathered at these borings represents only a small fraction of the total volume of material at the Site. Interpolation between data samples may not be indicative of the nature and extent of the variations that actually exist between sampling locations.

Notes:

All Elevations are based on NAVD88 datum unless otherwise noted.
All dimensions are horizontal.
All Bents are parallel.
Existing Bridge A0315 to be removed in accordance with Sec 216. Existing structure and foundations shown may not represent what is left in place after removal.
See Civil Package 6: I-70 Mainline for Jackson Ave. typical section and underpass lighting details.
For elevations of drilled shafts and rock sockets, see Sheets No. B27-09 and B27-11.

Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

GENERAL PLAN AND ELEVATION



Van W. Robbins
11-13-25

DATE PREPARED: 11/13/2025

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	B27-02

COUNTY: JACKSON
JOB NO.: J411486D
CONTRACT ID.: 240807-C01
PROJECT NO.:

BRIDGE NO.: A9759

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

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

CLARKSON RADMACHER
JOINT VENTURE

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

HNTB

Design Specifications:
 2020 AASHTO LRFD Bridge Design Specifications (9th Ed.) and 2023 AASHTO Guide Specifications for LRFD Seismic Bridge Design (3rd Edition)
 Seismic Design Category = A (Nonseismic)
 Design earthquake response spectral acceleration coefficient at 1.0 second period, $S_{D1} = 0.15$
 Acceleration Coefficient (effective peak ground acceleration coefficient), $A_s = N/A$

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 (End Bents below Const. Jt.) $f'c = 3,000$ psi
 Class B-1 Concrete (Intermediate Bents except Drilled Shafts and Rock Sockets) $f'c = 4,000$ psi
 Class B-2 Concrete (Drilled Shafts and Rock Sockets) $f'c = 4,000$ psi
 Class B-2 Concrete (Superstructure, except Prestressed Girders, and Barrier) $f'c = 4,000$ psi
 Class B-1 Concrete (Barrier) $f'c = 4,000$ psi
 Reinforcing Steel (ASTM A615 Grade 60) $f_y = 60,000$ psi
 Structural HP Steel Pile (ASTM A709 Grade 50) $f_y = 50,000$ psi
 For prestressed girder stresses, see Sheets No. B27-17 and B27-18.

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

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

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

All reinforcing in the Type D barriers, light blisters, slab, concrete diaphragms, End Bents No. 1 and 4 and Intermediate Bents No. 2 & 3 shall be epoxy coated. Reinforcing in the rock sockets and drilled shaft shall be uncoated.

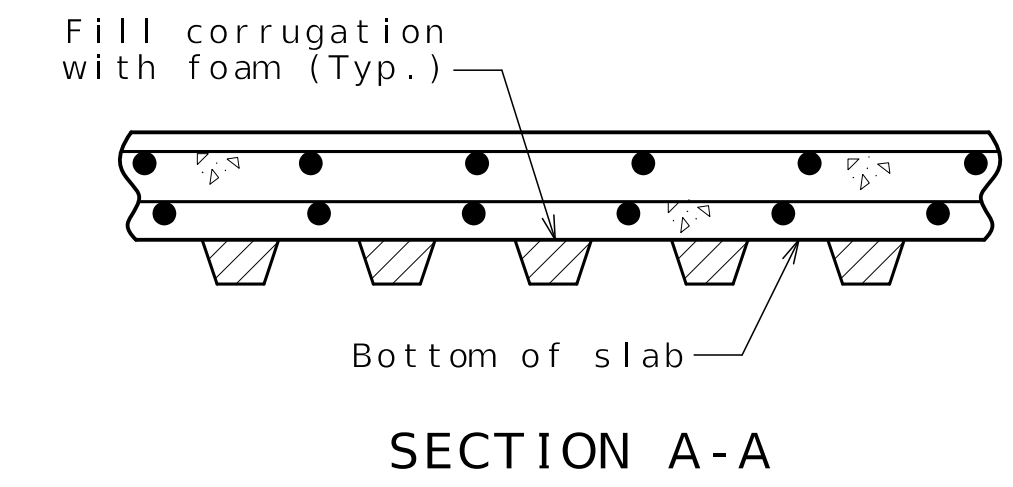
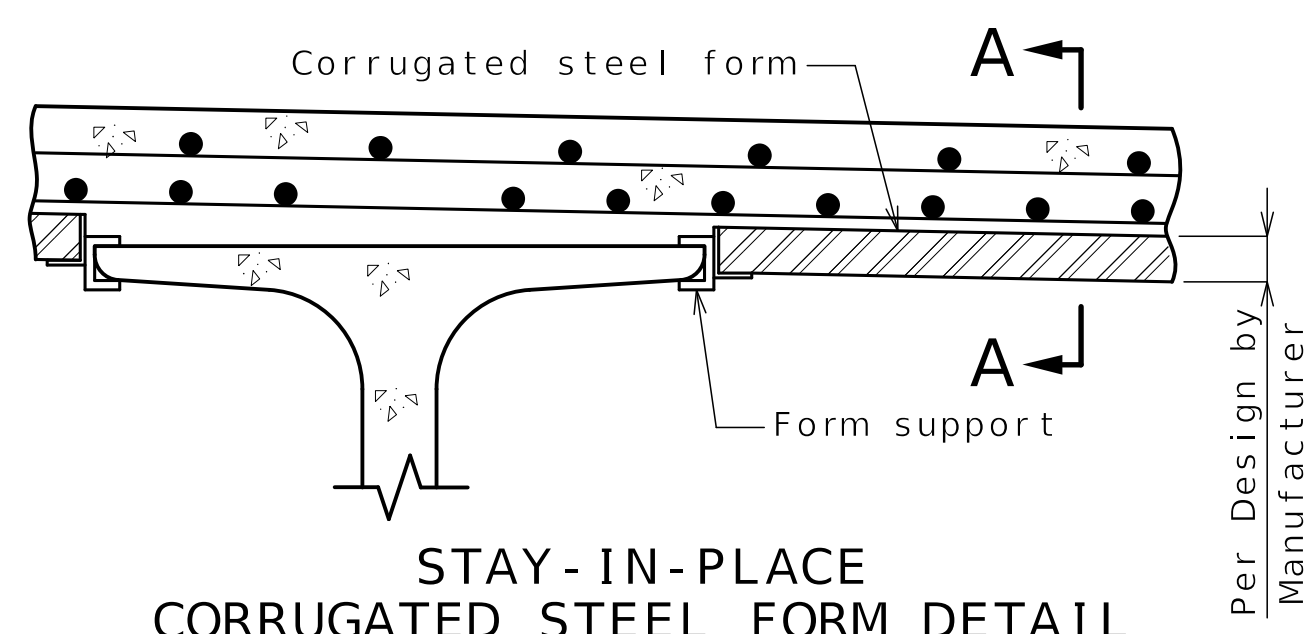
Concrete Protective Coatings:
 Concrete and masonry protective coating shall be applied to columns and on all exposed concrete and stone areas as noted in the plans in accordance with Sec 711. See Sheet No. B27-30.

Sacrificial graffiti protective coating shall be applied to columns and on all exposed concrete and stone areas as noted in the plans in accordance with Sec 711. See Sheet No. B27-30.

Miscellaneous:
 Outline of old work is indicated by light dashed lines. Heavy lines indicate new work U.N.O.

Abbreviations:
 E.F. denotes Each Face
 N.F. denotes Near Face
 F.F. denotes Far face
 U.N.O. denotes Unless Noted Otherwise

Foundation Data						
Type	Design Data	Bent Number				
		1	2	3	4	
Load Bearing Pile	Pile Type and Size	HP 12x53	---	---	HP 12x53	
	Number	ea 9	---	---	ea 9	
	Approximate Length Per Each (1)	ft 32	---	---	ft 45	
	Pile Point Reinforcement	ea All	---	---	ea All	
	Min. Galvanized Penetration (Elev.)	ft Full Length	---	---	ft Full Length	
	Minimum Tip Penetration (Elev.)	ft ---	---	---	ft ---	
	Criteria for Min. Tip Penetration	---	---	---	---	
	Pile Driving Verification Method	DF	---	---	DF	
Resistance Factor	0.40	---	---	0.40		
Minimum Nominal Axial Compressive Resistance	kip	505	---	---	505	
Number	ea	---	4	4	---	
Rock Socket	Layer 1	Foundation Material	---	LIMESTONE	SHALE	---
		Elevation Range	ft ---	855-851	850-826	ft ---
		Minimum Nominal Axial Compressive Resistance (Side Resistance)	ksf ---	28.0	11.2	ksf ---
	Layer 2	Foundation Material	---	SHALE	---	---
		Elevation Range	ft ---	851-830	---	ft ---
		Minimum Nominal Axial Compressive Resistance (Side Resistance)	ksf ---	11.2	---	ksf ---
	Minimum Nominal Axial Compressive Resistance (Tip Resistance)	ksf ---	157	157	ksf ---	



Stay-In-Place Corrugated Steel Form Notes:

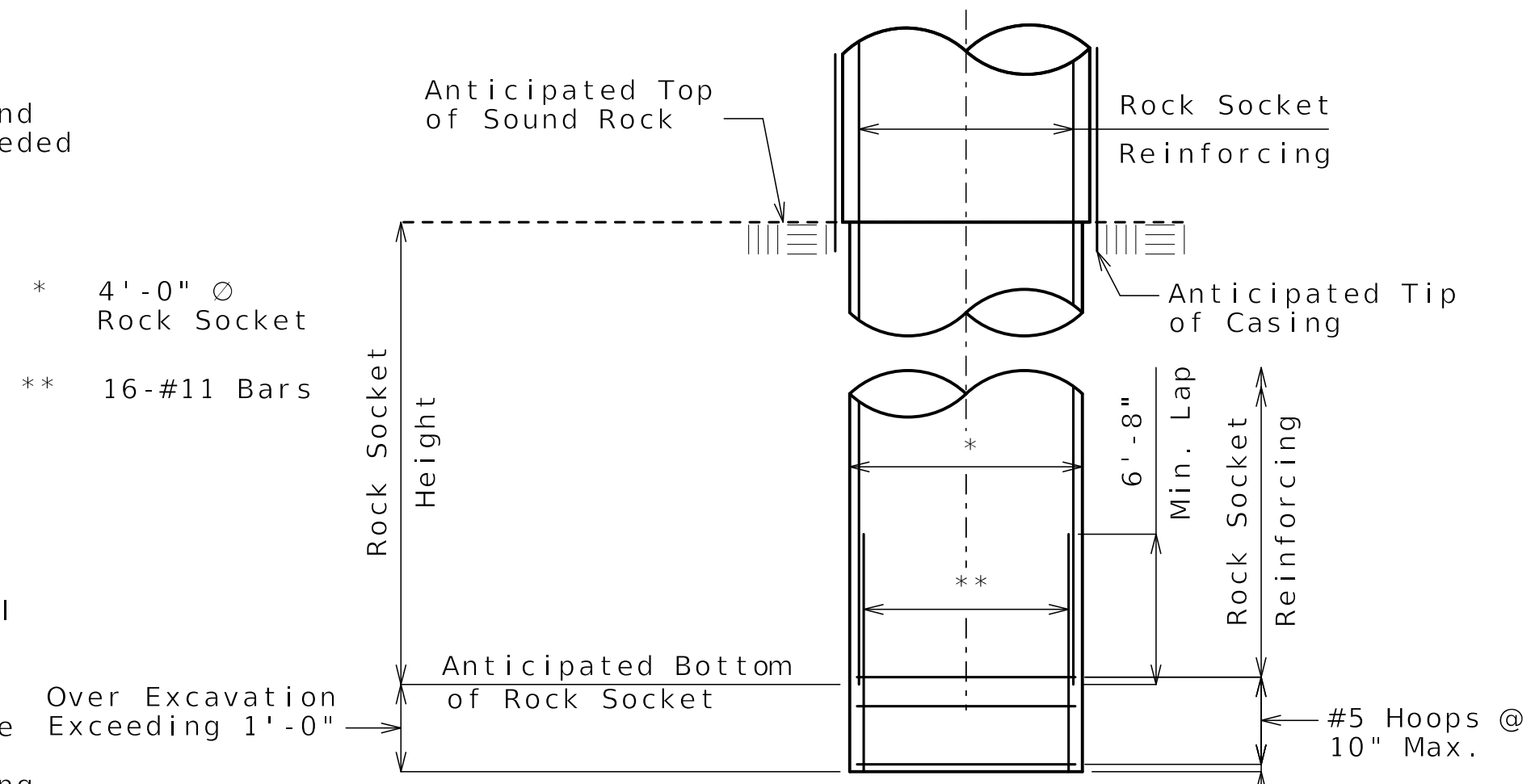
Corrugated steel forms, supports, closure elements and accessories shall be in accordance with grade requirement and coating designation G165 of ASTM A653. Complete shop drawings of the permanent steel deck forms shall be required in accordance with Sec 1080.

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

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

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

(1) Pile length is the maximum estimated per bent and includes embedment into concrete. Adjust as needed for bottom of concrete variations at each bent.



ROCK SOCKET OVER EXCAVATION DETAIL

For Rock Socket Details see Intermediate Bent Details

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

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.

Prebore for piles at End Bent No. 1 to elevation 864. This elevation corresponds to prebore through an approximately 5 ft. thick limestone layer to the underlying soft shale layer.

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

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

The contractor shall make every effort to achieve the minimum galvanized penetration (elevation) shown on the plans for all piles. Deviations in penetration less than 5 feet of minimum will be considered acceptable provided the contractor makes the necessary corrections to ensure the minimum penetration is achieved on subsequent piles.
 DF = FHWA-modified Gates Dynamic Pile Formula

Rock Socket (Drilled Shafts):

Minimum Nominal Axial Compressive Resistance (Side Resistance + Tip Resistance) = Maximum Factored Loads/Resistance Factors

Thickness of permanent steel casing shall be in accordance with Project AAS.

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

Drilled shafts shall be constructed in accordance with project Drilled Shaft AAS.

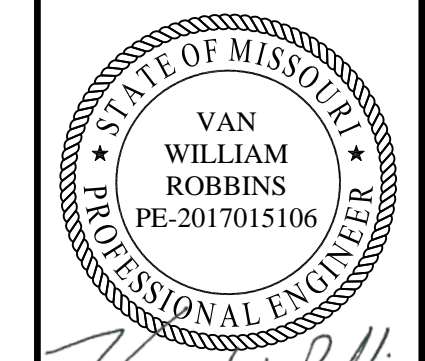
Released For Construction
 Not to Scale
 Revision: 0.0
 Date: 11/21/2025
 Package: BRD-27-WB-70-Jackson

GENERAL NOTES

Detailed JUL 2025
 Checked AUG 2025

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

Sheet No. B27-03 of B27-41



Van W. Robbins
 11-13-25

DATE PREPARED 11/13/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. B27-03
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	

BRIDGE NO.
A9759

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CLARKSON RADMACHER JOINT VENTURE

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



Gina D. Horner
11/13/2025

DATE PREPARED
11/13/2025

ROUTE STATE
I-70 MO
DISTRICT SHEET NO.
BR B27-04

COUNTY
JACKSON
JOB NO.
J411486D
CONTRACT ID.
240807-C01
PROJECT NO.

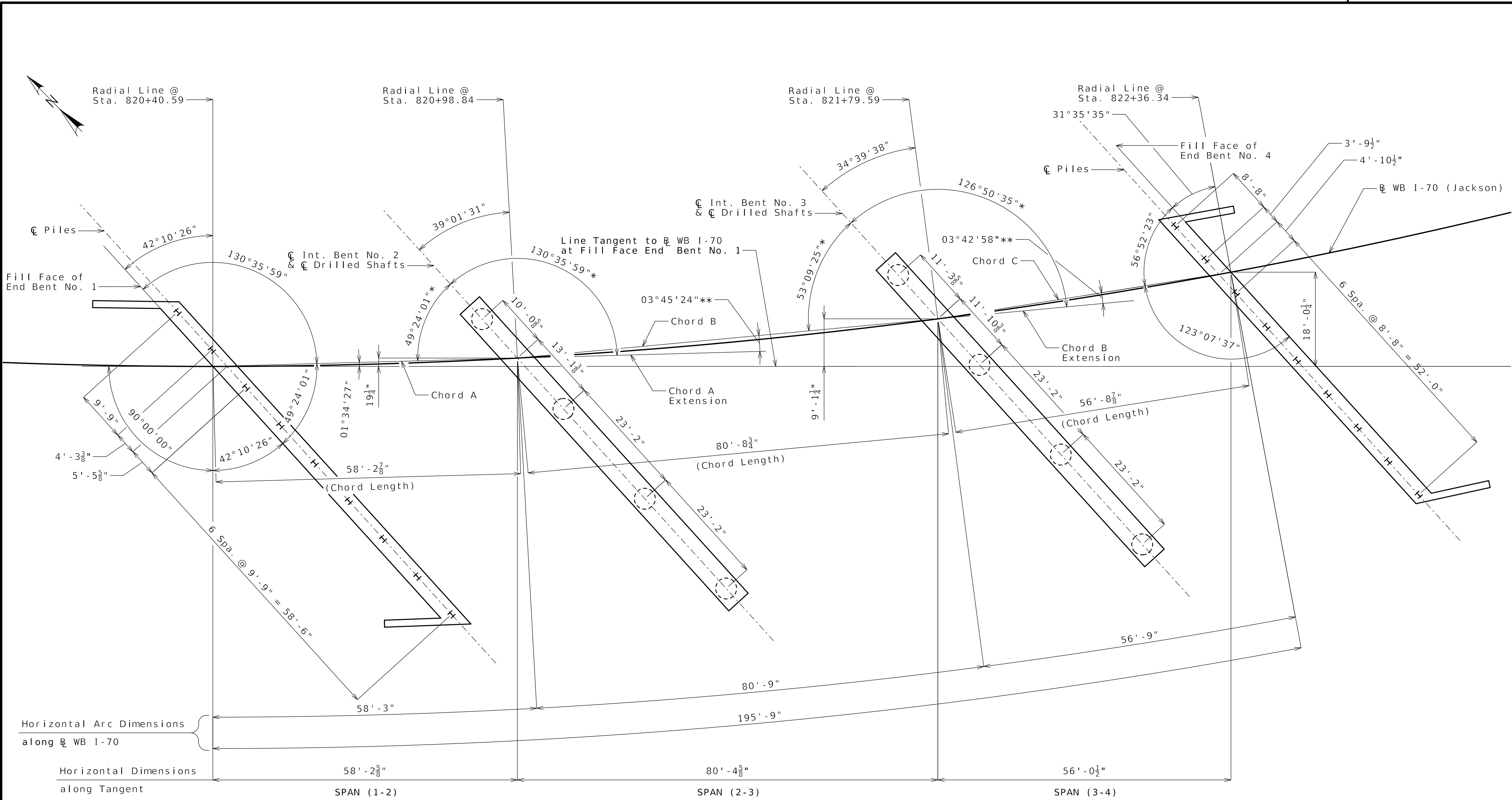
BRIDGE NO.
A9759

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

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



SUBSTRUCTURE LAYOUT

Notes:
 All stations are given along WB I-70.
 All dimensions are horizontal.
 * Angle between Bent and chord.
 ** Angle between extended chord and chord.

Released For Construction
 Not to Scale
 Revision: 0.0
 Date: 11/21/2025
 Package: BRD-27-WB-70-Jackson

SUBSTRUCTURE LAYOUT

Detailed JUL 2025
 Checked AUG 2025

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

Sheet No. B27-04 of B27-41



Gina D. Horner
11/13/2025

DATE PREPARED
11/13/2025

ROUTE
I-70 STATE
MO

DISTRICT
BR SHEET NO.
B27-05

COUNTY
JACKSON

JOB NO.
J411486D

CONTRACT ID.
240807-C01

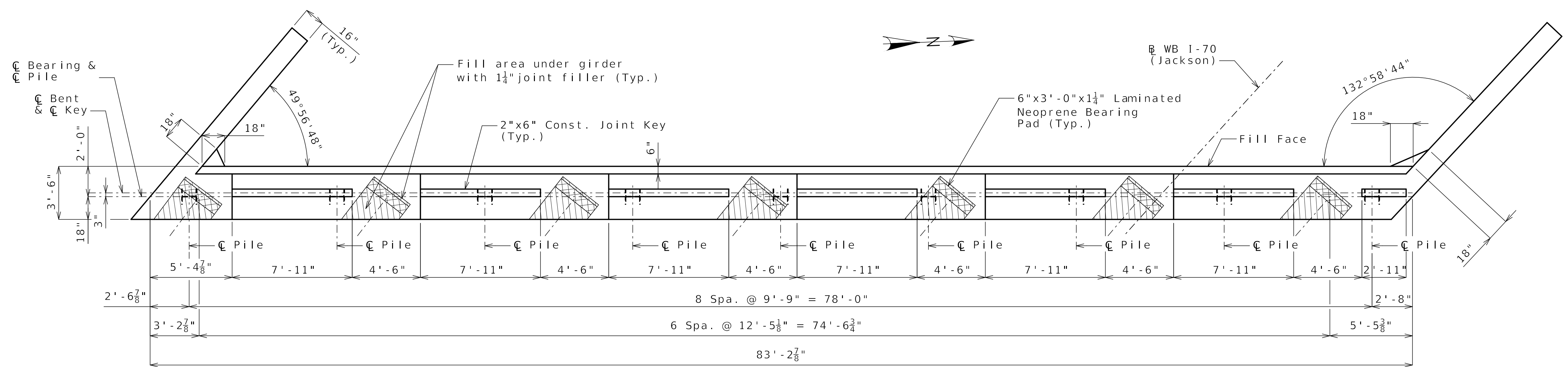
PROJECT NO.

BRIDGE NO.
A9759

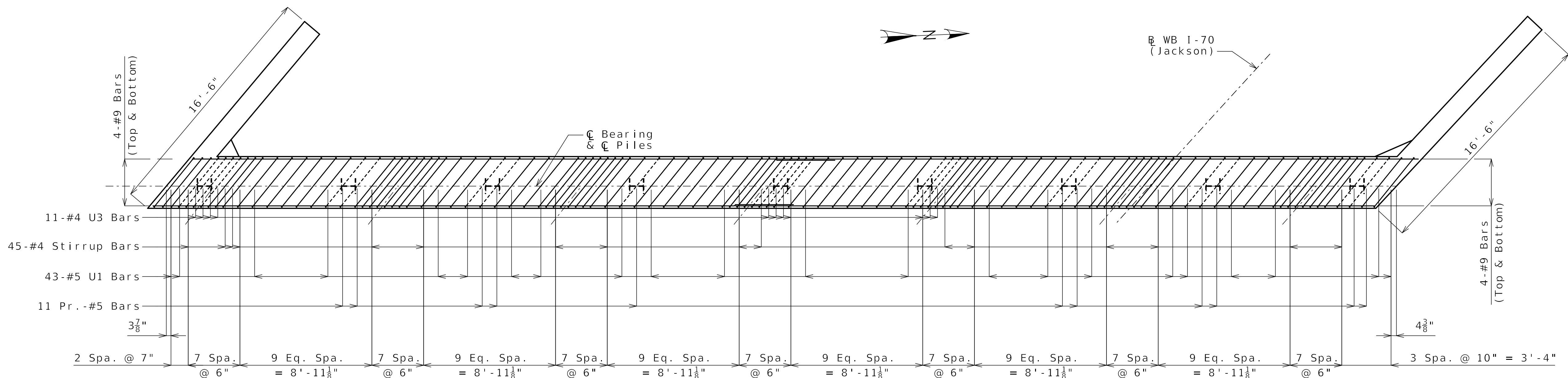
DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

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

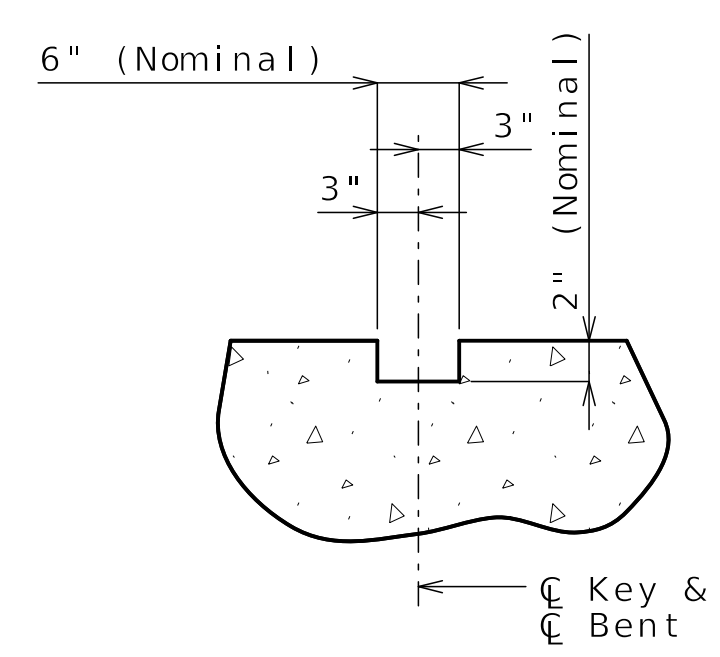
CLARKSON RADMACHER JOINT VENTURE
715 KIRK DRIVE KANSAS CITY, MO 64105-1310
CERTIFICATE OF AUTHORITY NO. 001270
HNTB



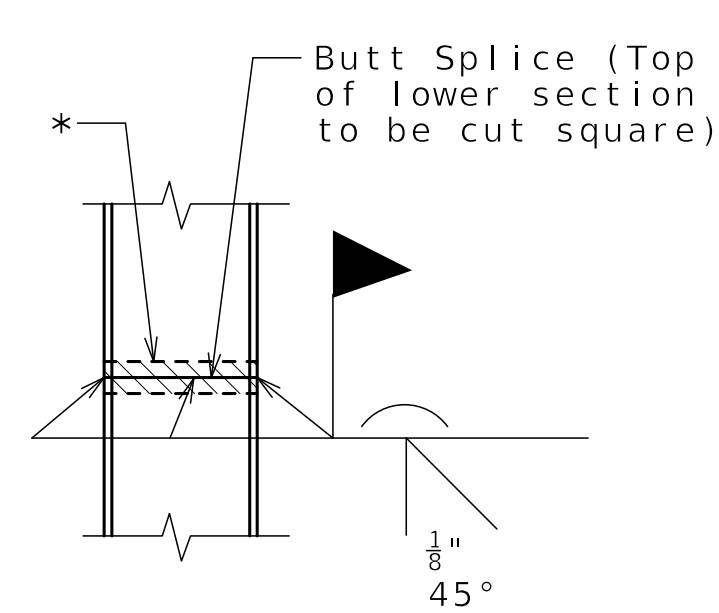
PLAN OF BEAM



PLAN OF BEAM SHOWING REINFORCING
(Key and steps not shown for clarity)

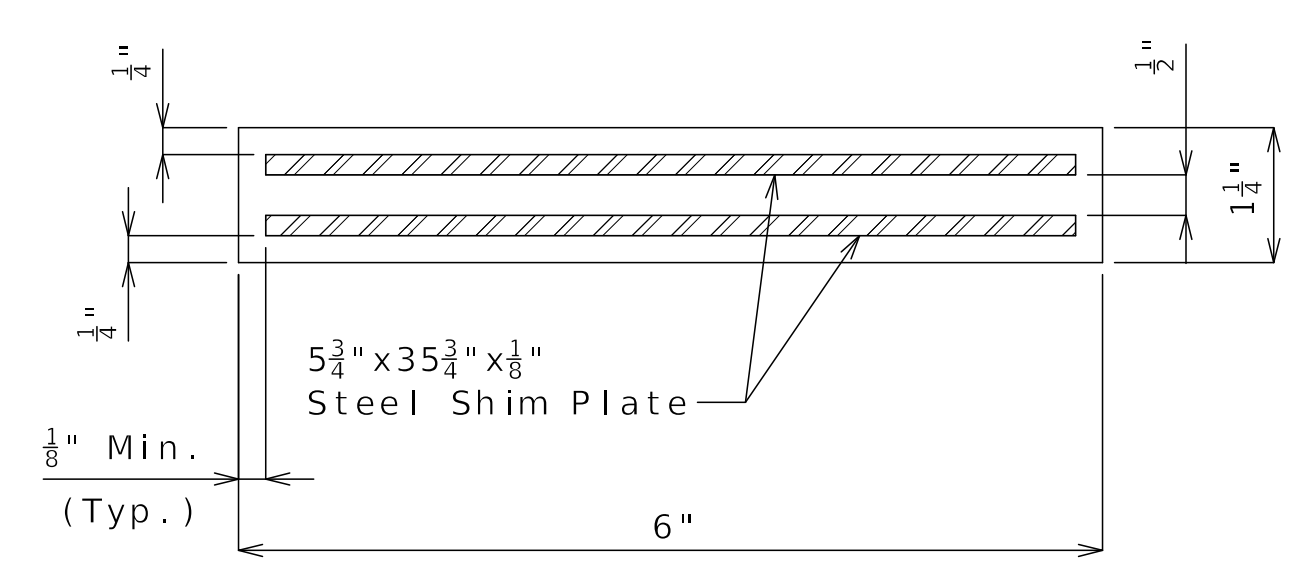


SECTION THRU KEY



STEEL PILE SPLICE
(If required)

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



TYPICAL SECTION THRU LAMINATED NEOPRENE BEARING PAD
7 Required

Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

Notes:
Work this sheet with Sheets No. B27-06 and B27-07.
All U bars and pairs of vertical bars shall be placed along skew. Reinforcing steel shall be shifted to clear piles. U-bars shall clear piles by at least 1 1/2".
For details of bridge approach slab, see Sheet No. B27-32.
For angles of girders relative to C Bent, see Sheet No. B27-16.

DETAILS OF END BENT NO. 1

Detailed JUL 2025
Checked AUG 2025

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

Sheet No. B27-05 of B27-41



GINA D. HORNER
PE-30413

DATE PREPARED
11/13/2025

ROUTE STATE
I-70 MO

DISTRICT SHEET NO.
BR B27-06

COUNTY
JACKSON

JOB NO.
J411486D

CONTRACT ID.
240807-C01

PROJECT NO.

BRIDGE NO.
A9759

DESCRIPTION
REV 0 - RFC SUBMITTAL

DATE
11/13/25

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL JEFFERSON CITY, MO 65102

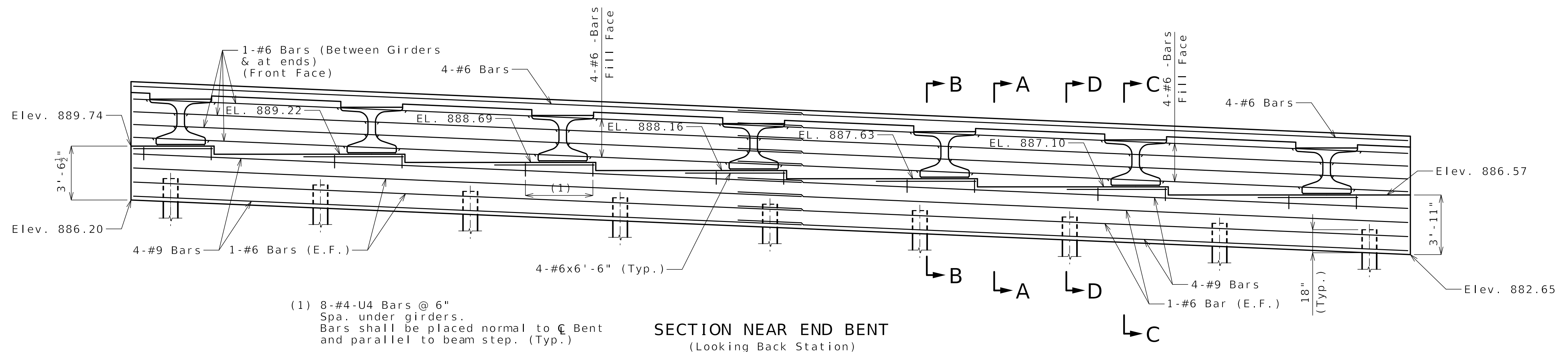
1-888-ASK-MODOT (1-888-275-6636)

CLARKSON RADMACHER JOINT VENTURE

715 KIRK DRIVE KANSAS CITY, MO 64105-1310

CERTIFICATE OF AUTHORITY NO. 001270

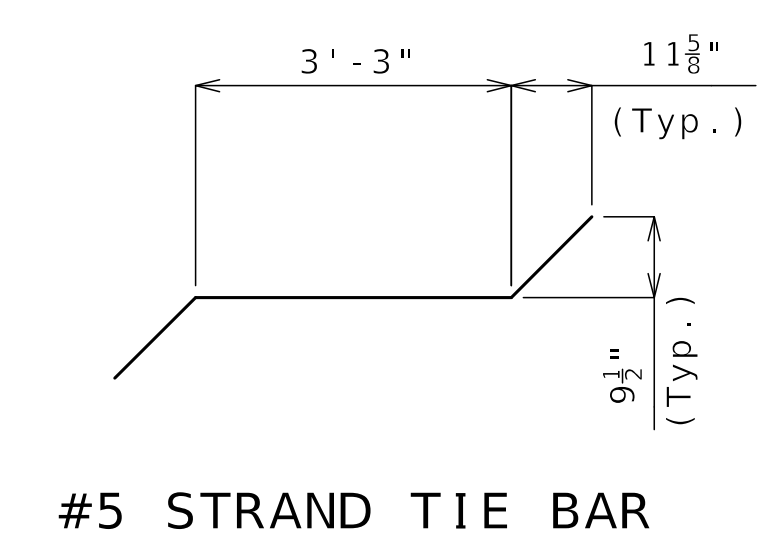
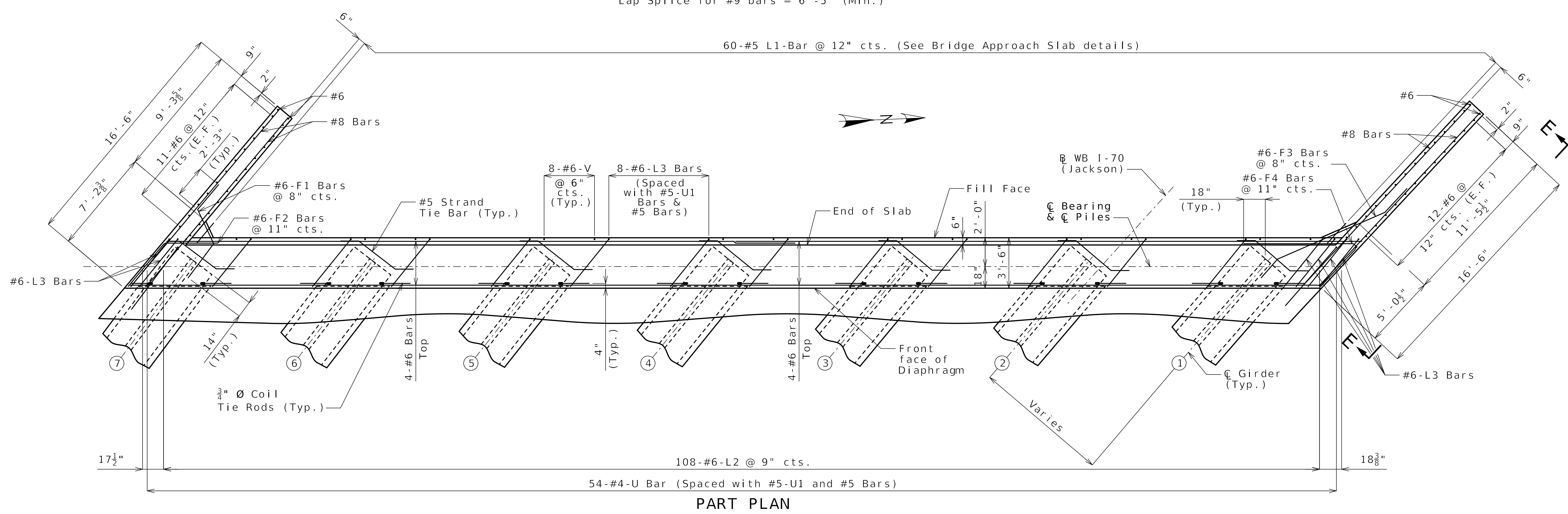
HNTB



(1) 8-#4-U4 Bars @ 6" Spa. under girders. Bars shall be placed normal to C Bent and parallel to beam step. (Typ.)

SECTION NEAR END BENT
(Looking Back Station)

Notes:
Lap Splice for #6 bars = 4'-3" (Min.)
Lap Splice for #9 bars = 6'-5" (Min.)



General Notes:
Work this sheet with Sheets No. B27-05 and B27-07.
For Sections A-A, B-B, C-C and D-D and Elevation E-E, see Sheet No. B27-07.
For location of coil tie rods, see Sheet No. B27-17.
Strands at end of the girders shall be field bent or, if necessary, cut in field to maintain 1 1/2-inch minimum clearance to fill face of end bent.
The #6-F bars shall be bent in the field to clear girders.

(X) Denotes girder number

DETAILS OF END BENT NO. 1

Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson



Gina D. Horner
11/13/2025

DATE PREPARED
11/13/2025

ROUTE 1-70 STATE MO

DISTRICT BR SHEET NO. B27-07

COUNTY JACKSON

JOB NO. J411486D

CONTRACT ID. 240807-C01

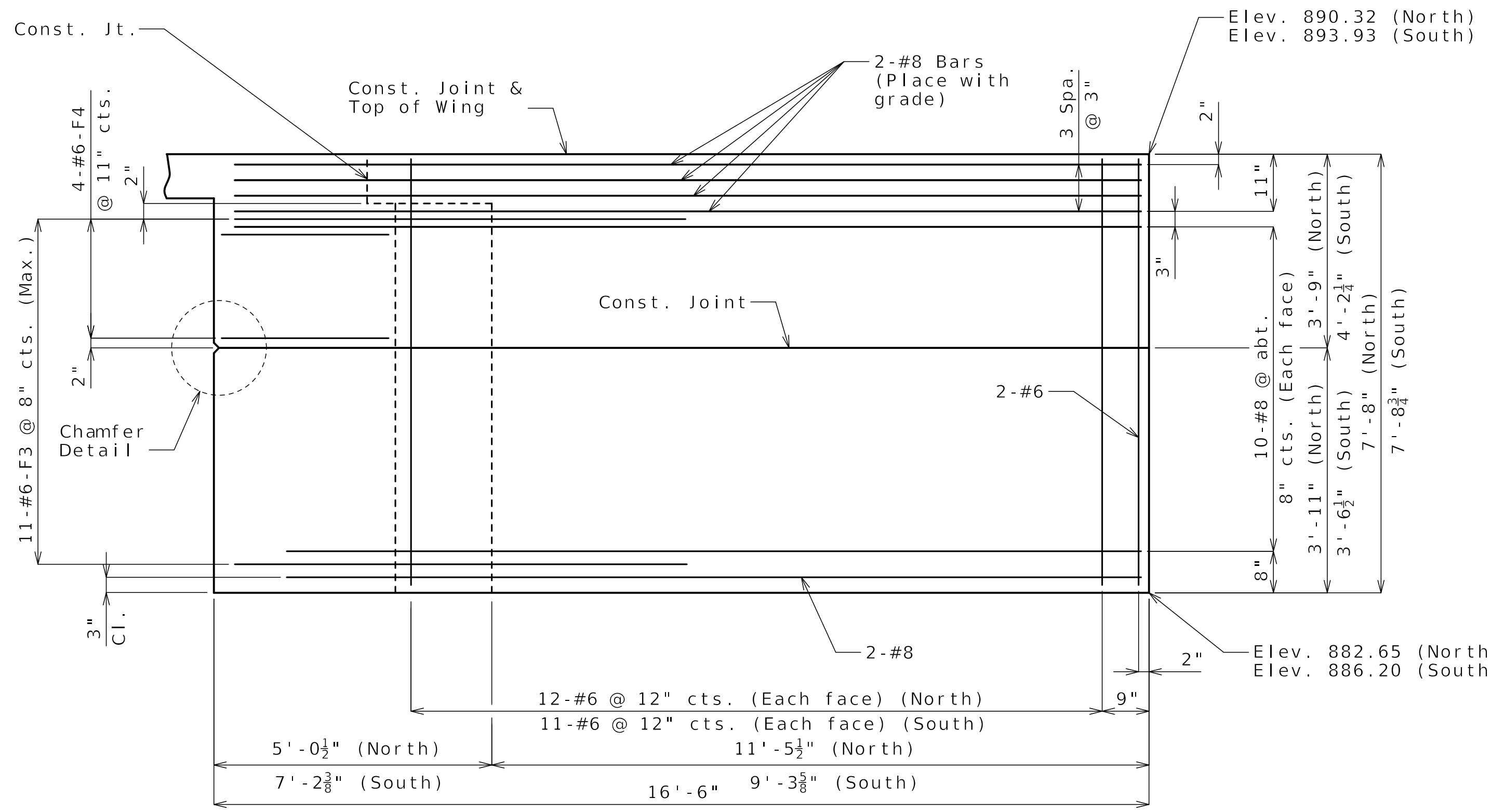
PROJECT NO.

BRIDGE NO. A9759

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

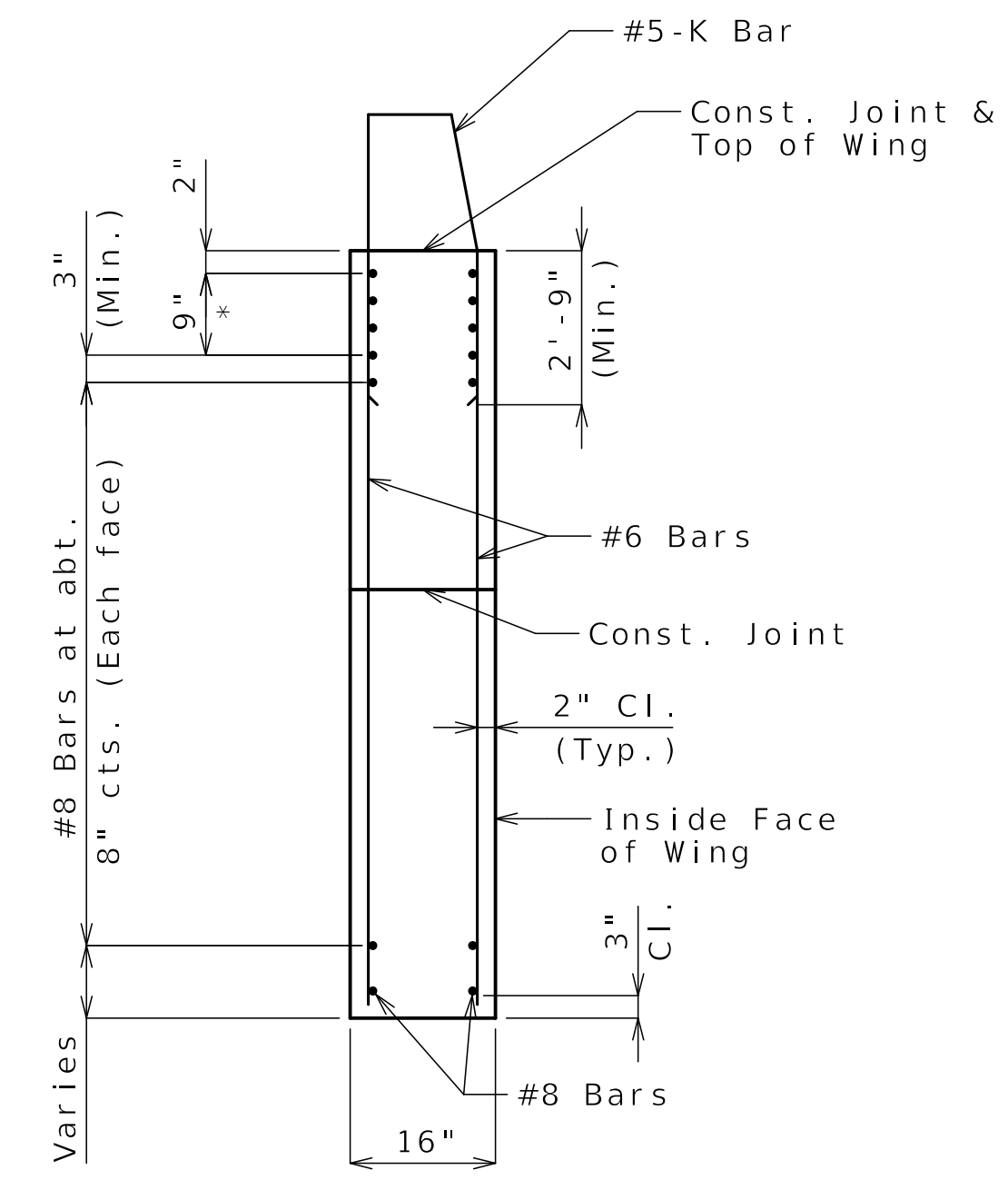
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
 105 WEST CAPITOL JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)

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



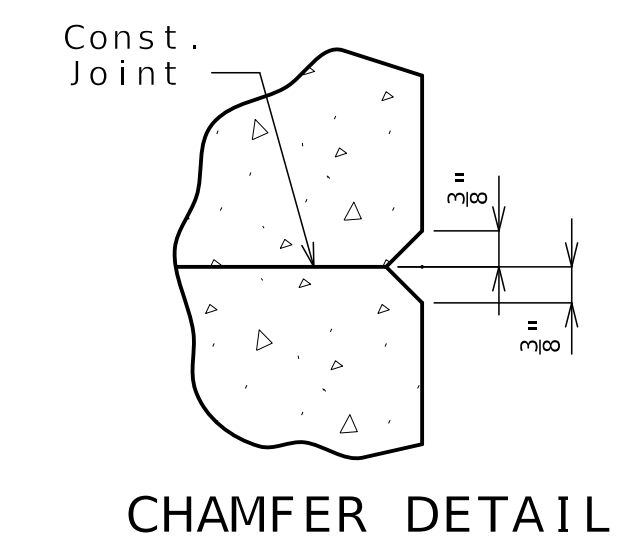
ELEVATION E-E

(North Wingwall shown, South wingwall similar except opposite hand)

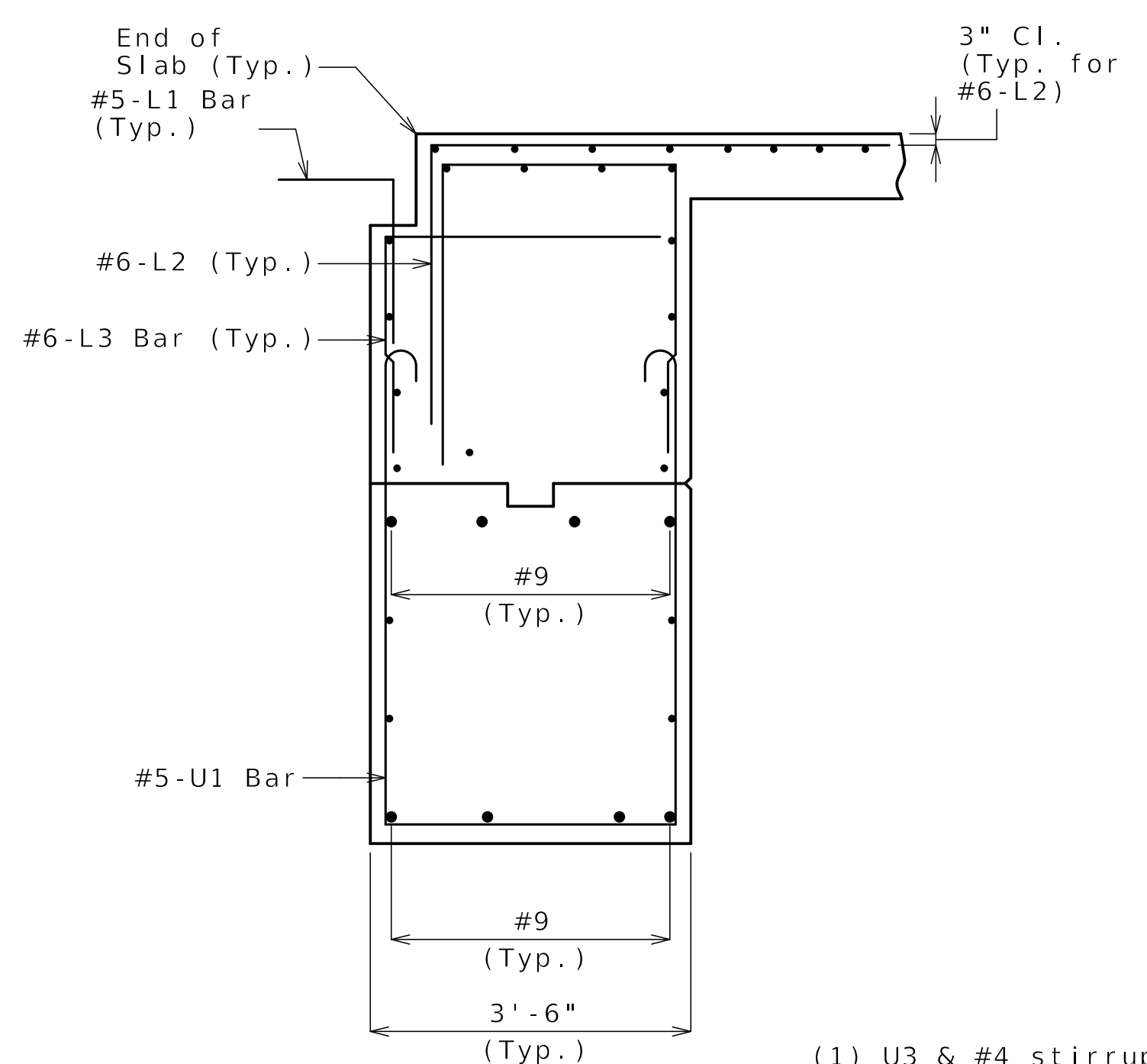


TYPICAL SECTION THRU WING

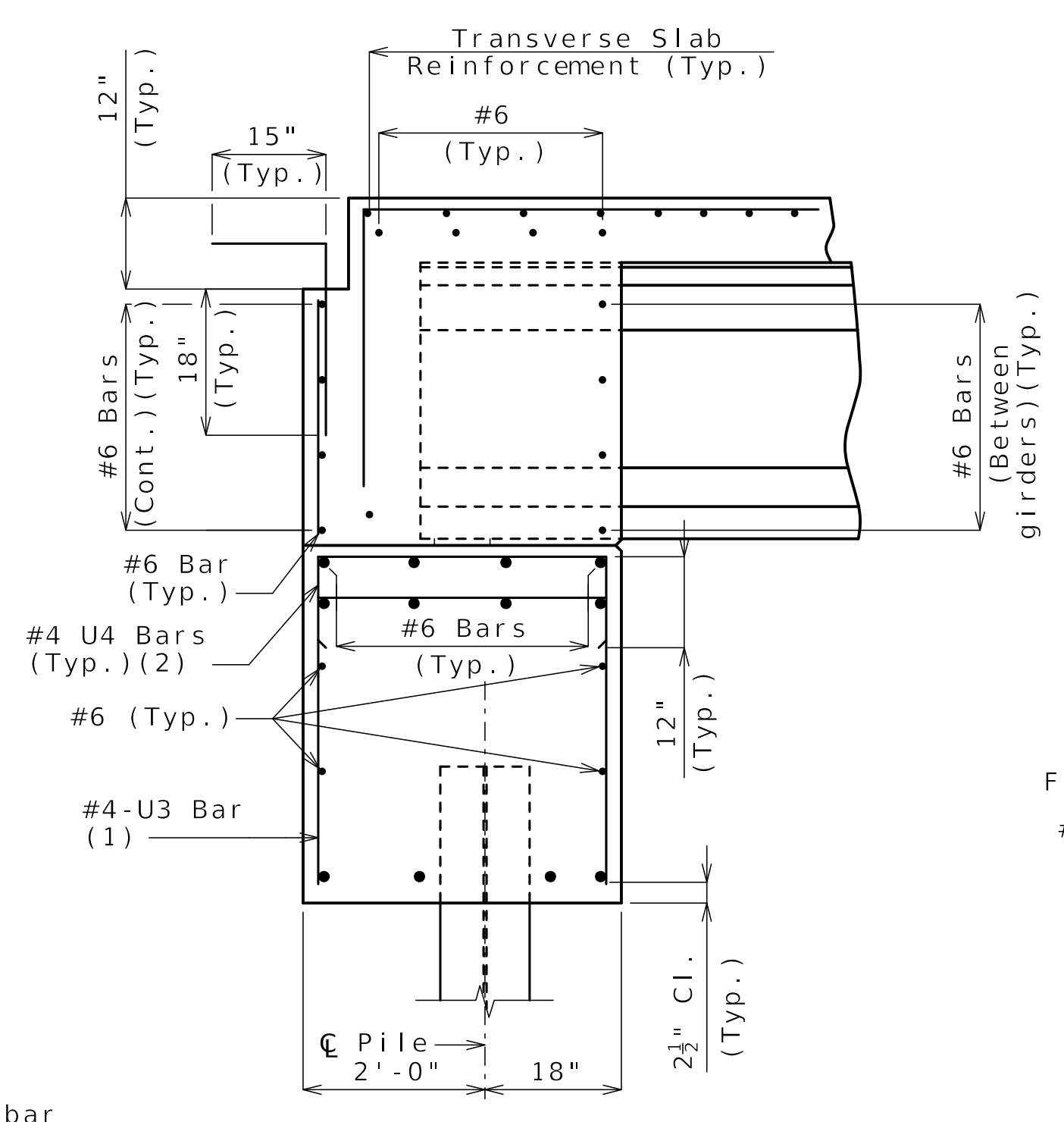
*#8 Bars at 3" cts. (Each face)(Place with grade) See Elevation E-E for number of bars



CHAMFER DETAIL

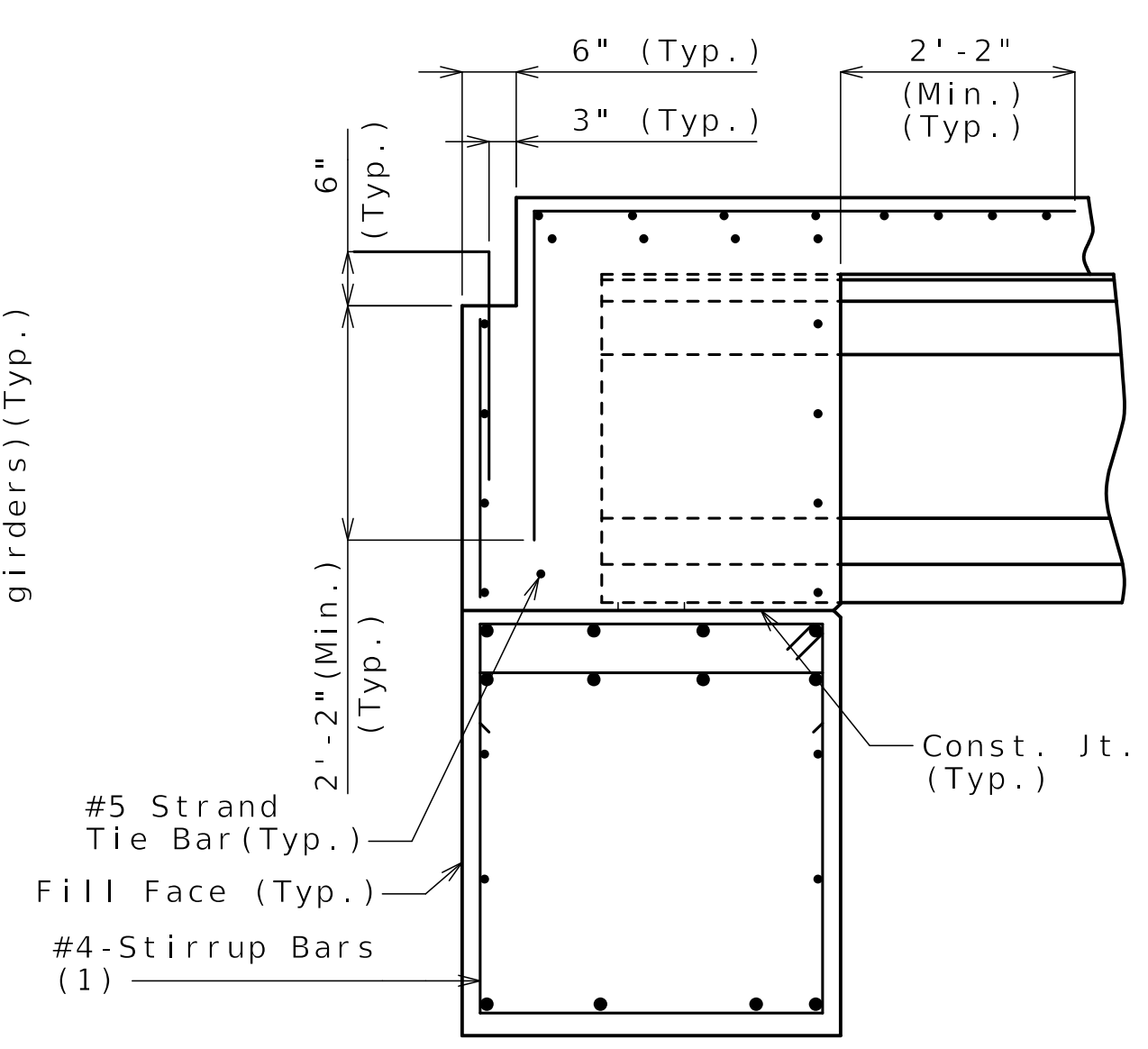


SECTION A-A

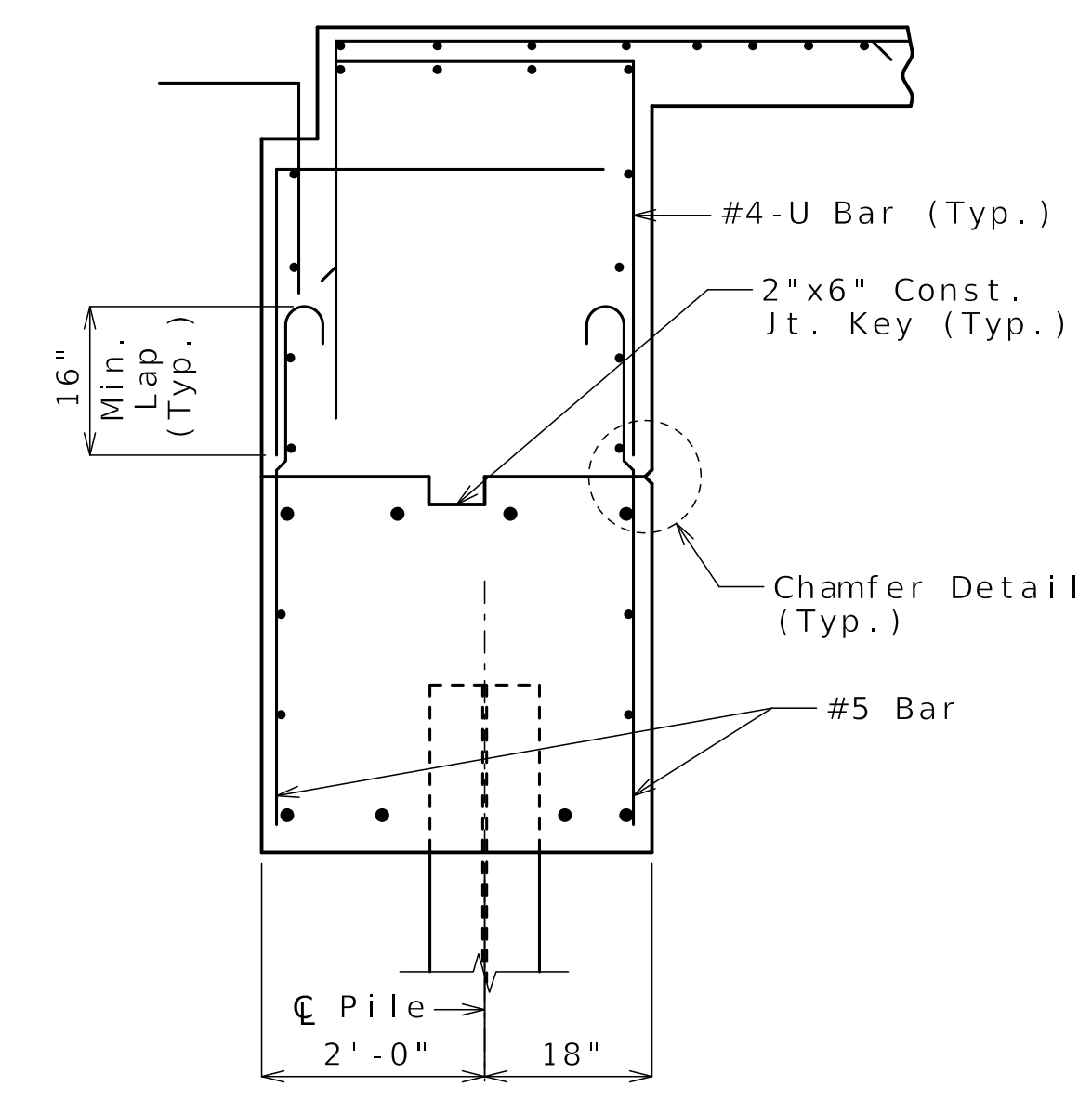


SECTION B-B

- (1) U3 & #4 stirrup bar vertical leg = 2'-10"
- (2) Bars shall be placed normal to \bar{C} Bent and parallel to beam step.



SECTION C-C



SECTION D-D

Released For Construction
 Not to Scale
 Revision: 0.0
 Date: 11/21/2025
 Package: BRD-27-WB-70-Jackson

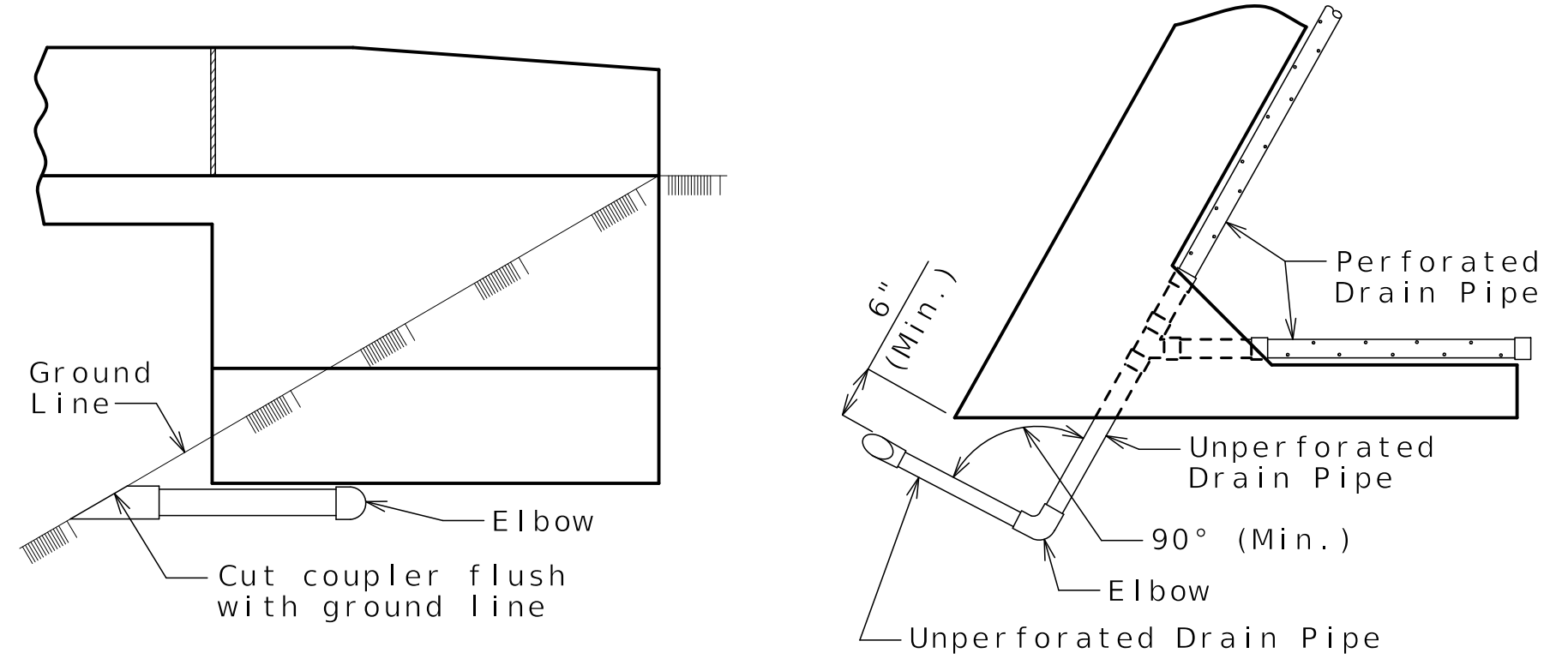
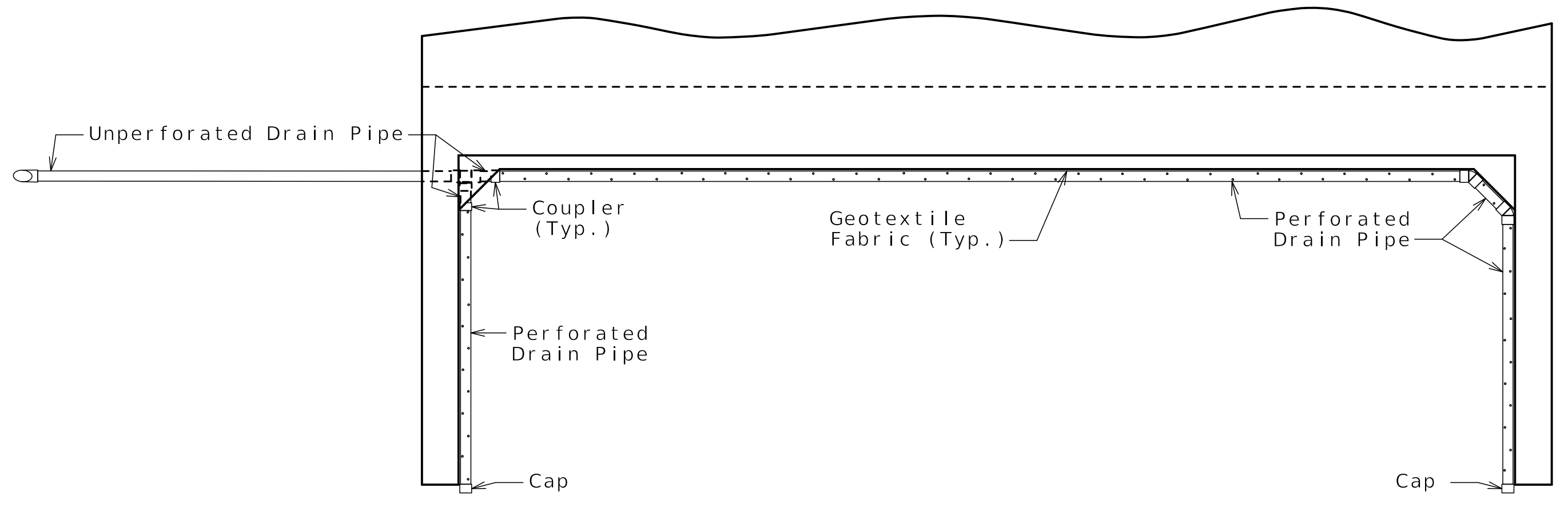
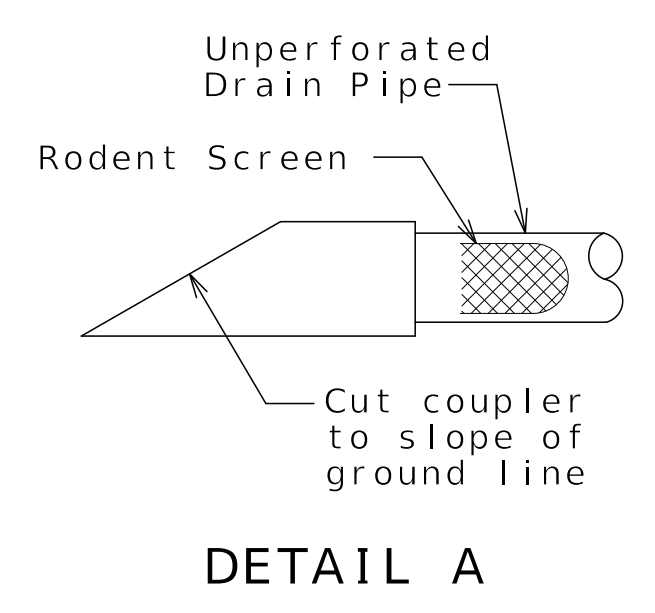
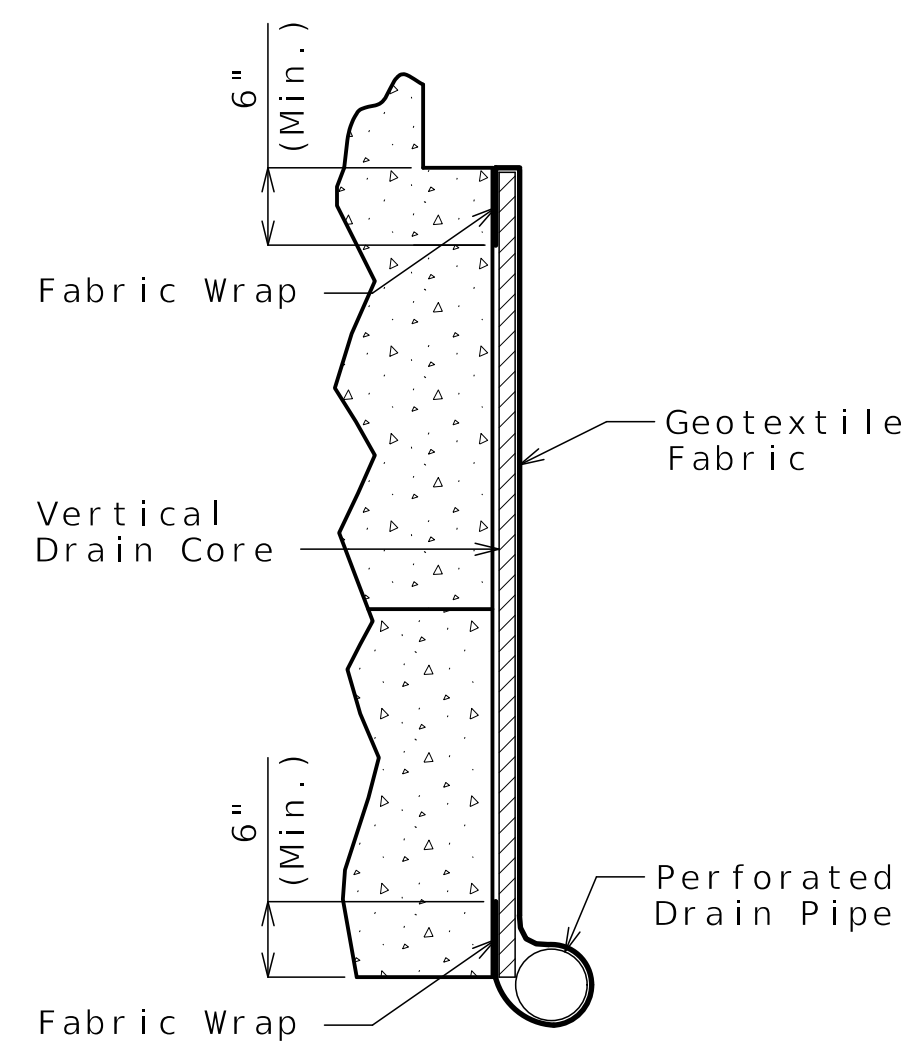
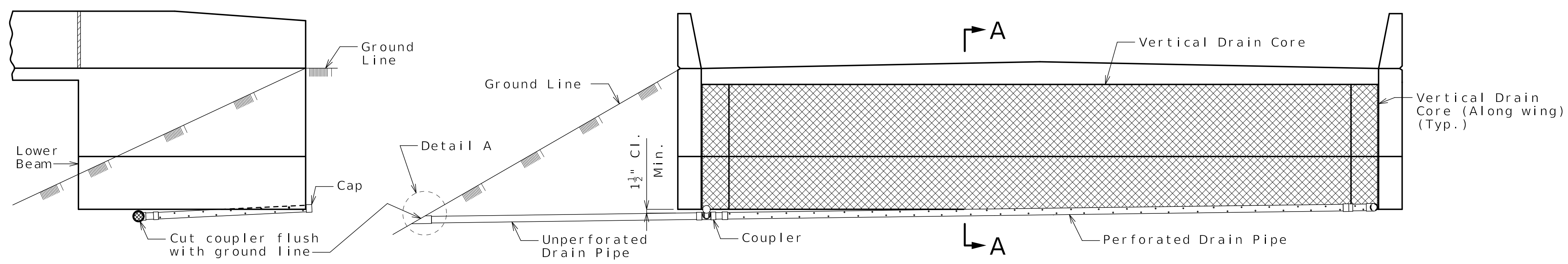
General Notes:
 Work this sheet with Sheets No. B27-05 and B27-06.
 For location of Sections A-A, B-B, C-C, D-D and Elevation E-E, see Sheet No. B27-06.
 For reinforcement of the Type D Barrier, see Sheet No. B27-28.

DETAILS OF END BENT NO. 1

Detailed JUL 2025
 Checked AUG 2025

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

Sheet No. B27-07 of B27-41



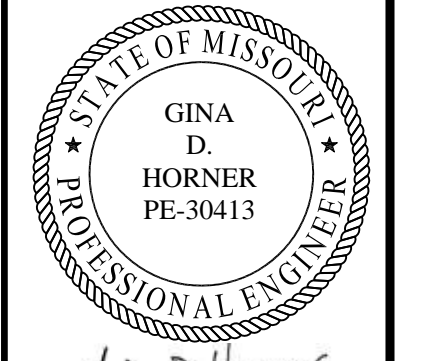
OPTIONAL TURNED DRAIN
(Use only when straight drain is not practical.)

General Notes:

- Squared end bent shown, skewed end bent similar.
- All drain pipe shall be sloped 1 to 2 percent.
- Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.
- Drain pipe shall be placed at fill face of end bent and inside face of wings. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.
- Perforated pipe shall be placed at fill face side and inside face of wings at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.

Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

VERTICAL DRAIN AT END BENTS



Gina D. Horner
11/13/2025
DATE PREPARED

11/13/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. B27-08
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	

BRIDGE NO.
A9759

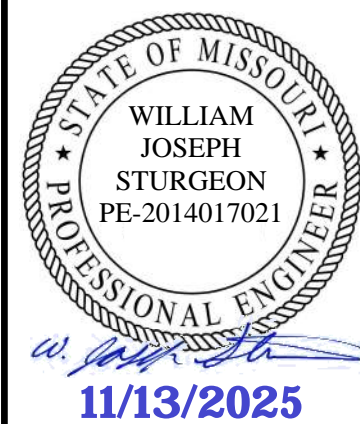
DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CLARKSON RADMACHER
JOINT VENTURE

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



DATE PREPARED 11/13/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. B27-09
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	

BRIDGE NO.
A9759

DESCRIPTION
REV 0 - RFC SUBMITTAL

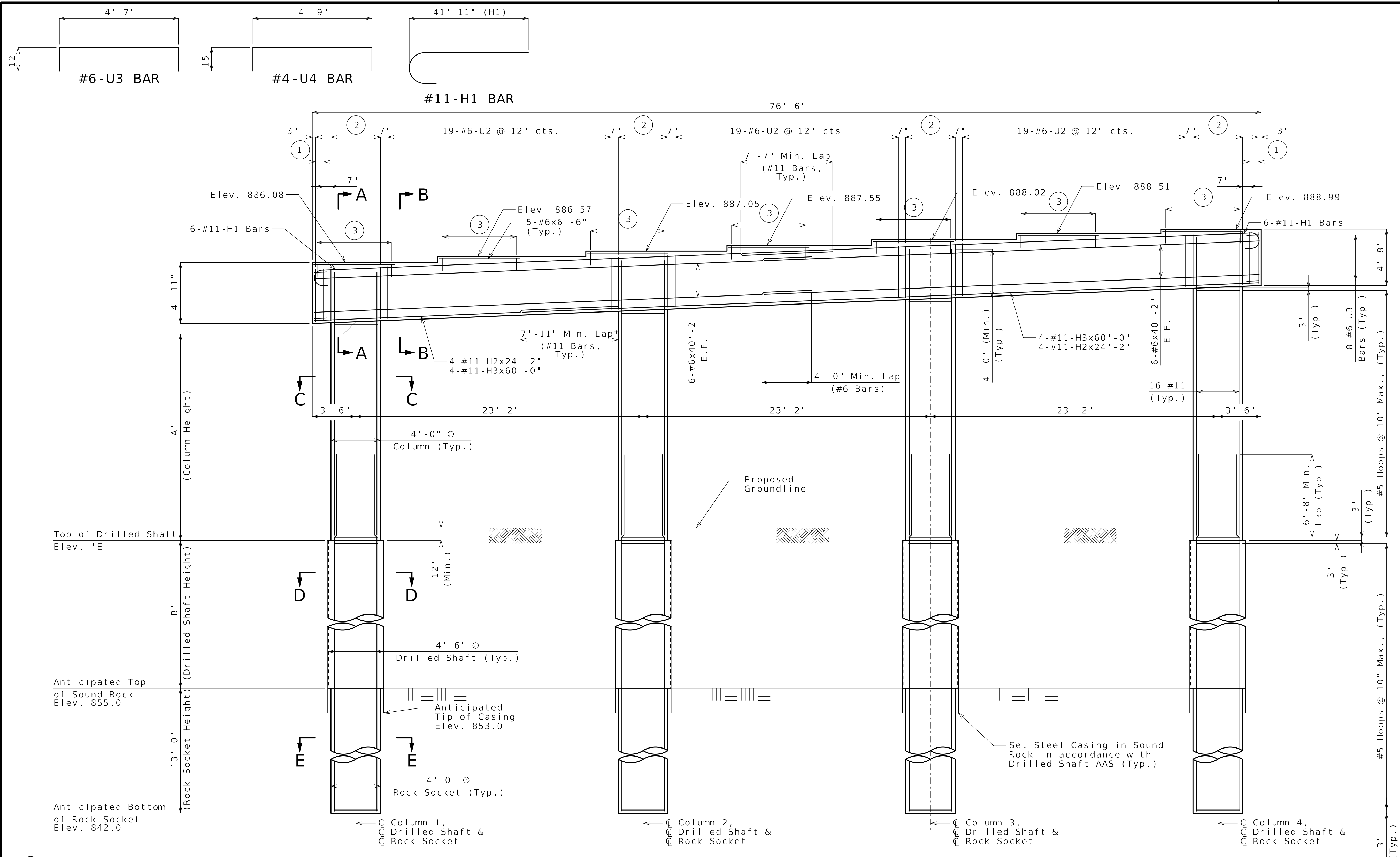
DATE
11/13/25

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



CLARKSON RADMACHER JOINT VENTURE

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



- ① 2-#6-U2 @ 8" cts.
- ② 5-#6-U1 @ 12" cts.
- ③ 13-#4-U4 @ 6" Spa.

Column Number	"A"	"B"	"E"
1	11' - 9 ³ / ₄ "	14' - 6"	869.5
2	13' - 9 ³ / ₈ "	13' - 6"	868.5
3	14' - 8 ⁵ / ₈ "	13' - 6"	868.5
4	15' - 8 ³ / ₈ "	13' - 6"	868.5

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

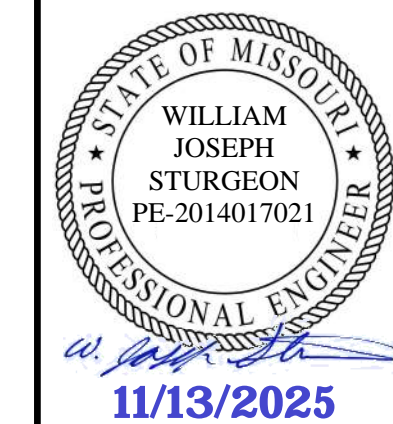
Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

Notes:
 * Alternate location of lap splices between adjacent bars about centerline of bent. Alternate lap splice not shown.
 Prior to placing concrete for columns, position of vertical reinforcement shall be verified so as to provide clearance for capbeam reinforcement as applicable.
 Work this sheet with Sheet No. B27-10.
 For steps 2 inches or more, use a 2 1/4 x 1/2" joint filler up vertical face.
 For location of drilled shafts, see Sheet No. B27-04.
 For Sections A-A thru E-E, see Sheet No. B27-10.
 For additional joint filler layout details, see Sheet No. B27-20.

DETAILS OF INTERMEDIATE BENT NO. 2

Detailed JUL 2025
Checked AUG 2025

Sheet No. B27-09 of B27-41



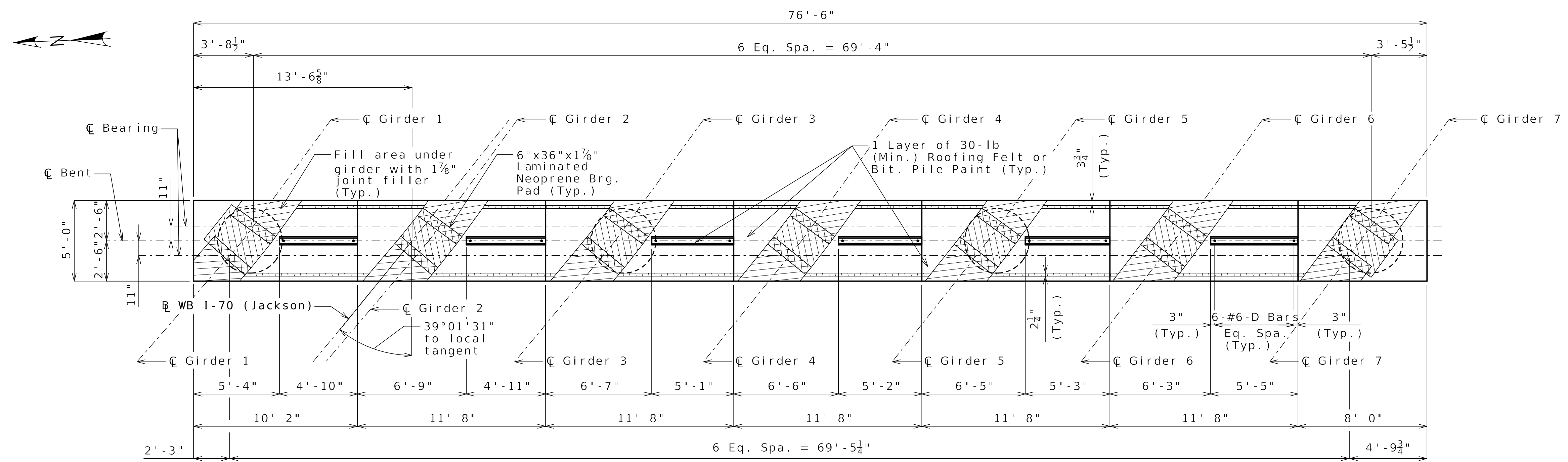
DATE PREPARED 11/13/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. B27-10
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	

BRIDGE NO. A9759

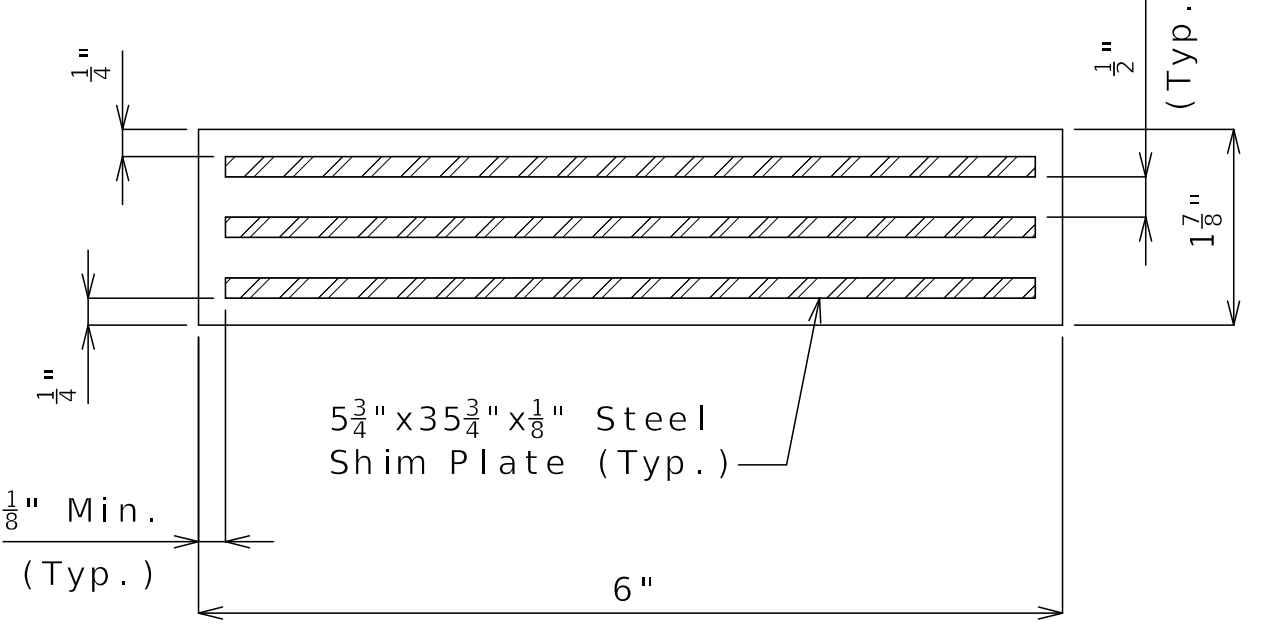
DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

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

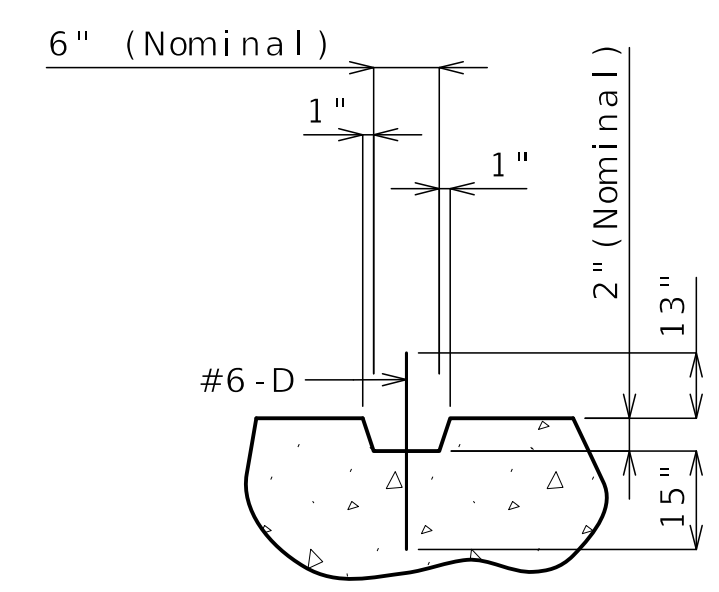
CLARKSON RADMACHER JOINT VENTURE
 715 KIRK DRIVE KANSAS CITY, MO 64105-1310
 CERTIFICATE OF AUTHORITY NO. 001270
HNTB



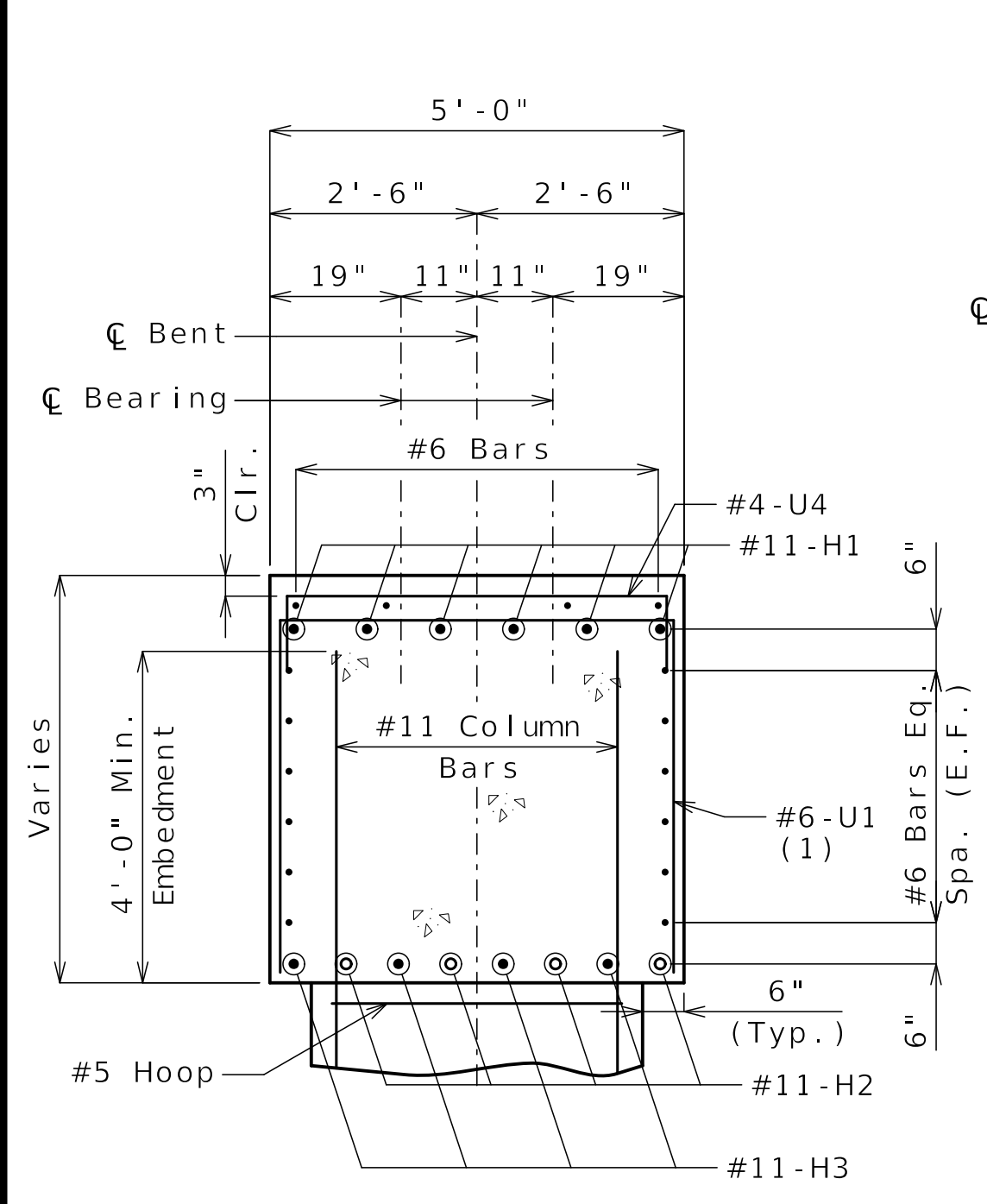
PLAN OF CAPBEAM



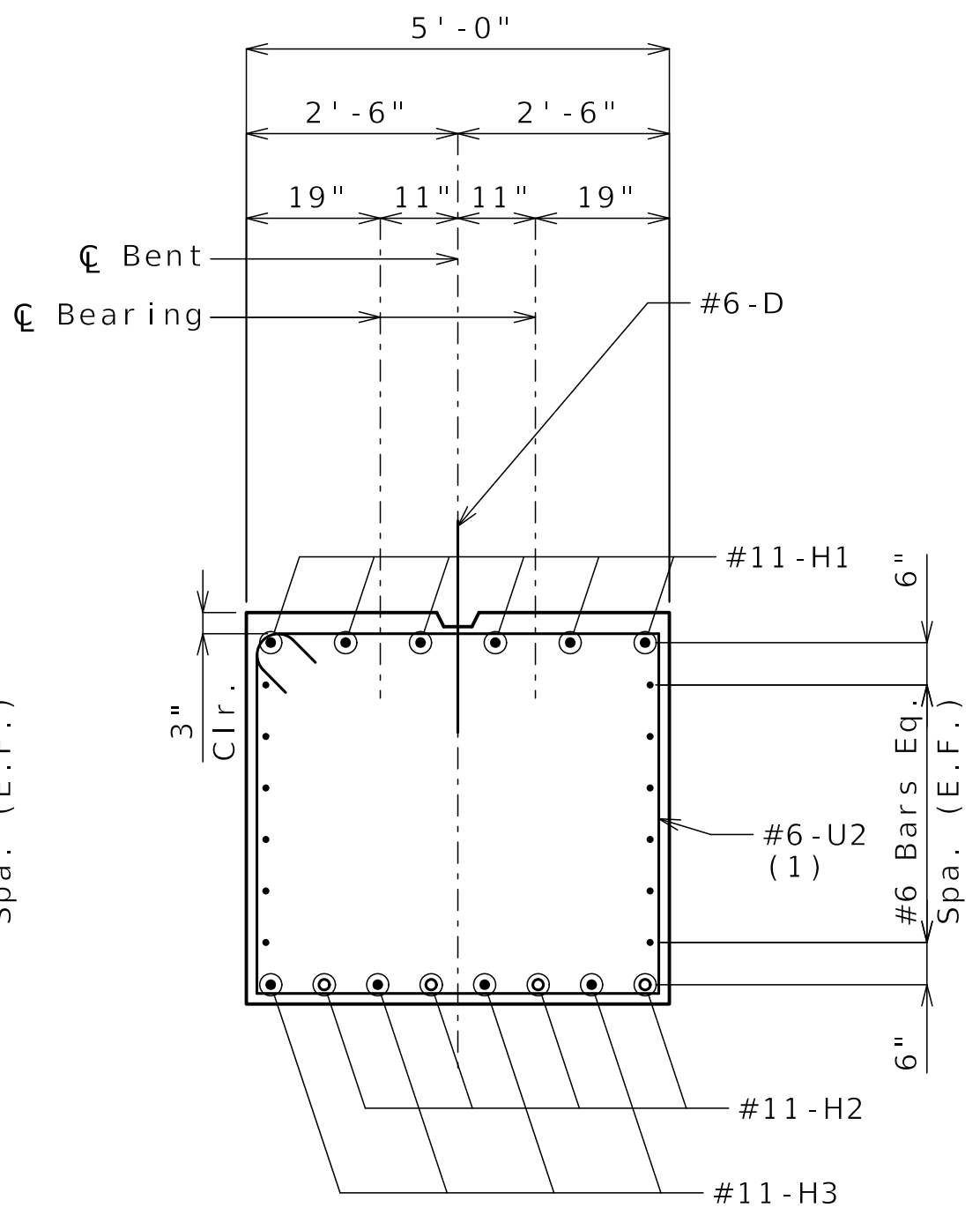
TYPICAL SECTION THRU LAMINATED NEOPRENE BEARING PAD
 14 Required per Bent



SECTION THRU KEY

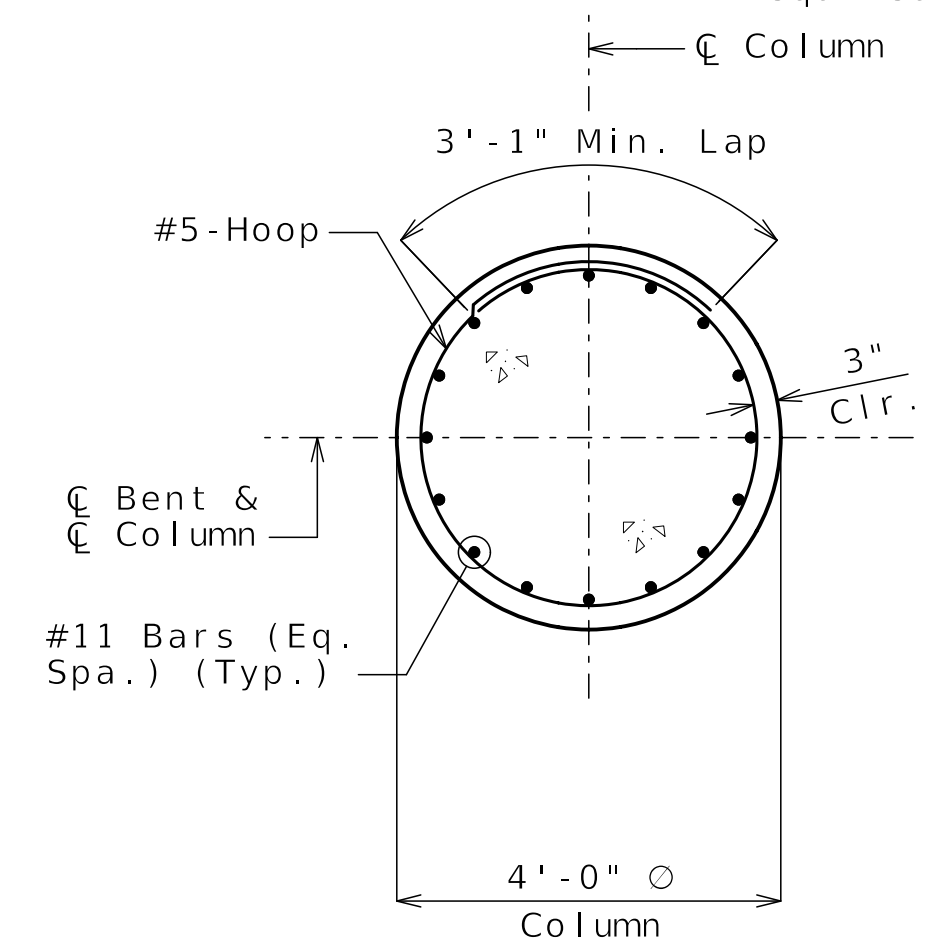


SECTION A-A

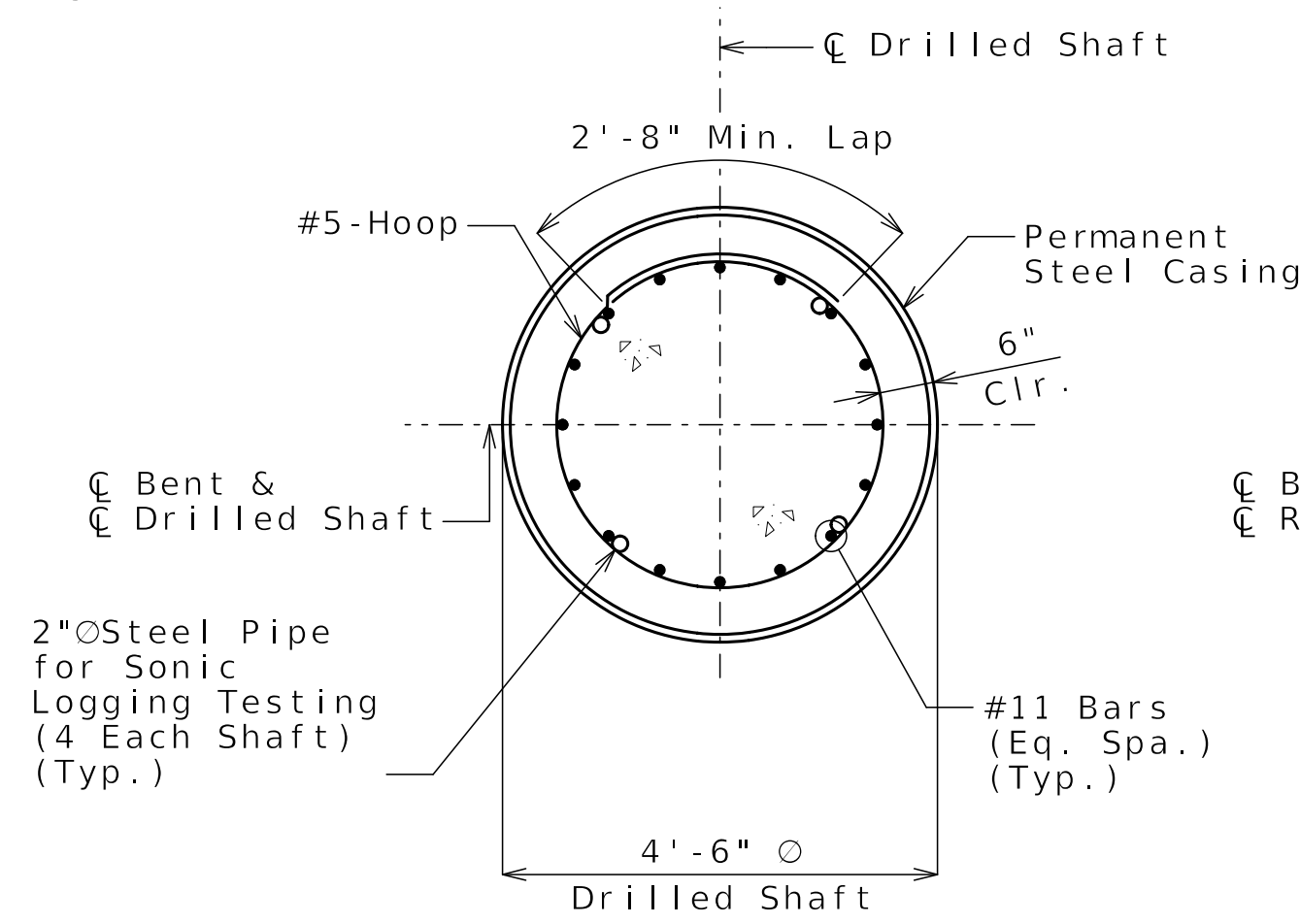


SECTION B-B

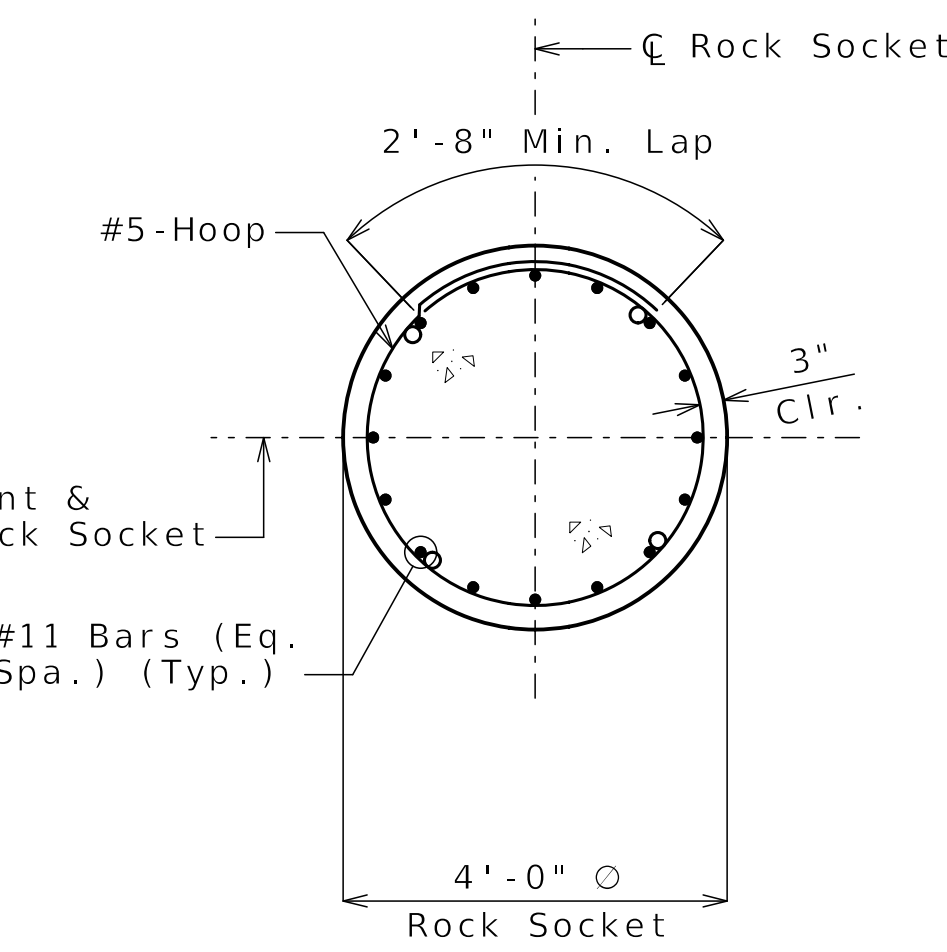
(1) U1 & U2 vertical leg = 4'-2"



SECTION C-C



SECTION D-D



SECTION E-E

Notes:
 Work this sheet with Sheet No. B27-09.
 Hoop splices shall be staggered around the drilled shaft and rock socket at 90 degree intervals.
 For additional joint filler layout details, see Sheet No. B27-20.
 For angles of girders relative to C Bent , see Sheet No. B27-16.

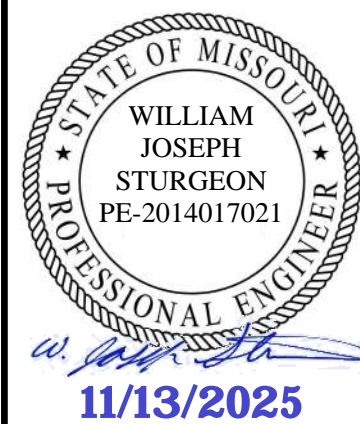
DETAILS OF INTERMEDIATE BENT NO. 2

Released For Construction
 Not to Scale
 Revision: 0.0
 Date: 11/21/2025
 Package: BRD-27-WB-70-Jackson

Detailed JUL 2025
 Checked AUG 2025

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

Sheet No. B27-10 of B27-41



DATE PREPARED 11/13/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. B27-11
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	

BRIDGE NO.
A9759

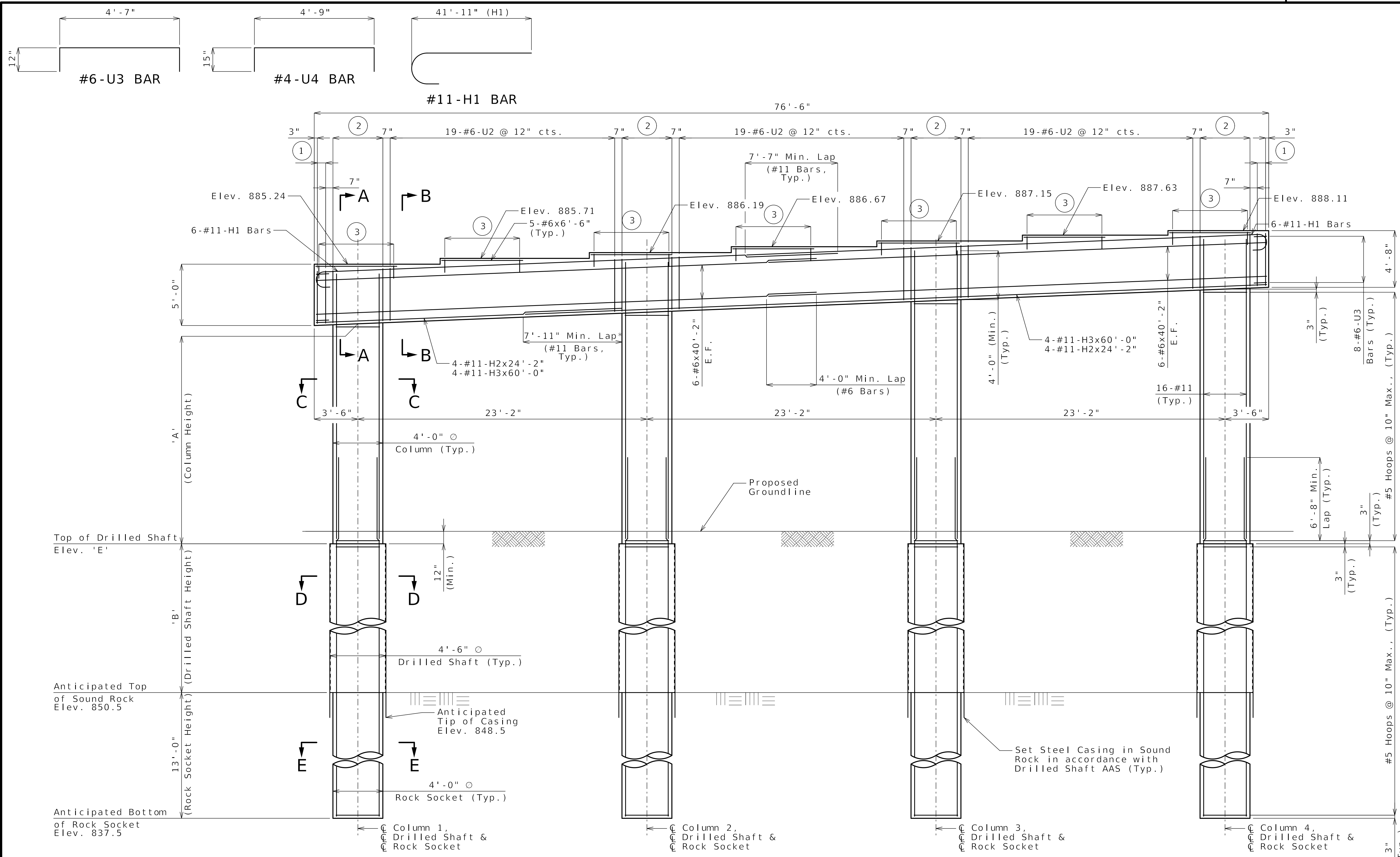
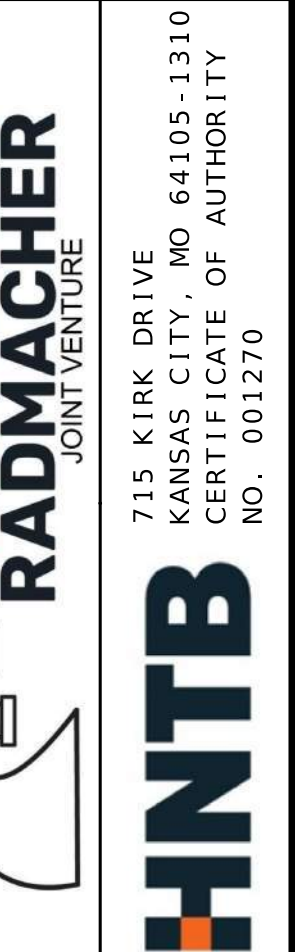
DESCRIPTION
REV 0 - RFC SUBMITTAL

DATE
11/13/25

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION



CLARKSON
RADMACHER
JOINT VENTURE



- ① 2-#6-U2 @ 8" cts.
- ② 5-#6-U1 @ 12" cts.
- ③ 13-#4-U4 @ 6" Spa.

Column Number	"A"	"B"	"E"
1	12' - 10 ³ / ₈ "	17' - 0"	867.5
2	14' - 4 ³ / ₈ "	16' - 6"	867.0
3	15' - 10"	16' - 0"	866.5
4	16' - 9 ³ / ₈ "	16' - 0"	866.5

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

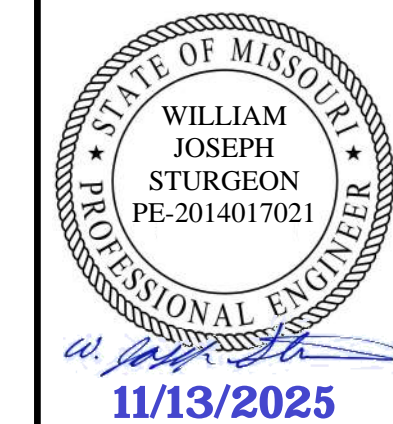
Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

Notes:
 * Alternate location of lap splices between adjacent bars about centerline of bent. Alternate lap splice not shown.
 Prior to placing concrete for columns, position of vertical reinforcement shall be verified so as to provide clearance for capbeam reinforcement as applicable.
 Work this sheet with Sheet No. B27-12.
 For steps 2 inches or more, use a 2 1/4 x 1/2" joint filler up vertical face.
 For location of drilled shafts, see Sheet No. B27-04.
 For Sections A-A thru E-E, see Sheet No. B27-12.
 For additional joint filler layout details, see Sheet No. B27-20.

DETAILS OF INTERMEDIATE BENT NO. 3

Detailed JUL 2025
Checked AUG 2025

Sheet No. B27-11 of B27-41



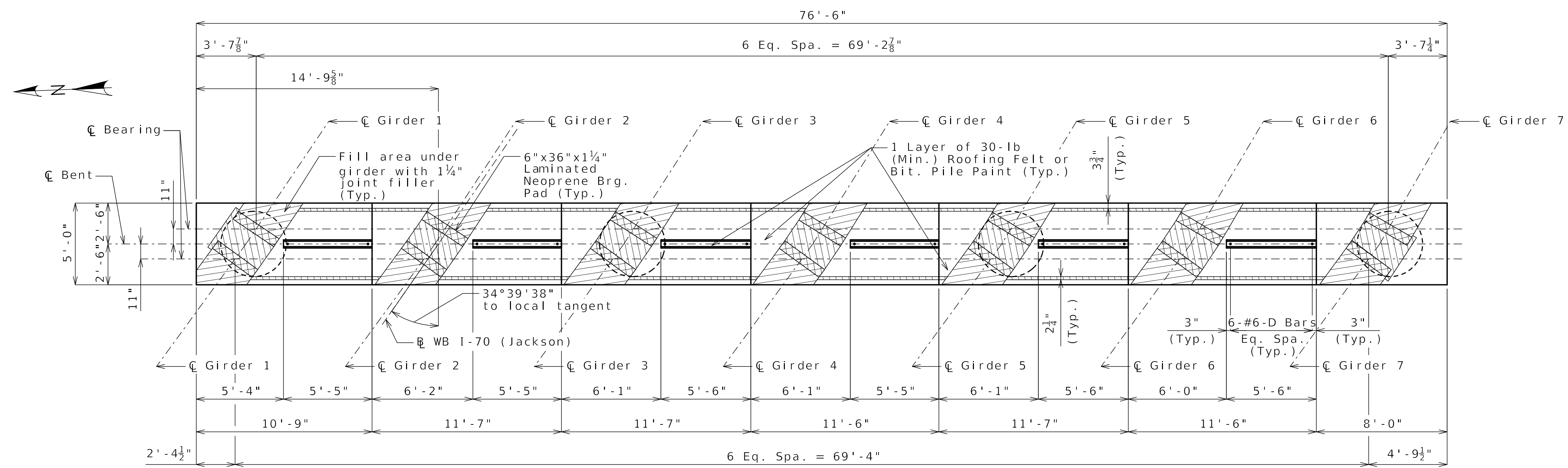
DATE PREPARED 11/13/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. B27-12
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	

BRIDGE NO. A9759

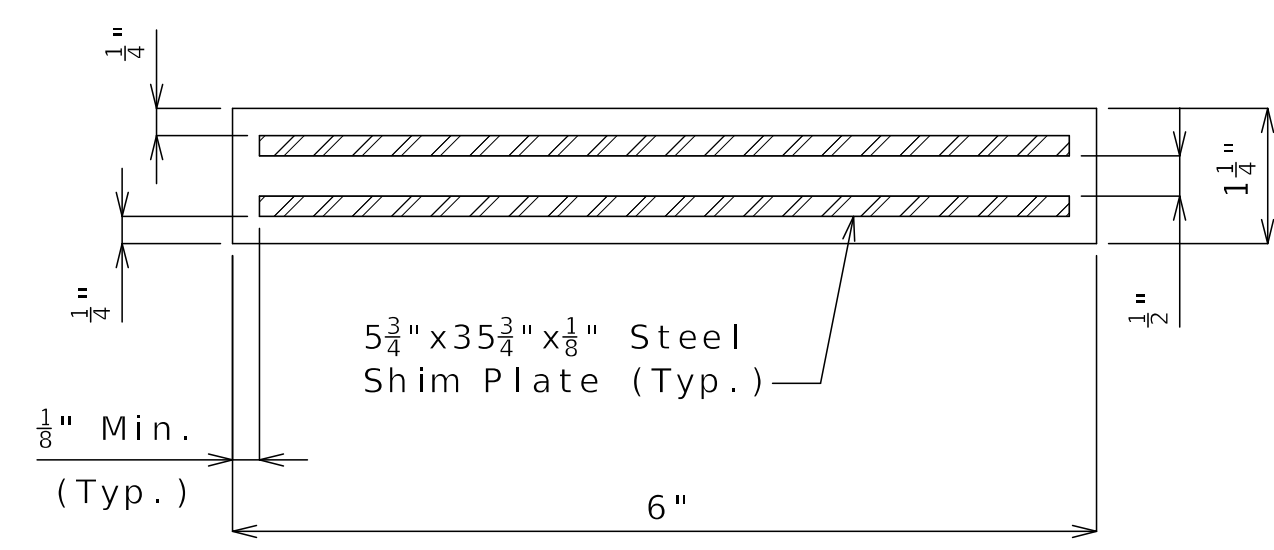
DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

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

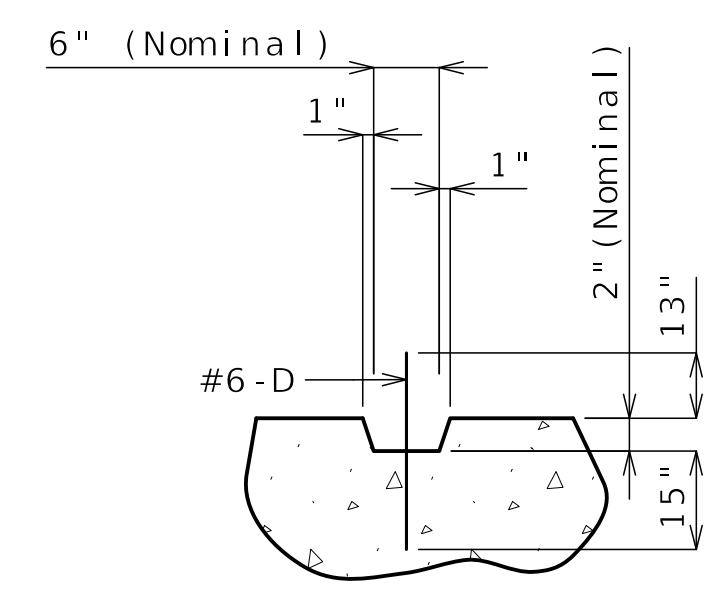
CLARKSON RADMACHER JOINT VENTURE
 715 KIRK DRIVE KANSAS CITY, MO 64105-1310
 CERTIFICATE OF AUTHORITY NO. 001270
HNTB



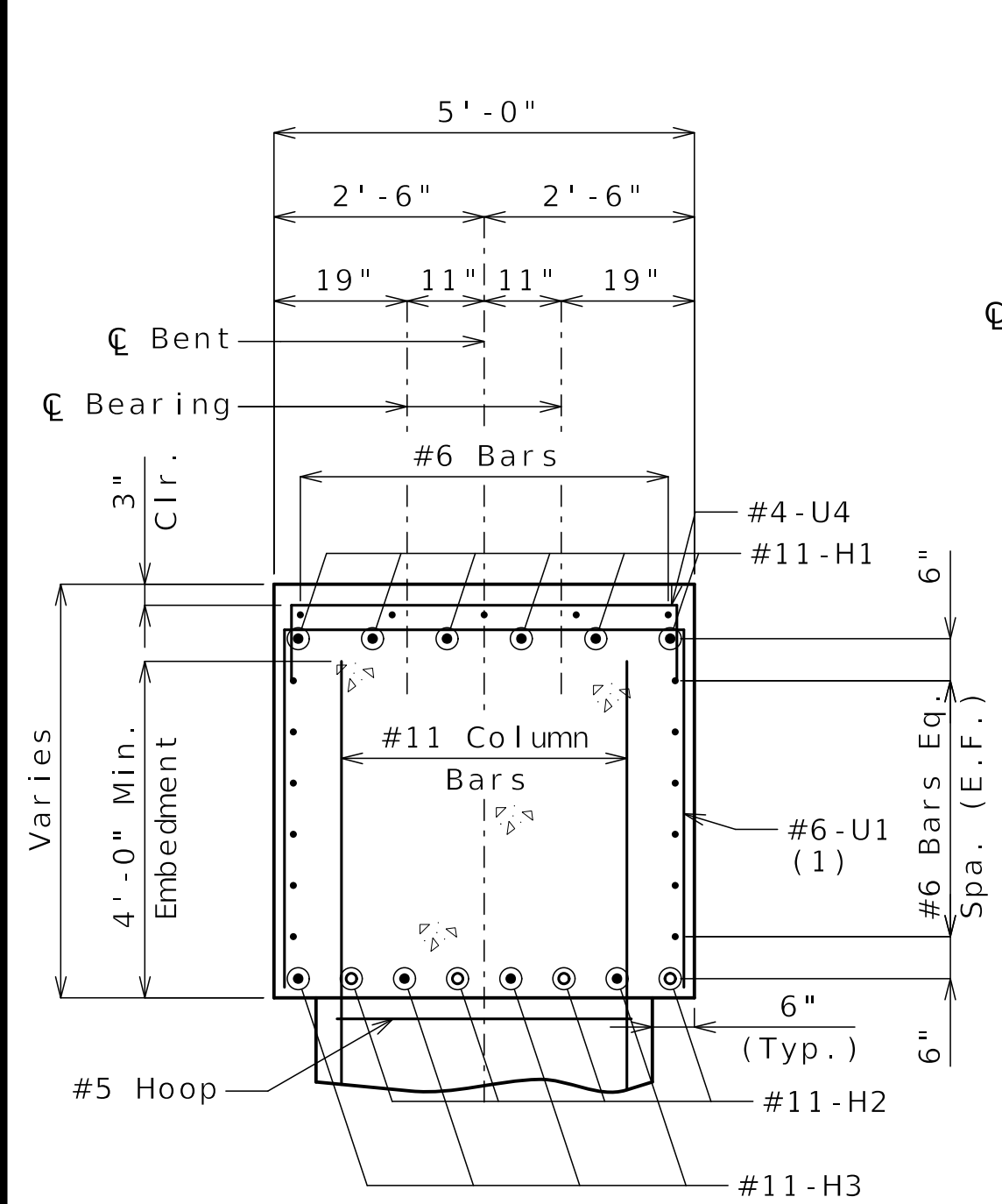
PLAN OF CAPBEAM



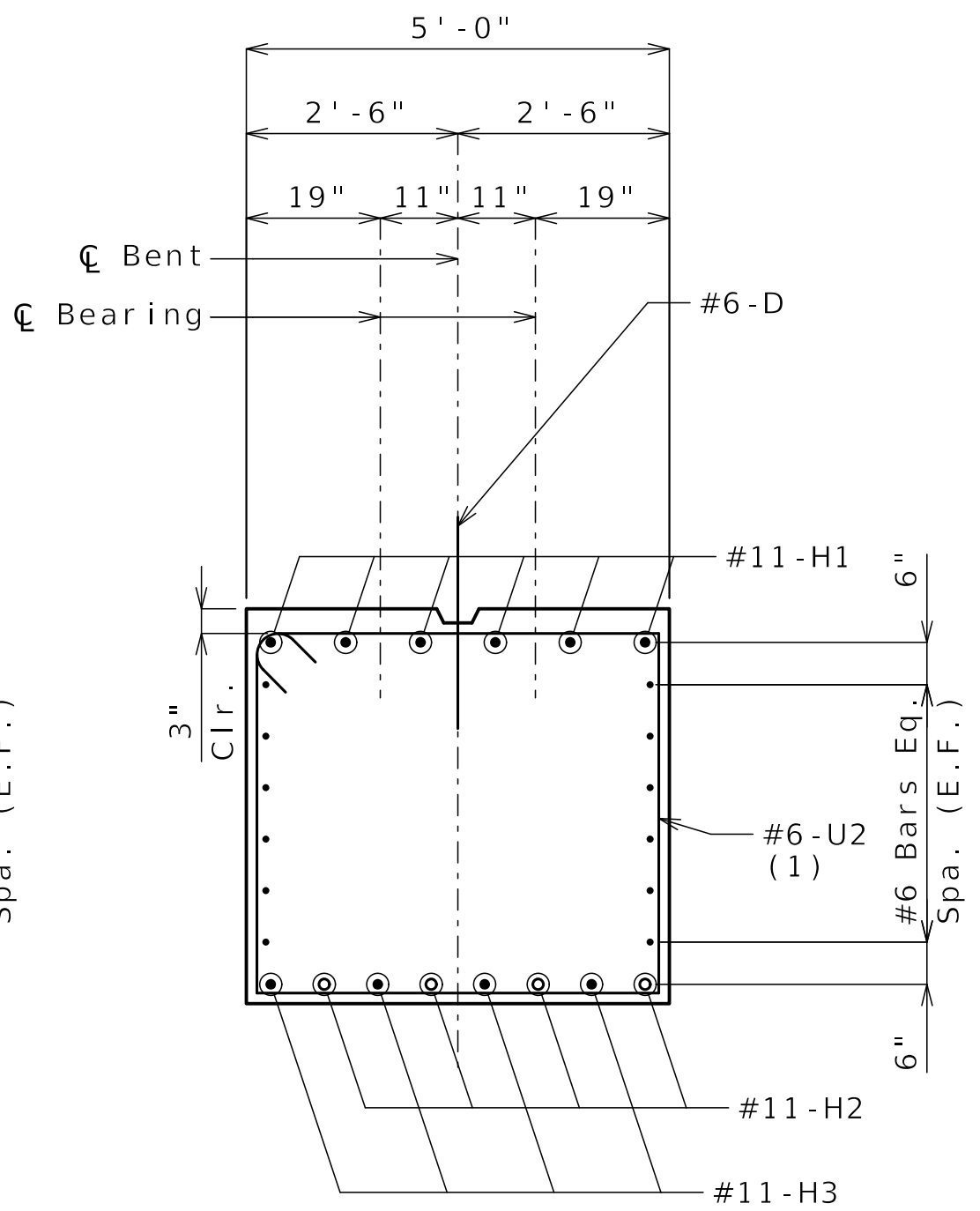
TYPICAL SECTION THRU LAMINATED NEOPRENE BEARING PAD
 14 Required per Bent



SECTION THRU KEY

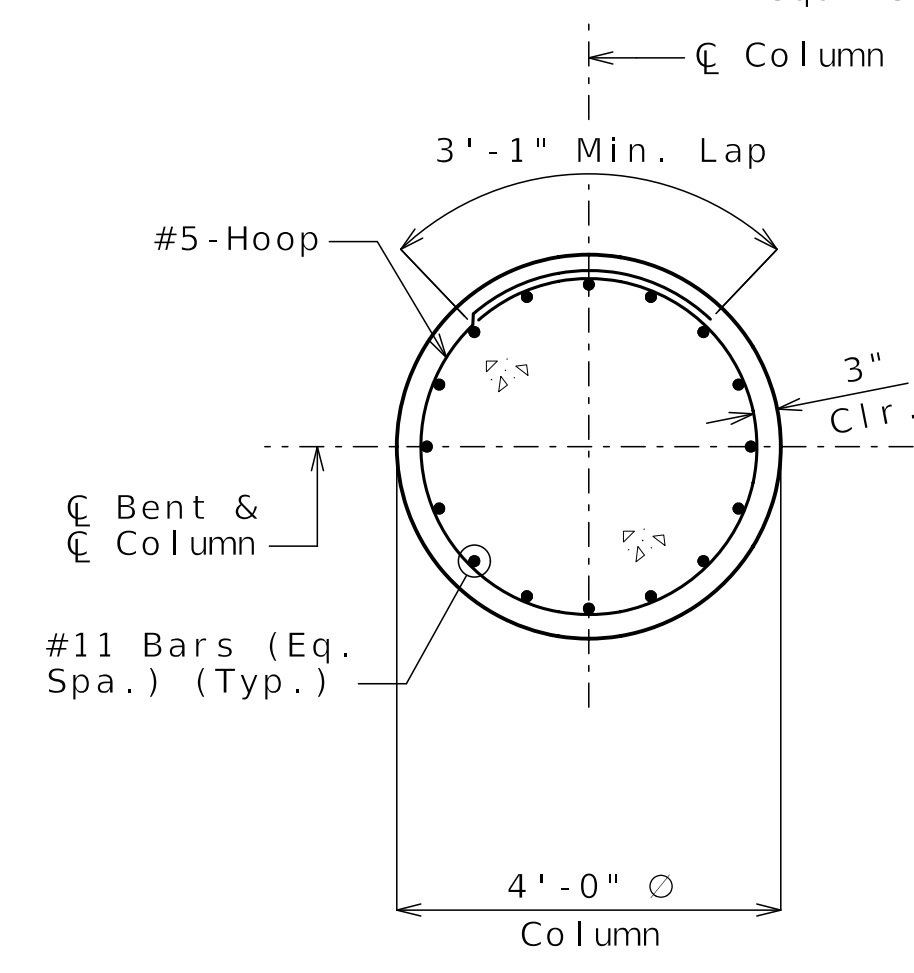


SECTION A-A

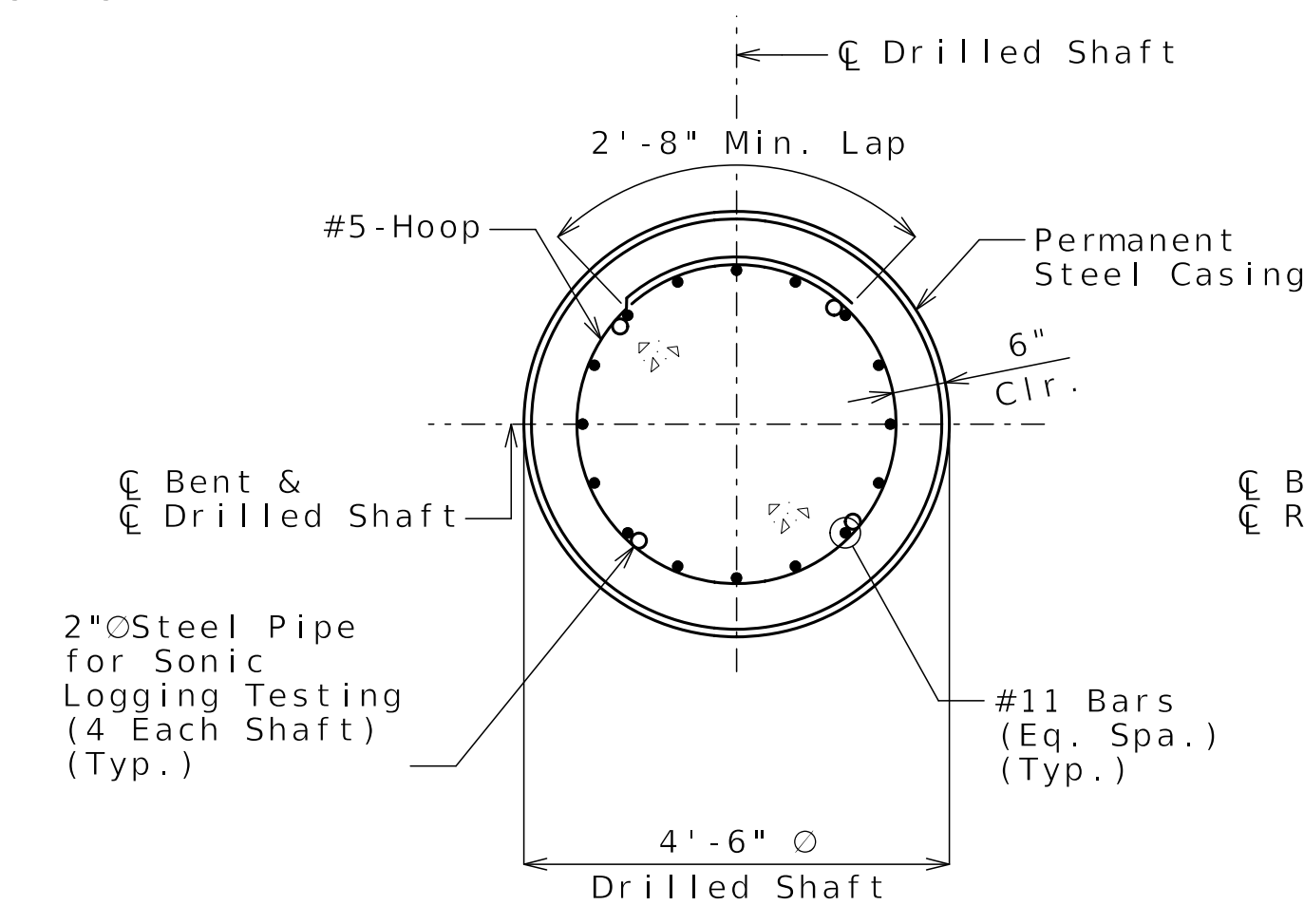


SECTION B-B

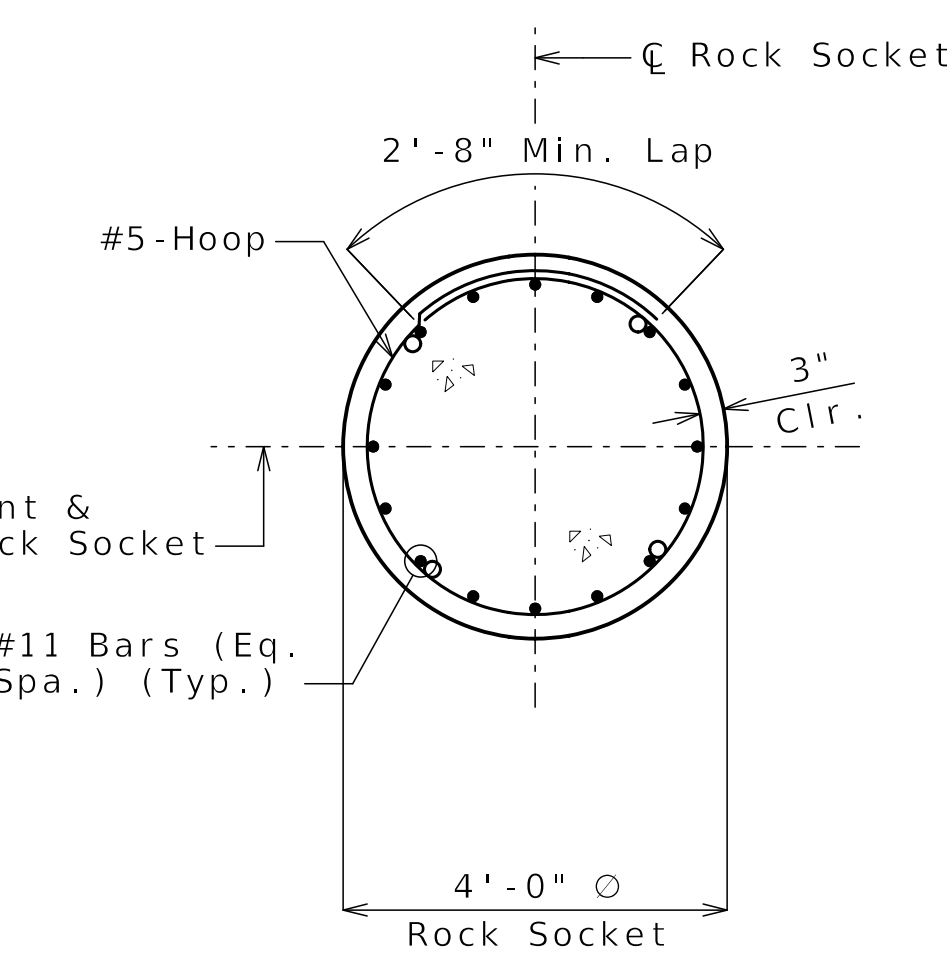
(1) U1 & U2 vertical leg = 4'-2"



SECTION C-C



SECTION D-D



SECTION E-E

Notes:
 Work this sheet with Sheet No. B27-11.
 Hoop splices shall be staggered around the drilled shaft and rock socket at 90 degree intervals.
 For additional joint filler layout details, see Sheet No. B27-20.
 For angles of girders relative to \bar{C} Bent, see Sheet No. B27-16.

DETAILS OF INTERMEDIATE BENT NO. 3

Released For Construction
 Not to Scale
 Revision: 0.0
 Date: 11/21/2025
 Package: BRD-27-WB-70-Jackson

Detailed JUL 2025
 Checked AUG 2025

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

Sheet No. B27-12 of B27-41



Gina D. Horner
11/13/2025

DATE PREPARED
11/13/2025

ROUTE 1-70 STATE MO

DISTRICT BR SHEET NO. B27-13

COUNTY JACKSON

JOB NO. J411486D

CONTRACT ID. 240807-C01

PROJECT NO.

BRIDGE NO. A9759

DESCRIPTION

REV 0 - RFC SUBMITTAL

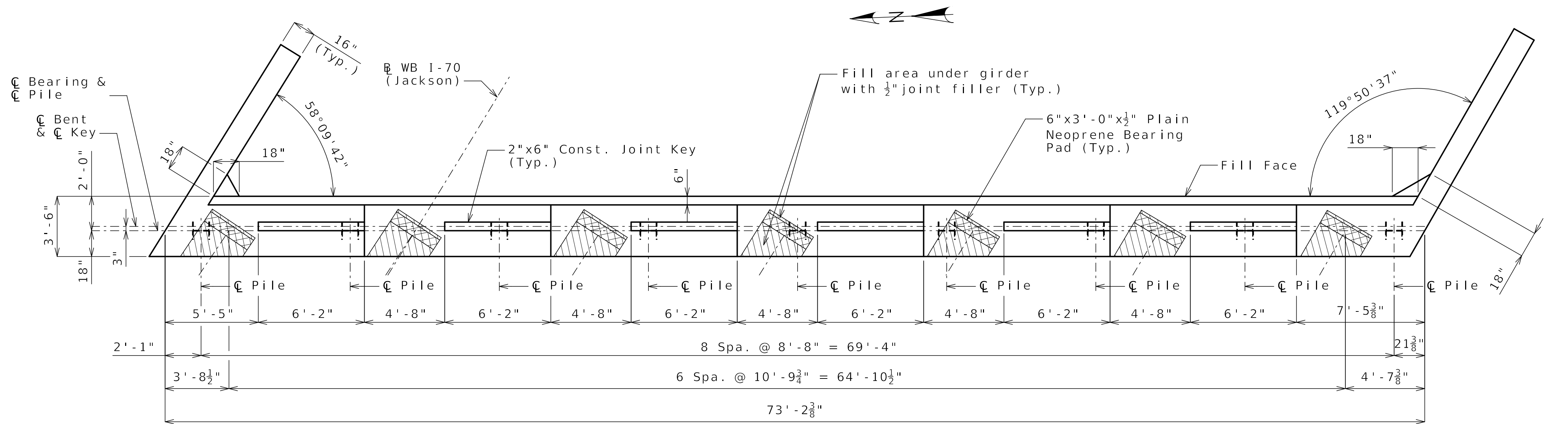
DATE 11/13/25

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

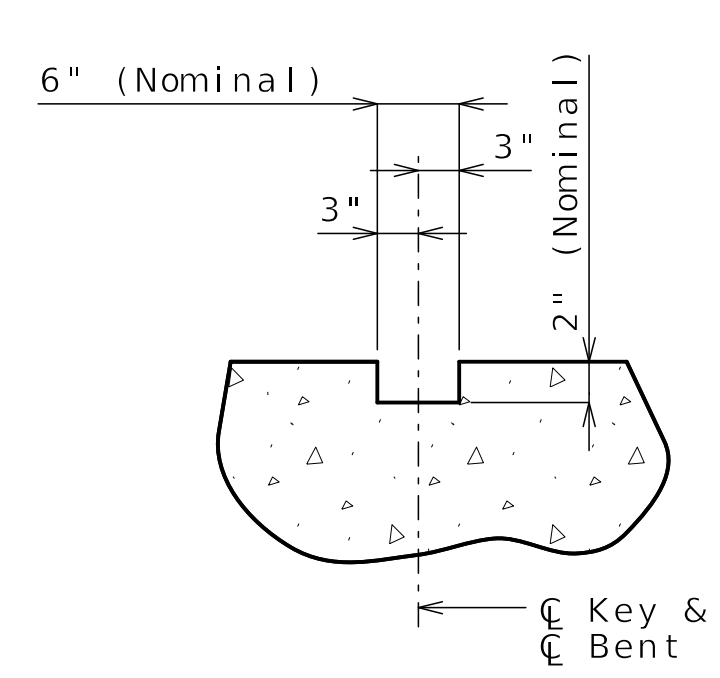
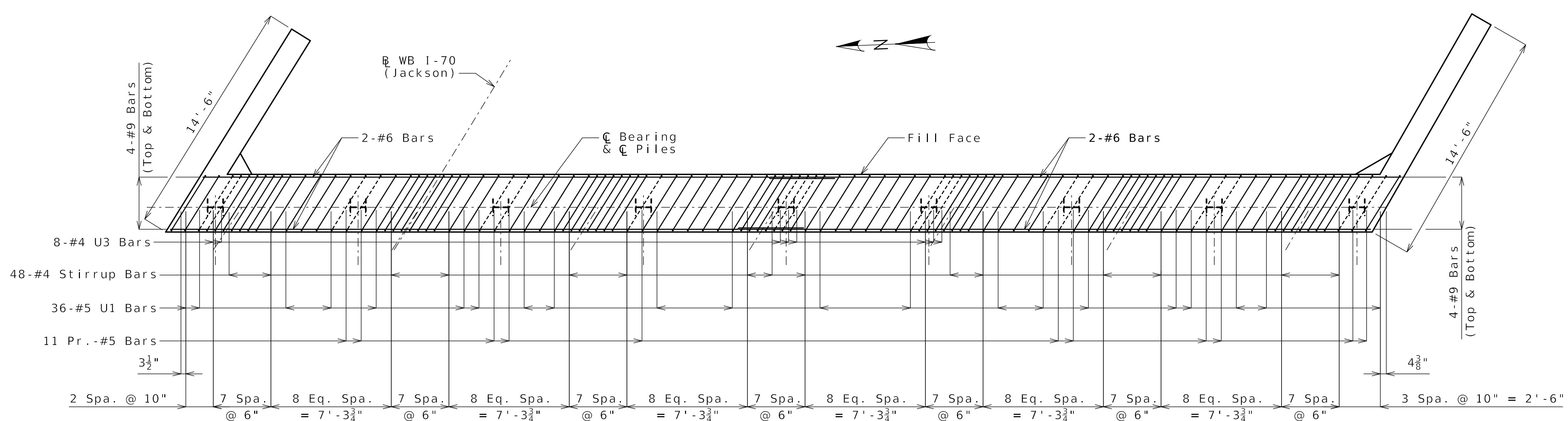
MoDOT

105 WEST CAPITOL JEFFERSON CITY, MO 65102

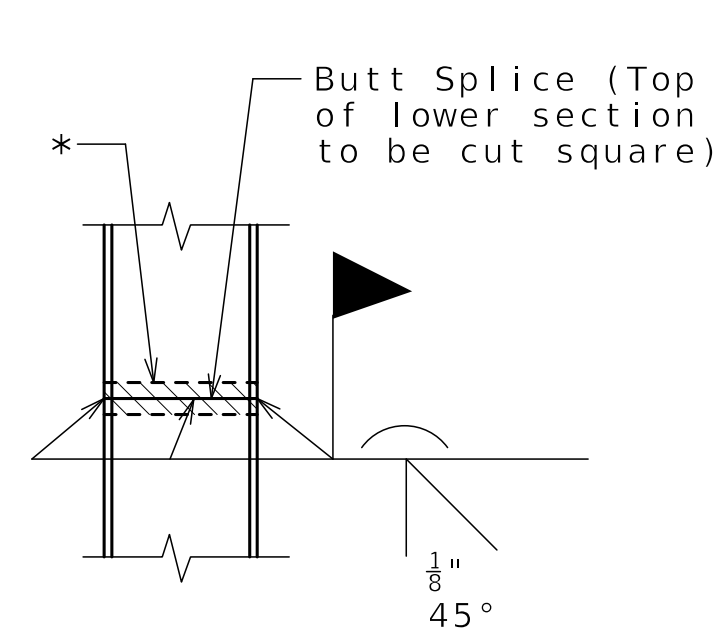
1-888-ASK-MODOT (1-888-275-6636)



PLAN OF BEAM



SECTION THRU KEY



STEEL PILE SPLICE
(If required)

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

Notes:
Work this sheet with Sheets No. B27-14 and B27-15.
All U bars and pairs of vertical bars shall be placed along skew.
Reinforcing steel shall be shifted to clear piles. U-bars shall clear piles by at least 1 1/2".
For details of bridge approach slab, see Sheet No. B27-32.
For angles of girders relative to ζ Bent, see Sheet No. B27-16.

Released For Construction
Not to Scale

Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

DETAILS OF END BENT NO. 4

Detailed JUL 2025
Checked AUG 2025

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

Sheet No. B27-13 of B27-41



Gina D. Horner
11/13/2025

DATE PREPARED
11/13/2025

ROUTE STATE
I-70 MO

DISTRICT SHEET NO.
BR B27-14

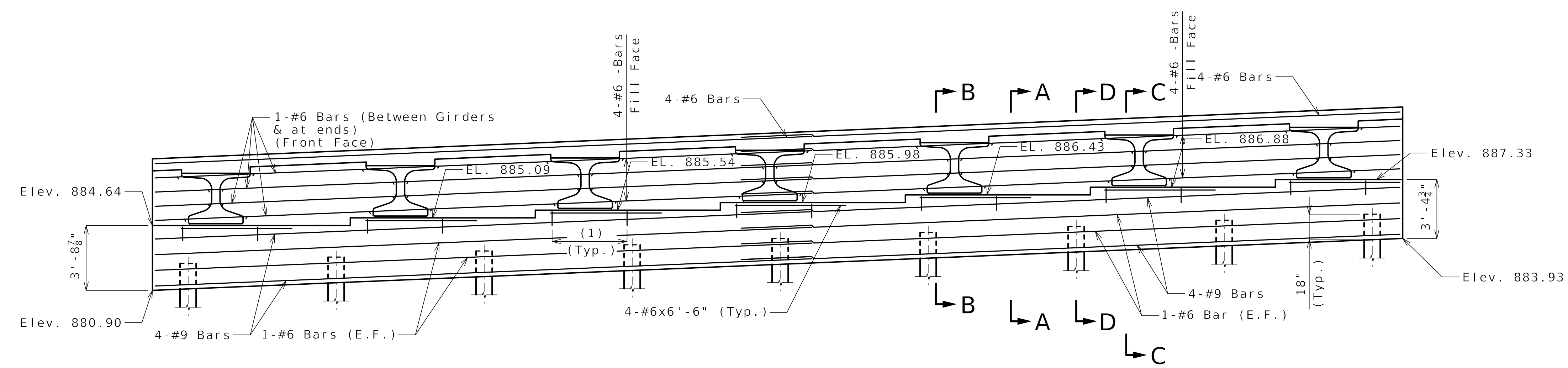
COUNTY
JACKSON

JOB NO.
J411486D

CONTRACT ID.
240807-C01

PROJECT NO.

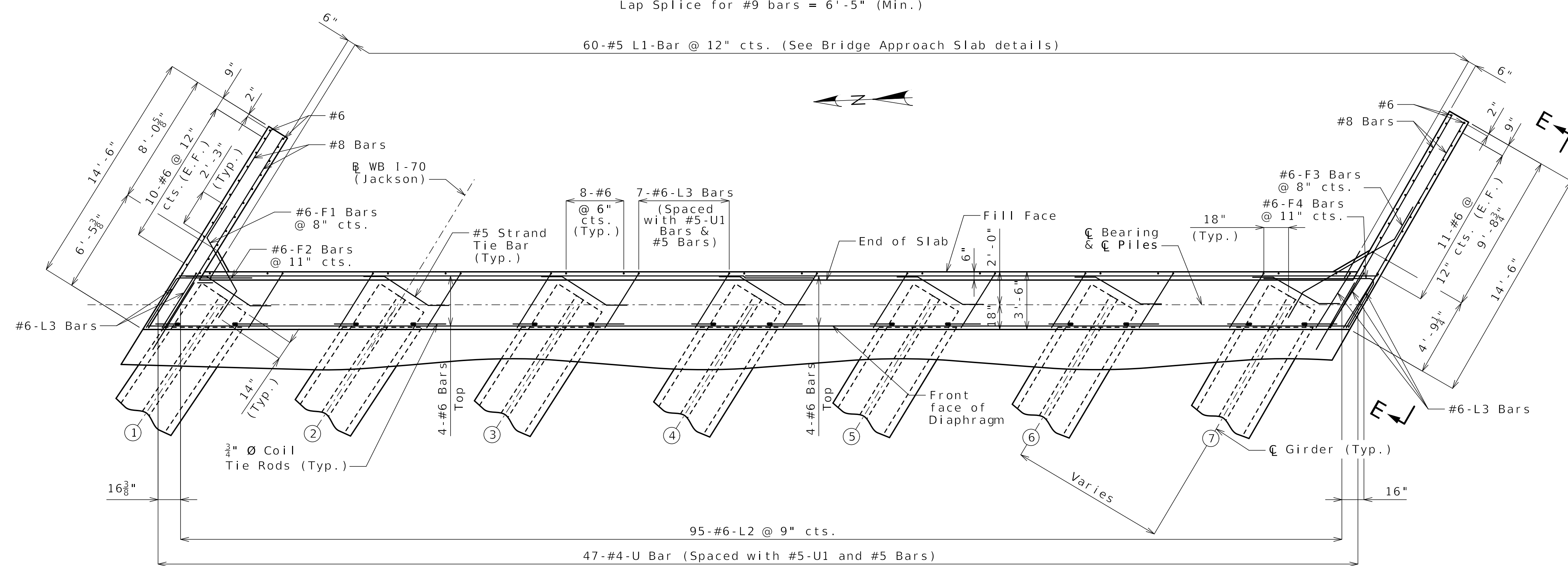
BRIDGE NO.
A9759



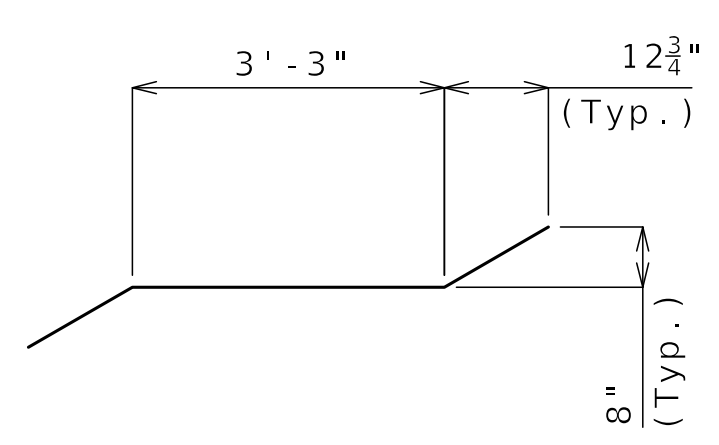
(1) 8-#4-U4 Bars @ 6" Spa. under girders. Bars shall be placed normal to C Bent and parallel to beam step (Typ.)

SECTION NEAR END BENT

Notes:
Lap Splice for #6 bars = 4'-3" (Min.)
Lap Splice for #9 bars = 6'-5" (Min.)



PART PLAN



#5 STRAND TIE BAR

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

General Notes:
Work this sheet with Sheets No. B27-13 and B27-15.
For Sections A-A, B-B, C-C and D-D, and Elevation E-E, see Sheet No. B27-15.
For location of coil tie rods, see Sheet No. B27-17.
Strands at end of the girders shall be field bent or, if necessary, cut in field to maintain 1 1/2-inch minimum clearance to fill face of end bent.
The #6-F bars shall be bent in the field to clear girders.
(X) Denotes girder number

Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

DETAILS OF END BENT NO. 4

Detailed JUL 2025
Checked AUG 2025

Sheet No. B27-14 of B27-41

DESCRIPTION	DATE
REV 0 - RFC SUBMITTAL	11/13/25

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CLARKSON RADMACHER JOINT VENTURE

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



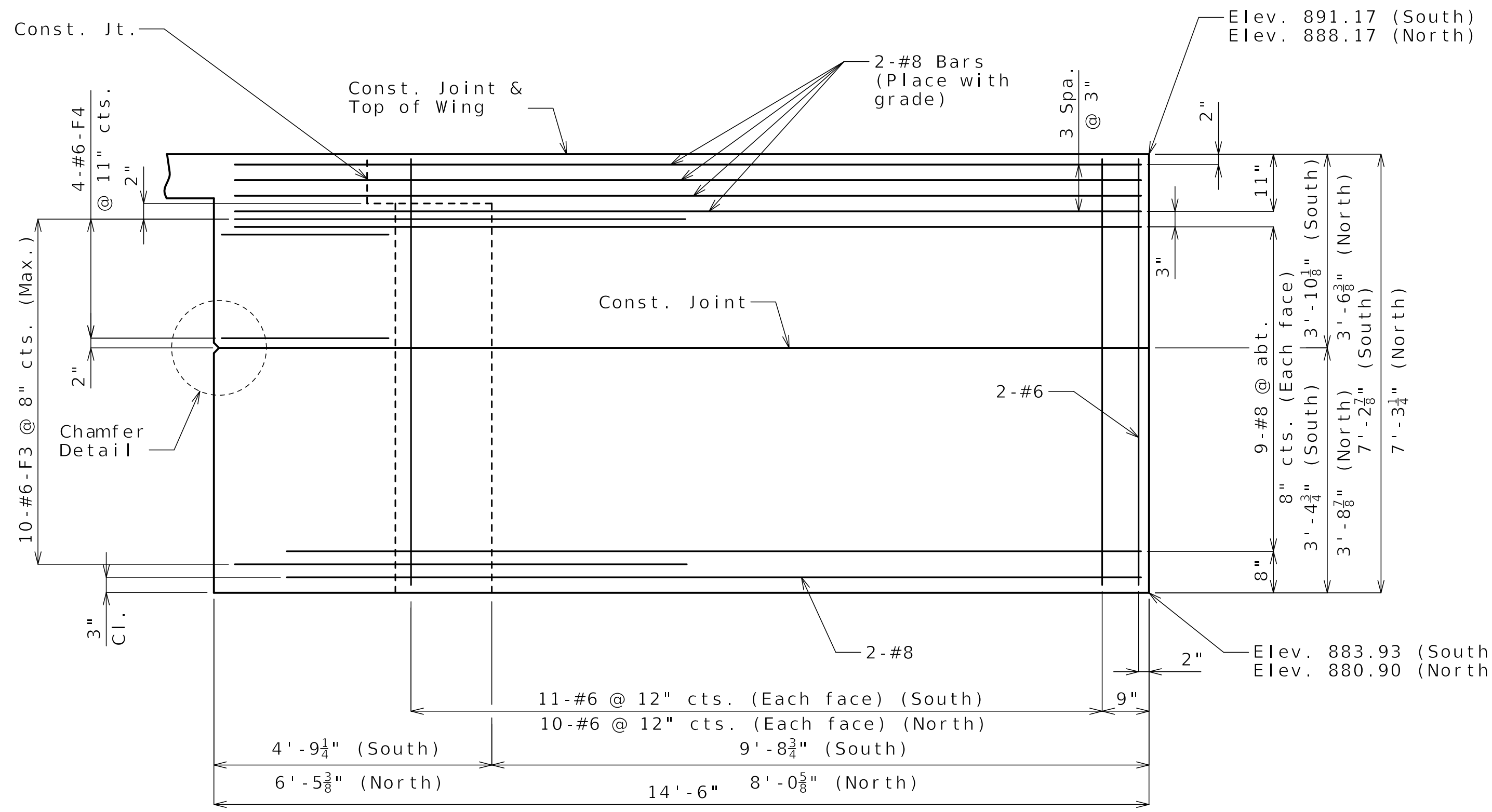
Gina D. Horner
 11/13/2025
 DATE PREPARED
 11/13/2025
 ROUTE 1-70 STATE MO
 DISTRICT BR SHEET NO. B27-15
 COUNTY JACKSON
 JOB NO. J411486D
 CONTRACT ID. 240807-C01
 PROJECT NO.

BRIDGE NO. A9759

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

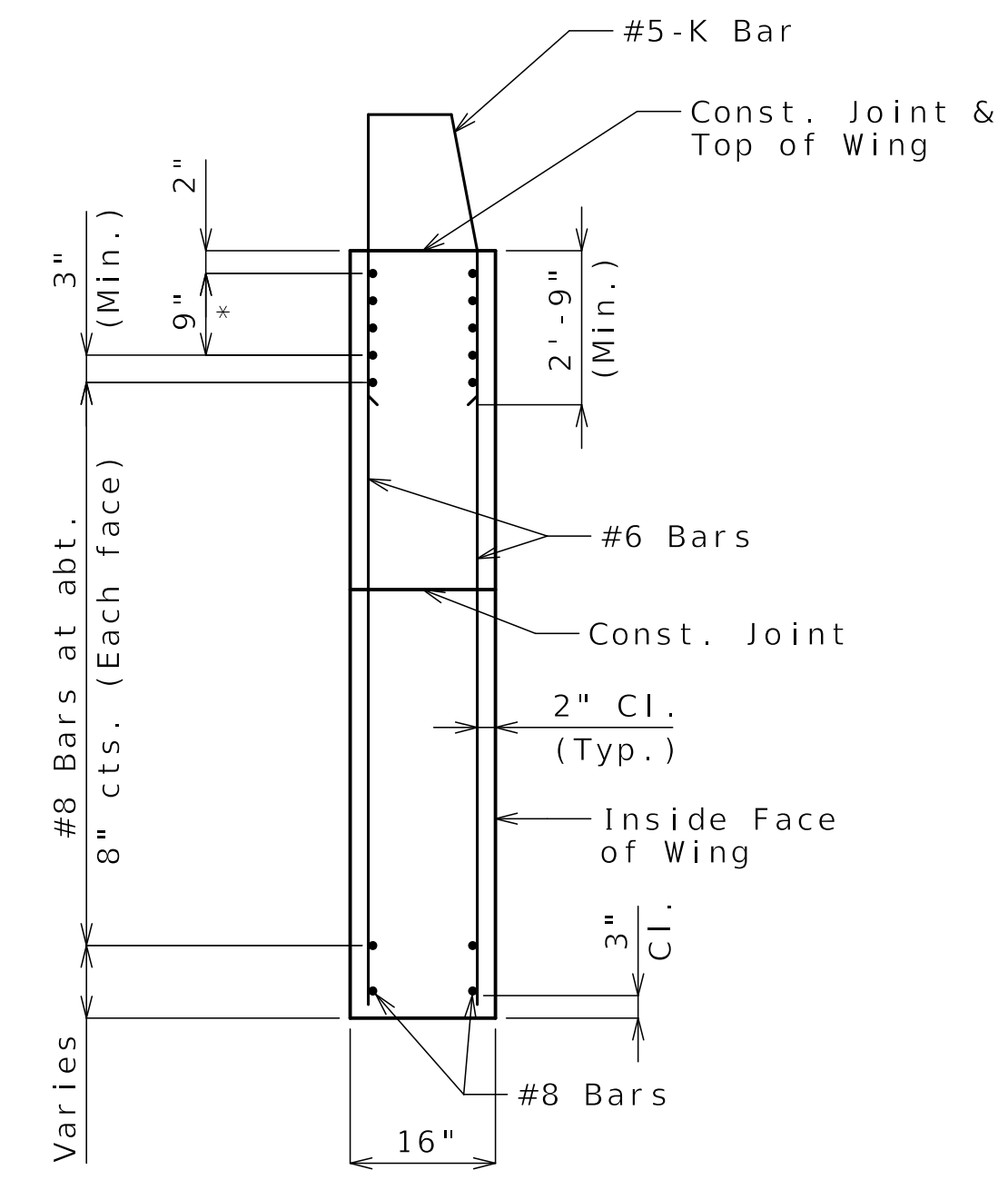
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
 MoDOT
 105 WEST CAPITOL JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)

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



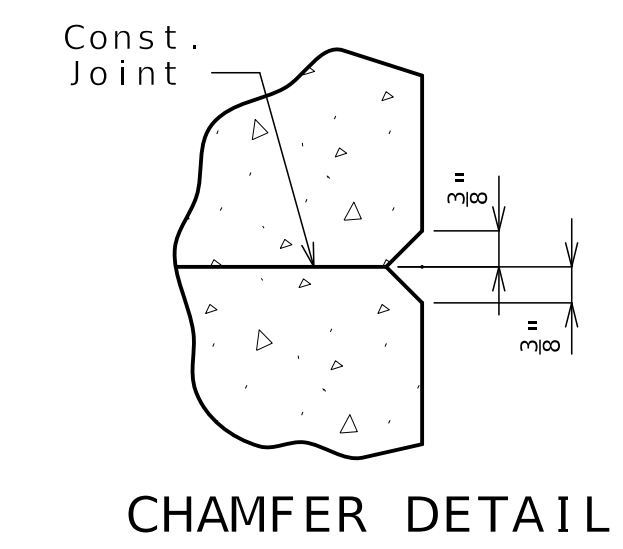
ELEVATION E-E

(South Wingwall shown, North wingwall similar except opposite hand)

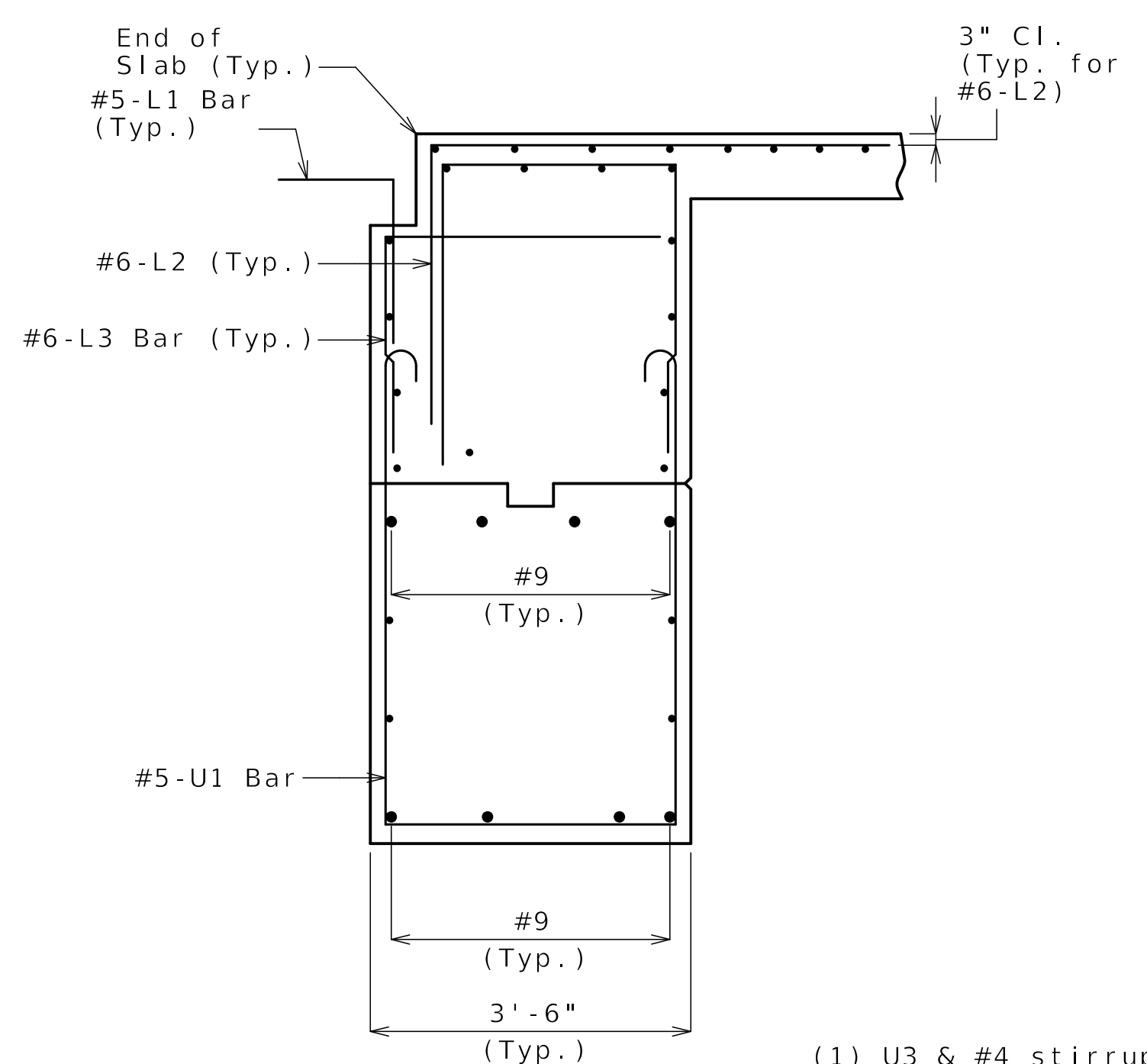


TYPICAL SECTION THRU WING

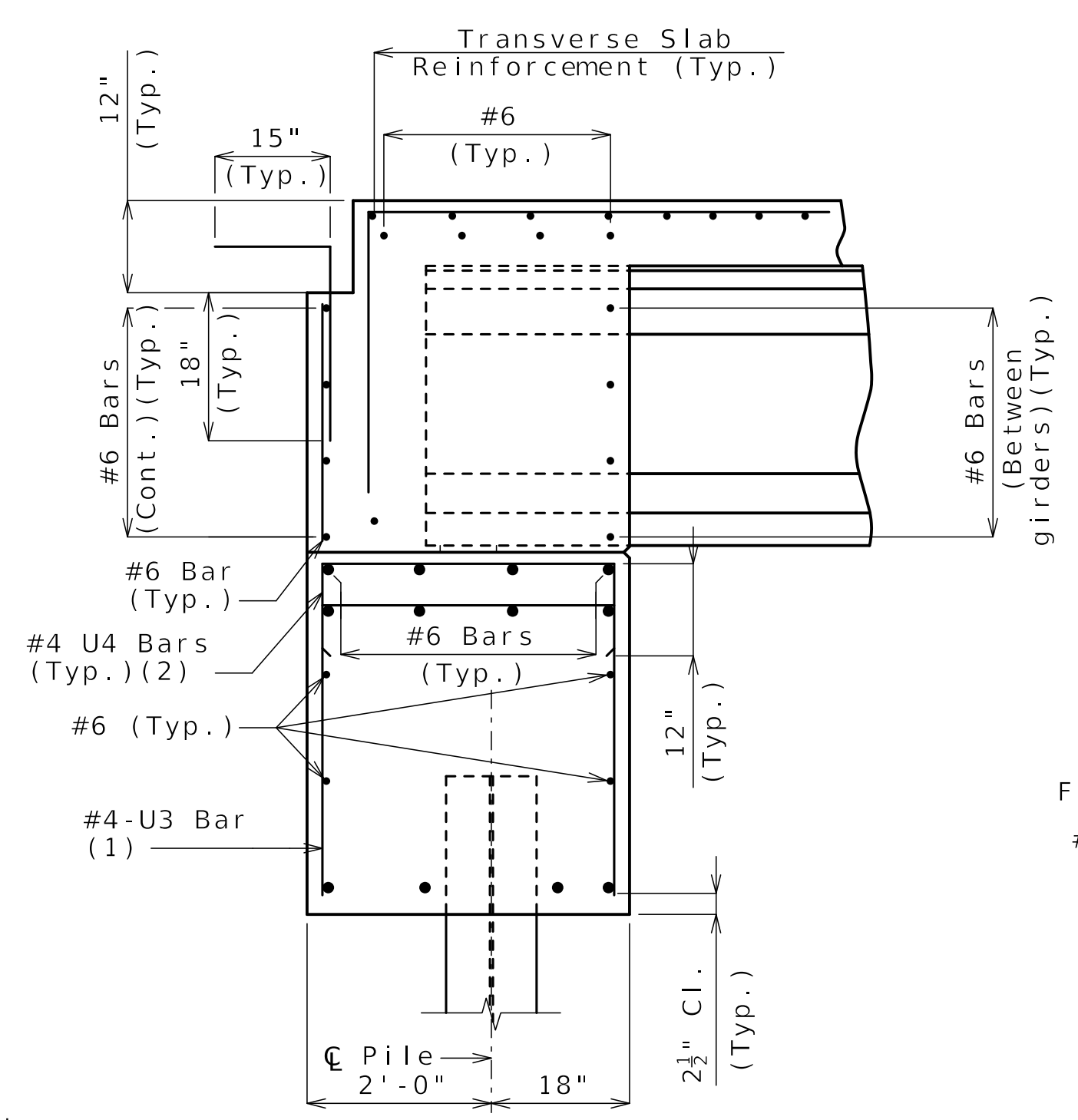
*#8 Bars at 3" cts. (Each face) (Place with grade) See Elevation E-E for number of bars



CHAMFER DETAIL

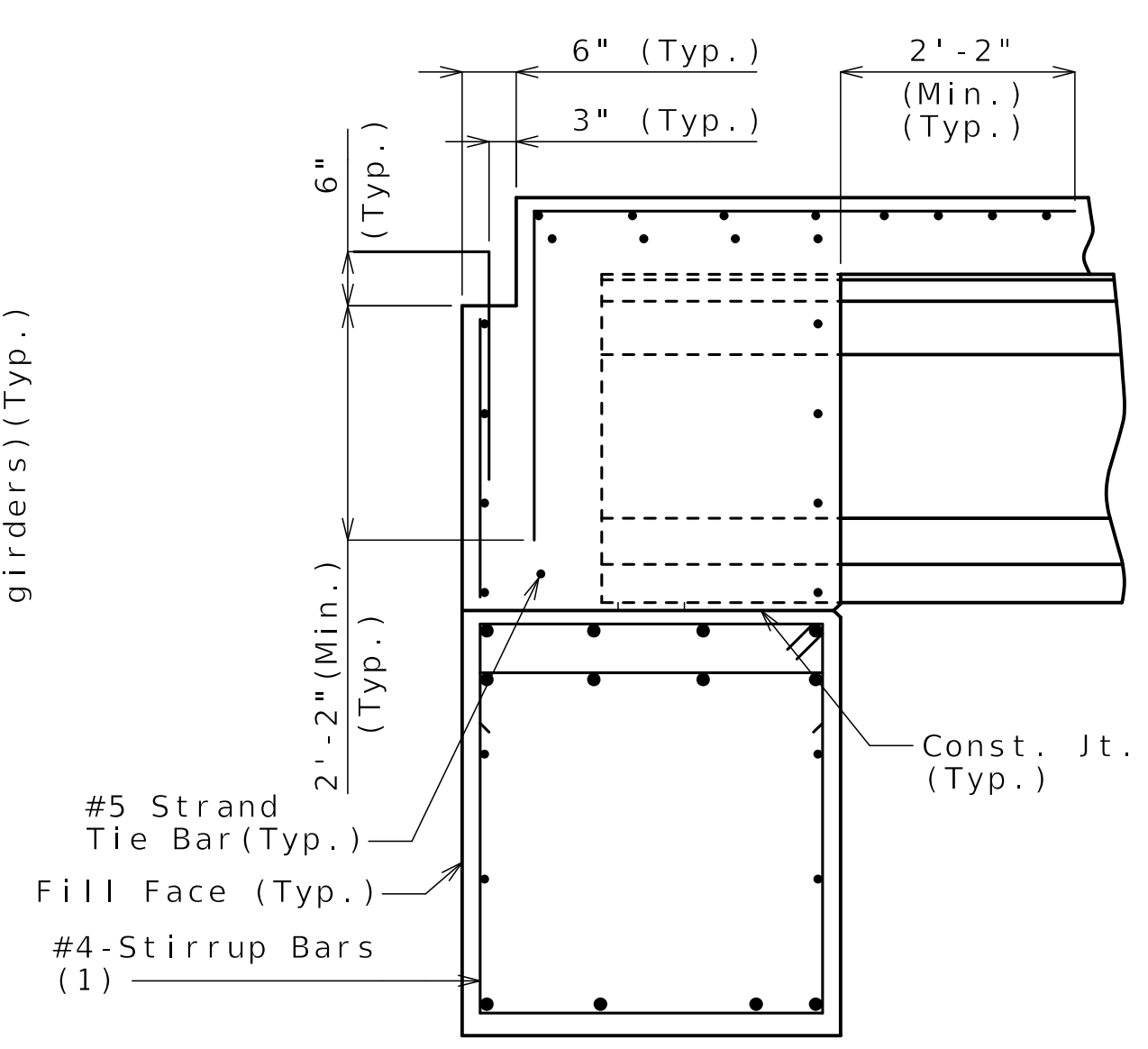


SECTION A-A

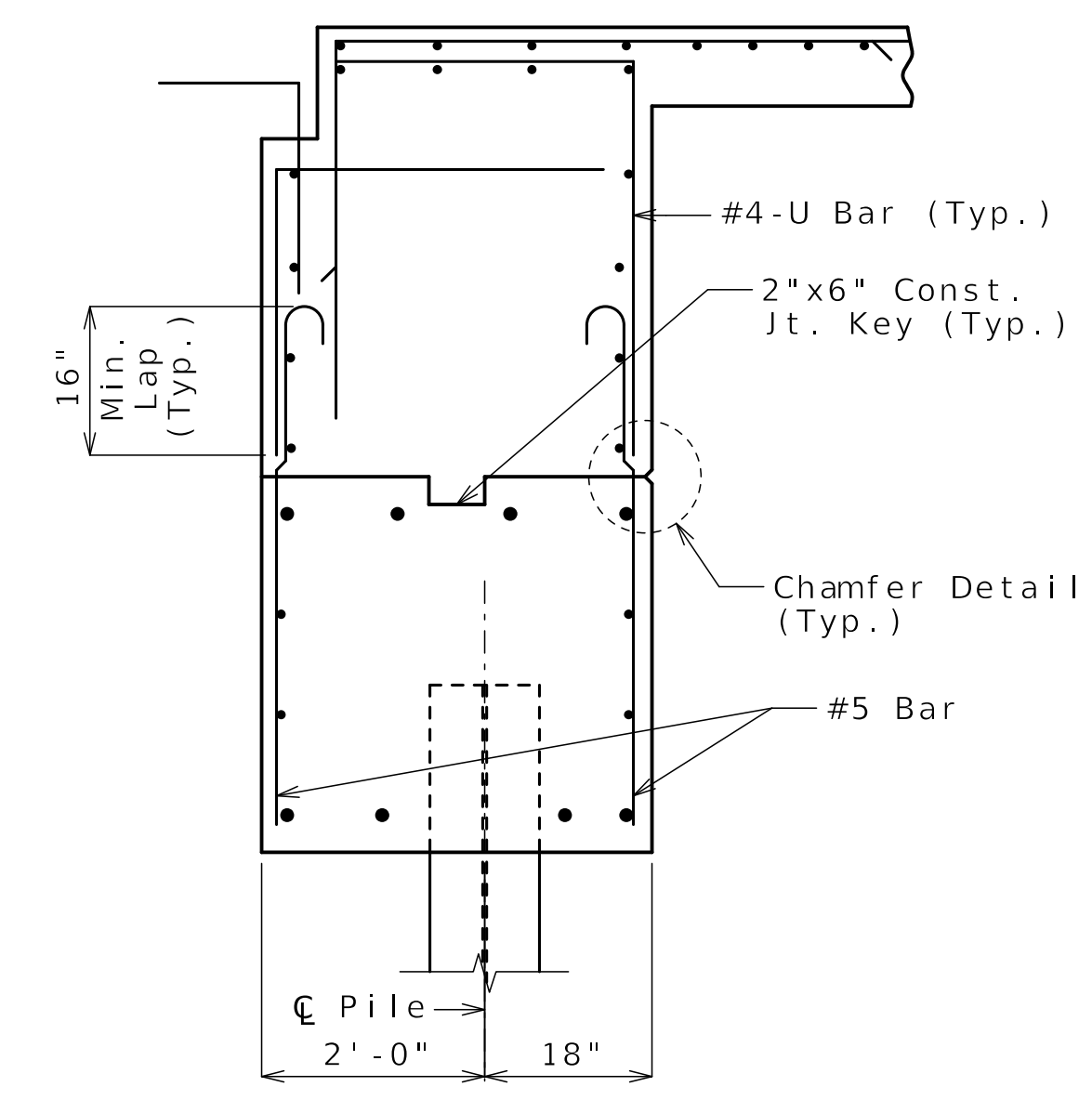


SECTION B-B

- (1) U3 & #4 stirrup bar vertical leg = 2'-10"
- (2) Bars shall be placed normal to ϕ Bent and parallel to beam step.



SECTION C-C



SECTION D-D

General Notes:
 Work this sheet with Sheets No. B27-13 and B27-14.
 For location of Sections A-A, B-B, C-C, D-D and Elevation E-E, see Sheet No. B27-14.
 For reinforcement of the Type D Barrier, see Sheet No. B27-28.

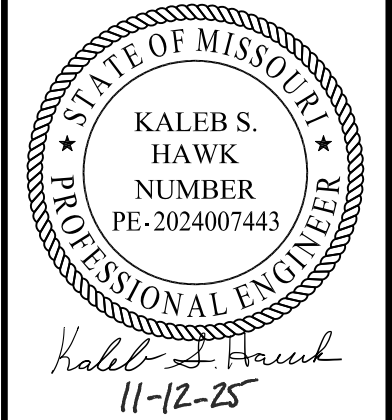
DETAILS OF END BENT NO. 4

Released For Construction
 Not to Scale
 Revision: 0.0
 Date: 11/21/2025
 Package: BRD-27-WB-70-Jackson

Detailed JUL 2025
 Checked AUG 2025

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

Sheet No. B27-15 of B27-41



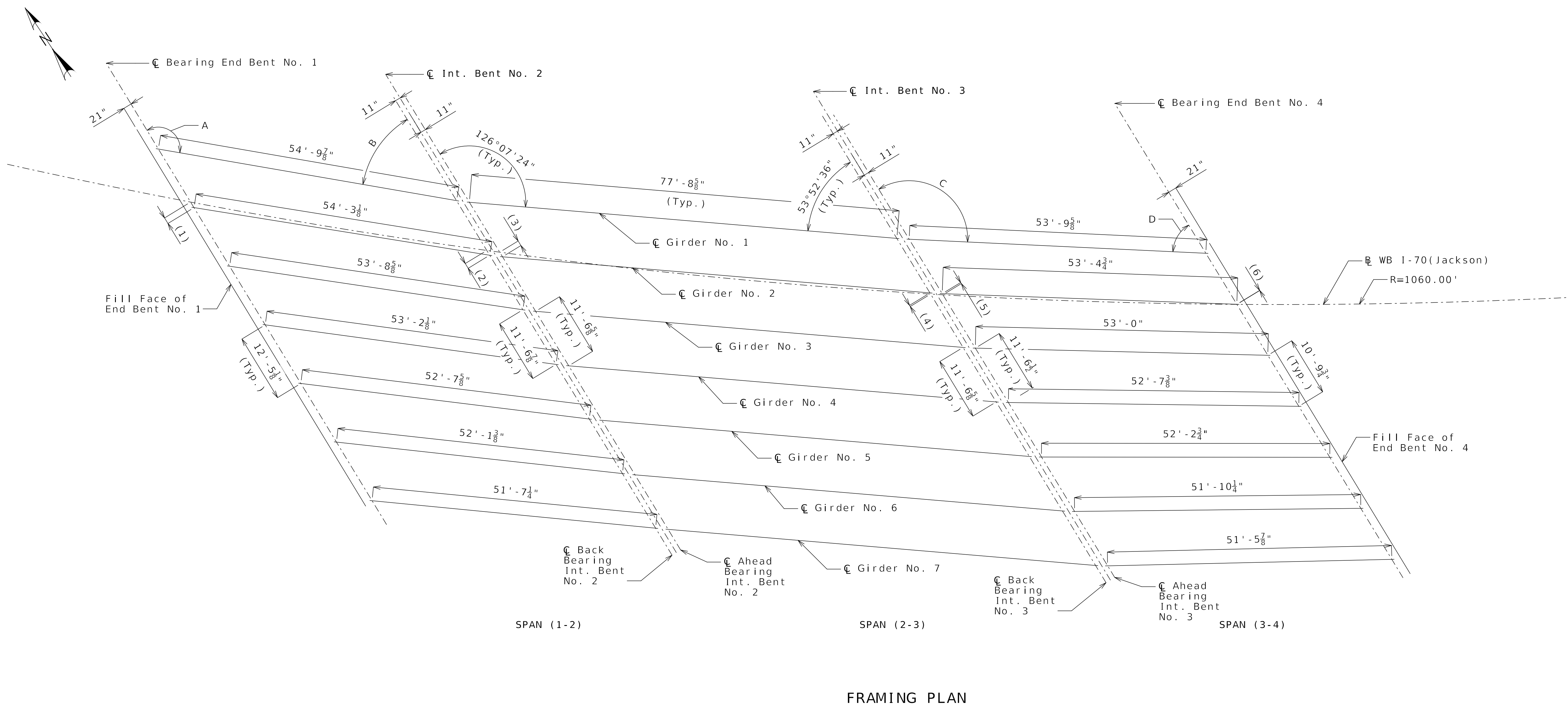
DATE PREPARED 11/13/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. B27-16
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	

BRIDGE NO. A9759

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

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

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



Girder Number	A	B	C	D
1	131°06'27"	48°53'33"	123°59'54"	56°00'06"
2	130°25'45"	49°34'15"	123°21'07"	56°38'53"
3	129°44'13"	50°15'47"	122°41'45"	57°18'15"
4	129°01'49"	50°58'11"	122°01'47"	57°58'13"
5	128°18'34"	51°41'26"	121°21'14"	58°38'46"
6	127°34'26"	52°25'34"	120°40'05"	59°19'55"
7	126°49'24"	53°10'36"	119°58'21"	60°01'39"

- (1) 14"
- (2) 12 1/8"
- (3) 11 5/8"
- (4) 2 7/8"
- (5) 2 7/8"
- (6) 1/4"

Released For Construction
 Not to Scale
 Revision: 0.0
 Date: 11/21/2025
 Package: BRD-27-WB-70-Jackson

Notes:
 All dimensions are horizontal.
 All bents are parallel.
 Girders in Span (2-3) are parallel.

FRAMING PLAN

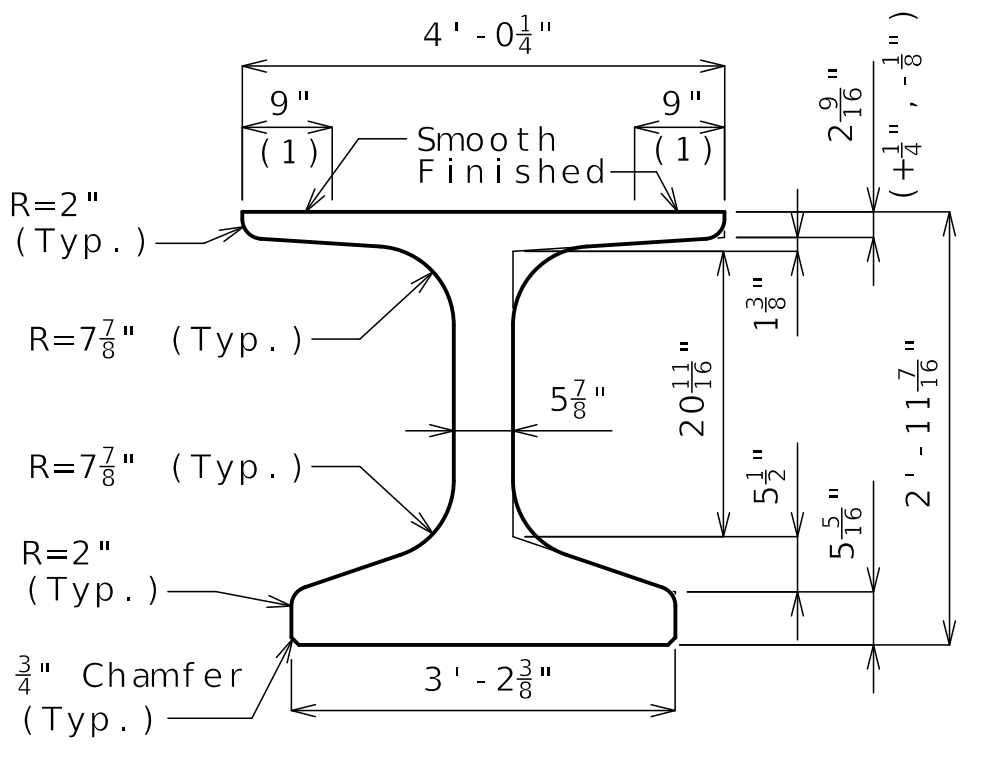
Detailed JUL 2025
 Checked AUG 2025

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

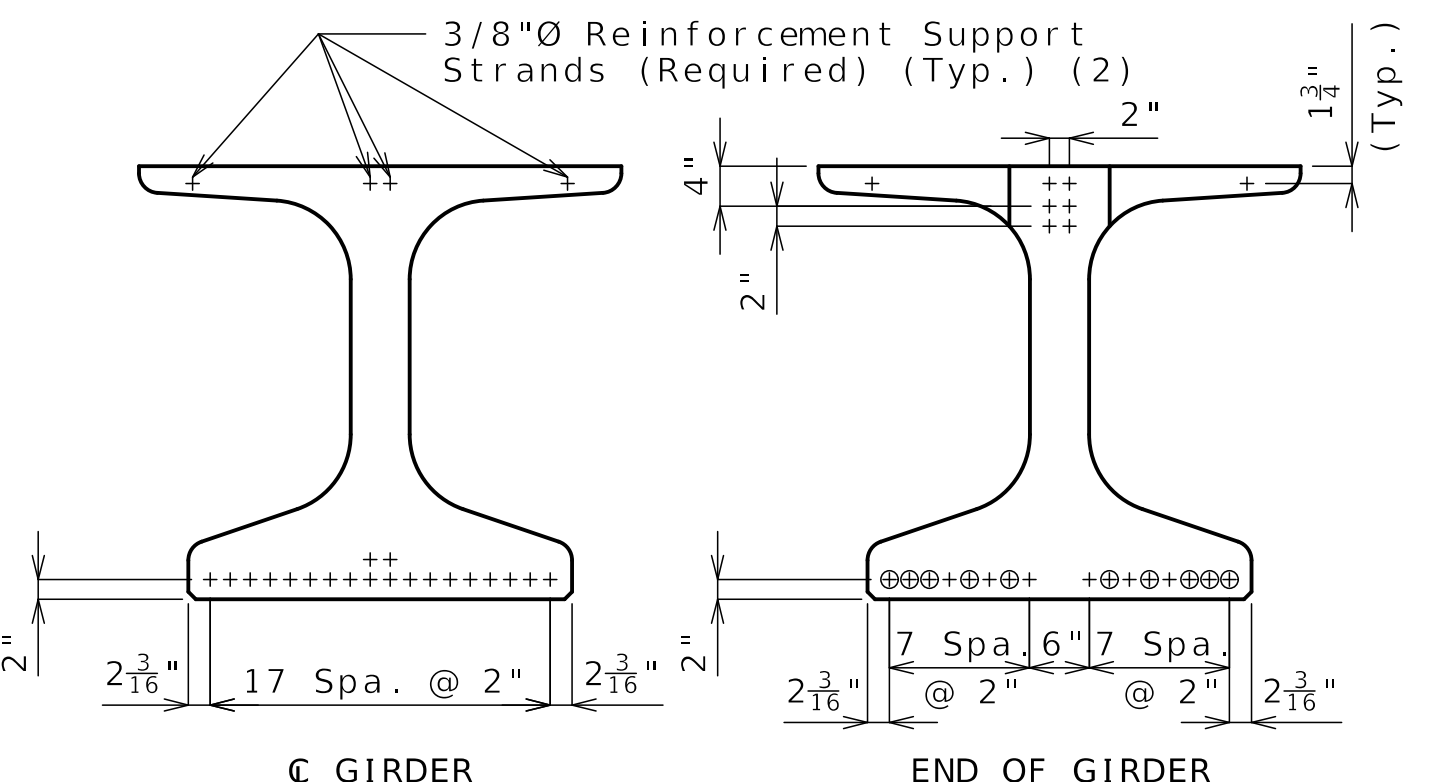
Sheet No. B27-16 of B27-41

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

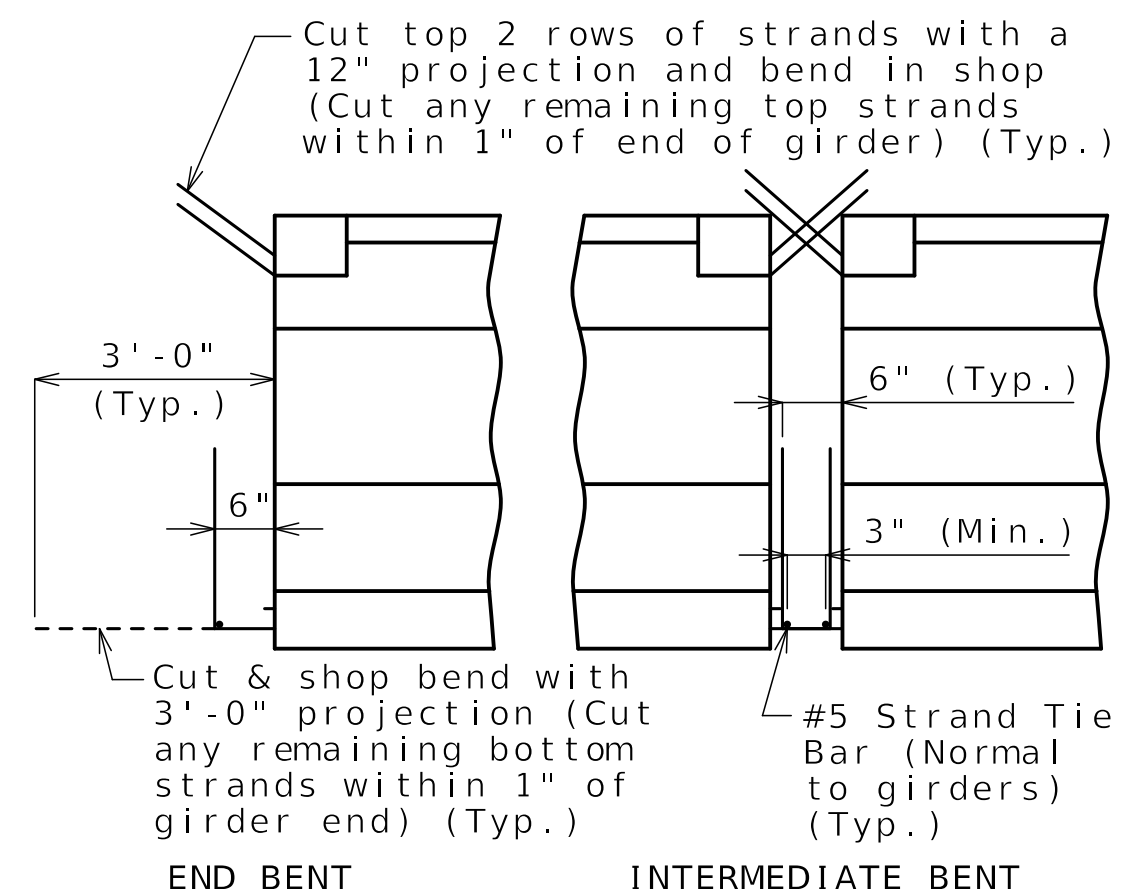
(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about \bar{C} Girder. May be moved laterally in pairs.



DIMENSIONS

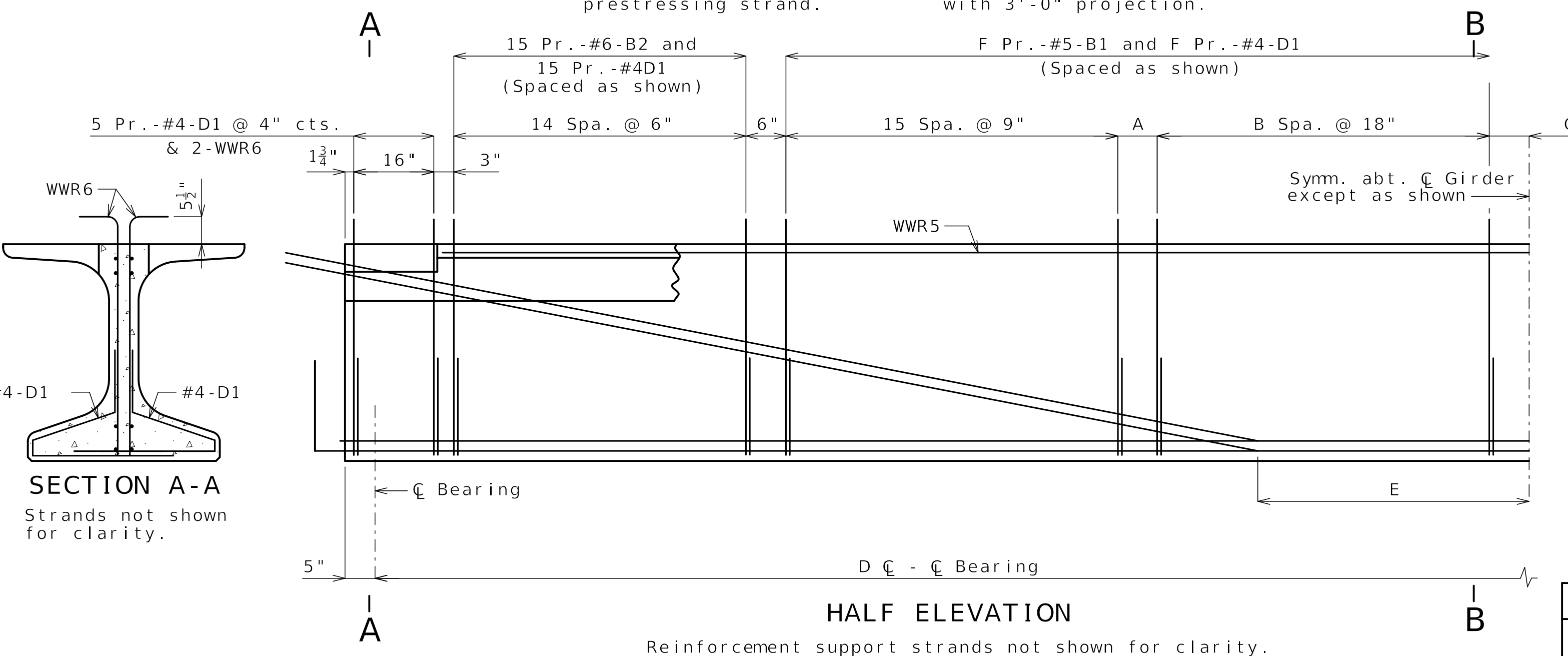


STRAND ARRANGEMENT



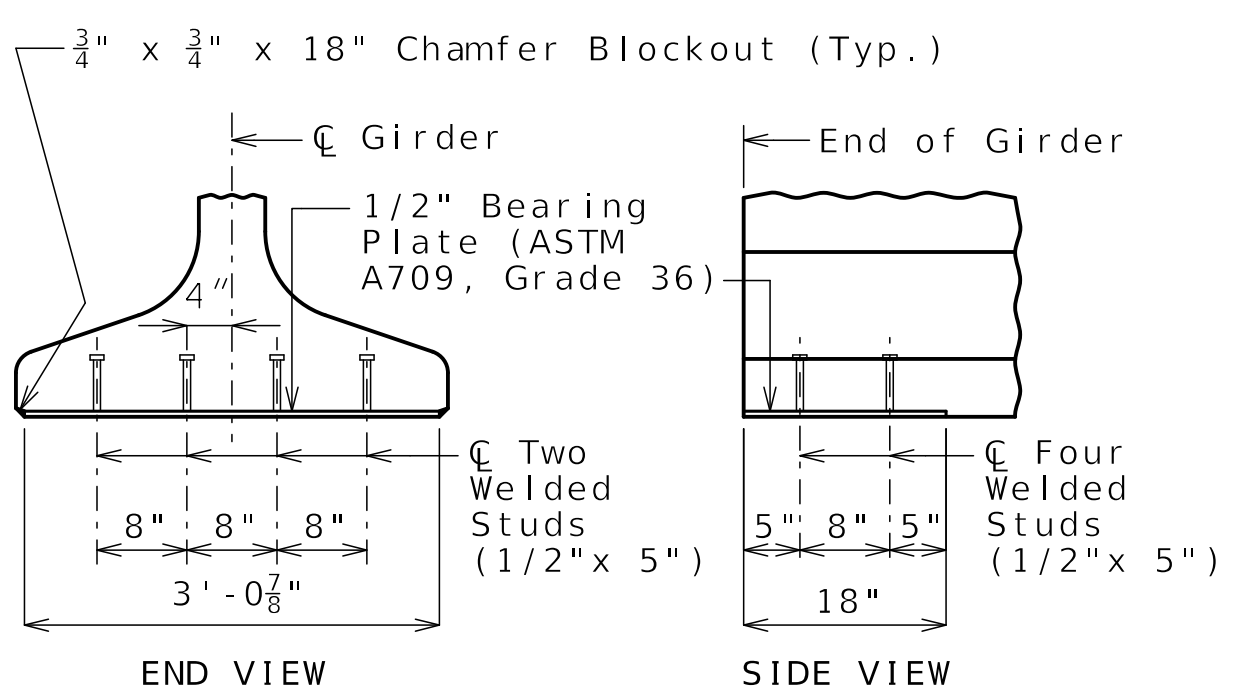
STRANDS AT GIRDER ENDS

+ Indicates prestressing strand. \circ Indicates cut & shop bend with 3'-0" projection.

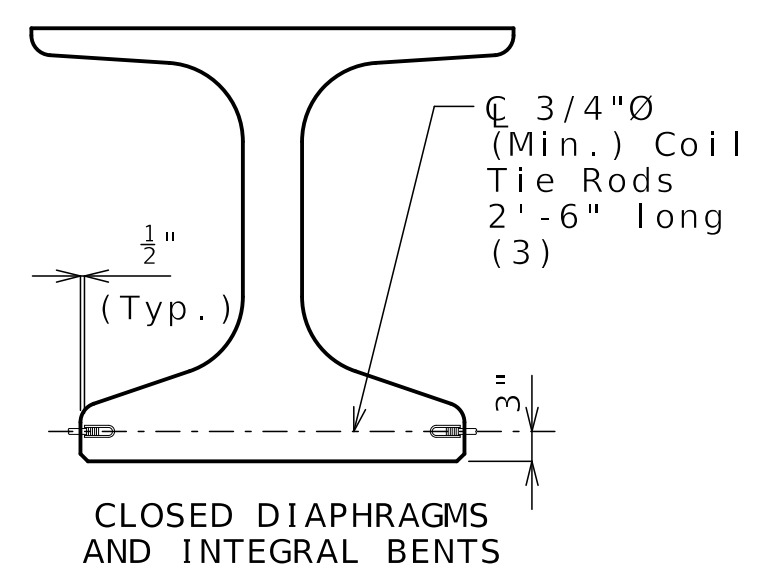


HALF ELEVATION

Reinforcement support strands not shown for clarity.



BEARING PLATE



COIL TIES

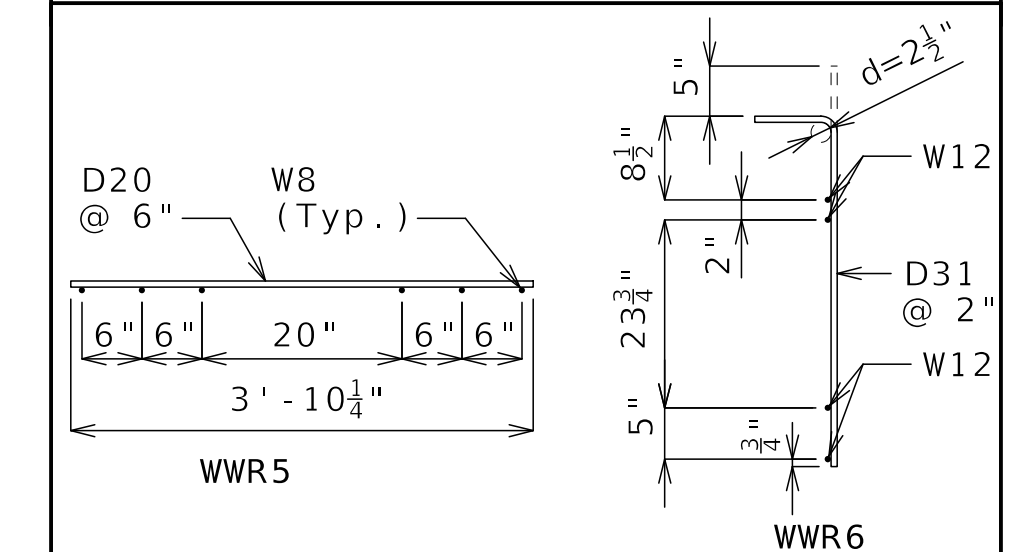
Exclude coil tie at exterior face of exterior girders except at integral end bents.

(3) 2'-3" at exterior face of exterior Girder No. 1 at end bents.

Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

Bill of Reinforcing Steel - Each Girder			
No.	Size/Mark	Length	Shape
G	5 B1	4'-4"	11S
60	6 B2	4'-3"	11S
H	4 D1	4'-0"	9S

Welded Wire Reinforcement - Each Girder



All dimensions are out to out.

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

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

Minimum clearance to reinforcing shall be one inch.

All bar reinforcement shall be Grade 60.

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

All B1 and B2 bars shall be epoxy coated.

General Notes:

Concrete for prestressed girders shall be Class A-1 with $f'c = 10000$ psi and $f'ci = 7500$ psi.

Use 18 strands, 0.6"Ø Grade 270, with an initial prestress force of 791 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, and application of bond breaker.

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

For Girder Camber Diagram, see Sheet No. B27-21.

For location of coil ties at concrete diaphragms and integral bents, see Sheets No. B27-06, B27-14 and B27-20.

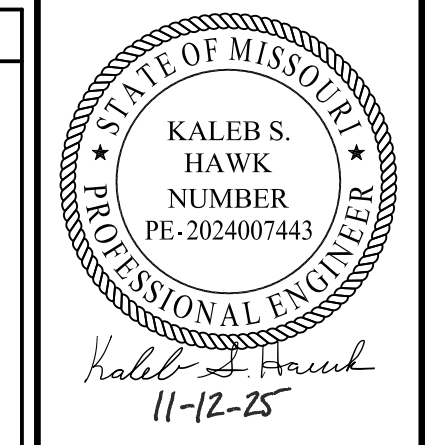
For additional NU Girder Details, see Sheet No. B27-19.

All dimensions are horizontal.

TABLE OF VARIABLES SPAN (1-2)								
Girder No.	A	B	C	D	E	F	G	H
1	16 1/8"	4	0"	54'-9 7/8"	5'-7"	21	82	162
2	12 7/8"	4	0"	54'-3 1/8"	5'-6"	21	82	162
3	9 1/2"	4	0"	53'-8 5/8"	5'-5"	21	82	162
4	15 1/4"	3	9"	53'-2 1/8"	5'-5"	20	80	160
5	12 3/8"	3	9"	52'-7 5/8"	5'-4"	20	80	160
6	9"	3	9"	52'-1 3/8"	5'-4"	20	80	160
7	14 7/8"	3	0"	51'-7 1/4"	5'-3"	20	78	158

TABLE OF VARIABLES SPAN (3-4)								
Girder No.	A	B	C	D	E	F	G	H
1	10"	4	0"	53'-9 5/8"	5'-6"	21	82	162
2	7 5/8"	4	0"	53'-4 3/4"	5'-5"	21	82	162
3	5 1/4"	4	0"	53'-0"	5'-5"	21	82	162
4	11 7/8"	3	9"	52'-7 3/8"	5'-4"	20	80	160
5	9 5/8"	3	9"	52'-2 3/4"	5'-4"	20	80	160
6	7 3/8"	3	9"	51'-10 1/4"	5'-3"	20	80	160
7	14 1/4"	3	0"	51'-5 7/8"	5'-3"	20	78	158

NU-GIRDERS - SPAN (1-2) AND (3-4)



DATE PREPARED	11/13/2025
ROUTE	I-70
STATE	MO
DISTRICT	BR
SHEET NO.	B27-17
COUNTY	JACKSON
JOB NO.	J411486D
CONTRACT ID.	240807-C01
PROJECT NO.	
BRIDGE NO.	A9759

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

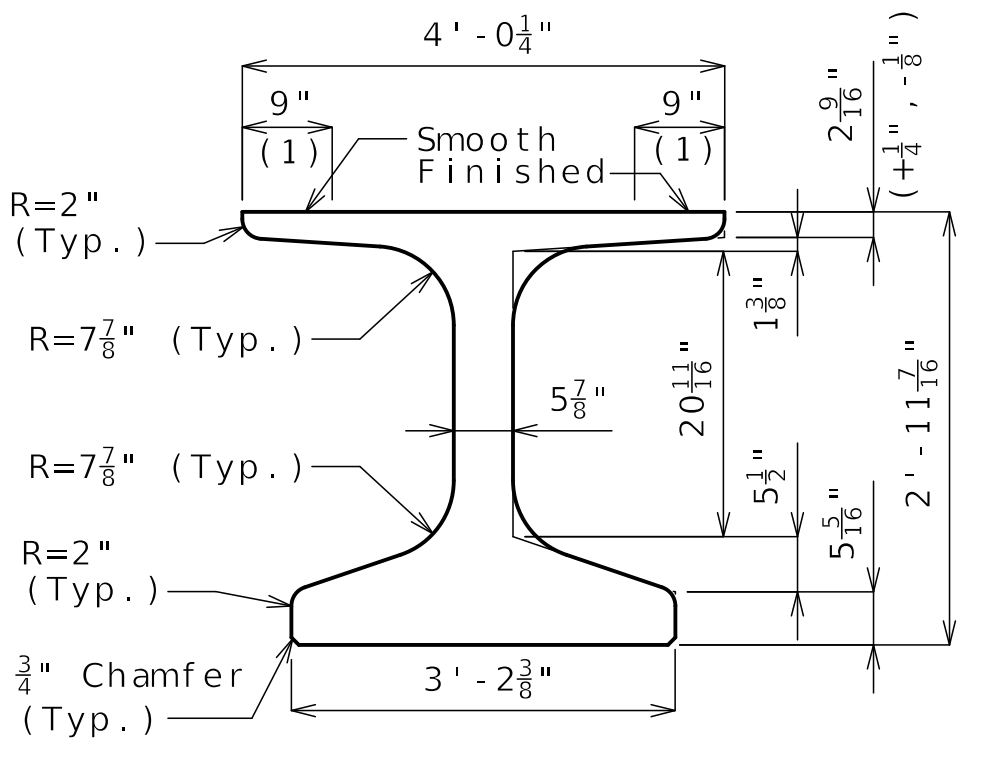
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CLARKSON RADMACHER JOINT VENTURE

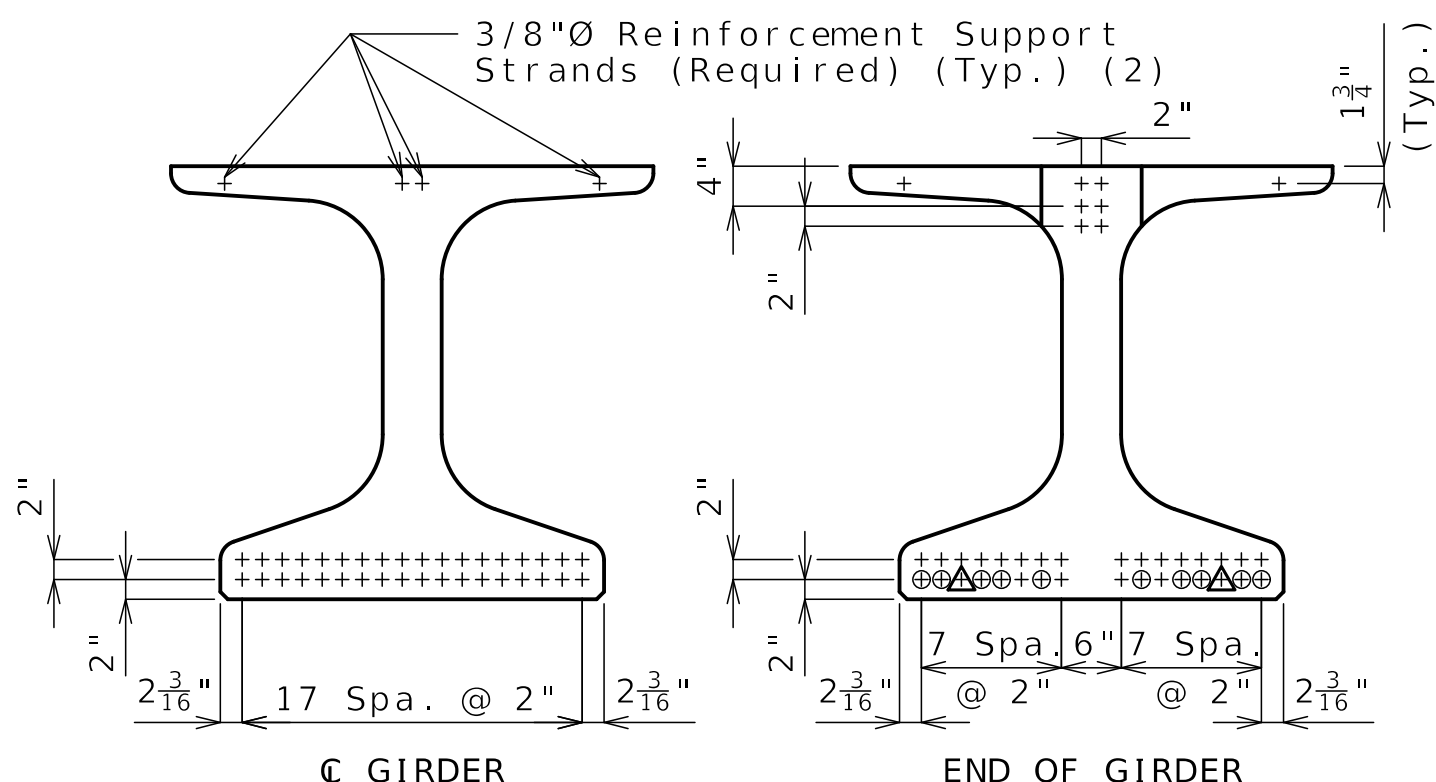
715 KIRK DRIVE
KANSAS CITY, MO 64105-1310
CERTIFICATE OF AUTHORITY
NO. 001270

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

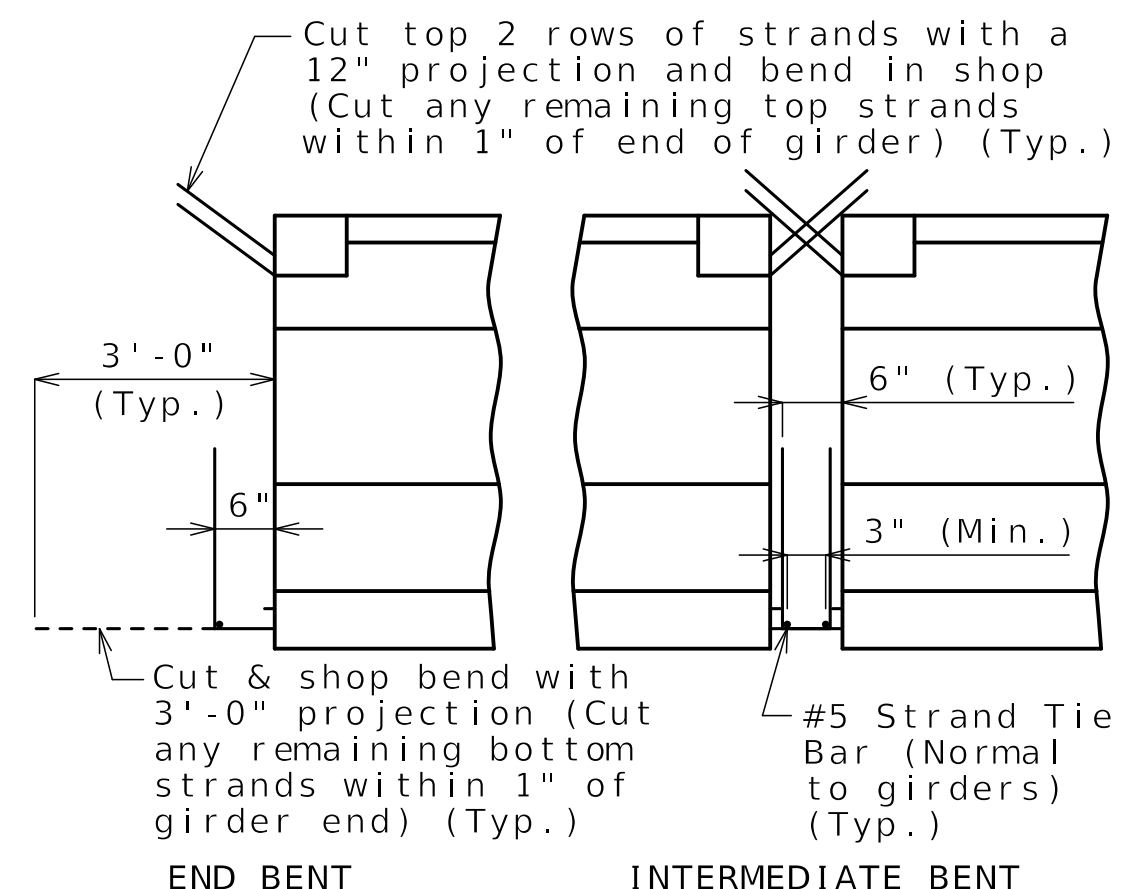
(2) Outer strands tensioned to 2.02 kips/strand and inner strands to 8 kips/strand. Placed symmetrical about \bar{C} Girder. May be moved laterally in pairs.



DIMENSIONS



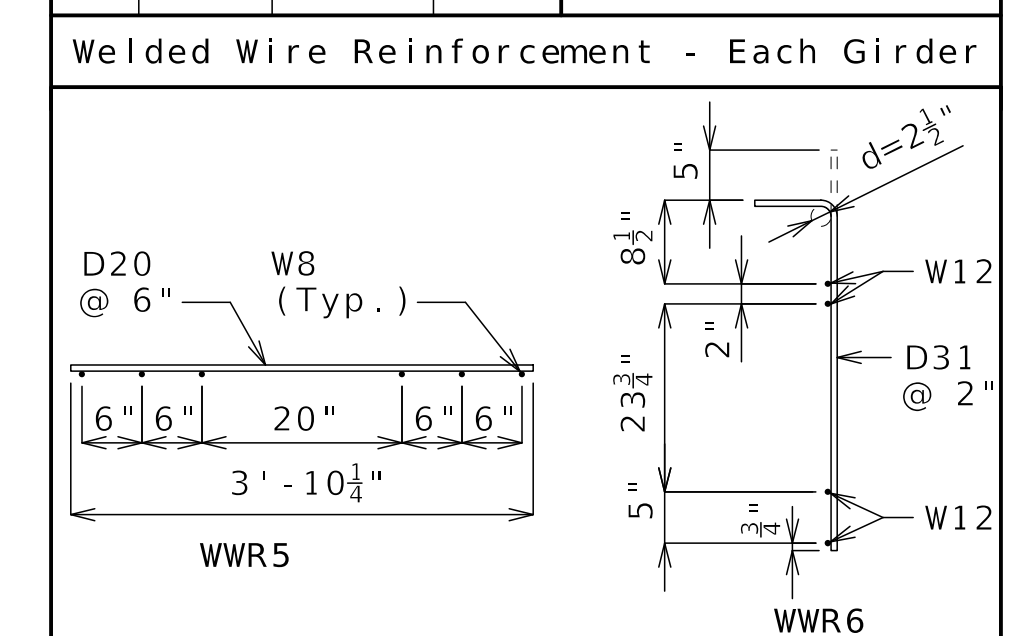
STRAND ARRANGEMENT



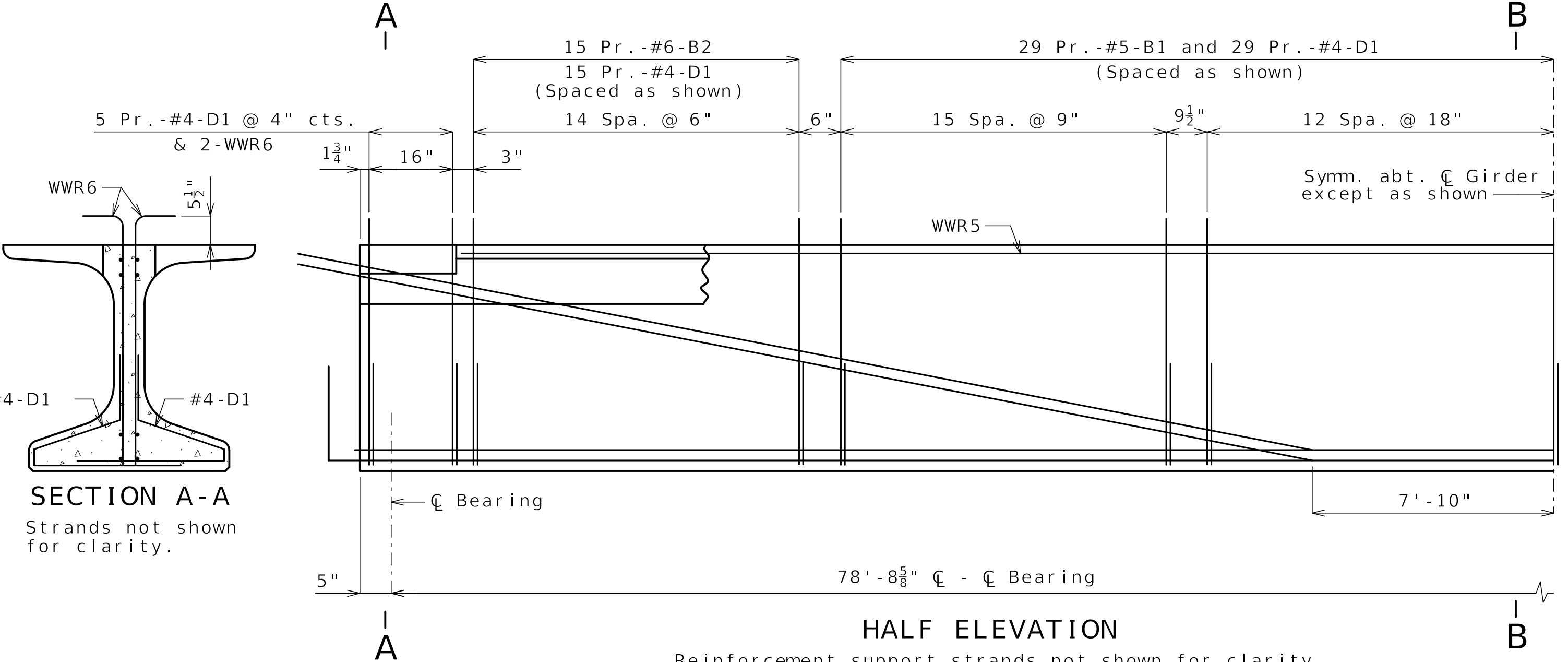
STRANDS AT GIRDER ENDS

+ Indicates prestressing strand.
 O Indicates cut & shop bend with 3'-0" projection.
 Δ Indicates debonded for 4'-0" from end of girder.

Bill of Reinforcing Steel - Each Girder				
No.	Size/Mark	Length	Shape	Bending Diagrams
114	5 B1	4'-4"	115	
60	6 B2	4'-3"	115	
194	4 D1	4'-0"	95	



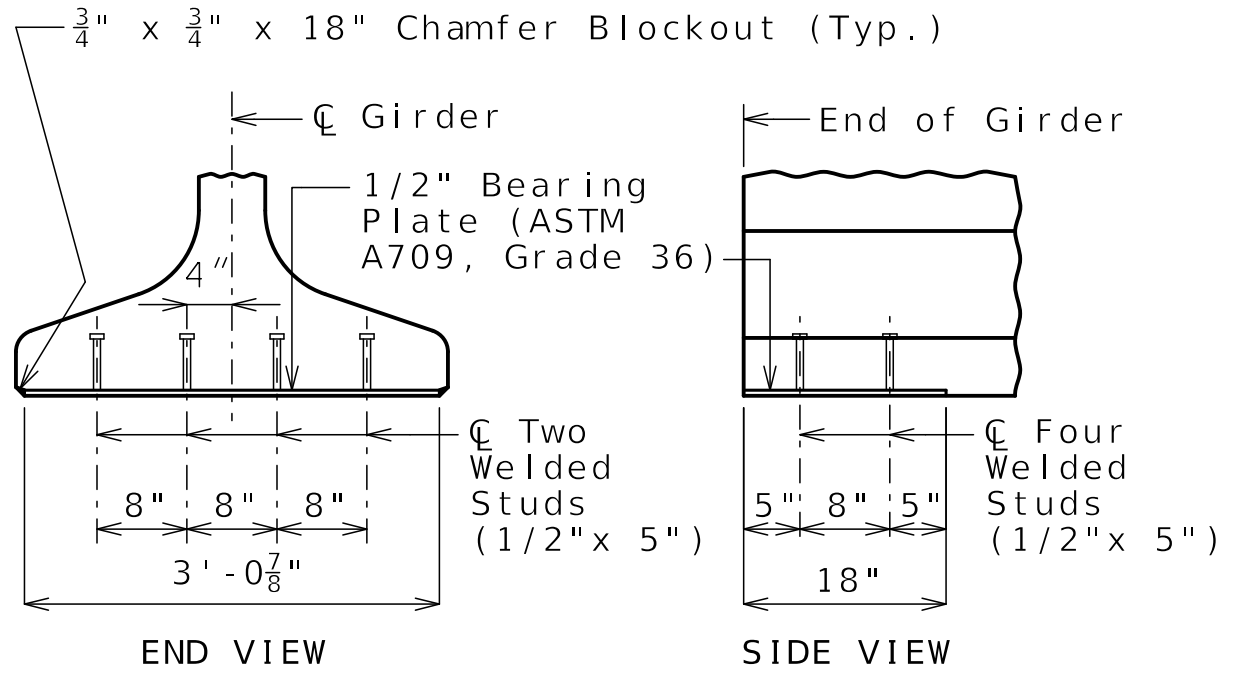
Welded Wire Reinforcement - Each Girder



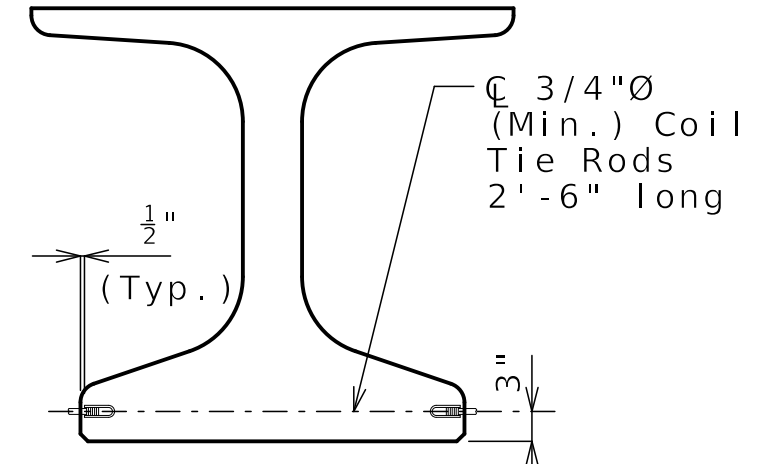
HALF ELEVATION
 Reinforcement support strands not shown for clarity.

SECTION A-A
 Strands not shown for clarity.

SECTION B-B
 Strands not shown for clarity.



BEARING PLATE



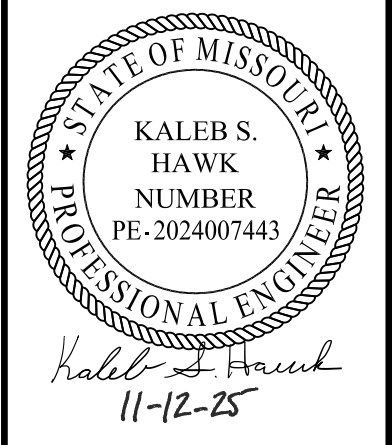
COIL TIES

Exclude coil tie at exterior face of exterior girders.

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 and B2 bars shall be epoxy coated.

General Notes:
 Concrete for prestressed girders shall be Class A-1 with $f'c = 10000$ psi and $f'ci = 7500$ psi.
 Use 36 strands, 0.6"Ø Grade 270, with an initial prestress force of 1582 kips.
 Pretensioned members shall be in accordance with Sec 1029.
 Fabricator shall be responsible for location and design of lifting devices.
 Exterior and interior girders are the same except: coil ties, top flange blockout, and application of bond breaker.
 The contractor shall provide bracing necessary for lateral and torsional stability of the girders during construction of the concrete slab and remove the bracing after the slab has attained 75% design strength.
 Contractor shall not drill holes in the girders.

For Girder Camber Diagram, see Sheet No. B27-21.
 For location of coil ties at concrete diaphragms, see Sheet No. B27-20.
 For additional NU Girder Details, see Sheet No. B27-19.
 All dimensions are horizontal.



DATE PREPARED	11/13/2025
ROUTE	1-70
STATE	MO
DISTRICT	BR
SHEET NO.	B27-18
COUNTY	JACKSON
JOB NO.	J411486D
CONTRACT ID.	240807-C01
PROJECT NO.	
BRIDGE NO.	A9759

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CLARKSON RADMACHER JOINT VENTURE

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

Detailed JUL 2025
 Checked AUG 2025

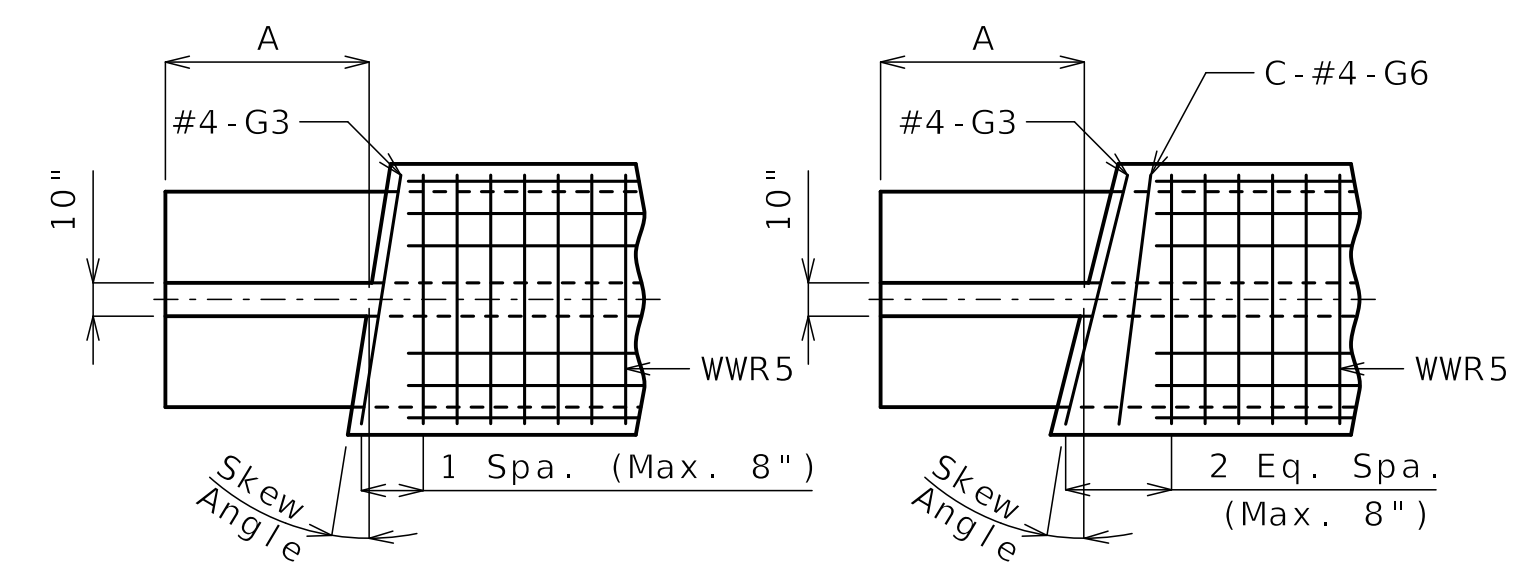
Note: This drawing is not to scale. Follow dimensions.

Released For Construction
 Not to Scale
 Revision: 0.0
 Date: 11/21/2025
 Package: BRD-27-WB-70-Jackson

Sheet No. B27-18 of B27-41

NU-GIRDERS - SPAN (2-3)

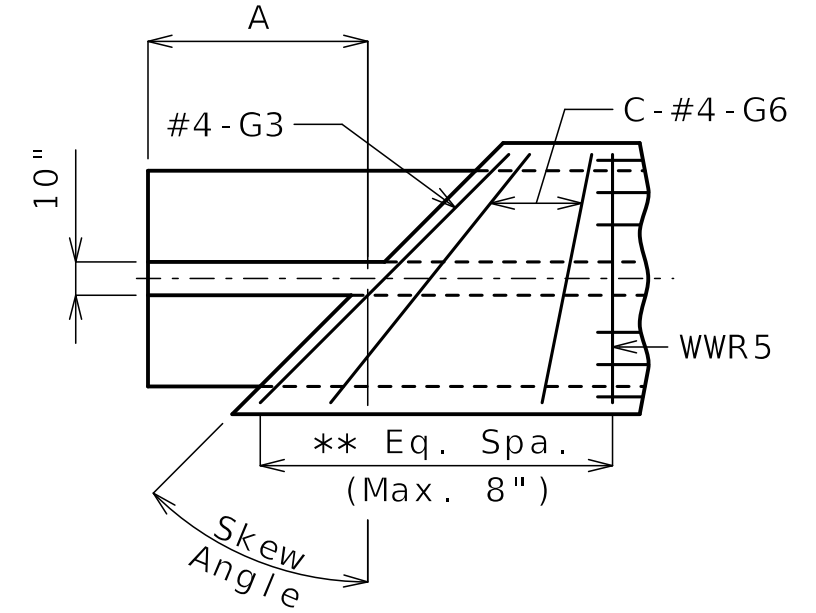
Note: 'C' = zero for Detail 1



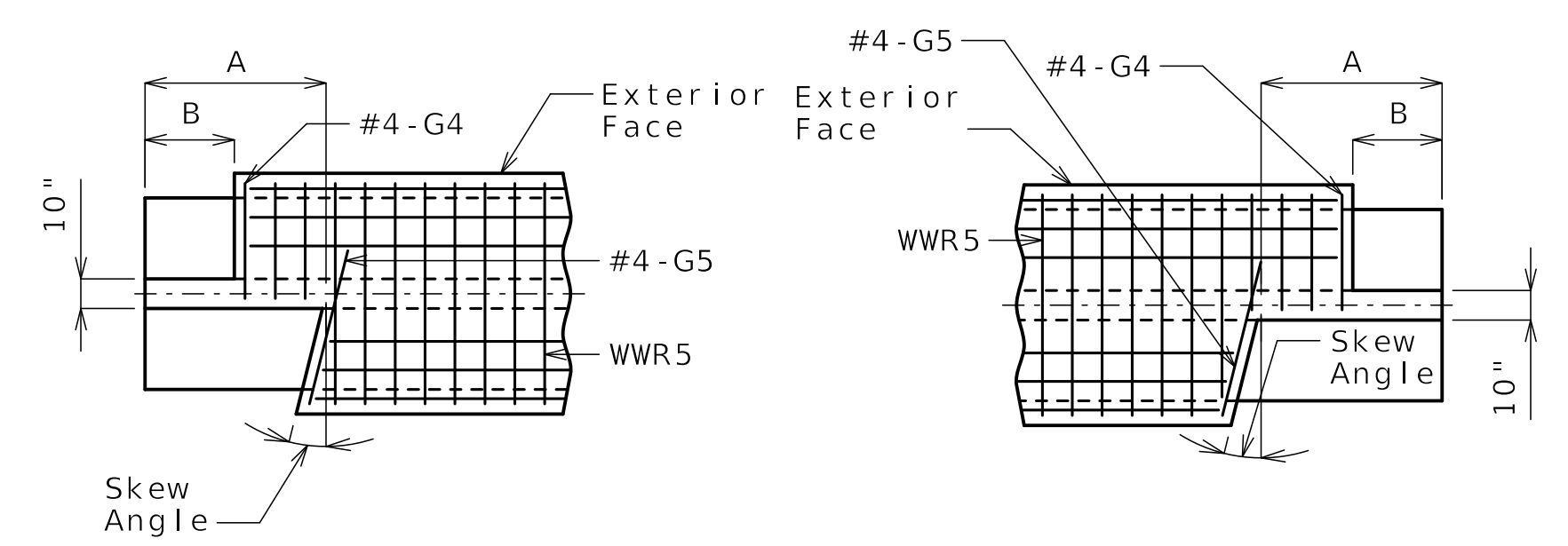
DETAIL 1
(0° to 7° Skew)

DETAIL 2
(>7° to 14° Skew)

** number of spaces = C+1



DETAIL 3
(>14° Skew)



DETAIL 4

(Left exterior girder shown, rotate 180° for right exterior girder)

TOP FLANGE BLOCKOUT DETAILS

(See Table of Variables for detail assignment to specific girders)
(Left advance skew shown, mirror for right advance skew)

BILL OF REINFORCING STEEL - EACH GIRDER				
NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE	BENDING DIAGRAMS
2	4 G3	D	20	SHAPE 20
2	4 G4	2'-3"	20	
2	4 G5	E	20	
*	4 G6	F	20	

* Total for each girder is the total value of the two "C" variables per span provided in the Table of Variables

TABLE OF VARIABLES									
Span No.	Girder No.	Bent No.	Detail	A	B	C	D	E	F
1-2	1	1	3	2'-3 ¹ / ₄ "	---	6	5'-1"	---	Varies
1-2	2	1	3	2'-3"	---	6	5'-0"	---	Varies
1-2	3	1	3	2'-2 ³ / ₄ "	---	6	5'-0"	---	Varies
1-2	4	1	3	2'-2 ¹ / ₂ "	---	6	4'-11"	---	Varies
1-2	5	1	3	2'-2 ¹ / ₄ "	---	6	4'-10"	---	Varies
1-2	6	1	3	2'-2"	---	6	4'-10"	---	Varies
1-2	7	1	3	2'-1 ⁵ / ₈ "	---	5	4'-9"	---	Varies
1-2	1	2	4	2'-0 ³ / ₄ "	8"	---	---	3'-6"	---
1-2	2	2	3	2'-0 ¹ / ₂ "	---	6	5'-0"	---	Varies
1-2	3	2	3	2'-0 ³ / ₈ "	---	6	5'-0"	---	Varies
1-2	4	2	3	2'-0 ¹ / ₄ "	---	6	4'-11"	---	Varies
1-2	5	2	3	2'-0 ¹ / ₈ "	---	6	4'-10"	---	Varies
1-2	6	2	3	23 ⁷ / ₈ "	---	6	4'-10"	---	Varies
1-2	7	2	4	23 ³ / ₄ "	8 ¹ / ₈ "	---	---	3'-4"	---
2-3	1	2	4	23 ³ / ₈ "	7 ⁵ / ₈ "	---	---	3'-3"	---
2-3	2-6	2	3	23"	---	5	4'-9"	---	Varies
2-3	7	2	4	23"	7 ⁵ / ₈ "	---	---	3'-3"	---
2-3	1	3	4	23 ⁷ / ₈ "	8 ³ / ₈ "	---	---	3'-3"	---
2-3	2-6	3	3	23 ⁷ / ₈ "	---	5	4'-9"	---	Varies
2-3	7	3	4	23 ⁷ / ₈ "	8 ¹ / ₂ "	---	---	3'-3"	---
3-4	1	3	4	22 ¹ / ₄ "	7 ¹ / ₄ "	---	---	3'-2"	---
3-4	2	3	3	22 ¹ / ₈ "	---	5	4'-7"	---	Varies
3-4	3	3	3	21 ⁷ / ₈ "	---	5	4'-6"	---	Varies
3-4	4	3	3	21 ³ / ₄ "	---	5	4'-6"	---	Varies
3-4	5	3	3	21 ⁵ / ₈ "	---	4	4'-6"	---	Varies
3-4	6	3	3	21 ¹ / ₂ "	---	4	4'-5"	---	Varies
3-4	7	3	4	21 ³ / ₈ "	7 ¹ / ₈ "	---	---	3'-1"	---
3-4	1	4	3	2'-1 ⁷ / ₈ "	---	5	4'-7"	---	Varies
3-4	2	4	3	2'-1 ⁵ / ₈ "	---	5	4'-7"	---	Varies
3-4	3	4	3	2'-1 ¹ / ₂ "	---	5	4'-6"	---	Varies
3-4	4	4	3	2'-1 ³ / ₈ "	---	5	4'-6"	---	Varies
3-4	5	4	3	2'-1 ¹ / ₄ "	---	4	4'-6"	---	Varies
3-4	6	4	3	2'-1 ¹ / ₈ "	---	4	4'-5"	---	Varies
3-4	7	4	3	2'-1"	---	4	4'-5"	---	Varies

Detailed JUL 2025
Checked AUG 2025

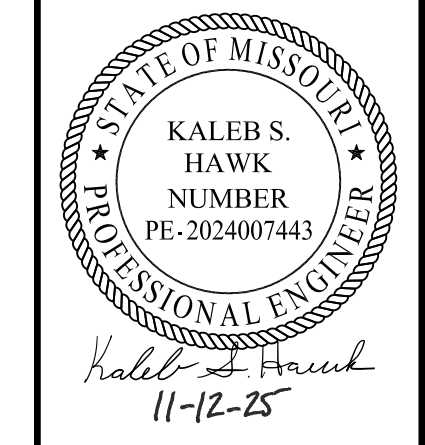
Note: This drawing is not to scale. Follow dimensions.

Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

Notes:
For additional Girder notes, see Sheets No. B27-17 and B27-18.

NU-GIRDER DETAILS

Sheet No. B27-19 of B27-41



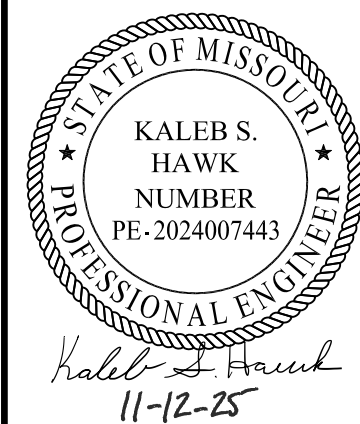
DATE PREPARED
11/13/2025
ROUTE
1-70
STATE
MO
DISTRICT
BR
SHEET NO.
B27-19
COUNTY
JACKSON
JOB NO.
J411486D
CONTRACT ID.
240807-C01
PROJECT NO.

BRIDGE NO.
A9759

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

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





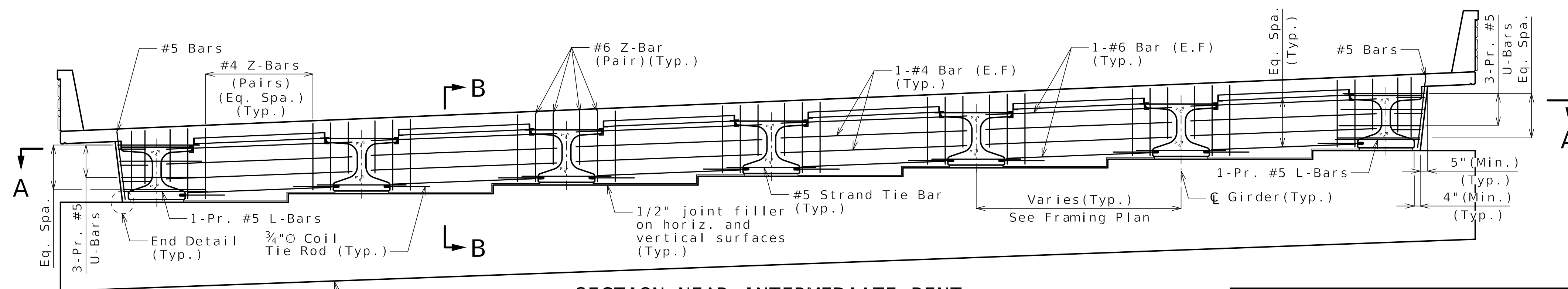
DATE PREPARED 11/13/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. B27-20
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	

BRIDGE NO.
A9759

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

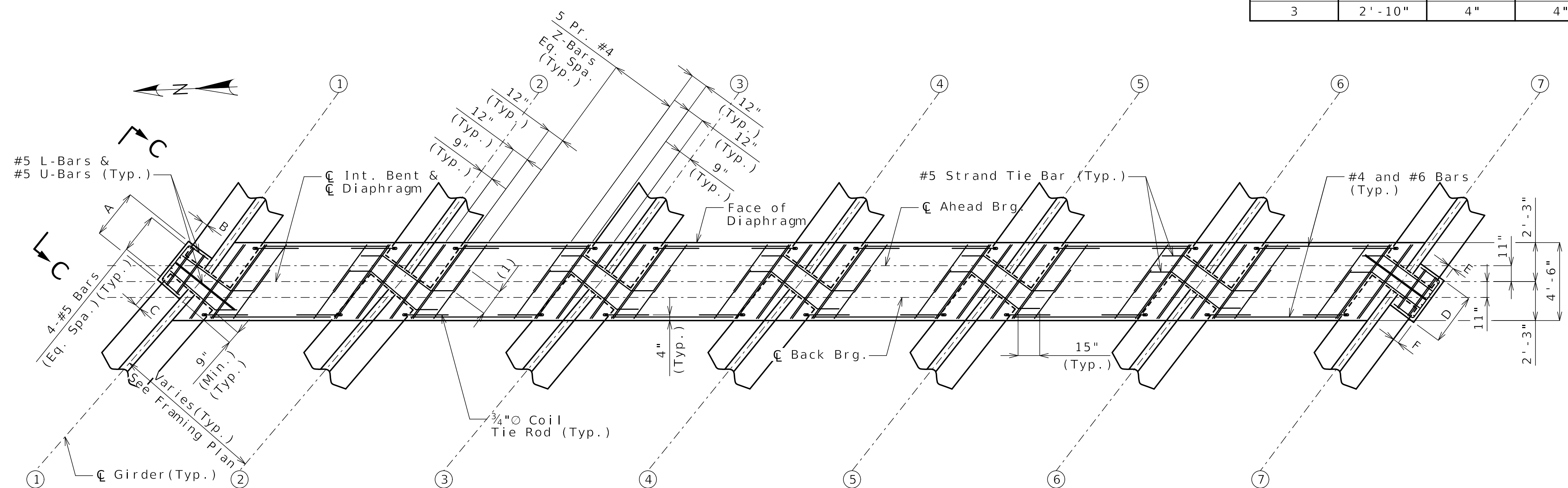
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
 105 WEST CAPITOL JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)

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



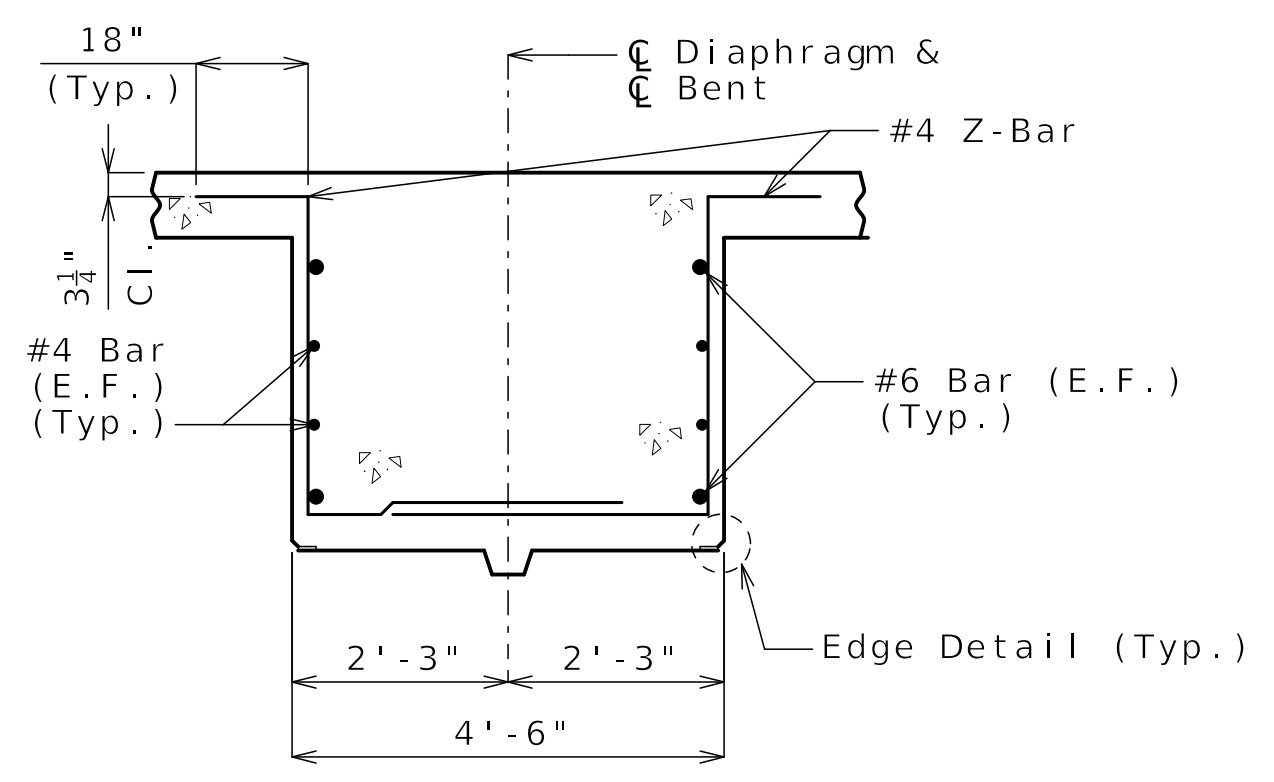
SECTION NEAR INTERMEDIATE BENT
 (Intermediate Bent No. 2 Shown, Intermediate Bent No. 3 Similar)
 (Looking Ahead Station)

Bent No.	A	B	C	D	E	F
2	2' - 10 ¹ / ₈ "	4"	4"	2' - 11 ⁵ / ₈ "	4"	4 ¹ / ₄ "
3	2' - 10"	4"	4"	3' - 0 ⁷ / ₈ "	5 ⁷ / ₈ "	4"

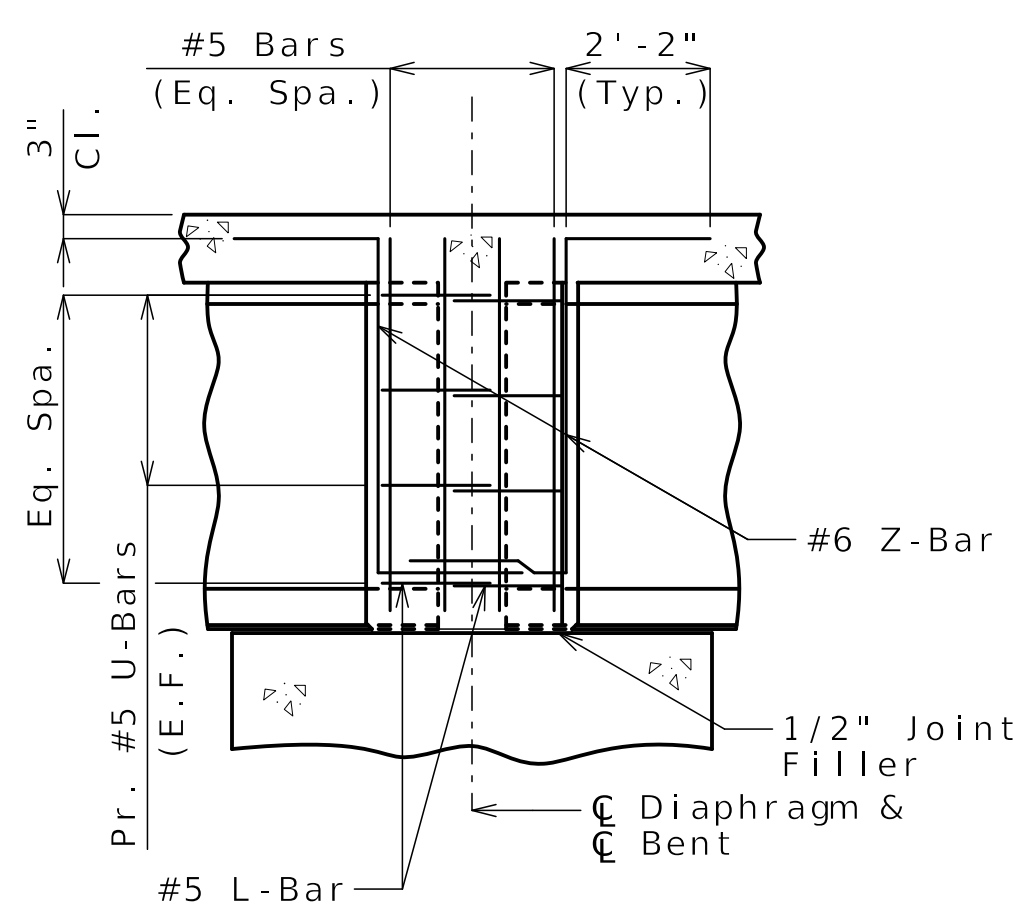


SECTION A-A

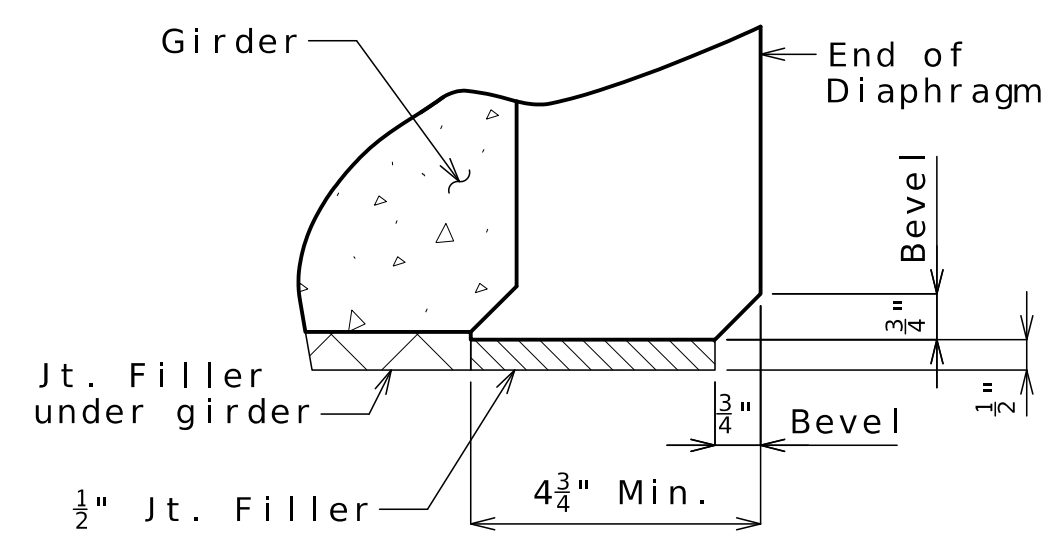
(1) Minimum Lap Lengths
 #4 Bar = 19"
 #6 Bar = Full Width of Diaphragm



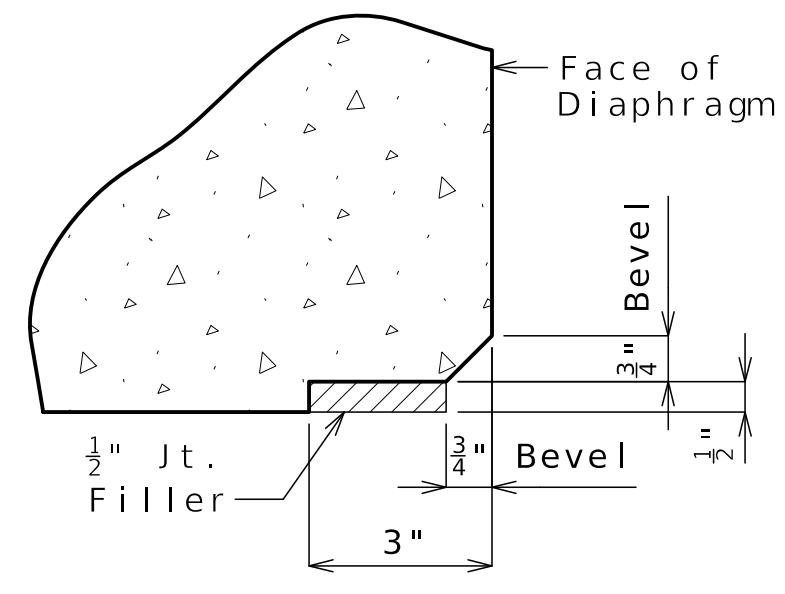
SECTION B-B



ELEVATION C-C



END DETAIL



EDGE DETAIL

Notes:
 Diaphragms shall be built vertical.
 For location of #5 Strand Tie Bars, see Sheets No. B27-17 and B27-18.
 For location of coil ties, see Sheets No. B27-17 and B27-18.
 For Bearing Details, see Sheets No. B27-10 and B27-12.
 For capbeam details, bearing location, dowel placement, shear key details, roofing felt details, joint filler details, see Sheets No. B27-10 and B27-12.

(X) Denotes Girder Number

CONCRETE DIAPHRAGM AT INTERMEDIATE BENTS

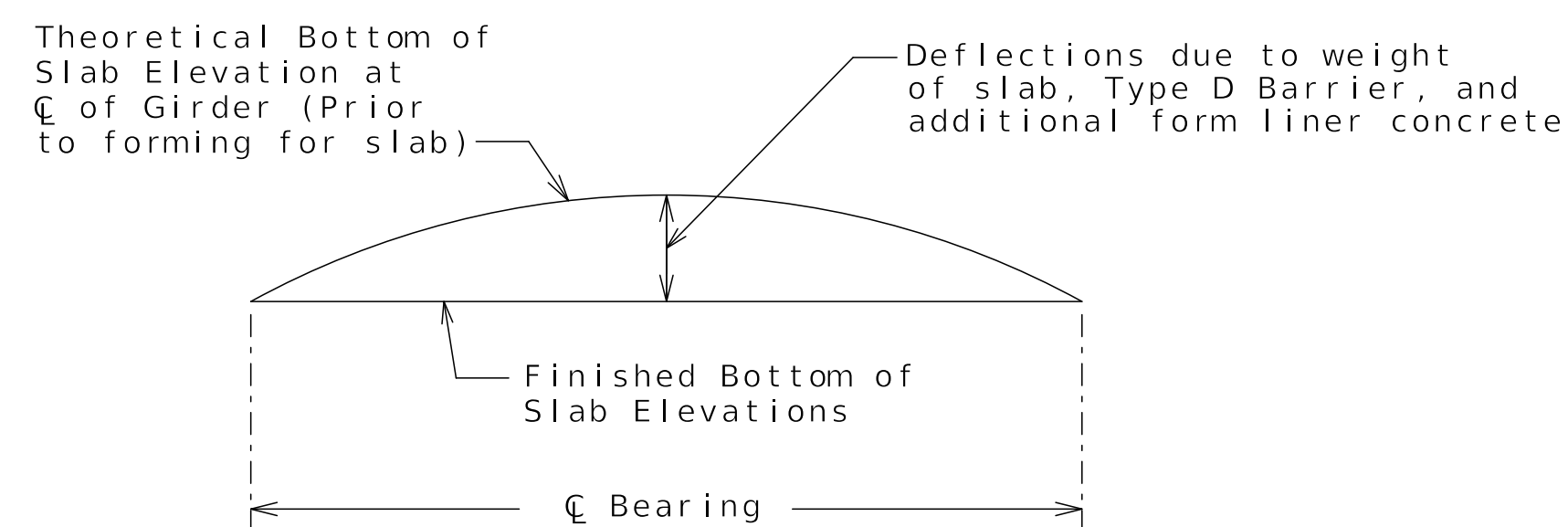
Theoretical Bottom of Slab Elevations at Centerline of Girder
(Prior to forming for slab)(Estimated at 90 days)**

Girder Number	Span (1-2) (Varies @ Brg. - @ Brg.)				
	@ Brg.	.25	.50	.75	@ Brg.
1	889.83	889.80	889.76	889.69	889.60
2	890.36	890.33	890.27	890.19	890.09
3	890.90	890.85	890.78	890.69	890.58
4	891.43	891.36	891.28	891.18	891.06
5	891.96	891.88	891.79	891.68	891.55
6	892.48	892.40	892.30	892.17	892.04
7	893.01	892.91	892.80	892.67	892.52

Girder Number	Span (2-3) (77'-8 1/8" @ Brg. - @ Brg.)										
	@ Brg.	.10	.20	.30	.40	.50	.60	.70	.80	.90	@ Brg.
1	889.59	889.54	889.49	889.44	889.37	889.28	889.19	889.08	888.97	888.84	888.71
2	890.07	890.03	889.99	889.94	889.87	889.79	889.69	889.58	889.46	889.33	889.19
3	890.56	890.52	890.47	890.42	890.35	890.27	890.17	890.06	889.94	889.80	889.67
4	891.04	891.00	890.96	890.90	890.83	890.75	890.65	890.54	890.42	890.28	890.14
5	891.53	891.49	891.44	891.38	891.31	891.23	891.13	891.02	890.90	890.76	890.62
6	892.01	891.97	891.92	891.87	891.80	891.71	891.61	891.50	891.38	891.24	891.10
7	892.50	892.45	892.40	892.34	892.27	892.18	892.08	891.97	891.85	891.72	891.58

Girder Number	Span (3-4) (Varies @ Brg. - @ Brg.)				
	@ Brg.	.25	.50	.75	@ Brg.
1	888.68	888.50	888.30	888.08	887.85
2	889.16	888.97	888.76	888.54	888.29
3	889.63	889.44	889.23	888.99	888.74
4	890.11	889.91	889.69	889.45	889.19
5	890.59	890.38	890.15	889.90	889.64
6	891.07	890.85	890.61	890.36	890.08
7	891.55	891.32	891.07	890.81	890.54

**Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoretical dead load deflections due to weight of slab (including Type D Barrier, additional form liner concrete).

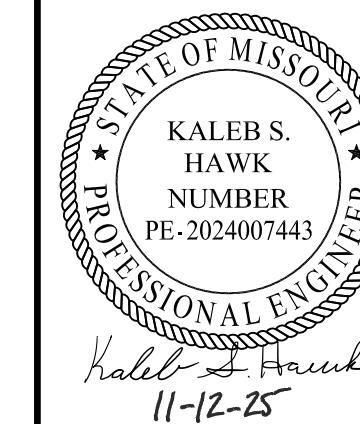


TYPICAL SLAB ELEVATIONS DIAGRAM

Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

Notes:
For @ Bearing Lengths, see Sheets No. B27-17 and B27-18.

THEORETICAL BOTTOM OF SLAB ELEVATIONS



DATE PREPARED
11/13/2025

ROUTE STATE
I-70 MO

DISTRICT SHEET NO.
BR B27-22

COUNTY
JACKSON

JOB NO.
J411486D

CONTRACT ID.
240807-C01

PROJECT NO.

BRIDGE NO.
A9759

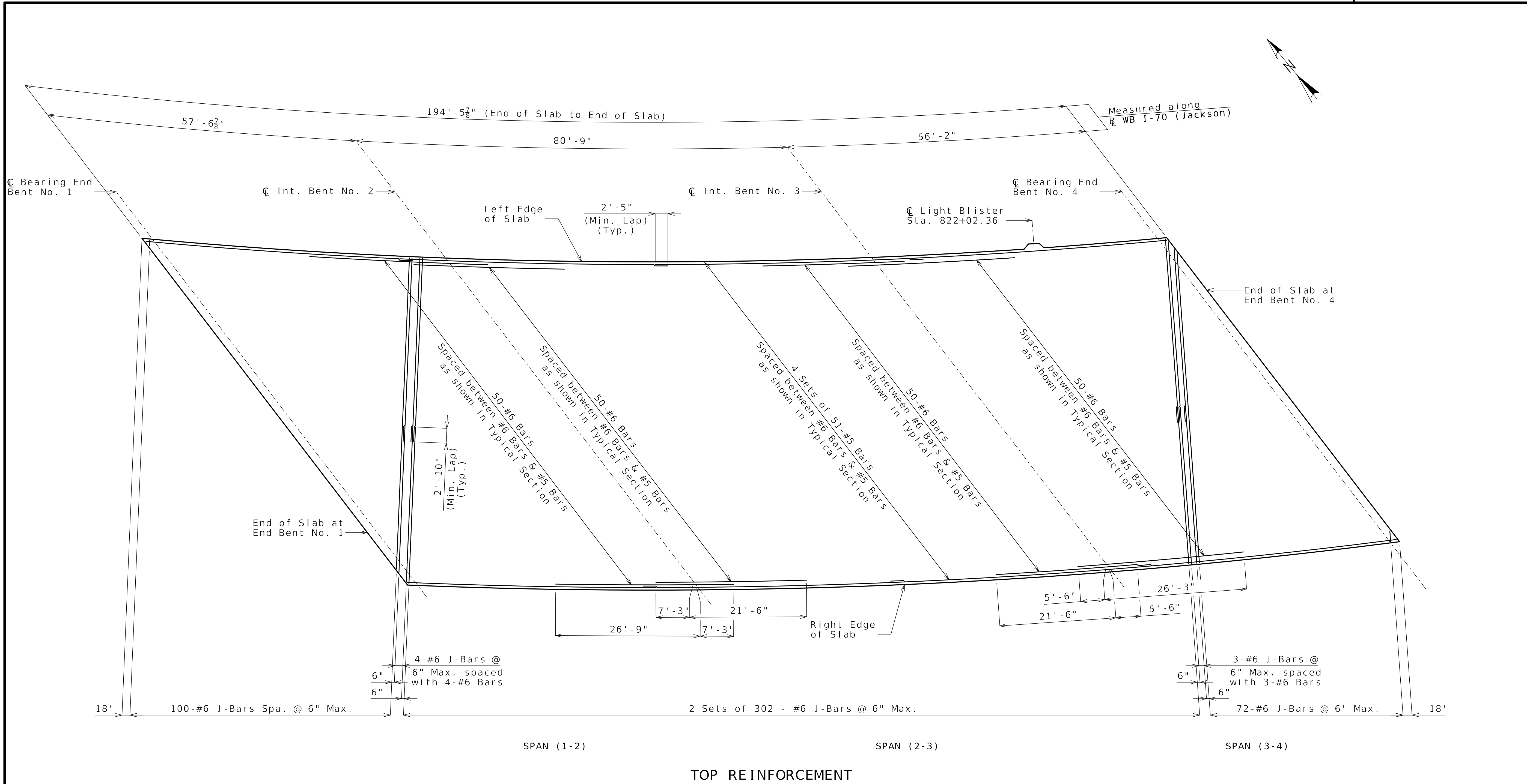
DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CLARKSON RADMACHER JOINT VENTURE

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



TOP REINFORCEMENT

Notes:
 Work this sheet with Sheet No. B27-24.
 For Typical Section, see Sheet No. B27-25.
 For Slab Pouring Sequence, see Sheet No. B27-24.
 For Details and Reinforcement of Type D Barrier, see Sheet No. B27-27.
 For Theoretical Slab Haunching Diagram and Girder Camber Diagram, see Sheet No. B27-21.
 For Theoretical Bottom of Slab Elevations, see Sheet No. B27-22.
 Longitudinal slab dimensions are measured horizontally.
 For Light Blister reinforcing and details, see Sheet No. B27-29.

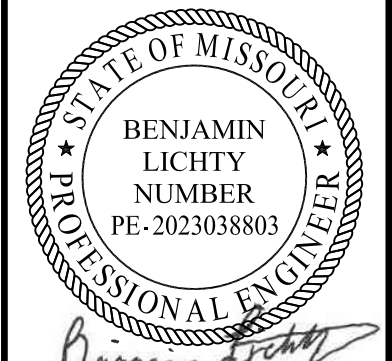
Released For Construction
 Not to Scale
 Revision: 0.0
 Date: 11/21/2025
 Package: BRD-27-WB-70-Jackson

SLAB PLAN SHOWING TOP REINFORCEMENT

Detailed JUL 2025
 Checked AUG 2025

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

Sheet No. B27-23 of B27-41



11-13-2025

DATE PREPARED	
11/13/2025	
ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	B27-23
COUNTY	
JACKSON	
JOB NO.	
J411486D	
CONTRACT ID.	
240807-C01	
PROJECT NO.	

BRIDGE NO.
A9759

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

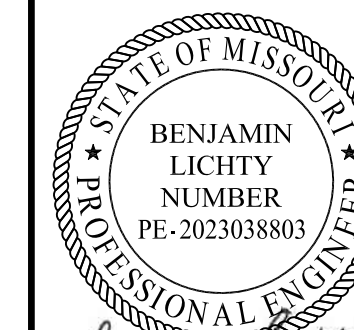
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CLARKSON RADMACHER
 JOINT VENTURE

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

Released For Construction
 Not to Scale
 Revision: 0.0
 Date: 11/21/2025
 Package: BRD-27-WB-70-Jackson



Benjamin Lichty
 11-13-2025

DATE PREPARED
 11/13/2025

ROUTE STATE
 I-70 MO

DISTRICT SHEET NO.
 BR B27-24

COUNTY
 JACKSON

JOB NO.
 J411486D

CONTRACT ID.
 240807-C01

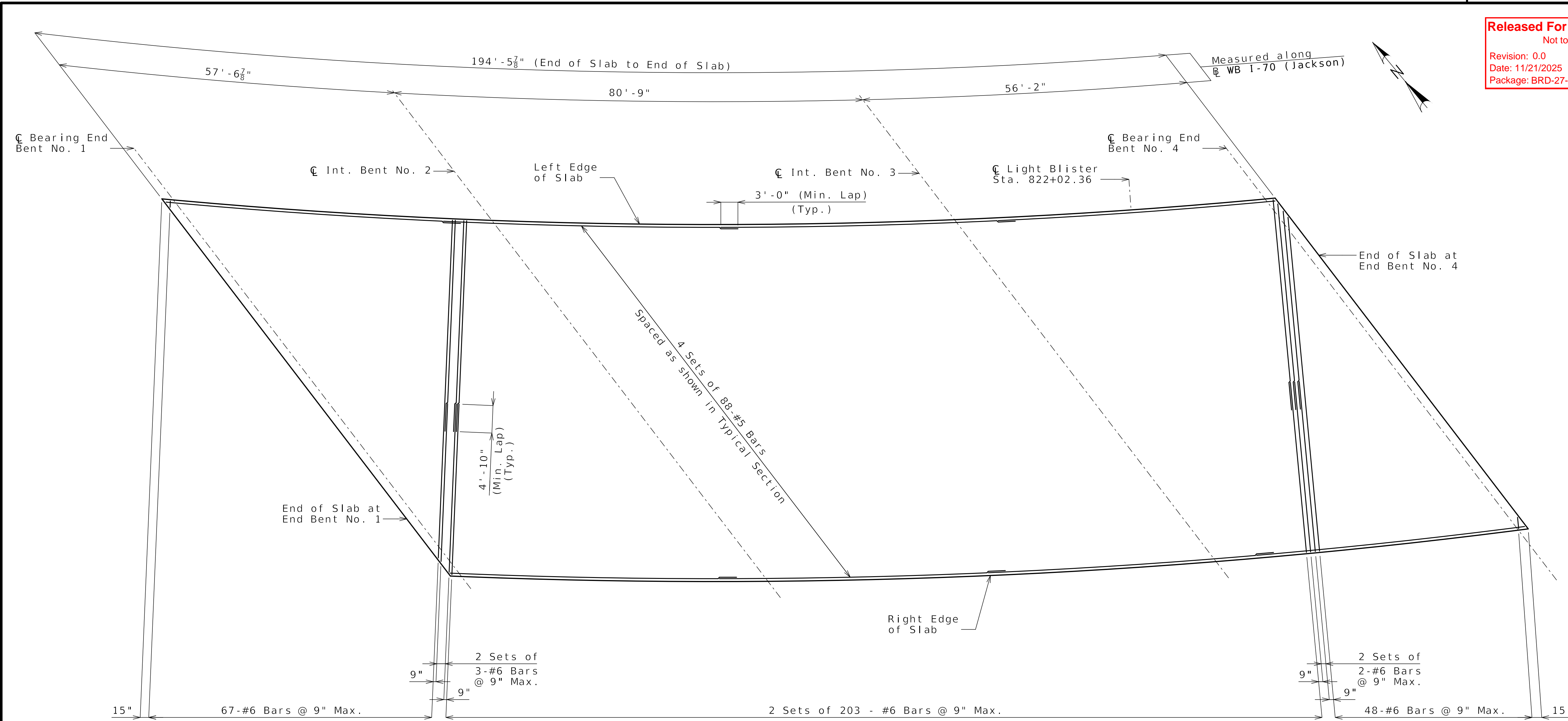
PROJECT NO.

BRIDGE NO.
 A9759

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

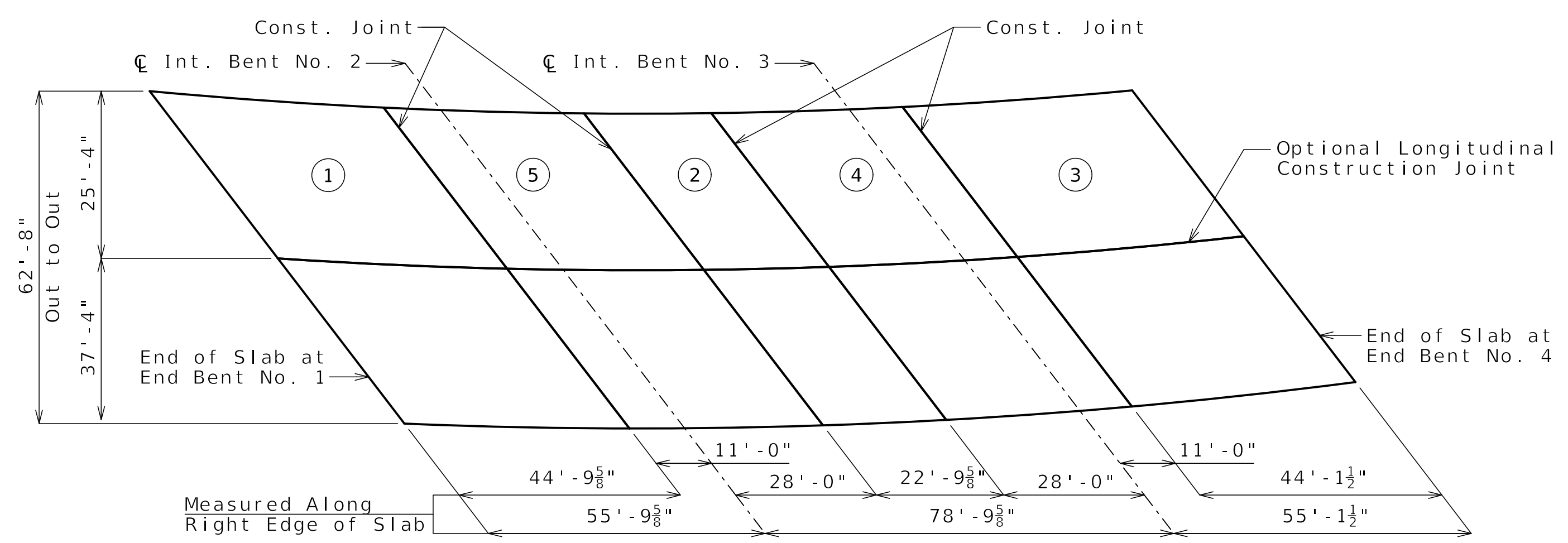
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
 105 WEST CAPITOL JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)

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



BOTTOM REINFORCEMENT

Note: Work this sheet with Sheet No. B27-23.



SLAB POURING SEQUENCE

	Sequence of Pours					Min. Rate of Pour Cu. Yds./Hr.
	Direction					
Basic Sequence	1	5	2	4	3	25*
	Either Direction					
Alternate pours to the basic sequence are subject to the approval of the engineer in accordance with Sec 703.						
Alternate A Pours	1	5 + 2	4 + 3			40
	End to 5	1 to 4	2 to End			
Alternate B Pours	1 + 5 + 2	4 + 3				40
	End to 4	2 to End				
Alternate C Pours	1 + 5 + 2 + 4 + 3 End to End					40

The contractor shall furnish an approved retarder to retard the set of the concrete to 2.5 hours, and shall pour and satisfactorily finish the slab pours at the rate given.

The concrete diaphragm at the intermediate bents and integral end bents shall be poured a minimum of 30 minutes and a maximum of 2 hours before the slab is poured.

* A minimum finishing rate of 20 LF/HR shall be maintained, otherwise the optional longitudinal construction joint shall be required.

SLAB PLAN SHOWING BOTTOM REINFORCEMENT

Detailed JUL 2025
 Checked AUG 2025

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

Sheet No. B27-24 of B27-41



Benjamin Lichty
11-13-2025

DATE PREPARED
11/13/2025

ROUTE STATE
I-70 MO

DISTRICT SHEET NO.
BR B27-25

COUNTY
JACKSON

JOB NO.
J411486D

CONTRACT ID.
240807-C01

PROJECT NO.

BRIDGE NO.
A9759

DESCRIPTION

REV 0 - RFC SUBMITTAL

DATE

11/13/25

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

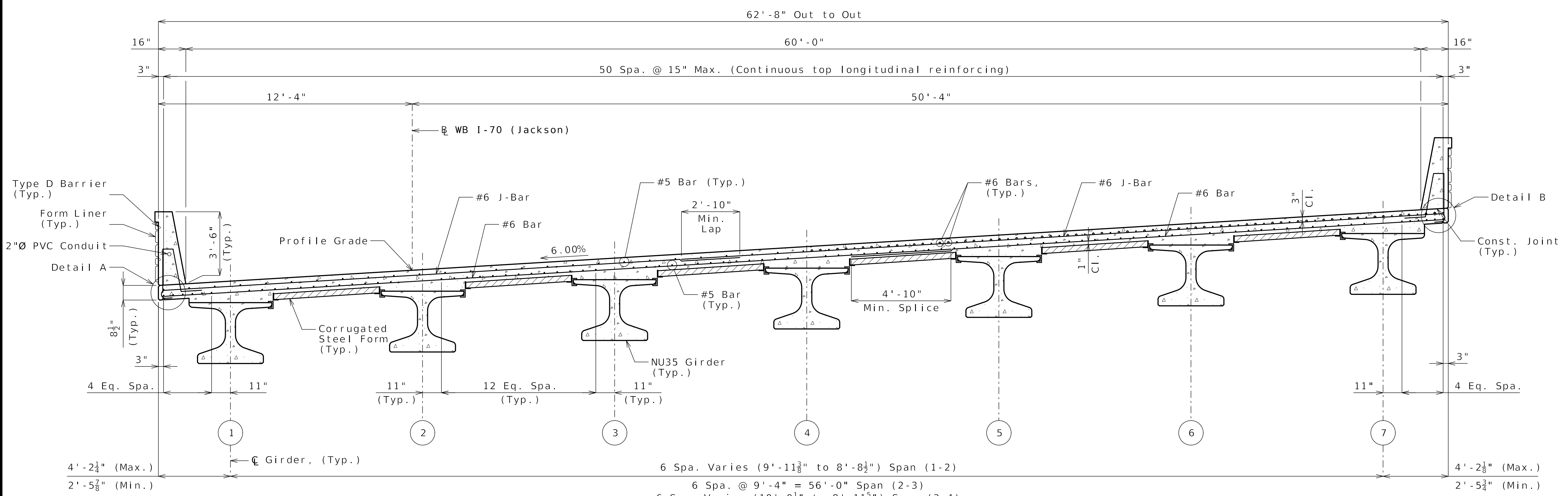
MoDOT

105 WEST CAPITOL JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

CERTIFICATE OF AUTHORITY NO. 001270

HNTB

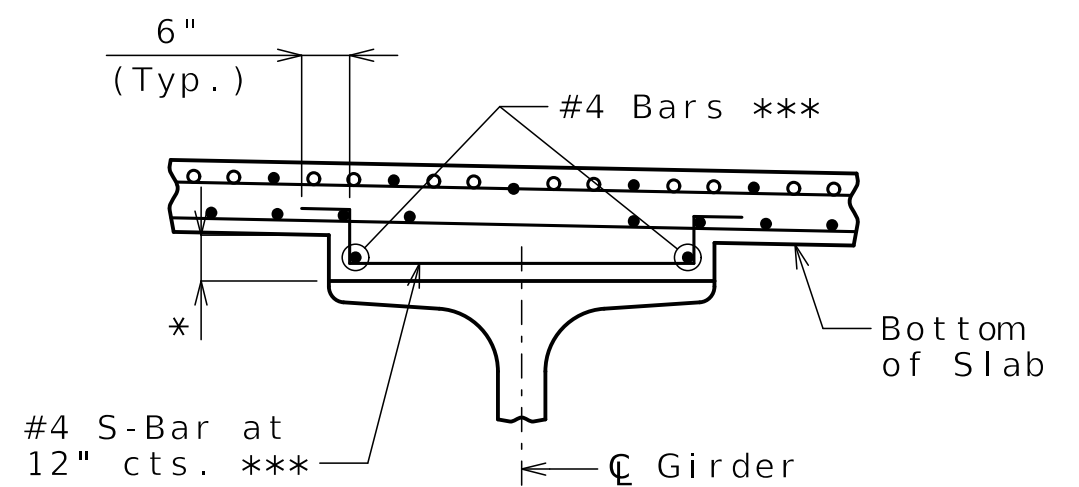


HALF SECTION NEAR MIDSPAN

HALF SECTION NEAR INTERMEDIATE BENT

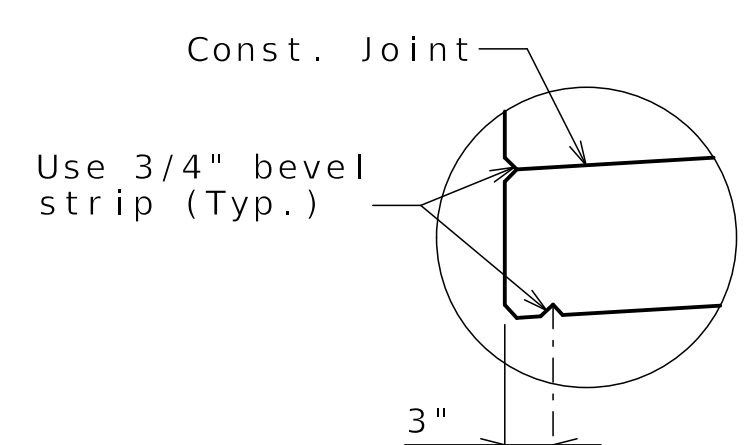
TYPICAL SECTION
(Looking Ahead Sta.)

* When dimension is greater than or equal to 5" and the typical haunch reinforcing detail is not used, a single Z-bar with 6" tail dimension and a single #4 longitudinal bar are required.

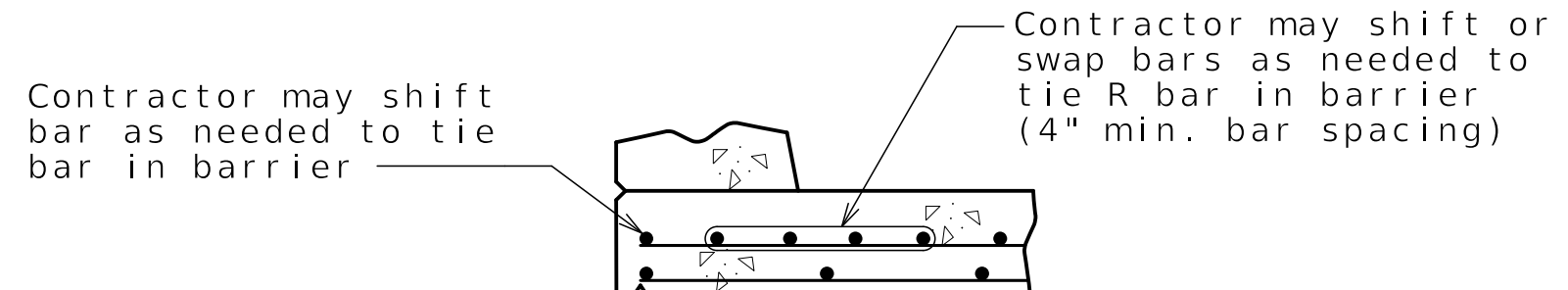


HAUNCH REINFORCING DETAIL

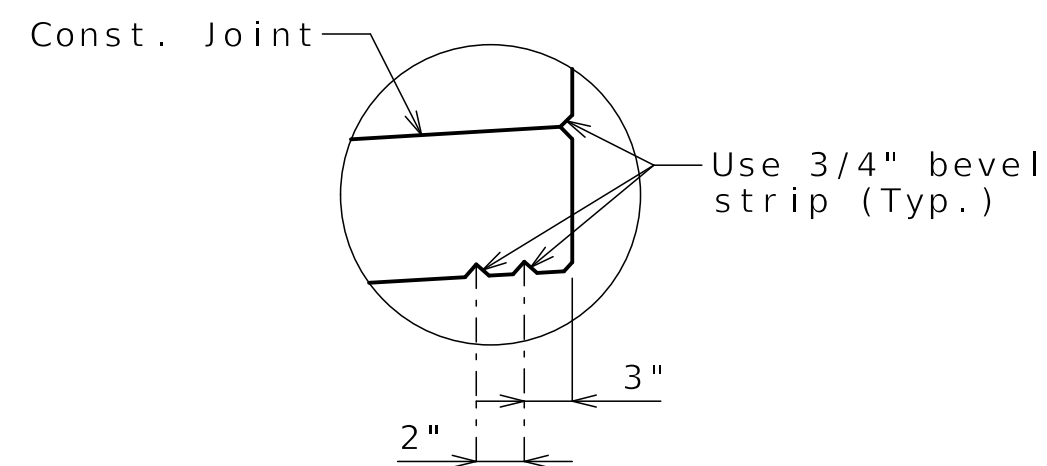
*** Contractor shall provide #4 Bars and #4 S-Bars as necessary where the haunch exceeds 4 inches measured at centerline of girder. See Theoretical Slab Haunching Diagram on Sheet No. B27-21 for haunch thickness.



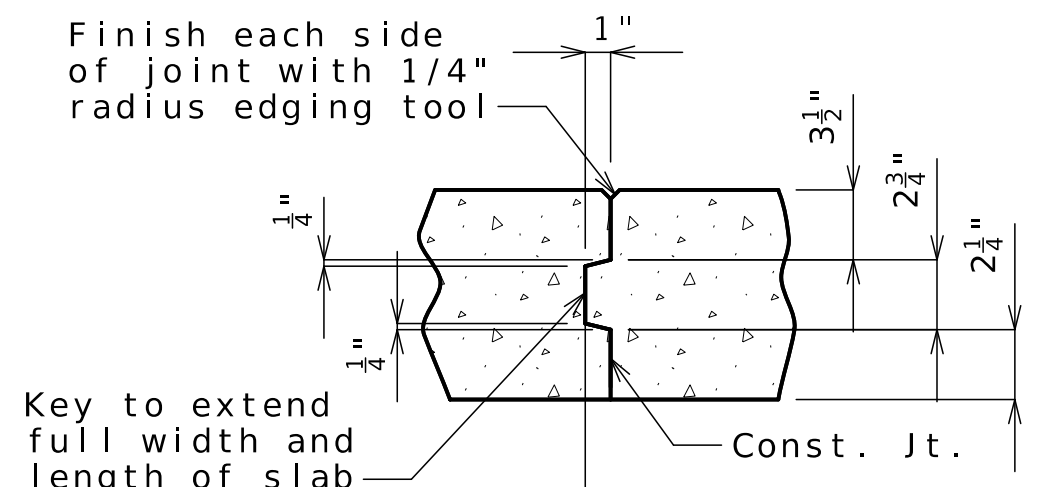
DETAIL A
(Low side of slab)



OPTIONAL SHIFTING TOP BARS AT BARRIER



DETAIL B
(High side of slab)



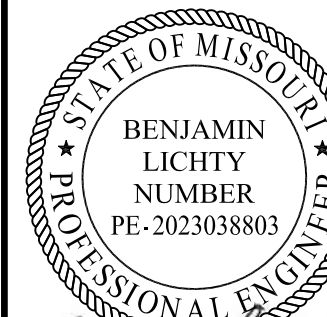
SLAB CONSTRUCTION JOINT

Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

Notes:
Cant #6 transverse hooked bars as needed to provide clearance.
For Slab Plan showing Top and Bottom Reinforcement, see Sheets No. B27-23 and B27-24.
For reinforcement of Type D barrier not shown, see Sheet No. B27-27.
For Details of Conduit System on Structure, see Sheet No. B27-31.
For Form Liner and Aesthetic Stain Details not shown, see Sheet No. B27-30.

(X) Denotes girder number.

SLAB DETAILS



Benjamin Lichty

11-13-2025

DATE PREPARED
11/13/2025

ROUTE STATE
I-70 MO

DISTRICT SHEET NO.
BR B27-26

COUNTY
JACKSON

JOB NO.
J411486D

CONTRACT ID.
240807-C01

PROJECT NO.

BRIDGE NO.
A9759

DESCRIPTION
REV 0 - RFC SUBMITTAL

DATE
11/13/25

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102

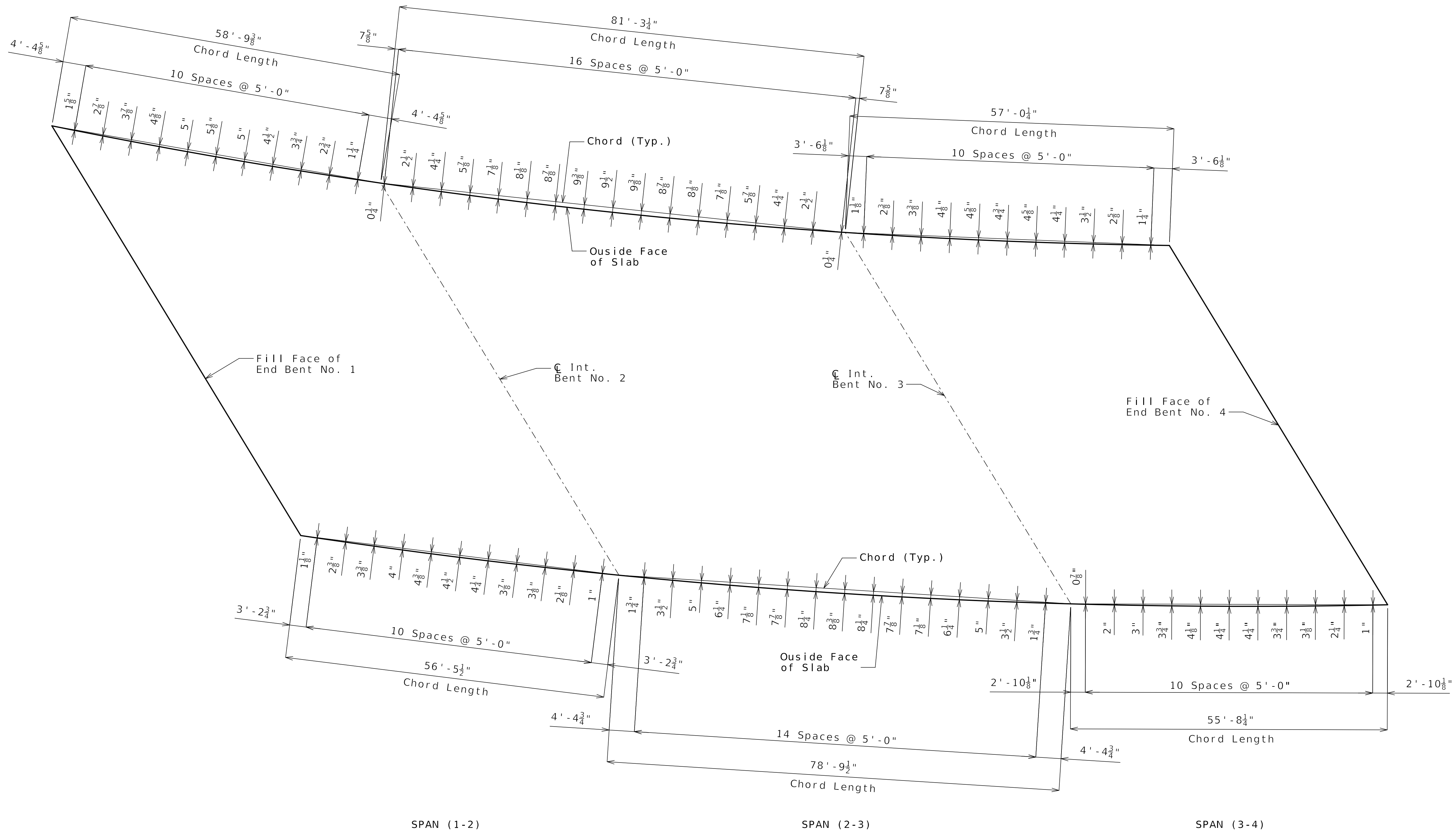
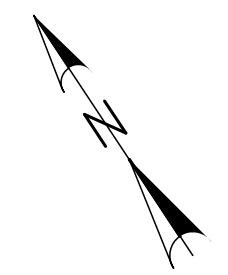
1-888-ASK-MODOT (1-888-275-6636)

CLARKSON RADMACHER JOINT VENTURE

715 KIRK DRIVE KANSAS CITY, MO 64105-1310

CERTIFICATE OF AUTHORITY NO. 001270

HNTB



PLAN
(@ WB I-70 not shown for clarity)

Notes:
All dimensions are horizontal.
All bents are parallel.

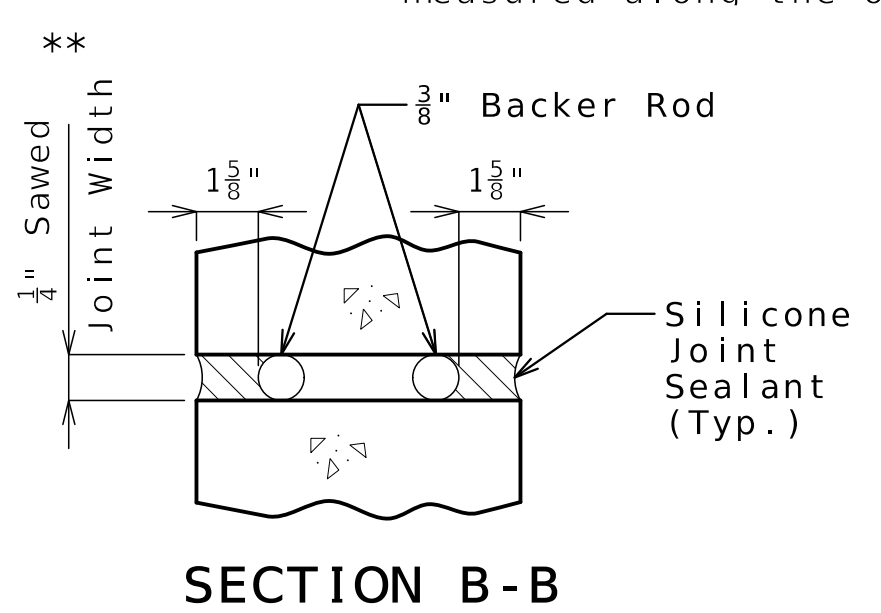
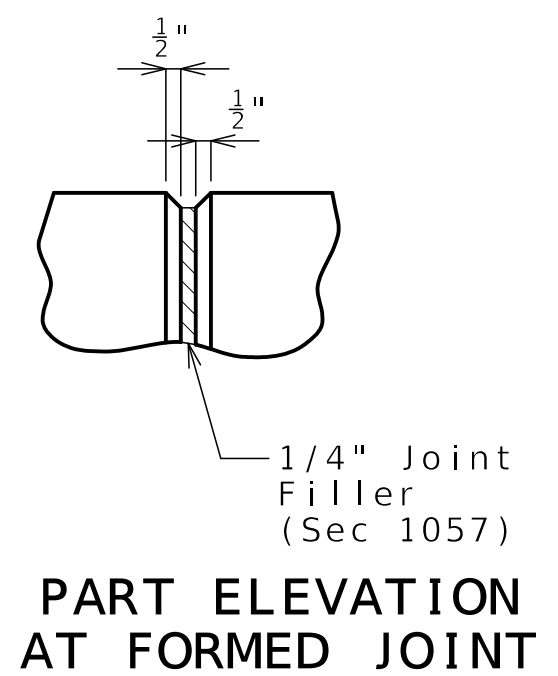
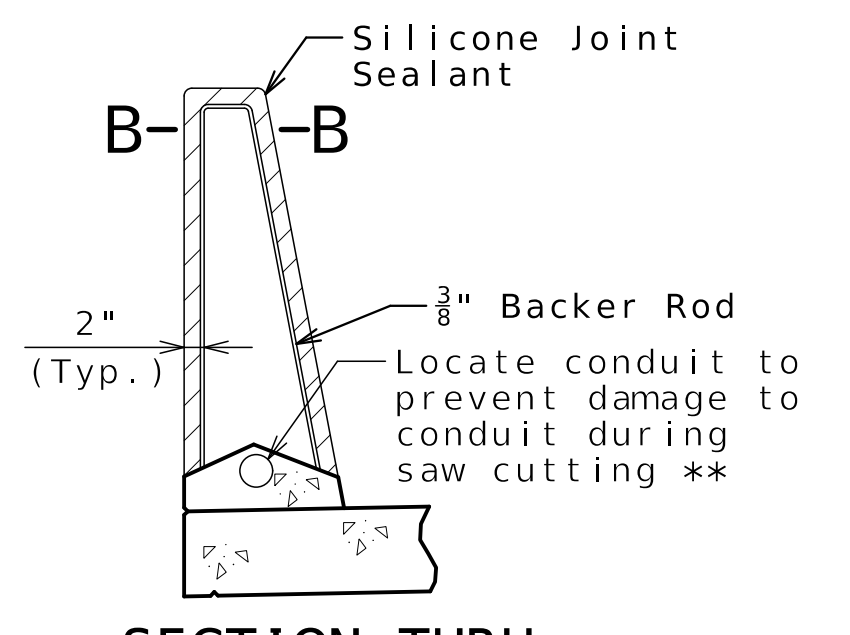
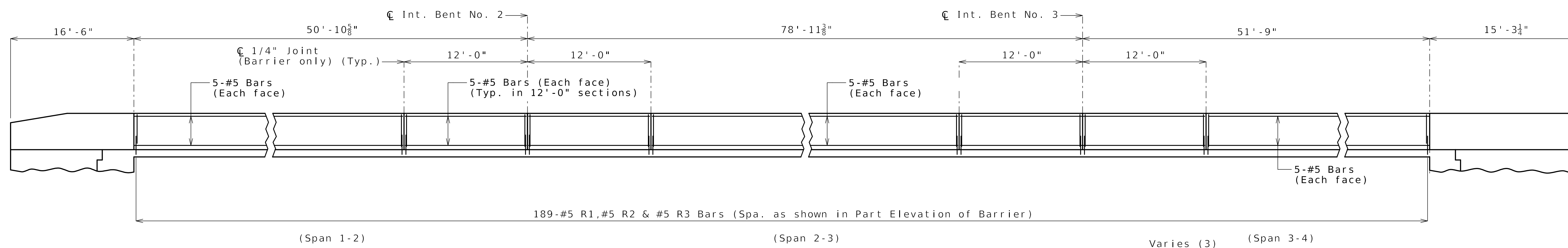
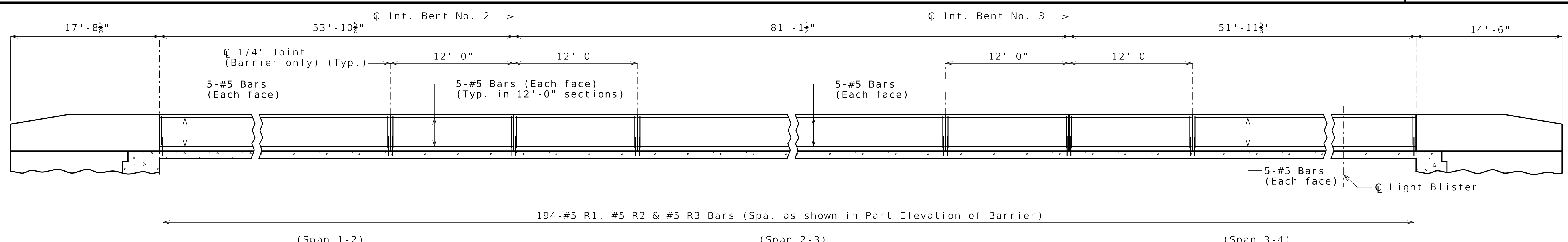
Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

SLAB CURVE ORDINATES

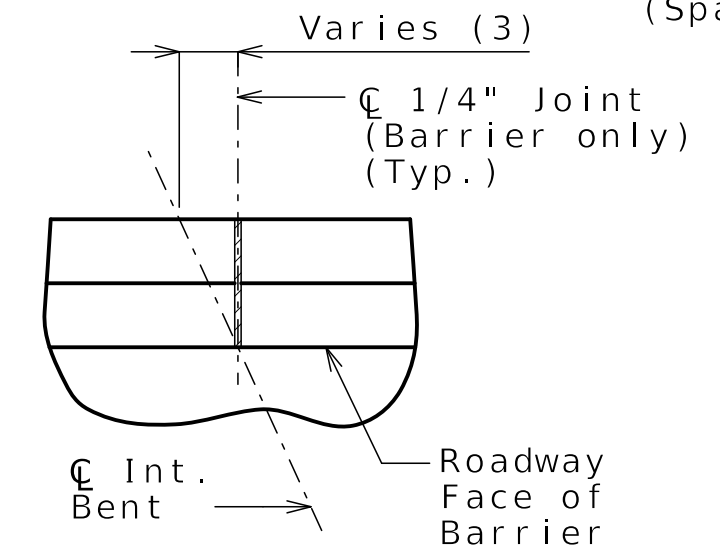
Detailed JUL 2025
Checked AUG 2025

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

Sheet No. B27-26 of B27-41

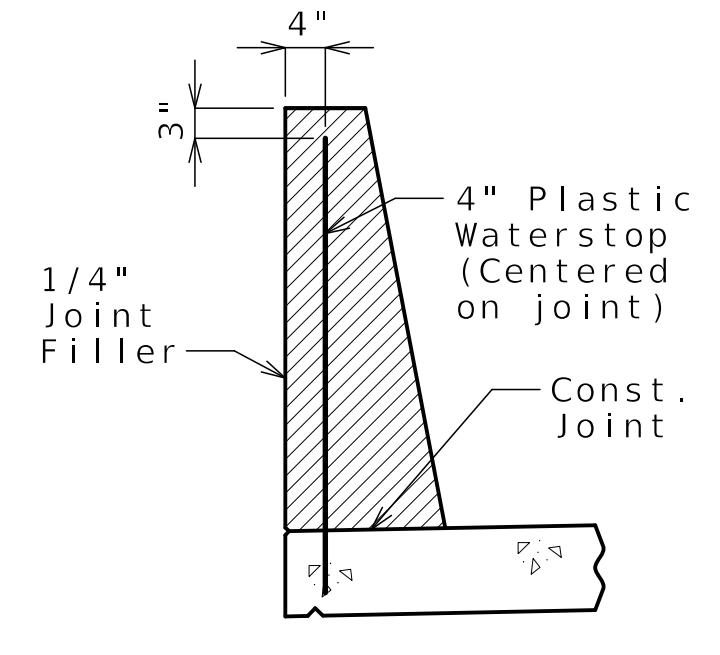
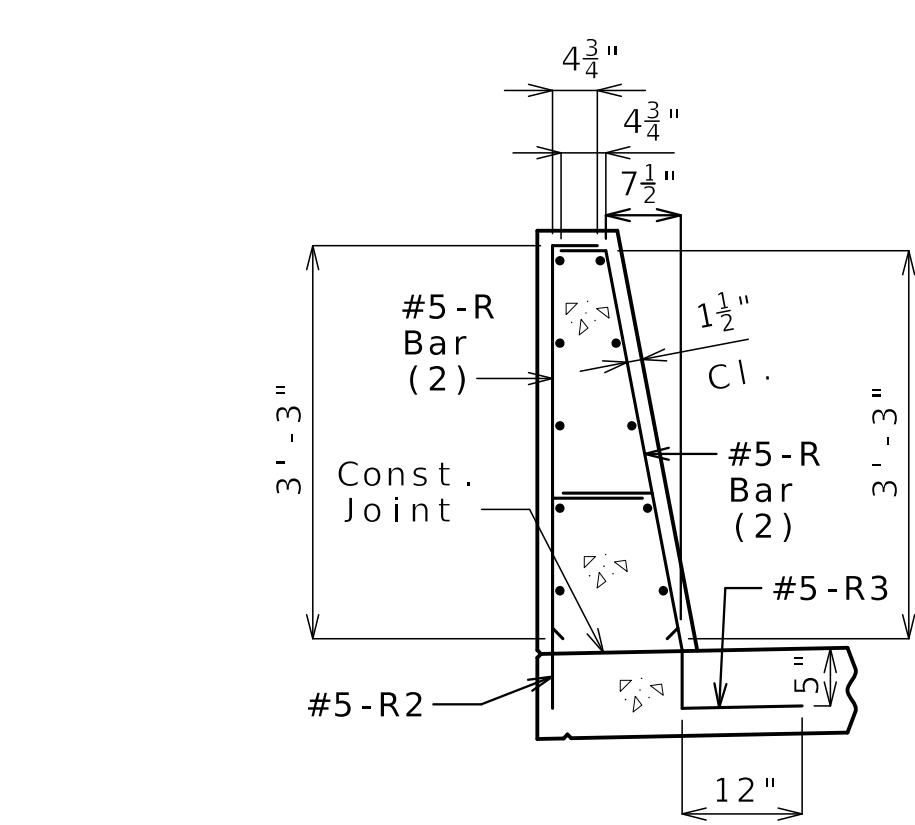
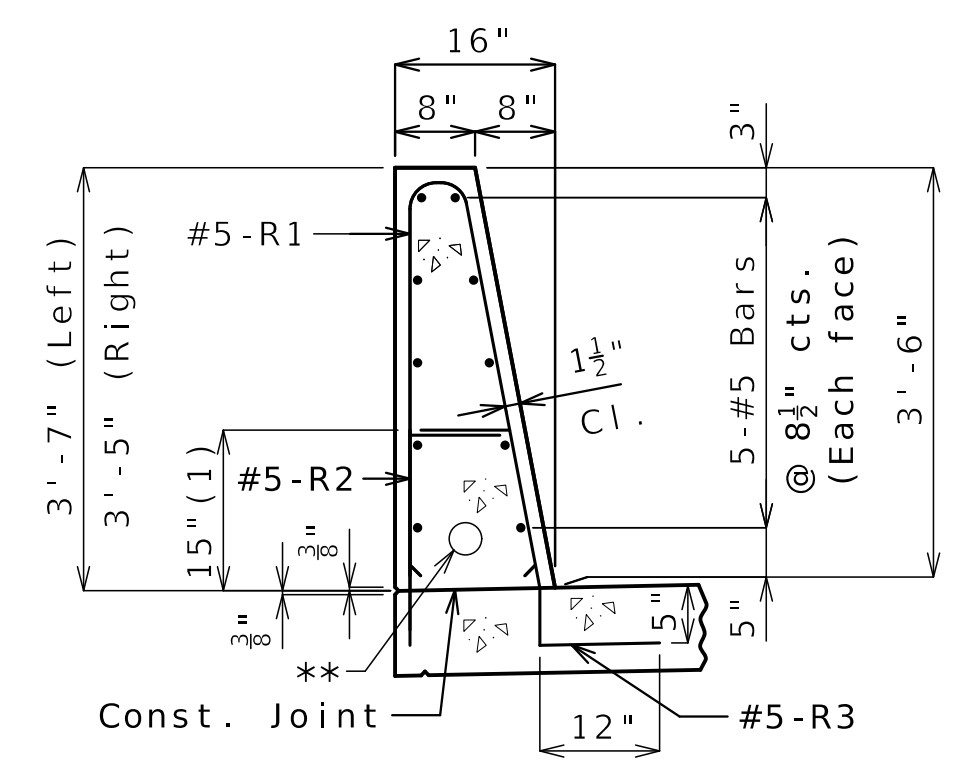
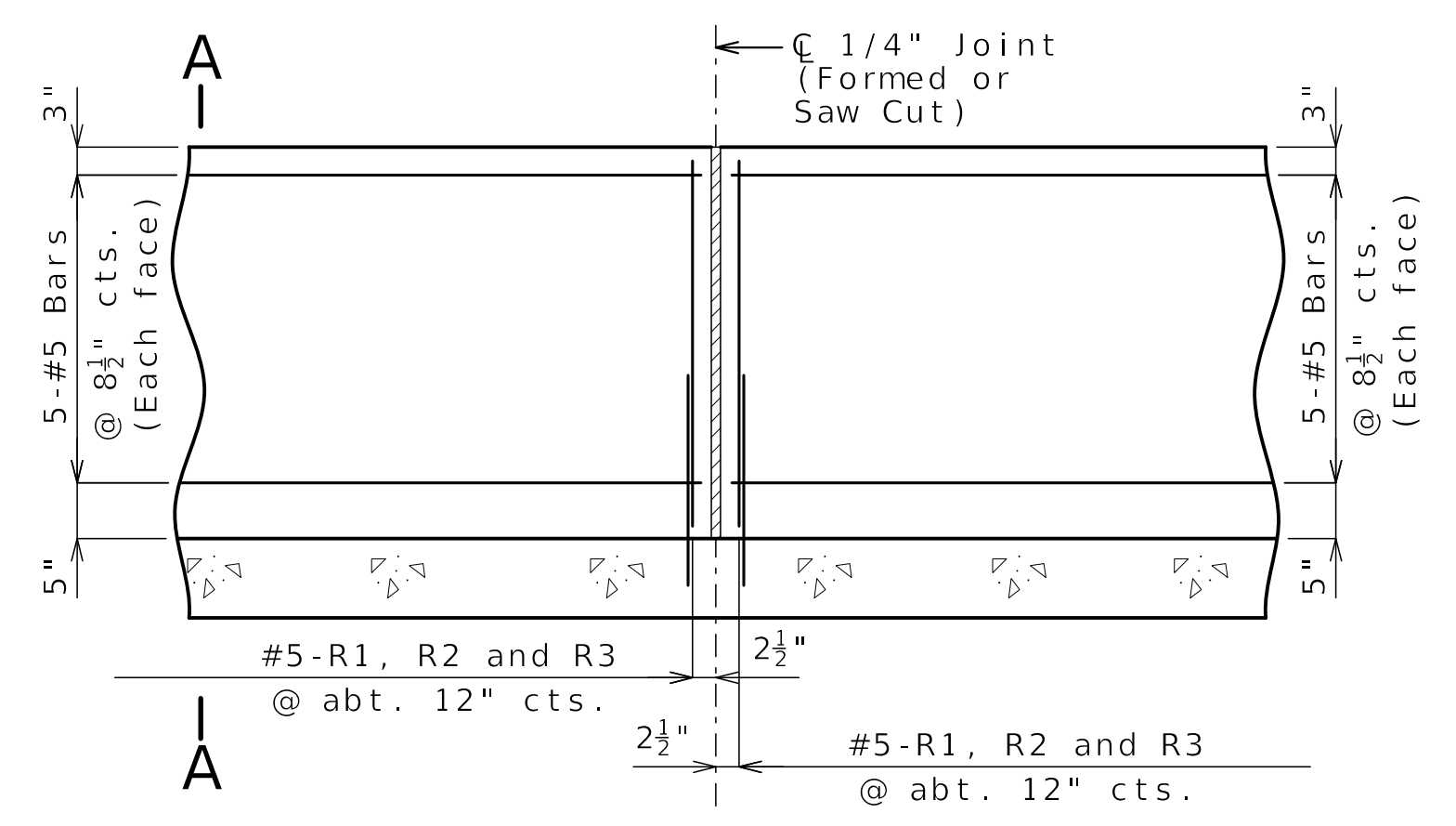


- (3) Int. Bent No. 2 Left = 1'-11 1/4"
- Int. Bent No. 2 Right = 1'-0"
- Int. Bent No. 3 Left = 11 1/4"
- Int. Bent No. 3 Right = 10 3/8"



General Notes:

- ** 2" Ø PVC Conduit (Left barrier only) For Details of Conduit System on Structure, see Sheet No. B27-31.
- Conventional forming shall 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.
- 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.
- For Form Liner and Aesthetic Stain details not shown, see Sheet No. B27-30.
- For Light Blister details, see Sheet No. B27-29.



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.

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.

For Form Liner and Aesthetic Stain details not shown, see Sheet No. B27-30.

For Light Blister details, see Sheet No. B27-29.

Released For Construction
 Not to Scale
 Revision: 0.0
 Date: 11/21/2025
 Package: BRD-27-WB-70-Jackson

TYPE D BARRIER

STATE OF MISSOURI
 BENJAMIN LIGHTY
 LICENSE NUMBER
 PE-2023038803
Benjamin Lighty
 11-13-2025
 DATE PREPARED

ROUTE 1-70 STATE MO
 DISTRICT BR SHEET NO. B27-27 COUNTY JACKSON
 JOB NO. J411486D
 CONTRACT ID. 240807-C01
 PROJECT NO.

BRIDGE NO. A9759

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

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

CLARKSON RADMACHER
 JOINT VENTURE

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

HNTB



Benjamin Lichty
11-13-2025
DATE PREPARED

11/13/2025

ROUTE STATE
1-70 MO

DISTRICT SHEET NO.
BR B27-28

COUNTY
JACKSON

JOB NO.
J411486D

CONTRACT ID.
240807-C01

PROJECT NO.

BRIDGE NO.
A9759

DESCRIPTION

REV 0 - RFC SUBMITTAL

DATE

11/13/25

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

CLARKSON RADMACHER JOINT VENTURE

715 KIRK DRIVE KANSAS CITY, MO 64105-1310

CERTIFICATE OF AUTHORITY NO. 001270

HNTB

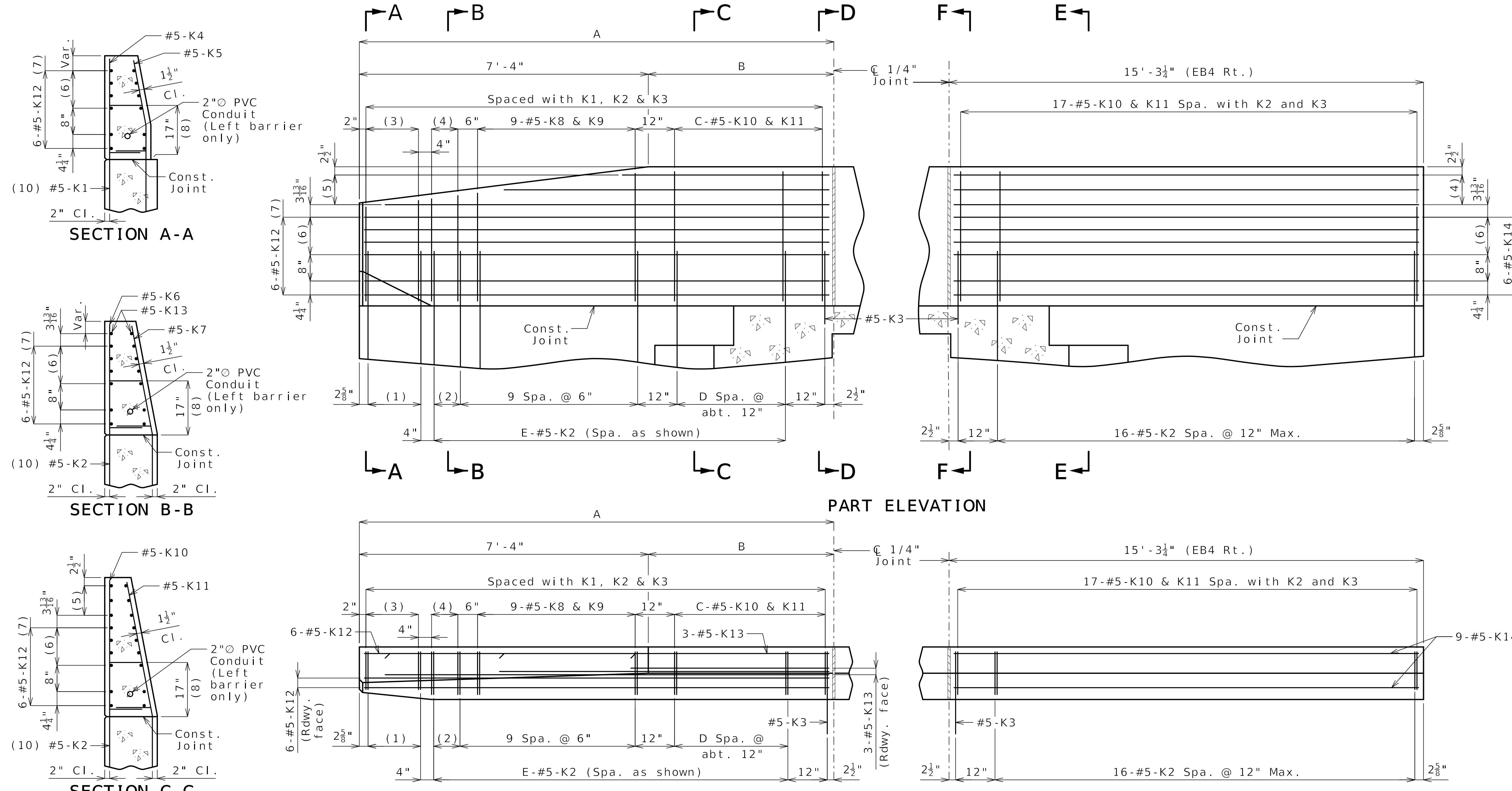
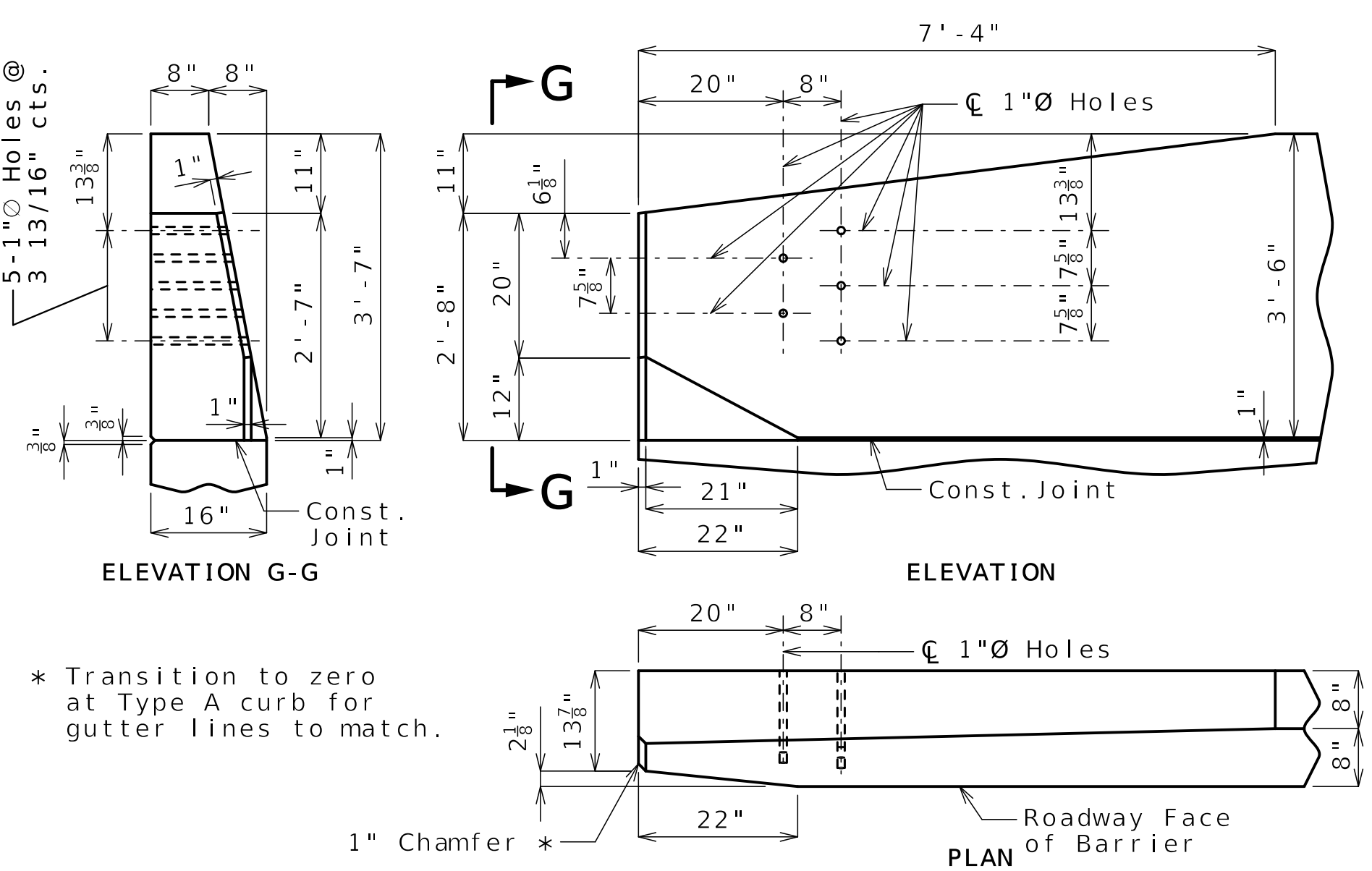


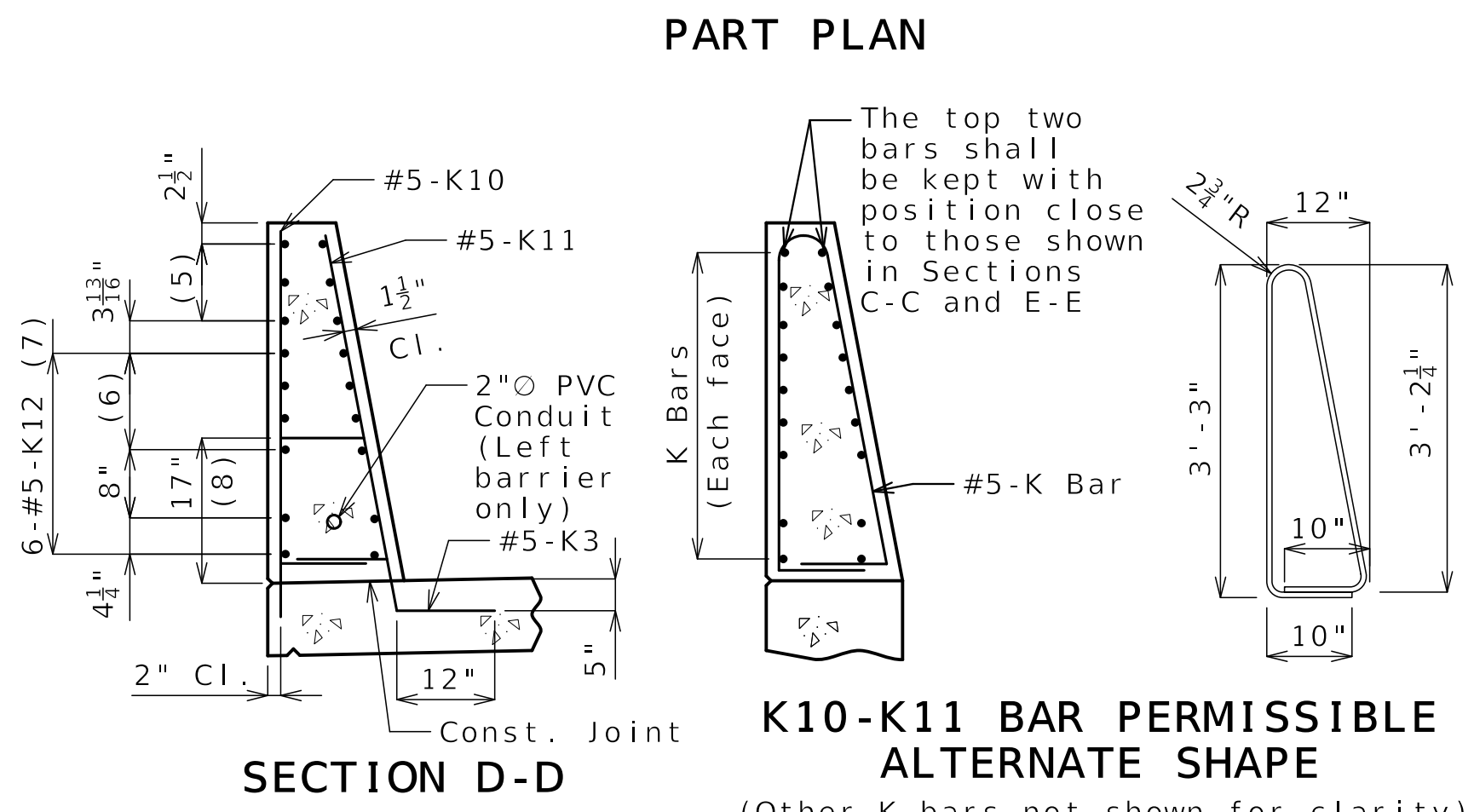
Table of Variables

Location	A	B	C	D	E
EB1 Lt.	17'-8 ³ / ₈ "	10'-4 ³ / ₈ "	11	9	22
EB4 Lt.	14'-6"	7'-2"	8	6	19
EB1 Rt.	16'-6"	9'-2"	10	8	21



* Transition to zero at Type A curb for gutter lines to match.

Detailed JUL 2025
Checked AUG 2025



PART PLAN

K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE

(Other K bars not shown for clarity)

The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

PVC conduit in left barrier not shown.

- (1) 5-#5-K1 @ 4" cts.
- (2) 2 spaces @ 4"
- (3) 5-#5-K4 & K5
- (4) 3-#5-K6 & K7
- (5) 3-#5-K13 or K15 @ 4¹/₂" cts., each face
- (6) 3 spaces @ 3¹/₈"
- (7) Spaced as shown, each face
- (8) To top of bar
- (9) 2 spaces @ 4¹/₂"
- (10) Minimum embedment into wingwall is 2'-9"

General Notes:

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617.

EB1 denotes End Bent No. 1
EB4 denotes End Bent No. 4

For Form Liner and Aesthetic Stain details not shown, see Sheet No. B27-30.

Reinforcing Steel:

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

TYPE D BARRIER AT END BENTS



Benjamin Lichty
11-13-2025

DATE PREPARED
11/13/2025

ROUTE STATE
I-70 MO

DISTRICT SHEET NO.
BR B27-29

COUNTY
JACKSON

JOB NO.
J411486D

CONTRACT ID.
240807-C01

PROJECT NO.

BRIDGE NO.
A9759

DESCRIPTION
REV 0 - RFC SUBMITTAL

DATE
11/13/25

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

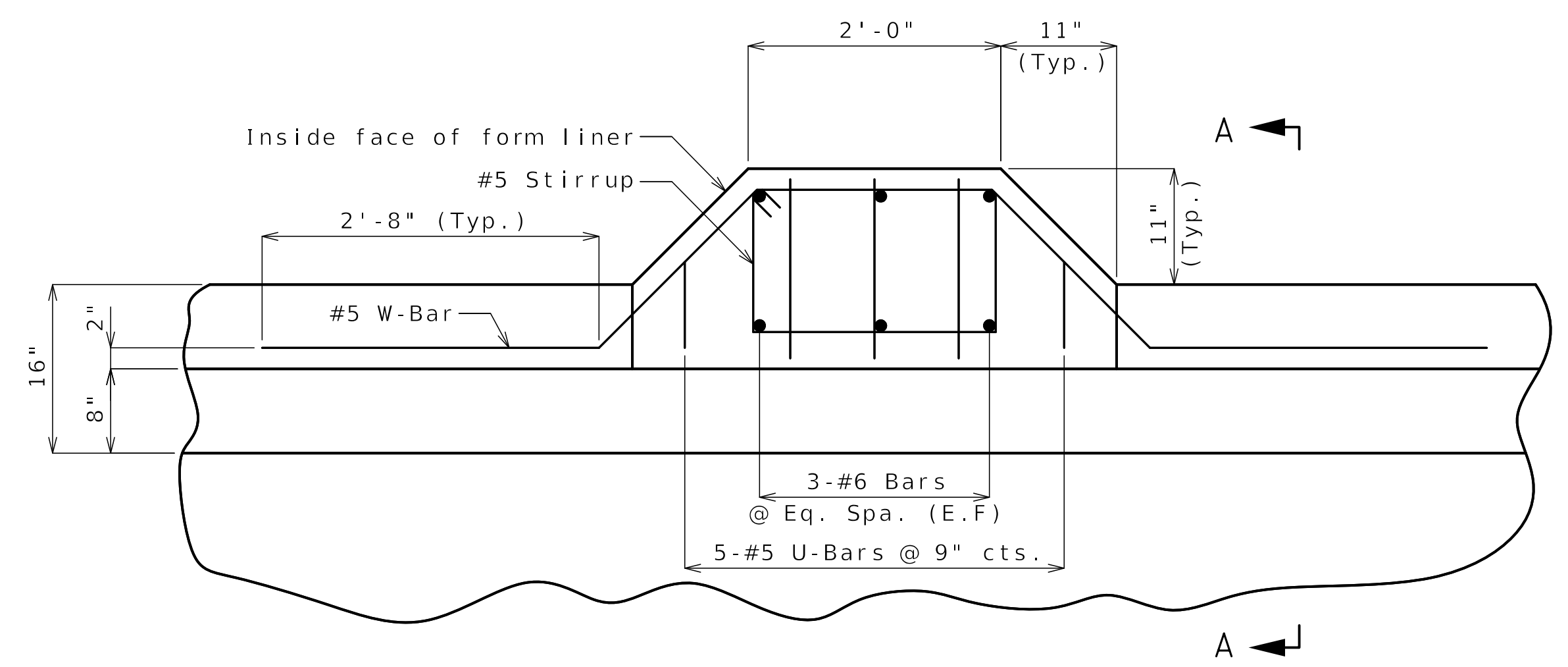
MoDOT

CLARKSON
RADMACHER
JOINT VENTURE

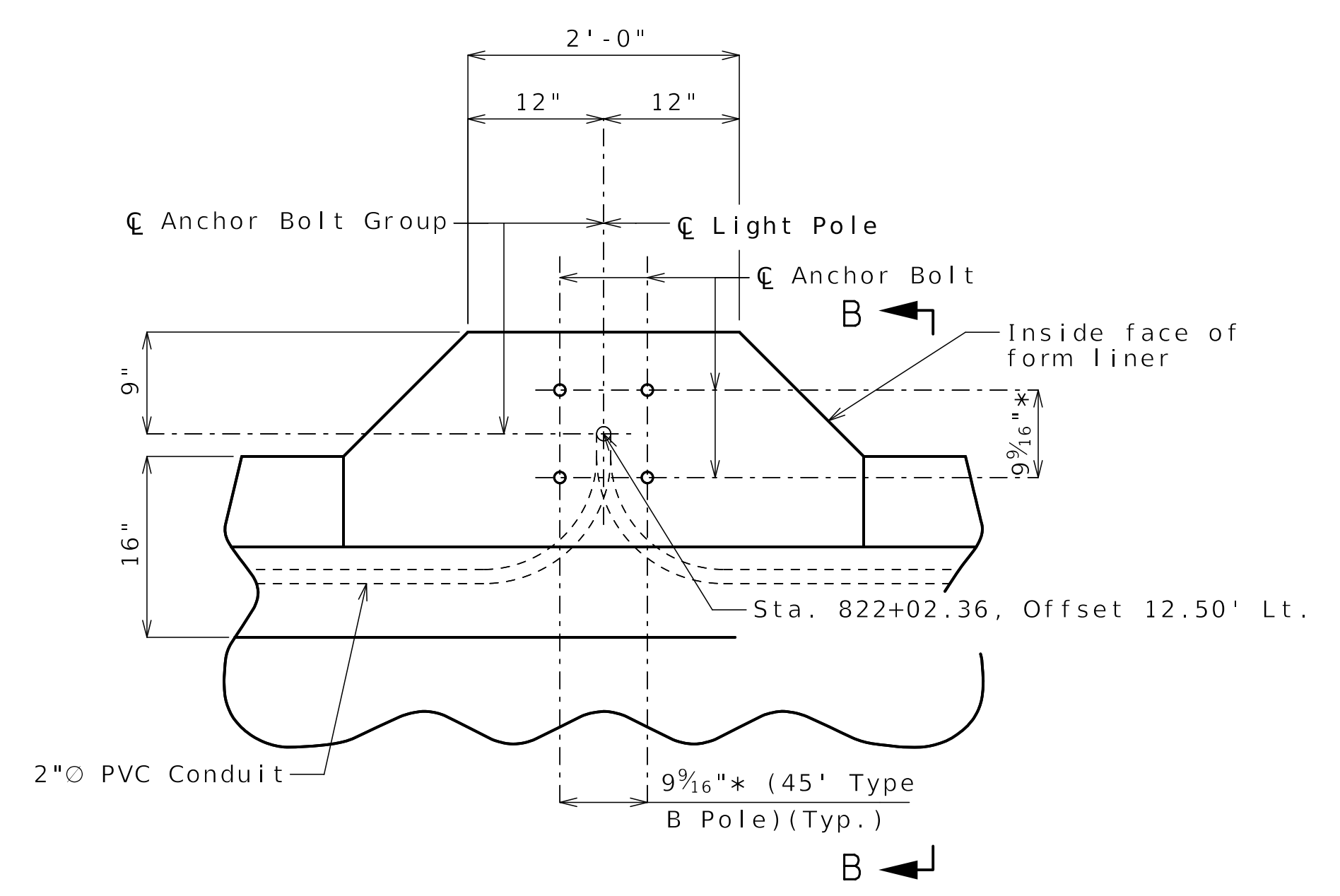
715 KIRK DRIVE
KANSAS CITY, MO 64105-1310

CERTIFICATE OF AUTHORITY
NO. 001270

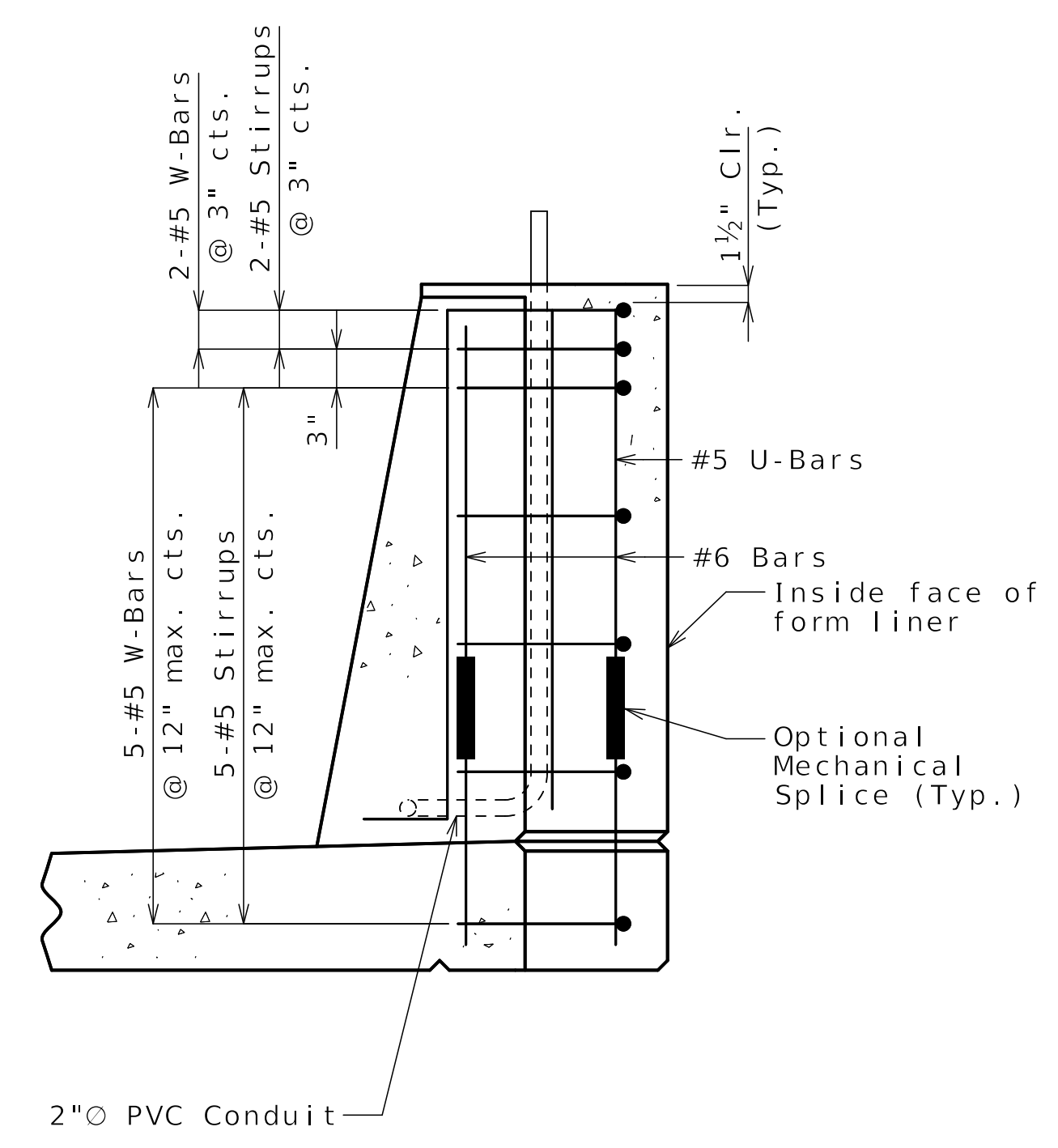
HNTB



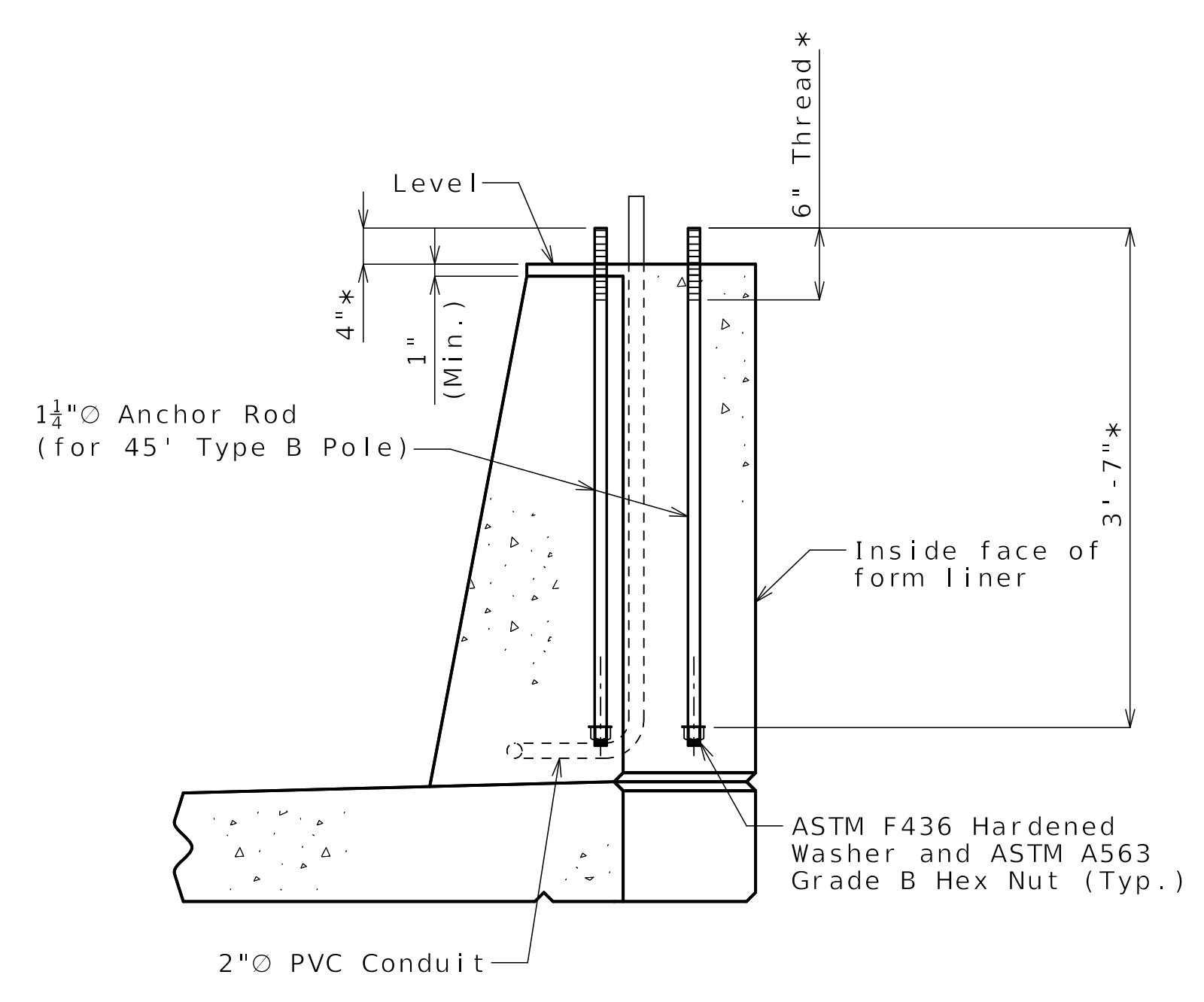
LIGHT POLE MOUNTING PLAN SHOWING REINFORCEMENT



LIGHT POLE MOUNTING PLAN



SECTION A-A



SECTION B-B

Notes:
 * Contractor shall confirm dimension with light pole manufacturer before setting anchor bolts.
 Anchor bolts and nuts shall be ASTM F1554 Grade 55. Anchor bolts, nuts and washers shall be galvanized in accordance with AASHTO M 232 (ASTM A153), Class C or ASTM B695, Class 55.
 Top of light standard supports shall be made horizontal; anchor rods shall be placed vertically. Contractor has the option to splice vertical bars with mechanical bar splices. Mechanical bar splices shall be in accordance with Sec 710.
 For locations of light blister, see Sheets No. B27-23 and B27-24.
 For Form Liner and Aesthetic Stain Details not shown, see Sheet No. B27-30.

Released For Construction
 Not to Scale
 Revision: 0.0
 Date: 11/21/2025
 Package: BRD-27-WB-70-Jackson

LIGHT BLISTER DETAILS



Benjamin Lichty

11-13-2025

DATE PREPARED
11/13/2025

ROUTE STATE
I-70 MO

DISTRICT SHEET NO.
BR B27-30

COUNTY
JACKSON

JOB NO.
J411486D

CONTRACT ID.
240807-C01

PROJECT NO.

BRIDGE NO.
A9759

DESCRIPTION
REV 0 - RFC SUBMITTAL

DATE
11/13/25

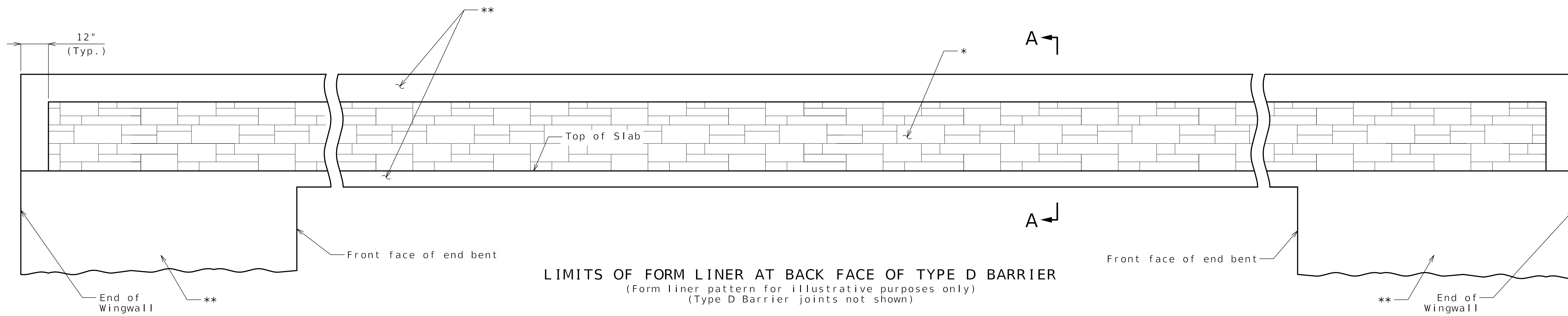
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CLARKSON RADMACHER JOINT VENTURE

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

HNTB



LIMITS OF FORM LINER AT BACK FACE OF TYPE D BARRIER
(Form liner pattern for illustrative purposes only)
(Type D Barrier joints not shown)

Form Liner and Aesthetic Concrete Stain for bridges are not a part of the base contract and are not yet contracted for this Project with MoDOT.

General Notes:

**Concrete and masonry protective coating and sacrificial graffiti protective coating shall be applied in accordance with Sec 711 to surfaces to receive form liner treatment and as noted in details on this sheet.

Protective coatings shall be compatible with Aesthetic Concrete Stain.

Concrete Form Liner Notes:

Form liner shall be constructed in accordance with Special Provisions.

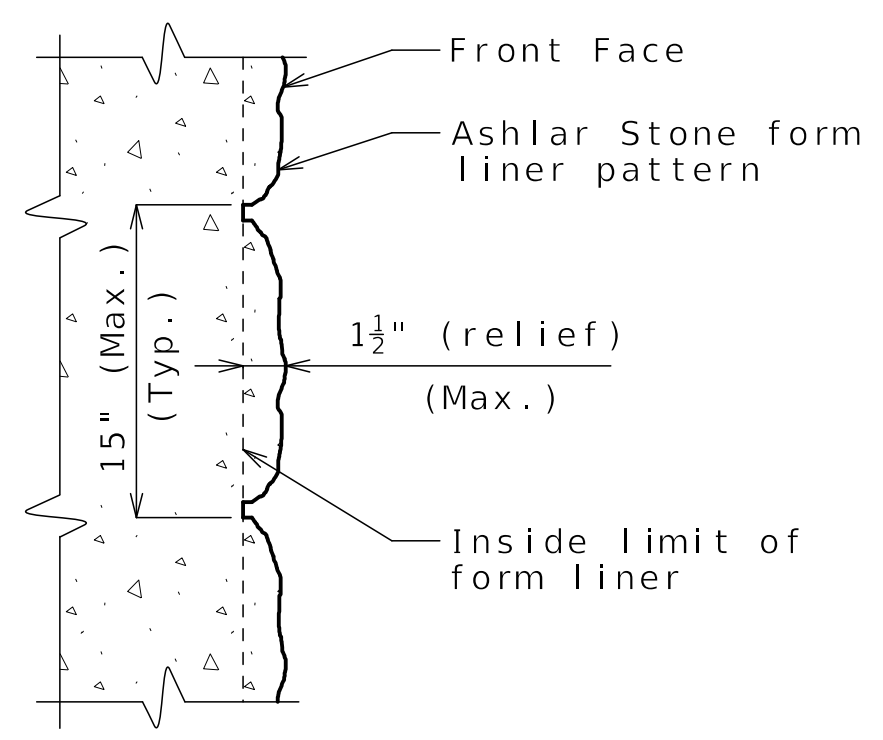
The following is a list of form liner manufacturers and types which may be used. Depth of relief for all form liner patterns shall vary up to 1 1/2". The height of any single "stone" shall be 15" maximum.

- Scott System, Inc.: Form liner pattern #167 "Ashlar Stone"
- Fitzgerald Formliners: Form liner pattern #16986 "Ashlar Stone"
- Greenstreak: Form liner pattern #330 "Ashlar Stone"
- Spec Formliners: Form liner pattern #1515 "Ashlar Stone"
- Customrock: Form liner pattern #12020 "Tollway Ashlar"
- An approved equal

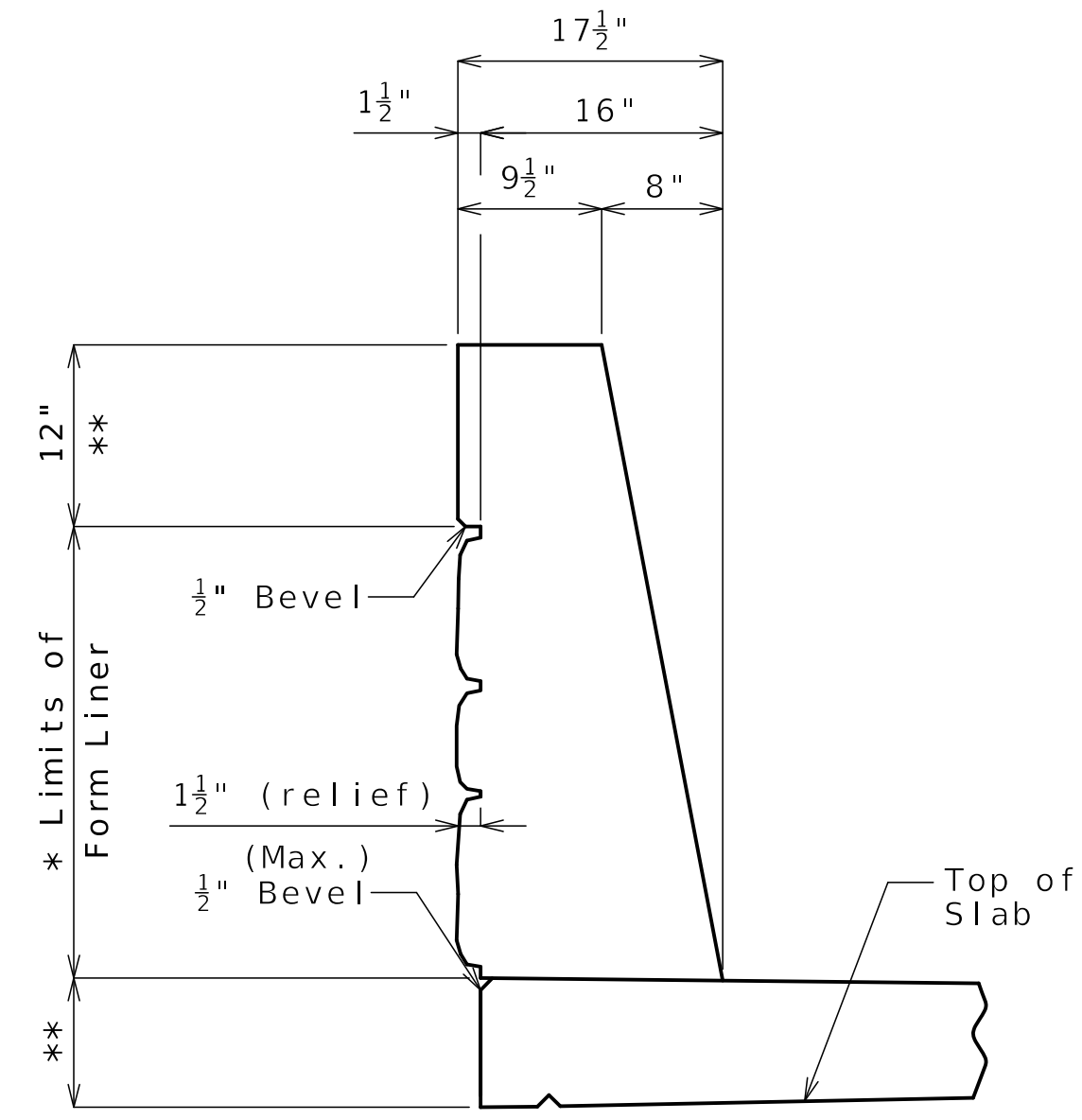
Aesthetic Concrete Stain Notes:

* Surface to receive Aesthetic Concrete Stain. The color shall be Federal Standard #37150.

Aesthetic Concrete Stain shall be applied in accordance with Sec 711 as shown in the plans.



FORM LINER DETAIL



SECTION A-A

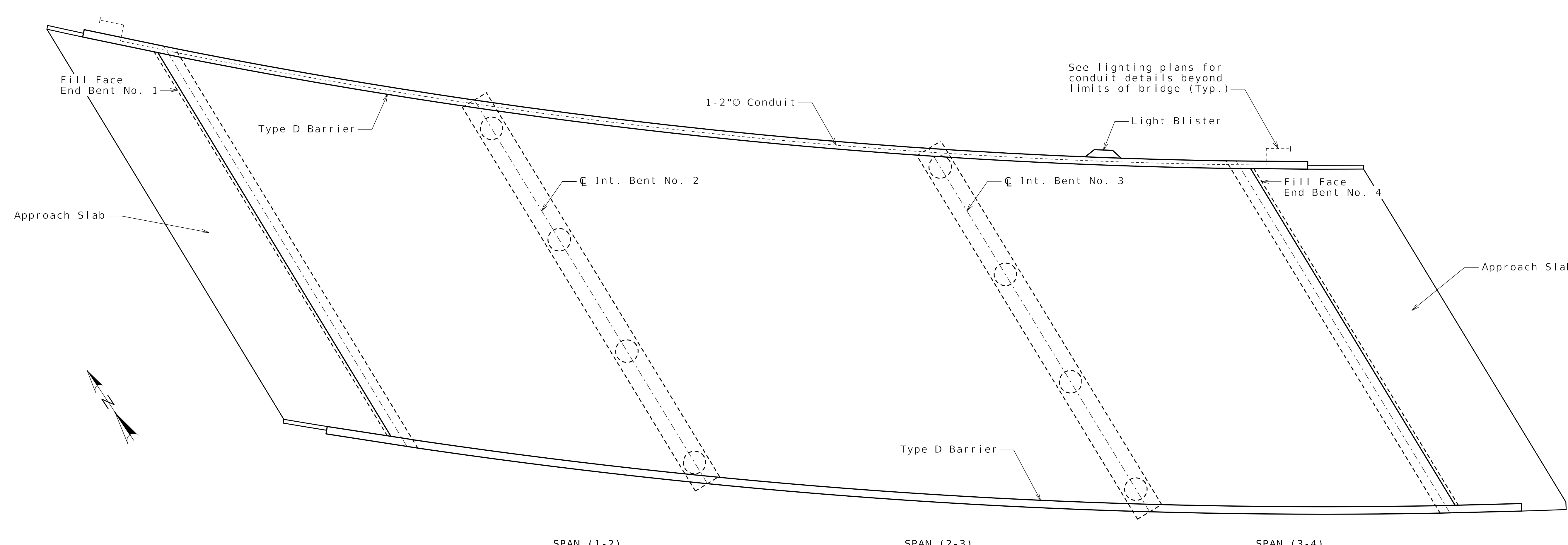
Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

FORM LINER AND AESTHETIC STAIN DETAILS

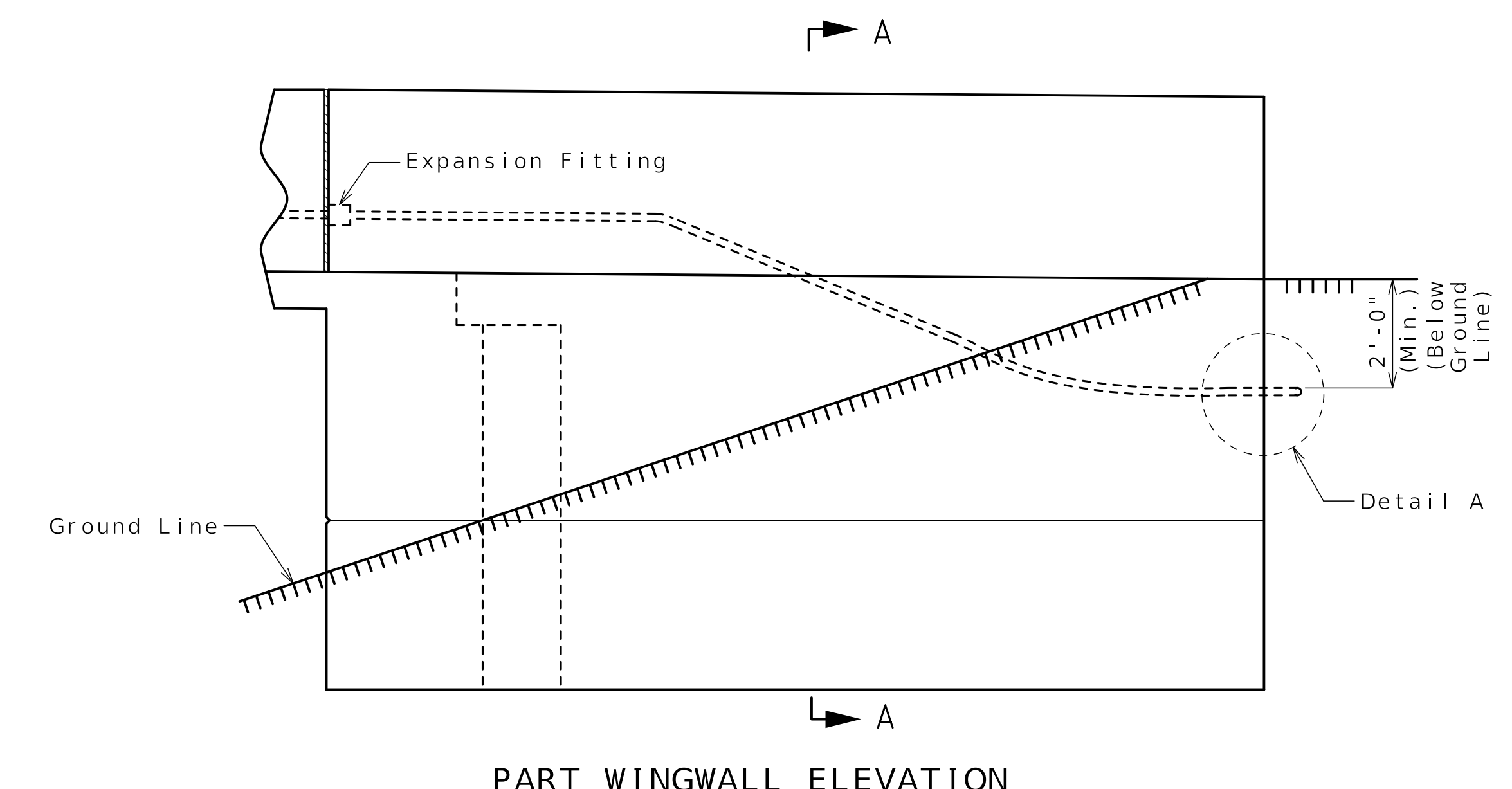
Detailed JUL 2025
Checked AUG 2025

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

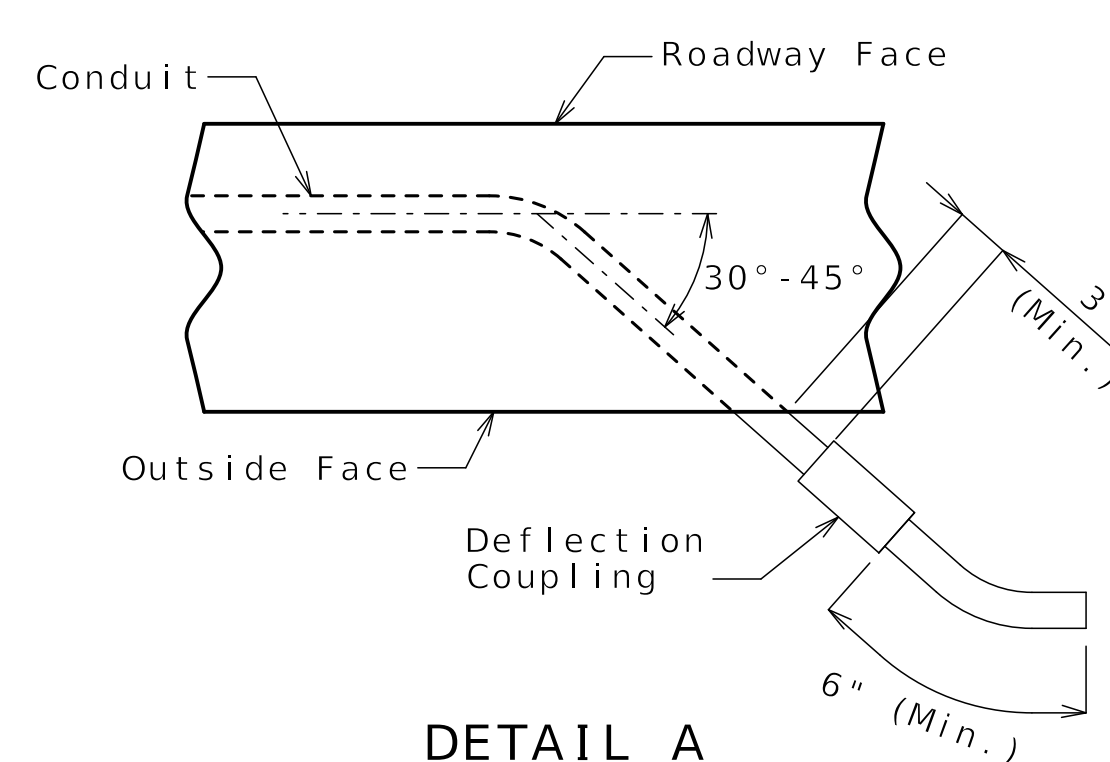
Sheet No. B27-30 of B27-41



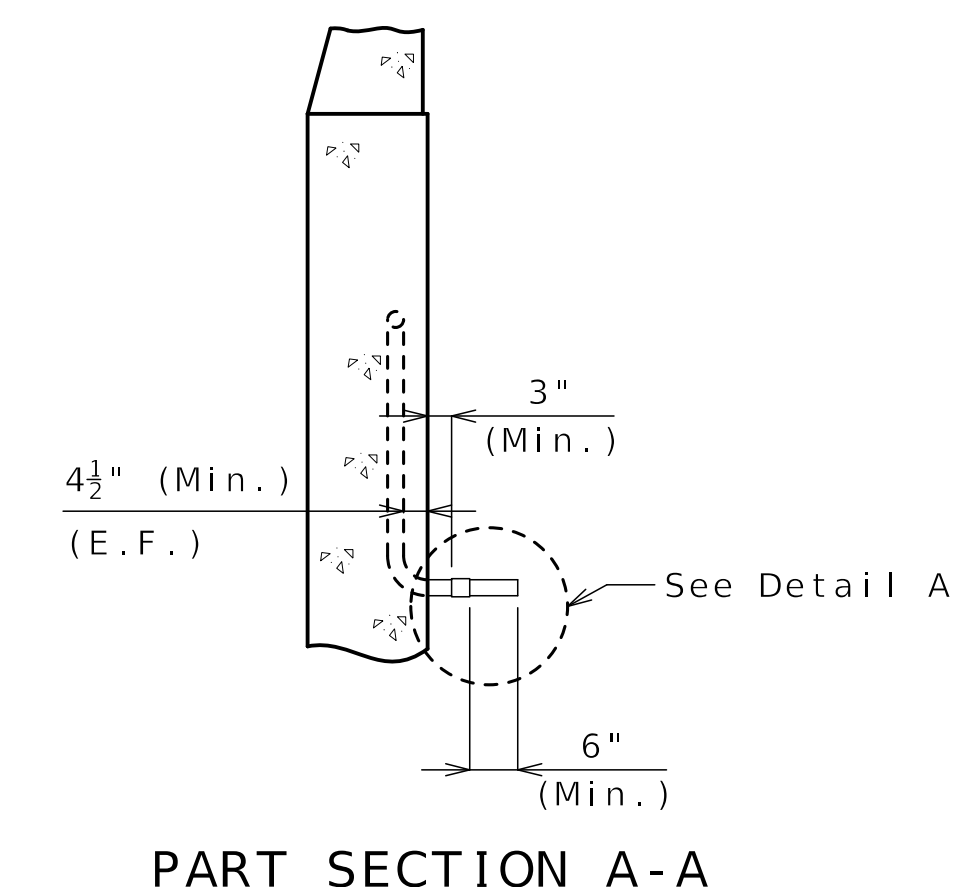
PLAN OF CONDUIT SYSTEM



PART WINGWALL ELEVATION



DETAIL A




PART SECTION A-A

Notes:
 All conduit shall be rigid non-metallic schedule 40 heavy wall PVC (polyvinyl chloride plastic) with 3 1/2" minimum cover in barrier and 4 1/2" minimum cover in wingwall. Each section of conduit shall bear the Underwriters Laboratories (UL) label.
 Shift reinforcing steel in field where necessary to clear conduit.
 Expansion fittings shall be placed as shown and set in accordance with the manufacturer's requirements and based on the air temperature at the time of setting given an estimated total movement of 1 inch at filled joints using a maximum temperature range of 120°F and a maximum temperature of 110°F.
 The conduit terminations shall be permanent or separable. The terminations and covers shall be of watertight construction and shall meet requirements for NEMA 4X enclosure.
 Drainage shall be provided at low points or other critical locations of all conduits in accordance with Sec 707. All conduits shall be sloped to drain where possible.
 For additional form liner details not shown see Sheet No. B27-30.

Released For Construction
 Not to Scale
 Revision: 0.0
 Date: 11/21/2025
 Package: BRD-27-WB-70-Jackson

DETAILS OF CONDUIT SYSTEM ON STRUCTURE



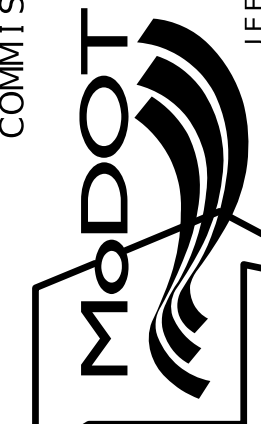
BENJAMIN LICHTY
 PROFESSIONAL ENGINEER
 NUMBER PE-2023038803

Benjamin Lichty
 11-13-2025

DATE PREPARED 11/13/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. B27-31
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	
BRIDGE NO. A9759	

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

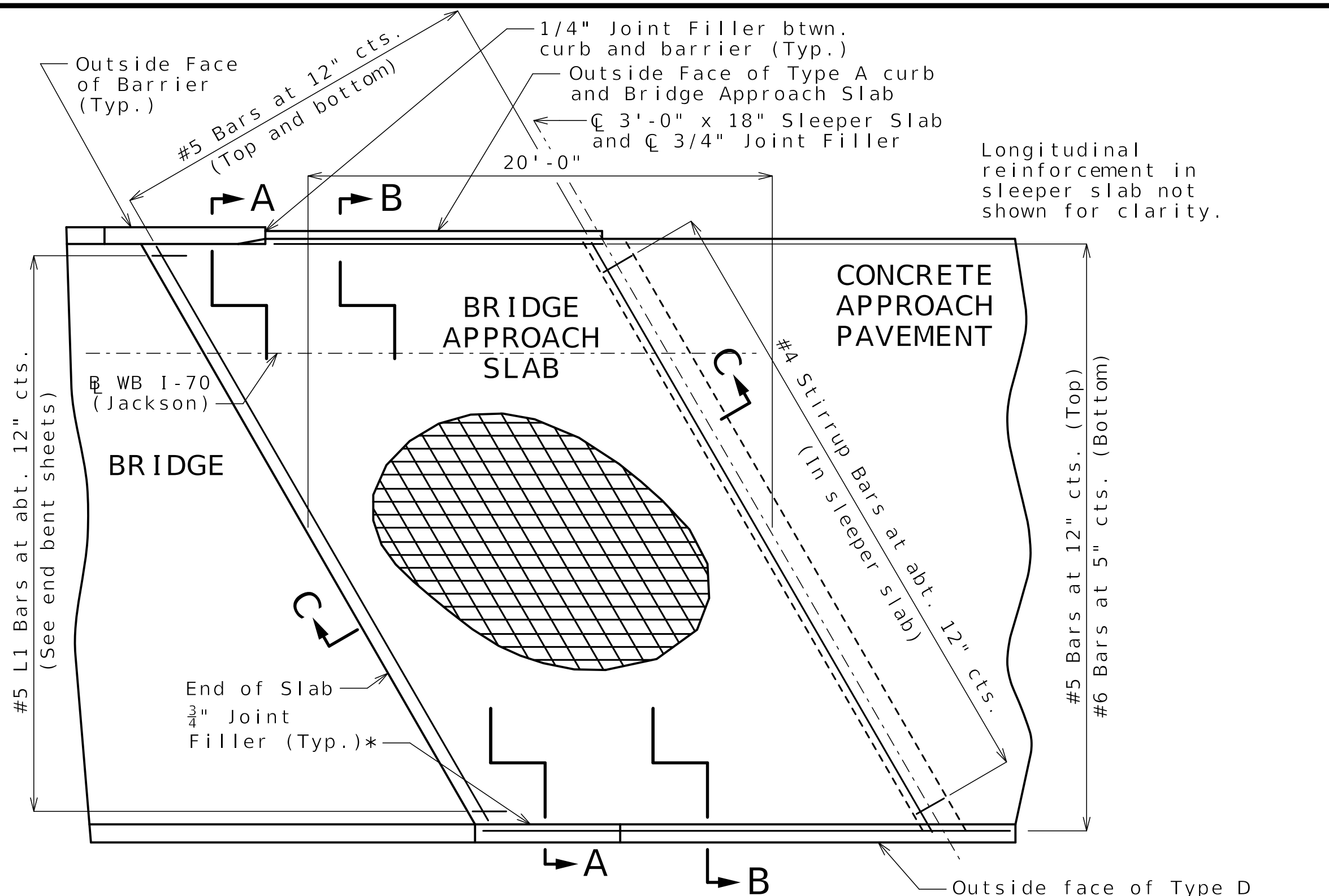


105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)

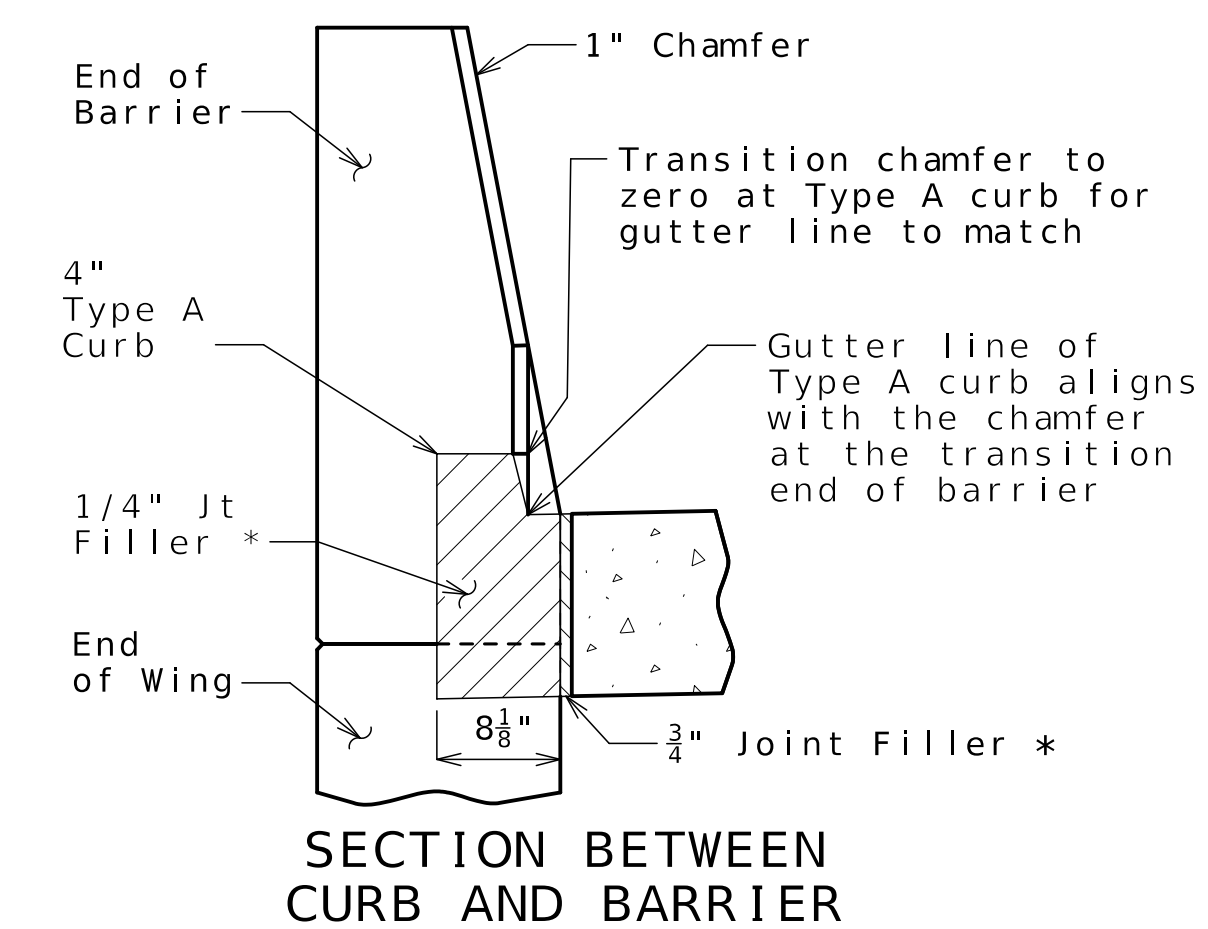
CLARKSON RADMACHER
 JOINT VENTURE

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

HNTB



PART PLAN SHOWING REINFORCEMENT



SECTION BETWEEN CURB AND BARRIER

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.

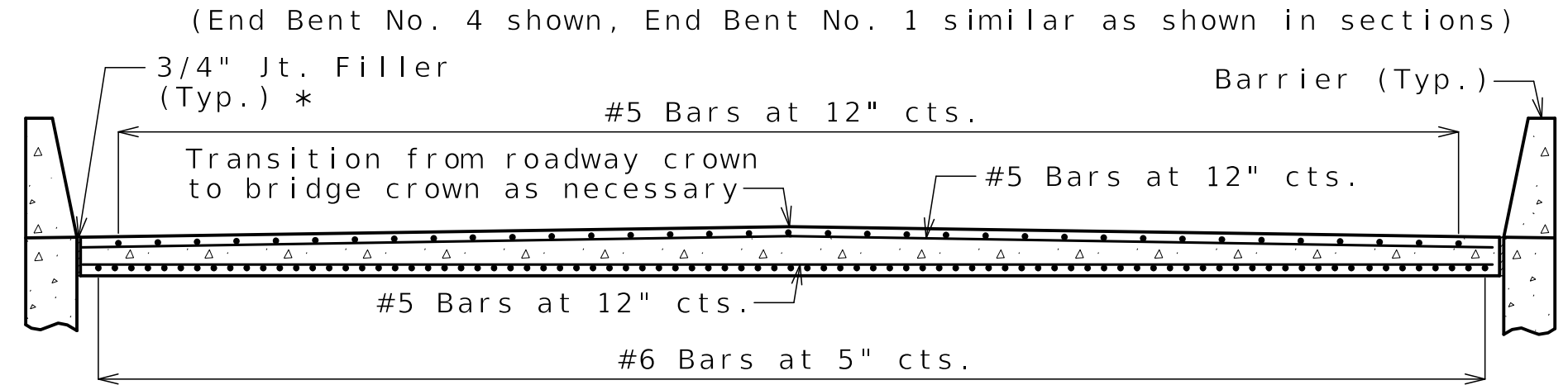
All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler except as noted.

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

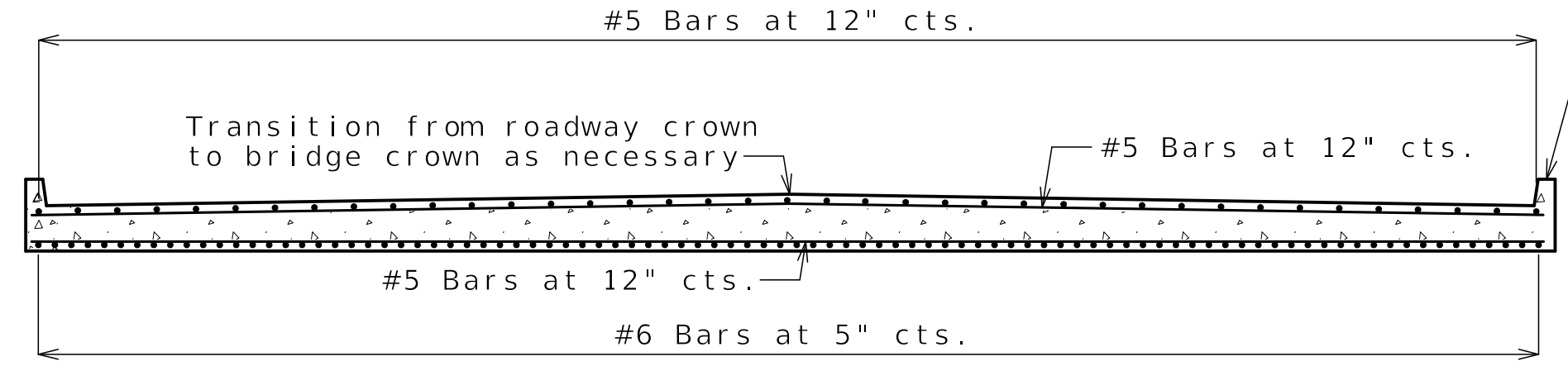
For concrete approach pavement details, see roadway plans.

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

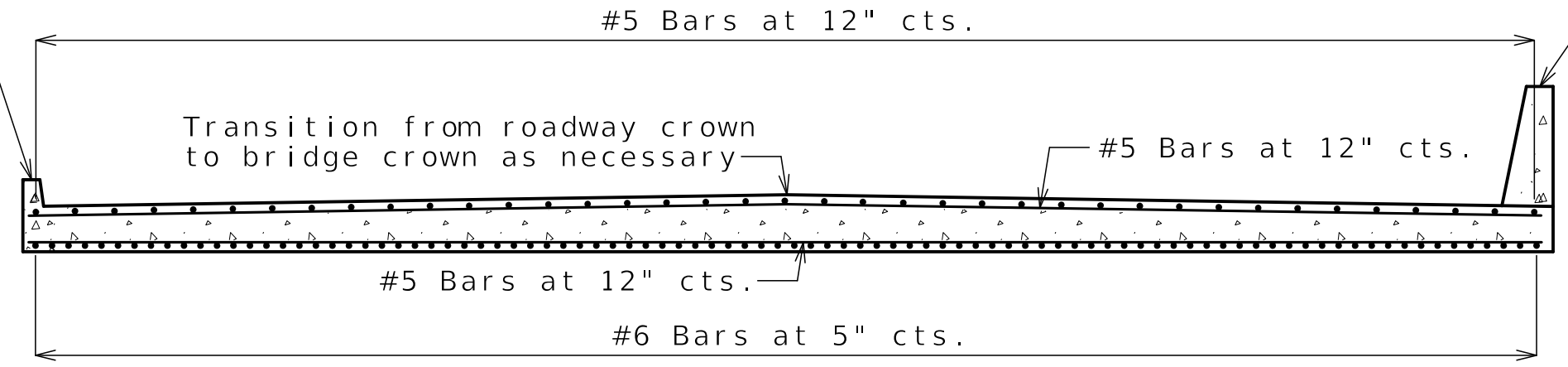
* Seal joint between vertical face of approach slab and wing with sealant in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.



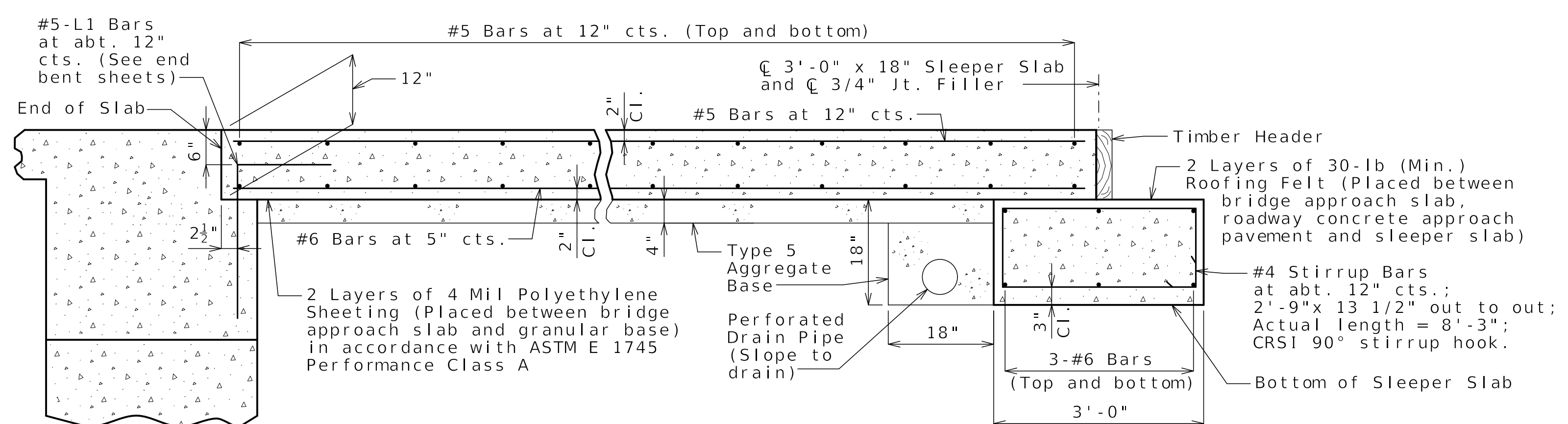
SECTION A-A



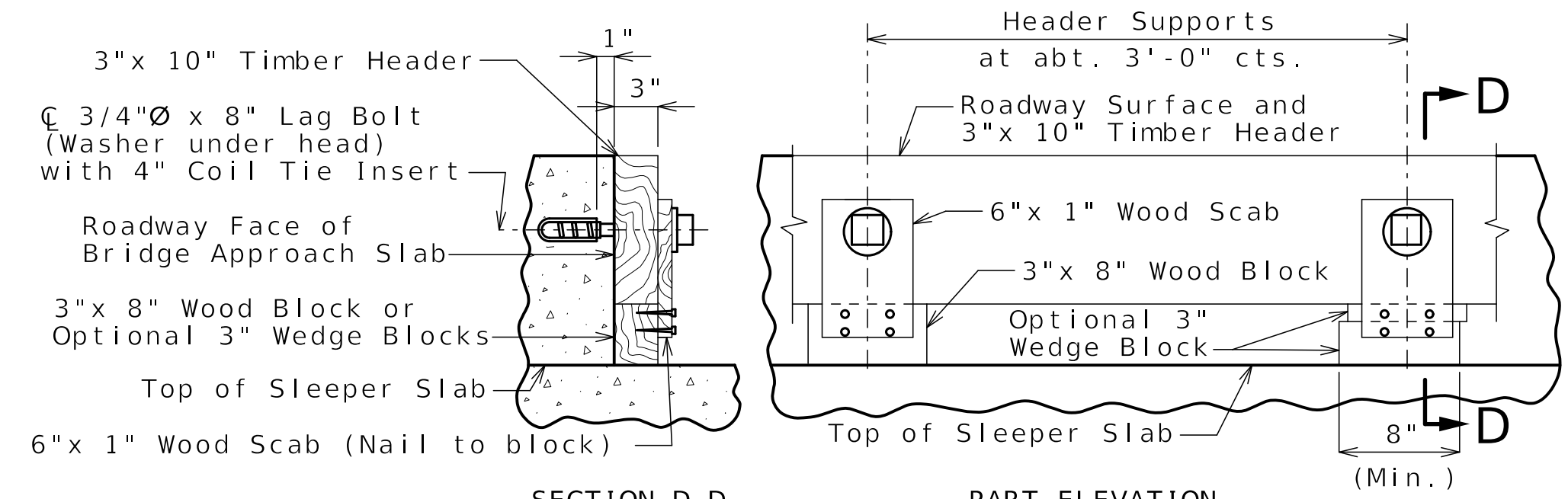
SECTION B-B AT END BENT NO. 1



SECTION B-B AT END BENT NO. 4



SECTION C-C



SECTION D-D PART ELEVATION

Remove timber header when concrete pavement is placed.

BRIDGE APPROACH SLAB (MAJOR)

Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson



Benjamin Lichty
11-13-2025

DATE PREPARED

11/13/2025

ROUTE STATE

I-70 MO

DISTRICT SHEET NO.

BR B27-32

COUNTY

JACKSON

JOB NO.

J411486D

CONTRACT ID.

240807-C01

PROJECT NO.

BRIDGE NO.

A9759

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

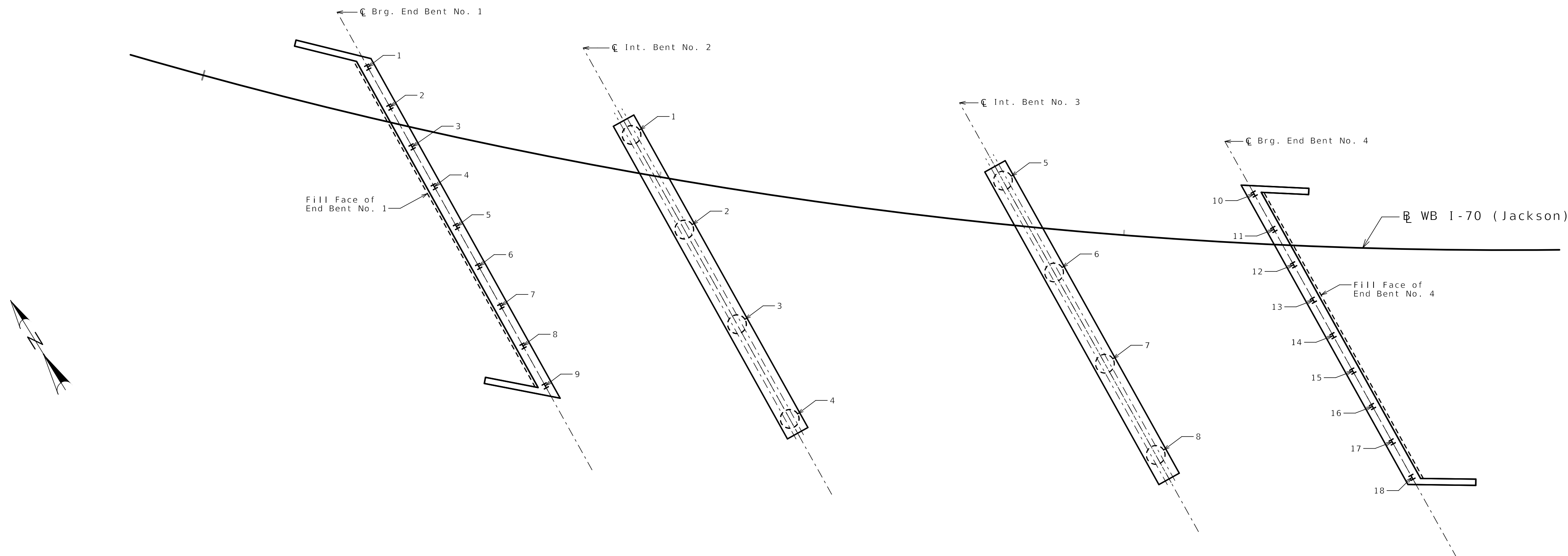
MoDOT

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

CLARKSON RADMACHER JOINT VENTURE

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

HNTB



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

As-Built Pile Data

Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	
End Bent No. 1			
1			
2			
3			
4			
5			
6			
7			
8			
9			
End Bent No. 4			
10			
11			
12			
13			
14			
15			
16			
17			
18			

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				
4				
Intermediate Bent No. 3				
5				
6				
7				
8				

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

Note:
 This sheet to be completed by design-builder.

Released For Construction
 Not to Scale
 Revision: 0.0
 Date: 11/21/2025
 Package: BRD-27-WB-70-Jackson

AS-BUILT PILE AND DRILLED SHAFT DATA

Detailed JUL 2025
 Checked AUG 2025

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

Sheet No. B27-33 of B27-41



Gina D. Horner
 11/13/2025

DATE PREPARED
 11/13/2025

ROUTE STATE
 I-70 MO
 DISTRICT SHEET NO.
 BR B27-33

COUNTY
 JACKSON

JOB NO.
 J411486D

CONTRACT ID.
 240807-C01

PROJECT NO.

BRIDGE NO.
 A9759

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CLARKSON RADMACHER
 JOINT VENTURE

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



SOIL BORING NUMBER: Jck_B1_1
Page 1 of 1

PROJECT Improve I 70 KC Design Build **NORTHING/EASTING** 1058489.0 / 2779165.0
DRILLING FIRM PPI **DRILLER** Josh Starkey **DATE STARTED** 10/30/2024
LOGGED BY Cameron Dupont **DATE COMPLETED** 10/30/2024
SURFACE ELEVATION 870.6' **RIG TYPE** CME-55x
METHOD Mud Rotary **TOOLING** 4-1/2" Continuous Flight Auger

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab									
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)						
5	3.5 ft	J-1	9	3-6-7 (13)				3.5				36-20-16	16.4								Brown, stiff, LEAN CLAY, moist, some organic material, with trace gravel
10	8.5 ft	J-2	18	4-5-8 (13)				3.0													- black mottling, stiff to moderately stiff at 8.5'
15	13.5 ft	J-3	8	17-50/2" (50/2")				1.5				14.0									Limestone with clay, highly weathered, tan-gray, iron stained
15	14.5 ft	C-1				90	0						0.9	1671	1534						
15	15.3 ft	C-2				70	10														
20	20.3 ft	C-3				100	10						9.1	130.5	21						Shale with some clay, highly weathered, fine grained, dark gray, soft
25																					- becomes thinly bedded, weathered at 23'
24.5																					Bottom of Boring at 24.5'
																					Boring backfilled with cuttings 10/30/2024



SOIL BORING NUMBER: Jck_B2_1
Page 1 of 2

PROJECT Improve I 70 KC Design Build **NORTHING/EASTING** 1058486.2 / 2779218.5
DRILLING FIRM PPI **DRILLER** Eric P. **DATE STARTED** 10/29/2024
LOGGED BY Zachary Boyd **DATE COMPLETED** 10/29/2024
SURFACE ELEVATION 868.3' **RIG TYPE** CME-550
METHOD Mud Rotary **TOOLING** 4-1/2" Continuous Flight Auger

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab											
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-Pi)	Moisture Content (%)	Dry Density (PCF)	UCS (tsf)								
5	3.5 ft	J-1	5	6-8-12 (20)		28		>4.5														Light to dark brown, stiff to very stiff, moist, LEAN CLAY	
10	8.5 ft	J-2	18	2-4-6 (10)		100		2.0														- becomes stiff at 9'	
15	12.6 ft	C-1	30			100	33															Limestone, weathered, light gray, hard, iron	
15	14.1 ft	C-2	60			100	78															Shale/claystone, highly weathered, gray, soft	
20	20.1 ft	C-3	60			100	0															- becomes moderately hard, no clay at 16.6'	
25	25.1 ft	C-4	60			100	45																
30	30.1 ft	C-5	60			100	82															- becomes slightly weathered at 30.5'	
35	35.1 ft	C-6	60			100	85															Limestone, weathered, light to dark gray, moderately hard	
																						35.9	832.4

Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

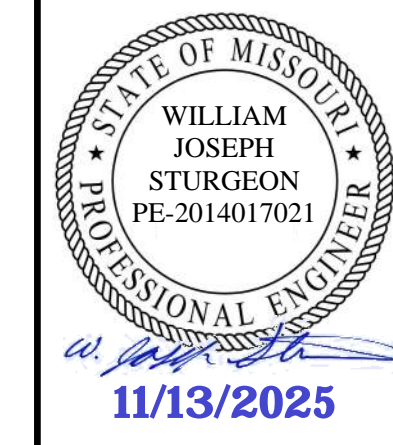
Notes:
For locations of borings, see Sheet No. B27-02 and Geotechnical Report.

BORING LOGS

Detailed JUL 2025
Checked AUG 2025

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

Sheet No. B27-34 of B27-41



DATE PREPARED 11/13/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. B27-34
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	
BRIDGE NO. A9759	

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CLARKSON RADMACHER
JOINT VENTURE

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



SOIL BORING NUMBER: Jck_B3_1
Page 2 of 2

PROJECT Improve I 70 KC Design Build **NORTHING/EASTING** 1058433.5 / 2779280.6
DRILLING FIRM PPI **DRILLER** Josh Starkey **DATE STARTED** 11/01/2024
LOGGED BY Cameron Dupont **DATE COMPLETED** 11/01/2024
SURFACE ELEVATION 867.3' **RIG TYPE** CME-55x
METHOD Water Rotary **TOOLING** 4-1/2" Continuous Flight Auger

Depth (ft)	Depth of Sample	Sample Type	Sample ID	Recovery Length (in)	Blow Counts (N-Value)	% Recovery	RQD (%)	Pocket Pen (tsf)	Graphic Log	Groundwater Data		Lab		
										During Drilling (ft):	N/A	Atterberg Limits (LL-PL-PI)	Moisture Content (%)	Dry Density (PCF)
										Visual Classification and Remarks				
40	40.1 ft	C-2	60			100				828.8	1.7	159.1	890	Shaley limestone, slightly weathered, gray to 38.5 dark gray, calcareous
		C-3	58			97	29							Limestone with fossils, slightly weathered, gray, hard, calcareous, some shale lens's
45	45.1 ft	C-4	56			93	39			824.8				42.5 Shale, thinly bedded, highly weathered, dark gray, soft, moist
		C-5	60			100	92							- shale, slightly weathered to weathered at 47.5'
50	50.1 ft	C-5	60			100	92			816.2	3.9	143.0	88	51.1 Limestone, slightly weathered, gray, hard
		C-6	60			100	93							- limestone, fresh to slightly weathered at 54'
55	55.1 ft	C-6	60			100	93			809.3	0.6	159.7	602	58.0 Shaley limestone, slightly weathered to weathered, dark gray, pitted
60										807.2				60.1 Bottom of Boring at 60.1' Boring backfilled with cuttings 11/1/2024

Elevation (feet)	Depth (feet)	DESCRIPTION OF MATERIAL	GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD	SAMPLES	SHEAR STRENGTH, tsf									
						Δ - UU/2	○ - QU/2	□ - PP/2	0.5	1.0	1.5	2.0	2.5		
885		ASPHALT - 3.5 inches CONCRETE - 9.5 inches 1.1 - 12' FILL - brown lean clay, green-gray and black lean clay, rock fragments, medium stiff and stiff													
880	5.0			3-4-5	SS1										
				N60=13											
875	10.0			3-3-5	SS2										
				N60=12											
870	15.0	12 - 17' CLAY - gray, stiff, lean - (CL)		3-4-6	SS3										
				N60=15											
865	20.0	17 - 22' Weathered LIMESTONE		10-43-39	SS4										82
				N60>100											
860	25.0	22 - 29' SHALE - black to gray, extremely soft, weathered to slightly weathered		16-32-49	SS5										81
				N60>100											
855	30.0	29 - 30' LIMESTONE - gray, medium hard, slightly weathered 3-inch gray calcareous shale bed		50.6" 100% 0%	SS6 NQ1										
		30 - 30.5' SHALE - gray, soft, slightly weathered, calcareous		98% 53%	NQ2										
850	35.0	30.5 - 34.3' LIMESTONE - gray, medium hard, slightly weathered, argillaceous 2-inch gray shale bed		90% 77%	NQ3										
		34.3 - 34.7' SHALE - gray, soft, slightly weathered, calcareous													
845	40.0	34.7 - 38.3' LIMESTONE - gray, medium hard, slightly weathered													
		38.3 - 39' SHALE - dark gray, very soft, slightly weathered													
840	45.0	Sampler refusal at 29 feet. Boring terminated at 39 feet.													

GROUNDWATER DATA
ENCOUNTERED AT 18.5 FEET

DRILLING DATA
 AUGER 3 3/4" HOLLOW STEM WASHBORING FROM FEET
 BCS DRILLER JDH LOGGER
 CME 550X DRILL RIG
 HAMMER TYPE Auto
 HAMMER EFFICIENCY 89 %

REMARKS:

NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

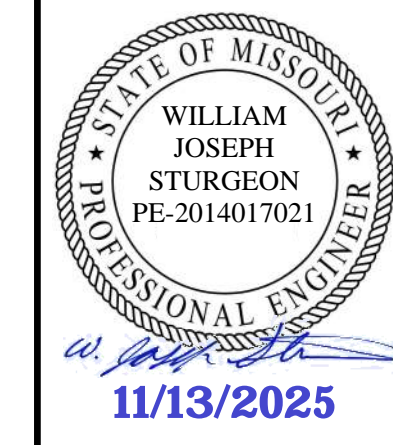
Drawn by: ADC Date: 4/26/22
 Check by: MHM Date: 4/25/23
 App'vd by: SDG Date: 5/1/23

GEOTECHNOLOGY
A Universal Engineering Sciences Company

Improve I-70 KC Bridge A313
I-70 over Jackson Avenue

LOG OF BORING: A313- 1

Project No. J039339.01



DATE PREPARED 11/13/2025
 ROUTE I-70 STATE MO
 DISTRICT BR SHEET NO. B27-36
 COUNTY JACKSON
 JOB NO. J411486D
 CONTRACT ID. 240807-C01
 PROJECT NO.
 BRIDGE NO. A9759

DATE	DESCRIPTION
11/13/25 <td>REV 0 - RFC SUBMITTAL</td>	REV 0 - RFC SUBMITTAL

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

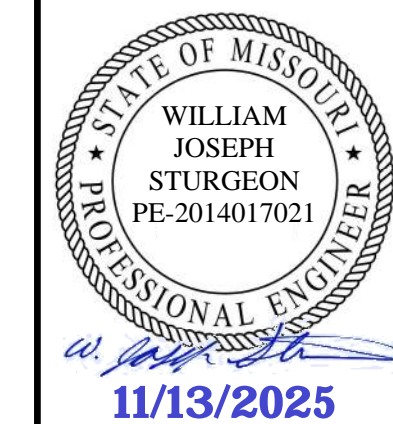
CLARKSON RADMACHER JOINT VENTURE
 715 KIRK DRIVE KANSAS CITY, MO 64105-1310
 CERTIFICATE OF AUTHORITY NO. 001270

HNTB

Released For Construction
 Not to Scale
 Revision: 0.0
 Date: 11/21/2025
 Package: BRD-27-WB-70-Jackson

Notes:
 For locations of borings, see Sheet No. B27-02 and Geotechnical Report.

BORING LOGS



DATE PREPARED
11/13/2025

ROUTE STATE
I-70 MO

DISTRICT SHEET NO.
BR B27-37

COUNTY
JACKSON

JOB NO.
J411486D

CONTRACT ID.
240807-C01

PROJECT NO.

BRIDGE NO.
A9759

DATE	DESCRIPTION
11/13/25 <td>REV 0 - RFC SUBMITTAL</td>	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

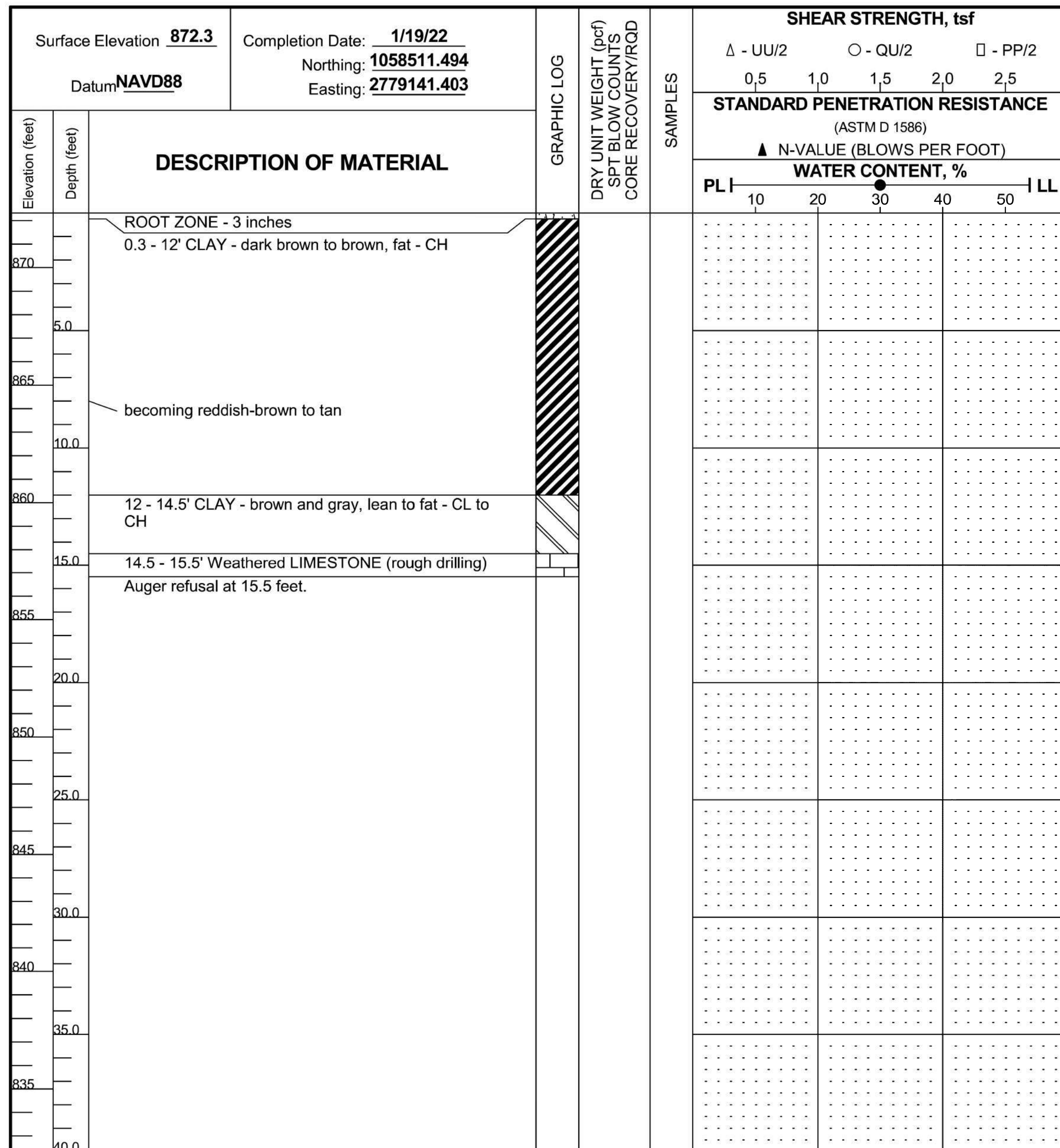
105 WEST CAPITOL JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

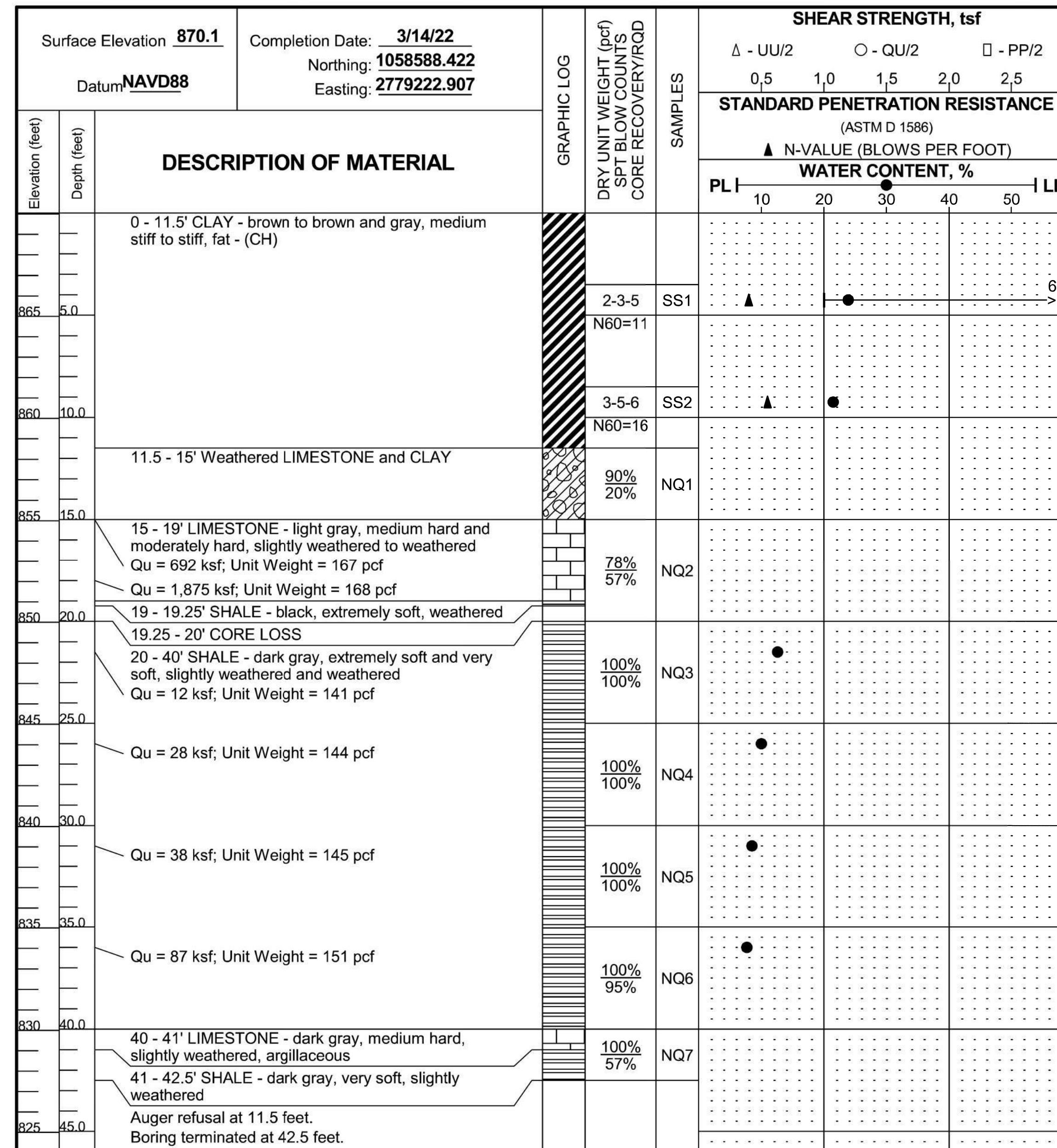
CLARKSON RADMACHER JOINT VENTURE

715 KIRK DRIVE KANSAS CITY, MO 64105-1310

CERTIFICATE OF AUTHORITY NO. 001270



<p>GROUNDWATER DATA</p> <p><input checked="" type="checkbox"/> FREE WATER NOT ENCOUNTERED DURING DRILLING</p>	<p>DRILLING DATA</p> <p><input type="checkbox"/> 4" AUGER <input type="checkbox"/> HOLLOW STEM WASHBORING FROM ___ FEET</p> <p><input type="checkbox"/> BCS DRILLER <input checked="" type="checkbox"/> JDN LOGGER</p> <p><input type="checkbox"/> Diedrich D-50 DRILL RIG</p> <p>HAMMER TYPE ___</p>	<p>Drawn by: JDN Date: 1/19/22</p> <p>Check by: MHM Date: 4/25/23</p> <p>App'vd by: SDG Date: 5/1/23</p>
<p>REMARKS: Stratigraphy description based on auger cuttings and drill rig action.</p>		
<p>NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.</p>		
<p>Improve I-70 KC Bridge A313 I-70 over Jackson Avenue</p> <p>LOG OF BORING: A313- 2</p> <p>Project No. J039339.01</p>		



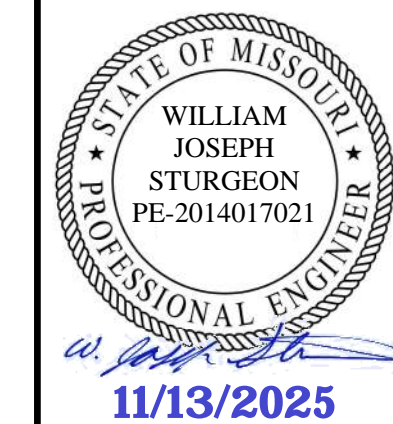
<p>GROUNDWATER DATA</p> <p><input checked="" type="checkbox"/> FREE WATER NOT ENCOUNTERED DURING DRILLING</p>	<p>DRILLING DATA</p> <p><input type="checkbox"/> AUGER <input checked="" type="checkbox"/> 3 3/4" HOLLOW STEM WASHBORING FROM ___ FEET</p> <p><input type="checkbox"/> DJT DRILLER <input checked="" type="checkbox"/> JDH LOGGER</p> <p><input type="checkbox"/> Diedrich D-50 DRILL RIG</p> <p>HAMMER TYPE <u>Auto</u></p> <p>HAMMER EFFICIENCY <u>86</u> %</p>	<p>Drawn by: JDH Date: 3/14/22</p> <p>Check by: MHM Date: 4/25/23</p> <p>App'vd by: SDG Date: 5/1/23</p>
<p>REMARKS:</p>		
<p>NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.</p>		
<p>Improve I-70 KC Bridge A313 I-70 over Jackson Avenue</p> <p>LOG OF BORING: A313- 4</p> <p>Project No. J039339.01</p>		

Released For Construction
Not to Scale

Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

Notes:
For locations of borings, see Sheet No. B27-02 and Geotechnical Report.

BORING LOGS



DATE PREPARED
11/13/2025

ROUTE STATE
I-70 MO

DISTRICT SHEET NO.
BR B27-38

COUNTY
JACKSON

JOB NO.
J411486D

CONTRACT ID.
240807-C01

PROJECT NO.

BRIDGE NO.
A9759

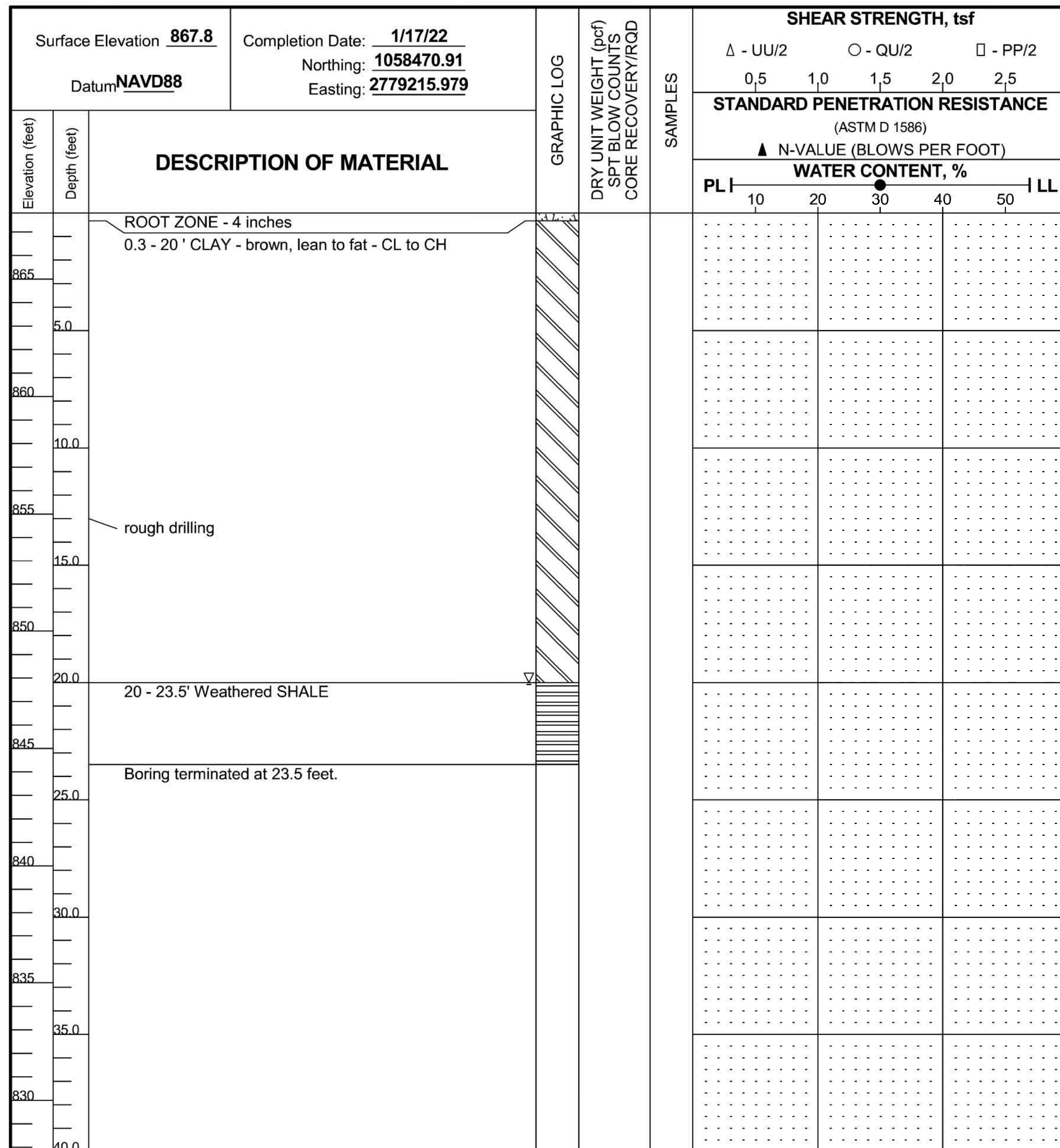
DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

CLARKSON
RADMACHER
JOINT VENTURE

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



GROUNDWATER DATA
ENCOUNTERED AT 20 FEET

DRILLING DATA
4" AUGER ___ HOLLOW STEM
WASHBORING FROM ___ FEET
BCS DRILLER MHM LOGGER
Diedrich D-50 DRILL RIG
HAMMER TYPE ___

REMARKS: Stratigraphy description based on auger cuttings and drill rig action.

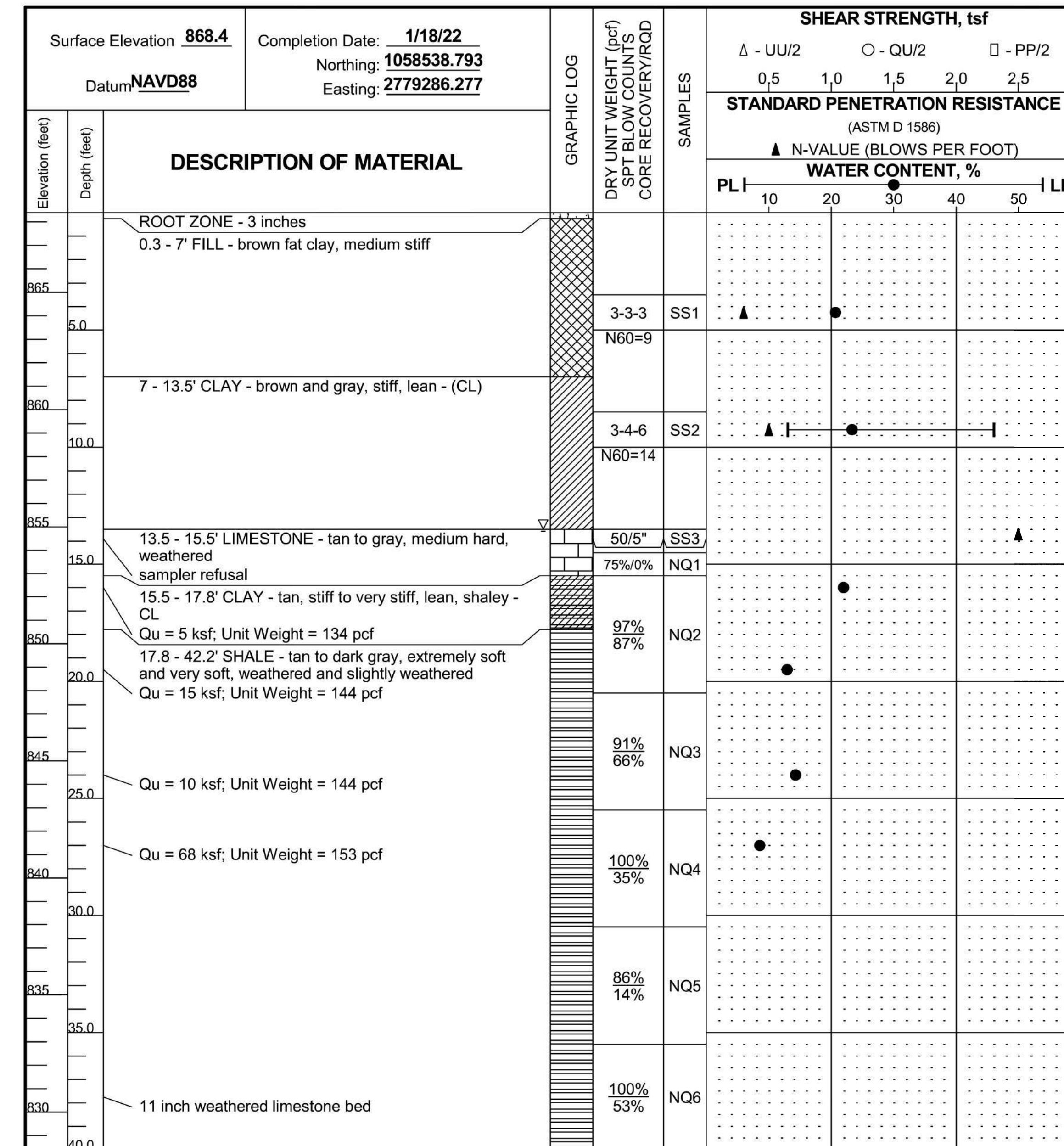
NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

Drawn by: MHM Check by: MHM App'vd by: SDG
Date: 1/17/22 Date: 4/25/23 Date: 5/1/23

**Improve I-70 KC
Bridge A313
I-70 over Jackson Avenue**

LOG OF BORING: A313- 5

Project No. **J039339.01**



GROUNDWATER DATA
ENCOUNTERED AT 13.5 FEET

DRILLING DATA
___ AUGER 3 3/4" HOLLOW STEM
WASHBORING FROM ___ FEET
BCS DRILLER JDN LOGGER
Diedrich D-50 DRILL RIG
HAMMER TYPE Auto
HAMMER EFFICIENCY 86 %

REMARKS:

NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

Drawn by: JDN Check by: MHM App'vd by: SDG
Date: 1/19/22 Date: 4/25/23 Date: 5/1/23

**Improve I-70 KC
Bridge A313
I-70 over Jackson Avenue**

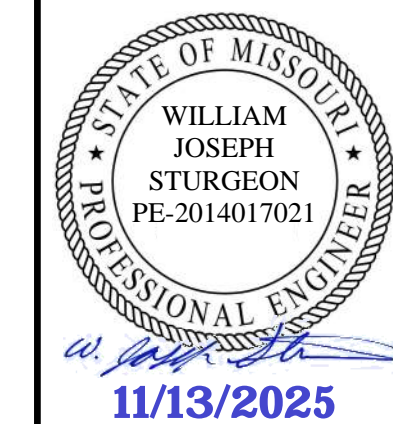
LOG OF BORING: A313- 7

Project No. **J039339.01**

Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

Notes:
For locations of borings, see Sheet No. B27-02 and Geotechnical Report.

BORING LOGS



DATE PREPARED 11/13/2025	
ROUTE I-70	STATE MO
DISTRICT BR	SHEET NO. B27-39
COUNTY JACKSON	
JOB NO. J411486D	
CONTRACT ID. 240807-C01	
PROJECT NO.	
BRIDGE NO. A9759	

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

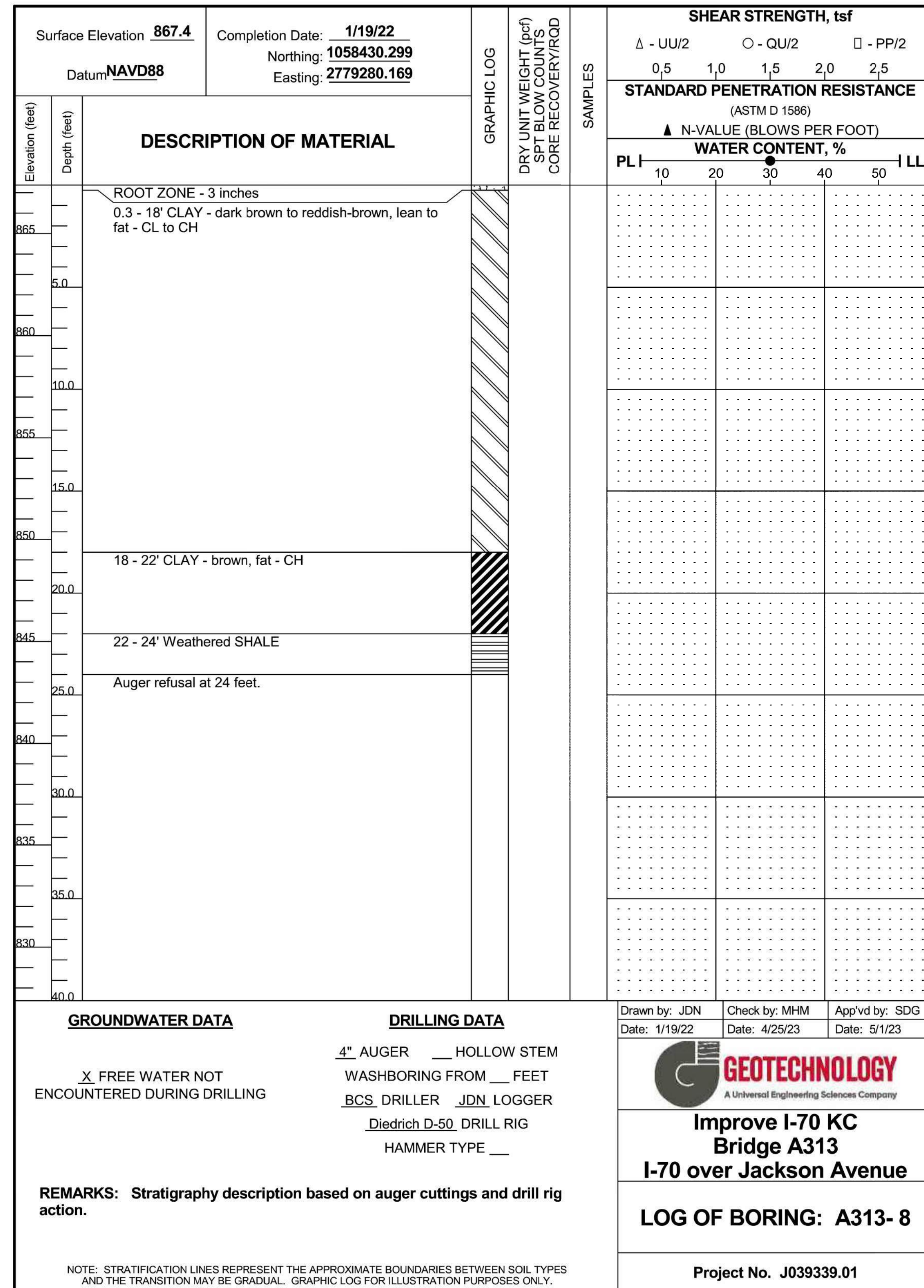
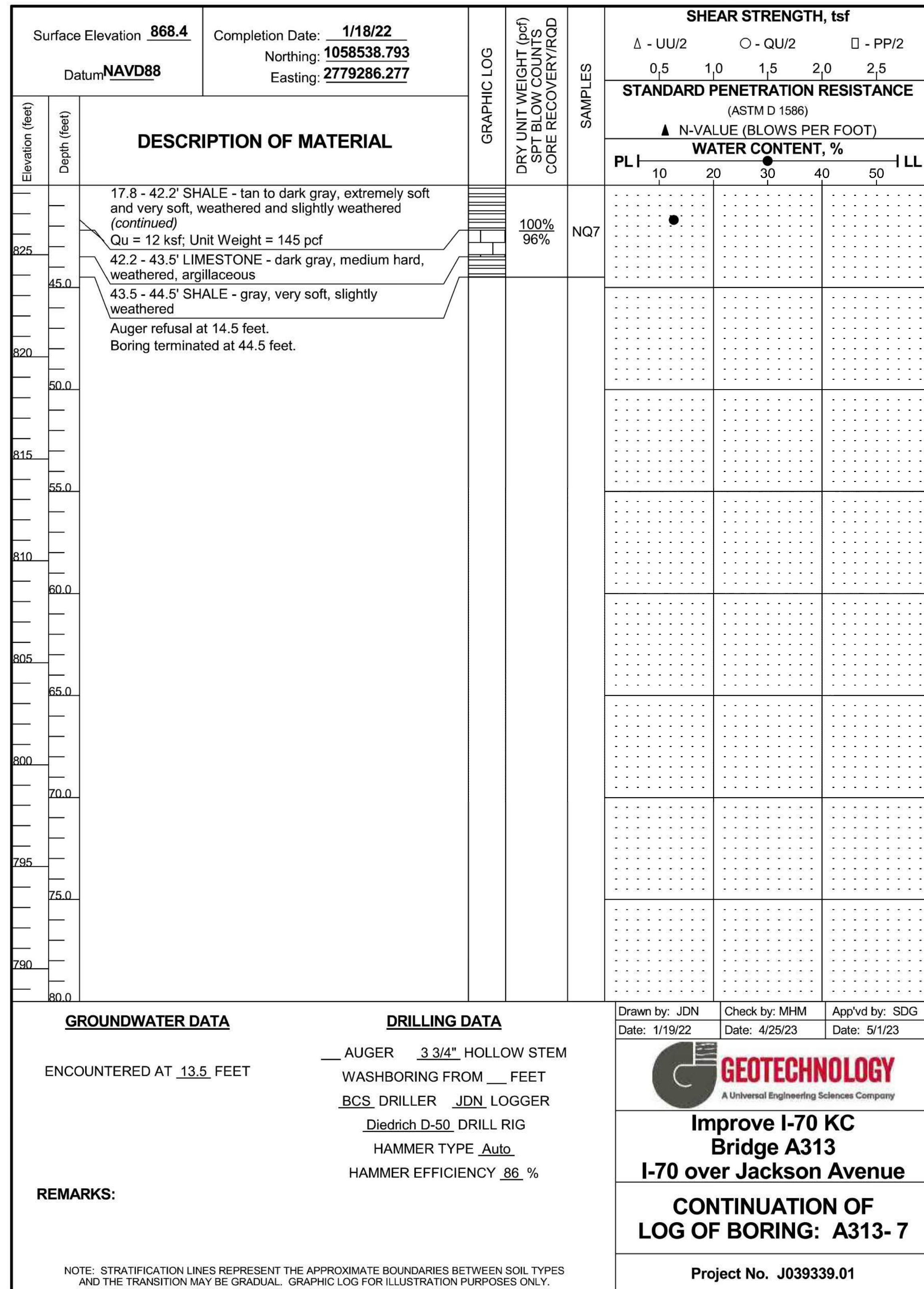
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CLARKSON RADMACHER JOINT VENTURE

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

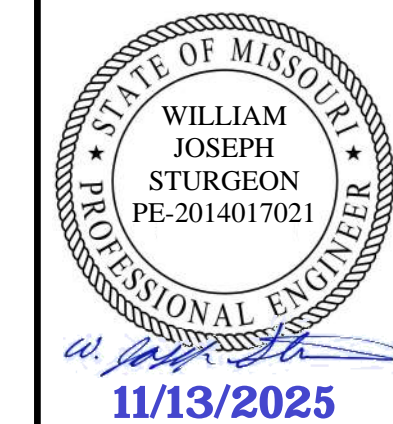
HNTB



Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

Notes:
For locations of borings, see Sheet No. B27-02 and Geotechnical Report.

BORING LOGS



DATE PREPARED
11/13/2025
ROUTE 1-70 STATE MO
DISTRICT BR SHEET NO. B27-40

COUNTY JACKSON
JOB NO. J411486D
CONTRACT ID. 240807-C01
PROJECT NO.

BRIDGE NO. A9759

DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

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

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



Surface Elevation 885.4 Completion Date: 4/12/22		GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/ROD	SAMPLES	SHEAR STRENGTH, tsf						
Datum NAVD88 Northing: 1058498.207					Δ - UU/2	○ - QU/2	□ - PP/2				
Easting: 2779338.154					0,5	1,0	1,5	2,0	2,5		
DESCRIPTION OF MATERIAL					STANDARD PENETRATION RESISTANCE (ASTM D 1586)					▲ N-VALUE (BLOWS PER FOOT)	
Elevation (feet)	Depth (feet)	WATER CONTENT, %					PL 10 20 30 40 50 LL				
	0 - 27' FILL - brown fat clay, concrete fragments, brick fragments, medium stiff and stiff rough drilling										
880	5.0										
	rough drilling										
	2-2-3 SS1 ▲										
	N60=7										
	6-6-4 SS2 ▲										
875	10.0										
	N60=14										
	5-5-4 SS3 ▲										
870	15.0										
	N60=13										
	3-4-30/4" SS4 ● ▲										
865	20.0										
	N60>100										
	sampler refusal, rough drilling to 21 feet										
	4-4-5 SS5 ▲										
860	25.0										
	N60=13										
	27 - 32' CLAY - gray, soft, lean - (CL)										
	2-1-1 SS6 ▲ ●										
855	30.0										
	N60=3										
	32 - 37' Weathered LIMESTONE and CLAY										
	4-6-4 SS7 ▲										
850	35.0										
	rough drilling										

GROUNDWATER DATA

ENCOUNTERED AT 21 FEET

DRILLING DATA

___ AUGER 3/4" HOLLOW STEM
WASHBORING FROM ___ FEET
DJT DRILLER MHM LOGGER
Diedrich D-50 DRILL RIG
HAMMER TYPE Auto
HAMMER EFFICIENCY 86 %

REMARKS: A pavement core at an offset location measured 5 inches of asphalt underlain by 13.5 inches of concrete.

NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

Drawn by: MHM Date: 5/3/22
Check by: MHM Date: 4/25/23
App'vd by: SDG Date: 5/1/23



Improve I-70 KC
Bridge A313
I-70 over Jackson Avenue

LOG OF BORING: A313-10

Project No. J039339.01

Surface Elevation 885.4 Completion Date: 4/12/22		GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/ROD	SAMPLES	SHEAR STRENGTH, tsf						
Datum NAVD88 Northing: 1058498.207					Δ - UU/2	○ - QU/2	□ - PP/2				
Easting: 2779338.154					0,5	1,0	1,5	2,0	2,5		
DESCRIPTION OF MATERIAL					STANDARD PENETRATION RESISTANCE (ASTM D 1586)					▲ N-VALUE (BLOWS PER FOOT)	
Elevation (feet)	Depth (feet)	WATER CONTENT, %					PL 10 20 30 40 50 LL				
	37 - 49' SHALE - gray, very soft, slightly weathered										
845	40.0										
	50/6" SS8 ●										
	94% NQ1										
	100% weathered to 45.5 feet										
840	45.0										
	100% NQ2										
	100% NQ3										
835	50.0										
	Sampler and auger refusal at 39 feet. Boring terminated at 49 feet.										
830	55.0										
825	60.0										
820	65.0										
815	70.0										

GROUNDWATER DATA

ENCOUNTERED AT 21 FEET

DRILLING DATA

___ AUGER 3/4" HOLLOW STEM
WASHBORING FROM ___ FEET
DJT DRILLER MHM LOGGER
Diedrich D-50 DRILL RIG
HAMMER TYPE Auto
HAMMER EFFICIENCY 86 %

REMARKS: A pavement core at an offset location measured 5 inches of asphalt underlain by 13.5 inches of concrete.

NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

Drawn by: MHM Date: 5/3/22
Check by: MHM Date: 4/25/23
App'vd by: SDG Date: 5/1/23



Improve I-70 KC
Bridge A313
I-70 over Jackson Avenue

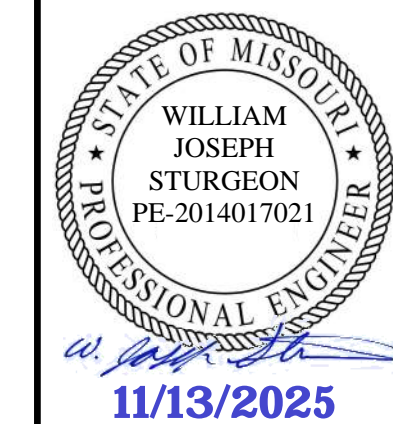
CONTINUATION OF
LOG OF BORING: A313-10

Project No. J039339.01

Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

Notes:
For locations of borings, see Sheet No. B27-02 and Geotechnical Report.

BORING LOGS



DATE PREPARED
11/13/2025

ROUTE 1-70 STATE MO
DISTRICT BR SHEET NO. B27-41

COUNTY JACKSON
JOB NO. J411486D
CONTRACT ID. 240807-C01
PROJECT NO.

BRIDGE NO. A9759

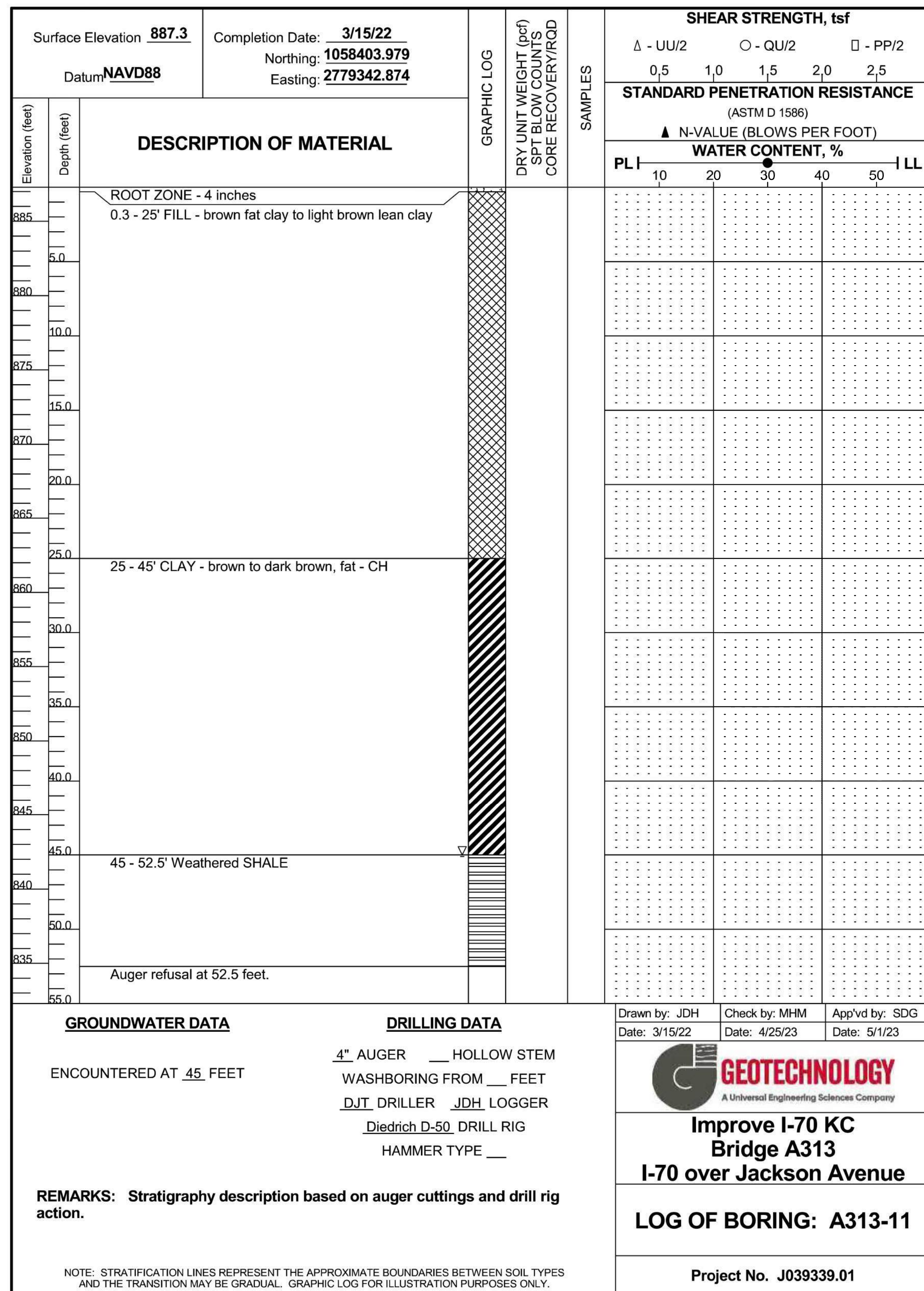
DATE	DESCRIPTION
11/13/25	REV 0 - RFC SUBMITTAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

CLARKSON RADMACHER JOINT VENTURE

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



Released For Construction
Not to Scale
Revision: 0.0
Date: 11/21/2025
Package: BRD-27-WB-70-Jackson

Notes:
For locations of borings, see Sheet No. B27-02 and Geotechnical Report.

BORING LOGS