

80% FED
20% STATE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				BRIDGE 0010	BRIDGE 0047	HIGHWAY LIGHTING 0021
				060-0347	060-0244	060-0347
50102400	CONCRETE REMOVAL	CU YD	13.1		13.1	
50200100	STRUCTURE EXCAVATION	CU YD	727	727		
50200300	COFFERDAM EXCAVATION	CU YD	1347	1347		
50201121	COFFERDAM (TYPE 2) (LOCATION - 1)	EACH	1	1		
50201122	COFFERDAM (TYPE 2) (LOCATION - 2)	EACH	1	1		
50300225	CONCRETE STRUCTURES	CU YD	772.8	772.8		
50300255	CONCRETE SUPERSTRUCTURE	CU YD	503.5	489.7	13.8	
50300260	BRIDGE DECK GROOVING	SQ YD	1692	1692		
50300265	SEAL COAT CONCRETE	CU YD	510	510		
50300300	PROTECTIVE COAT	SQ YD	2066	2066		
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	102.4	102.4		
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	1		
50500505	STUD SHEAR CONNECTORS	EACH	10780	10780		
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	245850	244050	1800	

△1 REVISED 1-2-2024
REV. - MS

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PLOT SCALE = 100.0000" / in.	DRAWN - TAK	REVISED -
PLOT DATE = 10/17/2023	CHECKED - BMR	REVISED -
	DATE - 10/17/23	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: NTS SHEET 3 OF 8 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
582	6-23B-I	MADISON	90	5
			CONTRACT NO. 76H49	
ILLINOIS FED. AID PROJECT				

BENCHMARK: **BM1:** Top of Barrier
SB 111 Sta 226+79.48,
74.93' Lt
EI 418.86

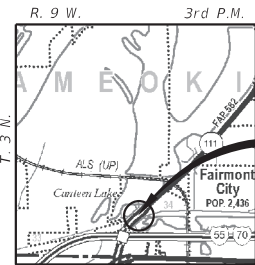
BM2: Top of Wingwall
SB 111 Sta 231+85.67,
22.06' Rt
EI 418.06

EXISTING STRUCTURE: SN 060-0127
Constructed in 1961 as FA Route 132, Section 6-23B at Sta 29+44.1. The existing structure consists of a 3-span continuous steel girder superstructure with a 7" cast-in-place concrete deck and HMA overlay, and a substructure of reinforced concrete piers on timber pile supported footings and concrete pile bent abutments. Back to back of abutment length is 318'-8" and out to out width of the deck is 36'-4". The structure is skewed at 61°-30'.

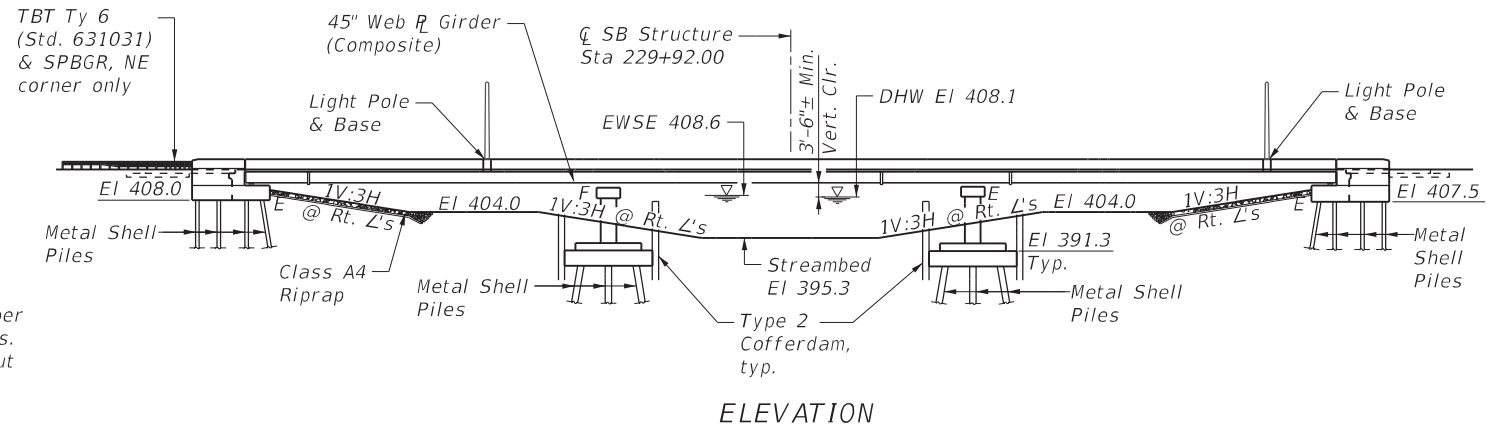
The structure is to be removed and replaced, including removal of the existing concrete pier footings to allow location of existing piles, repositioning proposed piles to miss them, and construction of the proposed pier footings.

Traffic is to be detoured on the adjacent structure and crossovers.

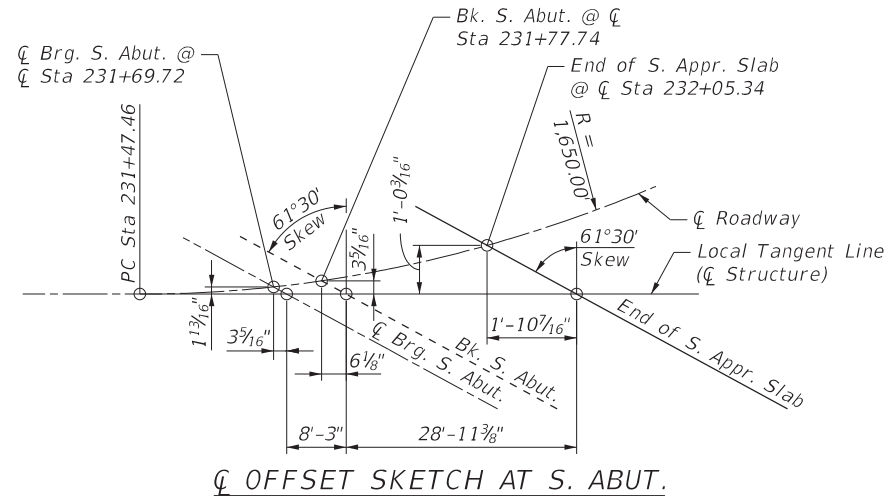
SALVAGE: No salvage



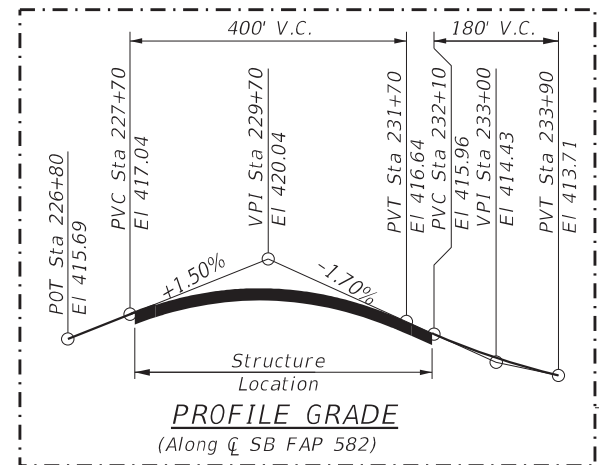
LOCATION SKETCH



ELEVATION



OFF SET SKETCH AT S. ABUT.



PROFILE GRADE
(Along \bar{C} SB FAP 582)

DESIGN SCOUR ELEVATION TABLE

Event/Limit State	Design Scour Elevations (ft.)				Item 113
	N. Abut.	Pier 1	Pier 2	S. Abut.	
Q100	408.0	390.3	390.3	407.5	5
Q200	408.0	390.3	390.3	407.5	
Design	408.0	390.3	390.3	407.5	
Check	408.0	390.3	390.3	407.5	

WATERWAY INFORMATION

Drainage Area = 105.5 Sq. Mi. Existing Overtopping EI = 416.4 at S. Abut. Proposed Overtopping EI = 416.4 at S. Abut.

Flood Event	Freq. Yr.	Q C.F.S.	Opening Sq Ft		Nat. H.W.E.	Head - Ft		Headwater EI	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	2,600	511	842	408.1	0.5	0.2	408.6	408.3
Base	100	2,600	511	842	408.1	0.5	0.2	408.6	408.3
Scour Design Check	200	2,600	511	842	408.1	0.5	0.2	408.6	408.3
Overtopping Existing	NA	-	-	-	-	-	-	-	-
Overtopping Proposed	NA	-	-	-	-	-	-	-	-
Max. Calc.	500	2,600	511	842	408.1	0.5	0.2	408.6	408.3

10 Year Velocity through Existing Bridge = 5.98 ft/s
10 Year Velocity through Proposed Bridge = 3.40 ft/s

DESIGN SPECIFICATIONS

2020 AASHTO LRFD
Bridge Design Specifications
LOADING HL-93
Allow 50 p.s.f. for future wearing surface

DESIGN STRESSES

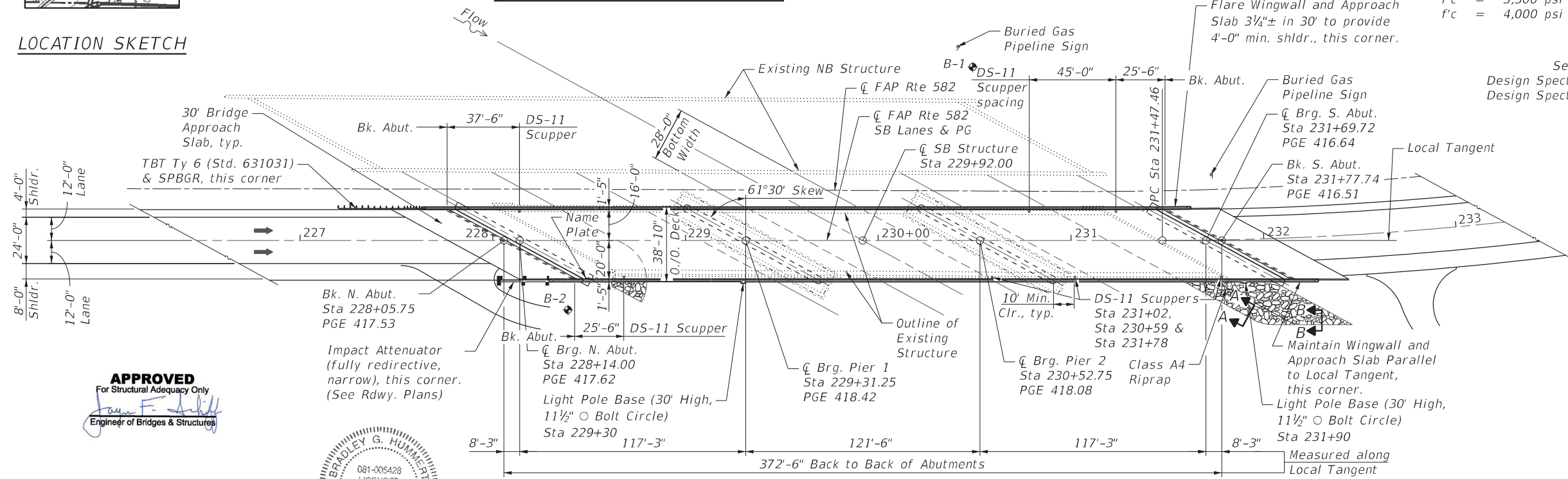
FIELD UNITS

f'c = 3,500 psi fy = 60,000 psi (reinf.)
f'c = 4,000 psi (Superstructure Concrete) fy = 50,000 psi (M270 Gr. 50)

SEISMIC DATA

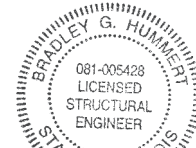
Seismic Performance Zone (SPZ): 2
Design Spectral Acceleration at 1.0 sec. (SD1): = 0.237 g
Design Spectral Acceleration at 0.2 sec. (SD5): = 0.535 g
Soil Site Class = D

PROP. CURVE PR BL_SB111
PI Sta = 233+31.14
 $\Delta = 12^\circ 42' 16''$ (LT)
D = 3° 28' 21"
R = 1,650.00'
T = 183.68'
L = 365.86'
E = 10.19'
e = 2.5%
T.R. = 39'
S.E. Run = 65'
PC Sta = 231+47.46
PT Sta = 235+13.32
Attain SE Sta 230+70 to Sta 231+74



PLAN

APPROVED
For Structural Adequacy Only
Jay F. Schmitt
Engineer of Bridges & Structures



Bradley G. Hummert Date 12/7/23
Bradley G. Hummert
Licensed Structural Engineer
in Illinois No. 081-005428
Expires: November 30, 2024

REVISD 1-2-2024

GENERAL PLAN & ELEVATION
SOUTHBOUND IL RTE 111
OVER CAHOKIA CANAL
FAP RTE 582 - SECTION 6-23B-1
MADISON COUNTY
STATION 229+92.00
STRUCTURE NO. 060-0347

MODEL: D:\p111\111_0318249_059_V05_IL111_Bridges\CAD_Sheets\0600347-76H49-041-01.dgn



USER NAME	DESIGNED	REVISION	DATE
tkrupp	KMM	12/21/2023	KHL
	KHL		
	BGH		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION

SCALE: SHEET 1 OF 41 SHEETS STA. TO STA.

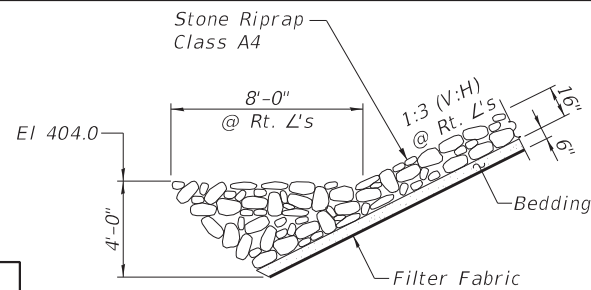
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
582	6-23B-1	MADISON	90	41

CONTRACT NO. 76H49
ILLINOIS FED. AID PROJECT

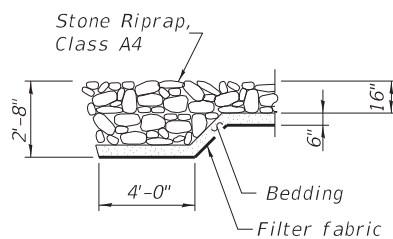
STATION 229+92
 BUILT 20___ BY
 STATE OF ILLINOIS
 FAP RTE 582 SEC. 6-23B-1
 F.A. PROJ. NO. _____
 LOADING HL-93
 STR. NO. 060-0347

NAME PLATE

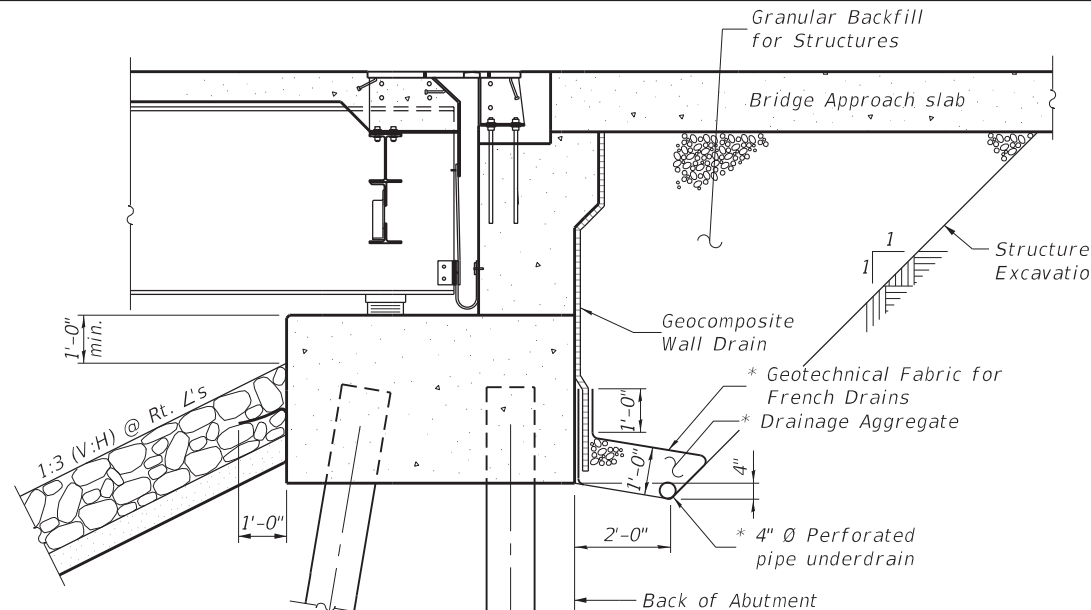
Locate Name Plate as shown in
 Plan View. (See Std. 515001)



SECTION A-A



SECTION B-B



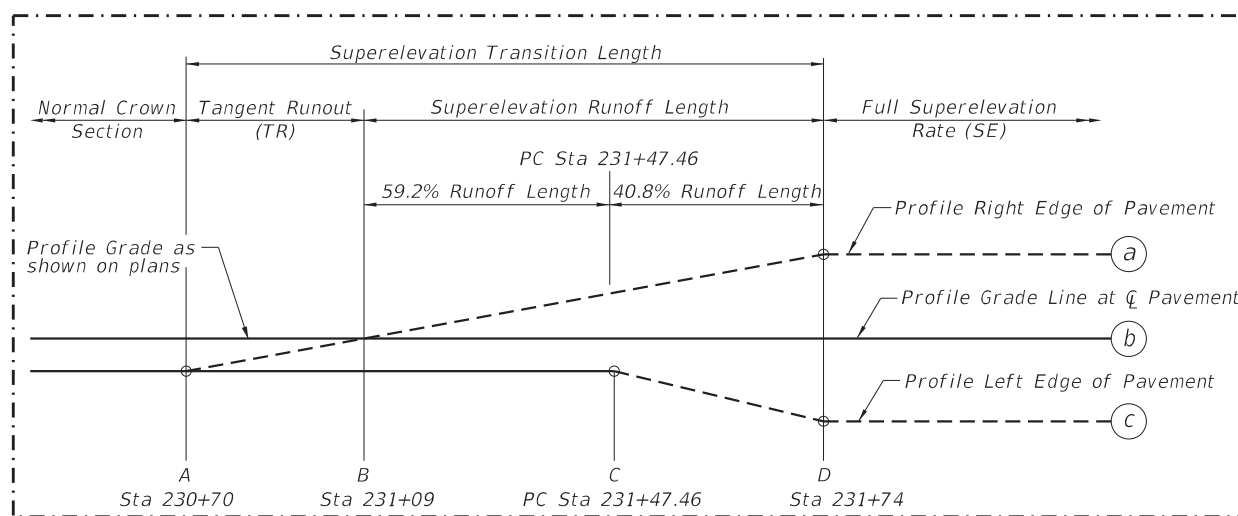
SECTION THRU PILE SUPPORTED

STUB ABUTMENT

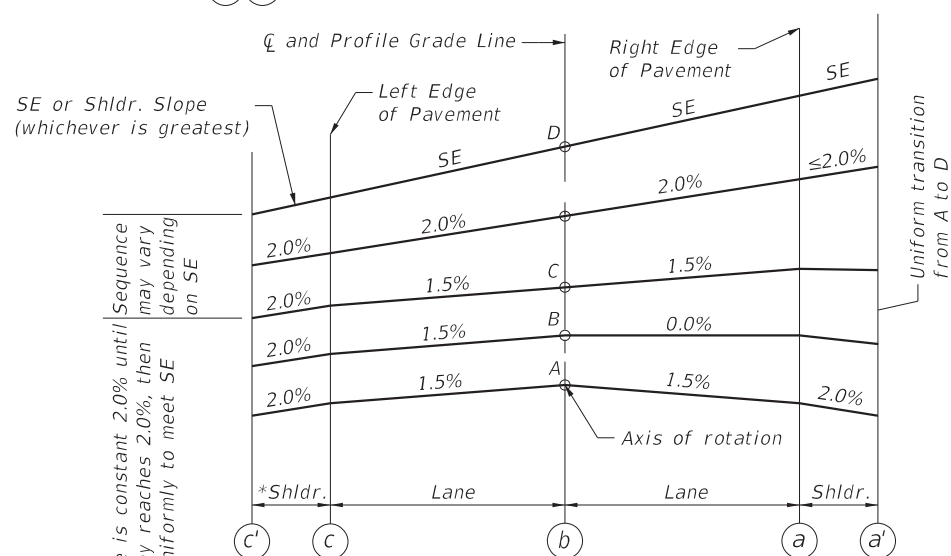
(Horiz. dim. @ Rt. L's)

Note:
 All drainage system components shall extend parallel to the abutment
 back wall until they intersect the wingwalls. The pipe shall extend under
 the wingwall before turning and extending to intersect slope under bridge.
 The pipes shall drain into concrete headwalls. (See Article 601.05 of the
 Standard Specifications and Highway Standard 601101).

* Included in the cost of
 Pipe Underdrains for
 Structures.



ⓐ ⓐ' Profile Edge of Shoulder not shown above for clarity.



METHOD OF ATTAINING SUPERELEVATION

INDEX OF BRIDGE SHEETS

1. General Plan & Elevation
2. General Data
3. Footing Layout and Construction Details
4. Top of Slab Elevations
5. Top of Slab Elevations
6. Top of Slab Elevations
7. Top of Slab Elevations
8. Top of Slab Elevations
9. Top of North Approach Slab Elevations
10. Top of South Approach Slab Elevations
11. Superstructure
12. Superstructure Details
13. Superstructure Details
14. Bridge Approach Slab Details - North Abutment
15. Bridge Approach Slab Details - North Abutment
16. Bridge Approach Slab Details - South Abutment
17. Bridge Approach Slab Details - South Abutment
18. Finger Plate Expansion Joint Details
19. Finger Plate Expansion Joint Details
20. Finger Plate Expansion Joint Details
21. Finger Plate Expansion Joint Details
22. Finger Plate Expansion Joint Details
23. Drainage Scupper, DS-11
24. Structural Steel
25. Structural Steel Details
26. Structural Steel Details
27. Guided Expansion HLMR Disc Bearing Details - North Abutment
28. Guided Expansion HLMR Disc Bearing Details - South Abutment
29. Guided Expansion HLMR Disc Bearing Details - Pier 2
30. North Abutment
31. North Abutment
32. North Abutment
33. South Abutment
34. South Abutment
35. South Abutment
36. Pier 1
37. Pier 2
38. Metal Shell Pile Details
39. Bar Splicer Assembly and Mechanical Splicer Details
40. Boring Logs
41. Boring Logs

GENERAL NOTES

1. Fasteners shall be ASTM F 3125 Grade A325 Type 1, hot dip galvanized bolts in metallized areas or mechanically galvanized bolts in painted areas. Bolts $\frac{7}{8}$ in. diameter, holes $1\frac{1}{16}$ in. diameter, unless otherwise noted.
2. Calculated weight of Structural Steel = 600,500 lbs.
3. All structural steel shall be AASHTO M270 Grade 50. See special provision for "Metallizing of Structural Steel".
4. No field welding is permitted except as specified in the contract documents.
5. Reinforcement bars designated (E) shall be epoxy coated.
6. The concrete for bridge decks finished according to Article 503.16(a) of the Standard Specifications shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The machine used for finishing shall be set parallel to the skew for striking off and screeding the concrete.
7. Slipforming of the parapets is not allowed.
8. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
9. A film forming Concrete Sealer shall be applied to the horizontal surfaces of the abutment seats. A penetrating Concrete Sealer shall be applied to the vertical exposed surfaces, including backwalls & front faces of caps. Concrete Sealers shall be applied prior to setting bearings.
10. The Seal Coat design thickness is based on the Cofferdam Design Water Elevation (CDWE) shown. Final cofferdam design, details and seal coat thickness shall be submitted to the Engineer for approval. The CDWE is equal to the Estimated Water Surface Elevation (EWSE) plus 3 feet.
11. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
12. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to address the presence of lead on this project.
13. The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat shall be Gray, Munsell No 5B 7/1.
14. All structural steel girders, cross-frames, and exposed surfaces of bearings within a distance of 12 ft. longitudinally from the end of each girder web shall be metallized and shop painted with System 3. The color of the final finish coat of paint shall be Gray, Munsell No 5B 7/1. See special provision for "Metallizing of Structural Steel."
15. Drains shall be located clear of all diaphragms and cross frames.

TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub.	Total
Stone Riprap, Class A4	Sq Yd		558	558
Filter Fabric	Sq Yd		558	558
Grout for use with Riprap	Cu Yd		15	15
Removal of Existing Structures	Each			1
Structure Excavation	Cu Yd		727	727
Cofferdam Excavation	Cu Yd		1,347	1,347
Cofferdam (Type 2) (Location-1)	Each		1	1
Cofferdam (Type 2) (Location-2)	Each		1	1
Concrete Structures	Cu Yd		772.8	772.8
Concrete Superstructure	Cu Yd		489.7	489.7
Bridge Deck Grooving	Sq Yd	1,692		1,692
Seal Coat Concrete	Cu Yd		510	510
Protective Coat	Sq Yd	2,066		2,066
Concrete Superstructure (Approach Slab)	Cu Yd	102.4		102.4
Furnishing & Erecting Structural Steel	L.Sum	1		1
Stud Shear Connectors	Each	10,780		10,780
Reinforcement Bars, Epoxy Coated	Pound	173,760	70,290	244,050
Mechanical Splicers	Each	8	112	120
Furnishing Metal Shell Piles 14" x 0.312"	Foot		6,922	6,922
Driving Piles	Foot		6,922	6,922
Test Pile Metal Shells	Each		4	4
Pile Shoes	Each		88	88
Name Plates	Each		1	1
Finger Plate Expansion Joint, 2"	Foot	76		76
Finger Plate Expansion Joint, 3"	Foot	76		76
Fabric Reinforced Elastomeric Trough	Foot		169	169
Anchor Bolts, $\frac{3}{4}$ "	Each		40	40
Anchor Bolts, 1"	Each		20	20
Anchor Bolts, $1\frac{1}{2}$ "	Each		10	10
Granular Backfill for Structures	Cu Yd		287	287
Concrete Sealer	Sq Ft			2,250
Geocomposite Wall Drain	Sq Yd		141	141
Pipe Underdrains for Structures 4"	Foot		300	300
High Load Multi-Rotational Bearings, Disc, Guided Expansion - 300 k	Each	10		10
High Load Multi-Rotational Bearings, Disc, Guided Expansion - 600 k	Each	5		5
Drainage Scuppers, DS-11	Each	7		7

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PLOT DATE = 12/20/2023	CHECKED - BGH	REVISED -
	DATE - 12/08/23	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA
 STRUCTURE NO. 060-0347**

SCALE:	SHEET 2 OF 41 SHEETS	STA.	TO STA.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
				582	6-23B-1	MADISON	90	42
				CONTRACT NO. 76H49				

ILLINOIS FED. AID PROJECT

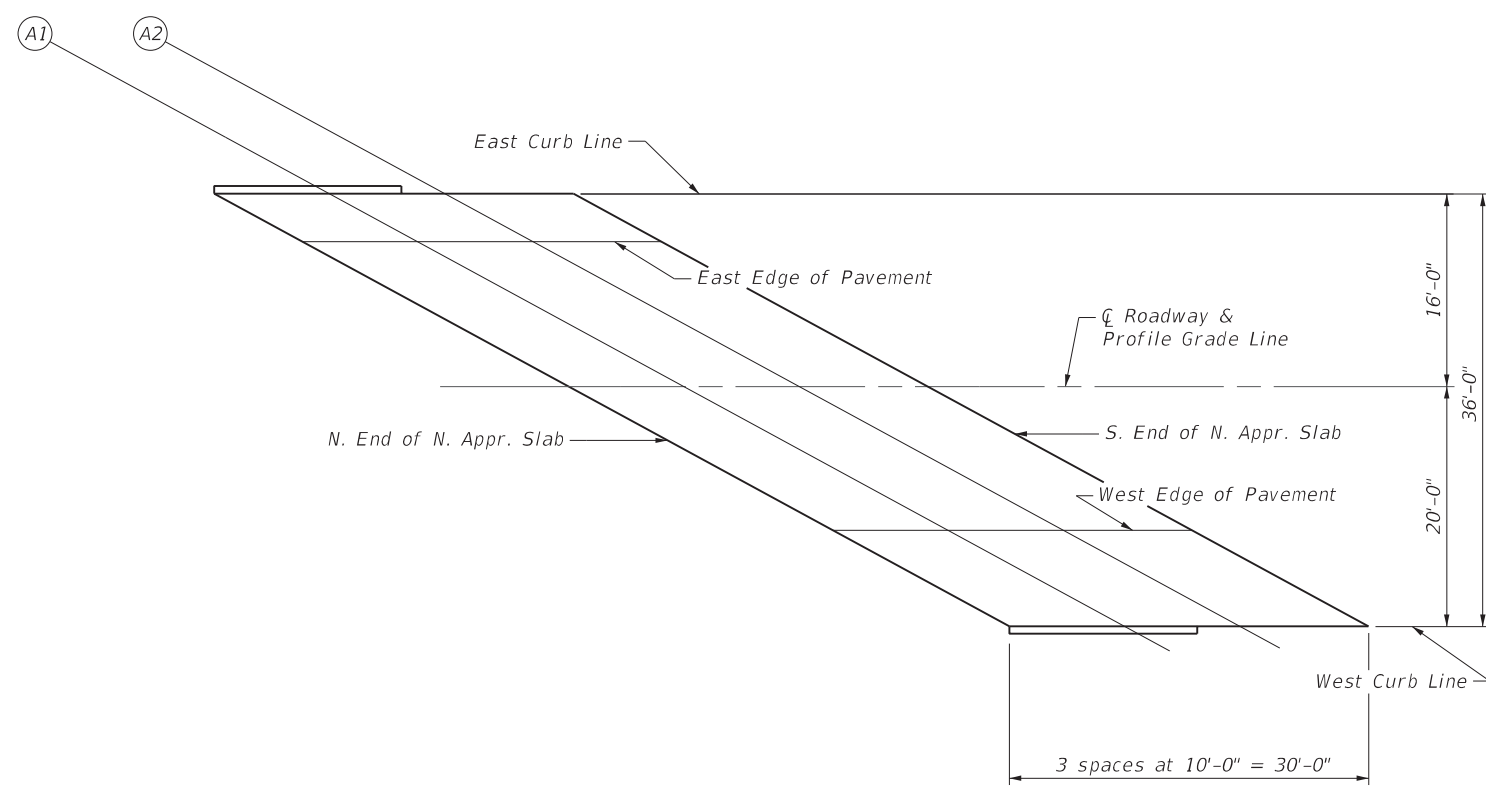
EAST CURB LINE			
Location	Station	Offset	Theoretical Grade Elevations
N. End of N. Apr. Slab	227+47.33	-16.00	416.44
A1	227+57.33	-16.00	416.59
A2	227+67.33	-16.00	416.74
S. End of N. Apr. Slab	227+77.33	-16.00	416.89

EAST EDGE OF PAVEMENT			
Location	Station	Offset	Theoretical Grade Elevations
N. End of N. Apr. Slab	227+54.70	-12.00	416.63
A1	227+64.70	-12.00	416.78
A2	227+74.70	-12.00	416.93
S. End of N. Apr. Slab	227+84.70	-12.00	417.07

C SOUTHBOUND LANES & PROFILE GRADE LINE			
Location	Station	Offset	Theoretical Grade Elevations
N. End of N. Apr. Slab	227+76.80	0.00	417.14
A1	227+86.80	0.00	417.28
A2	227+96.80	0.00	417.41
S. End of N. Apr. Slab	228+06.80	0.00	417.54

WEST EDGE OF PAVEMENT			
Location	Station	Offset	Theoretical Grade Elevations
N. End of N. Apr. Slab	227+98.90	12.00	417.26
A1	228+08.90	12.00	417.38
A2	228+18.90	12.00	417.50
S. End of N. Apr. Slab	228+28.90	12.00	417.60

WEST CURB LINE			
Location	Station	Offset	Theoretical Grade Elevations
N. End of N. Apr. Slab	228+13.64	20.00	417.28
A1	228+23.64	20.00	417.39
A2	228+33.64	20.00	417.49
S. End of N. Apr. Slab	228+43.64	20.00	417.59



NORTH APPROACH PLAN

REVISION 1-2-2024

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E-AS 2-17-2017



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DRAWN	- KHL	CHECKED	- BGH	REVISED	-
PLOT SCALE	= 2.0000" / in.	DATE	- 12/08/23	REVISED	-
PLOT DATE	= 12/20/2023				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 060-0347

SCALE: SHEET 9 OF 41 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
582	6-23B-1	MADISON	90	49
CONTRACT NO. 76H49				
ILLINOIS FED. AID PROJECT				

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
*N. End of S. Appr. Slab	231+47.70	-16.03	416.74
A3	231+57.60	-16.10	416.54
A4	231+67.51	-16.12	416.33
S. End of S. Appr. Slab	231+77.42	-16.07	416.13

* Flared wingwall. See abutment details.

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N. End of S. Appr. Slab	231+55.14	-12.00	416.67
A3	231+65.08	-12.00	416.46
A4	231+74.90	-12.00	416.26
S. End of S. Appr. Slab	231+84.63	-12.00	416.09

CL SOUTHBOUND LANES & PROFILE GRADE LINE

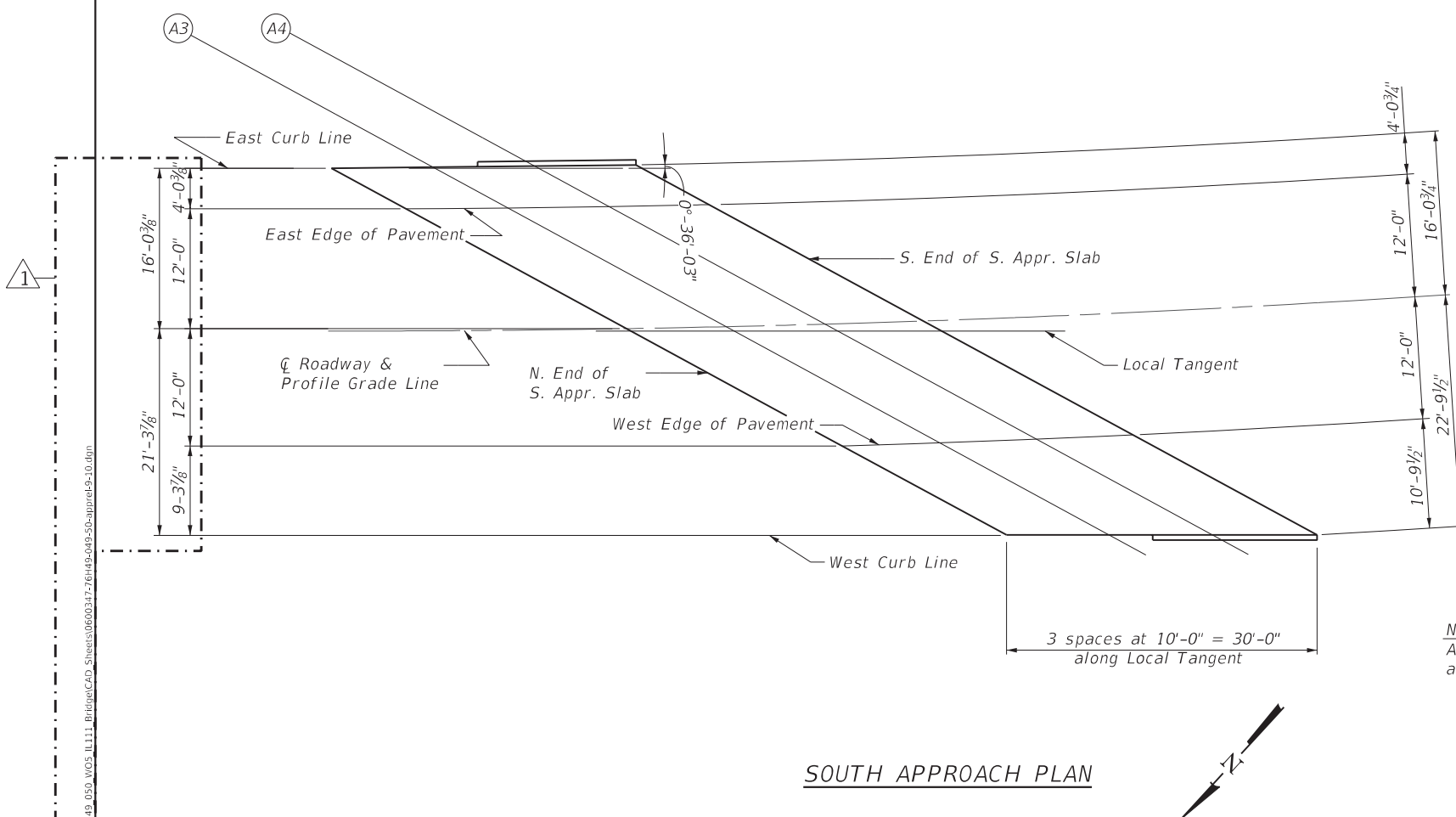
Location	Station	Offset	Theoretical Grade Elevations
N. End of S. Appr. Slab	231+76.74	0.00	416.53
A3	231+86.36	0.00	416.36
A4	231+95.92	0.00	416.20
S. End of S. Appr. Slab	232+05.36	0.00	416.04

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N. End of S. Appr. Slab	231+97.55	12.00	416.47
A3	232+06.92	12.00	416.31
A4	232+16.19	12.00	416.16
S. End of S. Appr. Slab	232+25.37	12.00	416.01

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
N. End of S. Appr. Slab	232+13.22	21.33	416.44
A3	232+23.09	21.76	416.29
A4	232+32.94	22.24	416.14
S. End of S. Appr. Slab	232+42.79	22.79	416.00

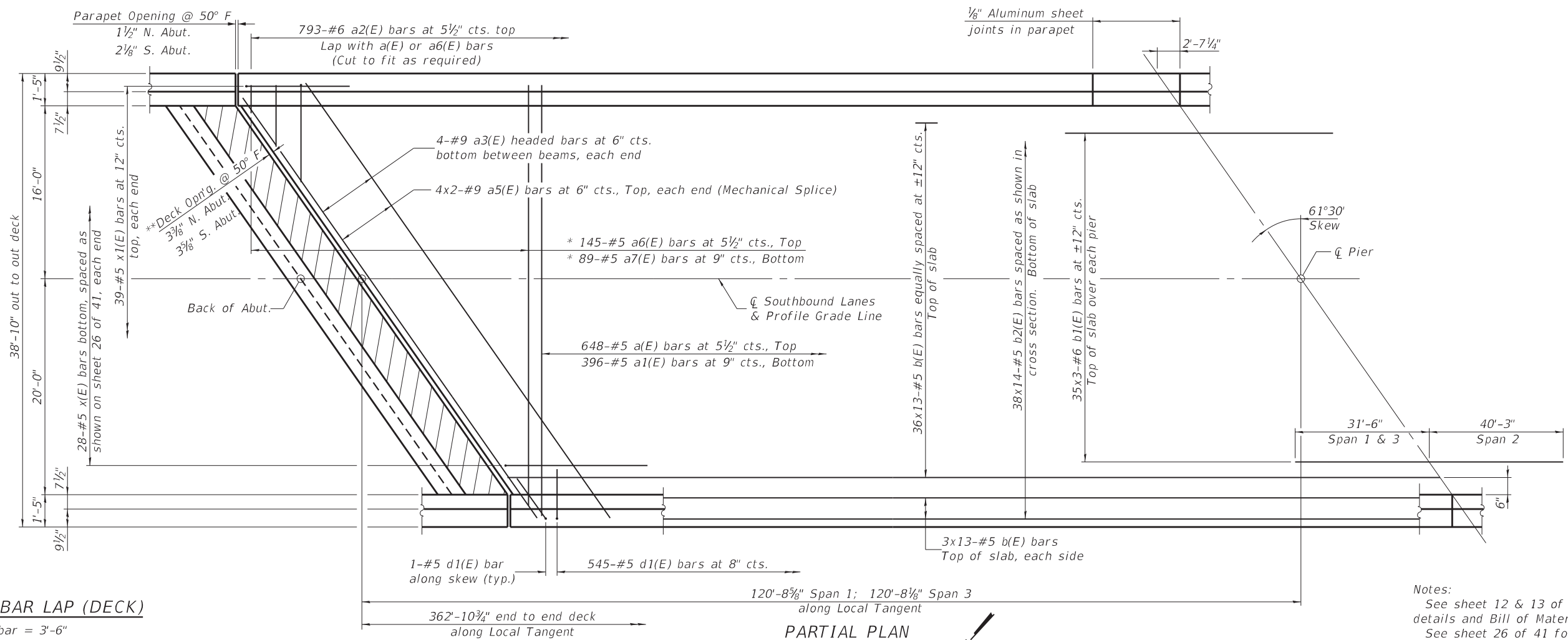


Note:
All transverse dimensions are radial.

SOUTH APPROACH PLAN

E-AS 2-17-2017

REVISD 1-2-2024



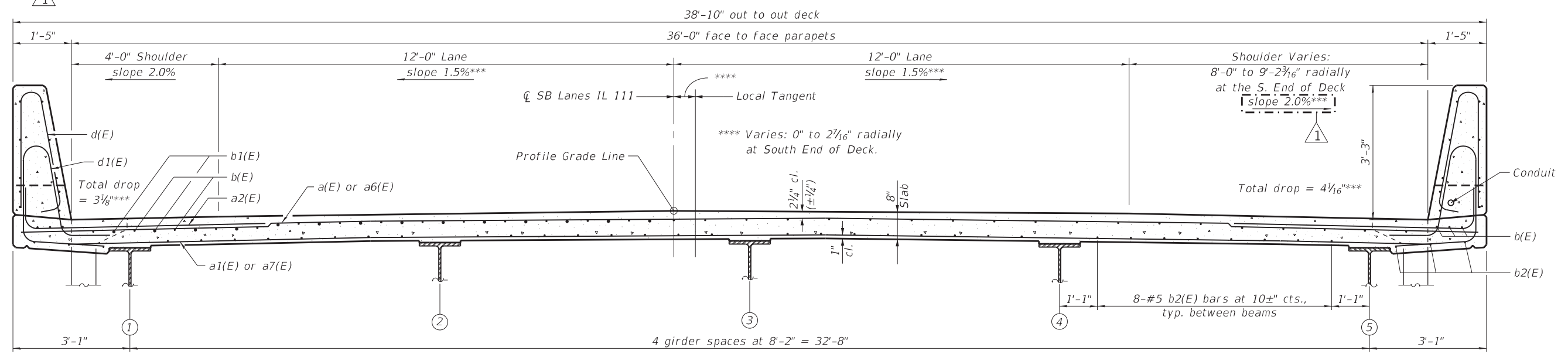
MINIMUM BAR LAP (DECK)

#5 bar = 3'-6"
 #6 bar = 3'-7"



Notes:
 See sheet 12 & 13 of 41 for superstructure details and Bill of Material.
 See sheet 26 of 41 for details of bars in ends of deck.
 Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

* See Field Cutting Diagram on sheet 12 of 41.
 ** Dimension showing deck opening. See sheet 22 of 41.



*** Typical cross slopes shown. Will vary in Superelevation transition area.

CROSS SECTION
 (Looking South)

REVISED 1-2-2024

SE-SB-2-R(>30°) 1-1-2020



USER NAME = tkrupep	DESIGNED - KMM	REVISED - 12/21/2023 KHL
PLOT SCALE = 2.0000' / in.	DRAWN - KHL	REVISED -
PLOT DATE = 12/20/2023	CHECKED - BGH	REVISED -
	DATE - 12/08/23	REVISED -

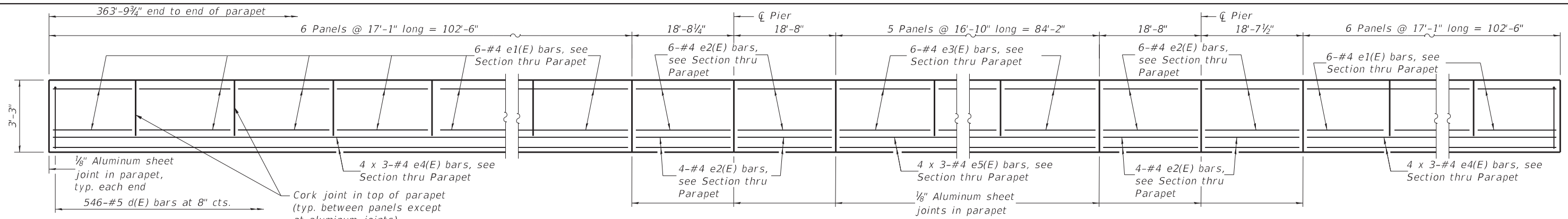
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 060-0347

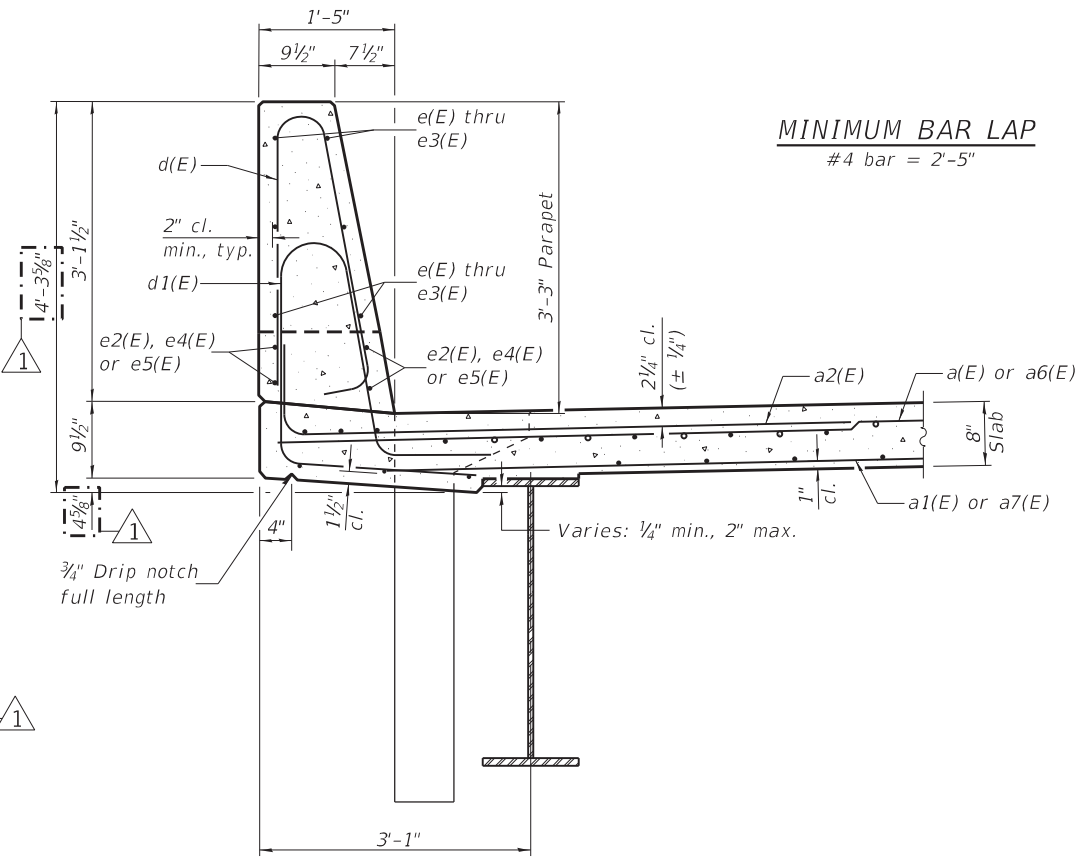
SCALE: SHEET 11 OF 41 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
582	6-23B-1	MADISON	90	51
CONTRACT NO. 76H49				
ILLINOIS FED. AID PROJECT				

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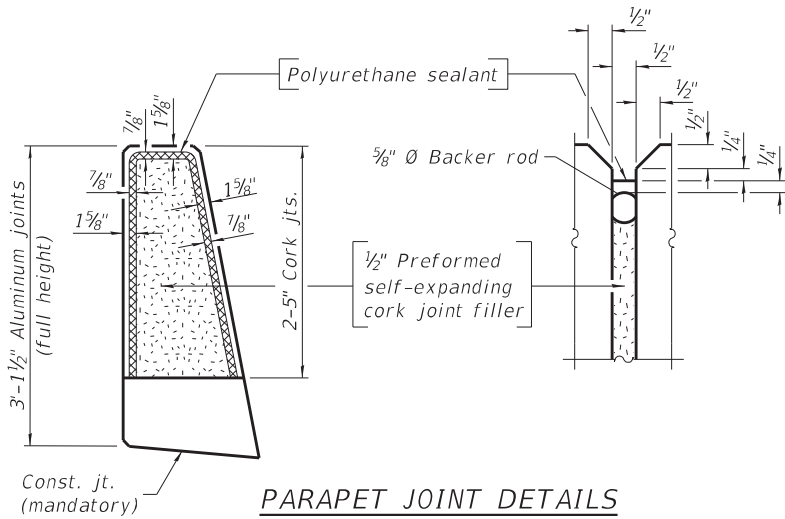


INSIDE ELEVATION OF EAST PARAPET
(West Parapet Similar)

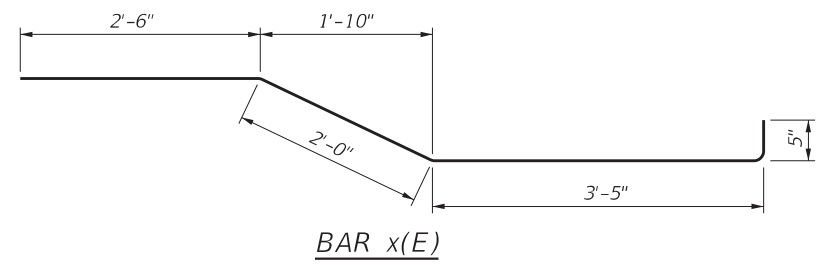


SECTION THRU PARAPET

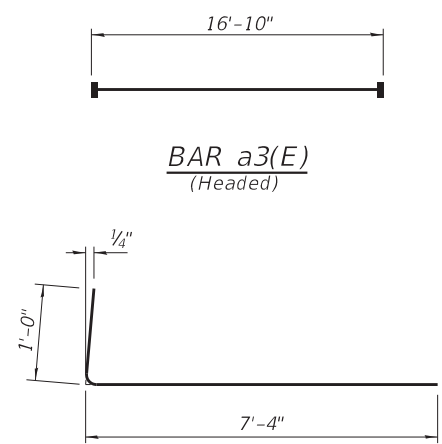
MINIMUM BAR LAP
#4 bar = 2'-5"



PARAPET JOINT DETAILS

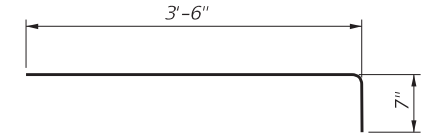


BAR x(E)



BAR a3(E)
(Headed)

BAR a2(E)

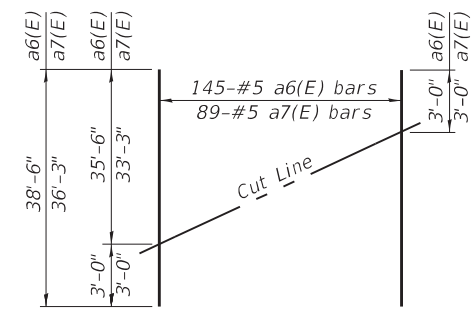


BAR x1(E)

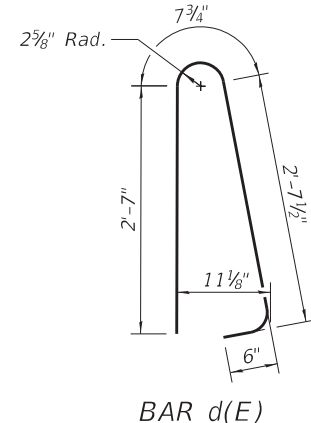
SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1(E)	648	#5	38'-6"	—
a2(E)	396	#5	36'-3"	—
a3(E)	1,586	#6	8'-4"	—
a4(E)	32	#9	16'-10"	—
a5(E)	96	#5	1'-6"	—
a6(E)	16	#9	39'-0"	—
a7(E)	145	#5	38'-6"	—
a7(E)	89	#5	36'-3"	—
b(E)	546	#5	31'-2"	—
b1(E)	210	#6	26'-4"	—
b2(E)	532	#5	29'-2"	—
d(E)	1,092	#5	6'-5"	—
d1(E)	1,092	#5	8'-4"	—
d2(E)	6	#6	4'-10"	—
d3(E)	12	#6	8'-11"	—
e1(E)	144	#4	16'-10"	—
e2(E)	80	#4	18'-4"	—
e3(E)	60	#4	16'-7"	—
e4(E)	48	#4	35'-9"	—
e5(E)	24	#4	29'-7"	—
x(E)	56	#5	8'-4"	—
x1(E)	78	#5	4'-1"	—
Reinforcement Bars, Epoxy Coated		Pound	137,380	—
Concrete Superstructure		Cu Yd	489.7	—
Protective Coat		Sq Yd	1,784	—
Bridge Deck Grooving		Sq Yd	1,452	—
Mechanical Splicers		Each	8	—

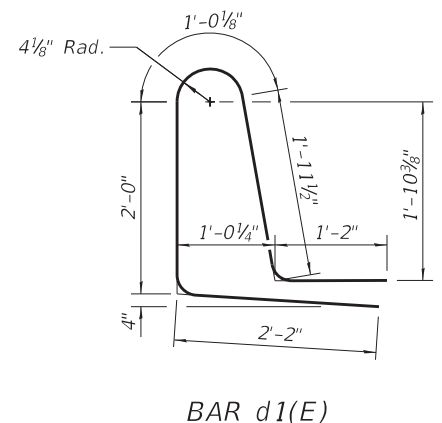
Notes:
The 1/8" aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.
The polyurethane sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.
See sheet 26 of 41 for details of bars in ends of deck.



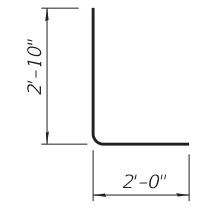
FIELD CUTTING DIAGRAM
Order a6(E) and a7(E) bars full length.
Cut as shown and use remainder of bars in opposite end of deck.



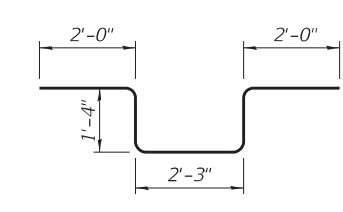
BAR d(E)



BAR d1(E)



BAR d2(E)



BAR d3(E)

REVIS 1-2-2024

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 SDI-SB-2
 HMG ENGINEERS
 IL PROF DESIGN FIRM 184.000899

SDI-SB-2 2-1-2023

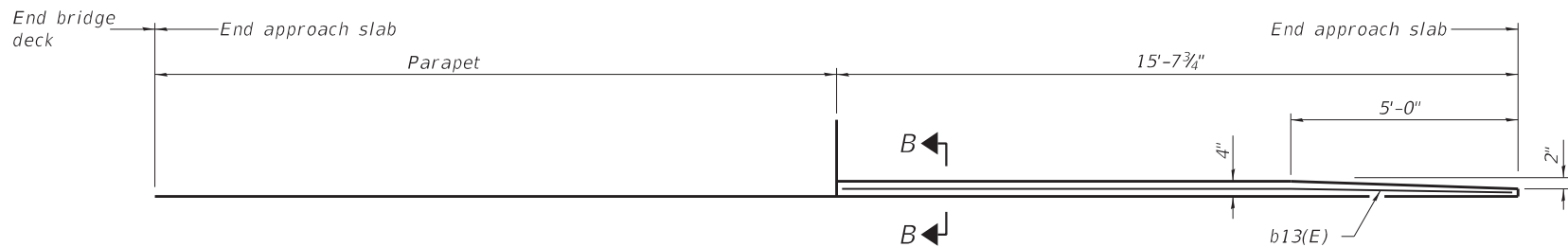
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

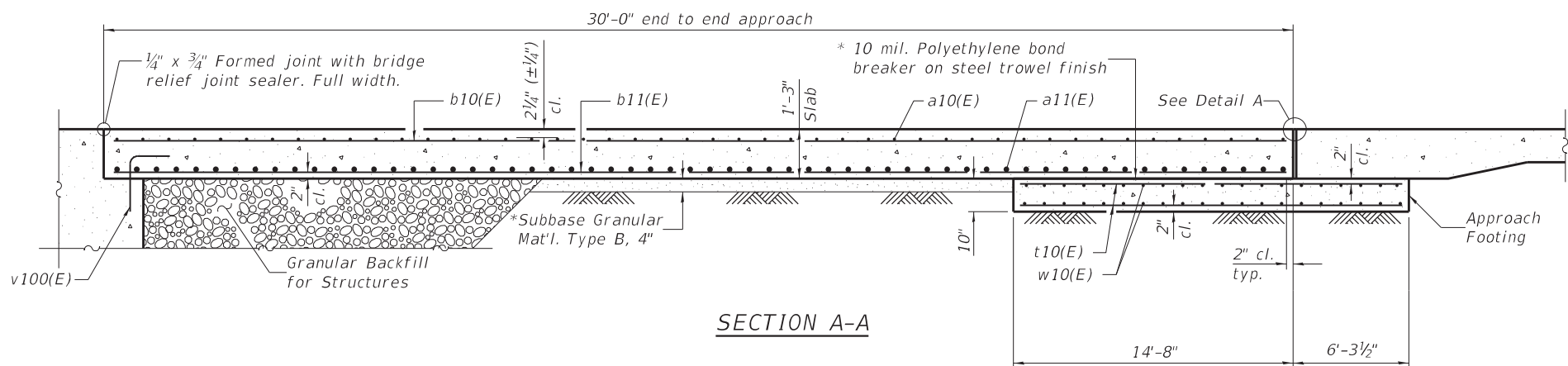
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 060-0347

SCALE: SHEET 12 OF 41 SHEETS STA. TO STA.

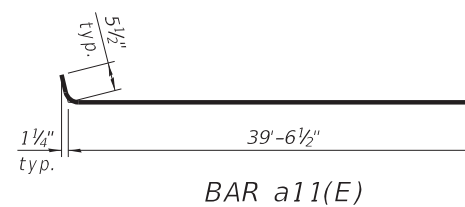
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
582	6-23B-1	MADISON	90	52
			CONTRACT NO. 76H49	
			ILLINOIS FED. AID PROJECT	



INSIDE ELEVATION OF PARAPET AND CURB

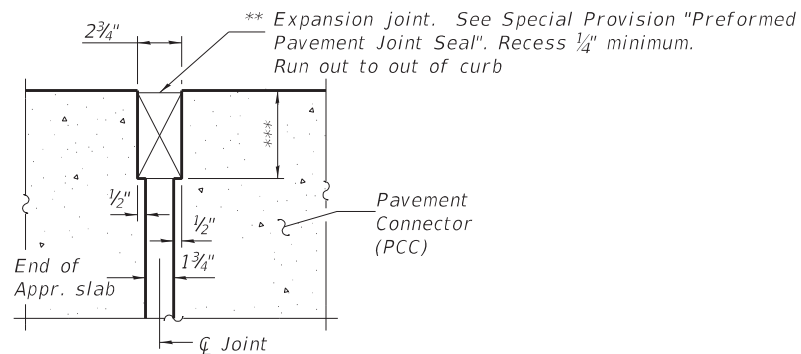


SECTION A-A



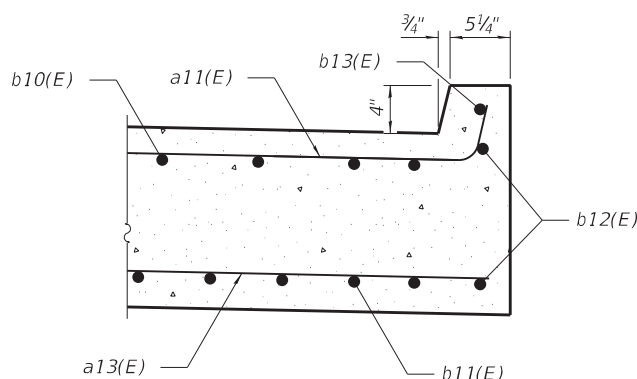
**NORTH APPROACH
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a10(E)	22	#5	39'-3"	---
a11(E)	24	#5	40'-0"	---
a12(E)	42	#8	28'-7"	---
a13(E)	45	#8	29'-6"	---
b10(E)	55	#5	29'-8"	---
b11(E)	87	#9	29'-8"	---
b12(E)	4	#5	15'-4"	---
b13(E)	2	#4	15'-4"	---
t10(E)	76	#4	9'-8"	---
w10(E)	40	#5	40'-6"	---
Concrete Superstructure (Approach Slab)			Cu Yd	50.2
Concrete Structures			Cu Yd	24.2
Reinforcement Bars, Epoxy Coated			Pound	18,190
Protective Coat			Sq Yd	141
Bridge Deck Grooving			Sq Yd	120



DETAIL A

(Detail A shown, applies to Highway Standard 420401 only. Detail A for pavement connector (HMA) may be found on Highway Standard 420406.)



SECTION B-B

Notes:

Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

1 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf. See special provision for Geotechnical Testing.

Cost of excavation for approach footing included with Concrete Structures.

For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 41.

See sheet 22 of 41 for hatched block details.

** Cost included with Concrete Superstructure (Approach Slab).

*** Per manufacturer recommendations

1 REVISED 1-2-2024

BASA-CIP-3944CS-0 2-1-2022-1-2023

(Sheet 2 of 2)

HMG
ENGINEERS
IL PROF DESIGN FIRM 184.000899

USER NAME = tkrupe	DESIGNED - KMM	REVISED - 12/21/2023 KHL
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	DATE - 12/08/23	REVISED -

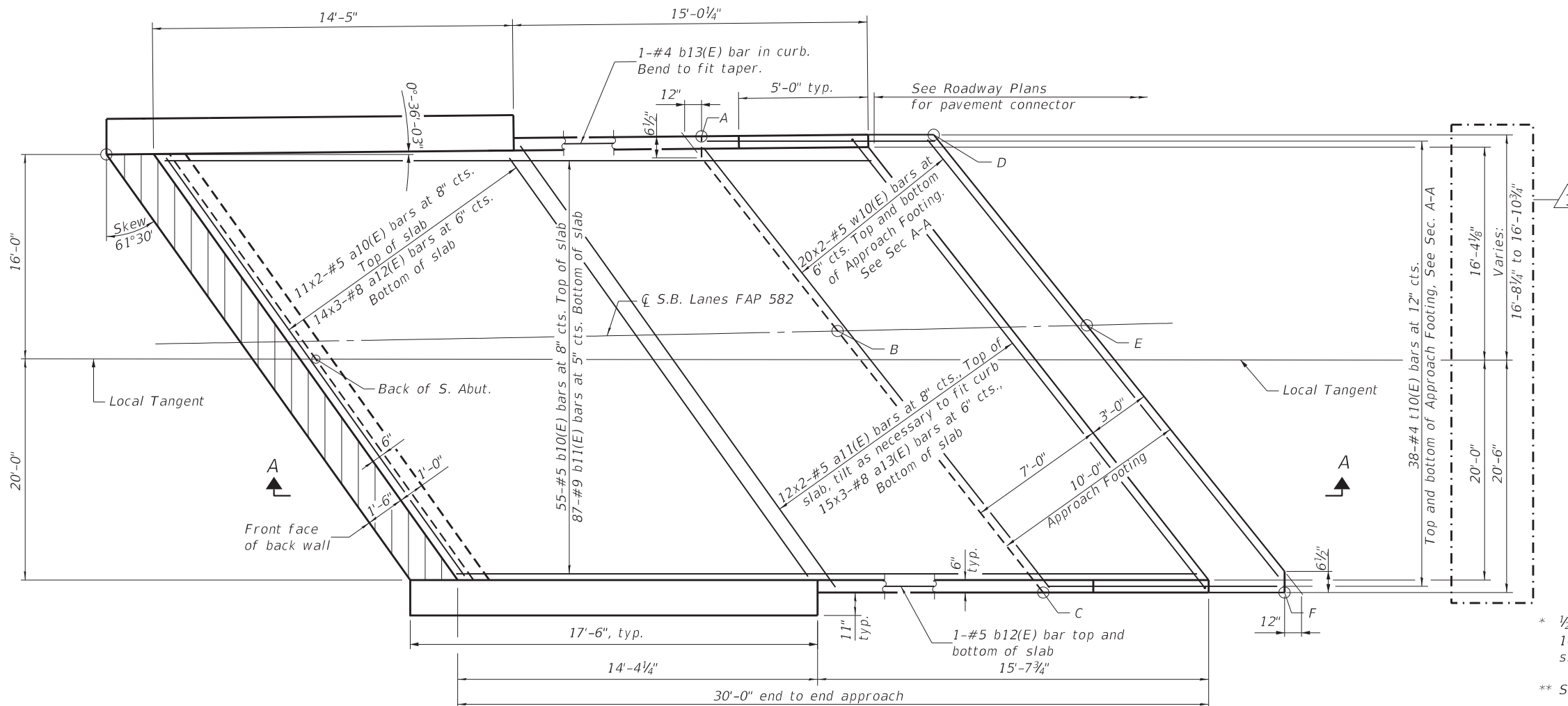
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS – NORTH ABUTMENT
STRUCTURE NO. 060-0347

SCALE: SHEET 15 OF 41 SHEETS STA. TO STA.

F.A.P. RTE. 582	SECTION 6-23B-1	COUNTY MADISON	TOTAL SHEETS 90	SHEET NO. 55
			CONTRACT NO. 76H49	
			ILLINOIS FED. AID PROJECT	

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TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

Point/Location	Approach	
	Top	Bottom
A	415.16	414.33
B	415.02	414.19
C	414.96	414.13
D	414.75	413.92
E	414.68	413.85
F	414.67	413.84

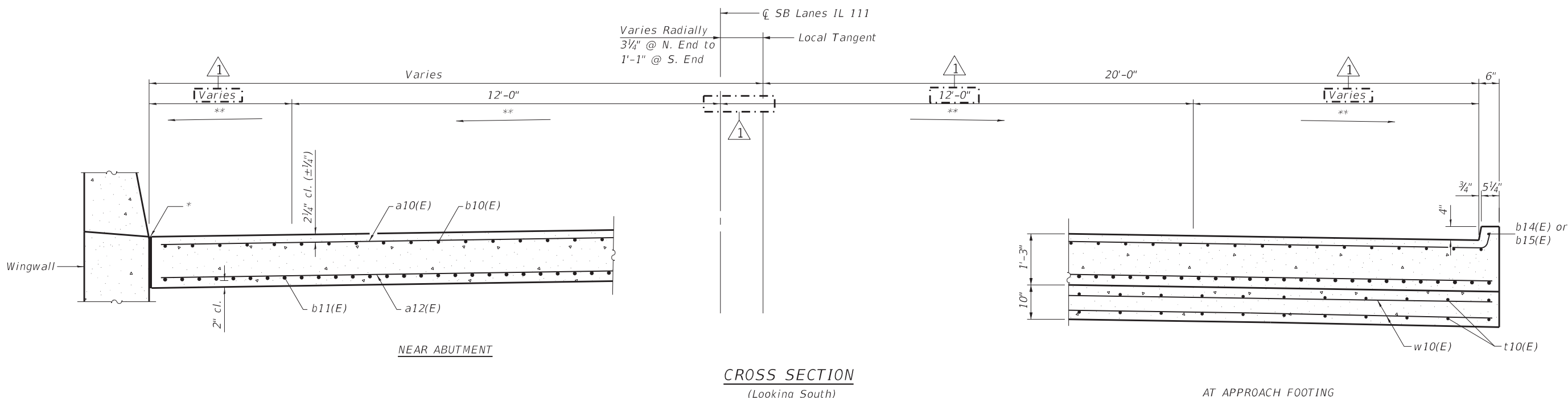
* 1/2" Prefomed Expansion Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of slab, full length of parapet. Typ. each parapet.

** See Superelevation Table in Roadway Plans.

MINIMUM BAR LAP (APPROACHES)

#5 bar = 3'-4"
#8 bar = 5'-4"

PLAN



CROSS SECTION
(Looking South)

AT APPROACH FOOTING

BASA-CIP-3944CS-0 (Modified) 2-1-2023

(Sheet 1 of 2)

REVISI 1-2-2024

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ENGINEERS
IL PROF DESIGN FIRM 184.000899

USER NAME = tkruop	DESIGNED - KMM	REVISED - 12/21/2023 KHL
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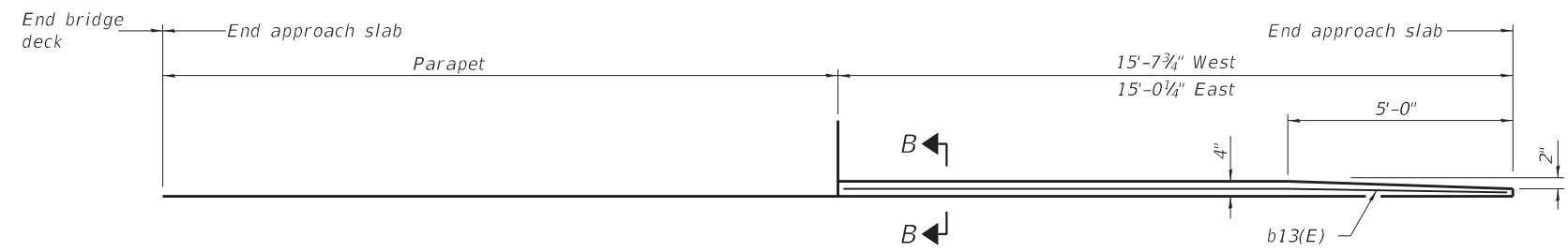
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS – SOUTH ABUTMENT
STRUCTURE NO. 060-0347

SCALE: SHEET 16 OF 41 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 76H49				
ILLINOIS FED. AID PROJECT				

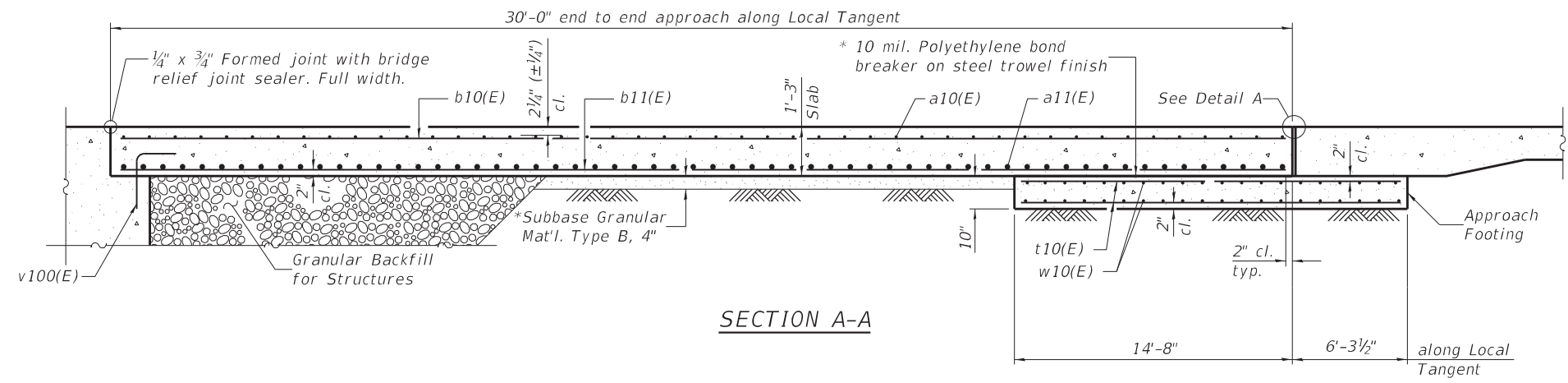
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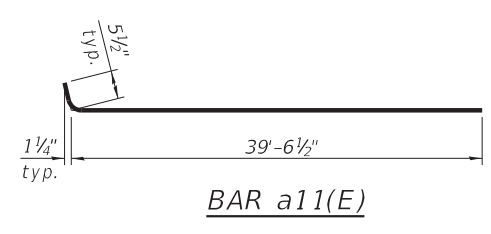
INSIDE ELEVATION OF PARAPET AND CURB

Notes:

- Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
- Approach footing concrete shall be paid for as Concrete Structures.
- 1 The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf. See special provision for Geotechnical Testing.
- Cost of excavation for approach footing included with Concrete Structures.
- For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 41.
- See sheet 22 of 41 for hatched block details.

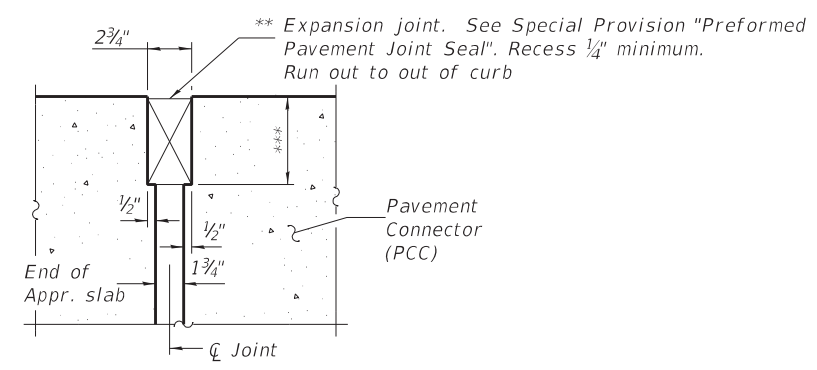


SECTION A-A



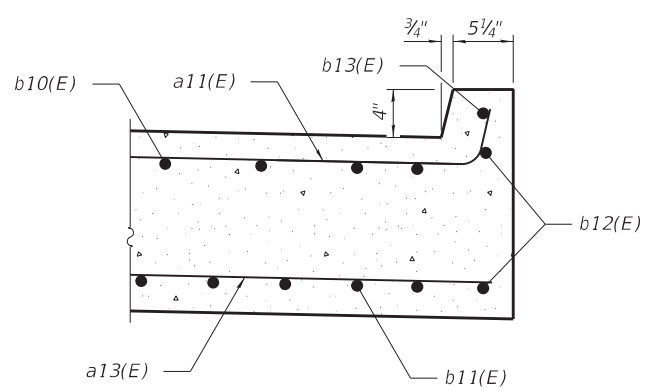
SOUTH APPROACH BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	22	#5	39'-3"	—
a11(E)	24	#5	40'-0"	—
a12(E)	42	#8	28'-7"	—
a13(E)	45	#8	29'-6"	—
b10(E)	55	#5	29'-8"	—
b11(E)	87	#9	29'-8"	—
b12(E)	4	#5	15'-4"	—
b13(E)	2	#4	15'-4"	—
t10(E)	76	#4	9'-8"	—
w10(E)	40	#5	40'-6"	—
Concrete Superstructure (Approach Slab)			Cu Yd	52.2
Concrete Structures			Cu Yd	24.2
Reinforcement Bars, Epoxy Coated			Pound	18,190
Protective Coat			Sq Yd	141
Bridge Deck Grooving			Sq Yd	120



DETAIL A

(Detail A shown, applies to Highway Standard 420401 only. Detail A for pavement connector (HMA) may be found on Highway Standard 420406.)



SECTION B-B

- ** Cost included with Concrete Superstructure (Approach Slab).
- *** Per manufacturer recommendations

1 REVISED 1-2-2024

BASA-CIP-3944CS-0 2-1-2023

(Sheet 2 of 2)

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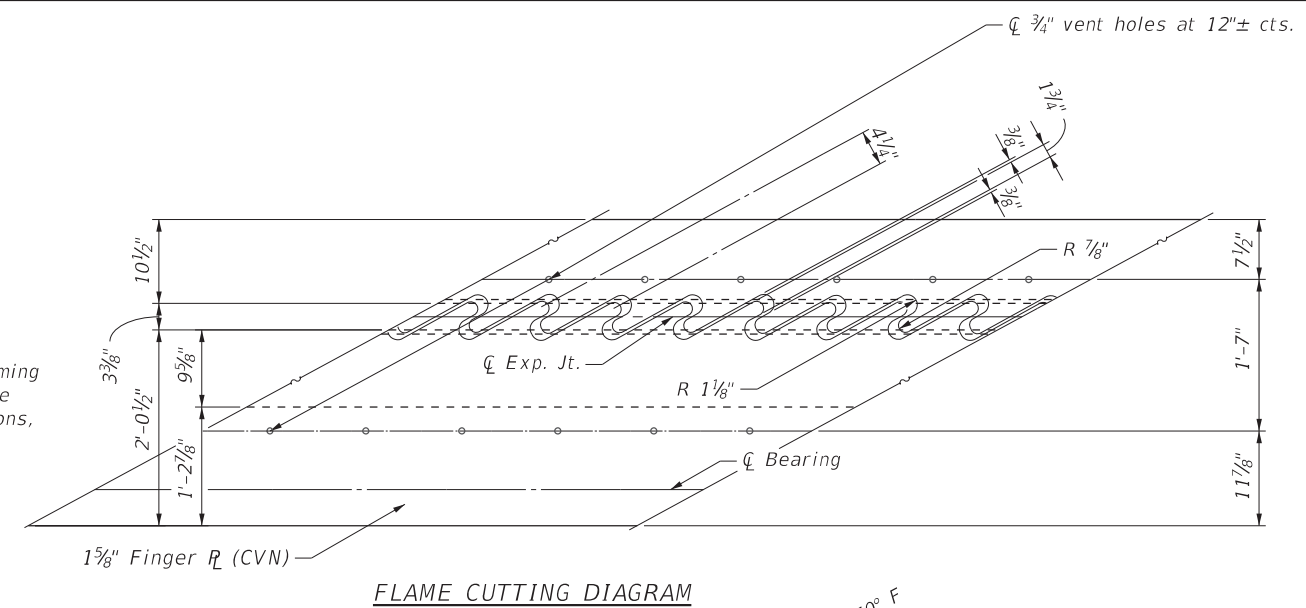
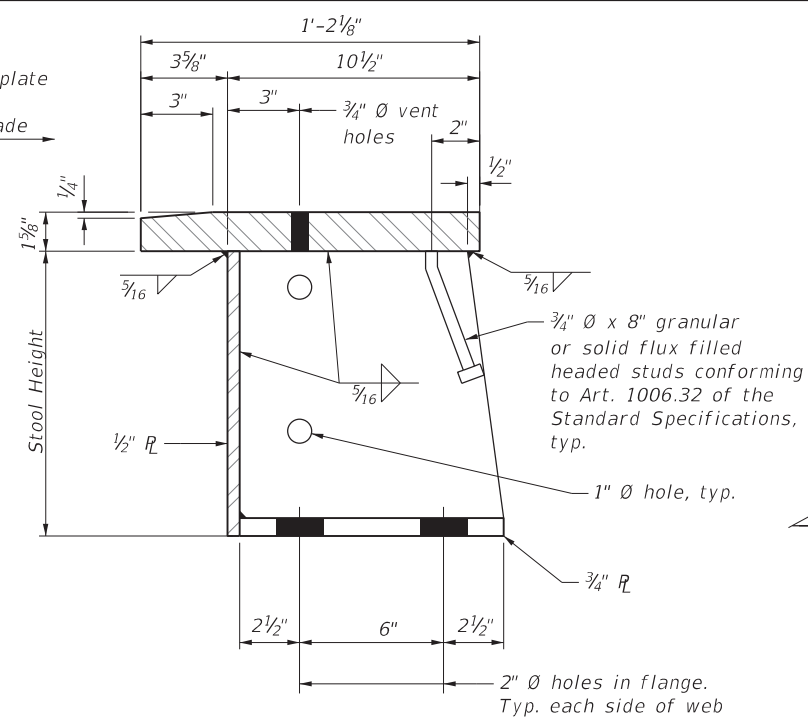
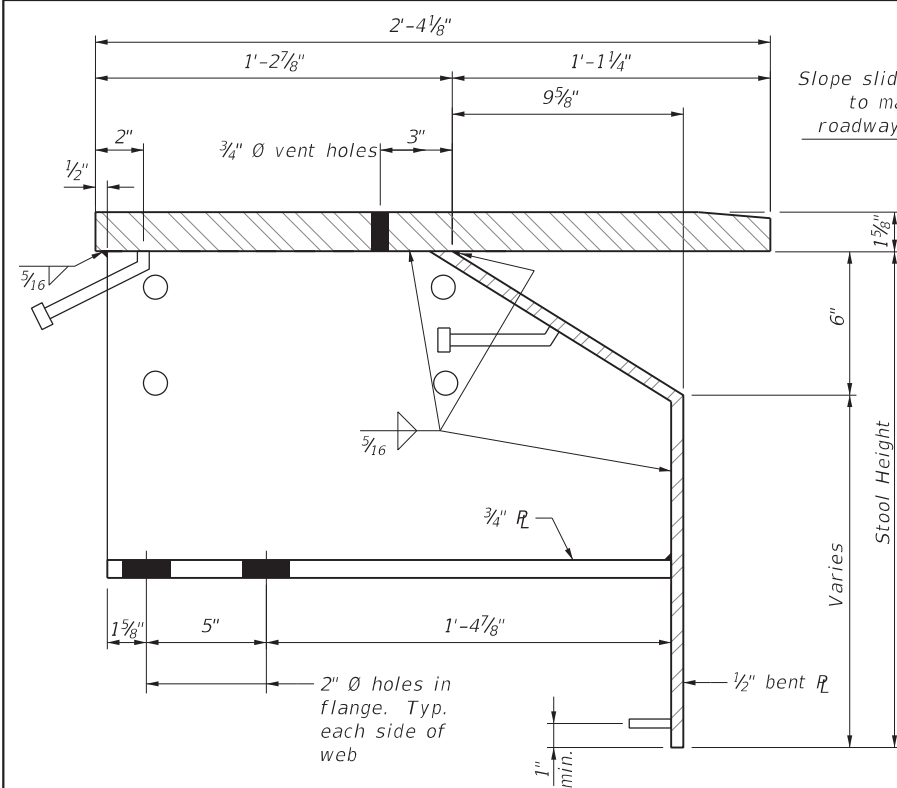
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

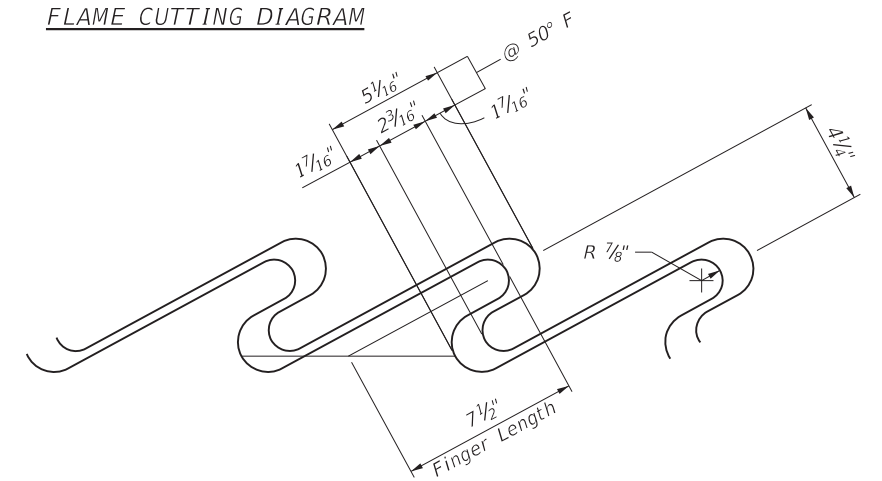
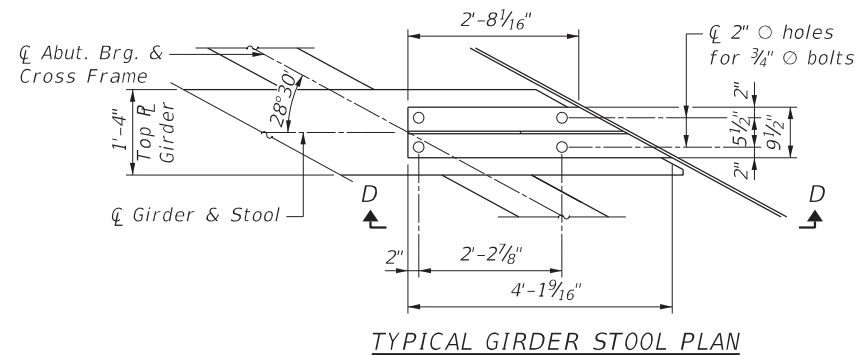
BRIDGE APPROACH SLAB DETAILS – SOUTH ABUTMENT
STRUCTURE NO. 060-0347

SCALE: SHEET 17 OF 41 SHEETS STA. TO STA.

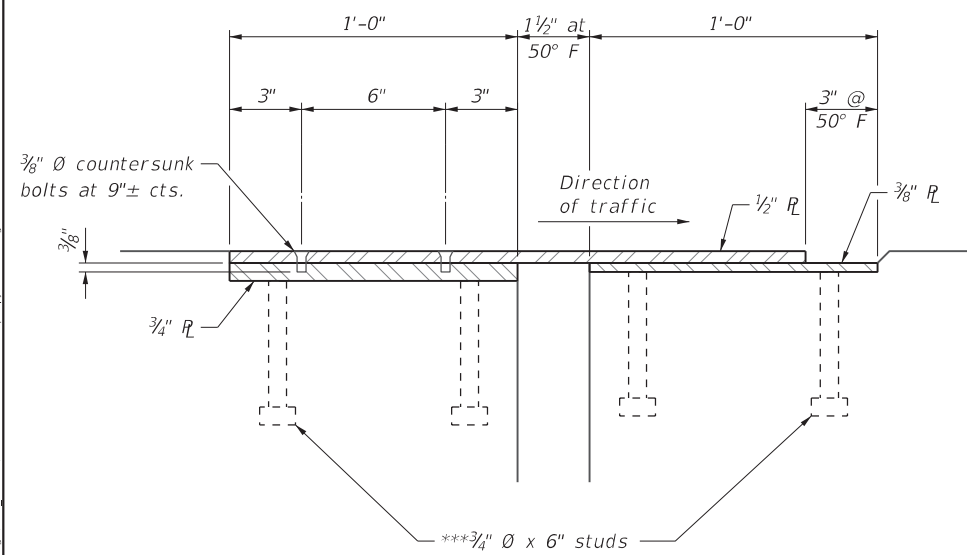
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582	6-23B-1	MADISON	90	57
				CONTRACT NO. 76H49
				ILLINOIS FED. AID PROJECT



STOOL DETAILS
Horizontal dimensions are perpendicular to the joint.

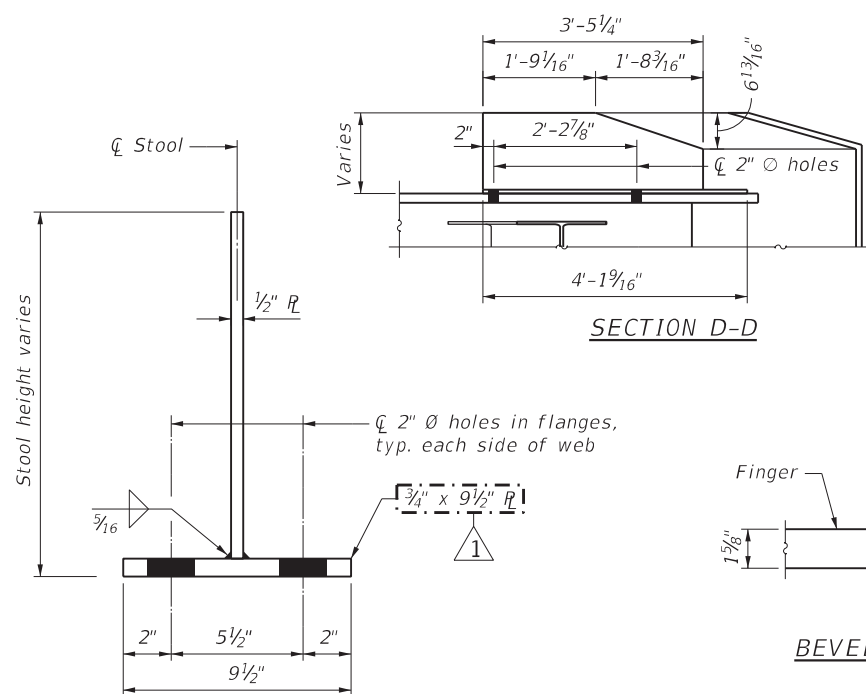


TYPICAL GIRDER STOOL PLAN

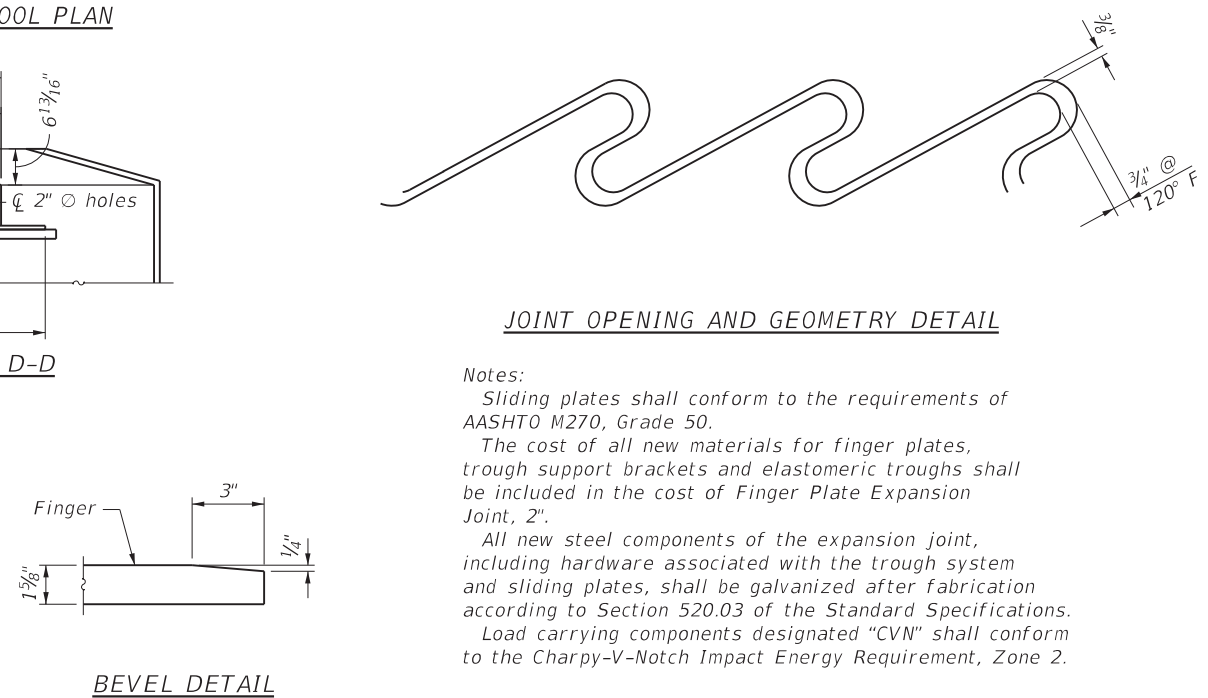


SECTION C-C

***Granular or solid flux filled headed studs conforming to Art. 1006.32 of the Standard Specifications.



SECTION THRU STOOL



BEVEL DETAIL

Notes:
Sliding plates shall conform to the requirements of AASHTO M270, Grade 50.
The cost of all new materials for finger plates, trough support brackets and elastomeric troughs shall be included in the cost of Finger Plate Expansion Joint, 2".
All new steel components of the expansion joint, including hardware associated with the trough system and sliding plates, shall be galvanized after fabrication according to Section 520.03 of the Standard Specifications.
Load carrying components designated "CVN" shall conform to the Charpy-V-Notch Impact Energy Requirement, Zone 2.

NORTH ABUTMENT-BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Finger Plate Expansion Joint, 2"	Foot	76

REVISD 1-2-2024

Sheet 2 of 5

MODEL: Definit FILE: NAME: 11182248_PTB_199_0218219_059_W05_IL111_R14101CAD_Sheets\0600347-76\49-058-62-0600347-18-22.dgn

HMG
ENGINEERS
IL PROF DESIGN FIRM 184.000899

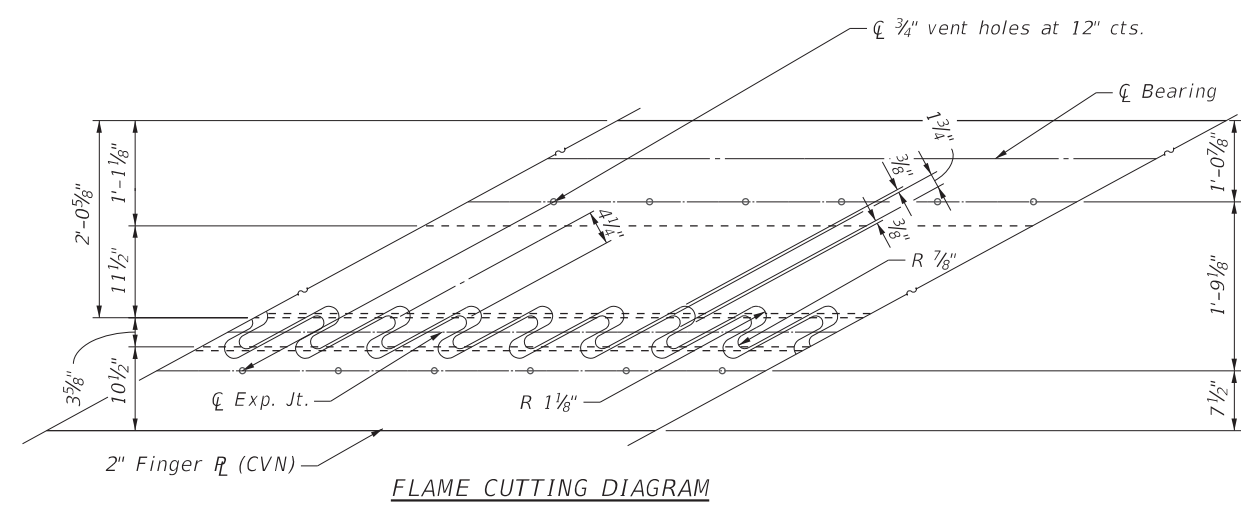
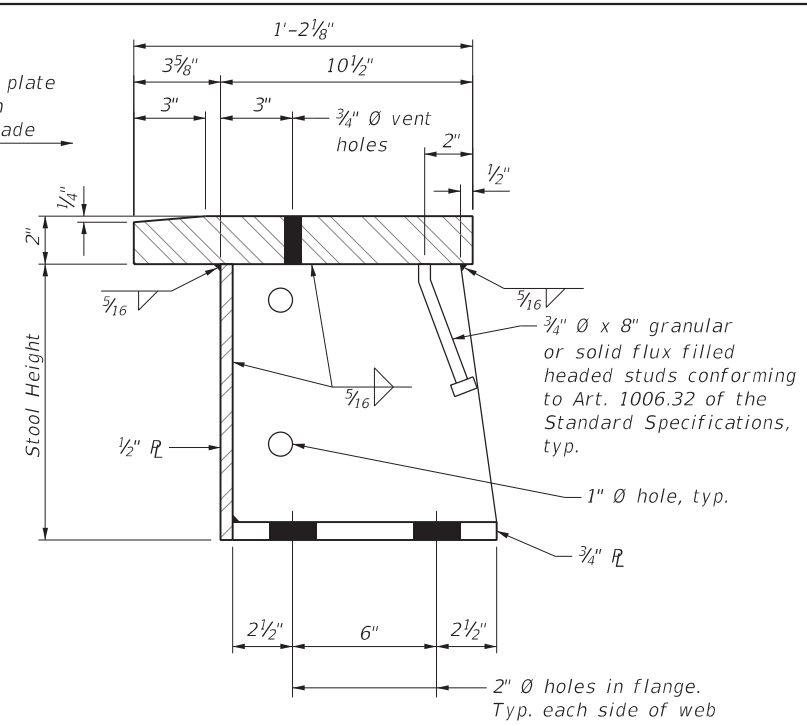
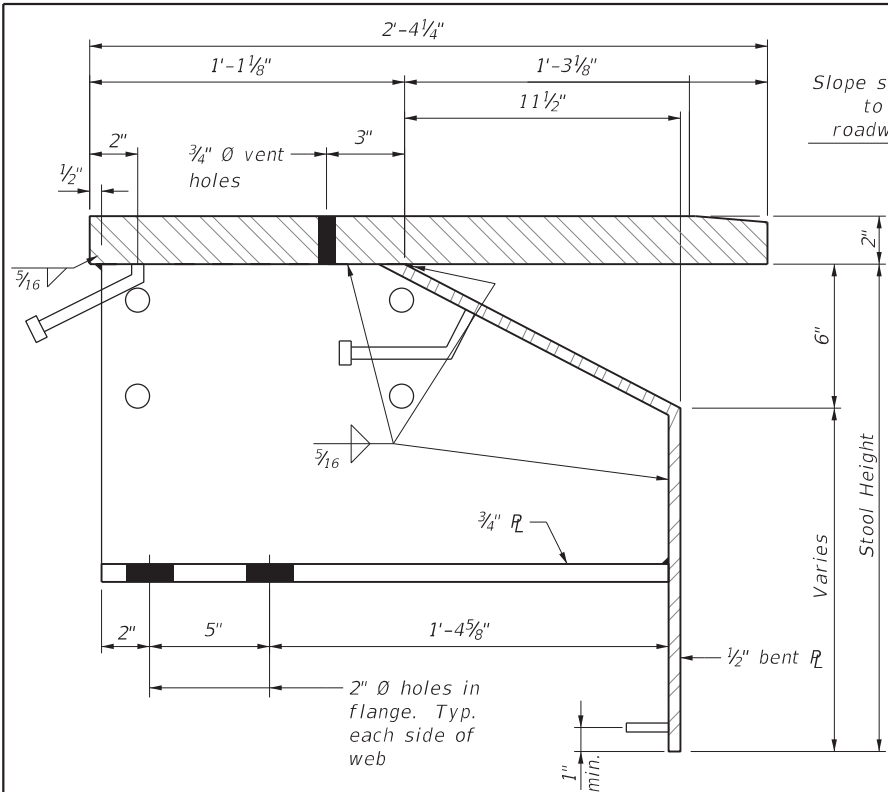
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

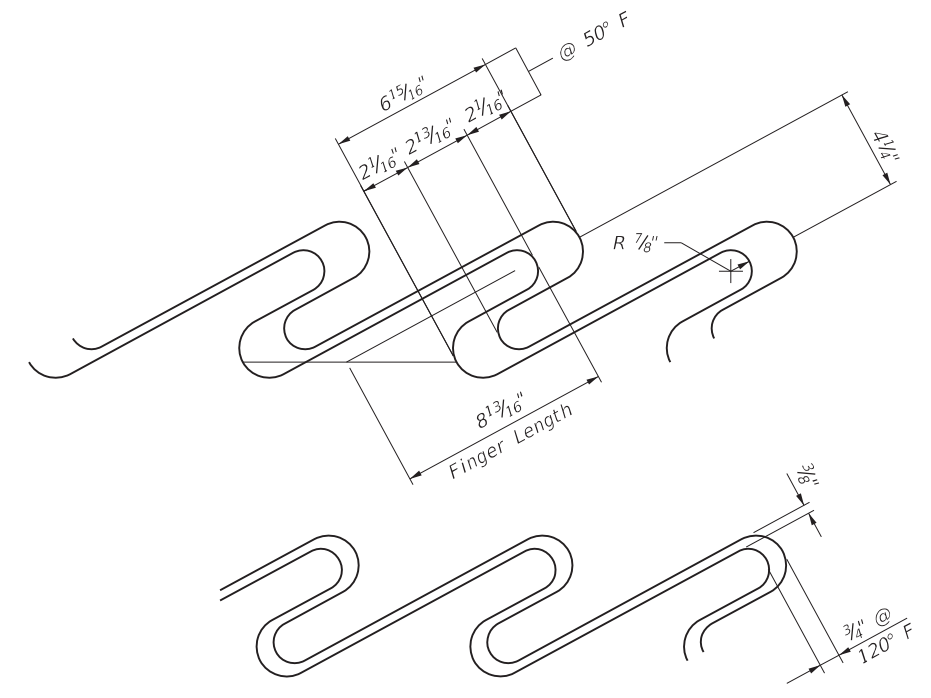
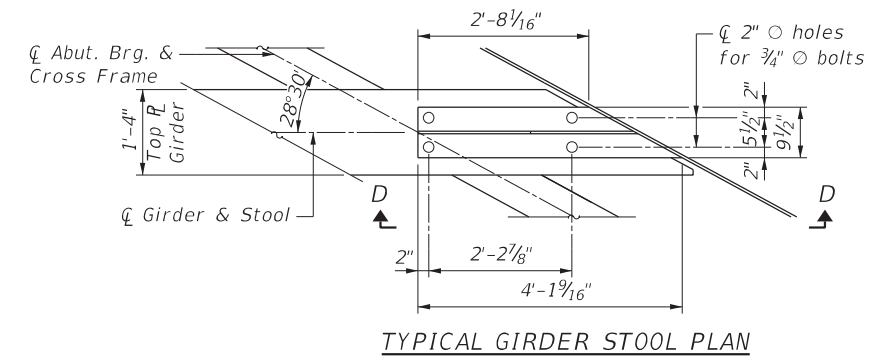
FINGER PLATE EXPANSION JOINT DETAILS
STRUCTURE NO. 060-0347

SCALE: SHEET 19 OF 41 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 76H49			ILLINOIS FED. AID PROJECT	

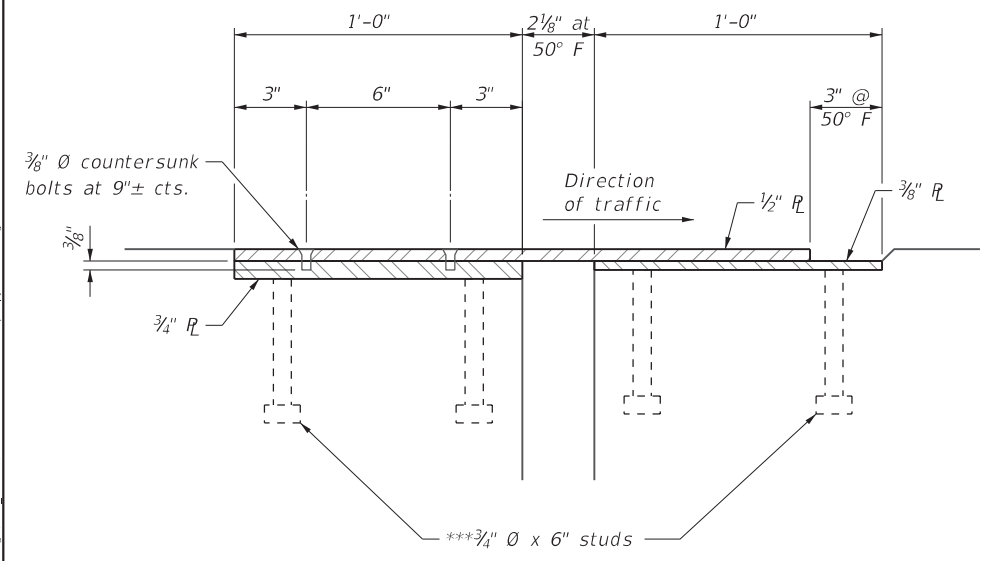


STOOL DETAILS
Horizontal dimensions are perpendicular to the joint.



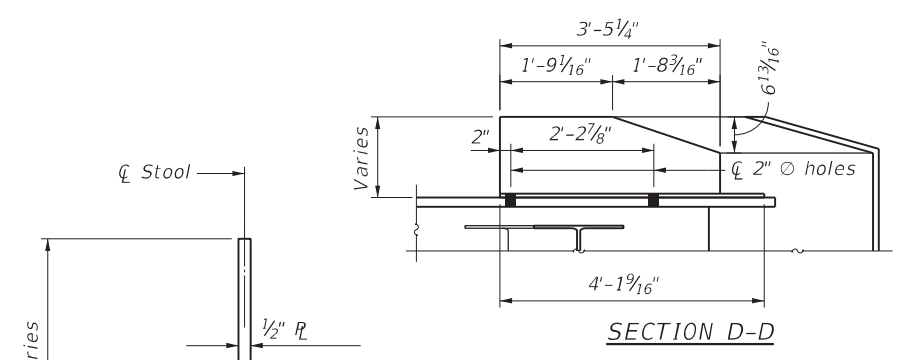
TYPICAL GIRDER STOOL PLAN

JOINT OPENING AND GEOMETRY DETAIL

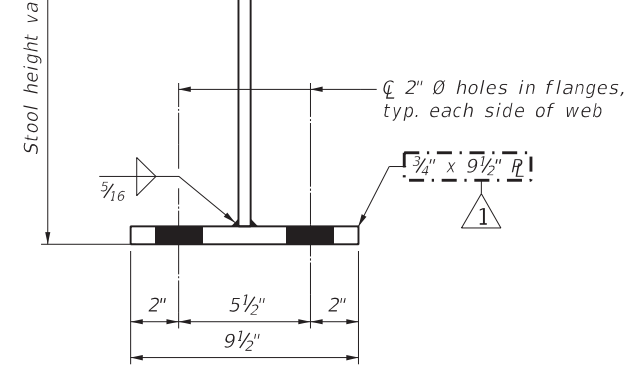


SECTION C-C

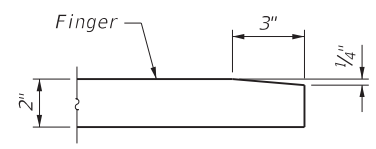
***Granular or solid flux filled headed studs conforming to Art. 1006.32 of the Standard Specifications.



SECTION D-D



SECTION THRU STOOL



BEVEL DETAIL

Notes:
Sliding plates shall conform to the requirements of AASHTO M270, Grade 50.
The cost of all new materials for finger plates, trough support brackets and elastomeric troughs shall be included in the cost of Finger Plate Expansion Joint, 3".
All new steel components of the expansion joint, including hardware associated with the trough system and sliding plates, shall be galvanized after fabrication according to Section 520.03 of the Standard Specifications.
Load carrying components designated "CVN" shall conform to the Charpy-V-Notch Impact Energy Requirement, Zone 2.

SOUTH ABUTMENT-BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Finger Plate Expansion Joint, 3"	Foot	76

REVISD 1-2-2024

Sheet 4 of 5

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	DATE - 12/08/23	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FINGER PLATE EXPANSION JOINT DETAILS
STRUCTURE NO. 060-0347

SCALE: SHEET 21 OF 41 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
582	6-23B-1	MADISON	90	61
ILLINOIS FED. AID PROJECT			CONTRACT NO. 76H49	

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier	0.5 Sp. 2
I_s	(in ⁴)	34,409	48,964	34,409
$I_c(n)$	(in ⁴)	73,191	96,050	73,191
$I_c(3n)$	(in ⁴)	55,337	—	55,337
$I_c(cr)$	(in ⁴)	—	55,670	—
S_s	(in ³)	1419	1959	1419
$S_c(n)$	(in ³)	1784	—	1784
$S_c(3n)$	(in ³)	1659	—	1659
$S_c(cr)$	(in ³)	—	2044	—
S_x	(in ³)	1658	—	1725
DC1	(k/ft)	1.13	1.21	1.13
M _{DC1}	(k)	1129	1803	405
DC2	(k/ft)	0.21	0.21	0.21
M _{DC2}	(k)	215	314	67
DW	(k/ft)	0.36	0.36	0.36
M _{DW}	(k)	370	541	116
LLDF		0.622	0.620	0.618
M _{ℓ + IM}	(k)	1726	1863	1446
f_t (Strength I)	(ksi)	27.7	3.7	16.0
$M_u + \frac{1}{3} f_t S_x$	(k)	6531	—	4061
$\phi_r M_n$	(k)	8556	—	8556
f_s DC1	(ksi)	9.5	11.0	3.4
f_s DC2	(ksi)	1.6	1.8	0.5
f_s DW	(ksi)	2.7	3.2	0.8
f_s (ℓ + IM)	(ksi)	11.6	10.9	9.7
f_t (Service II)	(ksi)	20.6	2.7	11.9
$f_s + \frac{f_t}{2}$ (Service II)	(ksi)	39.2	31.6	23.3
Service II Resistance (ksi)		47.5	47.5	47.5
$f_s + \frac{f_t}{3}$ (Strength I)	(ksi)	—	41.2	—
$\phi_r F_n$	(ksi)	—	50.0	—
V_r	(k)	41.1	45.2	37.0

INTERIOR GIRDER REACTION TABLE		
	Abut.	Pier
LLDF	0.83	0.83
OCF	1.37	—
R _{DC1}	(k) 51.8	156.7
R _{DC2}	(k) 10.0	27.9
R _{DW}	(k) 17.1	48.0
R _ℓ	(k) 114.1	149.2
R _{IM}	(k) 29.0	33.5
R _{Total (Strength I)(Impact)}	(k) 353.4	622.5
R _{Total (Strength I)(No Impact)}	(k) 302.6	563.9

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in.⁴ and in.³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in.⁴ and in.³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

$I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.⁴ and in.³).

S_x : Section modulus about the major axis of a section to the controlling flange, tension or compression, taken as yield moment with respect to the controlling flange over the yield strength of the controlling flange (in.³).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

LLDF: Live Load Distribution Factor for moment and shear computed according to Article 4.6.2.2 and further IDOT provisions.

M_{ℓ + IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u : Strength I load combination of factored design moments (kip-ft.). 1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{ℓ + IM}

f_t : Factored calculated flange lateral bending stress as calculated using Article 6.10.1.6 and as further simplified by IDOT provisions (ksi).

$\phi_r M_n$: Factored nominal flexural resistance of the section determined as specified in Article 6.10.7.1 or A6 as applicable (kip-ft.).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi). M_{DC1} / S_s

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi). $M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi). $M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (ℓ + IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi). $M_{ℓ + IM} / S_c(n)$ or $M_{ℓ + IM} / S_c(cr)$ as applicable.

$f_s + f_t/2$ (Service II): Sum of stresses as computed below (ksi). f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s (ℓ + IM) + $f_t/2$

Service II Resistance: Composite (0.95R_nF_{yf}) or noncomposite (0.80R_nF_{yf}) stress capacity according to Article 6.10.4.2 (ksi).

$f_s + f_t/3$ (Strength I): Sum of stresses as computed below on non-compact sections (ksi). 1.25 (f_s DC1 + f_s DC2) + 1.5 f_s DW + 1.75 f_s (ℓ + IM) + $f_t/3$

$\phi_r F_n$: Factored nominal flexural resistance of the section as specified in Article 6.10.7.2 or 6.10.8 as applicable (ksi).

V_r: Maximum factored shear range in span computed according to Article 6.10.10.

OCF: Obtuse Correction Factor according to Article 4.6.2.2.3c or as further simplified by IDOT provisions.

R_{DC1}: Un-factored reaction due to non-composite dead load (kip).

R_{DC2}: Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).

R_{DW}: Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).

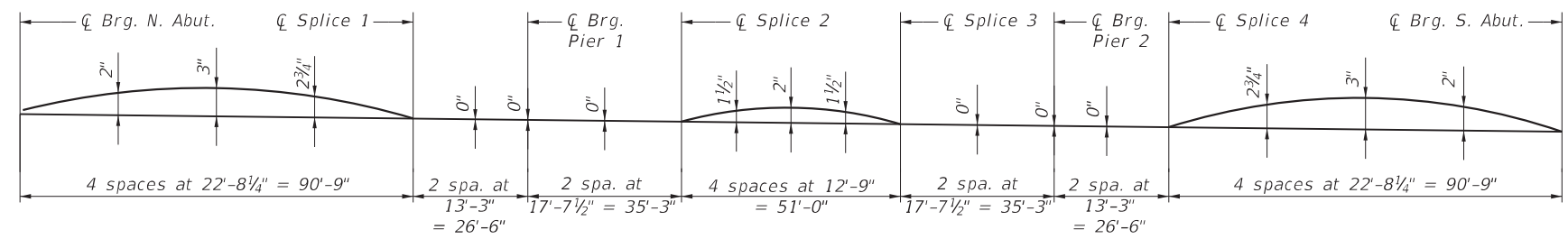
R_ℓ : Un-factored live load reaction (kip).

R_{IM} : Un-factored dynamic load allowance (impact) (kip).

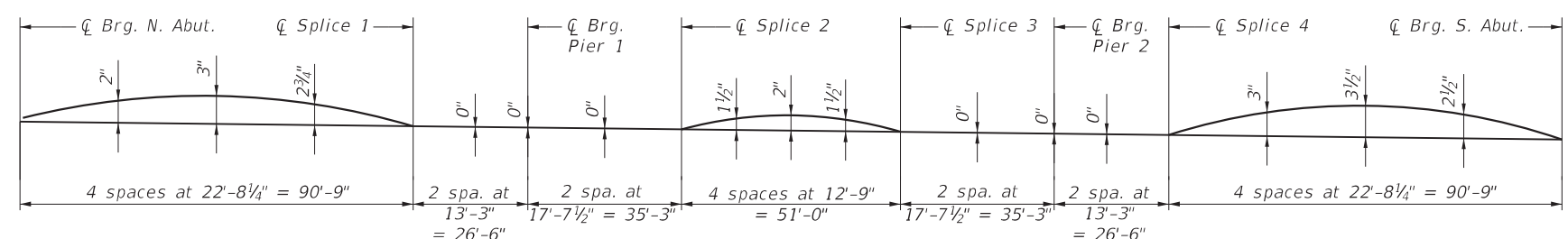
R_{Total (Strength I)(Impact)}: Strength I load combination of factored design reactions (kip). 1.25 (R_{DC1} + R_{DC2}) + 1.5R_{DW} + 1.75 (R_ℓ + R_{IM})

R_{Total (Strength I)(No Impact)}: Strength I load combination of factored design reactions, not including dynamic load allowance (Impact) (kip). 1.25 (R_{DC1} + R_{DC2}) + 1.5R_{DW} + 1.75 (R_ℓ)

Note: $M_{ℓ}$ and $R_{ℓ}$ include the effects of centrifugal force and superelevation.



CAMBER DIAGRAM-GIRDER 1, 2 & 3



CAMBER DIAGRAM-GIRDER 4 & 5

**TOP OF WEB ELEVATIONS

Location	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5
℄ Brg. North Abutment	416.173	416.502	416.742	416.779	416.766
℄ Splice 1	417.010	417.240	417.371	417.298	417.166
℄ Brg. Pier 1	417.079	417.274	417.372	417.268	417.108
℄ Splice 2	417.171	417.318	417.374	417.228	417.030
℄ Splice 3	417.139	417.222	417.217	417.009	416.752
℄ Brg. Pier 2	417.001	417.048	417.015	416.821	416.631
℄ Splice 4	416.897	416.917	416.863	416.679	416.540
℄ Brg. South Abutment	415.942	415.808	415.748	415.698	415.668

** For Fabrication only.

REVISED 1-2-2024

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PLOT DATE	= 12/20/2023	DATE	- 12/08/23	REVISED	-

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS STRUCTURE NO. 060-0347

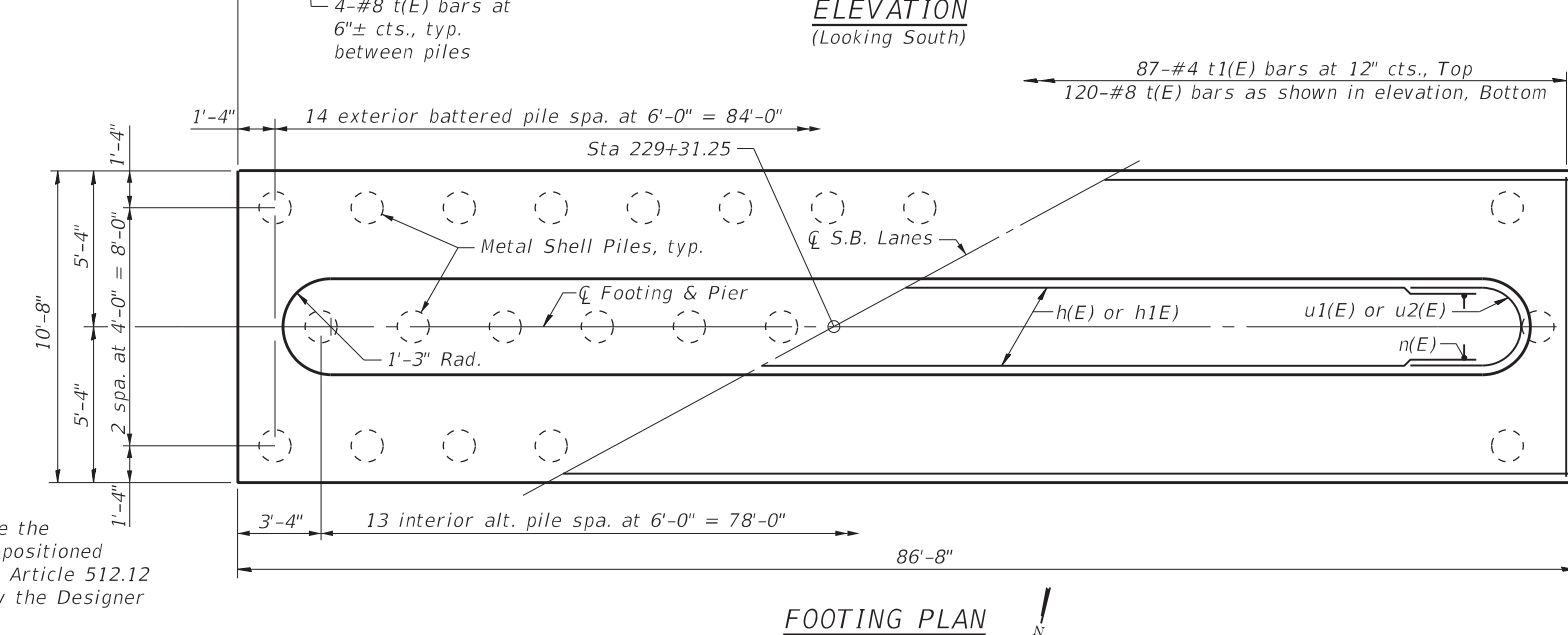
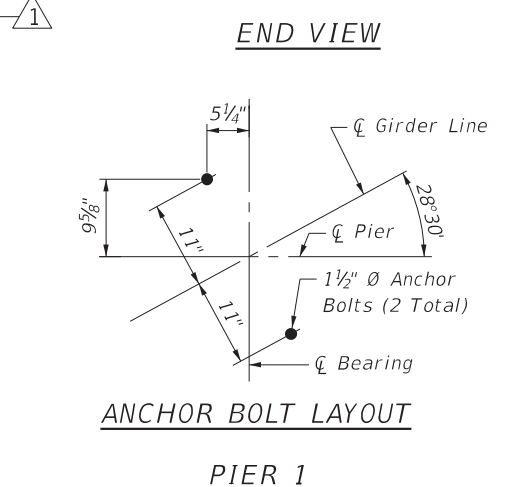
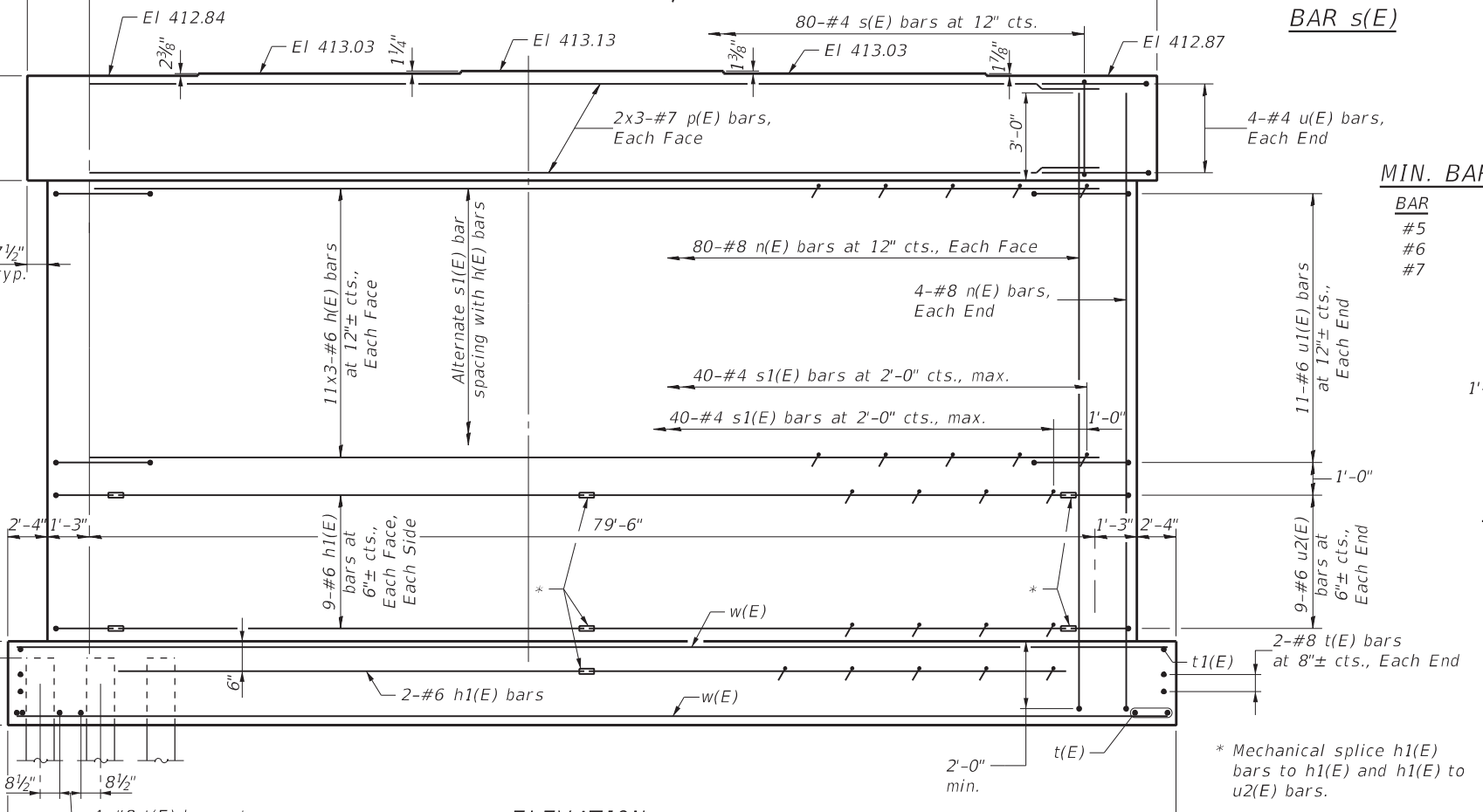
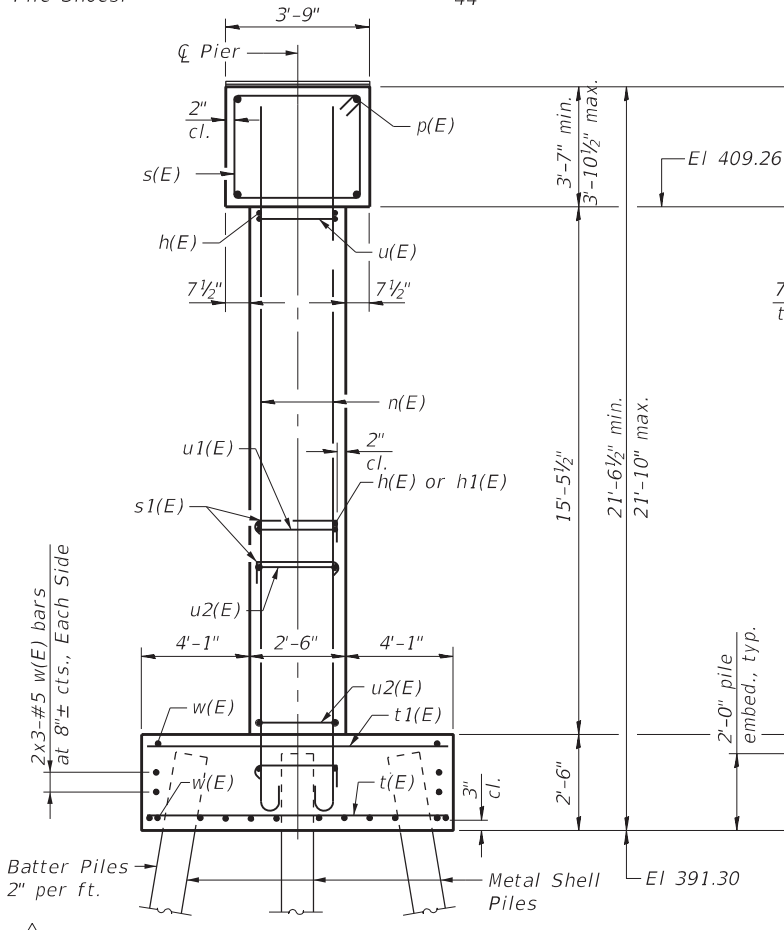
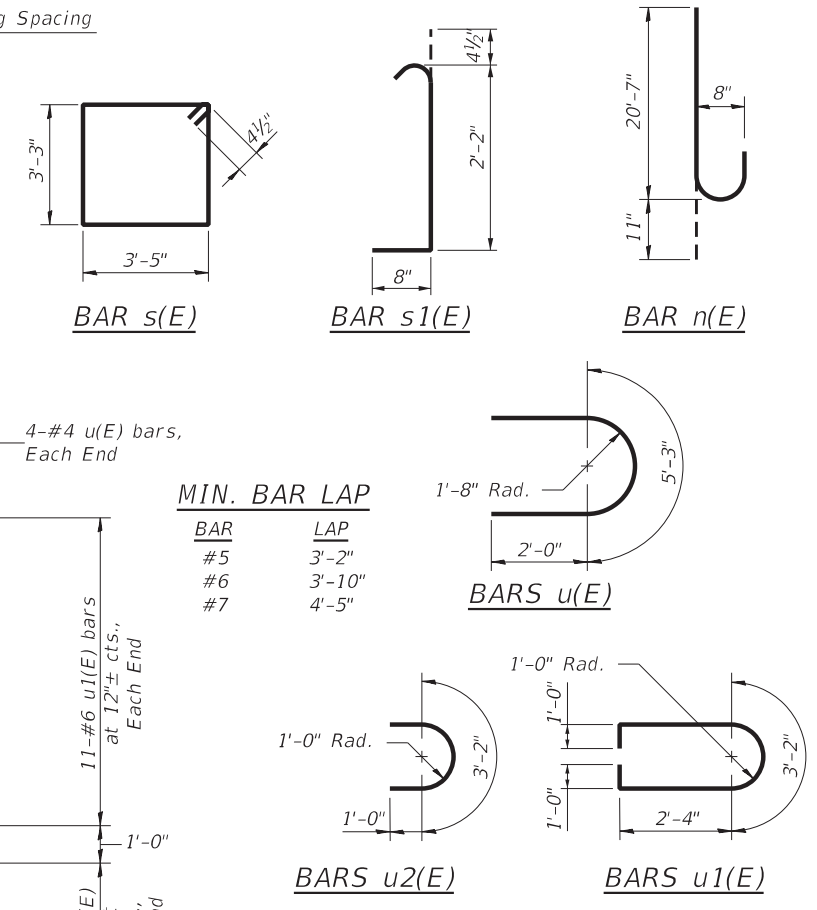
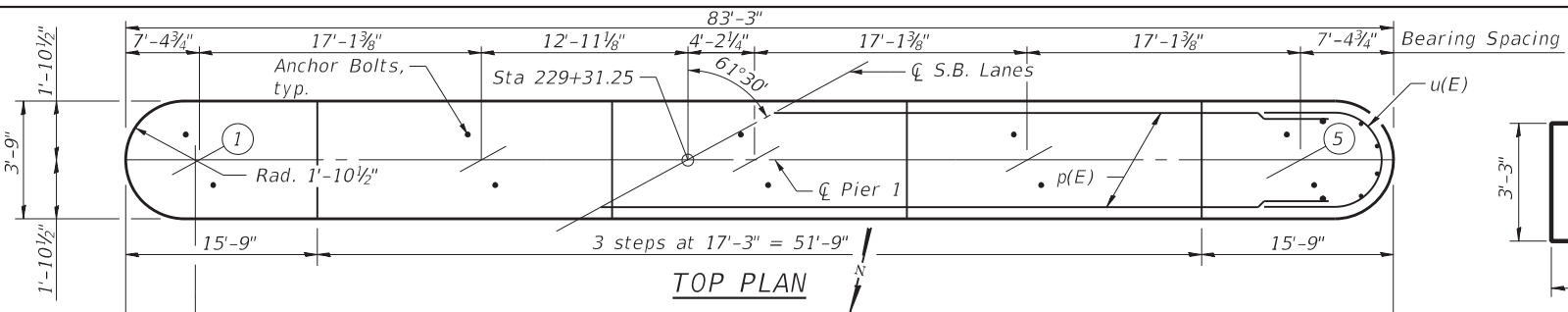
SCALE: SHEET 25 OF 41 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
582	6-23B-1	MADISON	90	65
CONTRACT NO. 76H49				
ILLINOIS		FED. AID PROJECT		

Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles, see sheet 38 of 41.

PILE DATA

Type: Metal Shell PP14 x 0.312"
 Nominal Required Bearing: 308 k
 Factored Resistance Available: 169 k
 Est. Length: 47'
 No. Production Piles: 43
 No. Test Piles: 1
 Pile Shoes: 44



PIER 1 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	66	#6	29'-1"	—
h1(E)	40	#6	38'-9"	—
n(E)	168	#8	21'-6"	U
p(E)	12	#7	29'-6"	—
s(E)	80	#4	14'-1"	□
s1(E)	880	#4	3'-3"	J
t(E)	120	#8	10'-2"	—
t1(E)	87	#4	10'-4"	—
u(E)	8	#4	9'-3"	U
u1(E)	22	#6	9'-10"	U
u2(E)	18	#6	5'-2"	U
w(E)	84	#5	30'-11"	—
Cofferdam Excavation	Cu Yd		673.5	
Concrete Structures	Cu Yd		243.9	
Reinforcement Bars, Epoxy Coated	Pound		25,330	
Furnishing Metal Shell Piles 14" x 0.312"	Foot		2,021	
Driving Piles	Foot		2,021	
Test Pile, Metal Shell	Each		1	
Pile Shoes	Each		44	
Cofferdam Type 2 (Location 1)	Each		1	
Seal Coat Concrete	Cu Yd		255	
Mechanical Splicers	Each		56	

Note:
 Following removal of the existing pier footing, locate the existing piles. Any proposed piles which must be repositioned more than the 6" allowed by Standard Specifications Article 512.12 should be reported to the Engineer for resolution by the Designer and the Bureau of Bridges and Structures.

PC-1 2-17-2017

REVISD 1-2-2024

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		DATE - 12/08/23	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

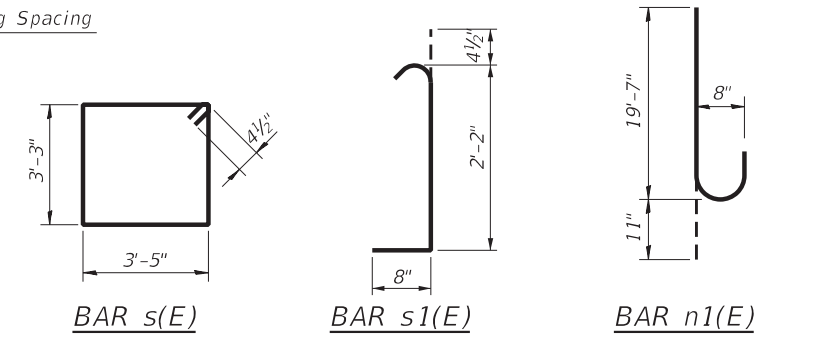
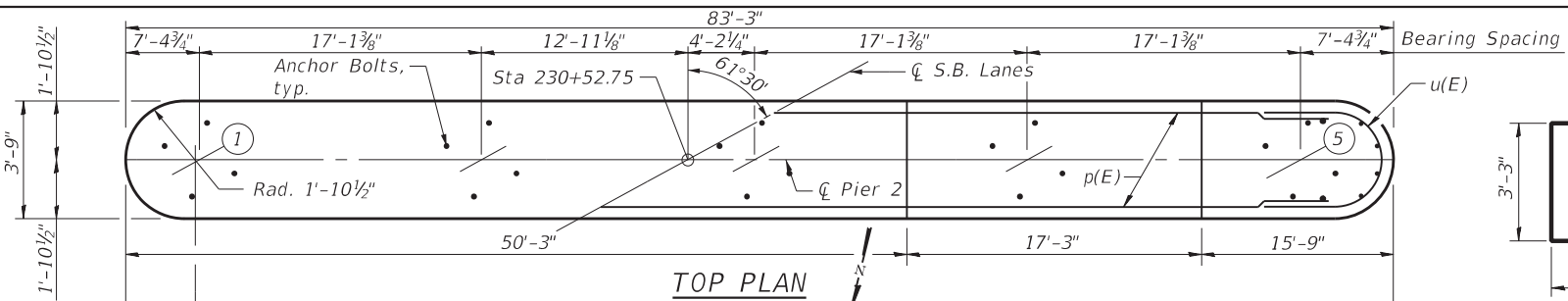
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 SCALE: SHEET 36 OF 41 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
582	6-23B-1	MADISON	90	76
				CONTRACT NO. 76H49
		ILLINOIS	FED. AID PROJECT	

Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles, see sheet 38 of 41.

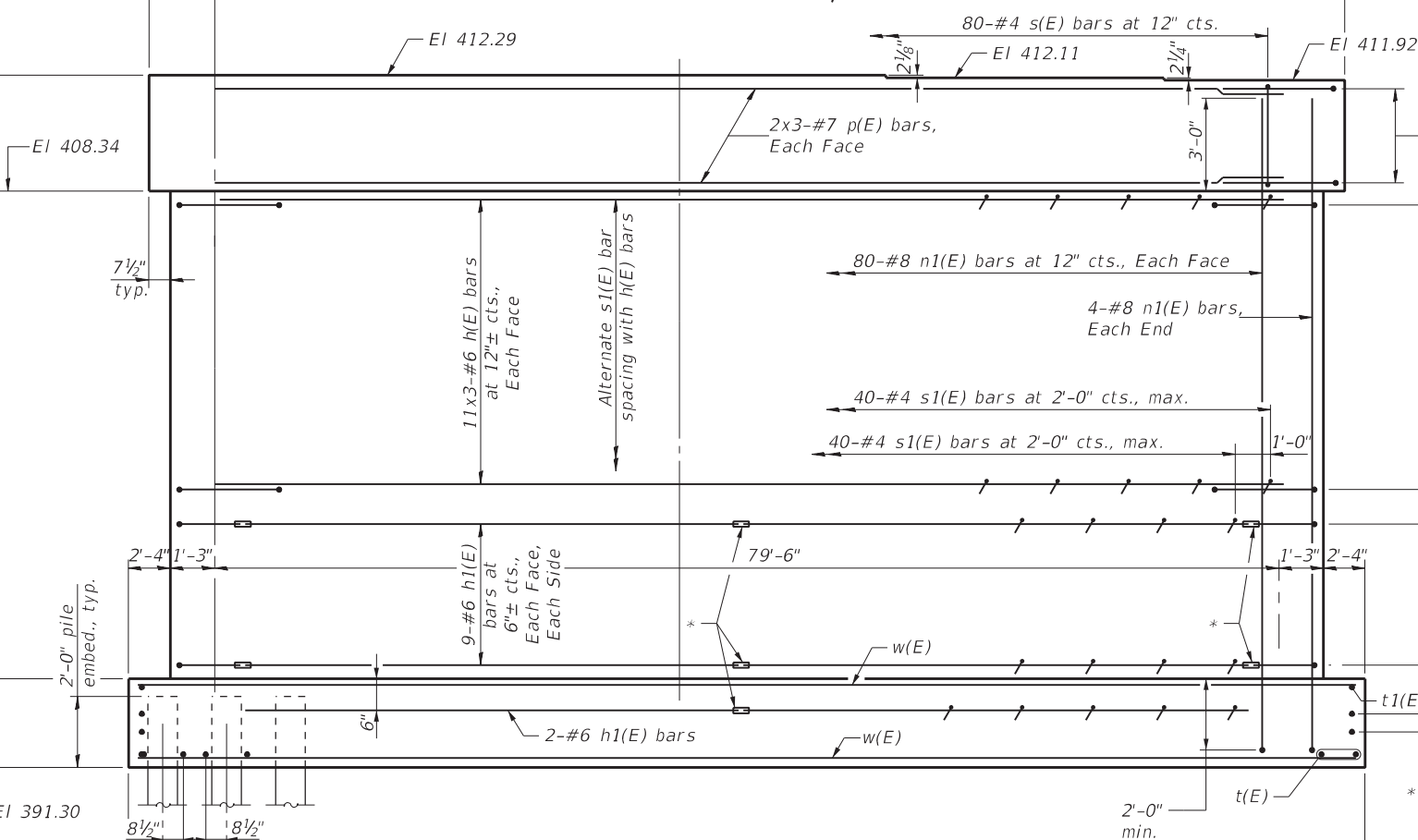
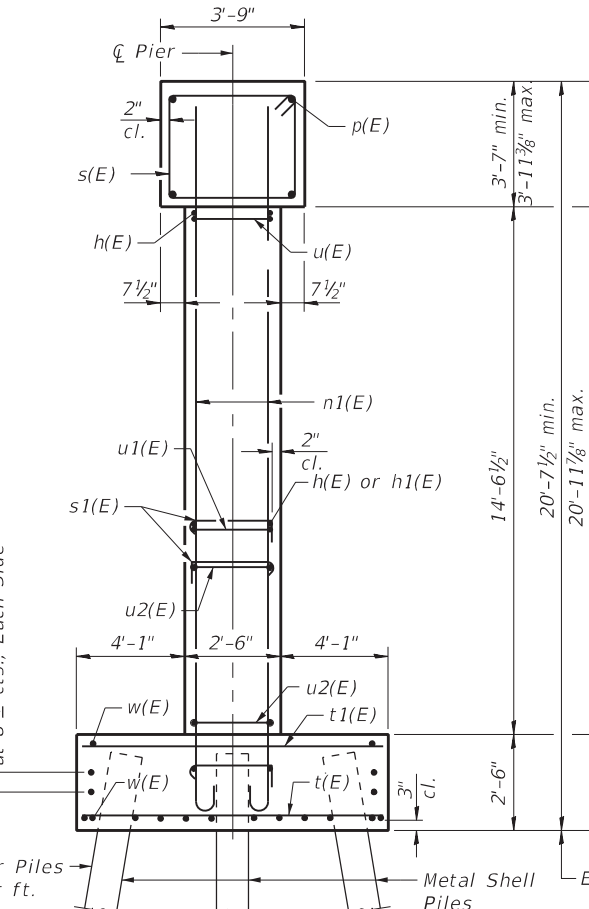
PILE DATA

Type: Metal Shell PP14 x 0.312"
 Nominal Required Bearing: 412 k
 Factored Resistance Available: 226 k
 Est. Length: 47'
 No. Production Piles: 43
 No. Test Piles: 1
 Pile Shoes: 44



MIN. BAR LAP

BAR	LAP
#5	3'-2"
#6	3'-10"
#7	4'-5"



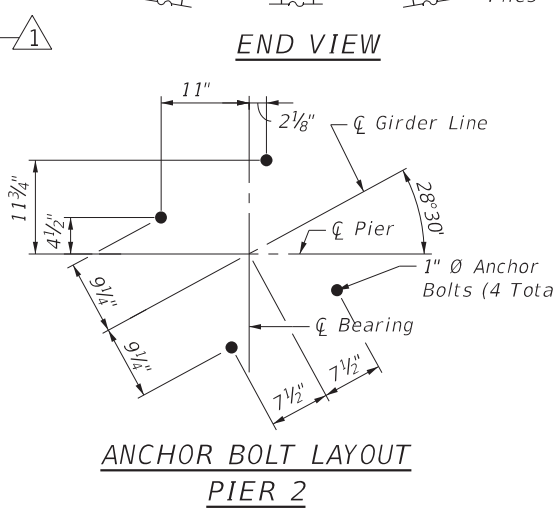
80-#4 s(E) bars at 12" cts.
 EI 412.29
 EI 412.11
 EI 411.92
 EI 408.34
 EI 391.30
 2x3-#7 p(E) bars, Each Face
 4-#4 u(E) bars, Each End
 80-#8 n1(E) bars at 12" cts., Each Face
 4-#8 n1(E) bars, Each End
 40-#4 s1(E) bars at 2'-0" cts., max.
 40-#4 s1(E) bars at 2'-0" cts., max.
 11-#6 u1(E) bars at 12"± cts., Each End
 9-#6 u2(E) bars at 6"± cts., Each End
 2-#8 t(E) bars at 8"± cts., Each End
 11x3-#6 h(E) bars at 12"± cts., Each Face
 Alternate s1(E) bar spacing with h(E) bars
 9-#6 h1(E) bars at 6"± cts., Each Face, Each Side
 2-#6 h1(E) bars
 2'-0" embed., typ.

PIER 2 BILL OF MATERIAL

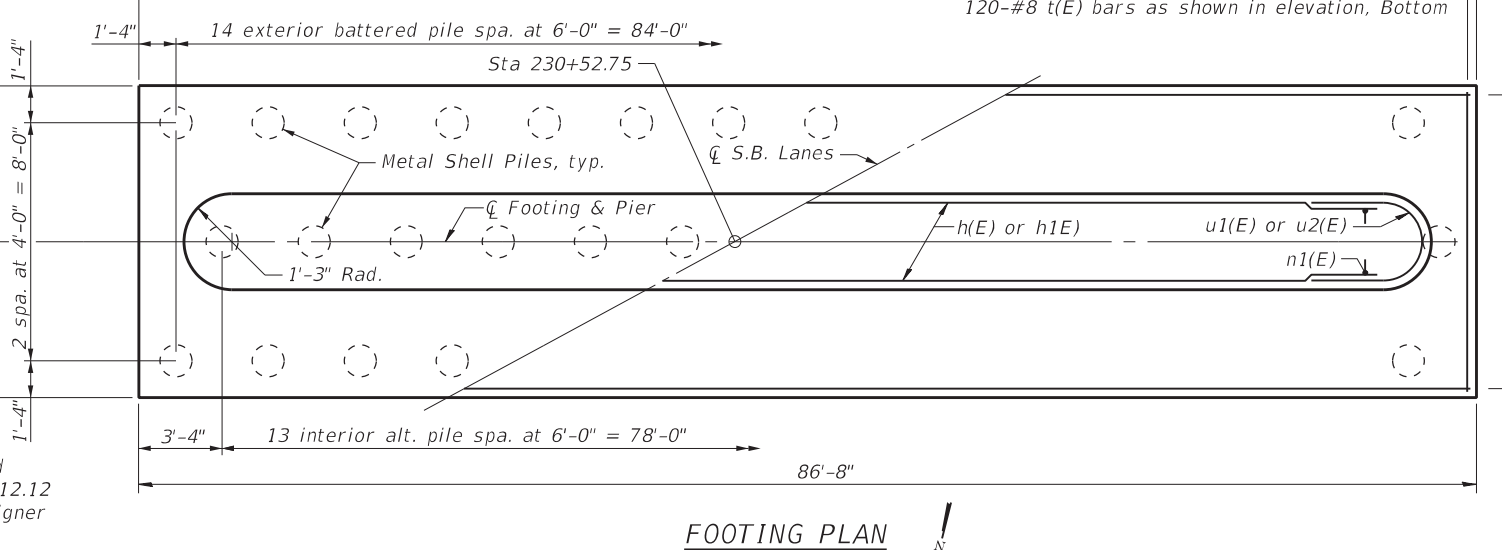
Bar	No.	Size	Length	Shape
h(E)	66	#6	29'-1"	—
h1(E)	40	#6	38'-9"	—
n1(E)	168	#8	20'-6"	U
p(E)	12	#7	29'-6"	—
s(E)	80	#4	14'-1"	□
s1(E)	880	#4	3'-3"	┌
t(E)	120	#8	10'-2"	—
t1(E)	87	#4	10'-4"	—
u(E)	8	#4	9'-3"	U
u1(E)	22	#6	9'-10"	U
u2(E)	18	#6	5'-2"	┌
w(E)	84	#5	30'-11"	—

Cofferdam Excavation	Cu Yd	673.5
Concrete Structures	Cu Yd	238.3
Reinforcement Bars, Epoxy Coated	Pound	24,880
Furnishing Metal Shell Piles 14" x 0.312"	Foot	2,021
Driving Piles	Foot	2,021
Test Pile, Metal Shell	Each	1
Pile Shoes	Each	44
Cofferdam Type 2 (Location 2)	Each	1
Seal Coat Concrete	Cu Yd	255
Mechanical Splicers	Each	56

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 DATE: 12/20/2023



Note:
 Following removal of the existing pier footing, locate the existing piles. Any proposed piles which must be repositioned more than the 6" allowed by Standard Specifications Article 512.12 should be reported to the Engineer for resolution by the Designer and the Bureau of Bridges and Structures.



PC-1 2-17-2017

REVISION 1-2-2024



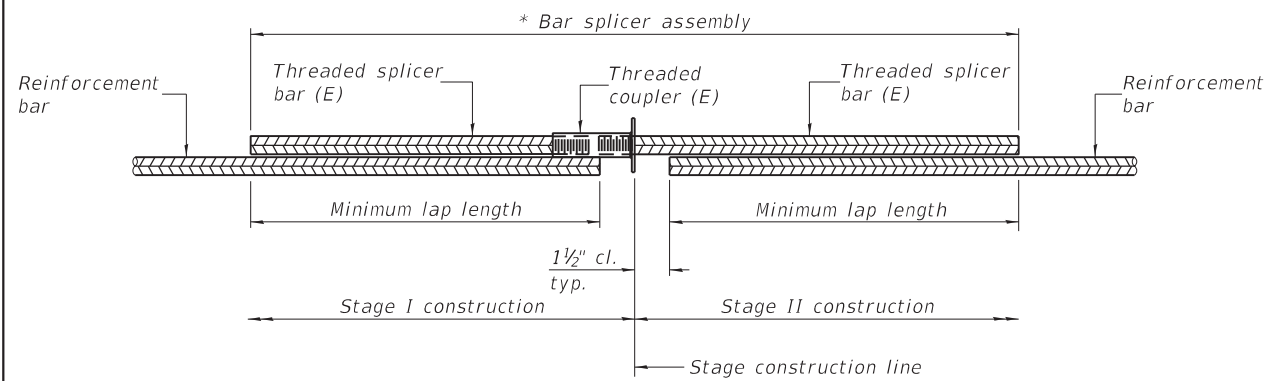
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PLOT DATE = 12/20/2023	CHECKED - BGH	REVISED -
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PIER 2 STRUCTURE NO. 060-0347
 SCALE: SHEET 37 OF 41 SHEETS STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
582	6-23B-1	MADISON	90	77

CONTRACT NO. 76H49
 ILLINOIS FED. AID PROJECT



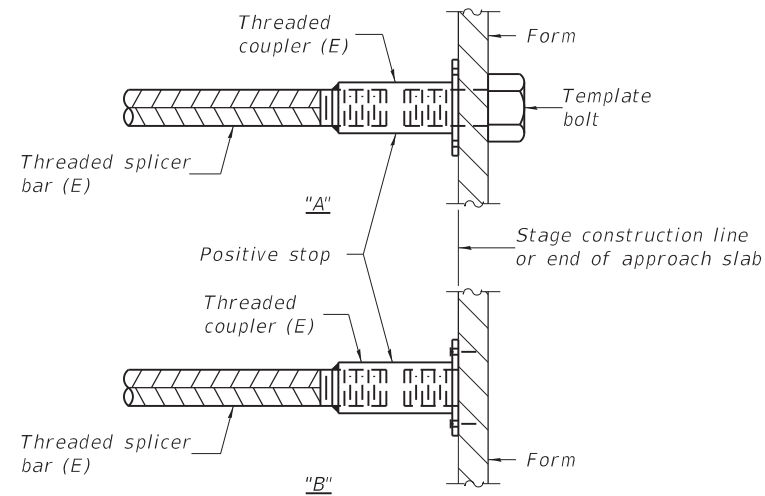
STANDARD BAR SPLICER ASSEMBLY PLAN

Only bar splicer assemblies as presented on the approved QPL list may be used.

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length

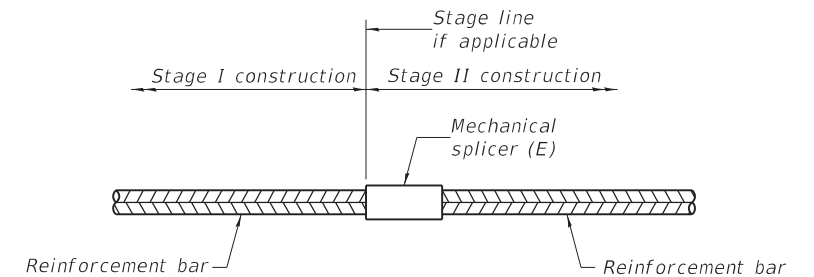


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Top of Deck Ends	9	8
Pier 1	6	56
Pier 2	6	56

Notes:
 Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

1 REVISED 1-2-2024

BSD-1

2-1-2023

MODEL: D:\hgm\118\23048_PTB_199_0218249_059_V050_V051_IL111_R\hgm\CAD_Sheets\06600347_76\118_079-splicers-39.dgn
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HMG
 ENGINEERS
 IL PROF DESIGN FIRM 184.000899

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PLOT DATE = 12/20/2023	DATE - 12/08/23	REVISOR -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 060-0347**

SCALE: SHEET 39 OF 41 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
582	6-23B-1	MADISON	90	79
CONTRACT NO. 76H49			ILLINOIS FED. AID PROJECT	