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PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
JACKSON COUNTY
Bridge Deck Replacement
IA 62 over Brush Creek
2.0 miles North of SR Y61

Refer to the Plan Sheets for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.13 of the Specifications.

Revisions

	TOTAL
	59
PROJECT IDENTIFICATION NUMBER	
22-49-062-010	
CONTRACT ID NUMBER	
49-0621-030	
PROJECT NUMBER	
BRF-062-1(030)--38-49	
R.O.W. PROJECT NUMBER	
PROJECT DIRECTORY NUMBER	
4906201022	



IowaDOT Bridges and Structures
Consultant Coordinator Contact:
Linda Narigon

Design Data	
2024 AADT	1,130 V.P.D.
Trucks	16%
Total Design ESALs	---

Index Of Seals		
Sheet No.	Name	Type
A.1	Anthony J. Bower	Structural Design
A.3	Jacob Verry	Roadway Design

Standard Road Plans

Standard Road Plans are listed on C.4

Structural Design

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

7/30/2026

Signature Anthony J. Bower Date

Printed or Typed Name

My license renewal date is December 31, 2026

Pages or sheets covered by this seal: A.1, A.2, V.1-V.24

Estimated Bridge Repair Quantities and Reference Notes - Design #127

Item No.	Item Code	Item	Unit	Estimated Quantities	Estimate Reference Notes
1	2401-6750001	Removals, As Per Plan	LS	1.00	Includes all work for removal and off-site disposal of concrete deck, barriers, abutment concrete diaphragm, and portions of concrete backwall as shown in these plans. Removal of scheduled items shall be in accordance with Section 2401 of the Standard Specifications. Any damage to material not to be removed shall be the responsibility of the Contractor and repaired at no extra cost to the State. Contractor to add the following information when submitting the Iowa DNR "Notification of Demolition" from: Name of Asbestos Inspector: Brad Azeltine Date Inspected: 06/16/2021 IA License Number: Iowa DOT Inspector Phone: 515-290-2687 Procedure used to detect the presence of asbestos material: Polarized Light Microscopy (PLM)
2	2402-2720000	Excavation, Class 20	CY	22.0	Includes excavation at existing abutments.
3	2403-1000005	Fiber Reinforcement for Structural Concrete	CY	182.5	Includes the cost of fiber reinforcement for concrete. The concrete is to be paid for in the bid item "High Performance Structural Concrete". Refer to "Developmental Specifications for Fiber Reinforcement for Structural Concrete" for additional information.
4	2403-1000010	Trial Batch and Test Placement (Fiber Reinforced Concrete)	LS	1.00	Refer to "Developmental Specifications for Fiber Reinforcement of Structural Concrete" for additional information.
5	2403-7000210	High Performance Structural Concrete	CY	182.5	Includes concrete for the bridge deck and semi-integral abutments. Includes cost to furnish and place all resilient joint material shown in these plans. Includes furnishing and placing subdrains, porous backfill, and geotextile fabric at abutments. Includes 3" PVC pipes in abutment wings. Refer to "Developmental Specifications for High Performance Concrete for Structures" for additional information.
6	2404-7775005	Reinforcing Steel, Epoxy Coated	LB	55,217	---
7	2404-7775009	Reinforcing Steel, Stainless Steel	LB	3,321	---
8	2414-6424110	Concrete Barrier Railing	LF	355.7	If placement of concrete is done by the slipforming method, Class BR concrete is required. Cast-in-place barrier rails shall use Class C mix. Price bid for this item shall included the cost of cast-in-place forms if required for placement of the concrete.
9	2426-6772011	Beam Repair, As Per Plan	SF	50	---
10	2426-6772013	Repair Beam Ends	EA	5	Perform beam repairs to spalls with exposed reinforcing in PPC beams.
11	2426-6772016	Concrete Repair	SF	84.0	Includes concrete repairs to both pier diaphragms.
12	2499-2300001	Deck Drains	LS	1.00	Includes all new deck drains. Refer to Design Sheet 3 for location and Design Sheet 13 for materials and details of their construction. Measurements will be the lump sum for all deck drains required as specified in the plans. The payment shall be full compensation for furnishing all material, equipment and labor for performance of all work necessary for fabricating and installing the deck drains as per plan. Includes cost of furnishing and placing splash basins (including excavation, Class E revetment, and engineering fabric).
13	2507-2638650	Bridge Wing Armoring - Erosion Stone	SY	12.2	Includes furnishing and placing engineering fabric, erosion stone, and all required excavating, shaping, and compacting for wing armoring.
14	2507-8029000	Erosion Stone	Tons	220.0	Includes furnishing and placing engineering fabric, erosion stone, porous backfill or granular subbase backfill at front face of abutment footing, and all required excavating, shaping, and compacting. Estimated at 1.6 Ton/Cu Yd.
15	2526-8285020	Construction Survey, Control Point Survey	LS	1.00	---
16	2526-8285040	Construction Survey, Location Survey	LS	1.00	Includes all costs associated with surveying the top of existing beams after deck removal. Includes populating the elevations in the e-file "Bridge Deck Grade Adjustment Spreadsheet" and submitting to the Engineer to finalize haunch thicknesses.
17	2533-4980005	Mobilization	LS	1.00	For Erosion Control: preparing the seedbed, furnishing and applying seed, fertilizer, and mulch are all incidental to mobilization and will not be paid for separately.



Roadway Quantities are included elsewhere in these plans.

Design For Repairs to 15°00 Skew (L.A.)

159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge

43'-1½" & 47'-3½" End Spans68'-9" Interior Span

Estimated Quantities

STA. 512+10.00 (IA 62)Turn-in Date: Aug 2026

Jackson County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 127Design Sheet No. 1 of 24FHWA No. 30220

General Notes:

This design is for repairs to the existing 159'-2" x 30'-0" PPCB bridge, on IA 62 over Brush Creek in Jackson County.

Electronic copies of original design plans are available to the contractor as part of the e-files supplied with the contract documents. Dimensions shown on these plans are based on design plans (original Design No. 4659).

See Design Sheet No, 3 for list of repair items.

Faint lines on plans indicate the existing structure.

All alignment, stationing, connecting dimensions, and elevations used in the new details in these plans were developed based on the existing bridge plans and field survey. The Bridge Contractor shall field verify these details before starting construction.

The bridge is designed for HS20-44 loading, plus 20 lbs. per square foot of roadway for future wearing surface.

It is the intent of this design to use the existing concrete beams, stirrups, intermediate diaphragms, pier diaphragms as constructed.

Utility Companies and Municipalities whose facilities are shown on the plans or known to be within the construction limits shall be notified by the Contractor of the construction starting date.

Keyway dimensions shown on these plans are based on nominal dimensions unless stated otherwise. In addition, the bevel used on the keyway shall be limited to a maximum of 10 degrees from vertical.

These bridge plans label all reinforcing steel with english notation (5a1 is 5/8 inch diameter bar). English reinforcing steel received in the field may display the following "Bar Designation". The "Bar Designation is the stamped impression on the reinforcing bars, and is equivalent to the bar diameter in millimeters.

English Size	3	4	5	6	7	8	9	10	11
Bar Designation	10	13	16	19	22	25	29	32	36

All reinforcing bars and bars noted as dowels supplied for this structure shall be deformed reinforcement unless otherwise noted or shown.

Minimum clear distance from face of concrete to near reinforcing bar is to be 2" unless otherwise noted or shown.

Concrete removal shall be initiated with a 3/4" saw cut wherever possible.

"Removals as per plan" include all costs associated with removing the full deck, barrier rails, abutment diaphragms, and portions of abutment backwalls. Removals shall be in accordance with Section 2401 of the Specifications. Any damage to other portions of the existing structure not noted for removal shall be the responsibility of the Bridge Contractor and shall be repaired at no extra cost to the State.

It is the intent of these plans to reuse the existing stirrups on top of the beams. The Contractor shall exercise care not to damage these stirrups during the concrete deck removal operation. Any replacement of damaged stirrups will be as directed by the Engineer and repaired at no cost to the State.

In addition to the requirements of Article 2413.03, G, of the Standard Specifications, both abutment bridge seats and wash surfaces shall have an application of concrete sealer in accordance with Article 2403.03, P, 3, of the Standard Specifications. Sealing the abutment shall be included in the unit bid price of "Concrete Repair."

Concrete barrier rails placed using the slipform method will require the use of a Class BR concrete in accordance with Article 2513.03, A, 2, of the Standard Specifications. Cast-in-place barrier rails shall use Class C mix. Class D concrete is not permitted for concrete barrier rails (cast-in-place or slipform method).

The Contractor shall be responsible for ensuring stability of prestressed concrete beams during erection and construction up through the concrete bridge deck reaching its full 28-day strength. The Contractor shall provide sufficient temporary anchor bracing at beam ends and temporary intermediate bracing as needed to ensure prestressed beam stability. Partially or fully installed permanent bracing as shown in these design plans shall not be assumed sufficient to brace prestressed beams during erection and construction. Temporary bracing shall not be welded to prestressed beam stirrups.

No paint scrape test data is available.

Specifications:

Design:
AASHTO series of 2002.

Construction:
Iowa Department of Transportation Standard Specifications for Highway and Bridge Construction. Series 2023, plus applicable General Supplemental Specifications, Developmental Specifications, Supplemental Specifications and Special Provisions shall apply to Construction work on this project.
Developmental Specifications for Fiber Reinforcement for Structural Concrete
Developmental Specifications for High Performance Concrete for Structures

Design Stresses:

Design stresses for the following materials are in accordance with the AASHTO Standard Specifications for Highway Bridges. Series 2002.

Reinforcing steel in accordance with Section 8, Grade 60.
Concrete in accordance with Section 8, f'c = 4.0 ksi.

Bridge Deck Dimension Table			
No.	Item	Unit	Quantity
1	Deck Length	L.F.	161.2
2	Minimum Deck Width	L.F.	35.17
3	Maximum Deck Width	L.F.	35.17
4	Deck Area	S.F.	5,671

1. Deck length is measured from face-to-face of paving notches along the centerline of the roadway.
- 2, 3. Deck widths are measured from out-to-out of deck perpendicular to the centerline of roadway.
4. Deck area is to be based on the face-to-face paving notch distance and out-to-out deck dimensions.

Working Drawing and Calculation Submittals

Working drawings and calculations shall be submitted for the following items shown in the table below. (Note additional working drawings and calculations may be required in accordance with Article 1105.03 of the Standard Specifications.)

Submittal requirements for working drawings and calculations shall be in accordance with 1105.03 of the Standard Specifications for Highway and Bridge Construction of the Iowa Department of Transportation. The absence of a certification requirement for a submittal does not relieve the Contractor of the responsibility to attain certification.

Calculation submittals in this table which are associated with working drawing submittals shall be submitted on the same day. Review time for calculation submittals shall be of the same duration as and run concurrently with review time for associated working drawings. The calculation submittals listed in the table are not meant to be an exhaustive list and do not relieve the Contractor from providing additional calculation submittals if requested by the Engineer.

No.	Working Drawing Description	Working Drawing File Name Convention For Submittal	Certified by Iowa P.E. (Yes/No)
1	Deck Drains	(030)_Jackson_Design127_DeckDrains.pdf	No
No.	Calculation Description	Calculation File Name Convention For Submittal	Certified by Iowa P.E. (Yes/No)

Traffic Control Plan

The roadway will be closed to traffic for the duration of the project. Refer to the Traffic Control Plan shown elsewhere in these plans.

Polution Prevention Plan

A Pollution Prevention Plan is not required for this project.

Design History At This Site

Des. No.	Type of Work
4659	Original Design
280	Barrier Rails
185	Bridge Deck Overlay
127	Bridge Deck Replacement

Design For Repairs to 15°00 Skew (L.A.)

159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge

43'-1½" & 47'-3½" End Spans68'-9" Interior Span

General Notes

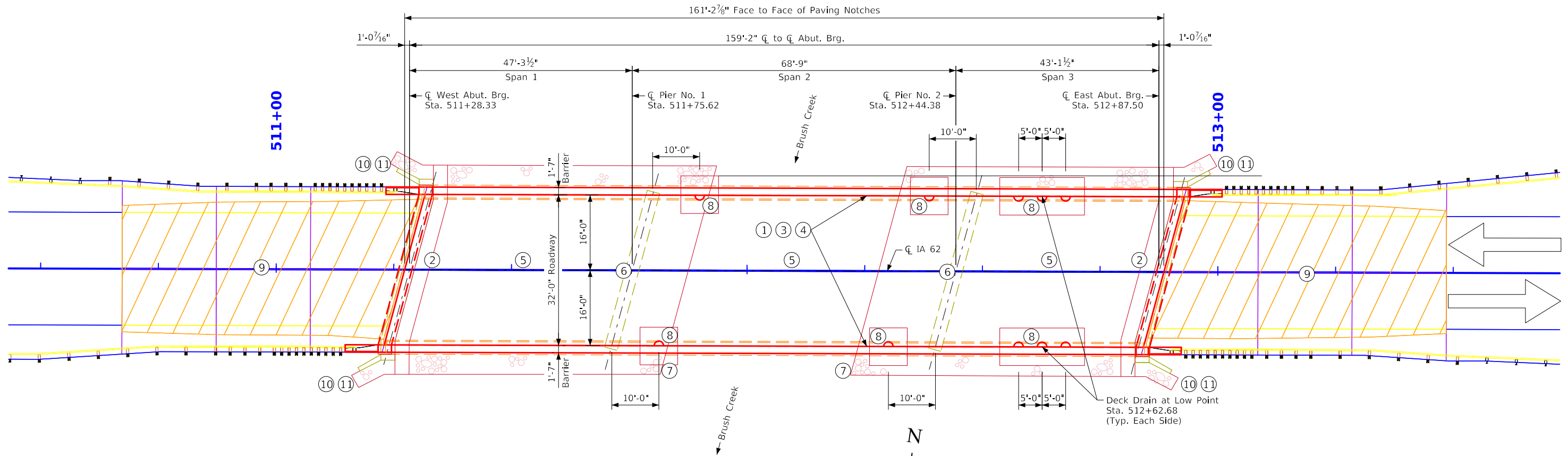
STA. 512+10.00 (IA 62)Turn-in Date: Aug 2026

Jackson County

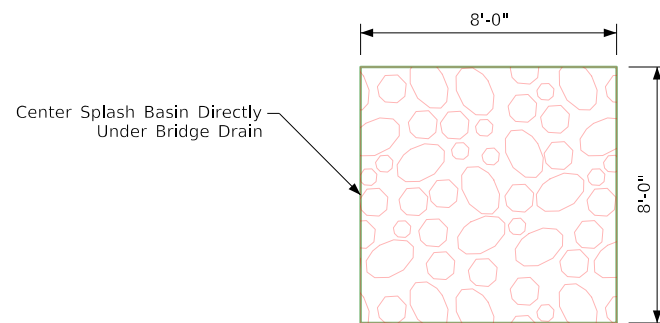
IOWA DEPARTMENT OF TRANSPORTATION

Design No. 127Design Sheet No. 2 of 24FHWA No. 30220

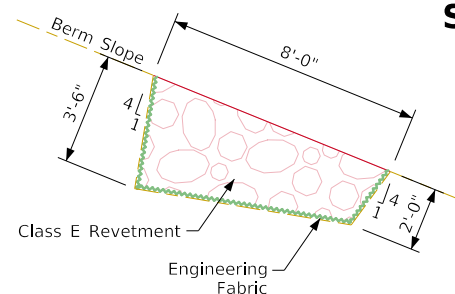




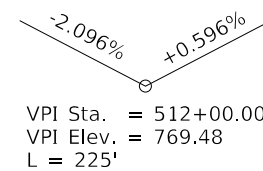
Situation Plan



Splash Basin Under Bridge Drain
Plan View



Splash Basin Under Bridge Drain
Typical Section for Berm Slopes



Proposed Profile
Grade IA 62

Traffic Estimate

ADT = 1,130 V.P.D (2024)
16% Trucks

Location

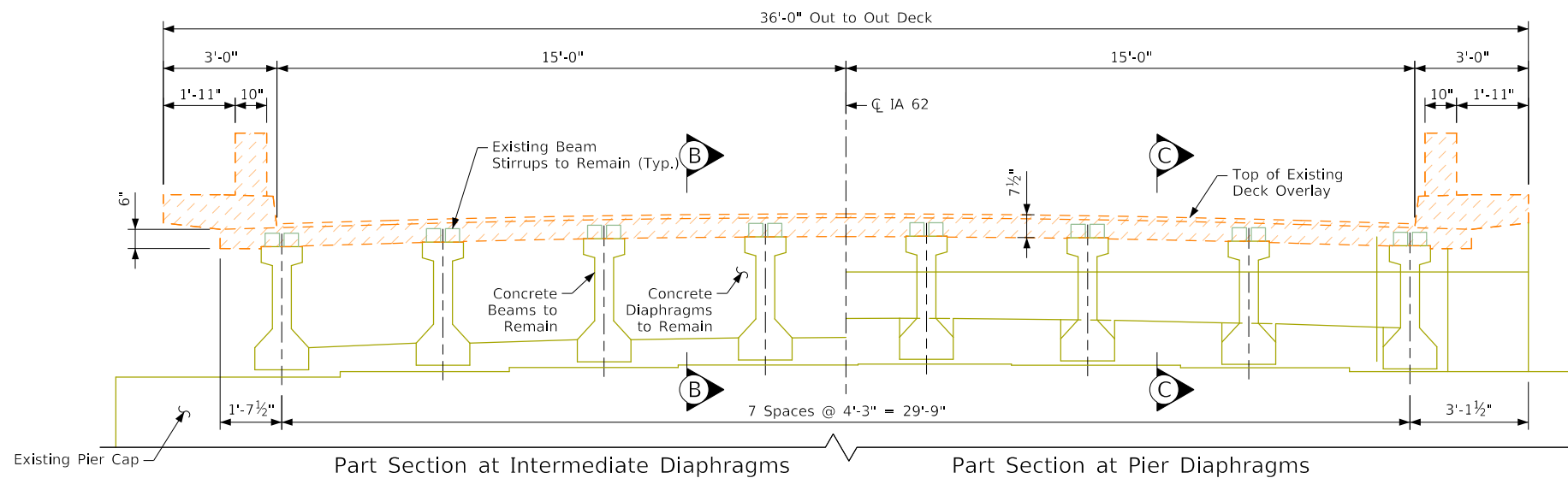
IA 62 over Brush Creek
T-85N R-3E
Section 11
Perry Twp.
Jackson County
Bridge Maint. No. 4909.75062
FHWA No. 30220
Latitude 42.185180°
Longitude -90.580572°

Repairs Shall Consist of:

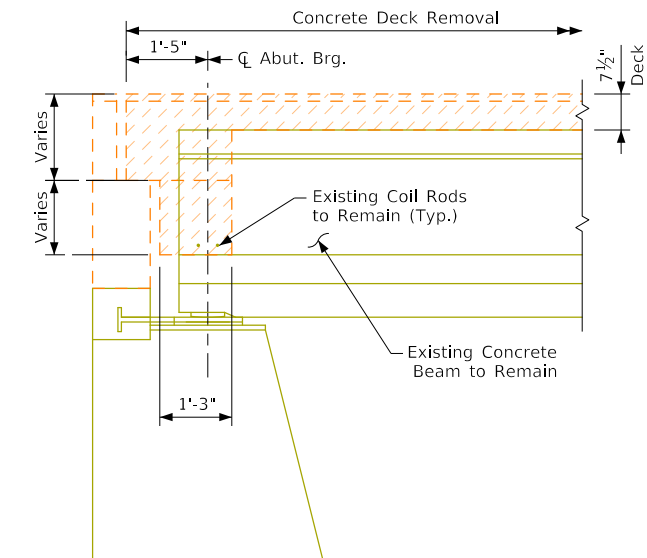
- ① Completely remove existing bridge deck, abutment diaphragms and barrier rails, while protecting PPC beam stirrups, pier diaphragm and abutment footing reinforcing.
- ② Clean and seal beam ends at abutments and construct semi-integral abutments.
- ③ Place new concrete bridge deck using high performance structural concrete.
- ④ Place new concrete barrier rails.
- ⑤ Perform beam repairs to spalls with exposed reinforcing in PPC beams.
- ⑥ Perform concrete repairs to the pier diaphragms.
- ⑦ Place erosion stone, 9" thick, on both abutment berm slopes.
- ⑧ Install splash basins below deck drains using Class E revetment.
- ⑨ Remove and replace bridge approach pavement at both ends of the bridge.
- ⑩ Replace the existing guardrail with guardrail meeting current standards.
- ⑪ Add paved shoulder next to guardrail.



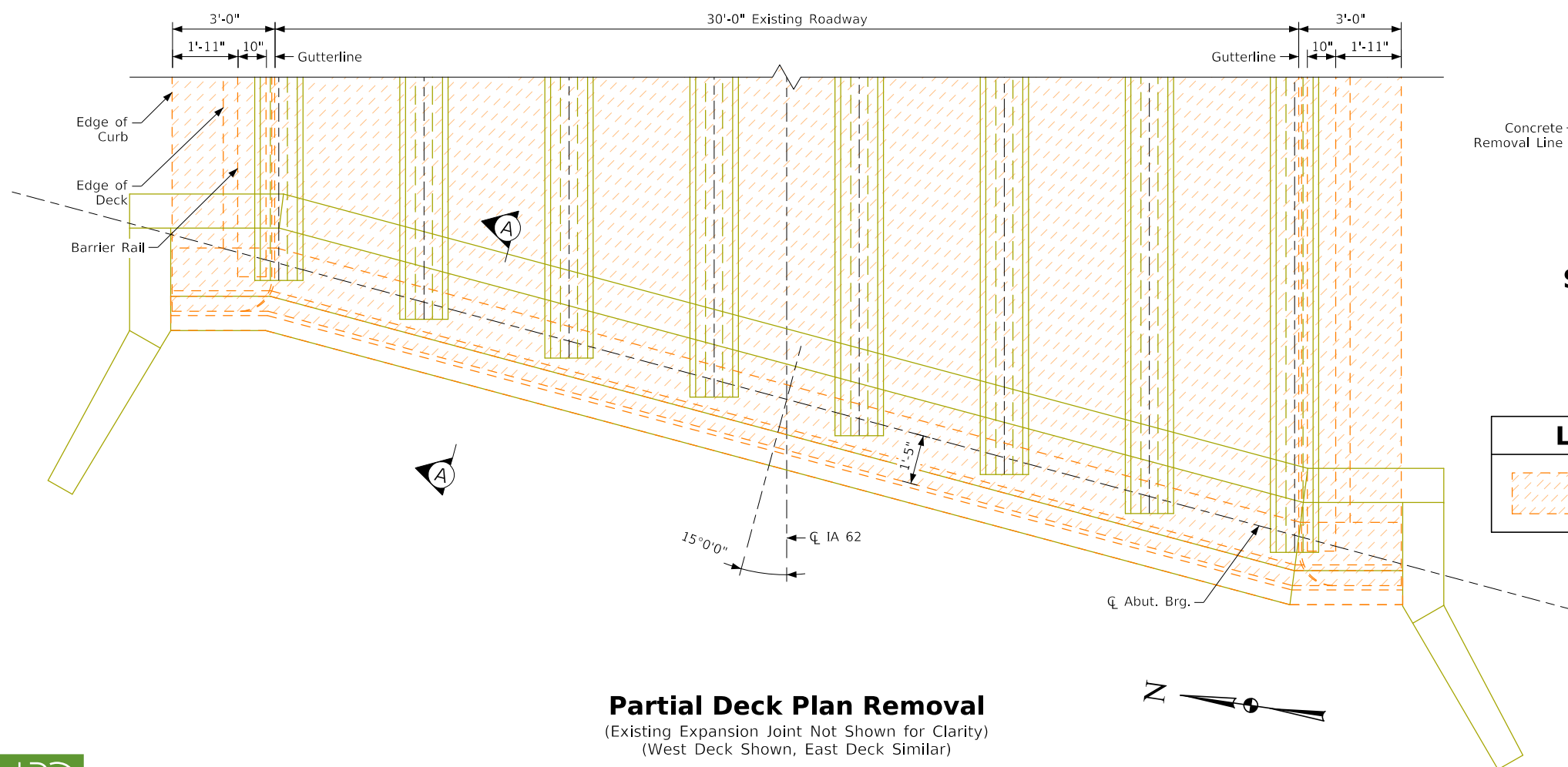
Design For Repairs to 15°00 Skew (L.A.)
159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge
43'-1 1/2" & 47'-3 1/2" End Spans 68'-9" Interior Span
Situation Plan
STA. 512+10.00 (IA 62) Turn-in Date: Aug 2026
Jackson County
IOWA DEPARTMENT OF TRANSPORTATION
Design No. 127 Design Sheet No. 3 of 24 FHWA No. 30220



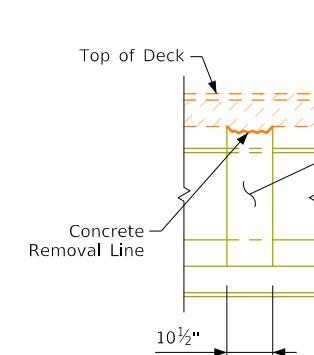
Deck Cross Section Removal
(Looking East)



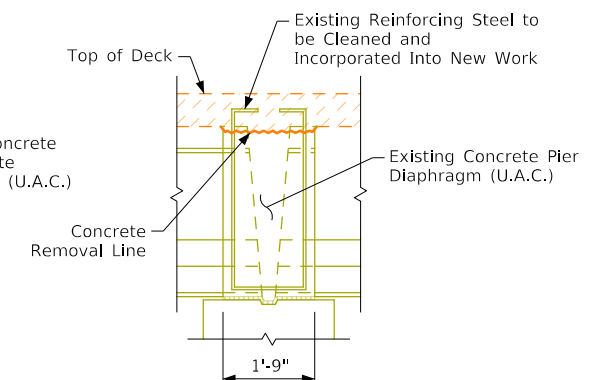
Section A-A



Partial Deck Plan Removal
(Existing Expansion Joint Not Shown for Clarity)
(West Deck Shown, East Deck Similar)



Section B-B



Section C-C

Legend



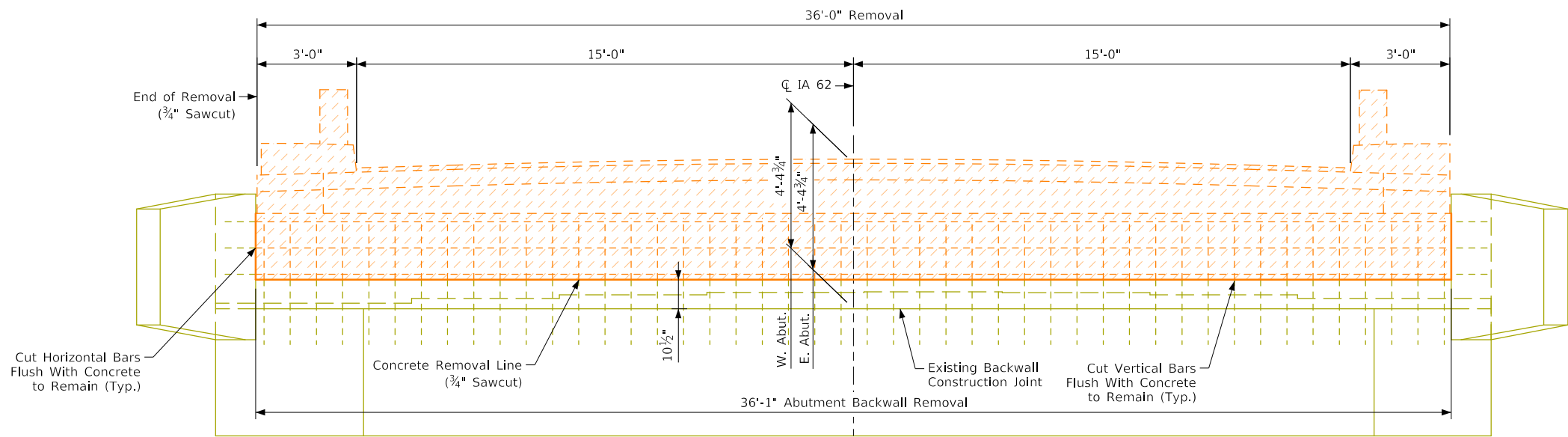
Removal Notes:

Existing Vertical bars and horizontal bars in the backwall shall be cleaned and Incorporated Into new work. The vertical bars shall be cut off 2'-0" above the concrete removal line. The horizontal bars that are embedded in the existing concrete to remain shall be cut off 3'-0" from the concrete removal line.

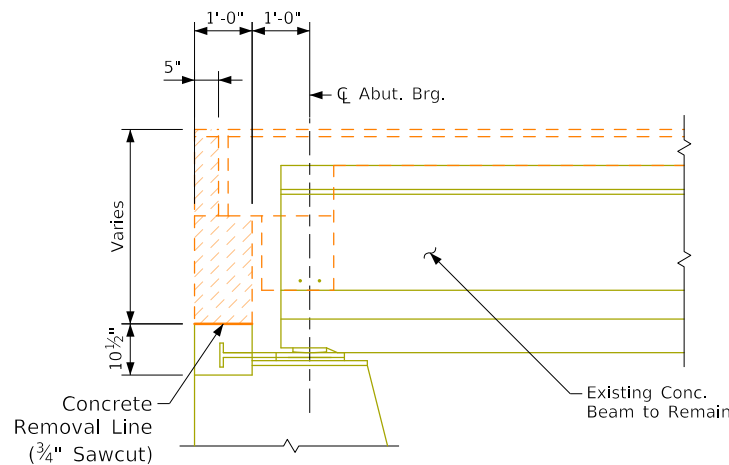
All other existing backwall bars are to be removed. Ant reinforcing exposed during removals that does not extend into new concrete shall be cut off flush with the removal line and give two coats of zinc-rich paint.

Design For Repairs to 15°00 Skew (L.A.)
159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge
 43'-1 1/2" & 47'-3 1/2" End Spans 68'-9" Interior Span
Deck Removal
 STA. 512+10.00 (IA 62) Turn-in Date: Aug 2026
Jackson County
 IOWA DEPARTMENT OF TRANSPORTATION
 Design No. 127 Design Sheet No. 4 of 24 FHWA No. 30220

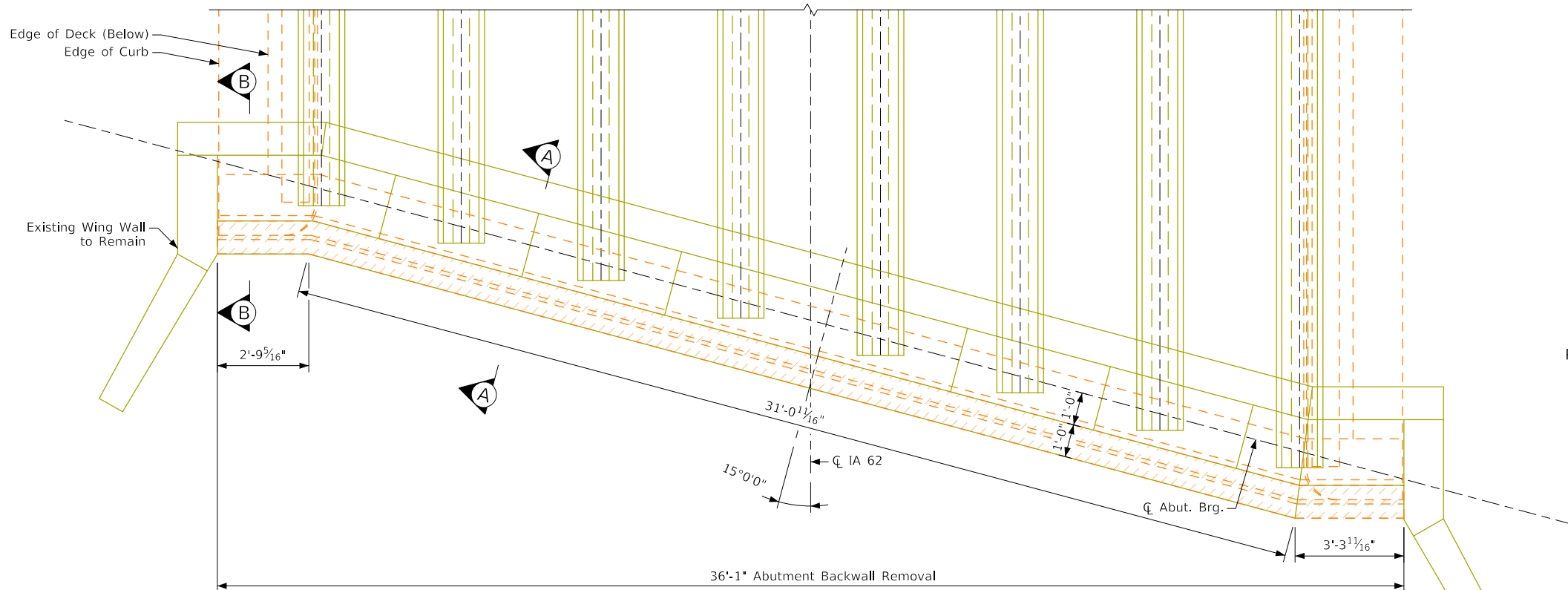




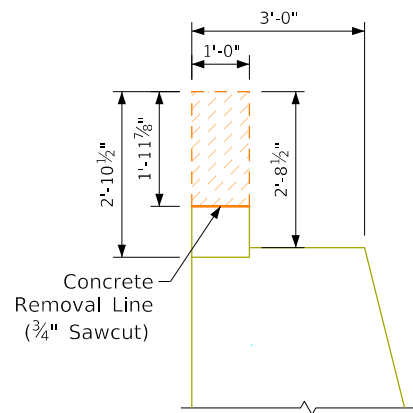
Abutment Rear Elevation Removal
(West Abutment Shown, East Abutment Similar)
(Looking East)



Section A-A



Abutment Plan Removal
(Existing Expansion Joint Not Shown for Clarity)
(West Abutment Shown, East Abutment Similar)



Section B-B

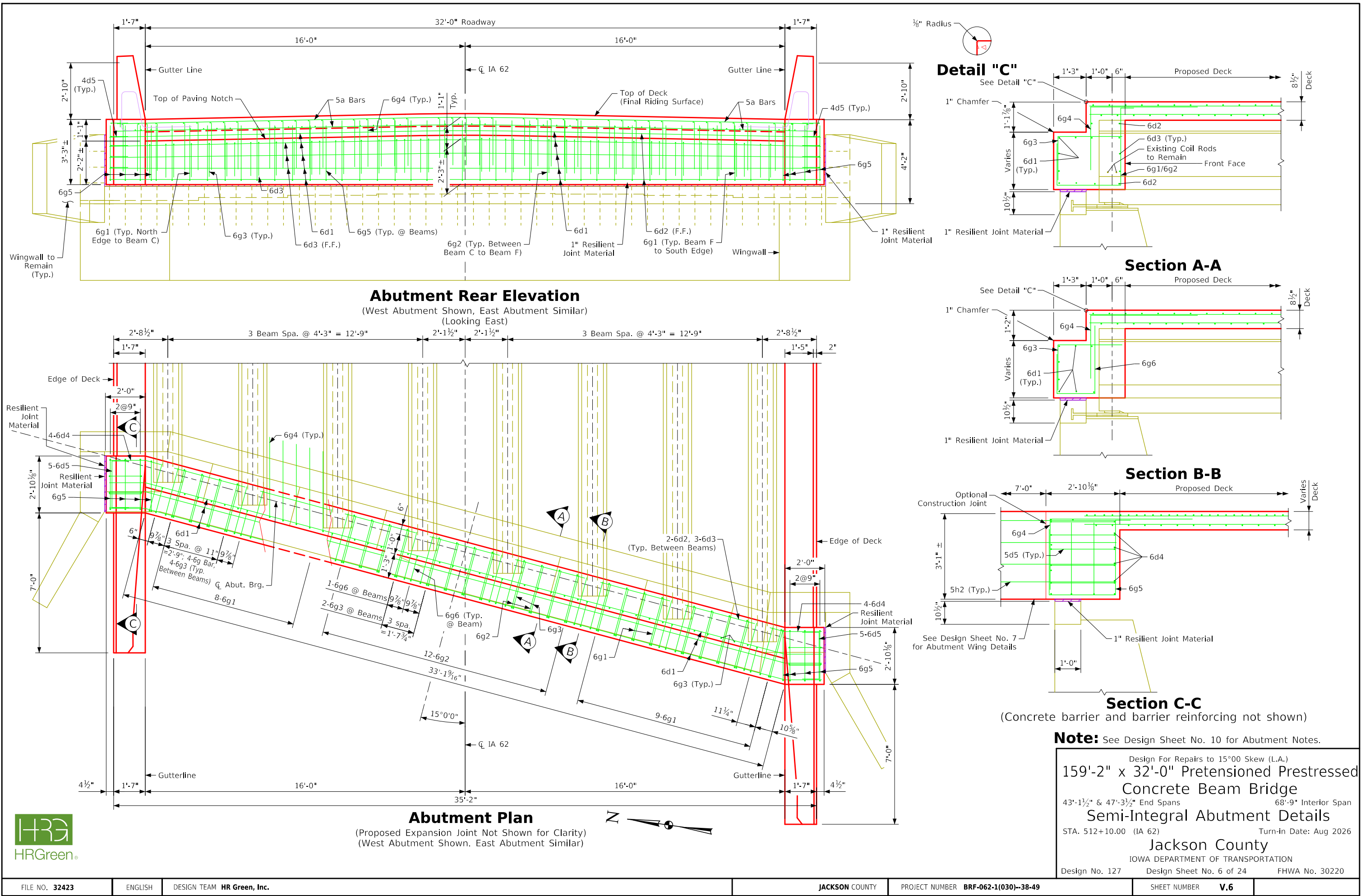
Note:

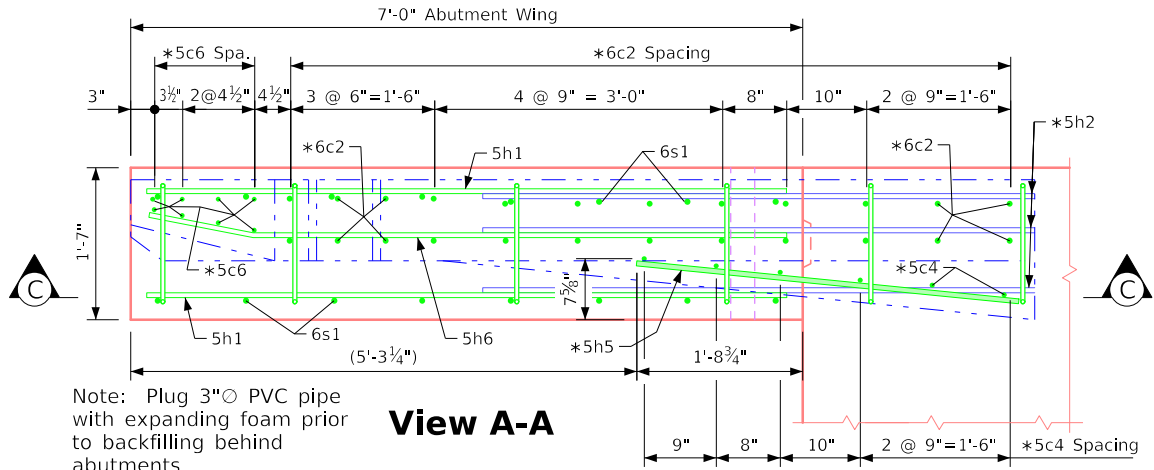
See Design Sheet No. 4 for Removal Notes.

Design For Repairs to 15°00 Skew (L.A.)	
159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge	
43'-1 1/2" & 47'-3 1/2" End Spans	68'-9" Interior Span
Abutment Removal Detail	
STA. 512+10.00 (IA 62)	Turn-in Date: Aug 2026
Jackson County	
IOWA DEPARTMENT OF TRANSPORTATION	
Design No. 127	Design Sheet No. 5 of 24 FHWA No. 30220

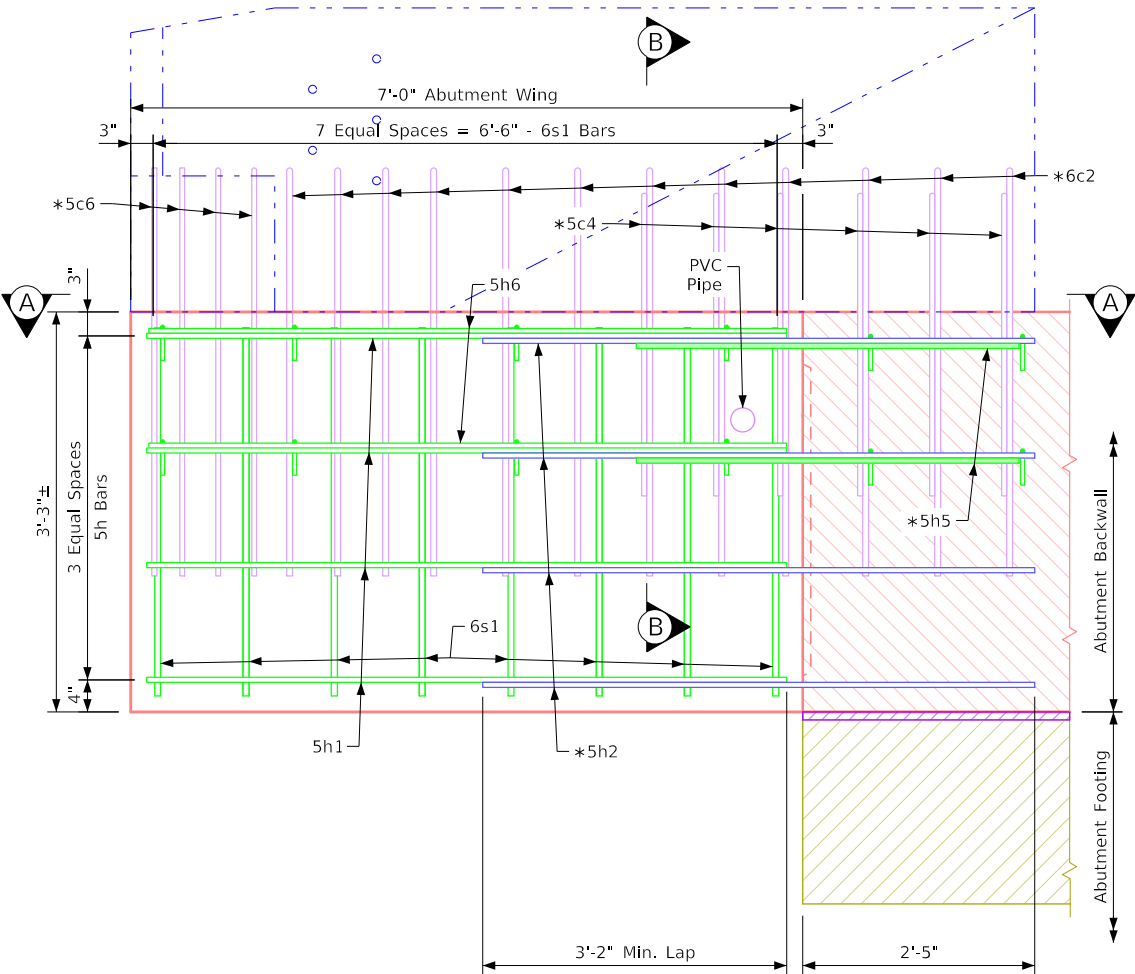


Legend
 Removal

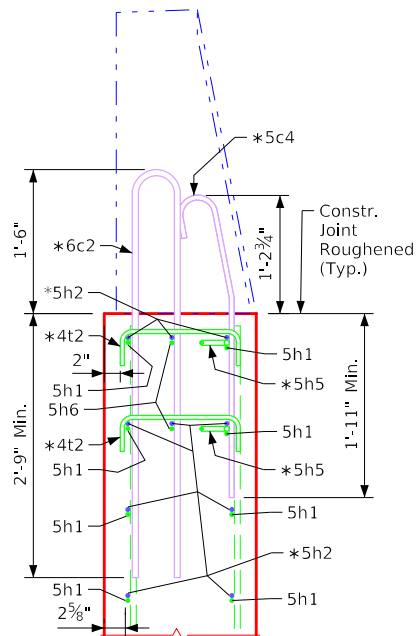




View A-A



Section C-C Abutment Wing - Elevation

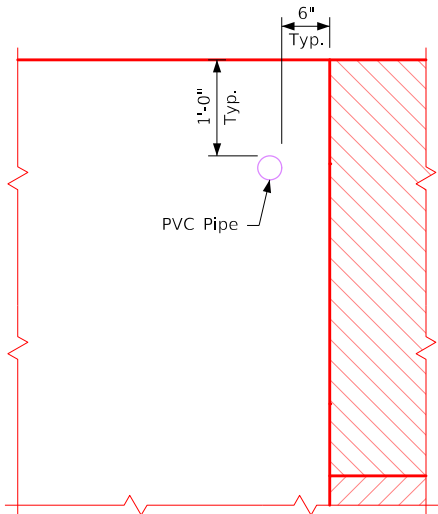


Section B-B

*Barrier rail end section bars to be placed with abutment wing and abutment.

See Barrier Rail End Section Sheet on Design Sheet No. 15 for details of reinforcing bars 6c2, 5c4, 5c6 and 4t2.

See Abutment Details Sheet on Design Sheet No. 10 for details of reinforcing bars 5h2 and 5h5.

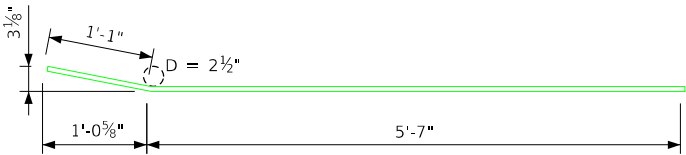


PVC Pipe Location

Note: Plug 3"Ø PVC pipe with expanding foam prior to backfilling behind abutments.

Reinforcing Bar List - One Abut. Wing

Bar	Location	Shape	No.	Length	Weight
5h1	Horizontal Both Faces		14	6'-8"	97
5h6	Horizontal Wingwall		2	6'-8"	14
6s1	Vertical Both Faces		16	2'-10"	68
Epoxy Reinforcing Total Weight (Lbs.)					179



Bent Bar Details

Note: All Dimensions are out to out. D = Pin Diameter

Concrete Placement Summary

Section	Total
One Abutment Wing	1.3
Total (Cu. Yds.)	1.3

Note:

See Design Sheet No, 10 for Abutment Notes.

Design For Repairs to 15°00 Skew (L.A.)

159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge

43'-1 1/2" & 47'-3 1/2" End Spans 68'-9" Interior Span

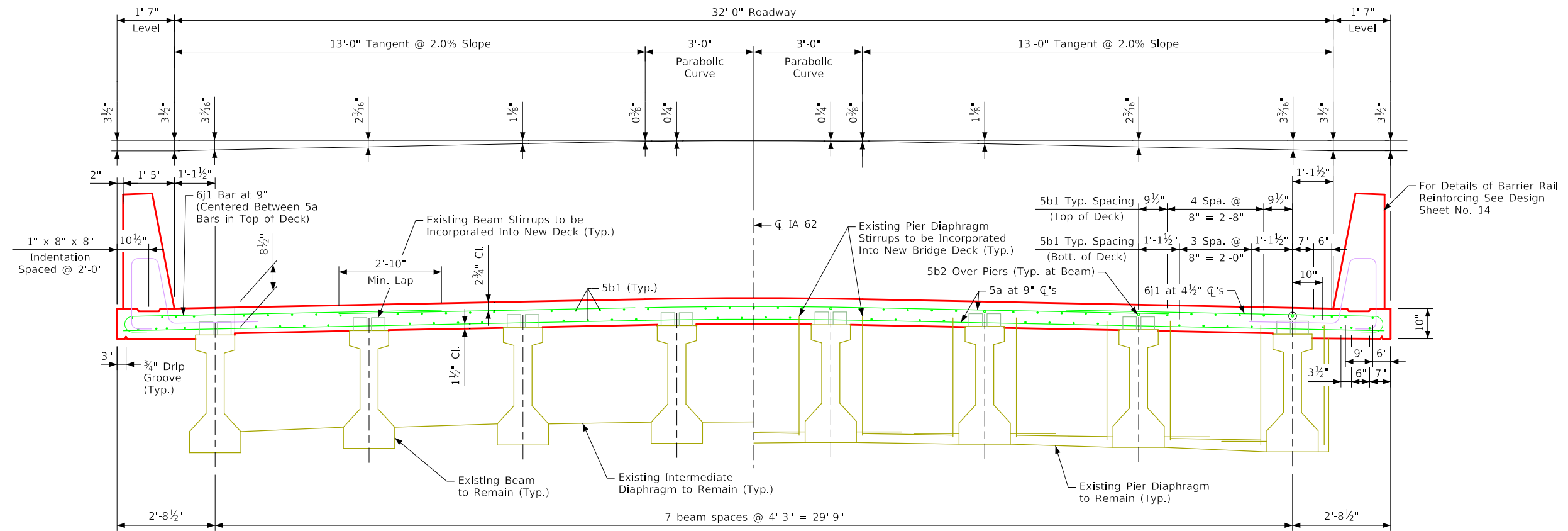
Abutment Wing Details

STA. 512+10.00 (IA 62) Turn-in Date: Aug 2026

Jackson County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 127 Design Sheet No. 7 of 24 FHWA No. 30220



Half Section Near Intermediate Diaphragm

Half Section Near Pier Diaphragm

Bridge Cross Section

Superstructure Notes:

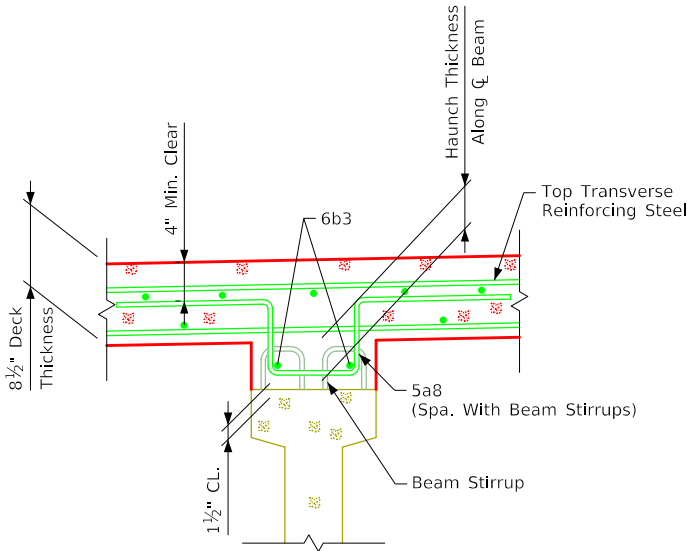
- The bridge deck as shown includes $\frac{3}{4}$ " integral wearing surface.
- The abutment diaphragm concrete is to be placed monolithically with the bridge deck.
- Cost of all resilient joint filler material is to be included in the price bid for "High Performance Structural Concrete".
- Forms for the deck and barrier rail are to be supported by the concrete beams.
- Clear distance from face of concrete to near reinforcing bar shall be 2" unless otherwise noted or shown.
- All deck and diaphragm reinforcing is to be wired in place and adequately supported before concrete is placed.

Top transverse reinforcing steel is to be parallel to and $2\frac{3}{4}$ " clear below top of deck. Bottom transverse reinforcing steel is to be parallel to and $1\frac{1}{2}$ " clear above bottom of deck. Top and bottom reinforcing steel is to be supported by individual bar chairs spaced at not more than 3'-0" centers longitudinally and transversely, or by continuous rows of bar high chairs or deck bolsters spaced 4'-0" apart. I.M. 451.01 requirements shall apply for bar chairs, bar high chairs, and deck bolsters.

Transverse deck reinforcing may be spliced with one lap located as follows:

- Top bar - lap midway between beams (min. lap = 2'-10").
- Bottom bars - lap over beams (min. lap = 3'-7").

Payment for reinforcing bars shall be based on no splices, and no allowance shall be made for the additional length of bar required for the use of splices.



Reinforced Haunch Detail
(Required where haunch > 2")

Deck area = 25.48 Sq. Ft.
Deck area does not include the nominal $\frac{1}{2}$ " haunch.



Design For Repairs to 15°00 Skew (L.A.)

159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge

43'-1 $\frac{1}{2}$ " & 47'-3 $\frac{1}{2}$ " End Spans 68'-9" Interior Span

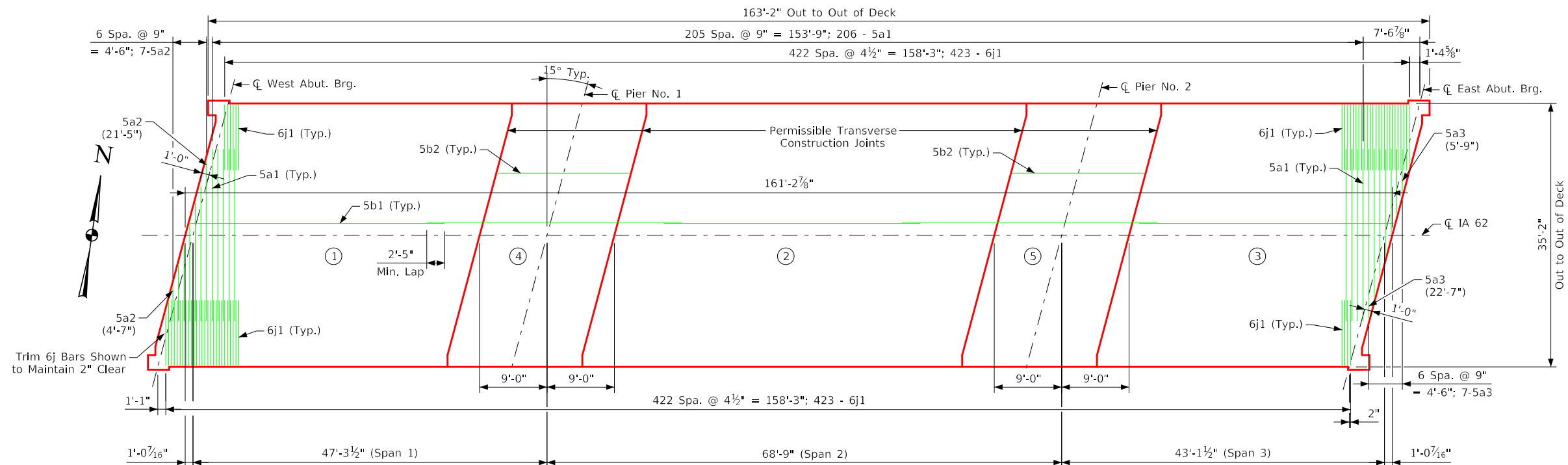
Bridge Cross Section

STA. 512+10.00 (IA 62) Turn-in Date: Aug 2026

Jackson County

IOWA DEPARTMENT OF TRANSPORTATION

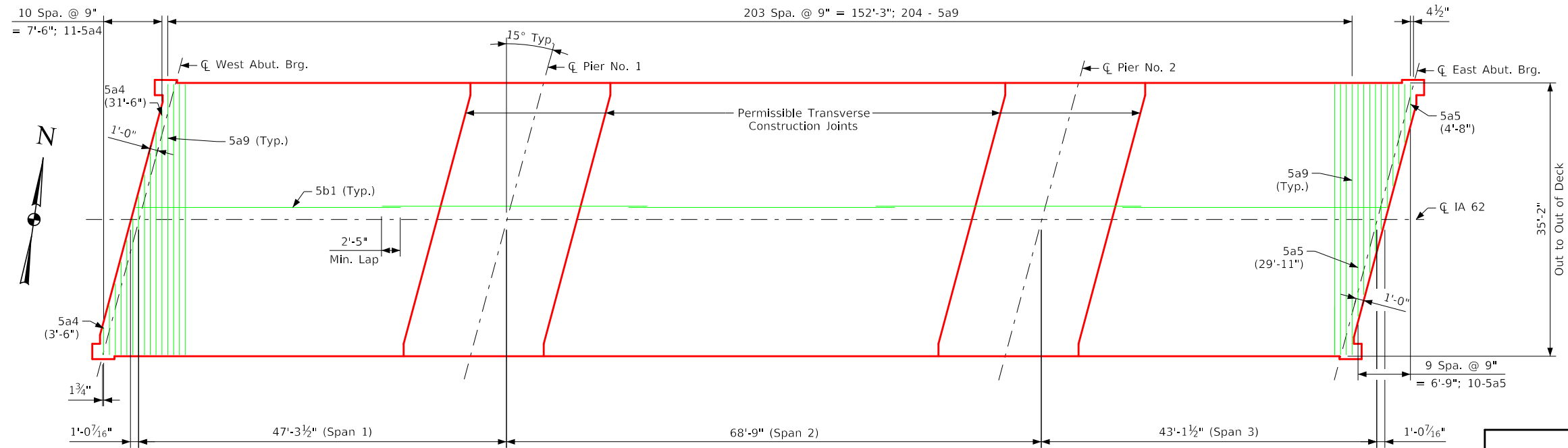
Design No. 127 Design Sheet No. 8 of 24 FHWA No. 30220



Top Mat Deck Reinforcing Layout and Concrete Placement Diagram

Note:
Concrete deck shall be placed in sections and sequenced indicated. Alternate procedure for placing deck concrete may be submitted for approval together with a statement of the proposed method and evidence that the Contractor possesses the necessary equipment and facilities to accomplish the required result. The Bridge Engineer shall review any alternate procedures. The cost of any additional analysis and plan modification shall be paid for by the Contractor. The Engineer shall determine if a retarding admixture is required to maintain plasticity of the concrete deck during placement.

Deck concrete sections shall cure for a minimum of 48 hours and shall achieve a minimum strength of 75% of the 28 day deck concrete strength prior to removing deck header and beginning an adjacent pour.



Bottom Mat Deck Reinforcing Layout

Note:
Longitudinal grooving will be a Part of this project. See Roadway sheet for quantity.

Design For Repairs to 15°00 Skew (L.A.)
159'-2" x 32'-0" Pretensioned Prestressed
Concrete Beam Bridge
43'-1 1/2" & 47'-3 1/2" End Spans
68'-9" Interior Span
Deck Reinforcing Details
STA. 512+10.00 (IA 62)
Turn-in Date: Aug 2026
Jackson County
IOWA DEPARTMENT OF TRANSPORTATION
Design No. 127
Design Sheet No. 9 of 24
FHWA No. 30220

V.9



Abutment Notes:

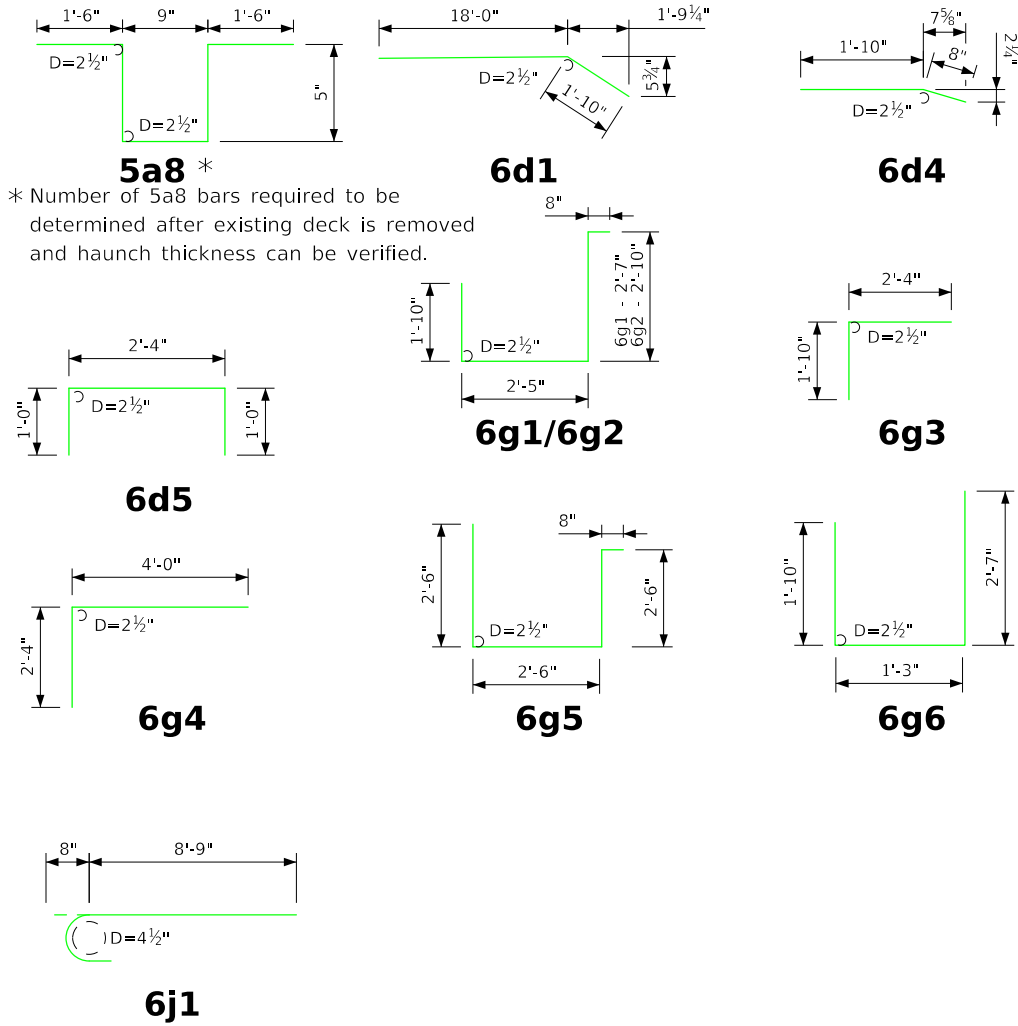
Minimum cleat distance from face of concrete to near reinforcing bat is to be 2" unless otherwise noted as shown.

Construction joint keyways are to be formed with beveled 2x6's, except as noted.

Both Abutment bridge seats and wash surfaces shall have an application of concrete sealer in accordance with Article 2403.03, P, 3, of the Standard Specification.

If necessary to prevent damage to the end of the bridge deck and backwall from construction equipment, an appropriate method of protection approved by the Engineer shall be provided by the Bridge Contractor at no extra cost to the State.

Bent Bar Detail



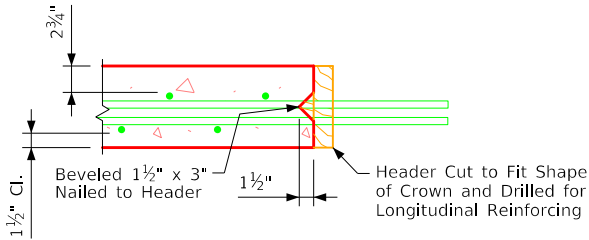
Note: All dimensions are out to out. D= Pin diameter

Epoxy Coated Reinforcing Steel - Bridge Deck

Bar	Location	Shape	No.	Length	Weight
5a1	Top Deck Transverse		206	23'-0"	4,942
5a2	Top Deck Transverse, End		7	Varies	95
5a3	Top Deck Transverse, End		7	Varies	103
5a4	Bott. Deck Transverse, End		11	Varies	201
5a5	Bott. Deck Transverse, End		10	Varies	180
5a6	Top & Bott. Deck, Corners		8	8'-11"	74
5a7	Deck at Drains		60	3'-0"	188
5a8	Haunch Vertical		560	4'-7"	2,677
5a9	Bott. Deck Transverse, End		204	34'-10"	7,412
5b1	Top & Bott. Deck Longitudinal		395	34'-3"	14,110
5b2	Top Deck Longitudinal @ Piers		16	17'-7"	293
6b3	Haunch Longitudinal		64	15'-0"	1,442
6d1	Abut. Diaphragm Longitudinal		36	19'-10"	1,072
6d2	Abut. Diaphragm Longitudinal Between Beams		28	2'-9"	116
6d3	Abut. Diaphragm Longitudinal Between Beams		42	3'-6"	221
6d4	Abut. Diaphragm, Ends		16	2'-6"	60
6d5	Abut. Diaphragm, Ends		20	4'-4"	130
6g1	Abutment Diaphragm Vertical		34	7'-4"	374
6g2	Abutment Diaphragm Vertical		24	7'-7"	273
6g3	Abutment Diaphragm Vertical		88	4'-3"	562
6g4	Abutment Diaphragm Vertical		70	6'-4"	666
6g5	Abutment Diaphragm Vertical, Ends		16	8'-2"	196
6g6	Abutment Diaphragm Vertical		16	5'-8"	136
5h2	Abutment Wing Horizontal		40	5'-9"	240
5h5	Abutment Wing Horizontal		8	4'-1"	34
6j1	Top of Deck Transv.		846	9'-5"	11,966
Epoxy Reinforcing Total Weight (Lbs.)					47,763

Concrete Placement Qtys. - Deck

Location	Quantity
Section 1, Deck & Abut. Diaph.	48.3
Section 2, Deck	49.0
Section 3, Deck & Abut. Diaph.	44.2
Section 4, Deck & Pier Diaph.	17.9
Section 5, Deck & Pier Diaph.	17.9
Total (Cu. Yds.)	177.3



Permissible Transverse Deck Construction Joint



Design For Repairs to 15°00 Skew (L.A.)

159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge

43'-1½" & 47'-3½" End Spans68'-9" Interior Span

Superstructure Details

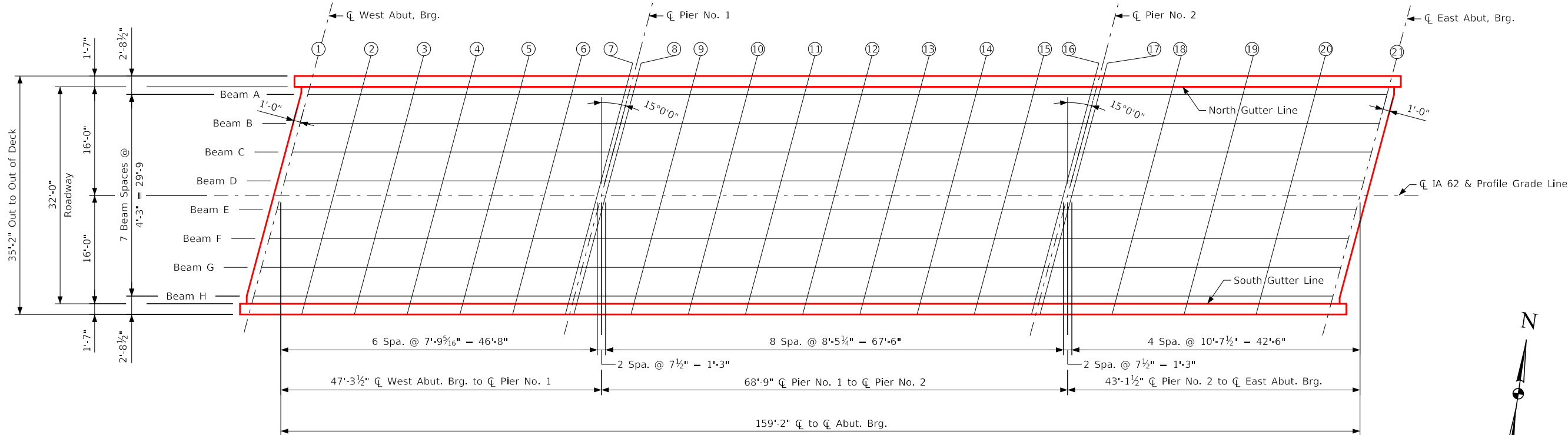
STA. 512+10.00 (IA 62)Turn-in Date: Aug 2026

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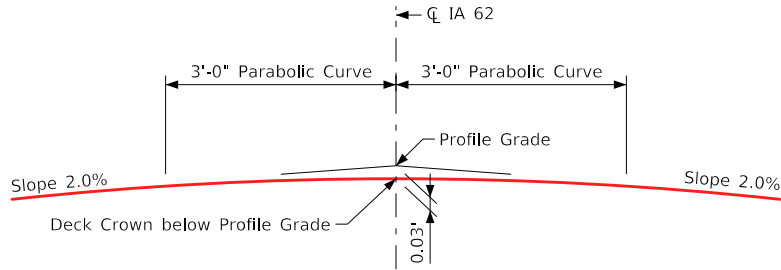
Design No. 127Design Sheet No. 10 of 24FHWA No. 30220

Bench Mark: BM No. 50NW; N=8305133.849, E=21487552.560, Elev. 770.72, FENO Set at Road Backslope Flush with Ground East of Bridge Area.



Top of Deck Elevation Plan

Top of Deck Elevations																					
Location	℄ W. Abut. Brg.						℄ Pier No. 1 Bearings									℄ Pier No. 2 Bearings					℄ E. Abut. Brg.
	Line 1	Line 2	Line 3	Line 4	Line 5	Line 6	Line 7	Line 8	Line 9	Line 10	Line 11	Line 12	Line 13	Line 14	Line 15	Line 16	Line 17	Line 18	Line 19	Line 20	Line 21
North Gutter Line	770.73	770.61	770.50	770.40	770.30	770.21	770.13	770.12	770.04	769.97	769.91	769.85	769.81	769.77	769.75	769.73	769.73	769.72	769.72	769.74	769.77
Beam Line A	770.75	770.64	770.53	770.42	770.33	770.24	770.16	770.14	770.06	769.99	769.93	769.88	769.83	769.80	769.77	769.75	769.75	769.74	769.74	769.76	769.79
Beam Line B	770.86	770.74	770.63	770.52	770.43	770.34	770.25	770.24	770.16	770.09	770.02	769.97	769.92	769.89	769.86	769.84	769.84	769.82	769.83	769.84	769.87
Beam Line C	770.96	770.84	770.73	770.62	770.52	770.43	770.35	770.34	770.26	770.18	770.12	770.06	770.02	769.98	769.95	769.92	769.92	769.91	769.91	769.92	769.95
Beam Line D	771.06	770.93	770.82	770.71	770.62	770.52	770.44	770.43	770.34	770.27	770.20	770.15	770.10	770.06	770.03	770.00	770.00	769.99	769.99	770.00	770.02
℄ IA 62 & Profile Grade Line	771.09	770.96	770.85	770.74	770.64	770.55	770.46	770.45	770.37	770.29	770.23	770.17	770.12	770.08	770.05	770.03	770.02	770.01	770.01	770.02	770.04
	771.07	770.95	770.84	770.73	770.63	770.54	770.45	770.44	770.35	770.28	770.21	770.15	770.10	770.06	770.03	770.01	770.00	769.99	769.99	770.00	770.02
	771.02	770.89	770.78	770.67	770.57	770.47	770.39	770.37	770.29	770.21	770.14	770.08	770.03	769.99	769.96	769.93	769.93	769.91	769.91	769.92	769.94
	770.95	770.82	770.71	770.60	770.50	770.40	770.31	770.30	770.21	770.14	770.07	770.01	769.95	769.91	769.88	769.85	769.85	769.83	769.82	769.83	769.85
	770.88	770.76	770.64	770.53	770.43	770.33	770.24	770.23	770.14	770.06	769.99	769.93	769.88	769.83	769.80	769.77	769.77	769.74	769.74	769.74	769.76
South Gutter Line	770.87	770.74	770.62	770.51	770.41	770.31	770.22	770.21	770.12	770.04	769.97	769.91	769.86	769.81	769.77	769.75	769.74	769.72	769.72	769.72	769.74



Crown Template

No Scale

Note:
Elevations along ℄ IA 62 are located at Deck Crown below Profile Grade as shown in the Crown Template Detail.

Design For Repairs to 15°00 Skew (L.A.)

159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge

43'-1½" & 47'-3½" End Spans68'-9" Interior Span

Top of Deck Elevations

STA. 512+10.00 (IA 62)Turn-in Date: Aug 2026

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Design No. 127Design Sheet No. 11 of 24FHWA No. 30220

Bench Mark: BM No. 50NW; N=8305133.849, E=21487552.560, Elev. 770.72, FENO Set at Road Backslope Flush with Ground East of Bridge Area.

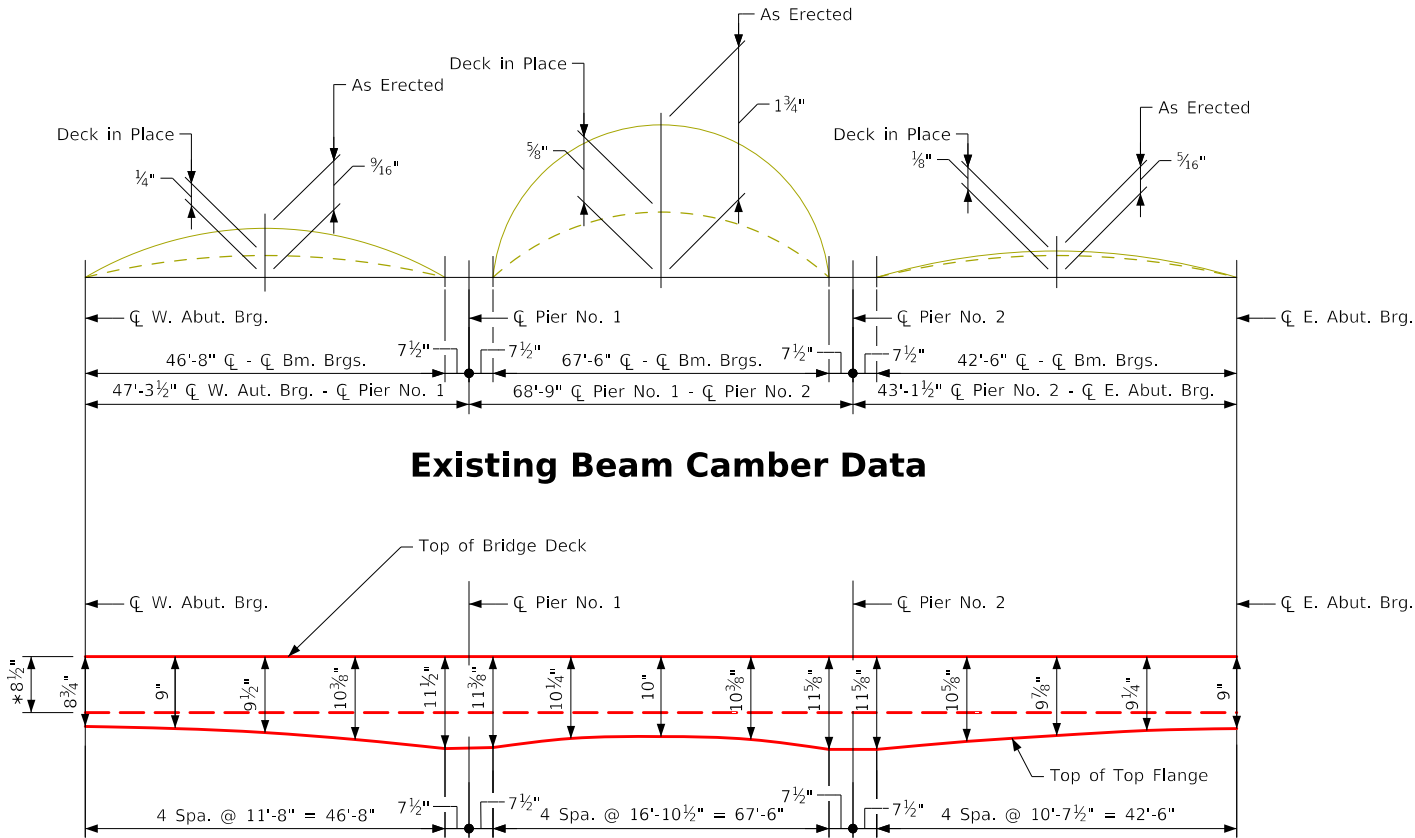
Table of Beam Line Deck Haunch Elevations

Location	℄ W. Abut. Brg.						℄ Pier No. 1 Barrings									℄ Pier No. 2 Barrings					℄ E. Abut. Brg
	Line 1	Line 2	Line 3	Line 4	Line 5	Line 6	Line 7	Line 8	Line 9	Line 10	Line 11	Line 12	Line 13	Line 14	Line 15	Line 16	Line 17	Line 18	Line 19	Line 20	Line 21
Beam Line A	770.05	769.94	769.84	769.74	769.64	769.54	769.45	769.44	769.39	769.35	769.31	769.26	769.21	769.16	769.10	769.04	769.04	769.04	769.05	769.06	769.08
Beam Line B	770.15	770.04	769.94	769.84	769.74	769.64	769.54	769.53	769.49	769.45	769.40	769.35	769.30	769.24	769.19	769.13	769.13	769.13	769.13	769.14	769.16
Beam Line C	770.25	770.14	770.04	769.94	769.84	769.74	769.64	769.63	769.58	769.54	769.50	769.45	769.39	769.33	769.27	769.22	769.21	769.21	769.22	769.23	769.24
Beam Line D	770.35	770.24	770.14	770.03	769.93	769.83	769.73	769.72	769.67	769.63	769.58	769.53	769.48	769.42	769.36	769.30	769.29	769.29	769.29	769.30	769.32
Beam Line E	770.37	770.26	770.15	770.05	769.94	769.84	769.74	769.73	769.68	769.64	769.59	769.54	769.48	769.42	769.36	769.30	769.29	769.29	769.29	769.30	769.31
Beam Line F	770.31	770.20	770.09	769.98	769.88	769.78	769.68	769.66	769.61	769.57	769.52	769.47	769.41	769.35	769.29	769.22	769.22	769.21	769.21	769.22	769.23
Beam Line G	770.24	770.13	770.02	769.92	769.81	769.70	769.60	769.59	769.54	769.49	769.44	769.39	769.33	769.27	769.20	769.14	769.14	769.13	769.13	769.13	769.14
Beam Line H	770.17	770.06	769.95	769.85	769.74	769.63	769.53	769.52	769.47	769.42	769.37	769.31	769.25	769.19	769.12	769.06	769.06	769.05	769.04	769.05	769.06

Note: Haunch locations are at the same location as the encircled numbers shown on deck elevations sheet.

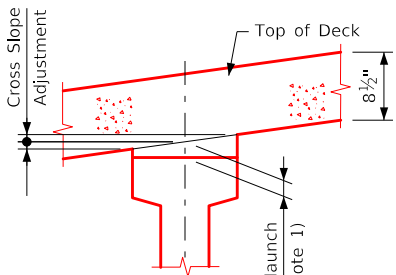
Miscellaneous Data Table

	Beam Line		℄ W. Abut. Brg.						℄ Pier No. 1 Barrings									℄ Pier No. 2 Barrings					℄ E. Abut. Brg.
			Line 1	Line 2	Line 3	Line 4	Line 5	Line 6	Line 7	Line 8	Line 9	Line 10	Line 11	Line 12	Line 13	Line 14	Line 15	Line 16	Line 17	Line 18	Line 19	Line 20	Line 21
Anticipated Deflection Due to Deck and Barrier (in.)	A-H		0	3⁄16	¼	5⁄16	¼	3⁄16	0	0	7⁄16	13⁄16	1½	1½	1½	13⁄16	7⁄16	0	0	½	3⁄16	½	0
Cross Slope Adjustments (in.)	A-H		1⁄8																				
Allowable Field Haunch In. (Ft.)	Max.	All	2 (0.167) (See Reinforced Haunch Detail on Design Sheet No. 8 where maximum value is exceeded)																				
	Min.	All	-3⁄8 (-0.031)																				

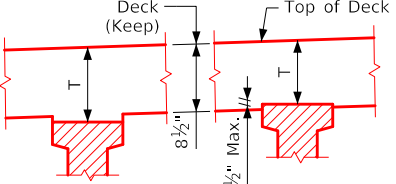


*Nominal deck thickness

Deck Thickness at Existing Beams (T)



Haunch Detail



Deck Thickness Details

Note: The deck thickness (T) at beams is based on the anticipated beam camber and deflections. These values are used by the Designer to set beam elevations and estimate concrete quantities. Refer to the haunch data details sheet for additional information to aid the Contractor in setting the field haunches required for construction.

Note: Bridge seat elevations are set based on theoretical camber and beam deflections. These bridge seats will provide a theoretical beam haunch within design parameters. Field haunches are determined using surveyed top of beam elevations and "Beam Line Haunch Elevation" data. Allowable maximum and minimum "Field Haunch" values are given in inches and decimals of feet in the "Miscellaneous Data" table. "Cross slope adjustment" values will aid the Contractor in determining actual formed haunch dimensions at the edges of the top flange.

Note 1: To calculate field haunch required at each location, survey the beam tops consistent with the spacings shown on the "Top of Deck Elevations Layout". Subtract the surveyed beam shot from the "Beam Line Haunch Elevation". This value will be the haunch needed (see "Field Haunch" in haunch detail). The "Beam Line Haunch Elevation" includes adjustments for deck thicknesses and anticipated deflections. No additional calculations are required. If the field haunch exceeds the maximums and minimums shown in inches and decimals of feet in the miscellaneous data table, adjustments to the grade or additional haunch reinforcement will be required.

Design For Repairs to 15°00 Skew (L.A.)

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43'-1½" & 47'-3½" End Spans68'-9" Interior Span

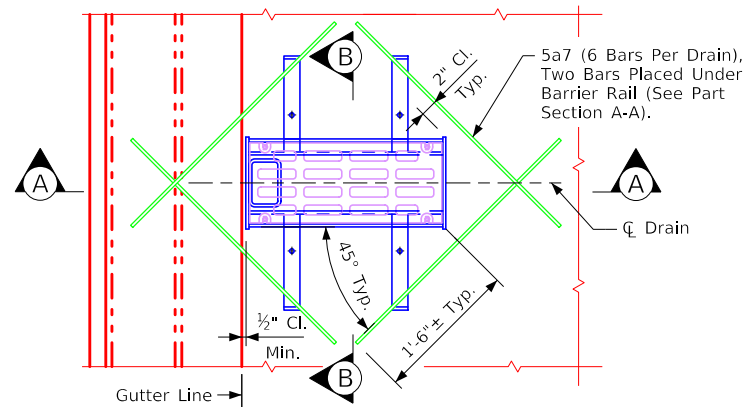
Top Beam, Deck Thickness, Data Tables

STA. 512+10.00 (IA 62)Turn-in Date: Aug 2026

Jackson County

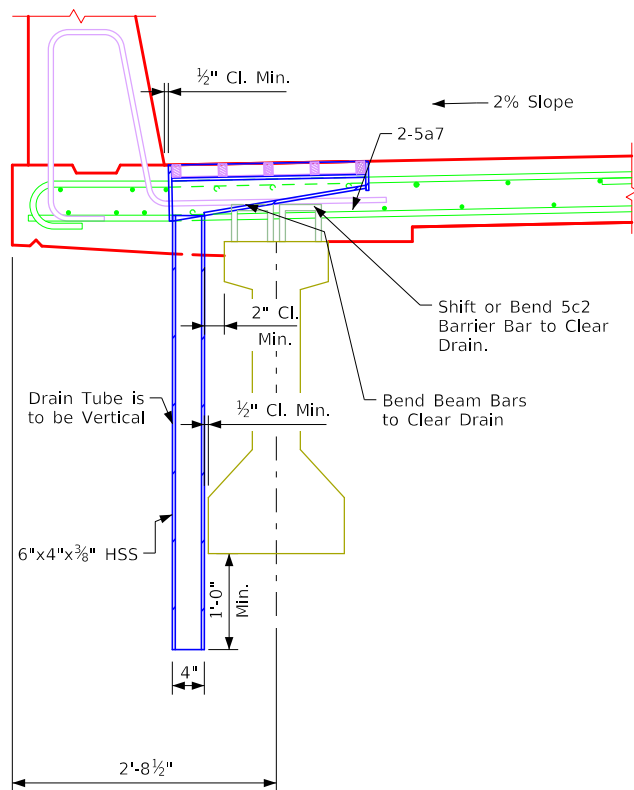
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Design No. 127Design Sheet No. 12 of 24FHWA No. 30220

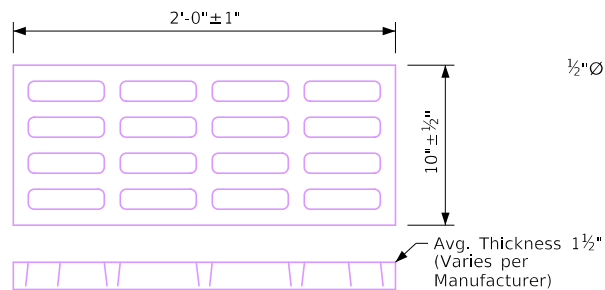


Part Plan At Drain

(Detail B Shown)



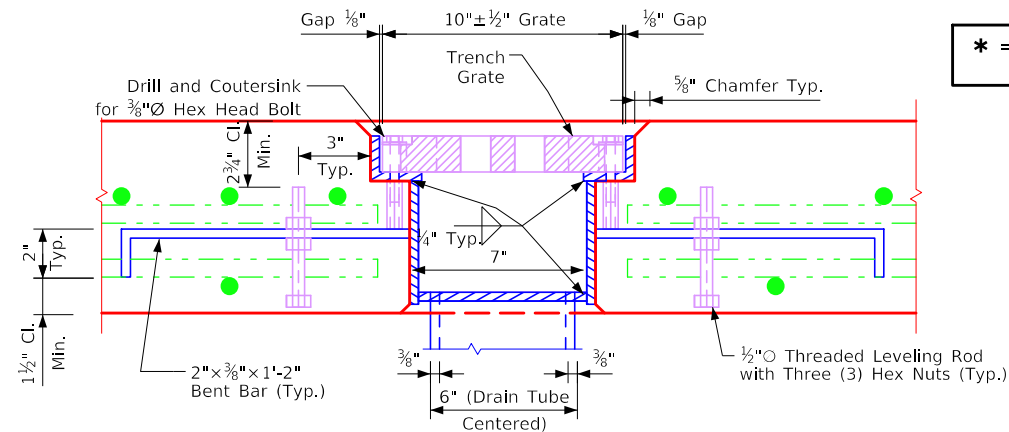
Part Section A-A



Drain Trench Grate Details

(1 Grate Required Per Drain)

Note: Pattern and direction of grate openings shall be similar to the pattern shown.



Part Section B-B - Showing Detail B Option

Detail is Shown Using 10" Wide Grate

Drain Notes

The drains shall be 3/8" thick steel. The drain assemblies shall be galvanized after fabrication. The bid item "Deck Drain, Lump Sum" shall include all costs associated with fabricating and installing the deck drains as per plan.

The trench grates shall be ferrous castings. Metal used in the manufacture of castings shall conform to ASTM A48-83 Class 35B or better gray iron castings in accordance with current Iowa D.O.T. Standard Specifications. Finish of castings shall be smooth and free of defects. Trench grates shall be capable of carrying AASHTO HL-93 loading. Galvanizing of the trench grates is not required.

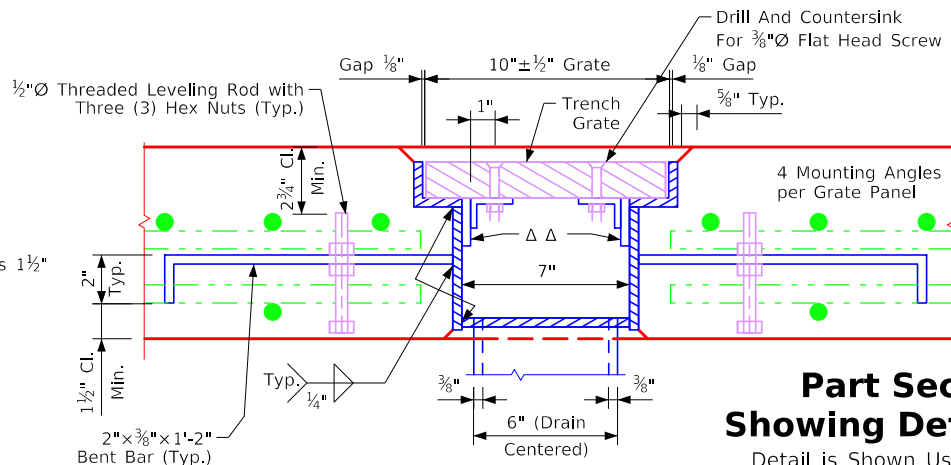
Drains shall be centered over the nearest bottom transverse deck reinforcing bar from the location designated on Design Sheet No. 3. The bottom transverse deck reinforcing bar shall be cut off to provide 1" clearance from the drain. The top transverse deck reinforcing bars on each side of the drain, shall be spaced as necessary to provide 1" clearance from the drain. Longitudinal deck reinforcing bars that conflict with the drain shall be cut off to provide 2" clearance from the drain. All cut ends of bars shall be coated with epoxy patching material supplied by the Manufacturer of the epoxy coating. Longitudinal deck reinforcing bars shall be shifted as necessary to accommodate anchor bars.

Materials

Plates, bars, threaded rods and angles shall meet the requirements ASTM A709 Grade 36. The tube steel shall meet the requirements ASTM A500 Grade B.

3/8" Ø mechanically galvanized steel hex head bolt and hex nut shall meet the requirements of ASTM B695-04 (2009) and ASTM A307-12 Grade A.

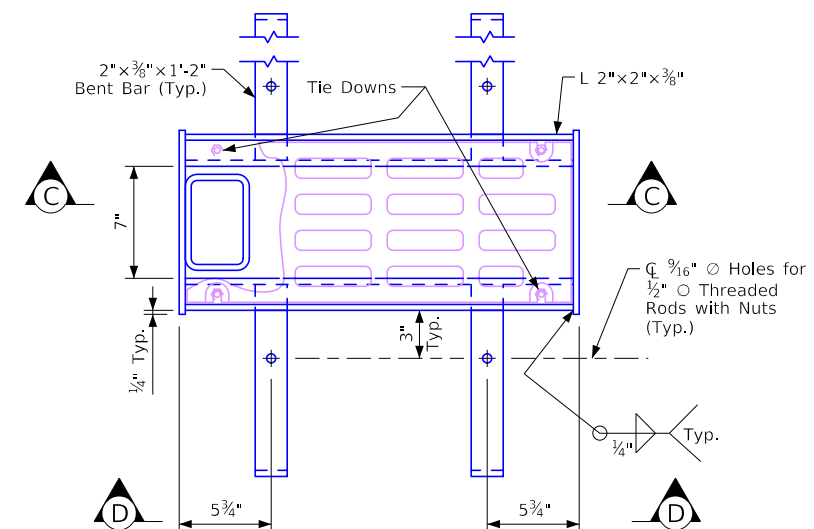
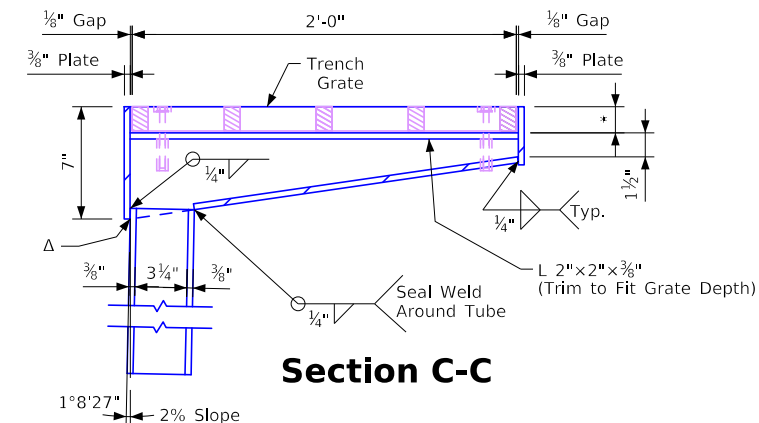
3/8" Ø mechanically galvanized steel flat head screw shall meet the requirements of ASTM B695-04 (2009) and ASTM F835-12.



Part Section B-B Showing Detail A Option

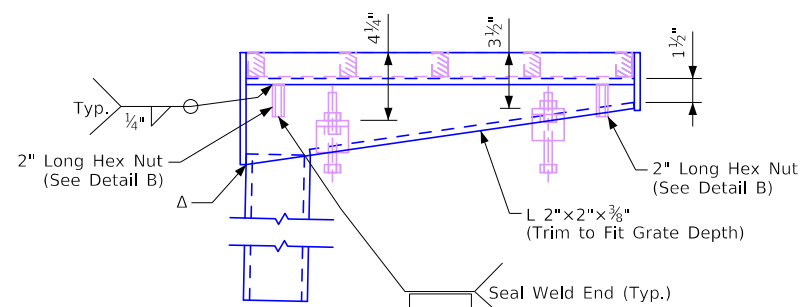
Detail is Shown Using 10" Wide Grate

* = Depth Based on Trench Grate Manufacturer.

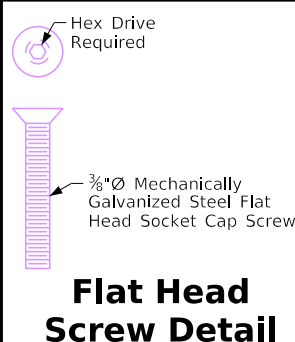
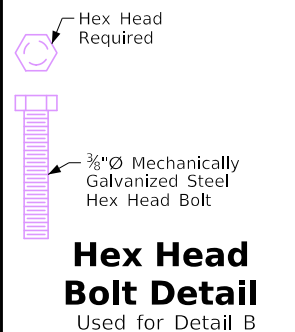


Plan View of Drain Trench

(Grate Tie Downs Show Detail B)



Side View D-D



Δ = Grind vertical plate flush with angled drain tube prior to welding.

Note: 10 Drains required.

Δ Δ = Adjust shim plate according to width of grate.

Design For Repairs to 15°00 Skew (L.A.)

159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge

43'-1 1/2" & 47'-3 1/2" End Spans 68'-9" Interior Span

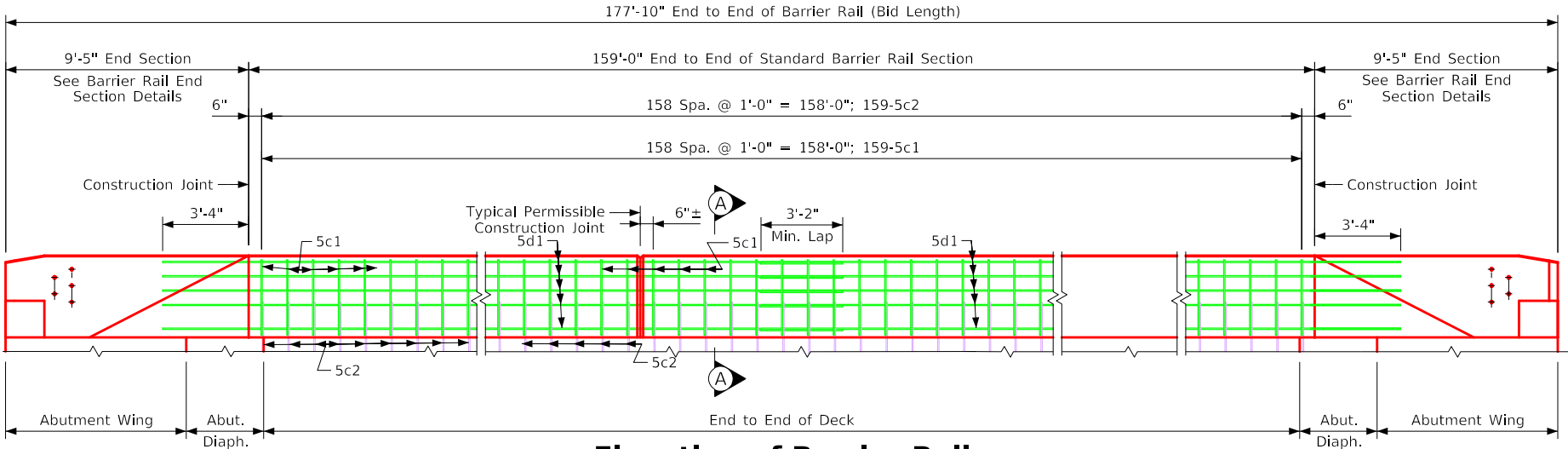
Aesthetic Deck Drains

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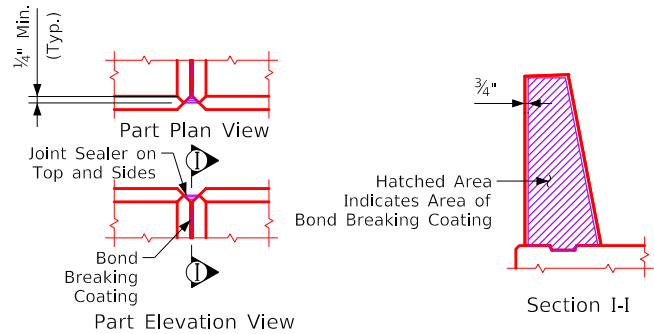
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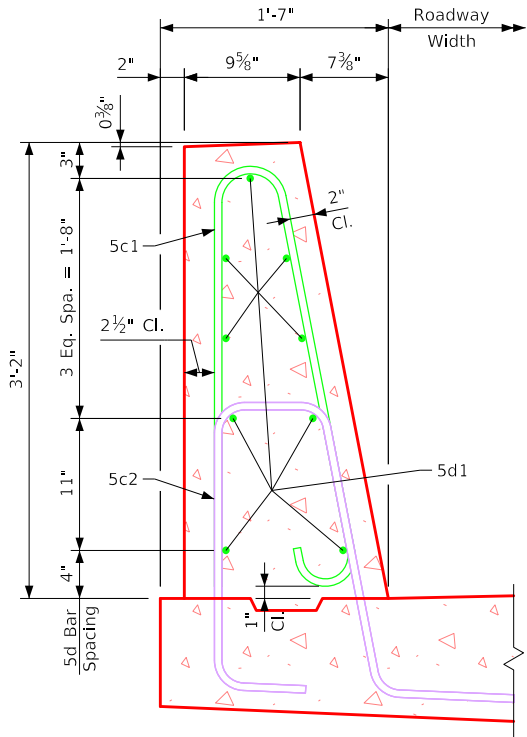
Design No. 127 Design Sheet No. 13 of 24 FHWA No. 30220



Elevation of Barrier Rail



Barrier Rail Joint Details



Part Section A-A

Barrier Rail Notes:

Minimum clear distance from face of concrete to near reinforcing bar is to be 2" unless otherwise noted or shown.

The permissible construction joints are to be placed between vertical bars at a minimum spacing of 20 feet. Construction joint contact surfaces are to be coated with an approved bond breaker.

Cost of the joint sealer and bond breaker shall be considered incidental to other construction.

All barrier rail reinforcing steel is to be either epoxy coated or stainless steel as shown. The stainless steel reinforcing steel shall be deformed bar grade 60 meeting the requirements of Construction and Materials I.M. 452.

The concrete barrier rail is to be bid on a lineal foot basis. The number of linear feet of barrier rail installed will be paid for at the contract price per lineal foot based on plan quantities. Price bid for concrete barrier railing shall be full compensation for furnishing all material, excluding reinforcing steel, and all of the equipment and labor required to erect the rail in accordance with these plans and current specifications.

The joint sealer shall be light gray nonsag latex caulking sealer marketed for outdoor use. No testing or certification is required.

Top of the barrier rail is to be parallel to the theoretical CL grade.

All exposed corners on the top of the barrier and all other corners 90° or sharper to be filleted with a 3/4" dressed and beveled strip.

Cross sectional area of the Standard Sections of the barrier rail = 3.50 square feet.

Epoxy Coated Reinf. Steel - Two Rails

Section	Bar	Location	Shape	No.	Length	Weight
Standard Sections	5c1	Rail, Vertical		318	6'-8"	2,211
	5d1	Rail, Longitudinal		90	36'-0"	3,379

Epoxy Reinf. Total Weight (Lbs.) 5,590

Stainless Steel Reinf. Steel - Two Rails

Section	Bar	Location	Shape	No.	Length	Weight
Standard Sections	5c2	Rail, Vertical		318	7'-3"	2,405

Stainless Steel Reinf. Total Weight (Lbs.) 2,405

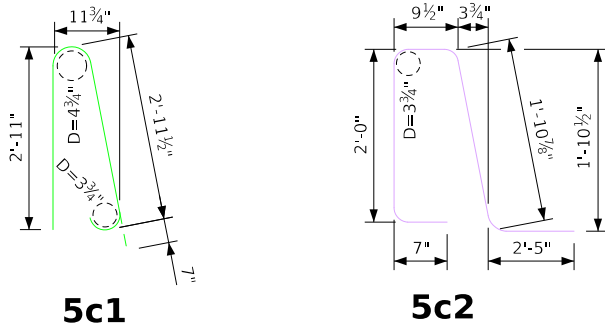
Concrete Placement Summary

Section	Total
Standard Section 318'-0" at 0.130 Cu. Yd. per Ft.	41.3
Total (Cu. Yd.)	41.3

Concrete Barrier Rail Quantities

Item	Unit	Quantity
Concrete Barrier Railing	L.F.	355.7

Bent Bar Details



Note: All dimensions are out to out. D = Pin Diameter

Design For Repairs to 15°00 Skew (L.A.)

159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge

43'-1 1/2" & 47'-3 1/2" End Spans 68'-9" Interior Span

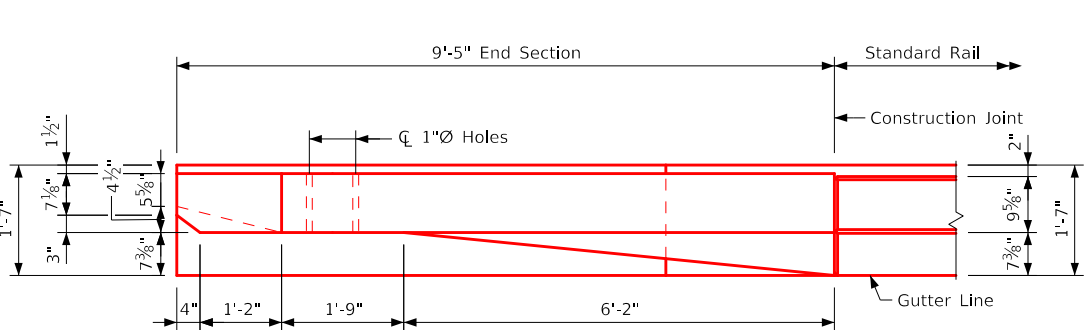
Barrier Details

STA. 512+10.00 (IA 62) Turn-in Date: Aug 2026

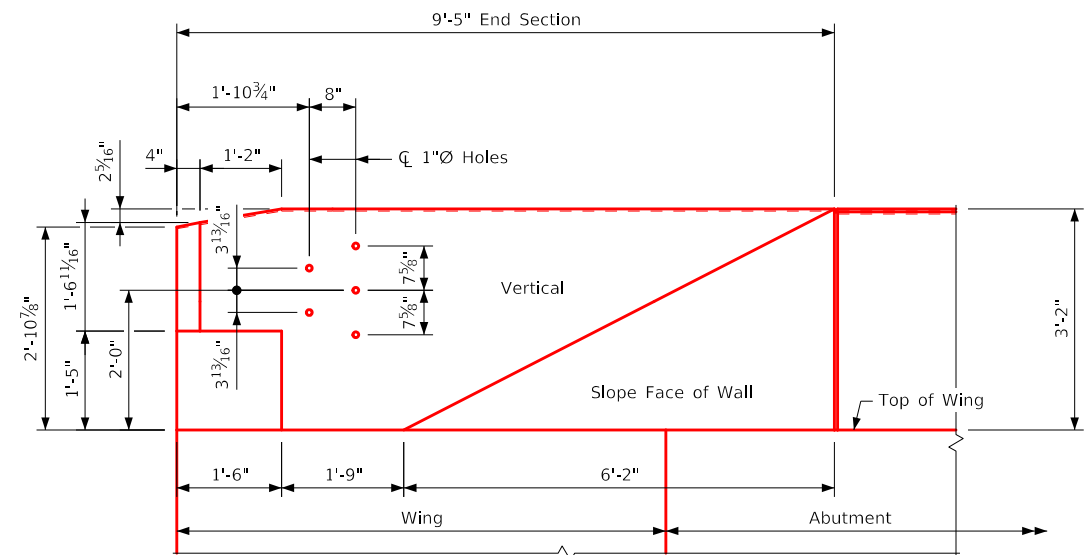
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Design No. 127 Design Sheet No. 14 of 24 FHWA No. 30220

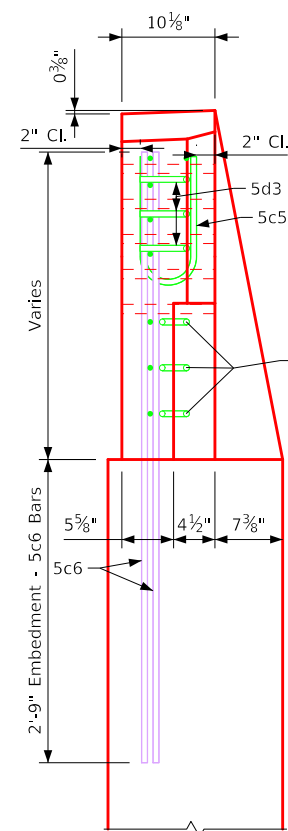


Part Plan View

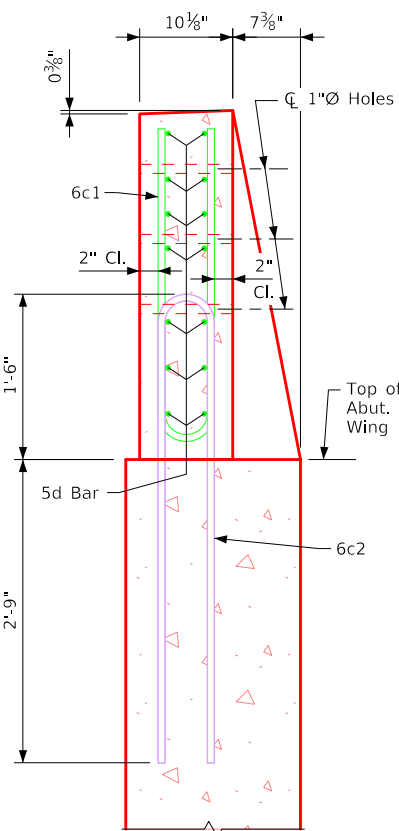


Part Elevation View

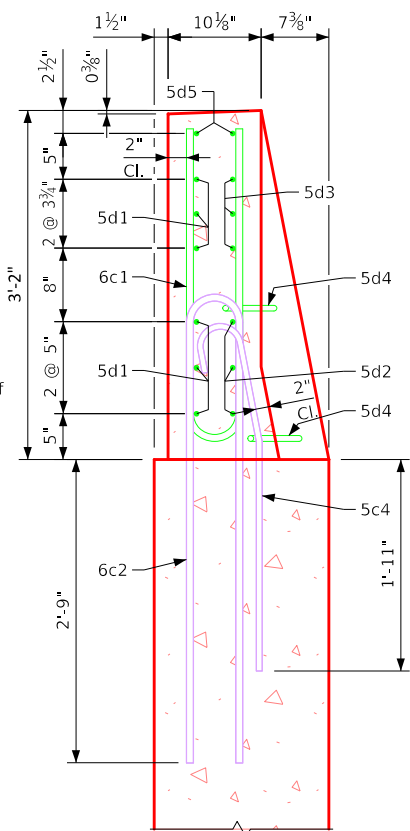
Provide 5 holes formed with 1"Ø plastic conduit.
Cost to be included in price of bid for Concrete Barrier Railing.



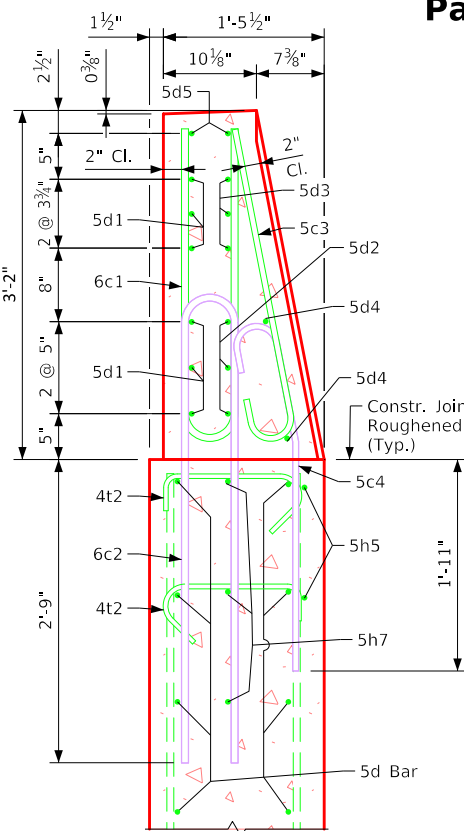
View A-A



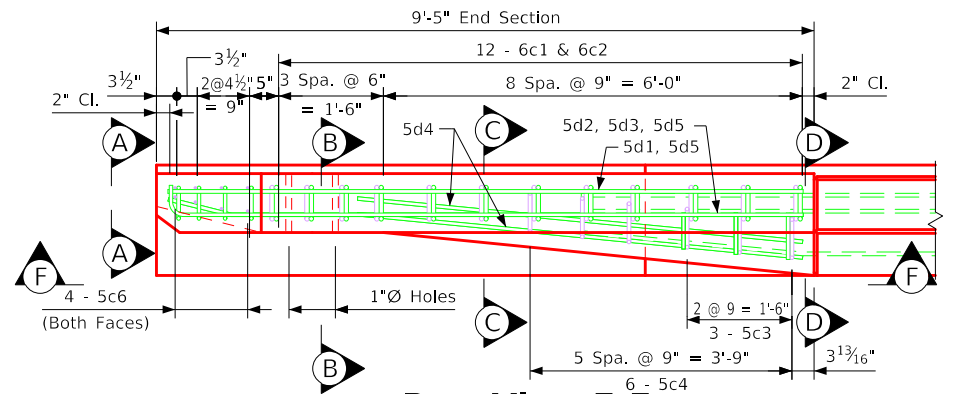
Section B-B



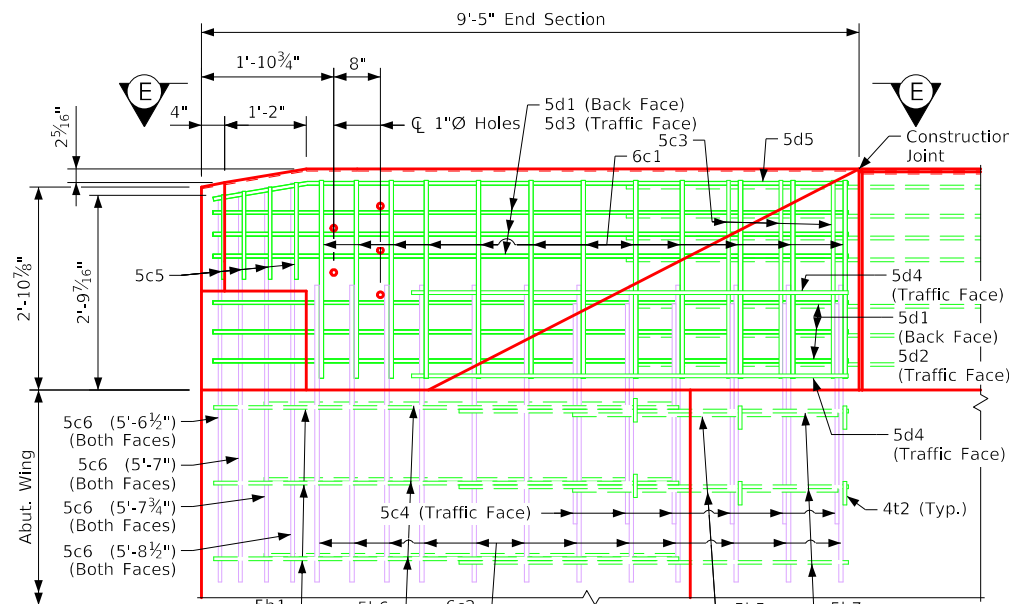
Section C-C



Section D-D



Part View E-E

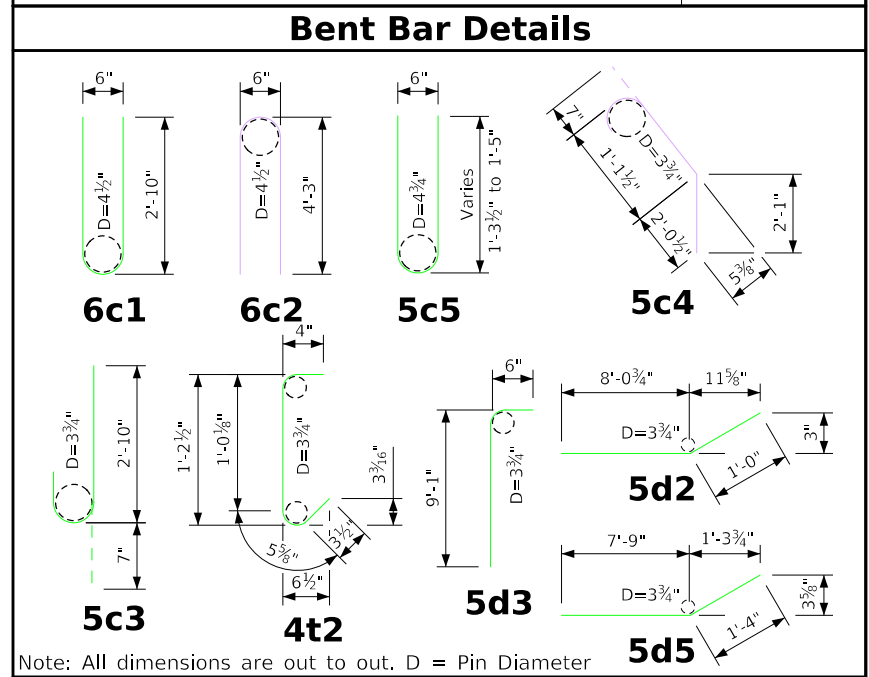


Part View F-F

Epoxy Coated Reinforcing Steel - One End Section					
Bar	Location	Shape	No.	Length	Weight
6c1	Rail, Vertical		12	5'-11"	107
5c3	Rail, Vertical (Traffic Face)		3	3'-5"	11
5c5	Rail, Vertical (End)		4	Varies	14
5d1	Rail, Horizontal (Back Face)		6	9'-1"	57
5d2	Rail, Horizontal (Traffic Face)		3	9'-1"	28
5d3	Rail, Horizontal (Traffic Face)		3	9'-7"	30
5d4	Rail, Horizontal (Traffic Face)		2	6'-3"	13
5d5	Rail, Horizontal (Top)		2	9'-1"	19
4t2	Rail, Abutment Wing Tie Bars		6	2'-0"	8
Epoxy Reinforcing Total Weight (lbs.)					287

Stainless Steel Reinforcing Steel - One End Section					
Bar	Location	Shape	No.	Length	Weight
6c2	Rail, Vertical		12	8'-9"	158
5c4	Rail, Vertical (Traffic Face)		6	3'-10"	24
5c6	Rail, Vertical (End)		8	Varies	47
Stainless Steel Reinforcing Total Weight (lbs.)					229

Concrete Placement Summary	
Section	Total
Barrier Rail, One End Section	1.0 cu. yd.



Note: 4t2 placement - 3 bars each at top two rows of 5h1/d bars in abutment wing.
Construction joint between top of abutment wing and abutment wing extension with barrier rail is roughened concrete.
The 6c2, 5c4, 5c6, and 4t2 bars are to be placed with the abutment wing. The details for placement are shown on the Abutment Wing Sheet.
Dashed lines below the top of wing are the abutment wing reinforcing steel.
See Abutment Wing Sheet for placement.

Design For Repairs to 15°00 Skew (L.A.)
159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge
43'-1½" & 47'-3½" End Spans 68'-9" Interior Span
Barrier End Section
STA. 512+10.00 (IA 62) Turn-in Date: Aug 2026
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Design No. 127 Design Sheet No. 15 of 24 FHWA No. 30220

Beam End Repair Notes:

It is estimated that 5 beam end(s) will be repaired. The final quantity and limits of beam end areas shall be determined by the Engineer.

The Contractor shall notify the Engineer when concrete removals are complete by each location to allow inspection by the Engineer prior to placement of concrete or repair mortar.

The Contractor shall report tendon or reinforcing bar section loss, exposed during removal work, to the Engineer prior to performing any repair work. The Engineer shall be given adequate time (7 days max.) to determine whether beam reinforcing is required. The Contractor shall incorporate this time into the construction schedule with work in other areas of the project in order to not delay the project.

Removal tools shall be limited to 15 lb chipping hammers and to hand tools without power.

The Contractor shall perform the concrete repair work in accordance with the following procedures and/or as directed by the Engineer:

1. Initiate removal of unsound concrete with 1/2" saw cuts at perimeter. Do not cross cut at corners. Stop saw cuts short of corners and remove concrete by hand. Adjust depth of saw cut as required to prevent cutting of existing reinforcing steel or strands. Extreme care shall be exercised during concrete removal so that exposed strands and reinforcing bars are not damaged. Any damage done to the strands or bars by the Contractor shall be repaired by the Contractor at no additional cost to the State.

2. Remove deteriorated areas to sound concrete and chip square. Boundaries to be square with no feathered edges. Sandblast concrete surfaces in the repair area and the exposed steel to bare metal. Remove all dust and debris resulting from chipping and blasting by using clean compressed air.

3. If concrete removal results in more than half the diameter of any reinforcing bar or prestressing strand being exposed, then removal shall continue to a minimum of 3/4" behind the first interior strand. If removals could exceed the 5" maximum horizontal depth, contact the Engineer prior to removal.

4. Report to the Engineer, prior to repair, section loss of tendons or reinforcing steel exposed during removals.

5. Apply two coats of protective coating/bonding agent (products are listed in the table on this sheet) to exposed prestressing strands and reinforcing bars according to manufacturer's recommendations.

6. Apply patching material. Type of material and application of material depends upon the extent of concrete removal and the two types of repair are to be as follows:

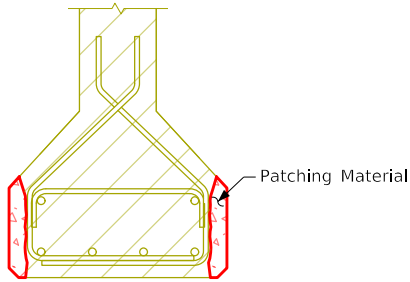
A. Shallow repair: Shallow repair areas are those where concrete removal did not result in reinforcing bars or prestressing strands being exposed for more than half their diameters. Patching material shall be as listed in the table on this sheet. Patching materials contain corrosion inhibitors. Apply patching material to match original beam surface. Patch need not be formed. Follow manufacturer's instructions and recommendations for mixing, placing and curing.

B. Regular repair: Regular repair areas are those where concrete removal extended behind the reinforcing bars and/or prestressing strands. These areas are to be placed using forms to match the original beam surface. Patching material shall be one of the grouts as listed in the table on this sheet. Patching materials contain corrosion inhibitors. Follow manufacturer's instructions and recommendations for mixing, placing and curing. Forms are to remain in place for seven days.

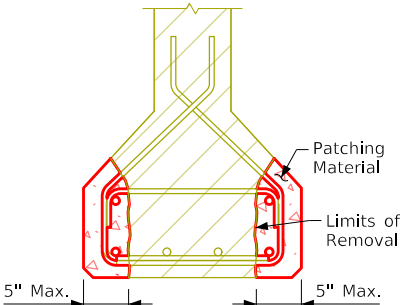
7. Sandblast 6'-0" of the ends of the repaired beams as shown on this sheet. The sandblasting shall be a light blast just enough to expose the fine aggregates. Do not sandblast patching material. All costs associated with sandblasting are to be included in the price bid for "Repair Beam Ends".

8. Apply concrete sealer to sandblasted portions of beams ends. Do not seal patching material.

All costs include equipment and materials required to repair deteriorated beam ends as detailed in these plans. These details shall be included in the price bid for "Repair Beam Ends". The Engineer will count each end of each beam properly repaired, and the Contractor will be paid the contract unit price per each repair.

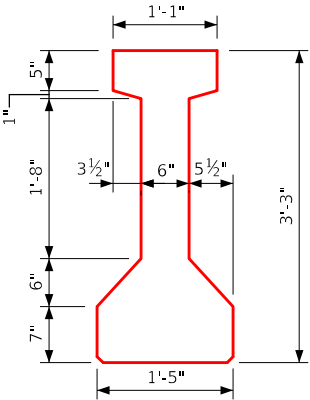


Shallow Repair Areas

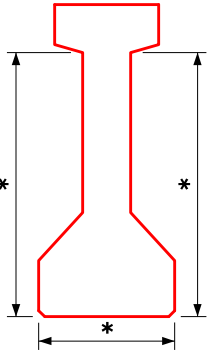


Regular Repair Areas

Note: The repair areas shown are schematic only. The actual area to be repaired will be determined by the Engineer. For location of beam ends to be repaired see beam layout below.

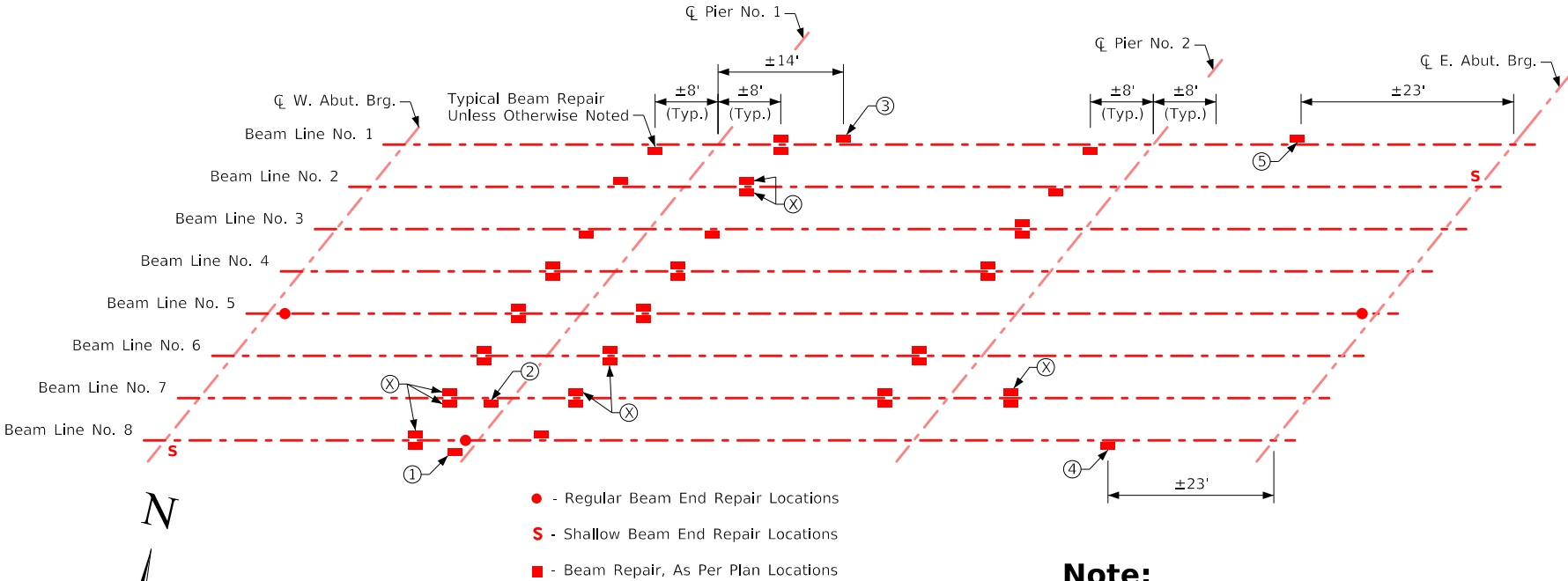


Beam Section



Limits of Sandblasting

* Sandblast the surfaces of the bottom flange and web within the limits shown to 6 feet of the beam ends.



Beam Layout

Note:

For Beam Repair, As Per Plan details, see Design Sheet No. 17.

For additional information on typical beam repairs and at locations X & 1 thru 5 noted on the Beam Layout detail, see Beam Repair Summary Table on Design Sheet No. 17.

Table of Manufacturers			
Manufacturer	Bonding Agent	Shallow Repair	Regular Repair
BASF	Mastermaco P 124	Masteremaco N 350 CI	Masteremaco S 477CI
Euclid	Duralprep A.C.	Verticoat Supreme	Eucorepair
Sika	Sika Armatec 110 Epocem	Sikatop 123 Plus	Sikatop 111 Plus

Design For Repairs to 15°00 Skew (L.A.)

159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge

43'-1 1/2" & 47'-3 1/2" End Spans68'-9" Interior Span

Beam End Repair Details

STA. 512+10.00 (IA 62)Turn-in Date: Aug 2026

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Design No. 127Design Sheet No. 16 of 24FHWA No. 30220

RepairRetrofitBridges.dgn - 1055 - This Sheet Issued 03-01-2017.
RepairRetrofitBridges.dgn - 1055 - This Sheet Re-Issued 07-2023.

Beam Repair Notes:

Refer to Article 2426 of the Standard Specifications for materials and construction methods that are adequate for structural concrete repair of the damaged beams. Bonding grout will not be required.

Refer to Article 2426.03, B of the Standard Specifications for surface preparation requirements when the reinforcing steel has been exposed as a result of concrete spalling or removal of loose and unsound concrete.

Prepare the surface of the old concrete by removing all loose, disintegrated or unsound concrete from the beam as shown on these plans and as designated by the Engineer. All concrete removals shall be complete before commencing placement of new concrete. Edge of repair area shall be sawcut 3/4" deep.

When surface preparation and cleaning is complete, the necessary forms are to be installed. Forms shall be positively held in the proper position to restore beam to original dimensions.

All concrete shall be Class "O" Structural Concrete.

The coarse aggregate shall be as described in Article 4115.05 of the Standard Specifications (1/2" maximum size).

The repair surfaces shall be cured by leaving the forms in place and any exposed concrete covered with wet burlap for at least 7 days.

All costs associated with the following shall be included in the price bid for "Beam Repair, As Per Plan":

- Removal of unsound or loose concrete, preparing and cleaning areas.
- Restoring beam to its original cross sectional dimensions with concrete as noted and shown in the plans.

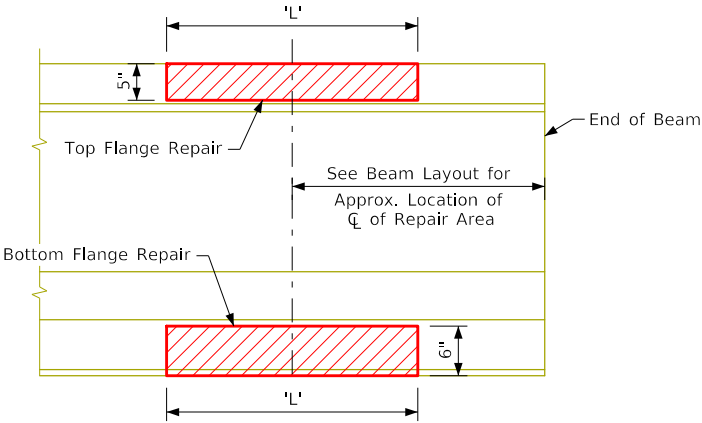
The Engineer will determine the square feet of Beam Repair by measuring the surface dimensions of the area repaired to the nearest 0.1 square foot. Distinction will not be made between shallow repair and regular repair.

Payment for the number of square feet of Beam Repair completed will be paid the contract unit price per square foot. Payment is full compensation for removal of excess concrete from the project; furnishing all materials and equipment; sandblasting exposed reinforcement; removing and replacing damaged reinforcing bars; forms; and labor necessary to complete the work according to the contract document.

Legend

Indicates Regular Repair

Indicates Shallow Repair



Beam Repair, As Per Plan
Typical Elevation View

Beam Repair Summary Table					
Mark	Location	Flange	No.	'L'	Area of Single Patch (SF)
Typical	Multiple	Top	31	1'-6"	0.75
ⓧ	Multiple	Top	8	3'-0"	1.50
①	Beam 8, Span 1, Near Pier 1	Top	1	1'-6"	0.75
②	Beam 7, Span 1, Near Pier 1	Top	1	2'-0"	1.00
③	Beam 1, Span 2, At Drain	Top	1	1'-6"	0.75
④	Beam 8, Span 3, At Drain	Top & Bott.	1	2'-0"	2.00
⑤	Beam 1, Span 3, At Drain	Bott.	1	2'-0"	1.00
Total (Sq. Ft.)					50.0

Beam Repair Quantities		
Description	Units	Amount
Beam Repair, As Per Plan	Sq. Ft.	50.0

Note:
For "Beam Repair, As Per Plan" locations, see Design Sheet No. 16.

Design For Repairs to 15°00 Skew (L.A.)

159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge

43'-1½" & 47'-3½" End Spans68'-9" Interior Span

Beam Repair Details

STA. 512+10.00 (IA 62)Turn-in Date: Aug 2026

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Design No. 127Design Sheet No. 17 of 24FHWA No. 30220



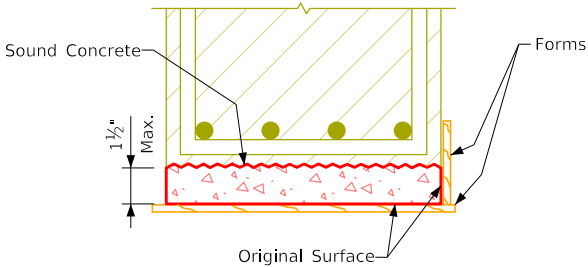
Typical Top Flange Beam Repair



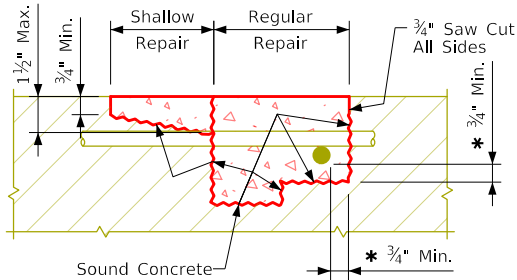
Top and Bottom Flange Beam Repair at Drain

Design For Repairs to 15°00 Skew (L.A.)
159'-2" x 32'-0" Pretensioned Prestressed
Concrete Beam Bridge
43'-1½" & 47'-3½" End Spans 68'-9" Interior Span
Beam Repair Details (Cont.)
STA. 512+10.00 (IA 62) Turn-in Date: Aug 2026
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Design No. 127 Design Sheet No. 18 of 24 FHWA No. 30220

Revised 10-2014 - Deleted All References to Grout. Section 2426 Covers this Requirement and Doesn't Need to be Stated on the Plans.
RepairRetrofitBridges.dgn - 1045 - This Sheet Redrawn 09-27-1990.
RepairRetrofitBridges.dgn - 1045 - This Sheet Re-Issued 07-2023.

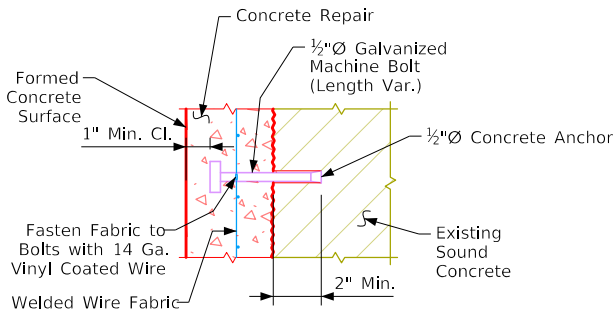


Shallow Repair
Bottom Surface



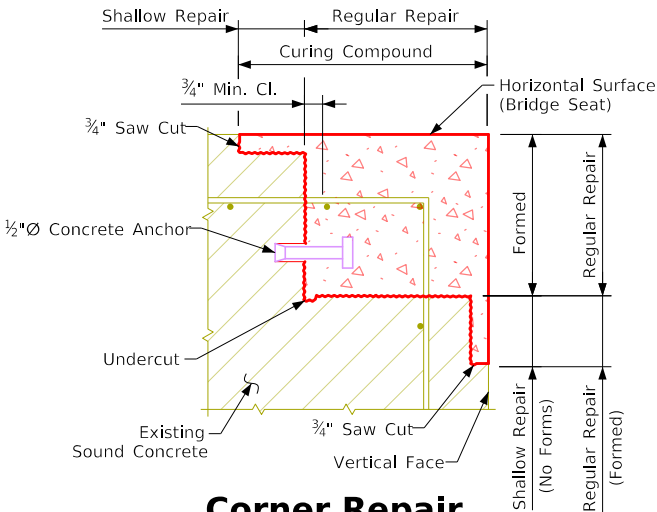
Repair Definition

* Indicates Clearance for an Un-Bonded Rebar.

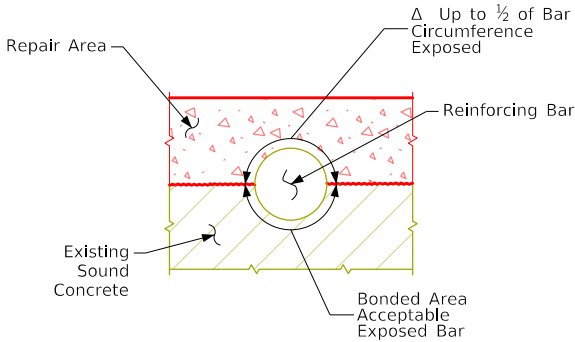


Anchor Detail

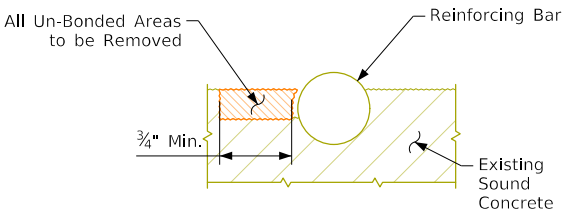
For Spacing and Use of Concrete Anchors and WWF See the Repair Notes.



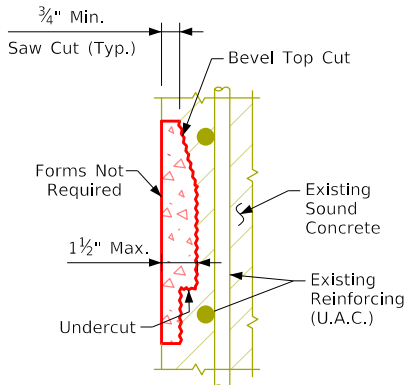
Corner Repair



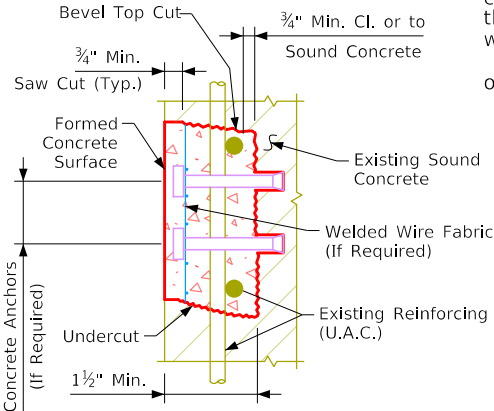
Δ If more than 1/2 of the rebar is exposed it shall be treated as an un-bonded rebar.



Concrete Removal
Adjacent to Reinforcing



Shallow Repair
Vertical Face



Regular Repair
Vertical Face

Repair Notes:

- The spalled and hollow areas of this bridge as noted and shown in these plans shall be repaired as follows:
- All the costs of equipment and materials required to repair the spalled and hollow areas of this bridge shall be included in the price bid for "Concrete Repair".
 - The price bid for "Concrete Repair" shall include the cost of all concrete anchors and welded wire fabric required by the plans.
 - The Engineer shall determine and outline by visual and audible inspection the actual areas of the concrete repairs. The Contractor shall be paid for the actual amount of repairs made on a square foot basis based on the price bid per square foot.
 - All existing reinforcing bars that are exposed by the concrete removal shall be cleaned and carefully incorporated into the new work, except badly deteriorated existing reinforcing which shall be replaced as directed by the Engineer.
 - The concrete anchors required shall have a minimum pull out of 5,000 lbs based on 4,000 psi concrete. An anchor meeting the requirements of Iowa D.O.T. Materials I.M. 453.09 and the pull out load above is required. The anchors shall be galvanized and shall be installed according to recommendations of the Manufacturer. The cost of furnishing and installing the concrete anchors shall be included in the price bid for "Concrete Repair".
 - The welded wire fabric shall be ASTM A185 and galvanized as per ASTM A-641. The WWF wires shall be spaced 3x3 or 4x4 and the wires shall have a nominal area of 0.014 to 0.029 square inch inclusive, example "WWF 3x3 - W1.4xW2.9".
- Where reinforcement has been exposed and clearance around the periphery of the existing bar is provided, no supplemental reinforcing is required, except where existing reinforcement density and pattern are such that individual open spaces between bars are of 1.5 square feet or larger. For this condition 1/2"Ø concrete anchors and welded wire fabric shall be installed at the rate of one concrete anchor with WWF per each 1.5 square feet of area within each open space.
- Repairing the structural concrete shall be in accordance with Section 2426 of the Standard Specifications.

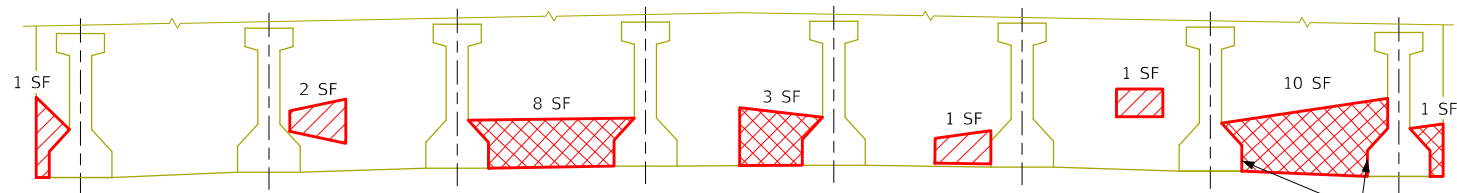
Concrete Placement Quantities

Mark	Type	Units	Quantity
①	Shallow Repair	Sq. Ft.	34
②	Regular Repair	Sq. Ft.	50
Total (Sq. Ft.)			84

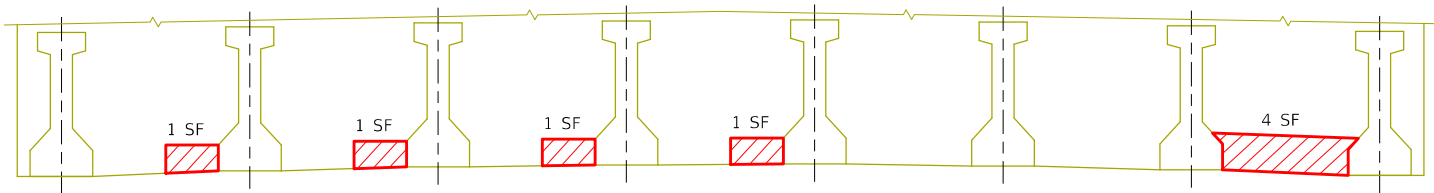
Estimated Concrete Repair Quantities

Description	Units	Amount
Concrete Repair	Sq. Ft.	84

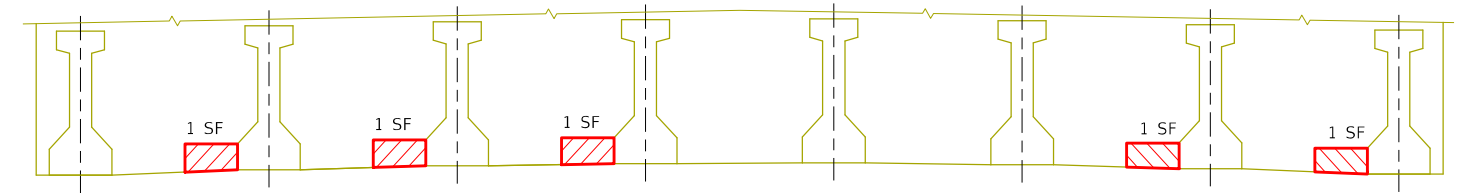
Design For Repairs to 15°00 Skew (L.A.)
159'-2" x 32'-0" Pretensioned Prestressed
Concrete Beam Bridge
43'-1 1/2" & 47'-3 1/2" End Spans 68'-9" Interior Span
Concrete Repair Details
STA. 512+10.00 (IA 62) Turn-in Date: Aug 2026
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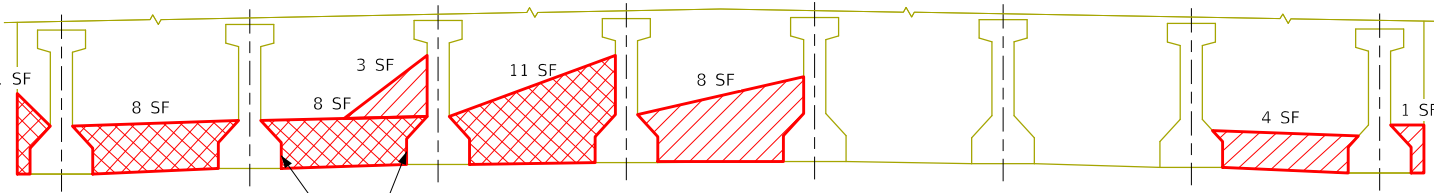
Pier No. 1 Diaphragm West Face
(Looking East)



Pier No. 1 Diaphragm East Face
(Looking West)



Pier No. 2 Diaphragm West Face
(Looking East)



Pier No. 2 Diaphragm East Face
(Looking West)

Note:
Concrete repair locations for estimating purposes. The actual quantity is determined at the time of repair. Actual spalled and hollow areas as determined by the Engineer shall be repaired.
Cost to Furnish and install resilient joint material at concrete repairs shall be included in price bid for "Concrete Repair".

Concrete Repair Quantities		
Location	Shallow	Regular
Concrete Repair (SF)	34	50

Legend

 Shallow Repair

 Regular Repair

Design For Repairs to 15°00 Skew (L.A.)

159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge

43'-1½" & 47'-3½" End Spans68'-9" Interior Span

Diaphragm Repair Details

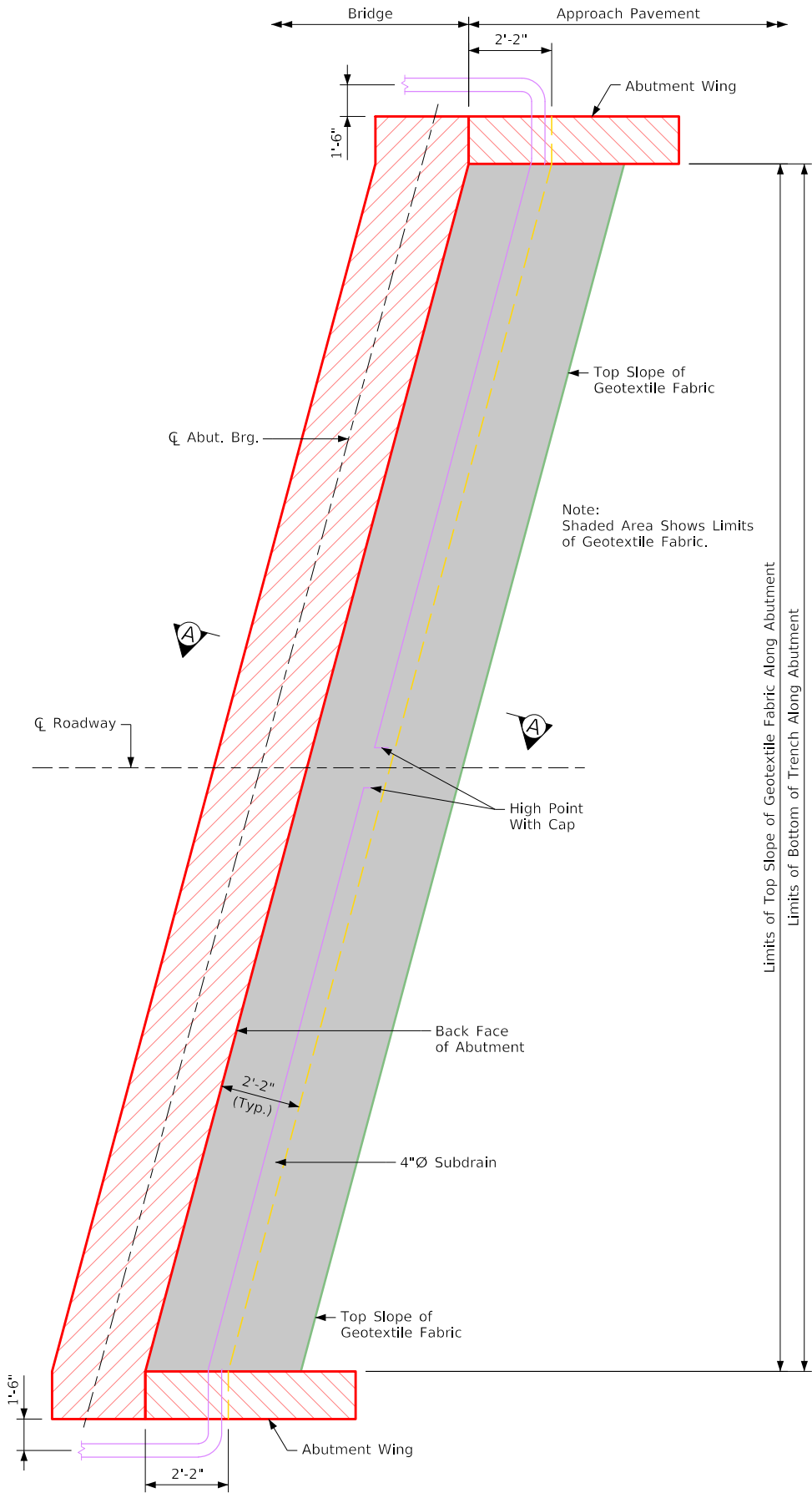
STA. 512+10.00 (IA 62)Turn-in Date: Aug 2026

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Design No. 127Design Sheet No. 20 of 24FHWA No. 30220

Revised 09-14 - The Technical Data Information Table was Removed and is Located in the Standard Specifications. Changed Surface Flooding Time to 5 Minute Increments.
Revised 09-16 - Changed the Bridge Approach Pavement Standard to "BR" (was "RK").
ForeSlopeProtectionBridges.dgn - 1007D - This Sheet Issued 08-07.
ForeSlopeProtectionBridges.dgn - 1007D - This Sheet Redrawn 07-23.



Abutment Plan without Wing Extensions

Abutment Backfill Process:

The base of the excavation subgrade behind the abutment is to be graded with a 4% slope away from the abutment footing and a 2% cross slope in the direction of the subdrain outlet. This excavation shaping is to be done prior to beginning installation of the geotextile and backfill material.

After the subgrade has been shaped, the geotextile fabric shall be installed in accordance with the details shown. The fabric is intended to be installed in the base of the excavation and extended vertically up the abutment backwall, abutment wing walls, and excavation face to a height that will be approximately 1 to 2 ft higher than the height of the porous backfill placement as shown in the "Backfill Details" on this sheet. The strips of the fabric placed shall overlap approximately 1 ft and shall be pinned in place. The fabric shall be attached to the abutment by using lath folded in the fabric and secured to the concrete with shallow concrete nails. The fabric placed against the excavation face shall be pinned.

When the fabric is in place, the subdrain shall be installed directly on the fabric at the toe of the rear excavation slope. A slot will need to be cut in the fabric at the point where the subdrain exits the fabric near the end of the abutment wing wall.

Porous backfill is then placed and leveled, no compaction is required.

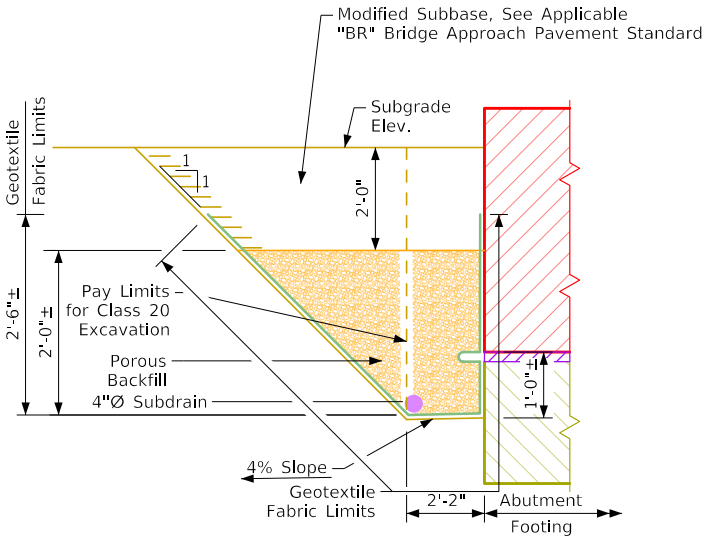
Subdrains, porous backfill, and geotextile fabric furnished at the bridge abutments will not be measured separately for payment.

Subdrains, porous backfill, and geotextile fabric furnished at the bridge abutments shall be included in the contract unit price bid for "High Performance Structural Concrete".

Note:

Subdrain shall slope downward 2% from center line approach roadway when outletting both sides of the abutment.

The geotextile fabric shall be in accordance with Article 4196.01, B, 6 of the Standard Specifications. If the engineering fabric is lapped the laps shall be a minimum of 1 ft in length, shingle fashion with up slope lap piece on top and stapled for continuity.



Section A-A
Backfill Details

Note: Geotextile Fabric will be Attached to Face of Abutment Footing and Wings.

* Dimension Varies Due to 2% Subdrain Slope.

Note:
For Details not Shown on this Sheet which are Pertinent to this Structure See Subdrain Details Sheet on Design Sheet No. 22.

Design For Repairs to 15°00 Skew (L.A.)

159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge

43'-1½" & 47'-3½" End Spans68'-9" Interior Span

Abutment Backfill Detail

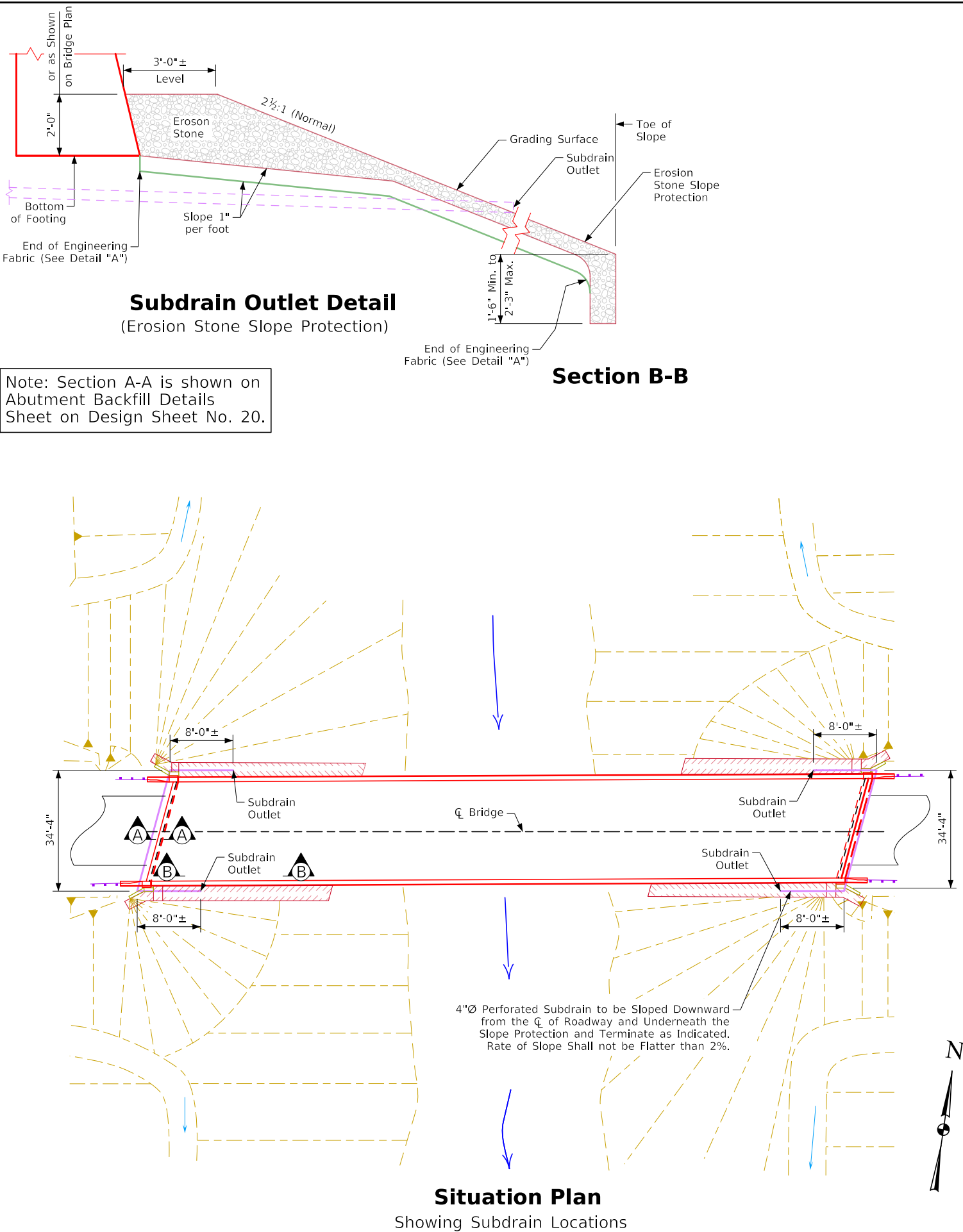
STA. 512+10.00 (IA 62)Turn-in Date: Aug 2026

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Design No. 127Design Sheet No. 21 of 24FHWA No. 30220

Revised 07-11 - The Berm Slope is Identified as the Grading Surface.
Revised 09-2023: Added pattern shapes in details to show backfill and subbase materials.
Revised 06-2024: Added leader line locations to Engineering Fabric in Section B-B. Changed Control Point text (was Bench Mark).
ForeSlopeProtectionBridges.dgn - 1007A - This Sheet Issued 06-02.
ForeSlopeProtectionBridges.dgn - 1007A - This Sheet Redrawn 07-23.



Subdrain Notes:

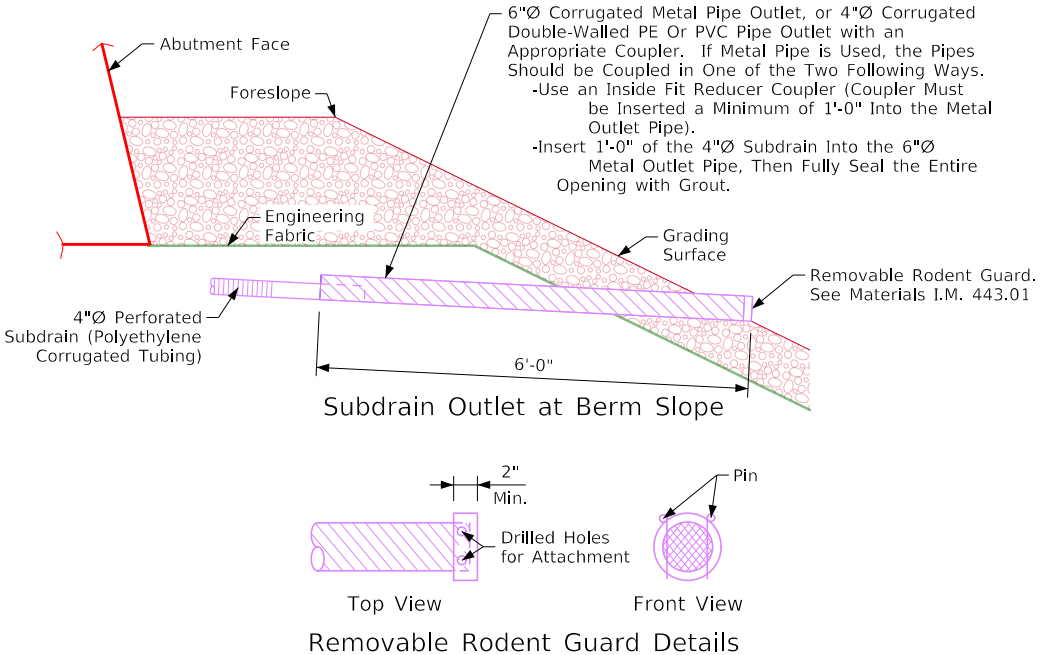
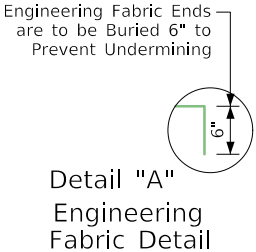
This plan sheet shows details for placing all subdrains and subdrain outlets required for this structure.

The subdrains shall be 4"Ø and shall be in accordance with Article 4143.01, B, of the Standard Specifications.

The subdrain outlet shall consist of 6'-0" length of pipe with a removable rodent guard as detailed on this sheet.

The cost of furnishing and placing subdrain (including excavation), granular backfill, porous backfill, and subdrain outlet is to be included in the price bid for "High Performance Structural Concrete". No extra payment will be made.

The dimensions shown for the proposed subdrains are based on the proposed grading layout of bridge berms. The dimensions shown are for estimating only. Required lengths and general locations of subdrains are subject to change due to field adjustments of the grading layout.



Subdrain Outlet Elevations	
Location	Elevation
West Abutment	760.0
East Abutment	759.0

Design For Repairs to 15°00 Skew (L.A.)

159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge

43'-1½" & 47'-3½" End Spans 68'-9" Interior Span

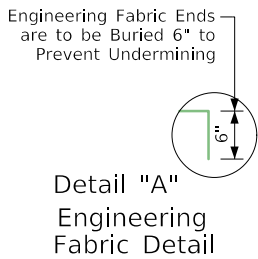
Subdrain Details

STA. 512+10.00 (IA 62) Turn-in Date: Aug 2026

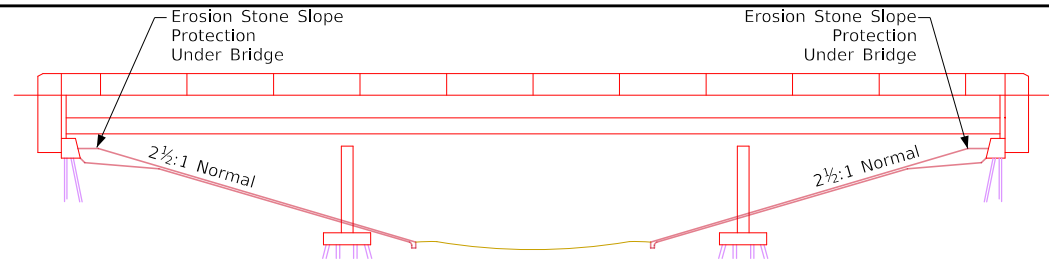
Jackson County

IOWA DEPARTMENT OF TRANSPORTATION

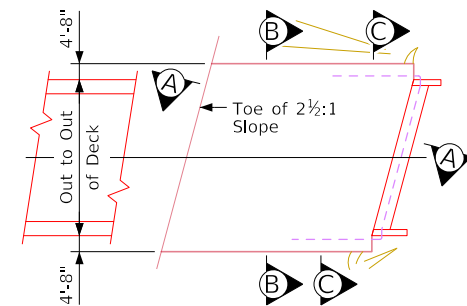
Design No. 127 Design Sheet No. 22 of 24 FHWA No. 30220



Section A-A



Longitudinal Section Along C Roadway



Slope Protection Layout 15° Skew

General Notes:

The bridge berm foreslope shall be compacted and shaped as shown on this sheet. Shaping will include excavation from the grading surface shown on the situation plan and as directed by the Engineer. The berm foreslope shall be firm when the engineering fabric and erosion stone are placed.

The erosion stone shall be in accordance with Section 4122, of the Standard Specifications, coarse material (no choke stone is allowed).

The erosion stone shall be deposited, spread, consolidated and shaped by mechanical or hand methods that will provide uniform depth and density and provide uniform surface appearance.

The berm foreslope shaping and compacting and the disposal of excess soil from shaping or trenching shall be considered incidental to placing the slope protection.

The Bridge Contractor is to install subdrains as detailed on the Subdrain Details Sheet on Design Sheet No. 22.

Estimated Quantities		
Description	Location	Quantity
Erosion Stone	West Abut.	110 Tons
Erosion Stone	East Abut.	110 Tons
Total		220 Tons

Items to be included in "Erosion Stone":
Excavating, Shaping and Compacting
Engineering Fabric
Erosion Stone
4"x6" Treated Timber Edging
1/2"Ø Steel Pins (or Rebar)

Design For Repairs to 15°00 Skew (L.A.)

159'-2" x 32'-0" Pretensioned Prestressed
Concrete Beam Bridge

43'-1½" & 47'-3½" End Spans 68'-9" Interior Span

Erosion Stone Slope Protection

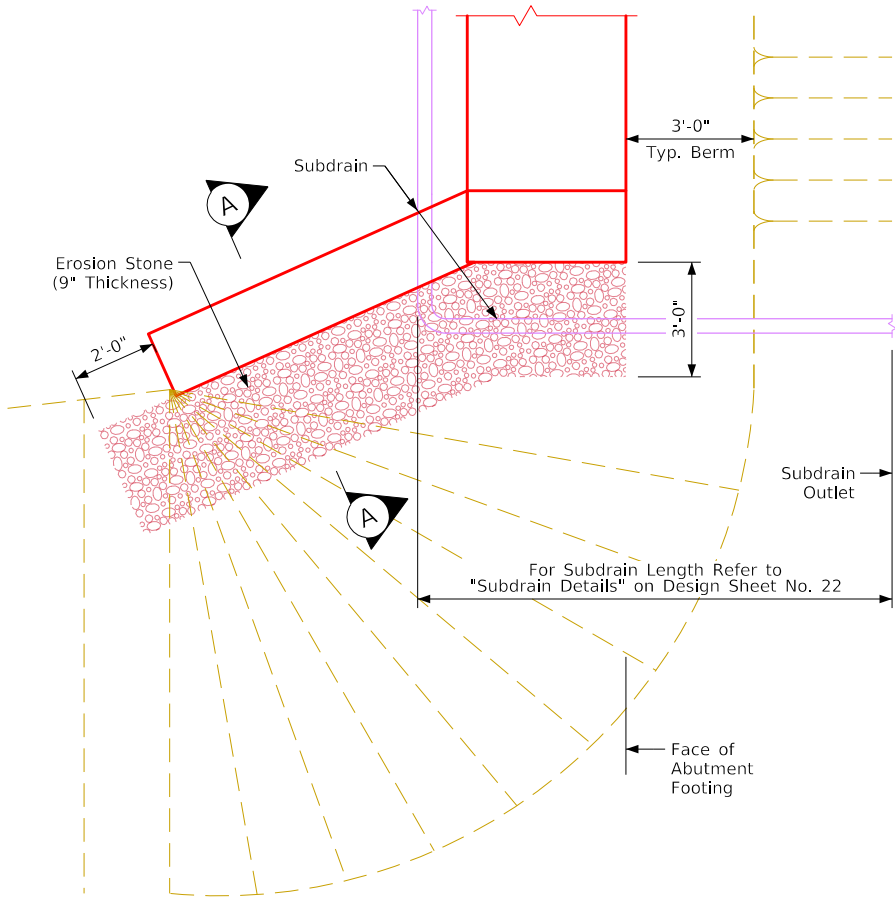
STA. 512+10.00 (IA 62) Turn-in Date: Aug 2026

Jackson County

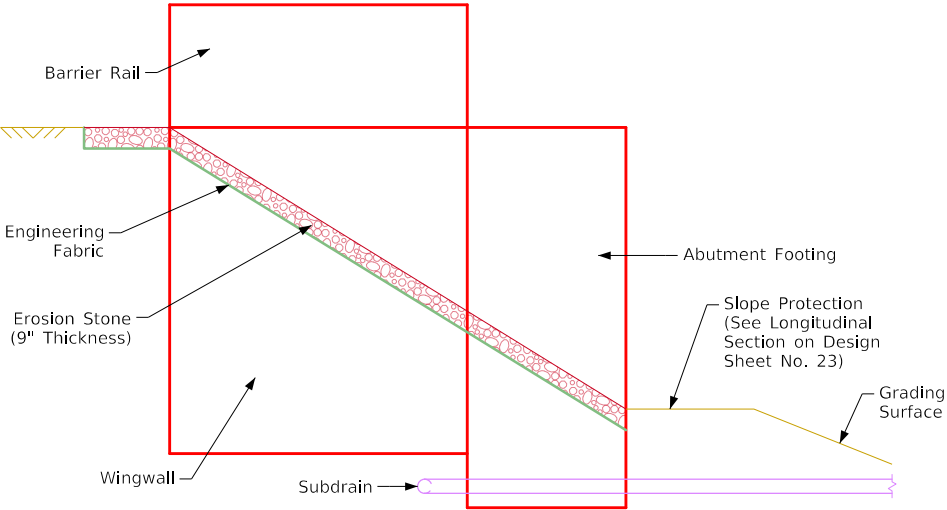
IOWA DEPARTMENT OF TRANSPORTATION

Design No. 127 Design Sheet No. 23 of 24 FHWA No. 30220

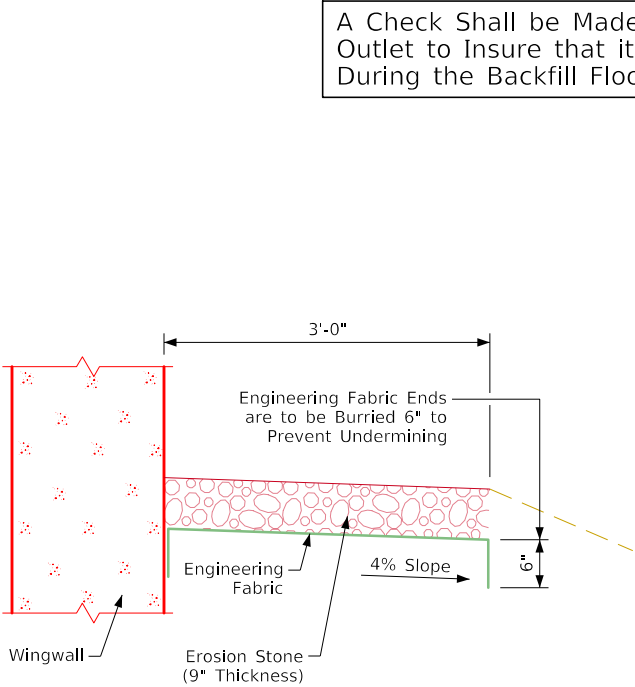
Revised 10-12 - Located the "A" and "B" Points in Section A-A.
Revised 09-2023: Added pattern shapes in details to show backfill and subbase materials.
ForeSlopeProtectionBridges.dgn - 1006C - This Sheet Issued 09-16-92.
ForeSlopeProtectionBridges.dgn - 1006C - This Sheet Redrawn 07-23.



Top View of Wing Armoring



Profile View of Wing Armoring



Section A-A

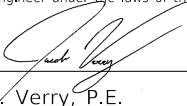
A Check Shall be Made at the Subdrain Outlet to Insure that it is Draining Properly During the Backfill Flooding Process.

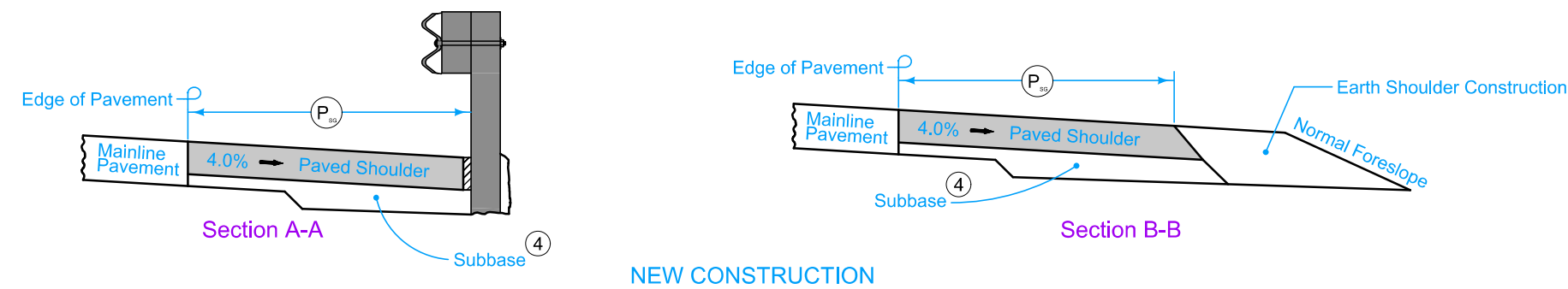
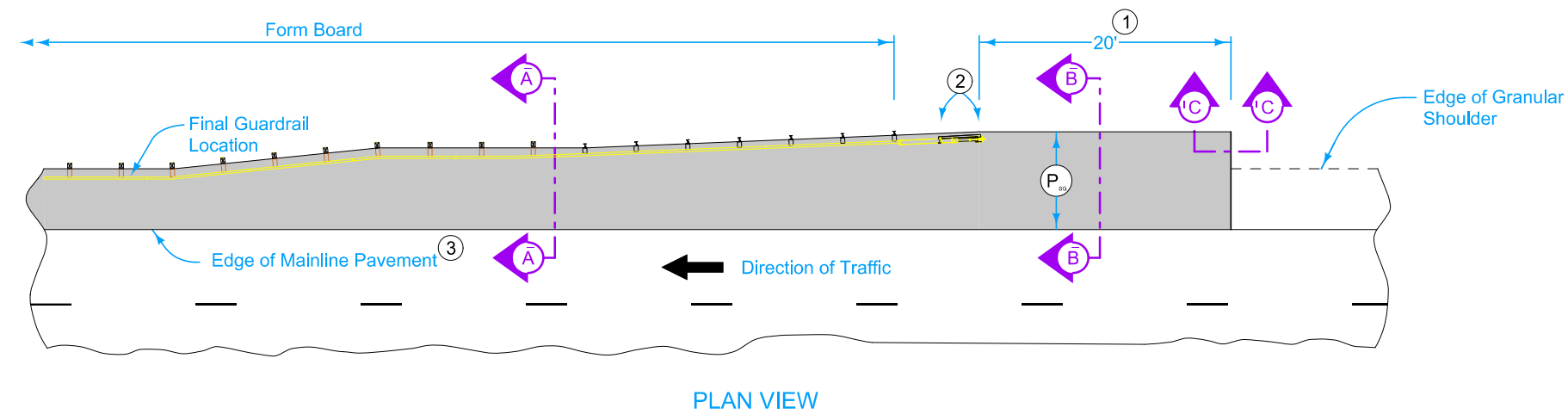
General Notes:

Erosion stone shall be placed along the sides of the wings and abutment footing as shown in Section A-A. This is typical at each corner of the bridge unless otherwise noted in the plans. The erosion stone at these locations shall be underlayed with engineering fabric in accordance with Article 4196.01, B, 3, of the Standard Specifications. The erosion stone shall be in accordance with Section 4130, of the Standard Specifications. Material passing the 3 inch screen but 100% retained on a 1 inch screen may be used as choke stone. The erosion stone shall be deposited, spread, consolidated and shaped by mechanical or hand methods that will provide uniform 9 inch depth and density and provide uniform surface appearance. Payment for the bridge wing armoring will be bid per square yard. Cost will include engineering fabric, erosion stone, excavation, shaping, and compaction to dimensions shown in these plans. Bid item shall be "Bridge Wing Armoring - Erosion Stone".

Design For Repairs to 15°00 Skew (L.A.)
159'-2" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge
43'-1½" & 47'-3½" End Spans 68'-9" Interior Span
Bridge Wing Armoring
STA. 512+10.00 (IA 62) Turn-in Date: Aug 2026
Jackson County
IOWA DEPARTMENT OF TRANSPORTATION
Design No. 127 Design Sheet No. 24 of 24 FHWA No. 30220

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets A.3	Title Sheets Title Sheet
B Sheets B.1 - 2	Typical Cross Sections and Details Typical Cross Sections and Details
C Sheets C.1 - 2 C.3 - 17	Quantities and General Information Estimated Project Quantities Tabulations
D Sheets D.1 D.2	Mainline Plan and Profile Sheets Plan Legend & Symbol Information Sheet IA 62 Plan and Profile
G Sheets G.1 - 3 G.4	Survey Sheets Survey Information Alignment Information Tabulations
J Sheets J.1 - 3 J.4	Traffic Control and Detour Traffic Control Plan IA 62 Detour Plan
U Sheets U.1 - 3	500 Series, Mod.Stds. and Detail Sheets Modified Standards and Detail Sheets

ROADWAY DESIGN	
	I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.
	Signature  Jacob M. Verry, P.E. Printed or Typed Name 7-29-2026 Date
	My license renewal date is December 31, 2027
	Pages or sheets covered by this seal: A.3, B.1-2, C.1-17, D.1-2, G.1-4, J.1-4, U.1-3



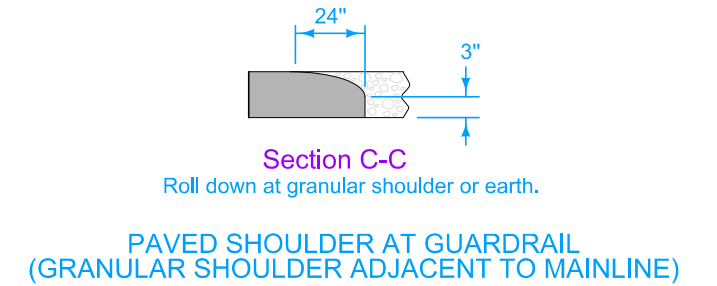
10" HMA Paved Shoulder at guardrail.

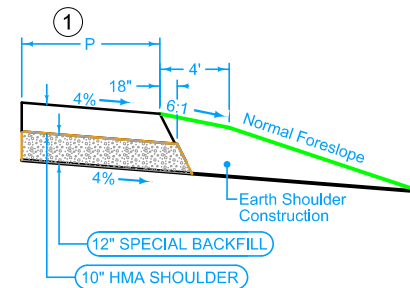
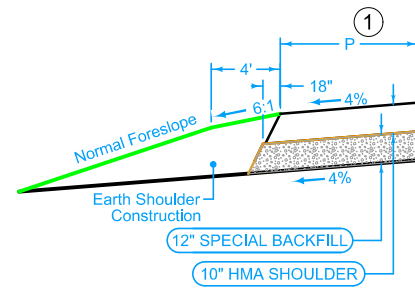
Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at $P/2$ from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

Refer to Tabulation 112-9 for shoulder quantities.

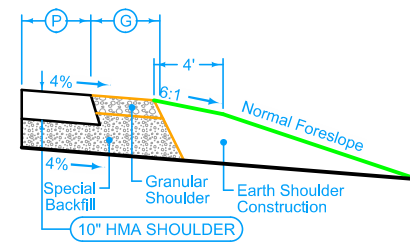
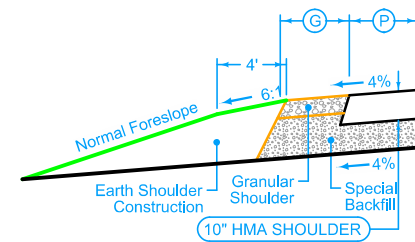
- ① Continue paved shoulder 20 feet beyond the center of the first post.
- ② Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ③ 'B' joint (per PV-101) for HMA shoulder.
- ④ Refer to other details in the plan.





PAVED HMA SHOULDER TYPICAL

① Refer to Tab. 112-09 in the C sheets for shoulder dimensions, locations, and details.



COMBINATION SHOULDER

① Refer to Tab. 112-09 in the C sheets for shoulder dimensions, locations, and details.

ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Roadway Items : Roadway Items

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadway Items	
1	2102-0425070	SPECIAL BACKFILL	TON	1,185	Item is for paved shoulder construction. See B.2 and Tab. 112-9 for locations and details. Bid item is increased by 5% for irregularities.
2	2102-2625000	EMBANKMENT-IN-PLACE	CY	139.7	Item is for paved shoulder construction. Refer to Tab. 107-23. Provide borrow material according to Section 2102 of the Standard Specification. Material shall be provided by The Contractor.
3	2102-2713090	EXCAVATION, CLASS 13, WASTE	CY	552.2	Refer to Tab. 112-9 for locations and details. Dispose of excess material according to Article 1106.07 of the current specifications.
4	2121-7425010	GRANULAR SHOULDERS, TYPE A	TON	156.6	See Modified Detail 7157 and Paved HMA Shoulder typical on B.2, Sheet D.2, and Tab. 112-9 for locations and details.
5	2122-5500100	PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 10 IN.	SY	774.9	See Modified Detail 7157 and Paved HMA Shoulder typical on B.2, Sheet D.2, and Tab. 112-9 for locations and details.
6	2123-7450000	SHOULDER CONSTRUCTION, EARTH	STA	14.1	Item is for shaping earth material for paved shoulder construction. See Tab. 112-9 for locations and details.
7	2301-0690203	BRIDGE APPROACH, BR-203	SY	472.3	Refer to Tab. 112-6 for locations and details.
8	2412-0000100	LONGITUDINAL GROOVING IN CONCRETE, BRIDGE DECK AND/OR APPROACHES	SY	994	Refer to Tab. 100-28 for locations and details.
9	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL	LF	294	Refer to Tab. 110-7A for locations and details. Removal of delineators and object markers is incidental to this item. Refer to D.2 and Tab. 108-8A for locations and details.
10	2505-4008300	STEEL BEAM GUARDRAIL	LF	125	
11	2505-4008410	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION, BA-201	EACH	3	
12	2505-4008410	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION, BA-201 , Modified	EACH	1	Refer to D.2, U.1-3, and Tab. 108-8A for locations and details.
13	2505-4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	EACH	4	Refer to D.2 and Tab. 108-8A for locations and details.
14	2505-4021720	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, BA-205	EACH	3	Refer to Tab. 108-8A for locations and details.
15	2505-4021720	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, BA-205 , Valtir 4F-T	EACH	1	Refer to Tab. 108-8A for locations and details. See SP for Valtir 4F-T End Terminal.
16	2510-6745850	REMOVAL OF PAVEMENT	SY	386.4	Refer to Tab. 102-5, Tab. 110-1. and sheet D.2 for locations and details.
17	2519-4200010	REMOVAL AND REINSTALLATION OF FENCE, BARBED WIRE	LF	375	The intent of this work is to remove and reinstall only the fence for placement of erosion stone slope protection. This item includes all labor, equipment, and materials required to remove and reinstall the fence. Replace posts damaged by the Contractors operations at no additional cost to the Contracting Authority. Restore the area disturbed by removal and reinstallation operations to an acceptable condition. See Tab. 100-08 for locations and details.
18	2520-3350015	FIELD OFFICE	EACH	1	

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadway Items	
19	2527-9263209	PAINTED PAVEMENT MARKINGS, WATERBORNE OR SOLVENT-BASED	STA	36.65	Refer to Tab. 108-22 and 108-29 for locations and details.
20	2528-2518000	SAFETY CLOSURE	EACH	3	Refer to Tab. 108-13A and J Sheets for locations and details.
21	2528-8445110	TRAFFIC CONTROL	LS	1	Refer to Tab. 108-23A for the Traffic Control Plan. Furnishing, maintenance, and removal of all detour signs are included in this item.
22	2528-9290050	PORTABLE DYNAMIC MESSAGE SIGN (PDMS)	CDAY	0	See Proposal.
23	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	2,430	Refer to Tab. 100-19. The tabulation includes estimated locations for placement of "Perimeter and Slope Sediment Control Device, 12 in. dia." to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 25% additional quantity for field adjustments and replacements.
24	2602-0000351	REMOVAL OF PERIMETER AND SLOPE OR DITCH CHECK SEDIMENT CONTROL DEVICE	LF	2,430	Refer to Tab. 100-19. The tabulation includes estimated locations for placement of "Perimeter and Slope Sediment Control Device, 12 in. dia." to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 25% additional quantity for field adjustments and replacements.

111-25 10-18-11		
INDEX OF TABULATIONS		
Tabulation	Tabulation Title	Sheet No.
105-4	Standard Road Plans	C.4
100-8	Removal and Reinstallation of Fence	C.5
100-19	Perimeter and Slope Sediment Control Device	C.6
100-28	Longitudinal Grooving	C.7
102-5	Existing Pavement	C.8
107-23	Grading for Guardrail Installations	C.9
108-8A	Steel Beam Guardrail at Concrete Barrier or Bridge Rail End Section	C.10
108-13A	Safety Closures	C.11
108-22	Pavement Marking Line Types	C.12
110-1	Removal of Pavement	C.13
110-7A	Removal of Steel Beam Guardrail	C.14
112-6	Bridge Approach Section	C.15
112-9	Shoulders	C.16
232-3A	Erosion Control (Rural Seeding)	C.17
232-3C	Erosion Control (Native Grass Seeding)	C.17
262-6	Utilities (Not a Point 25 Project)	C.17
108-23A	Traffic Control Plan	J.1
108-25	511 Travel Restrictions	J.2
111-1	Coordinated Operations	J.3

STANDARD ROAD PLANS

The following Standard Road Plans apply to construction work on this project.

Number	Date	Title
BA-200	4/15/2025	Steel Beam Guardrail Components
BA-201	10/18/2022	Steel Beam Guardrail Barrier Transition Section (MASH TL-3)
BA-202	4/15/2022	Steel Beam Guardrail Bolted End Anchor
BA-205	10/17/2023	Steel Beam Guardrail Tangent End Terminal (MASH TL-3)
BA-250	10/21/2025	Steel Beam Guardrail Installation at Concrete Barrier or Bridge Rail End Section (MASH TL-3)
BR-203	10/21/2025	Double Reinforced 12" Approach
BR-212	10/21/2025	Bridge Approach (Abutting HMA Pavement)
EC-204	10/19/2021	Perimeter, Slope and Ditch Check Sediment Control Devices
EC-502	4/21/2015	Seeding in Rural Areas
EW-301	4/16/2024	Guardrail Grading
PM-110	10/15/2024	Line Types
PM-111	4/21/2020	Symbols and Legends
PV-012	4/16/2024	Milled Shoulder Rumble Strips
PV-101	1/1/2026	Joints
PV-102	10/21/2025	PCC Curb Details
SI-173	4/19/2016	Object Markers
SI-211	10/18/2022	Object Marker and Delineator Placement with Guardrail
TC-001	10/15/2019	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-202	4/18/2023	Work Within 15 ft of Traveled Way
TC-252	10/21/2025	Routes Closed to Traffic

100-08
MODIFIED

REMOVAL AND REINSTALLATION OF FENCE

Location				Type	Length	Remarks
From		To			LF	
Station	Offset	Station	Offset			
511+28.10	72.7	511+67.26	-78.1	Barbed Wire	160.0	1,2
512+30.06	64.8	512+68.16	-83.3	Barbed Wire	160.0	1,2
512+18.06	74.5	512+25.17	20.7	Barbed Wire	55.0	1,2
			Total		375.0	

1: Storage of fence during construction is at the responsibility of the Contractor.
2: Removal of fence is approximate. Verify in field necessary removal limits.

100-19
10-15-24

PERIMETER, SLOPE AND DITCH CHECK SEDIMENT CONTROL DEVICES

Possible Standards: EC-204

Location			Perimeter and Slope			Ditch Check		Remarks
Begin Station	End Station	Side	Length of Installation			Length of Installation		
			9 inch Dia	12 inch Dia	20 inch Dia	12 inch Dia	20 inch Dia	
			LF	LF	LF	LF	LF	
507+18.00	509+35.93	Rt		220.0				Slope Protection Rt
509+18.02	511+35.96	Rt		220.0				Slope Protection Rt
511+35.96	511+35.96	Cen		90.0				Slope Protection Center
512+77.40	512+77.40	Cen		90.0				Slope Protection Center
512+79.78	514+97.87	Rt		220.0				Slope Protection Rt
514+79.69	516+95.95	Rt		220.0				Slope Protection Rt
507+18.00	509+35.93	Lt		220.0				Slope Protection Lt
509+18.02	511+35.96	Lt		220.0				Slope Protection Lt
512+79.78	514+97.87	Lt		220.0				Slope Protection Lt
514+79.69	516+95.95	Lt		220.0				Slope Protection Lt
	Total			1940.0				

100-28 08-15-22		
LONGITUDINAL GROOVING		
Location	Total	Remarks
	SY	
511+27.29	185.0	West Bridge Approach
512+12.58	624.0	Bridge
512+88.53	185.0	East Bridge Appraoch
Total	994.0	

102-5 09-29-23																					
EXISTING PAVEMENT																					
No.	Location					Year	Type	Project Number	Surface		Base		Subbase		Removal		Coarse Aggregate			Reinforcement	Remarks
	County	Route	Dir. of Travel	Begin Ref. Loc. Sign	End Ref. Loc. Sign				Type	Depth	Type	Depth	Type	Depth	Type	Depth	Source	Type	Durability Class	Type	
										IN		IN		IN		IN					
	Jackson	IA 62	Both	007 73	017 37	1997		STPN-62-1(16)--2J-49	AAC	2	AAC						BELLEVUE	C.LST			
						1971		FN-62-1(6)--21-49	AAC	1	AAC	2					ANDREW	C.LST			
						1962		F-999(1) & F-144(3)	BAC	3	RSB	12	SAS	6			FELDERMAN	C.LST			

107-23 08-15-22																
GRADING FOR GUARDRAIL INSTALLATIONS																
① Lane(s) to which the installation is adjacent. Refer to EW-301																
Location				Foreslope at Guardrail	Dimensions (Feet)								Earthwork		Remarks	
No.	Direction of Traffic ①	Station	Side		X1	Y1	X2	Y2	X3	Y3	X4	Y4	Z	Excavation Class 10		Embankment In Place
														CY		CY
1	EB	511+14.71	RT	4:01	40.0	9.4	65.0	11.0	94.0	11.0	151.0	13.3	70.0		22.0	
2	WB	511+23.28	LT	4:01	40.0	9.7					108.2	12.7	68.0		15.5	
3	EB	512+92.28	RT	4:01	40.0	9.7					108.2	12.7	68.0		15.5	
4	WB	513+00.85	LT	4:01	33.5	9.4					85.7	14.5	74.0		86.7	
		Total													139.7	

STEEL BEAM GUARDRAIL AT CONCRETE BARRIER OR BRIDGE RAIL END SECTION

Possible Standards: BA-200, BA-201, BA-202, BA-205, BA-206, BA-210, BA-211, BA-221, BA-225, BA-250, BA-260, LS-625, LS-626, LS-630, LS-635, SI-172, SI-173 and SI-211.

- ① Lane(s) to which the obstacle is adjacent.
- ② Not a bid item. Incidental to guardrail installation.

Location				Layout Lengths					Long-Span System		Delineators and Object Markers ②					Bid Items												Remarks
No.	Direction of Traffic	Side O = Outside W = Median	Station	Offset	BA-250, BA-260, LS-630, or LS-635						SI-211	Delineator	Object Marker			Bolted End Anchor	Post Adapter	Steel Beam Guardrail	BA-250 or LS-630				BA-260 or LS-635					
					VT1	VF	VT2	ET					SI-172	SI-173					Barrier Transition Section	End Terminal				Barrier Transition Section	End Terminal			
												Type 1		Type 2	Type 3					Tangent	Flared	Tangent	Flared			Tangent		
												BA-211		White	OM2-2	OM3-L	OM3-R	BA-202		BA-210	BA-200	BA-201	BA-205	BA-206	LS-625	LS-626	BA-221	
STATION	TYPE	TYPE	EACH	EACH	EACH	EACH	TYPE	EACH	EACH	LF	EACH	EACH	EACH	EACH	EACH	EACH	EACH											
1	EB	O	511+14.71	16.4	53.125			47.7			2		5		1	A	1		62.5	1	1							
2	WB	O	511+23.28	16.4	53.125			47.7			2		4	1		A	1		25.0	1	1							
3	EB	O	512+92.28	16.4	53.125			47.7			2		4	1		A	1		25.0	1	1							
4	WB	O	513+00.85	16.4	46.875			34.4			2		3		1	A	1		12.5	1	1						1,2	
			Total													4		125	4	4								

- 1: See SP for Valtir 4F-T End Terminal.
- 2: See U Sheets for Modified BA-201.

			108-13A 10-04-23
SAFETY CLOSURES			
Refer to Section 2528 of the Standard Specifications			
Station	Closure Type		Remarks
	Road Qty.	Hazard Qty.	
508+75.00	1		Maintain Field Entrance
512+10.00	1		IA 62 Closure
514+05.00	1		Maintain Field Entrance
Total	3		

108-22
04-16-23

PAVEMENT MARKING LINE TYPES

See PM-110, PM-115

*BCY4 - Place on the same side of the roadway to match existing markings near the project.
**NPY4 - For estimating purposes only. No Passing Zone Lines will be located in the field.
***MNY6 - Factor of 1.00 as value includes number of 6-inch passes to cover median nose area.

BCY4: Broken Centerline (Yellow) @ 0.17
CBW6: Crosswalk Bar (White) @ 10.00
CLW6: Crosswalk Line (White) @ 2.00
DLW4: Dotted Line (White) @ 0.22
ELW6: Edge Line Right (White) @ 1.00
MNY6: Median Nose (Yellow) @ 1.00
RLY4: Ramp Edge Line Left (Yellow) @ 0.67
SPW4: Sloped Curb 4" (White) @ 2.16
STY6: Standard Curb 6" (Yellow) @ 2.03

BCY6: Broken Centerline (Yellow) @ 0.25
CHW8: Channelizing Line (White) @ 1.33
DCY4: Double Centerline (Yellow) @ 1.34
DLW6: Dotted Line (White) @ 0.33
ELY4: Edge Line Left (Yellow) @ 0.67
NPY4: No Passing Zone Line (Yellow) @ 0.84
RLY6: Ramp Edge Line Left (Yellow) @ 1.00
SPW6: Sloped Curb 6" (White) @ 2.28
YLW2: Yield Line (White) 1.15

BLC6: Broken Line Contrast (White/Black) @ 0.50
CHW10: Channelizing Line (White) @ 1.67
DCY6: Double Centerline (Yellow) @ 2.00
DLY4: Dotted Line (Yellow) @ 0.22
ELY6: Edge Line Left (Yellow) 1.00
NPY6: No Passing Zone Line (Yellow) @ 1.25
SLW2: Stop Line (White) @ 4.00
SPY4: Sloped Curb 4" (Yellow) @ 2.16

BLW4: Broken Lane Line (White) @ 0.17
CHY8: Channelizing Line (Yellow) @ 1.33
DDY4: Double Dotted Line (Yellow) @ 0.44
DLY6: Dotted Line (Yellow) @ 0.33
LDW8: Lane Drop (White) @ 0.33
RLW4: Ramp Edge Line Right (White) @ 0.67
SLW4: Solid Lane Line (White) @ 0.67
SPY6: Sloped Curb 6" (Yellow) @ 2.28

BLW6: Broken Lane Line (White) @ 0.25
CHY10: Channelizing Line (Yellow) @ 1.67
DDY6: Double Dotted Line (Yellow)@ 0.67
ELW4: Edge Line Right (White) @ 0.67
LDW10: Lane Drop (White) @ 0.42
RLW6: Ramp Edge Line Right (White) @ 1.00
SLW6: Solid Lane Line (White) @ 1.00
STW6: Standard Curb 6" (Yellow) @ 2.03

Location				Grooves		Length by Line Type (Factored)														Remarks		
Road ID	Station to Station		Lane	Marking Type	Side			Groove Marking	Groove Quantity	NPY4	DCY4	ELW4	NPY6	DCY6	ELW6							
					L	C	R		STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA		STA	STA
IA 62	507+17.29	510+63.48	Both	Waterborne / Solvent Paint		X		No	0.00				4.33									
IA 62	510+63.48	516+98.53	Both	Waterborne / Solvent Paint		X		No	0.00					12.70								
IA 62	507+17.29	516+98.53	EB	Waterborne / Solvent Paint			X	No	0.00						9.81							
IA 62	507+17.29	516+98.53	WB	Waterborne / Solvent Paint			X	No	0.00						9.81							

Totals

Waterborne / Solvent Paint36.65 STA

FILE NO. 32423

ENGLISH

DESIGN TEAM HR Green, Inc.

Jackson COUNTY

PROJECT NUMBER BRF-062-1(030)--38-49

SHEET NUMBER C.12

9:23:57 PM7/16/2026jverrypw:\\projectwise.dot.int.lan:PWMMain\Documents\Projects\4906201022\Design\Excel\C Sheets\SHT_C01_57151377

REMOVAL OF PAVEMENT

Refer to Tabulation 102-5

* Not a Bid Item

Start Station	End Station	Side	Pavement Type	Area	Saw Cut*	Remarks
				SY	LF	
508+44.49	509+03.08	Right	HMA	12.9	58.5	
510+67.29	511+26.89	Both	HMA	187.2	24.0	WB Bridge Approach Pavement
512+89.11	513+48.53	Both	HMA	186.3	24.0	EB Bridge Approach Pavement
	Total			386.4		

110-7A 08-15-22					
REMOVAL OF STEEL BEAM GUARDRAIL					
Lane(s) to which the installation is adjacent. Includes length of End Terminals and End Anchors.					
Location					Removal of Guardrail
No.	Direction of Traffic	Station to Station		Side	
					LF
1	EB	510+43.19	511+20.69	Rt	80.0
2	EB	512+76.42	513+42.11	Rt	67.0
3	WB	510+63.48	511+28.96	Lt	67.0
4	WB	512+84.87	513+62.55	Lt	80.0
		Total			294.0

BRIDGE APPROACH SECTION

Refer to the BR Series.

* Not a bid item

Location				Approach Pavement					Standard Road Plans BR Series			Subdrain				*	*	*	Remarks				
Bridge Station	End	Skew Ahead		Thickness	Pay Length	Non-Reinf. Pavement Area	Single-Reinf. Pavement Area	Double-Reinf. Pavement Area				* Perforated Subdrain 4"	* Subdrain Outlet		* Porous Backfill					* Class 'A' Crushed Stone Backfill	* Modified Subbase	* Polymer Grid	* Special Backfill
		LEFT	RIGHT										Inches	FT									
10+45.89	W	15°00'00"		12.0	60.0	79.4	78.2	78.2	BR-203	Movable						248.0	263.0						
10+45.89	E	15°00'00"		12.0	60.0	80.3	78.2	78.2	BR-203	Movable						248.1	263.0						
Total						159.7	156.3	156.3							496.1	526.0							

- Calculations assume a HMA unit weight (lbs/cf) of 145, a Special Backfill unit weight (lbs/cf) of 140, and a Granular Shoulder unit weight (lbs/cf) of 140.

1. 10" HMA

232-3A 09-28-22 EROSION CONTROL (RURAL SEEDING)
Area to be seeded is estimated to be less than 1 acre. If the contractor determines the area exceeds 2 acres, notify the Engineer. Approved quantity in excess of 2 acres will be paid for as extra work according to Article 1109.03,B of the Standard Specifications. Following the completion of work in a disturbed area and according to the seeding dates in Section 2601 of the Standard Specifications, place seed, fertilizer, and mulch on the disturbed area lying 8 feet adjacent to shoulder and median as follows: -Place seed and fertilize according to the requirements of Article 2601.03,C,3 and Section 4169 of the Standard Specifications. -Place mulch according to the requirements of Articles 2601.03,E,2,a and 4169.07,A of the Standard Specifications. Preparing the seedbed, furnishing and applying seed, fertilizer, and mulch are all incidental to mobilization and will not be paid for separately.

232-3C
09-28-22

EROSION CONTROL
(NATIVE GRASS SEEDING)

Area to be seeded is estimated to be less than 1 acre. If the Contractor determines the area exceeds 2 acres, notify the Engineer. Approved quantity in excess of 2 acres will be paid for as extra work according to Article 1109.03,B of the Standard Specifications.

Following the completion of work in a disturbed area and according to the seeding dates in Section 2601 of the Standard Specifications, place seed and mulch on the disturbed area lying 8 feet or more beyond the shoulder as follows:

SEED MIX:

Big bluestem (Andropogon geradii) 6 lbs. PLS/Acre (7.0 kg/ha)

Indiangrass (Sorghastrum nutans) 6 lbs. PLS/Acre (7.0 kg/ha)

Little bluestem (Schizachyrium scoparium) 6 lbs. PLS/Acre (7.0 kg/ha)

Partridge Pea (Chamaecrista fasciculata) 4 lbs. PLS/Acre (4.5 kg/ha)

Sideoats grama (Bouteloua curtipendula) 4 lbs. PLS/Acre (4.5 kg/ha)

Canada wildrye (Elymus canadensis) 2 lbs. PLS/Acre (2.2 kg/ha)

Switchgrass (Panicum virgatum) 1 lbs. PLS/Acre (1.1 kg/ha)

Oats (Avena sativa) 32 lbs./Acre (36.0 kg/ha)

Furnish Big bluestem, Indiangrass, Canada wildrye and Little bluestem that is debarbed or equal to facilitate the application of seed.

Furnish seed certified as Source Identified Class (Yellow Tag) Source G0-Iowa. Oats are excluded from this requirement.

Place seed according to the requirements of Article 4169.02 of the Standard Specifications.

Place mulch according to the requirements of Articles 2601.03,E,2,a and 4169.07,A of the Standard Specifications.

Preparing the seedbed, furnishing and applying seed and mulch are incidental to mobilization and will not be paid for separately.

262-6 09-28-22 UTILITIES (NOT A POINT 25 PROJECT)
This is NOT a POINT 25 project and is not subject to the provisions of IAC 761-115.25.

	Interstate Highway Symbol
	U.S. Highway Symbol
	Iowa Highway Symbol
	County Road Highway Symbol
	Evergreen Tree
	Deciduous Tree
	Fruit Tree
	Shrub (Bushes)
	Timber
	Hedge
	Stump
	Swamp
	Rock Outcrop
	Broken Concrete
	Revetment (Rip Rap)
	Cemetery
	Grave
	Cave
	Sink Hole

	Board Fence
	Chain Link or Security Fence
	Wire Fence
	Terrace
	Earth Dam or Dike (Existing)
	Tile Outlet
	Edge of Water
	Existing Drainage
	Right of Way Rail or Lot Corner
	Concrete Monument
	Well
	Windmill
	Beehive Intake
	Existing Intake
	Existing Utility Access (Manhole)
	Fire Hydrant
	Water Hydrant (Rural)

- Septic Tank
- Cistern
- L.P. Gas Tank (No Footing)
- Underground Storage Tank
- Latrine
- Satellite TV Dish
- Water Hook Up
- Radio Tower
- Tower Anchor
- Guardrail (Beam or Cable)
- Guard Post (one or two)
- Guard Post (over two)
- Filler Pipe
- Gas Valve
- Water Valve
- Speed Limit Sign
- Mile Marker Post
- ✓ Sign
- Traffic Signal Control Box
- Rail Road Signal Control Box
- Telephone Switch Box
- Electric Box

—E1(C)— — EL1C, Alliant Energy
Company - Quality C (OH)

FO1D, Andrews Telephone
Company - Quality D

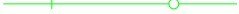
—FO(B)— — FO1B, Andrews Telephone Company - Quality B

(ANE) ALLIANT ENERGY
Company name : ALLIANT ENERGY
Design contact: Alliant Energy Field Engineer
Phone: 8002554268
Email: locate_IPL@alliantenergy.com

(ATC) ANDREW TELEPHONE COMPANY
Company name : ANDREW TELEPHONE COMPANY
Design contact: Milt Cornelius
Phone: 5636723277
Email: ANDRTEL@NETINS.NET

LINEWORK		Design Color No.
Green	(2)	Existing Topographic Features and Labels
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)	Existing Utilities
SHADING		Design Color No.
Lavender	(9)	Temporary Pavement Shading
Yellow	(4)	Proposed Pavement Shading
Orange	(6)	Proposed Granular Shading
Orange	(70)	Proposed Shoulder Granular Shading
Yellow	(68)	Proposed Shoulder Paved Full Depth Shading
Yellow	(132)	Proposed Shoulder Paved Partial Depth Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)	Grading Shading
Orange, Light	(134)	Proposed Granular Entrance Shading
Yellow	(220)	Proposed Paved Entrance Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading
Green, Light	(225)	Existing Pavement Shading
Red	(3)	Proposed Structure Shading
Red	(3)	Delineates Restricted Areas

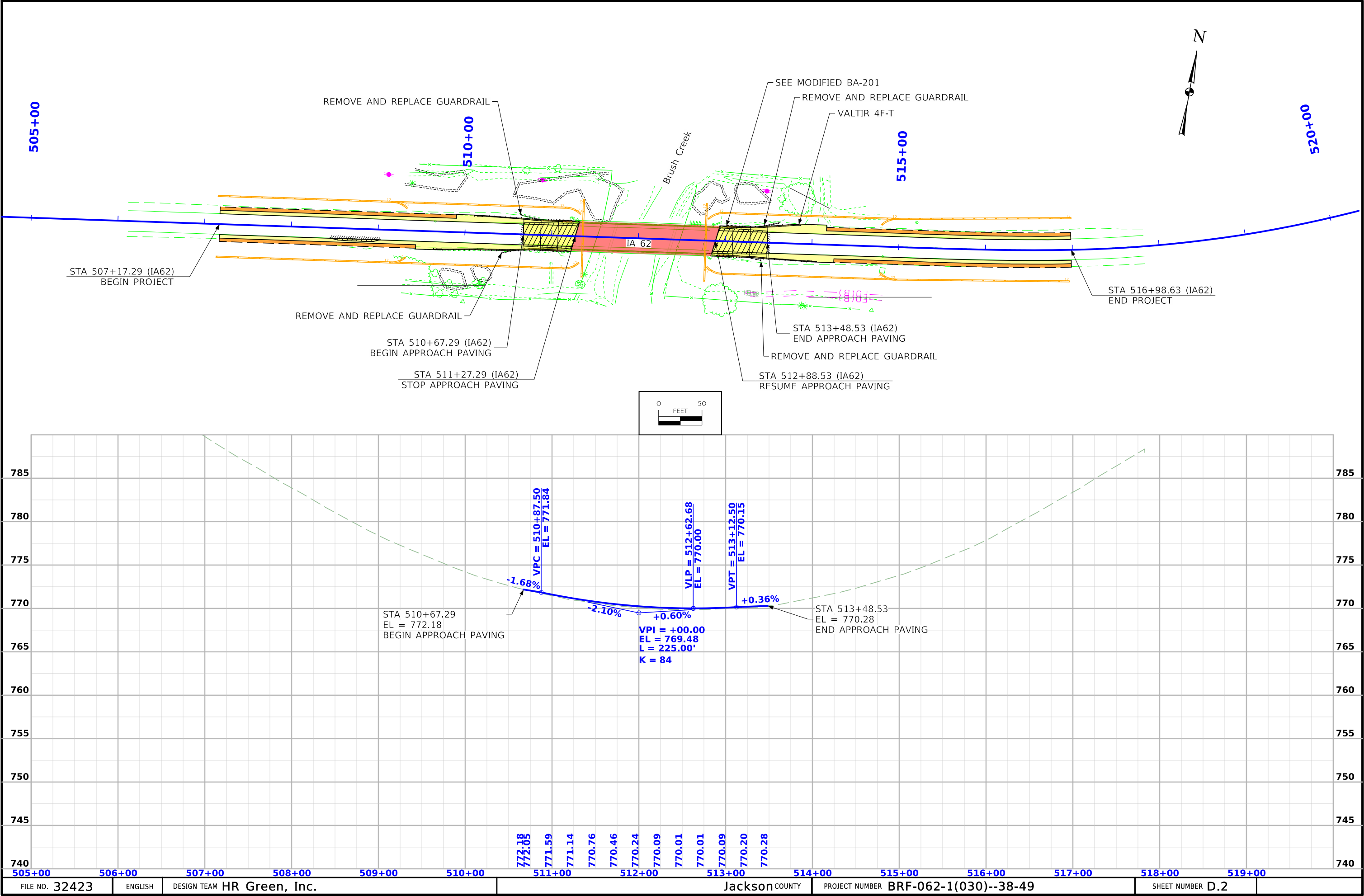
LINEWORK	Design	Color	No.
Green	(10)		Existing Ground Line Profile
Blue	(1)		Proposed Profile and Annotation
Magenta	(5)		Existing Utilities
Blue, Light	(230)		Proposed Ditch Grades, Left
Black	(0)		Proposed Ditch Grades, Median
Rust	(14)		Proposed Ditch Grades, Right

	Reference Point	Survey Line
	Station	
	Section Corner	
	Ground Line Intercept	
	Saw Cut	
	Guardrail	
	Trench Drain	
	HighTension Cable Guardrail	
	Sheet Pile	
	Pavement Removal	 Clearing & Grubbing Area

- Proposed Right-of-Way
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- Access Control
- Property Line

LINESTYLE	Design Element
	Silt Fence
	Perimeter and Slope Sediment Control Device (9")
	Perimeter and Slope Sediment Control Device (12")
	Perimeter and Slope Sediment Control Device (20")
	Open-Throat Curb Intake Sediment Filter
	Concentrated Flow
	Rock Check and Rock Check Dam
	Sheet Flow

(COVERS SHEET SERIES D, E, F, & K)



Survey Information

SURVEY INDEX

County: Jackson
PIN: 22-49-062-010
Project Number: BRF-062-1(030)—38-49
Location: Brush Creek 2.0 mi N of Co Rd Y61
Type of Work: Bridge Deck Replacement
Project Directory: 4906201022

PROJECT DATUM: NAD83(2011) for EPOCH 2010.00 (laRTN 2019)
COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 11
(U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2018

Alignment Information

HRG Alignment Information

Route 62 East West Alignment – Based upon 1963 as-builts (Jackson County Project Number 144(3)). Searched for centerline monumentation at the following locations: P.T. STA 495+00, P.C. STA 515+00. Both centerline monuments were recovered as found mag nails. The alignment was created based upon monumented tangent section and extended from curve and spiral data in the 1963 as-builts. The curve to the east of the bridge was created using the spiral length and curve radius, continuing from the tangent section . Stationing is based on the location of the recovered monument P.C. STA 515+00 as it falls on the created alignment.

Survey Personnel

HR Green, Inc.
John Boline - PLS
Mike Fischer – Project Manager
Nate Reincke – Staff Land Surveyor, Staff Engineer
Brandon Kilcoyne – Staff Land Surveyor

Date(s) of Survey

Begin Date 09/22/2025
End Date 09/23/2025

General Information

This survey is for the Route 62 bridge deck replacement: limits defined as the Route 62 bridge deck, extending for 500 feet of the Route 62 roadway along the centerline to the east and west beyond the bridge deck. Topographic data shall be obtained from the end of the bridge to 200 feet past the bridge on both sides. The limits shall stop at the outside toe of slope of the road ditch and end of bridge. Bridge superstructure and substructure were performed using terrestrial LiDAR. Conventional survey was performed for all other parts of the project excluding the bridge. This project is a partial field DTM.

Utility Information

For logging data and other utility details see Utility Survey and Ownership Report in the Utility folder of the Prelim Survey project directory.

Project Control

Two Primary Control points, FENO markers with caps, were established using the IowaDOT RTN Primary Control methods. Differential levelling was performed through secondary control points.

CONTROL POINT VICINITY MAP

This map is a guide to the vicinity of the primary project control points. Primary control is for use with RTK base stations and for RTN validation. Future surveys will use primary project control to establish temporary control as needed for construction or other surveying applications.



HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019) - Iowa RCS Zone 11 (U.S. Survey Foot)
VERT. DATUM: NAVD88 - Geoid Model: 2018u3
Coordinate listing from next sheet will be used with IaRTN for monument recovery. No other reference ties are given.

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING
HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019)
Ia. Regional Coordinate System Zone 11 (U.S. Survey Foot)
VERT. DATUM: NAVD88
Geoid Model: 2018u3

1	8305085.22	21487158.81	771.40	CP BASE 5/8 IR OPC - LEVELED
2	8305125.97	21487195.45	773.01	CP CUT X BARRIER
3	8305116.52	21487349.17	771.93	CP CUT X BARRIER
4	8305098.75	21487035.79	775.42	CP MAG IN ACC EP
5	8305149.48	21487550.20	773.29	CP MAG IN ACC EP
6	8305151.64	21487351.76	769.78	CP CUT X ABUT
11	8305085.22	21487158.81	771.38	WC BASE 5/8 IR OPC - RTK MEASUREMENT
50	8305133.85	21487552.56	770.72	FENO 50 SET
51	8305037.37	21486249.46	818.22	FENO 51 SET
500	8305163.49	21487566.46	773.81	REF MAG NAIL STA 515+00
501	8304890.55	21485681.40	851.23	REF MAG NAIL STA 495+95

Alignment Coordinates																		101-16	
																		4/19/2011	
Element Number	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Y (Northing)	X (Easting)	Station	Y (Northing)	X (Easting)	Station	Y (Northing)	X (Easting)	Station	Y (Northing)	X (Easting)	Station	Y (Northing)	X (Easting)	Station	Y (Northing)	X (Easting)
1	MLIA62	49595.290 R1	8304890.549	21485681.4															
2	MLIA62				51500.007 R1	8305163.488	21487566.46				51666.740 R1	8305187.38	21487731.47				51750.007 R1	8305206.478	21487812.65
3	MLIA62							51750.007 R1	8305206.478	21487812.65	52204.662 R1	8305310.594	21488255.22	52630.507 R1	8305650.878	21488556.75			
4	MLIA62				52630.507 R1	8305650.878	21488556.75				52713.901 R1	8305713.293	21488612.06				52880.507 R1	8305847.245	21488711.34
5	MLIA62	53080.507 R1	8306007.924	21488830.43															

Spiral or Circular Curve Data															101-17	
															4/19/2011	
Name	Location	DELTA _{cs}	Horizontal Alignment Data												Remarks	
			Spiral Data								Curve Data					
			THETA.	L.	T.	E.	X.	Y.	L.T.	S.T.	DELTA.	T	L	R	E	
C1	MLIA62	45.217	5	250	722.262	121.214	249.81	7.268	166.733	83.394	35.217	454.655	880.5	1432.5	70.42	

108-23A
08-15-22

TRAFFIC CONTROL PLAN

IA 62 construction will be carried out in a single stage and will maintain a complete closure of the bridge over Brush Creek. EB and WB traffic are to utilize the detour that has traffic using County Highway Y61 and County Highway D61. See J.4 for more details.

Advanced warning of the bridge closure will be displayed 7 days prior to the closure utilizing a Portable Dynamic Message Sign. The Engineer will determine the message to display. Remove when road is closed.

Permanent signing that conveys a message contrary to the message of the temporary traffic control or is not applicable to the working conditions shall be covered by the Contractor, as directed by the Engineer and stated in the Standard Specifications. Furnishing, maintenance, and removal of all detour signs shall be be covered by the Contractor.

511 TRAVEL RESTRICTIONS

108_25
3/28/2024

This Data Entry Sheet fills Tab 108-25 effecive 10-21-14

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
IA 62	Both	Jackson	No Travel Restrictions Expected on Offsite Detour				None					

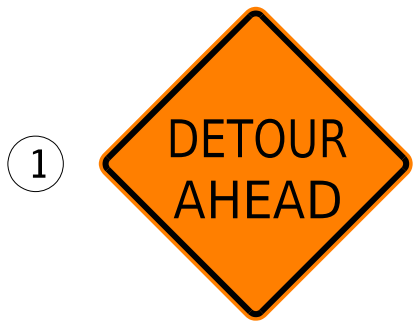
111-01
10-14-22

COORDINATED OPERATIONS

Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
BROS-C049(102)--8J-49	Overlay

IA 62 Detour Route



W20-2
48" x 48"



M1-5
24" x 24"
M4-9L
30" x 24"



M1-5
24" x 24"
M4-9L
30" x 24"



M4-9R
24" x 18"



Type III
Barricade



R11-4
60" x 30"



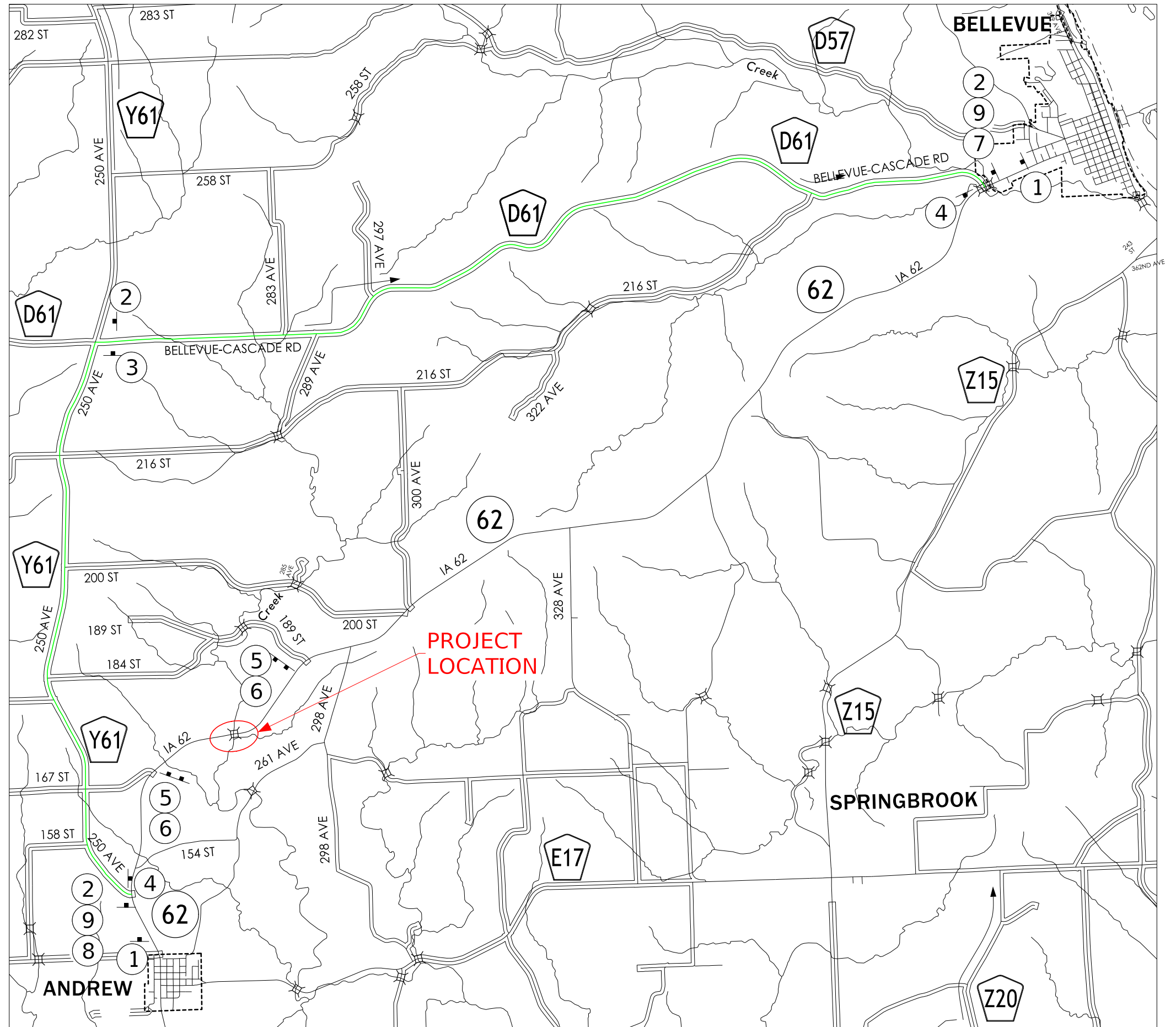
W16-3aP
30" x 12"

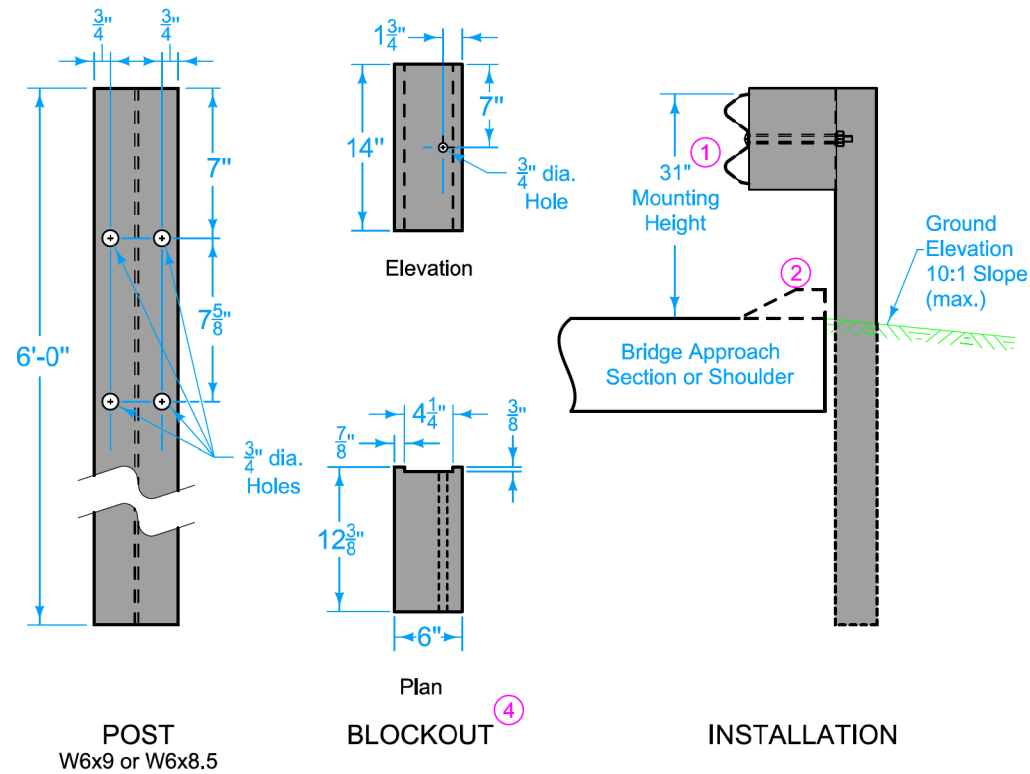


W16-3aP
30" x 12"

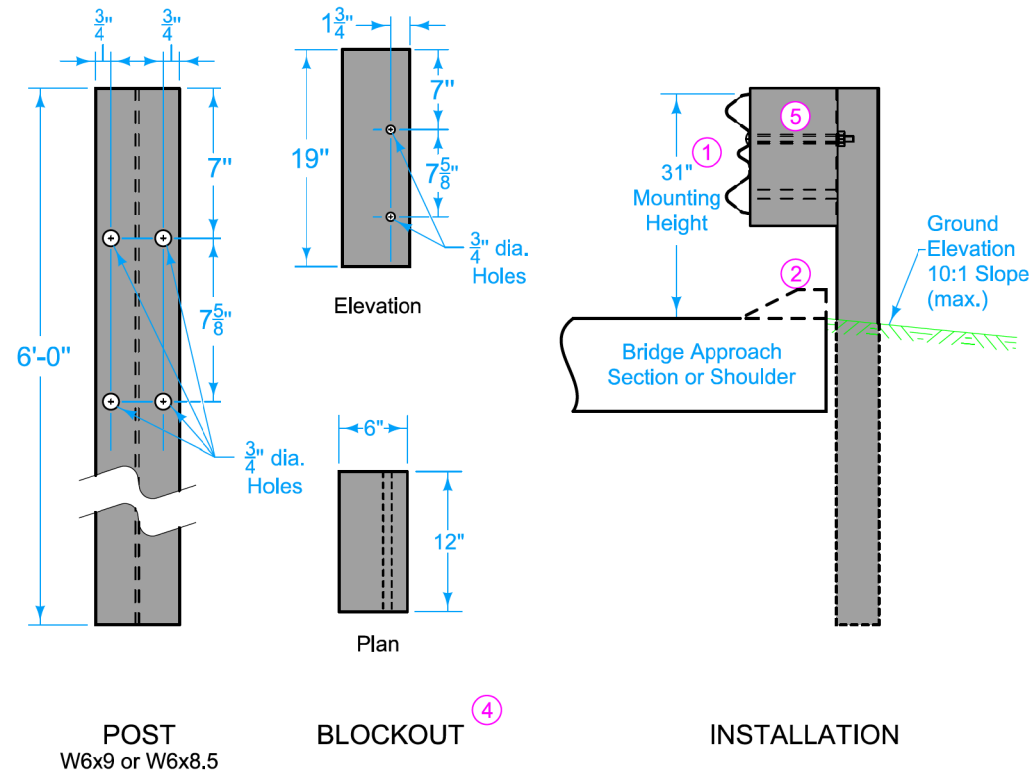


R11-2
48" x 30"

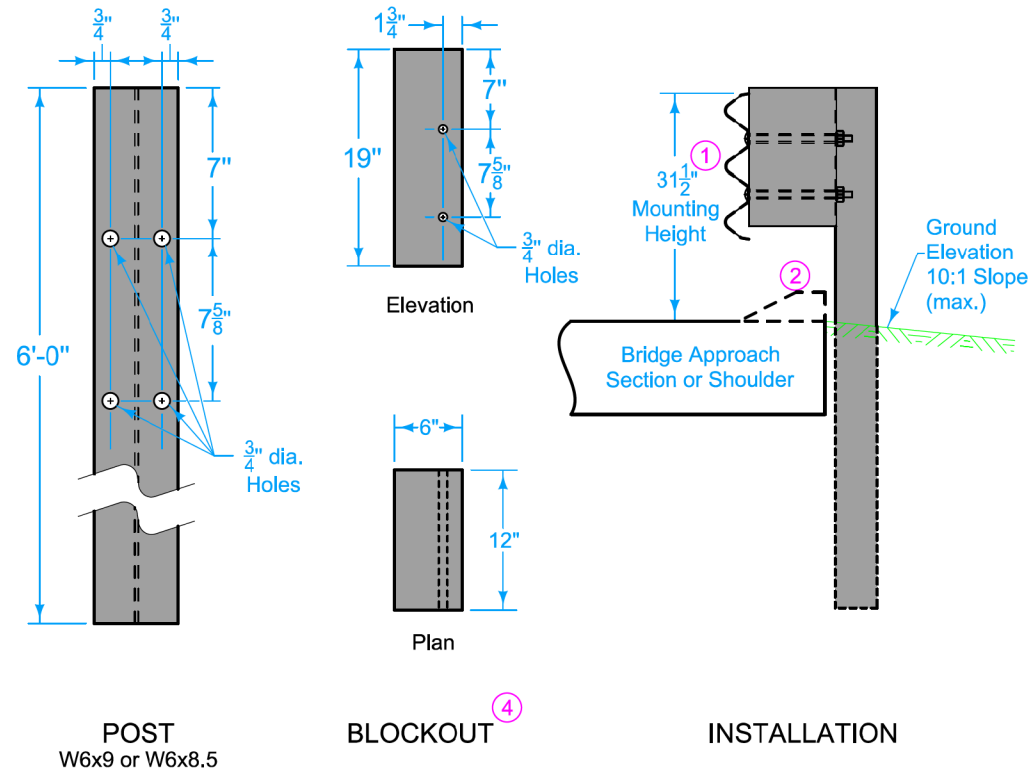




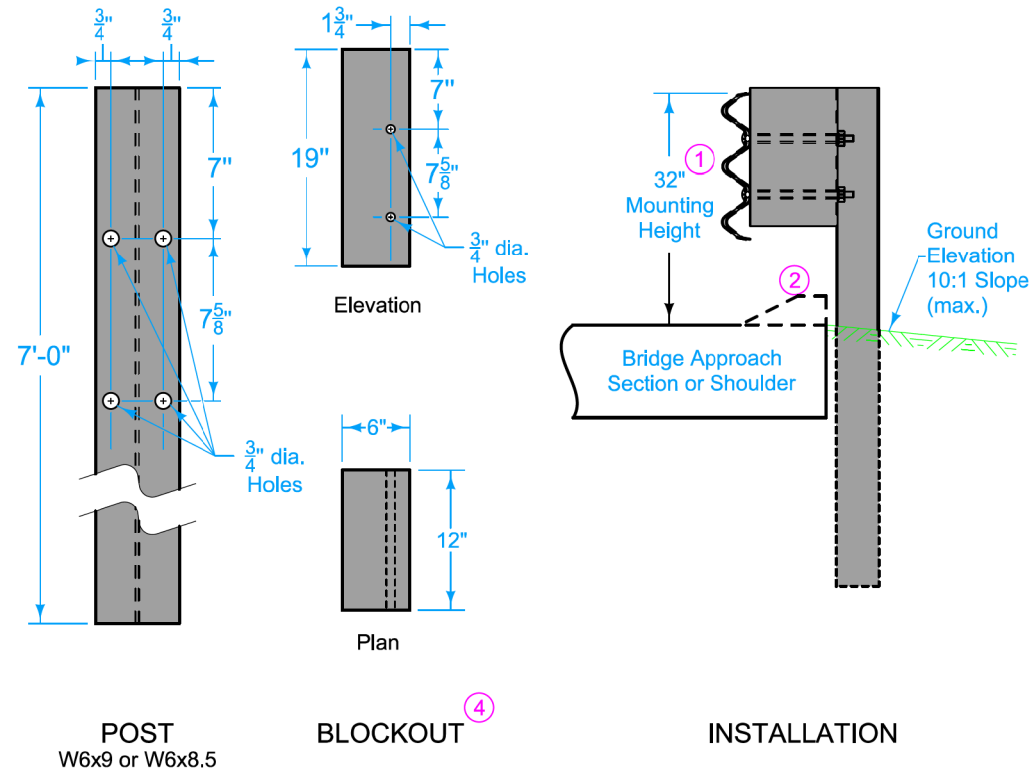
STEEL BTS POST #1-3



STEEL BTS POST #4



STEEL BTS POST #5



STEEL BTS POSTS #6-11

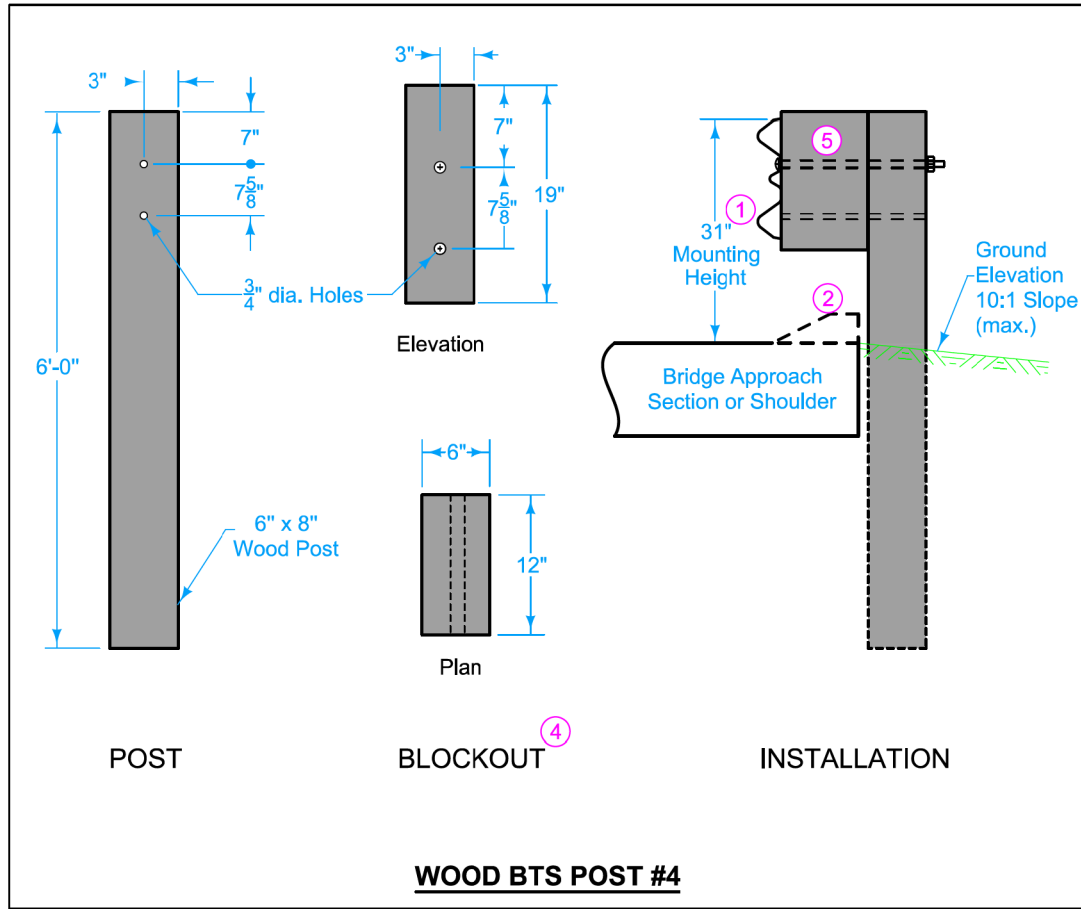
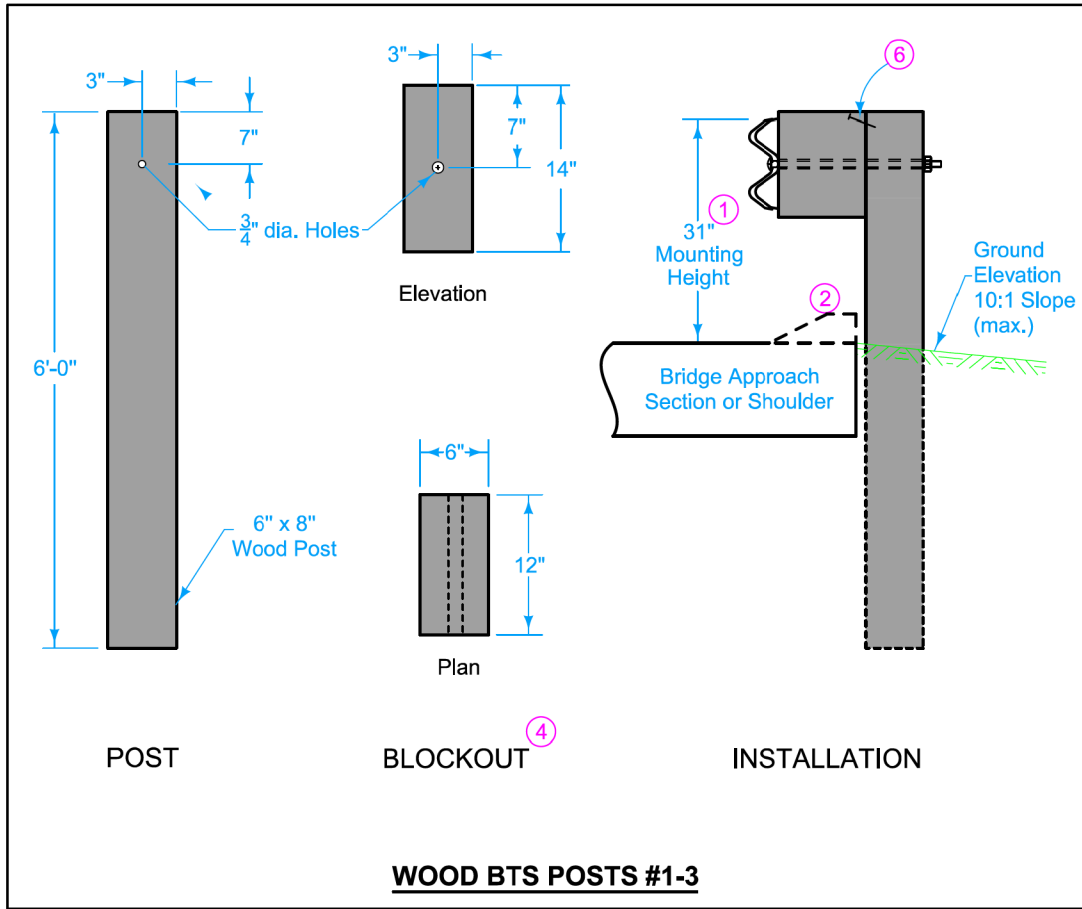
- ① Guardrail mounting height at barrier connection is 32 inches. Transition guardrail mounting height down to 31 inches at BTS Post #3.
- ② 6 inch curb.
- ③ Depending on end anchor type, BTS Post #11 may be modified. See BA-202.
- ④ Wood or composite only. Steel blockouts will not be allowed.
- ⑤ Place bolt in top hole only.

MODIFIED

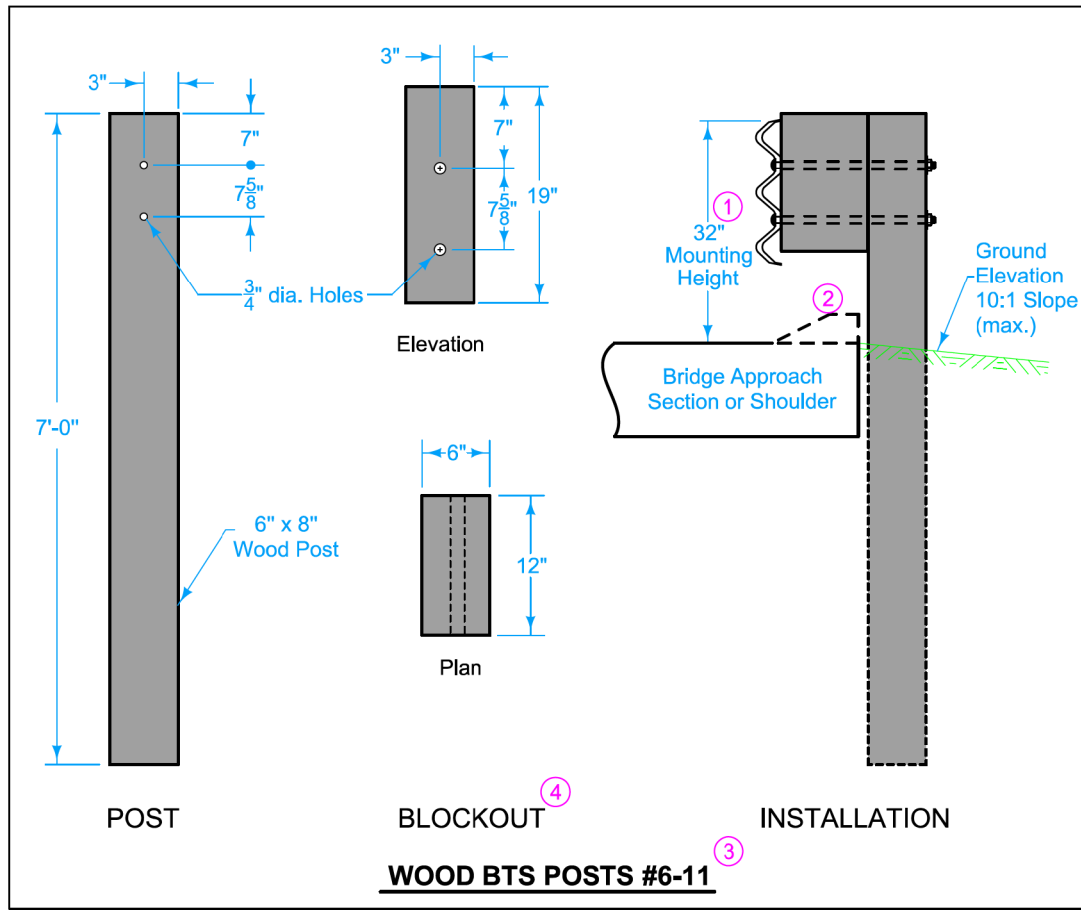
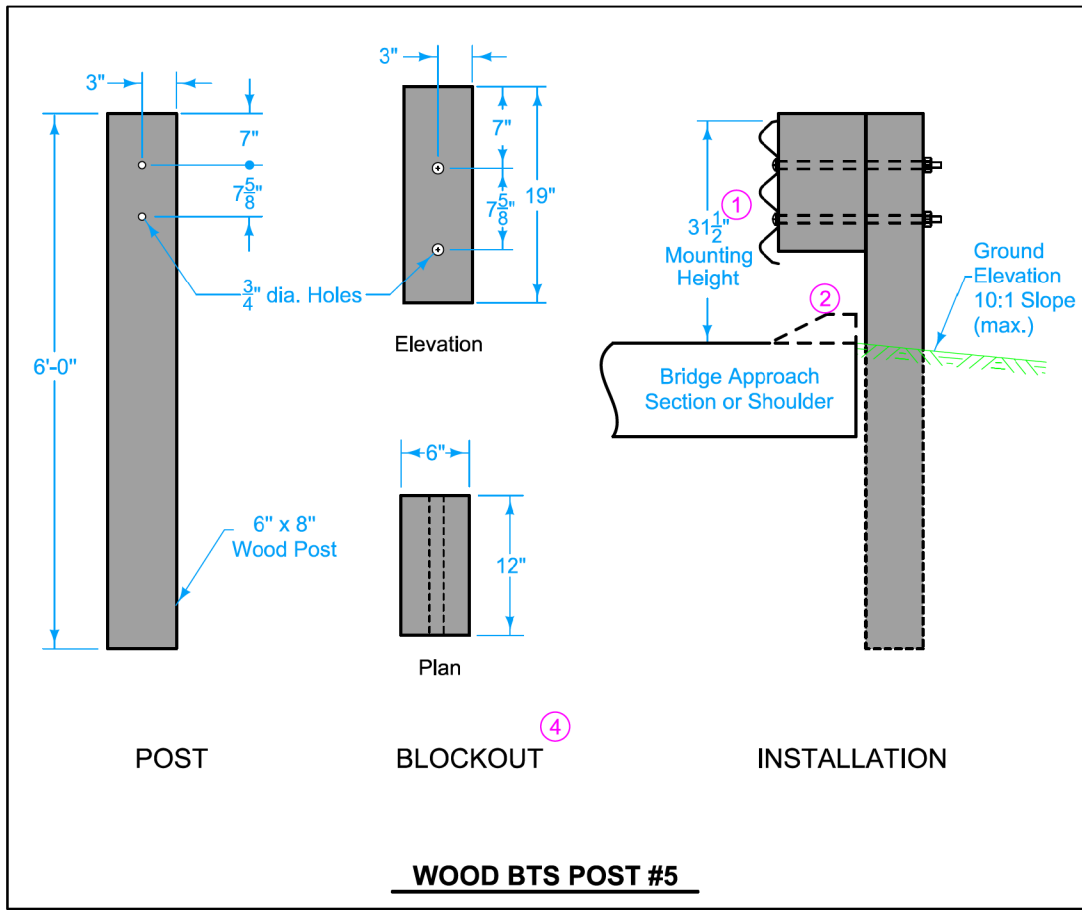
MODIFICATIONS: Removed 6'-3" of single thrie beam.
Asymmetrical Transition Section and Thrie-Beam Rail Sections to be 10 gauge.

STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION (MASH TL-3)

BA-201 SHEET 2 of 3



- ① Guardrail mounting height at barrier connection is 32 inches. Transition guardrail mounting height down to 31 inches at BTS Post #3.
- ② 6 inch curb.
- ③ Depending on end anchor type, BTS Post #11 may be modified. See BA-202.
- ④ Wood or composite only. Steel blockouts will not be allowed.
- ⑤ Place bolt in top hole only.
- ⑥ 16d nail to prevent blockout rotation.



MODIFIED

MODIFICATIONS: Removed 6'-3" of single thrle beam.
Asymmetrical Transition Section and Thrle-Beam Rail Sections to be 10 gauge.

**STEEL BEAM GUARDRAIL
BARRIER TRANSITION SECTION
(MASH TL-3)**

BA-201 **SHEET 3 of 3**