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C.2	Estimate Sheet For Roadway
C.4	Standard Plans
B.1 - J.8	Roadway Sheets



PLANS OF PROPOSED IMPROVEMENT ON THE

INTERSTATE ROAD SYSTEM

DECATUR COUNTY

Bridge Deck Overlay

On Secondary Road J-20
over I-35
5 miles North of Jct. IA 2

Refer to the Plan Sheets for List of applicable specifications.

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

Revisions

	TOTAL
	37
PROJECT IDENTIFICATION NUMBER	
22-27-035-020	
PROJECT NUMBER	
IMX-035-1(199)18--02-27	
R.O.W. PROJECT NUMBER	
PROJECT DIRECTORY NUMBER	
2703502022	



Iowa DOT Bridges and Structures Bureau
Consultant Reviewer:
Bryant Thelen

Standard Road Plans

Standard Road Plans are listed on Sheet No. C.4

Design Data Rural			
(J-20)			
2024 AADT	850	V.P.D.	
TRUCKS	7	%	

Design Data Rural			
(I-35)			
2024 AADT	15,900	V.P.D.	
TRUCKS	38	%	
Includes NB & SB			

Index of Seals		
Sheet No.	Name	Type
A.1	Matthew J. Johnson	Structural Design
A.3	Doug Parke	Roadway Design

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.

Signature Matthew J. Johnson Date 07-29-2026

Printed or Typed Name

My license renewal date is December 31, 2027

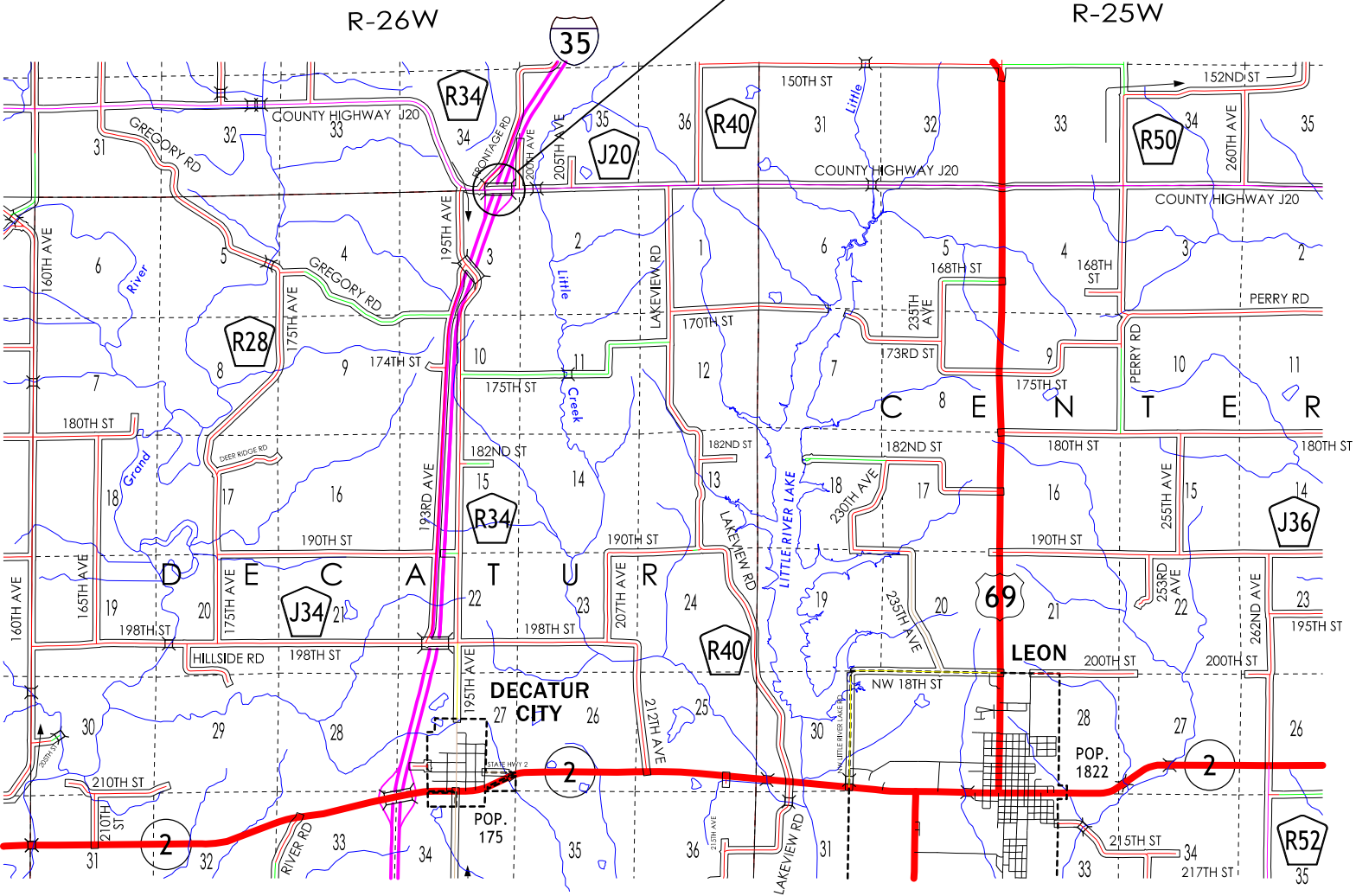
Pages or sheets covered by this seal: A.1, A.2, V.1-V.11

DESIGN NO. 127

FHWA # 099220

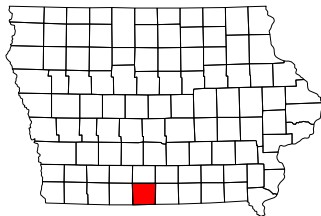
LEGEND

- INTERSTATE HIGHWAY
- PRIMARY HIGHWAY-DIVIDED
- PRIMARY HIGHWAY
- PORTLAND CEMENT CONCRETE ROAD
- ASPHALT ROAD
- BITUMINOUS ROAD
- GRAVEL ROAD
- EARTHEN ROAD
- INTERSTATE HIGHWAY
- UNITED STATES HIGHWAY
- STATE HIGHWAY
- COUNTY HIGHWAY
- RAILROAD
- PIPELINE
- AIRPORT
- HYDROLOGY
- BRIDGE
- STATE BOUNDARY
- COUNTY BOUNDARY
- CORPORATE BOUNDARY
- TOWNSHIP LINE
- SECTION LINE
- ROAD NAMES
- UNINCORPORATED PLACE



Decatur County Location Map

Not To Scale



Estimated Bridge Reconstruction Quantities and Reference Notes - Design #127	
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Item No.	Item Code	Item	Unit	Quantities Estimated Design No. 127	Estimate Reference Notes
1	2401-6750001	Removals, As Per Plan	LS	1	Includes all work for removal and off-site disposal of joint assemblies, abutment concrete, approach pavement, and other components shown in the plans except for the existing concrete overlay. 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.
2	2403-0100000	Structural Concrete (Miscellaneous)	CY	10	Includes all resilient joint filler. Includes cleaning existing concrete rail, furnishing and placing concrete sealer.
3	2403-1000005	Fiber Reinforcement for Structural Concrete	CY	1180	--
4	2403-1000010	Trial Batch and Test Placement (Fiber Reinforced Concrete)	LS	1	--
5	2404-7775005	Reinforcing Steel, Epoxy Coated	LB	368	--
6	2413-0698066	Deck Overlay (Class O-PCC)	SY	1180	--
7	2413-0698074	Deck Repair, Class A	SY	240	Estimated at 20% of the total deck area.
8	2413-0698075	Deck Repair, Class B	SY	12	Estimated at 12 SY.
9	2413-1200000	Steel Extrusion Joint with Neoprene	LF	64	Includes all necessary hardware and accessories including the anchorage system, temporary erection material and the 3/8" barrier plates with their anchorage system. Excludes installation of neoprene gland.
10	2413-1200100	Neoprene Gland Installation and Testing	LF	64	Includes installation of neoprene gland and water testing of joint.
11	2426-6772016	Concrete Repair	SF	20	--
12	2510-6745640	Removal of Existing P.C. Overlay	SY	1180	--
13	2533-4980005	Mobilization	LS	1	--

Note:
Roadway Quantities shown
elsewhere in these plans.

DESIGN FOR REPAIRS TO A 20°25'00" SKEW (L.A.)

**326'-0" x 32' CONTINUOUS
WELDED GIRDER BRIDGE**

72'-0" & 54'-0" END SPANS 2 - 100'-0" INTERIOR SPANS

Estimated Quantities

STATION: 22047+08.3 AUGUST, 2025

DECATUR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN NO. 127 DESIGN SHEET NO. 2 OF 11 FHWA No. 22990

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, Development Specifications, Supplemental Specifications, and Special Provisions shall apply to construction work on this project.

Developmental Specifications for Fiber Reinforcement for Structural Concrete.

Design Stresses:

Design stresses for the following materials are in accordance with the AASHTO standard specifications for highway bridges, Series of 2002.

Reinforcing steel in accordance with section 8, grade 60.

concrete in accordance with section 8, f'c = 4.0 KSI.

General Notes:

This design is for repairs to the existing 326'-0"x 32'-0" continuously welded girder bridge in Decatur County road J-20 over interstate 35. electronic copies of original design plans will be made available to the contractor as part of the E-files supplied with the contract documents.

See situation plan for list of repairs.

Faint lines on plans indicate the existing structure.

Utility companies whose facilities are shown on the plans or known to be within the construction limits shall be notified by the bridge contractor of the starting date.

All dimensions and details shown on these plans pertinent to new construction shall be verified in the field by the contractor before starting construction.

The contractor's attention is directed to the existing conduit in the bridge curbs. The contractor shall take care not to damage the conduit during removal operations. Any damage to the conduit or wiring by the contractor will be the responsibility of the contractor and repaired at no extra cost to the state.

No preliminary deck survey is shown. The plan quantity for "class A bridge deck repair" is estimated as 20% of the total deck area. The actual quantity is determined by the engineer after the P.C. overlay has been removed. Actuall spalled and hollow areas as determined by the engineer shall be repaired.

Present deck thickness is about 10 inches, including existing overlay. The contractor shall exercise care in removing concrete in order to prevent unnecessary unbonding of reinforcing steel.

The bridge deck is covered with a 1¾ inch thick portland cement concrete overlay. The contractor shall note the redefining of the classification line (boundary between repair and overlay) for this project due to the existing 1¾ inch overlay. The classification line will be defined as 2 inches below the top of existing overlay. This will necessitate the removal of the existing bridge deck overlay before placing the proposed new bridge deck overlay.

The bridge deck may have been epoxy-injected. The contractor shall remove all exposed epoxy. Removal of epoxy is incidental to "removal of existing P.C.C. overlay" and "deck repair, class A" as appropriate.

All cost associated with the removal of the existing overlay shall be included in the bid item "removal of existing P.C.C. overlay". Removal of existing overlay shall be computed in square yards from the measurement of areas removed. The contractor will be paid the contract price per square yard for furnishing all equipment and labor necessary to remove the concrete to within ¼ inch above the classification line. All cost, including furnishing equipment and labor, associated with removal of the next ¼ inch of concrete (to the classification line) shall be included in the bid item "deck overlay".

Upon completion of the removal of concrete down to the classification line, the engineer shall determine the areas of bridge deck to be repaired as "deck repair, class a". Actual hollow areas, as determined by the engineer, shall be repaired.

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

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

Surface preparation shall be according to Article 2413.03, B and C of the Standard Specifications. The Contractor shall ensure the vertical edge of the Stage 1 overlay is prepared for placement of the new concrete for Stage 2 by sandblasting or shot blasting, followed by an air blast. Ensure this cleaning removes all dirt, oil, and other foreign material. Ensure it removes all unsound concrete, laitance, or loose material from the surface and edges against which the surface mixture is to be placed. The cleaning should roughen the surface in order to provide satisfactory bond with the surfacing mixture.

Construction shall be done in stages with at least one lane traffic maintained at all times in accordance with "traffic control plan" note.

Surface raise, as shown on the plans, shall be considered a minimum. In order to limit the additional dead load surface raise shall be restricted to a maximum of ½" more than shown on the plans. Profile may be adjusted to the extent possible within these limits.

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

In addition to the requirements of article 2413.03, G, of the standard specifications, both exposed 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. All cost associated with cleaning and sealing of the abutments shall be included on the unit price bid item deck overlay (class O)

The lump sum bid for "removals, as per plan" shall include all cost associated with removing the joint assemblies, abutment concrete, approach pavement, and other components as shown in the plans with the exception of the existing concrete overlay. Removal of scheduled items shall be in accordance with section 2401 of the standard specifications. Any damage to any steel or concrete not to be removed shall be the responsibility of the contractor and repaired at no extra cost to the state.

Ready mix trucks are not allowed on the prepared portion of the bridge deck.

The tops of the abutment backwalls as shown shall be constructed using structural concrete class c. Promptly after the concrete has been placed and vibrated as provided in articles 2403.03, C, and 2403.03, D, of the standard specifications, it shall be hand finished to provide a smooth surface with the proper crown. The contractor may elect to use formwork which is marked or trimmed to the correct elevation and crwon to provide the limits for the hand finishing.

The top and interior faces of the existing concrete railing are to be cleaned and sealed in accordance with article 2403.03, P, of the standard specifications. If new sections of rail are constructed, the new sections shall not be sealed. All costs associated with cleaning and sealing of the concrete rails shall be include in the unit price bid item Structural Concrete (Miscellaneous)

Design History
at this Site
(Including this design)

Design. No.	Type of Work
967	Original Design
590	Barrier Rail Retrofit
101	Bridge Deck Overlay
113	Slope Protection Retrofit
127	Bridge Deck Overlay

TRAFFIC CONTROL PLAN

The roadway will be open to thru traffic. Refer to the Traffic Control Plan shown elsewhere in these plans.

DESIGN FOR REPAIRS TO A 20°25'00" SKEW (L.A.)
326'-0" x 32' CONTINUOUS
WELDED GIRDER BRIDGE

72'-0" & 54'-0" END SPANS2 - 100'-0" INTERIOR SPANS

GENERAL NOTES

STATION: 22047+08.3

AUGUST, 2025

DECATUR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN NO. 127

DESIGN SHEET NO. 2 OF 11

FHWA No. 22990

FILE NO. 32401

ENGLISH

DESIGN TEAM GFT

DECATUR COUNTY

PROJECT NUMBER IMX-035-1(199)18--02-27

SHEET NUMBER

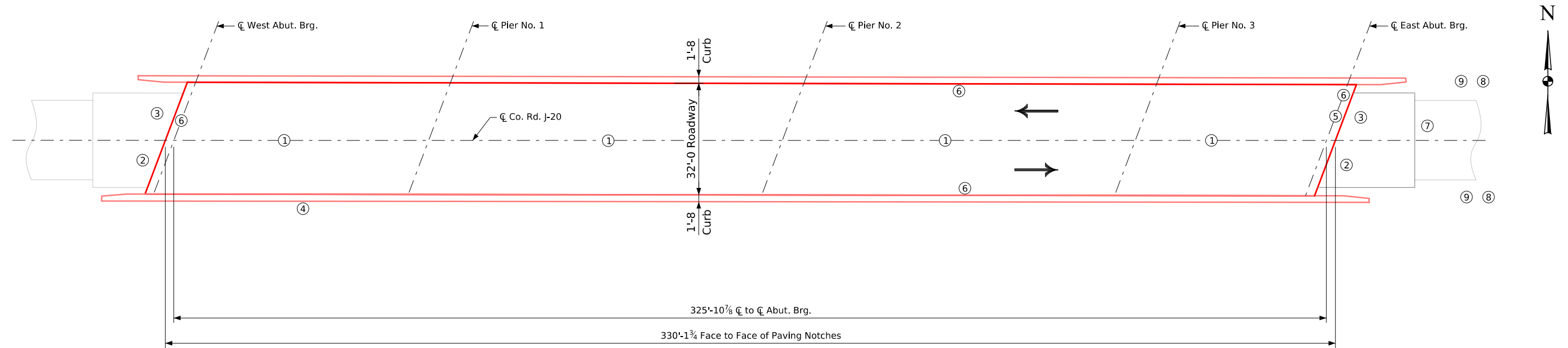
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Situation Plan

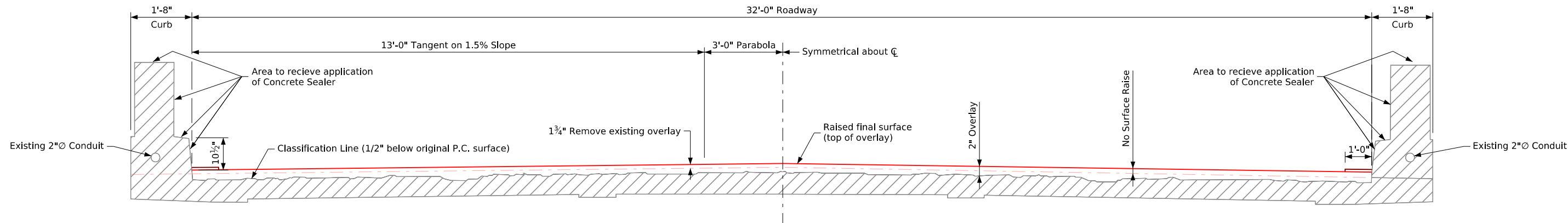
Repairs shall consist of:

- ① Remove existing overlay, scarify deck, complete Class A and Class B repairs and overlay bridge with P.C.C.
- ② Install new steel extrusions with neoprene seals.
- ③ Remove and reconstruct the top of both abutment backwalls.
- ④ Perform concrete repairs to south retrofit barrier rail.
- ⑤ Perform concrete repairs to east abutment.
- ⑥ Clean abutment seats and retrofit barrier rails and place concrete sealer.
- ⑦ Remove and replace 20 LF of east approach pavement, 20 to 40 ft away from paving notch. Seal other cracks in approach pavement.
- ⑧ Shoulder strengthening.
- ⑨ Remove and reinstall steel beam gaurdrail adjacent to new approach pavement.

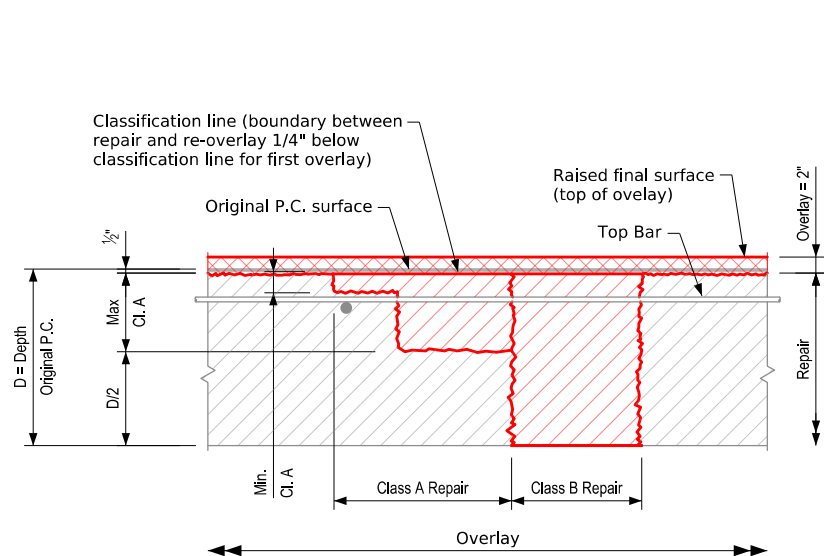
Location:

Road J-20 over I-35
T-69N, R-26W
Section 3
Decatur TWP
Decatur County
FHWA# 022990
Bridge Maint. No. 2717.90035
Latitude 40.811764°
Longitude -93.827211°

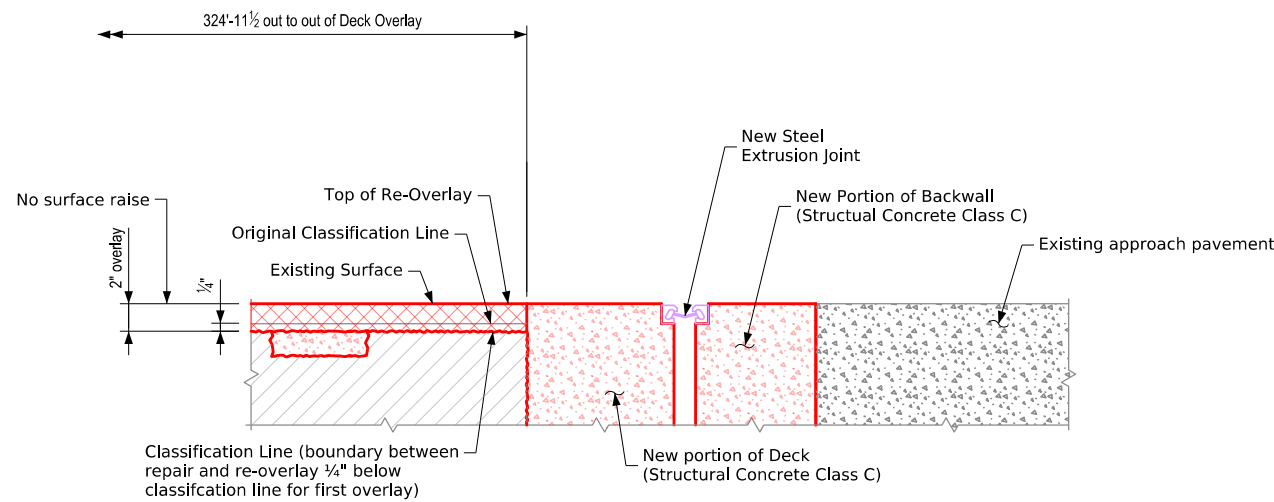
DESIGN FOR REPAIRS TO A 20°25'00" SKEW (L.A.)
**326'-0" x 32' CONTINUOUS
WELDED GIRDER BRIDGE**
72'-0" & 54'-0" END SPANS 2 - 100'-0" INTERIOR SPANS
SITUATION PLAN
STATION: 22047+08.3 AUGUST, 2025
DECATUR COUNTY
IOWA DEPARTMENT OF TRANSPORTATION
DESIGN NO. 127 DESIGN SHEET NO. 3 of 11 FHWA No. 22990



Typical Cross Section



Repair and Overlay Definition

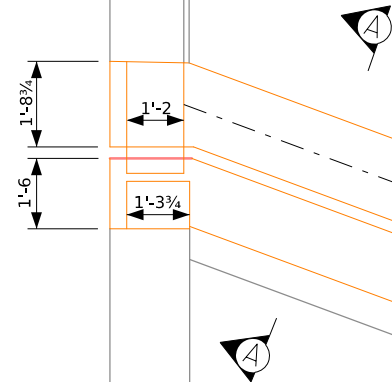


Part Longitudinal Section Along Roadway

Both Abutments

DESIGN FOR REPAIRS TO A 20°25'00" SKEW (L.A.)
**326'-0" x 32' CONTINUOUS
 WELDED GIRDER BRIDGE**
 72'-0" & 54'-0" END SPANS 2 - 100'-0" INTERIOR SPANS
DECK REPAIR DETAILS
 STATION: 22047+08.3 AUGUST, 2025
DECATUR COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION
 DESIGN NO. 127 DESIGN SHEET NO. 4 of 11 FHWA No. 22990

Edge of slab
Gutterline



Remove Backwall down to
top of paving notch
elevation only

☐ Roadway

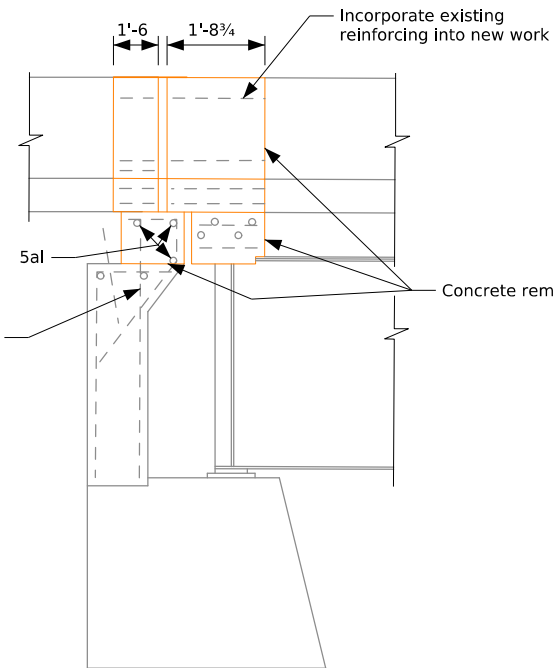
Limit of slab removal
(initiate with a 3/4\"

20°25'00"

16'-0

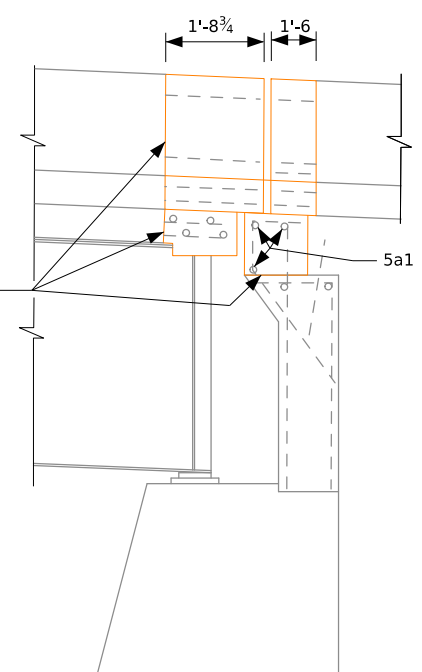
Plan View

Incorporate existing
vertical reinforcing
into new work



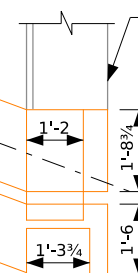
Section A-A (West Abutment)

Concrete removal line



Section A-A (East Abutment)

Edge of Slab
☐ Abut. Brg.



Note: Incorporate all Existing Reinforcing
into new work, except for Horizontal
Reinforcing in the top of Backwall and the
bottom Horizontal 5/8\"

Note: Remove Barrier Rails directly above
Concrete removal lines shown in Plan View.

DESIGN FOR REPAIRS TO A 20°25'00" SKEW (L.A.)
**326'-0" x 32' CONTINUOUS
WELDED GIRDER BRIDGE**
72'-0" & 54'-0" END SPANS 2 - 100'-0" INTERIOR SPANS
REMOVAL DETAILS
STATION: 22047+08.3 AUGUST, 2025
DECATUR COUNTY
IOWA DEPARTMENT OF TRANSPORTATION
DESIGN NO. 127 DESIGN SHEET NO. 5 of 11 FHWA NO. 22990

FILE NO. 32401

ENGLISH

DESIGN TEAM GFT

DECATUR COUNTY

PROJECT NUMBER IMX-035-1(199)18--02-27

SHEET NUMBER

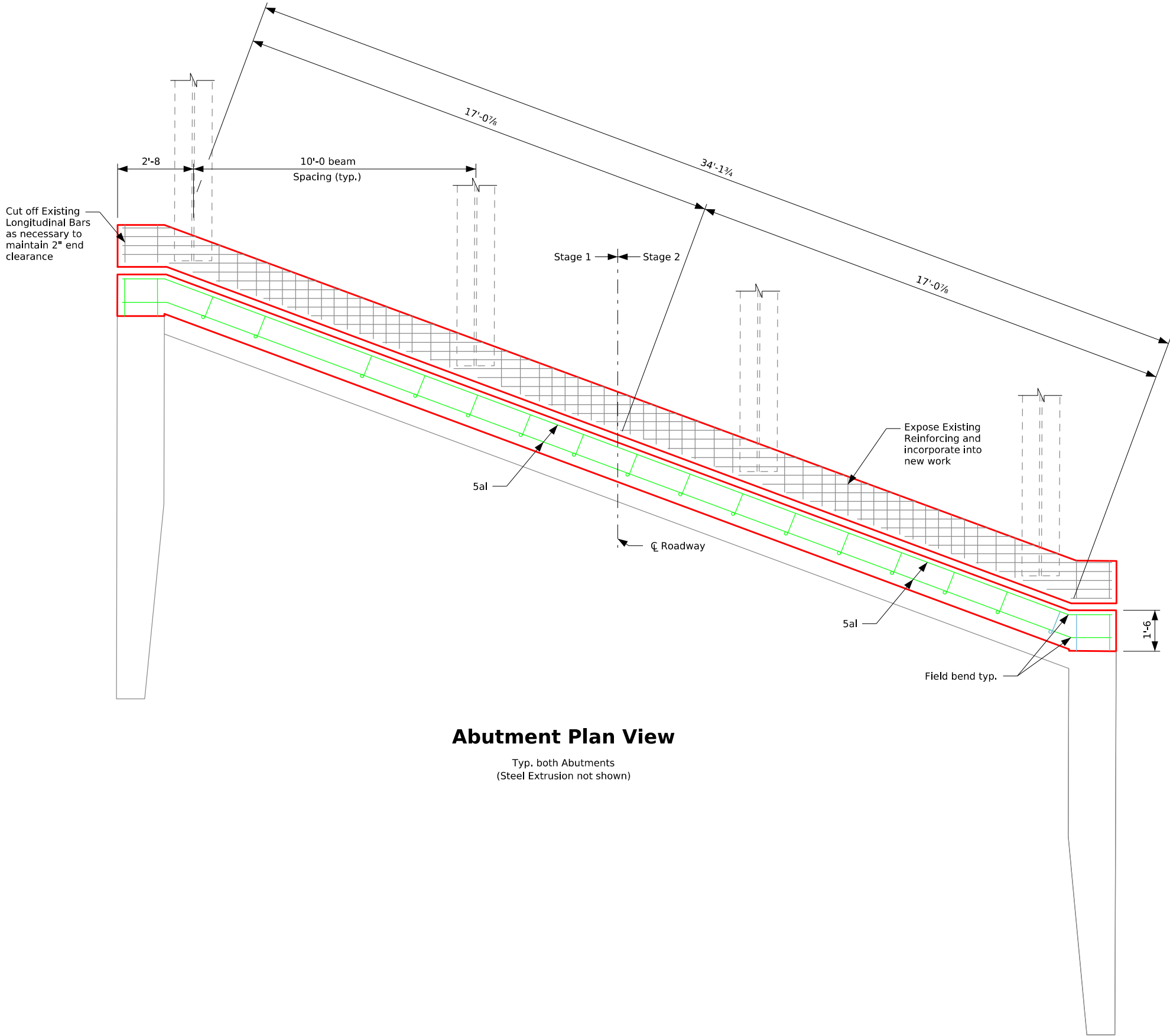
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Epoxy-Coated Reinforcing Steel - both Bridge Ends					
Bar	Location	Shape	No.	Length	Weight
5a1	Horizontal, Backwall F.F. & B.F.		12	18'-2"	227
5b1	Horizontal, Rail		16	1'-3"	21
6b2	Vertical, Rail		32	2'-6"	120
TOTAL (LB)					368

Concrete Placement Quantity - both Bridge Ends	
Section	Quantity
West Abut. Backwall, Slab, Curbs	4
East Abut. Backwall, Slab, Curbs	4.0
4 End Sections at 0.2033 C.Y. each	0.8
4 Standard Sections at .2117 C.Y. each	0.9
Total (CY)	9.7

Abutment Plan View

Typ. both Abutments
(Steel Extrusion not shown)

DESIGN FOR REPAIRS TO A 20°25'00" SKEW (L.A.)

326'-0" x 32' CONTINUOUS

WELDED GIRDER BRIDGE

72'-0" & 54'-0" END SPANS2 - 100'-0" INTERIOR SPANS

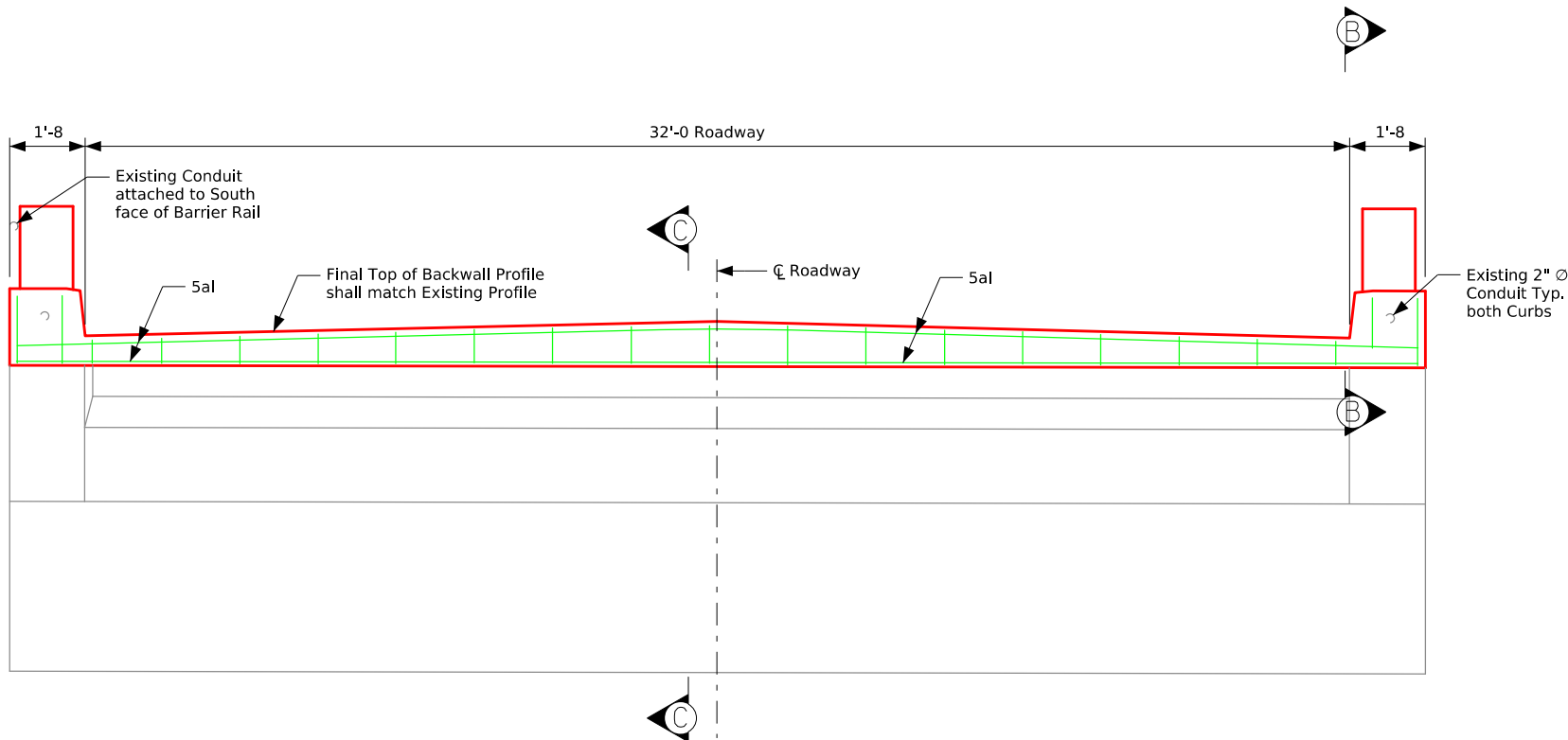
ABUTMENT REPAIR DETAILS

STATION: 22047+08.3AUGUST, 2025

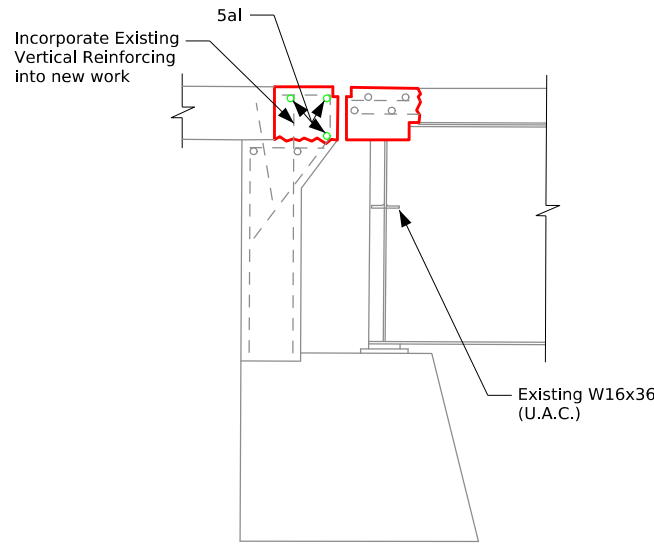
DECATUR COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

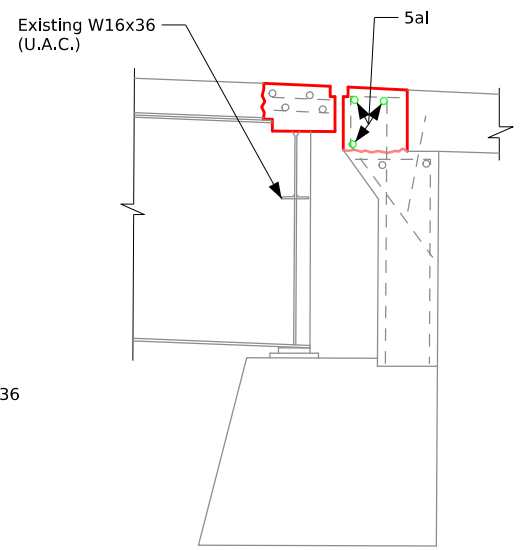
DESIGN NO. 127DESIGN SHEET NO. 6 OF 11FHWA NO. 22990



Rear Elevation
(Looking parallel to C Roadway)
(West Abutment shown East Abutment similar)



Section C-C
(West Abutment)



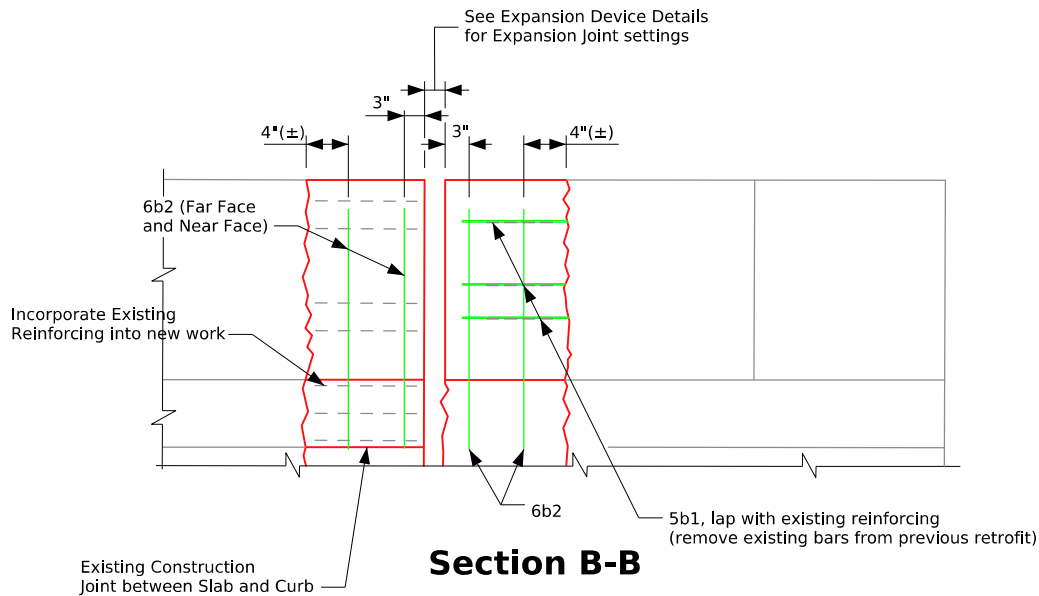
Section C-C
(East Abutment)

Note:

Cost of preformed joint material shall be incidental to other construction.

Specifications

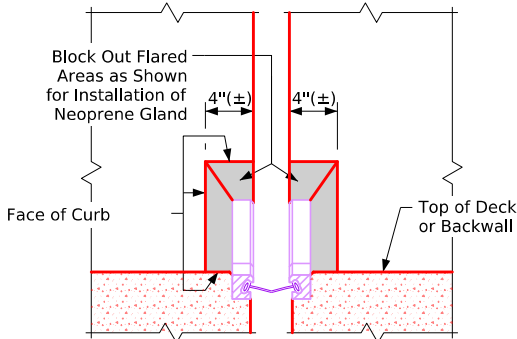
If machine finishing for the top of backwall and end of slab / diaphragm is not practical, a manual type screed or metal plate, with approved vibrators attached, shall be used.



Section B-B

DESIGN FOR REPAIRS TO A 20°25'00" SKEW (L.A.)
**326'-0" x 32' CONTINUOUS
WELDED GIRDER BRIDGE**
72'-0" & 54'-0" END SPANS 2 - 100'-0" INTERIOR SPANS
BACKWALL REPAIR DETAILS
STATION: 22047+08.3 AUGUST, 2025
DECATUR COUNTY
IOWA DEPARTMENT OF TRANSPORTATION
DESIGN NO. 127 DESIGN SHEET NO. 7 OF 11 FHWA NO. 22990

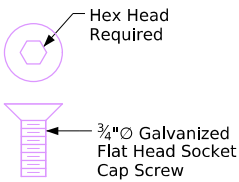
Revised 08-13: Added a Corresponding Maximum Deck Temperature Column to Expansion Device Table. Added a Splice Detail to the Plan Part Views.
Issued 03-02: DeckRailBridges.dgn - 1026s-1 -This Sheet Re-Issued 05-2024. Sheet Format Update.



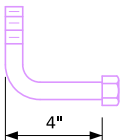
Blockout Detail

(Drawn for 0° Skew for Illustrative Purposes)

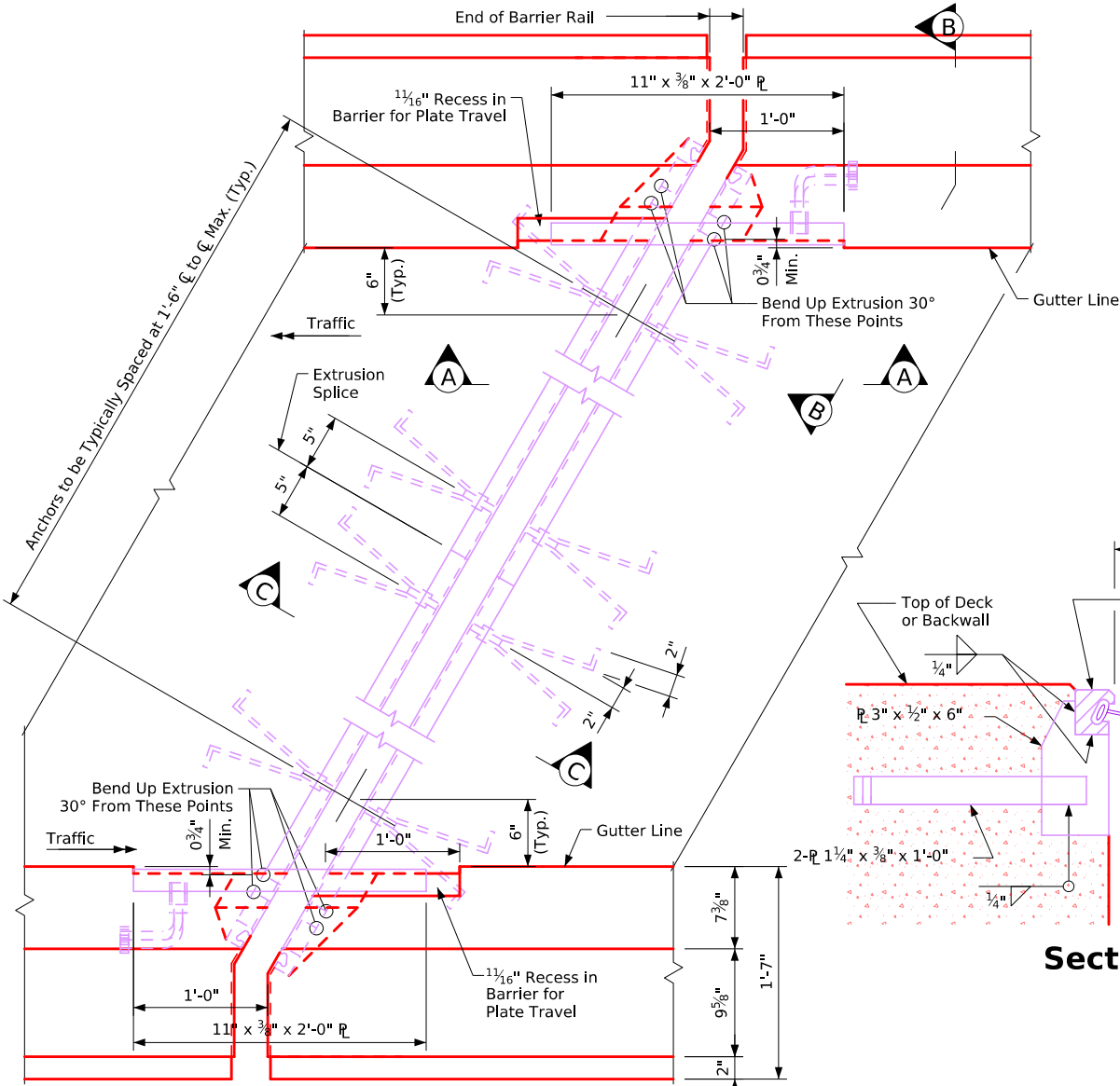
Contractor to note that the cap screw anchorage system for the 3/8" barrier plates are always to be placed on the oncoming traffic side.



Cap Screw Detail

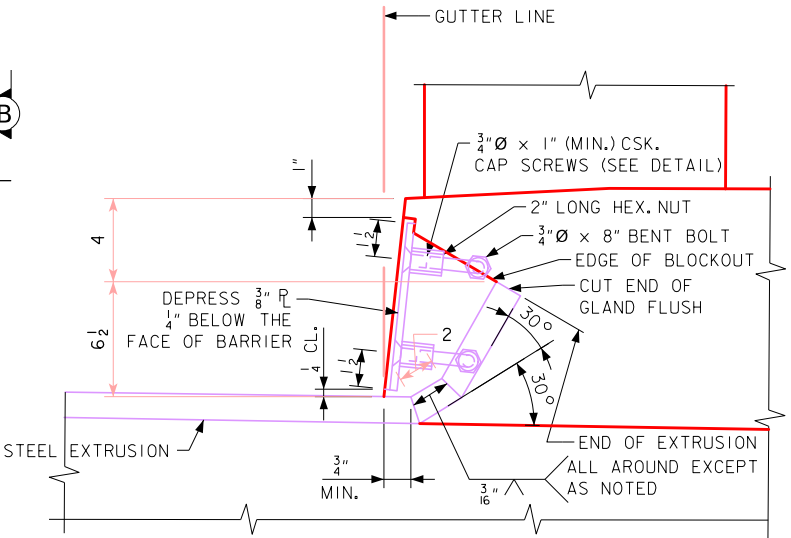


Bent Bolt Detail

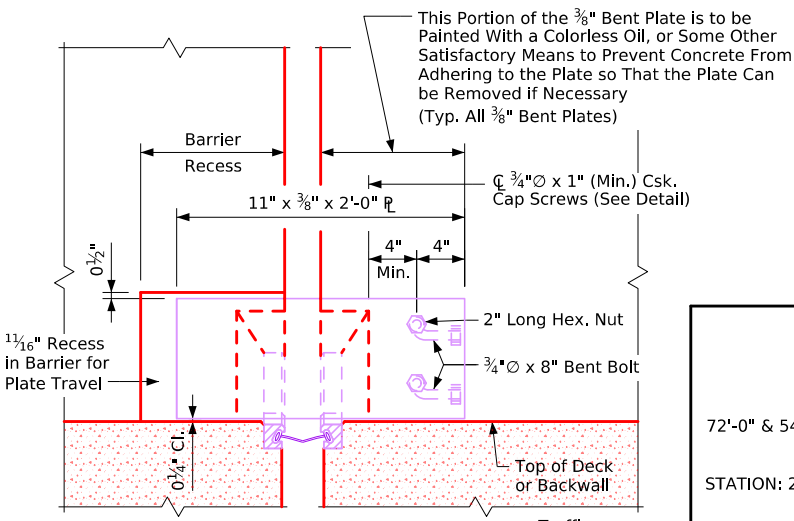


Part Plan View of Expansion Device L.A. Skew

Note: It is intended that the 1 1/16" recessed area be formed so that when the 3/8" bent plate is installed the plate will be able to move freely in this recessed area.



Section B-B



Section A-A

(Drawn for 0° Skew for Illustrative Purposes)

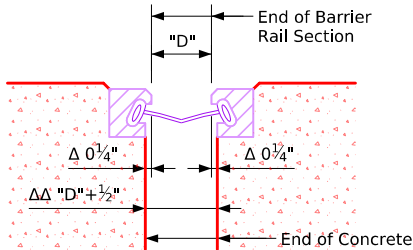
Barrier Plate Note:

The material used for the barrier plates is to be ASTM A36 steel. The bolts shall meet the requirements of ASTM A307. The plates, bolts, nuts and cap screws are to be galvanized in accordance with Article 4100.07 of the Standard Specifications.

Note: Joint settings for other temperatures are proportional. Temperatures shown are concrete deck temperatures on the underside or shaded portion of the deck.

Expansion Joint Settings

1 3/4" at 90° F.
2 1/4" at 50° F.
2 3/4" at 10° F.

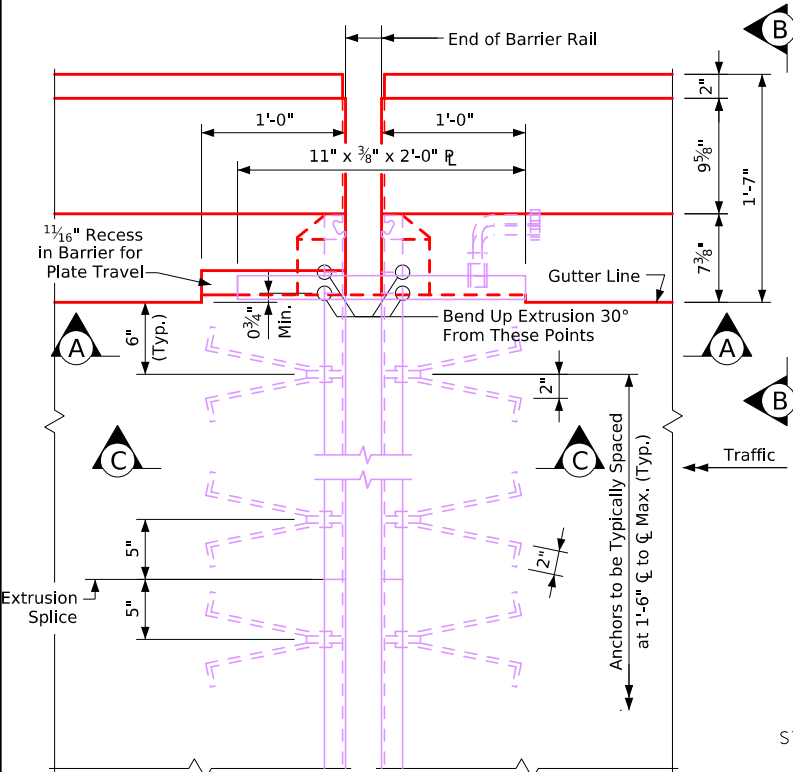


Expansion Opening Detail

- Δ This dimension may vary slightly depending on manufacturer furnishing the joint.
- ΔΔ Used for all out to out dimensions of deck. The dimensions may vary slightly depending on manufacturer furnishing the joint.

Table of Approved Expansion Devices

Manufacturer	Type of Steel Extrusion	Neoprene Gland	Minimum Opening for Gland Installation	Corresponding Maximum Deck Temperature
Watson-Bowman & Acme Corp.	A	SE-400	1 1/2"	110°F
D.S. Brown Co.	SSA2	A2R-400	2"	70°F
Approved Equal				



Part Plan View of Expansion Device 0° Skew

Note: See Standard Sheet 1026s2 for expansion device notes containing the steel extrusion notes, neoprene gland notes, and watertight integrity testing and repair notes.

DESIGN FOR REPAIRS TO A 20°25'00" SKEW (L.A.)
326'-0" x 32' CONTINUOUS WELDED GIRDER BRIDGE
72'-0" & 54'-0" END SPANS 2 - 100'-0" INTERIOR SPANS
EXPANSION DEVICE DETAILS
STATION: 22047+08.3 AUGUST, 2025
DECATUR COUNTY
IOWA DEPARTMENT OF TRANSPORTATION
DESIGN NO. 127 DESIGN SHEET NO. 8 OF 11 FHWA NO. 22990

The Contractor shall submit for approval shop drawings of the expansion devices showing layout, material to be used, and provisions for the holding device during placement of concrete.

The expansion device is to be parallel to grade.

Shop splices of the steel extrusion will be permitted. Prior to making shop splices steel extrusion pieces shall have a minimum length of 15 feet. The individual length of pieces shall be chosen so that a minimum number of splices is required. All pieces shall be joined with a prequalified partial penetration single groove weld detailed on the shop drawing. All surfaces not in contact with concrete are to be ground flush. No weld shall be permitted in the internal section of the extrusion where the neoprene gland is to be installed.

The Contractor shall install the gland above the minimum temperature of 45° and the minimum joint opening and corresponding maximum deck temperature shown in these plans. The deck temperature shall be measured by recording the surface temperatures on the underside of the deck adjacent to the joints. If the deck temperature does not fall within the specified temperature range before the Contractor has completed all other required work, it will be necessary for the Contractor to return to the project site to complete installation and testing of the neoprene gland. If the Contractor is required to return to the project site after all other required work has been completed, the Contractor shall complete installation and testing of neoprene gland at no extra charge to the State.

Manufacturer. The price bid for "Neoprene Gland Installation and Testing" shall include all watertight integrity testing, leak repairs as directed by the Engineer, and subsequent watertight testing until a leak free installation is achieved.

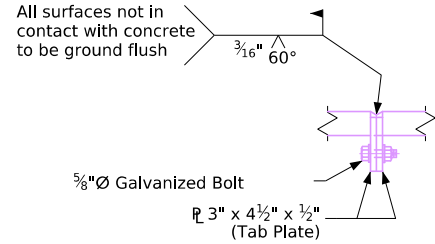
After installation of each neoprene gland, the Contractor shall perform watertight integrity tests at the deck level to detect any leakage. The tests are to check for leakage at the upturned ends of the expansion device and for leakage along the expansion device across the deck and any medians or sidewalks. The Contractor may conduct a single test of the entire device including upturned ends or may conduct separate tests of upturned ends and one or more tests of overlapping lengths between the upturned ends.

for at least 30 minutes. During the test, the Inspector shall observe for any overflow at the upturned end. At the conclusion of the test the Inspector will examine the underside of the joint for leakage. The expansion device is considered watertight if the Inspector observes no overflow during the test and if no dripping water or water droplets are visible in the under deck areas near the upturned end.

flow over the entire curb height for 30 minutes. At the conclusion of the test, the inspector will examine the underside of the joint for leakage. The expansion device is considered watertight if no dripping water or water droplets are visible in the under deck areas along the full length of the expansion joint. Damp concrete that does not show dripping water or water droplets is not considered a sign of leakage.

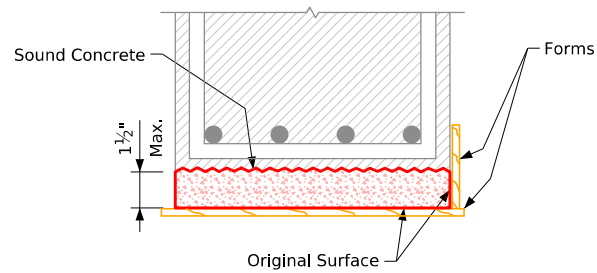
If measures to eliminate leakage are taken, the Contractor shall perform subsequent watertight integrity tests subject to the same conditions as the original test.

Galvanized coating damage by field welding shall be repaired in accordance with Construction and Materials I.M. 410.

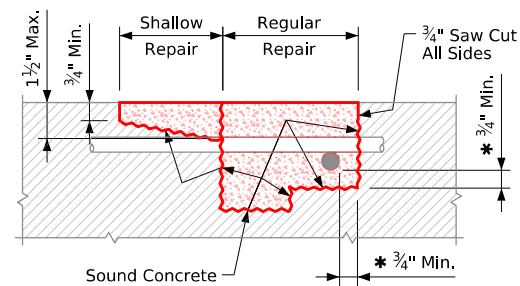


Section Thru Extrusion

DESIGN FOR REPAIRS TO A 20°25'00" SKEW (L.A.)
326'-0" x 32' CONTINUOUS
WELDED GIRDER BRIDGE
 72'-0" & 54'-0" END SPANS 2 - 100'-0" INTERIOR SPANS
EXPANSION DEVICE REPAIRS
 STATION: 22047+08.3 AUGUST, 2025
DECATUR COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION
 DESIGN NO. 127 DESIGN SHEET NO. 9 OF 11 FHWA NO. 22990

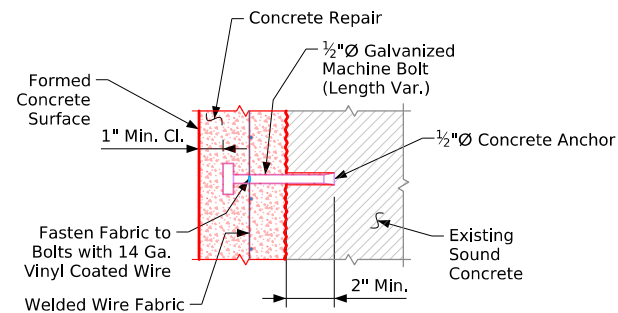


Shallow Repair Bottom Surface



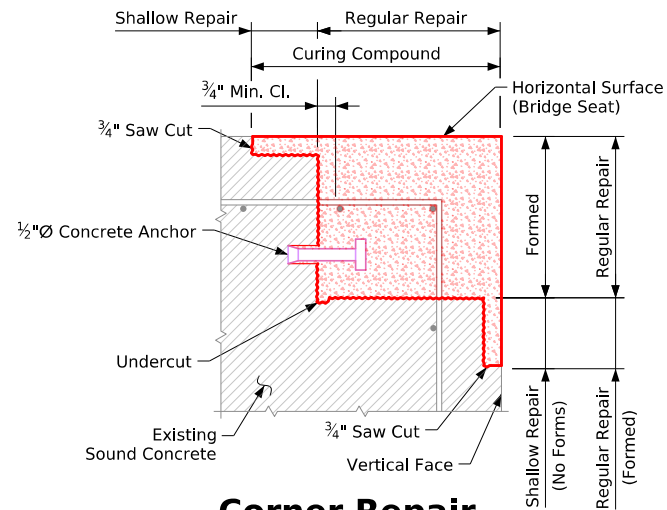
Repair Definition

* Indicates Clearance for an Un-Bonded Rebar.

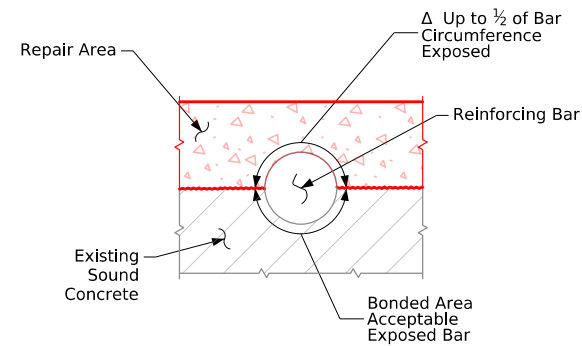


Anchor Detail

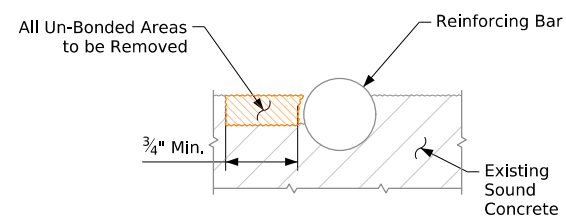
For Spacing and Use of Concrete Anchors
and WWF See the Repair Notes.



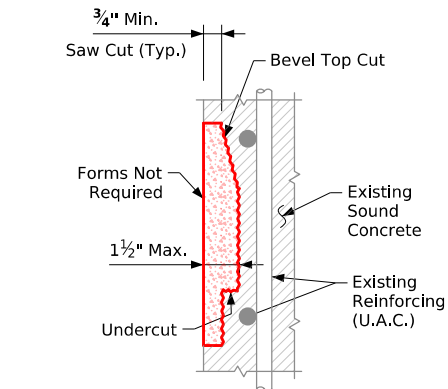
Corner Repair



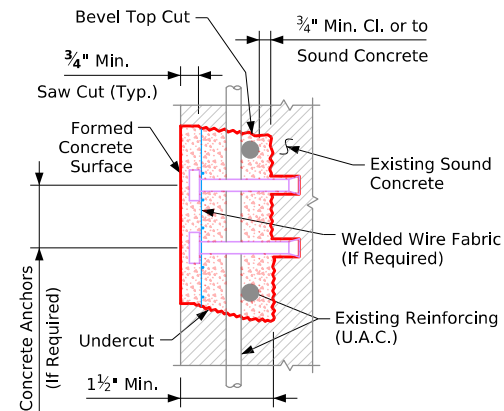
Δ If more than $\frac{1}{2}$ of the rebar is exposed it shall be treated as an un-bonded rebar.



Concrete Removal Adjacent to Reinforcing



Shallow Repair Vertical Face



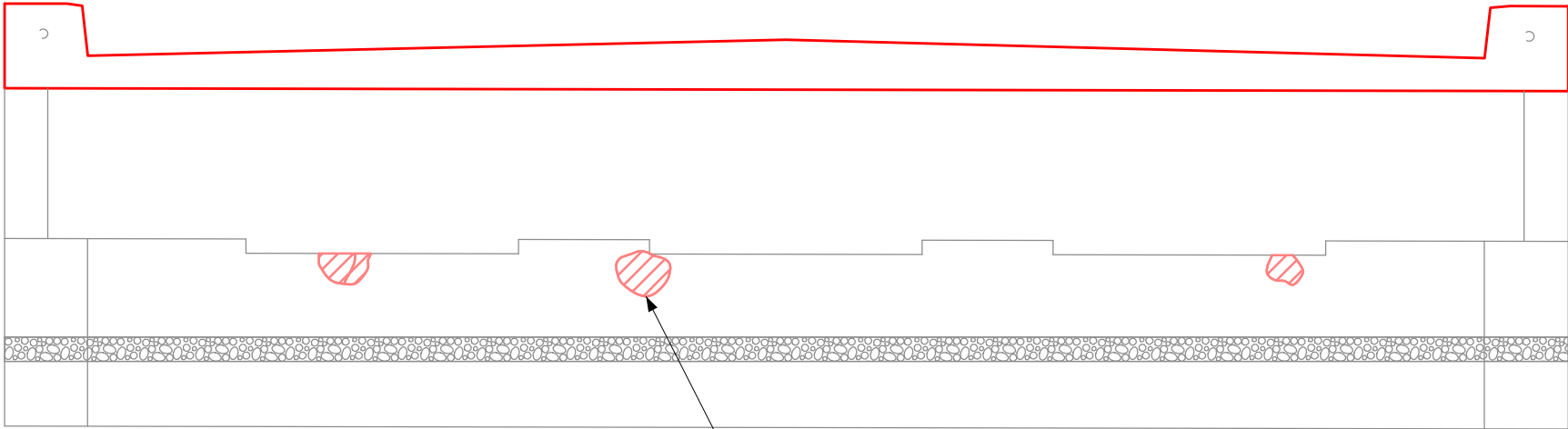
Regular Repair Vertical Face

Concrete Placement Quantities			
Mark	Type	Units	Quantity
①	Shallow Repair	Sq. Ft.	20
②	Regular Repair	Sq. Ft.	0
Total (Sq. Ft.)			20

Estimated Concrete Repair Quantities		
Description	Units	Amount
Concrete Repair	Sq. Ft.	20

Note: See Design Sheet 11 for repair locations.

DESIGN FOR REPAIRS TO A 20°25'00" SKEW (L.A.)
**326'-0" x 32' CONTINUOUS
WELDED GIRDER BRIDGE**
72'-0" & 54'-0" END SPANS 2 - 100'-0" INTERIOR SPANS
CONCRETE REPAIRS
STATION: 22047+08.3 AUGUST, 2025
DECATUR COUNTY
IOWA DEPARTMENT OF TRANSPORTATION
DESIGN NO. 127 DESIGN SHEET NO. 10 OF 11 FHWA NO. 22990



Repair, Typ.

East Abutment

Legend:



Concrete Repair

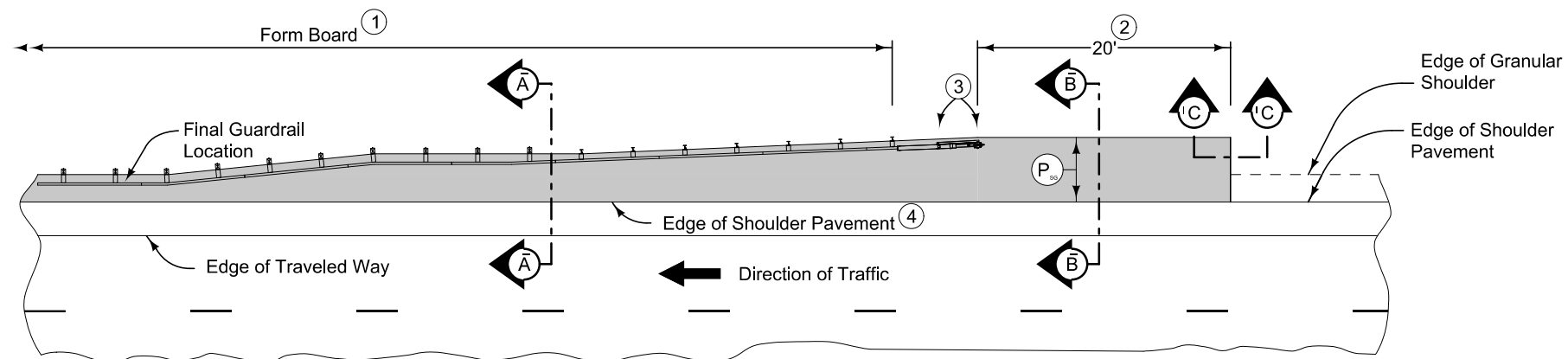
Note: See Design Sheet
10 for repair locations.

DESIGN FOR REPAIRS TO A 20°25'00" SKEW (L.A.)
**326'-0" x 32' CONTINUOUS
WELDED GIRDER BRIDGE**
72'-0" & 54'-0" END SPANS 2 - 100'-0" INTERIOR SPANS
CONCRETE REPAIRS
STATION: 22047+08.3 AUGUST, 2025
DECATUR COUNTY
IOWA DEPARTMENT OF TRANSPORTATION
DESIGN NO. 127 Design Sheet No. 11 of 11 FHWA NO. 22990

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.3	Index of Sheets
B Sheets	Typical Cross Sections and Details
B.1 - 2	Typical Cross Sections and Details
C Sheets	Quantities and General Information
C.1	Project Description
C.2	Estimated Project Quantities
C.3	Estimate Reference Information
C.4	Standard Road Plans
C.5	Index of Tabulations
C.6 - 13	Tabulations
J Sheets	Traffic Control and Staging Sheets
J.1	Traffic Control Plan
J.2 - 4	Staging Notes, Coordinated Operations, 511 Travel Restrict.
J.5	Traffic Control & Staging Legend & Symbol Info. Sheet
J.6 - 7	Staging and Traffic Control Sheets Stage 1
J.8	Staging and Traffic Control Sheets Stage 2



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.  07-27-2026 Signature Douglas B. Parke Printed or Typed Name My license renewal date is December 31, 2027
Pages or sheets covered by this seal: A.3, B.1-B.2, C.1-C.12, J.1-J.8	



PLAN VIEW

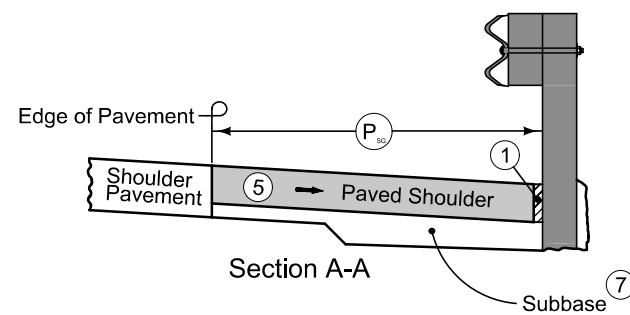
9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

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.

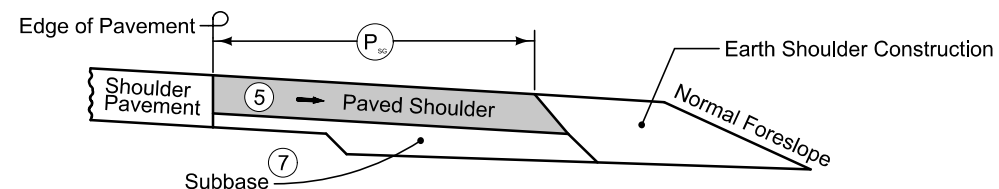
Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

Refer to Tabulation 112-9 for shoulder quantities.

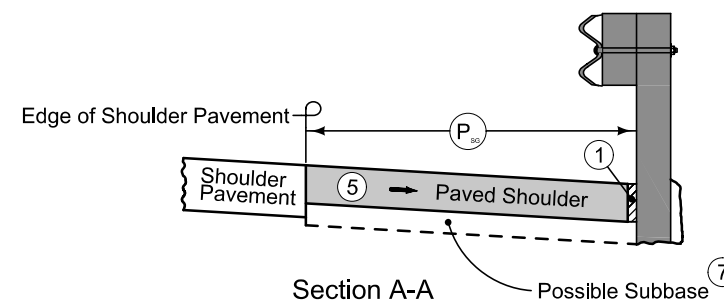
- ① PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.
- ② Continue paved shoulder 20 feet beyond the center of the first post.
- ③ Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ④ 'BT' (per PV-101) joint for PCC shoulder.
'B' (per PV-101) joint for HMA shoulder.
- ⑤ Match shoulder slope.
- ⑥ The Contractor has the option to pave the paved shoulder at guardrail and the partial width paved shoulder as one operation.
- ⑦ Refer to other details in the plan.



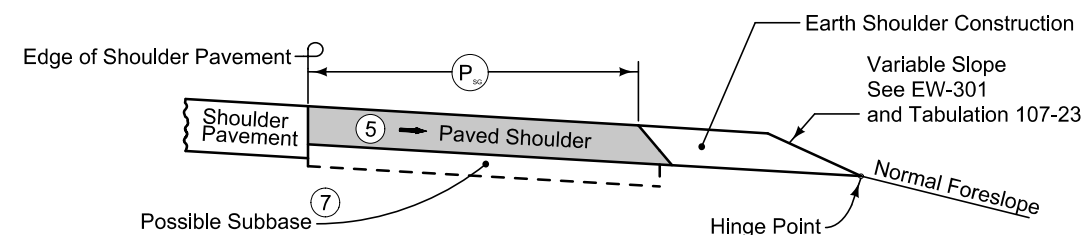
NEW CONSTRUCTION



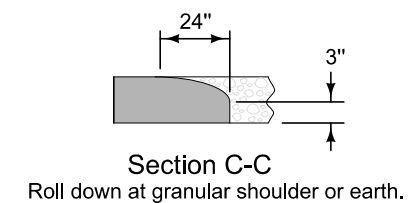
Section B-B



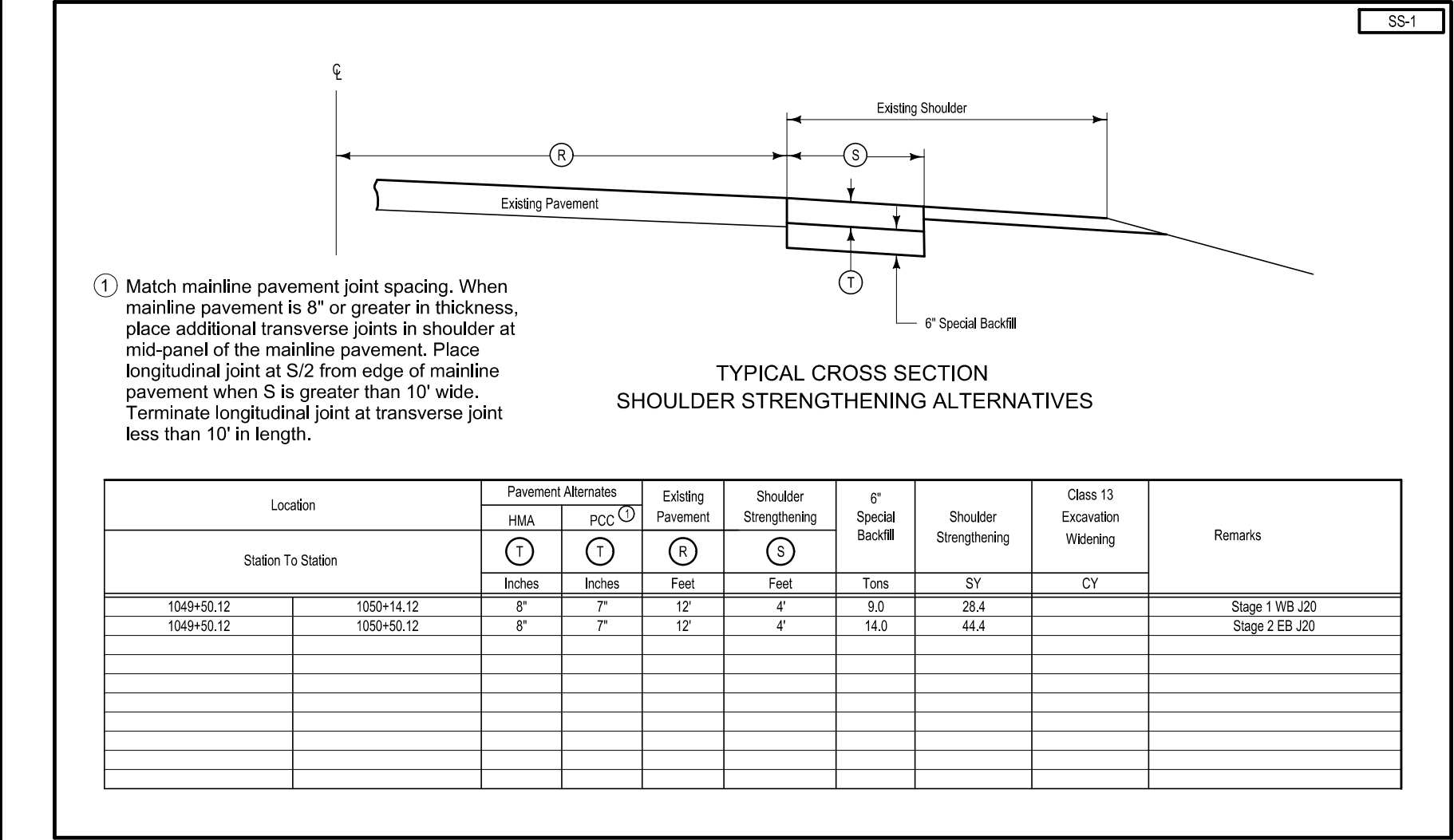
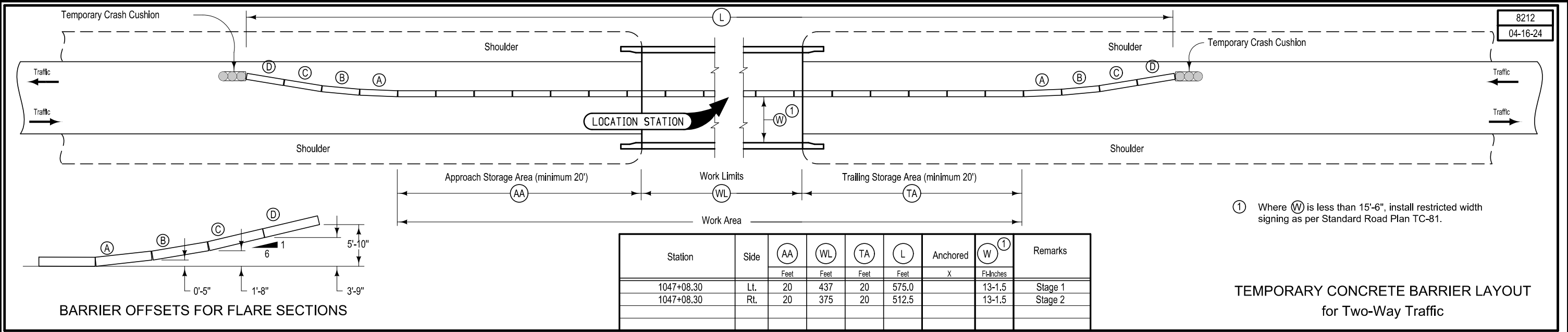
EXISTING SHOULDER



Section B-B



PAVED SHOULDER AT GUARDRAIL
(ADJACENT TO PARTIAL WIDTH PAVED SHOULDER)



100_01D
8/15/22

PROJECT DESCRIPTION

This project is for the replacement of bridge approach pavement for a bridge deck overlay and repair project on County Road J-20 over I-35 in Decatur County.

ESTIMATED PROJECT QUANTITIES						100_01A 3/24/25
Line No.	Item No.	Item Code	Item	Unit	Total	As Built Qty.
1.0	1	2102-0425070	SPECIAL BACKFILL	TON	18.00	
2.0	2	2122-7450080	SHOULDER STRENGTHENING, OPTIONAL HOT MIX ASPHALT MIXTURE OR PORTLAND CEMENT CONCRETE, 8 IN.	SY	56.89	
3.0	3	2301-0685550	BRIDGE APPROACH PAVEMENT, AS PER PLAN	SY	78.00	
4.0	4	2505-6765006	REMOVE AND REINSTALL FORMED STEEL BEAM GUARDRAIL	LF	40.00	
5.0	5	2510-6745850	REMOVAL OF PAVEMENT	SY	78.00	
6.0	6	2527-9263209	PAINTED PAVEMENT MARKINGS, WATERBORNE OR SOLVENT-BASED	STA	24.70	
7.0	7	2527-9263231	REMOVABLE TAPE MARKINGS WET RETROFLECTIVE	STA	4.42	
8.0	8	2527-9263181	PAVEMENT MARKINGS REMOVED	STA	20.23	
9.0	9	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE	LF	1087.50	
10.0	10	2528-8400256	TEMPORARY TRAFFIC SIGNALS	EACH	1.00	
11.0	11	2528-8445110	TRAFFIC CONTROL	LS	1.00	
12.0	12	2551-0000110	TEMP CRASH CUSHION	EACH	4.00	

ESTIMATE REFERENCE INFORMATION				100_04A 6/2/23
Line No.	Item No.	Item Code	Description	
1.0	1	2102-0425070	SPECIAL BACKFILL	
1.1			Refer to Typical SS-1 on Sheet B.2 for details.	
2.1	2	2122-7450080	SHOULDER STRENGTHENING, OPTIONAL HOT MIX ASPHALT MIXTURE OR PORTLAND CEMENT CONCRETE, 8 IN.	
2.2			Use PG-22 asphalt binder at 6% or PG 58-26 asphalt binder at 6%	
2.3			Refer to Typical 7156 on Sheet B.1 for details.	
3.0	3	2301-0685550	BRIDGE APPROACH PAVEMENT, AS PER PLAN	
3.1			Refer to Tab. 112-6 on Sheet C.7 for details.	
4.0	4	2505-6765006	REMOVE AND REINSTALL FORMED STEEL BEAM GUARDRAIL	
4.1			Remove 20' of guardrail each side of east approach pavement repair. Reinstall guardrail.	
5.0	5	2510-6745850	REMOVAL OF PAVEMENT	
5.1			Refer to Tab. 110-1 on Sheet C.6 for details	
6.0	6	2527-9263209	PAINTED PAVEMENT MARKINGS, WATERBORNE OR SOLVENT-BASED	
7.0	7	2527-9263231	REMOVABLE TAPE MARKINGS, WET RETROREFLECTIVE	
8.0	8	2527-9263181	PAVEMENT MARKINGS REMOVED	
8.1			Refer to Tab. 108-22 on Sheet C.11 for details.	
9.0	9	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE	
9.1			Includes 4 Tapered End Sections, Refer to Tab. 108-33 on Sheet C.9 for details.	
10.0	10	2528-8400256	TEMPORARY TRAFFIC SIGNALS	
10.2			Refer to Tab. 108-28 on Sheet C.10 for details.	
11.0	11	2528-8445110	TRAFFIC CONTROL	
11.1			Refer to Tab. 108-23A on Sheet J.1 and Tab. 108-26A on Sheet J.2.	
12.0	12	2551-0000110	TEMP CRASH CUSHION	
12.1			Refer to Tab. 108-30 on C.8 for details.	

105_04 10/20/26 STANDARDS The following Standards apply to construction work on this project.		
Number	Date	Title
BA-401	04-20-21	Temporary Barrier Rail (Precast Concrete)
BA-500	04-20-21	Temporary Crash Cushions Sand Barrel
TC-1	10-15-19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-81	04-18-23	Restricted Width Signing (Less Than 14.5 Feet)
TC-202	04-18-23	Work Within 15 ft of Traveled Way
TC-211	10-15-19	Lane Closure on Low Volume Roadway
TC-216	04-18-23	Lane Closure with Signals
TC-217	10-21-25	Lane Closure with Signals and TBR
TC-418	04-18-23	Lane Closure on Divided Highway
PM-110	10-15-24	Line Types

INDEX OF TABULATIONS			
Line No.	Tabulation	Tabulation Title	Sheet No.
1.0	100_01D	PROJECT DESCRIPTION	C.1
2.0	100_01A	ESTIMATED PROJECT QUANTITIES	C.2
3.0	100_04A	ESTIMATE REFERENCE INFORMATION	C.3
4.0	100_28	LONGITUDINAL GROOVING	C.12
5.0	105_04	STANDARD ROAD PLANS	C.4
6.0	108_22	PAVEMENT MARKING LINE TYPES	C.11
7.0	108_28	TEMPORARY TRAFFIC SIGNALS	C.10
8.0	108_30	CRASH CUSHIONS	C.8
9.0	108_33	TEMPORARY BARRIER RAIL	C.9
10.0	110_01	REMOVAL OF PAVEMENT	C.6
11.0	111_25	INDEX OF TABULATIONS	C.5
12.0	112_06	BRIDGE APPROACH SECTION	C.7

REMOVAL OF PAVEMENT Refer to Tabulation 102-5.							110_01 4/5/24
* Not a bid item.							
Line No.	Station From	Station To	Side	Pavement Type	Area (SY)	Saw Cut* (LF)	Remarks
1.0	1048+99.91	1049+19.91	Both	PCC	78.0	70.0	
Totals:					78.0	70.0	

112_06

10/20/26

BRIDGE APPROACH SECTION

Refer to the BR Series.

* Not a bid item

** Verify layout of bridge approach does not conflict with guardrail posts.

Line No.	Bridge Station	End	Skew Ahead Left (Degrees)	Skew Ahead Right (Degrees)	(T) Thickness (IN)	Pay Length (FT)	Right Edge Offset (FT) **	Left Edge Offset (FT) **	Non-Reinf. Area (SY)	Single-Reinf. Area (SY)	Double-Reinf. Area (SY)	SRP Approach	SRP Abutment Type	SRP Abutting Pavement	Perforated * 4" Subdrain (LF)	Subdrain * Outlet (STA)	Subdrain * Outlet Side	Porous * Backfill (CY)	Modified * Subbase (TON)	Polymer * Grid (SY)	Special * Backfill (TON)	Remarks
1.0	1047+08.30	E	20.4		10.0	20.0	16	16	78.0				Fixed						16.798	80.0		Standard BR112 consulted

Total:
Bridge Approach Pavement, As Per Plan: 78.0 SY

CRASH CUSHIONS

108_30
4/16/24

- * Bid Item
1. Lane(s) to which the installation is adjacent.
2. Complete this section when using the Temporary Crash Cushion bid item and Earthwork is needed for Sand Barrel placement. Refer to BA-500.

Line No.	Lane	Station	Side	Obstacle Width (FT)	Crash Cushion Type	Crash Cushion Quantity	V (FT) (2)	W (FT) (2)	X (FT) (2)	Y (FT) (2)	Z (FT) (2)	Excavation Class 10* (CY)	Embankment in Place* (CY)	Obstacle Description	Remarks
1.0	EB	1044+78.00	Right	2.0	Temporary	1								TBR	Stage 1
2.0	WB	1050+54.50	Right	2.0	Temporary	1								TBR	Stage 1
3.0	EB	1044+78.00	Left	2.0	Temporary	1								TBR	Stage 2
4.0	WB	1049+90.00	Left	2.0	Temporary	1								TBR	Stage 2
Total:						4									

108_33

8/15/22

TEMPORARY BARRIER RAIL

Possible Standard: BA-401 Possible Detail: 560-7

* Not a bid item. Anchorage requirements are based on TBR locations shown in the plans. TBR alignments that vary from what is shown in the plans may result in additional TBR sections requiring anchorage.

Line No.	No.	Station From	Station To	Length (FT)	Barrier Rail Type	Anchored*	Modular Glare Screen System	Remarks
1.0	1	1044+78.00	1050+54.50	575.0	Concrete BA-401	No	No	Refer to Typical 8212
2.0	2	1044+78.00	1049+92.00	512.5	Concrete BA-401	No	No	Refer to Typical 8212
Total:				1087.5				

TEMPORARY TRAFFIC SIGNALS				
Line No.	Item No.	Station	Signal Type	Remarks
1.0	1	1047+08.30	One Lane Traffic	See TC-217
Total:		1		

108_22
11/25/25

PAVEMENT MARKING LINE TYPES

Line factors based on 6-inch wide continuous line.
*BCY4 - Place on the same side of the roadway to match existing markings near the project.
**NPY4 - Estimating purposes only. No Passing Zone Lines will be located in the field.
***MNY6 - Factor of 1.00 includes number of 6-inch passes to cover median nose area.
BCY4: Broken Centerline (Yellow) @ 0.17 BCY6: Broken Centerline (Yellow) @ 0.25 BLC6: Broken Line Contrast (White/Black) @ 0.50 BLW4: Broken Lane Line (White) @ 0.17 BLW6: Broken Lane Line (White) @ 0.25
CBW6: Crosswalk Bar (White) @ 10.00 CHW8: Channelizing Line (White) @ 1.33 CHW10: Channelizing Line (White) @ 1.67 CHY8: Channelizing Line (Yellow) @ 1.33 CHY10: Channelizing Line (Yellow) @ 1.67
CLW6: Crosswalk Line (White) @ 2.00 DCY4: Double Centerline (Yellow) @ 1.34 DCY6: Double Centerline (Yellow) @ 2.00 DDY4: Double Dotted Line (Yellow) @ 0.44 DDY6: Double Dotted Line (Yellow) @ 0.67
DLW4: Dotted Line (White) @ 0.22 DLW6: Dotted Line (White) @ 0.33 DLY4: Dotted Line (Yellow) @ 0.22 DLY6: Dotted Line (Yellow) @ 0.33 ELW4: Edge Line Right (White) @ 0.67
ELW6: Edge Line Right (White) @ 1.00 ELY4: Edge Line Left (Yellow) @ 0.67 ELY6: Edge Line Left (Yellow) @ 1.00 LDW8: Lane Drop (White) @ 0.33 LDW10: Lane Drop (White) @ 0.42
MNY6: Median Nose (Yellow) @ 1.00 NPY4: No Passing Zone Line (Yellow) @ 0.84 NPY6: No Passing Zone Line (Yellow) @ 1.25 RLW4: Ramp Edge Line Right (White) @ 0.67 RLW6: Ramp Edge Line Right (White) @ 1.00
RLY4: Ramp Edge Line Left (Yellow) @ 0.67 RLY6: Ramp Edge Line Left (Yellow) @ 1.00 SLW2: Stop Line (White) @ 4.00 SLW4: Solid Lane Line (White) @ 0.67 SLW6: Solid Lane Line (White) @ 1.00
SPW4: Sloped Curb 4" (White) @ 2.16 SPW6: Sloped Curb 6" (White) @ 2.28 SPY4: Sloped Curb 4" (Yellow) @ 2.16 SPY6: Sloped Curb 6" (Yellow) @ 2.28 STW6: Standard Curb 6" (Yellow) @ 2.03
STY6: Standard Curb 6" (Yellow) @ 2.03 YLW2: Yield Line (White) @ 1.15

Line No.	Road ID	Station From	Station To	Lane	Marking Type	Left	Center	Right	Groove Marking Needed?	Groove Qty. (STA)	DCY4 (STA)	DCY4 Factored (STA)	ELW4 (STA)	ELW4 Factored (STA)	SLW2 (STA)	SLW2 Factored (STA)	Remarks
1.1	SR J20	1042+97.91	1045+47.91	Both	Removal of Paint		X		No		2.50	3.35					Stage 1
1.2	SR J20	1042+97.91	1045+42.43	EB	Removal of Paint			X	No				2.45	1.64			Stage 1
2.0	SR J20	1048+76.22	1052+19.91	EB	Removal of Paint			X	No				3.44	2.30			Stage 1
2.1	SR J20	1048+80.26	1052+19.91	Both	Removal of Paint		X		No		3.40	4.56					Stage 1
2.2	SR J20	1042+97.91	1045+51.83	WB	Removal of Paint			X	No				2.54	1.70			Stage 2
2.3	SR J20	1048+84.14	1052+19.91	WB	Removal of Paint			X	No				3.36	2.25			Stage 2
2.6	Total										5.90	7.91	11.79	7.90			
5.0	SR J20	1042+97.97	1042+97.97	EB	Wet Retroreflective Removable Tape			X	No						0.12	0.48	Stage 1 Stop Line EB
6.0	SR J20	1042+98.01	1045+08.30	EB	Wet Retroreflective Removable Tape			X	No				2.10	1.41			Stage 1
6.5	SR J20	1052+20.00	1052+20.00	WB	Wet Retroreflective Removable Tape			X	No						0.12	0.48	Stage 1 Stop Line WB
7.0	SR J20	1049+70.00	1052+20.00	WB	Wet Retroreflective Removable Tape			X	No				2.50	1.68			Stage 2
7.5	SR J20	1049+87.98	1050+45.34	WB	Wet Retroreflective Removable Tape			X	No				0.57	0.38			Stage 2
8.1	Total												5.17	3.46	0.24	0.96	
9.0	SR J20	1042+97.91	1052+19.91	WB	Waterborne/Solvent Paint			X	No				9.22	6.18			Stage 1
10.0	SR J20	1042+97.91	1052+19.91	EB	Waterborne/Solvent Paint			X	No				9.22	6.18			Stage 2
10.1	SR J20	1042+97.91	1052+19.91	Both	Waterborne/Solvent Paint		X		No		9.22	12.35					Stage 2
10.2	Total										9.22	12.35	18.44	12.35			
11.0	SR J20	1042+97.91	1045+08.30	EB	Removal of Removable Tape			X	No				2.10	1.41			Stage 3 Remove EL from Stage 1
12.0	SR J20	1042+97.91	1042+97.91	EB	Removal of Removable Tape			X	No						0.12	0.48	Stage 3 Remove SL from Stage 2
13.0	SR J20	1049+70.00	1052+20.00	WB	Removal of Removable Tape			X	No				2.50	1.68	0.12	0.48	Stage 3 Remove EL and SL
14.0	SR J20	1049+87.98	1050+45.30	WB	Removal of Removable Tape			X	No				0.57	0.38			Stage 3 Remove EL
15.0	Total												5.17	3.46	0.24	0.96	

Notes:

Removal of removable tape marking is incidental to Removable Tape Markings, Wet Retroreflective.

Wet retroreflective removable tape markings are to be 8" wide, consisting of two side-by-side 4" tapes.

Totals (Factored):

Painted Pavement Markings, Waterborne or Solvent-based: 24.7

Pavement Markings Removed: 15.8

Removable Tape Markings, Wet Retroreflective: 4.42

Incidental Removal of Removable Tape: 4.42

LONGITUDINAL GROOVING			
Line No.	Location	Total (SY)	Remarks
1.0	1047+08.30	1180.4	Bridge
2.0	1047+08.30	78.0	Approach pavement repair
Total:		1258.4	

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UTILITIES

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Line No.	Company	Contact	Phone	Email
1.0	ALLIANT ENERGY	Alliant Energy Field Engineer	8002554268	locate_IPL@alliantenergy.com
2.0	IOWA DEPARTMENT OF TRANSPORTATION	Rick Toney	6414466214	rick.toney@iowadot.us
3.0	SOUTHERN IOWA RURAL WATER ASSOCIATION	Chad Mahan	6417825744	cmahan@sirwa.org
4.0	GRAND RIVER MUTUAL TELEPHONE CORPORATION	Michael Jordison	6414464212	mjordison@corp.grm.net

TRAFFIC CONTROL PLAN

1.
All Traffic Control items shall be installed prior to Contractor starting roadway work operations. Staging Traffic Control items shall be installed prior to beginning each stage’s work. Items to be installed per the roadway plans, Standard Road Plan sheets, or as directed by the field engineer. Additional items may be necessary to accommodate field conditions. Contractor is responsible for field locating utilities.
2.
All lane closures and notifications shall be submitted and approved a minimum of 14 days prior to related roadway work operations.
3.
Traffic Control shall be in accordance with Standard Road Plans and following J sheets. For additional information, refer to Part 6 of the Manual on the Uniform Traffic Control Devices and the current Standard and Supplemental Specifications
4.
Traffic will be maintained on I-35 and Secondary Road J20 and ramps at all times.
5.
Contractor shall coordinate traffic control with other projects in the area.
- I-35
Traffic shall be maintained at all times.
- Secondary Road J20
Maintain a minimum of one lane of traffic in each direction at all times
- Ramps
Traffic shall be maintained at all times.

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STAGING NOTES

Stage 1A
Traffic:
-Maintain one lane using TC-216
Construction:
-Construct Shoulder strengthening for WB Sideroad J20.

Stage 1B
Traffic:
-Maintain one lane using TC-217
-Close EB Sideroad J20 lane per TC-217.
-Set up Temporary Signals. Place TBR per typical 8212.
Construction:
-Construct EB Sideroad J20 bridge overlay and non-reinforced bridge approach.
-Construct Shoulder strengthening for EB Sideroad J20.

Stage 2
Traffic:
-Maintain one lane using TC-217.
-Close WB Sideroad J20 lane per TC-217.
-Place TBR per typical 8212.
Construction:
-Construct WB Sideroad J20 bridge overlay and non-reinforced bridge approach.

Stage 3
Traffic:
-All traffic lanes return to normal operations.

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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
None	

511 TRAVEL RESTRICTIONS

Line No.	Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No. or Structure ID or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
1.0	SR J20	Both	Decatur	SR J20 bridge at I-35	Temporary Construction Barrier	Barrier	N/A	Horizontal	16'-0"	13'-1.5"	12'-0"	N/A	Stage 1 & 2

CROSS SECTION VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS		
SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Med	(237)	Future Proposed Pavement Shading

CROSS SECTION VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS			
	Pavement Removal		Proposed Granular Shoulder
	Proposed Granular Subbase		Temporary Shoulder
	Proposed Special Backfill		Existing Shoulder Strengthening
	Temporary Barrier Rail		Permanent Barrier Rail
			Channelizing Device

PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS		
LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Magenta	(5)	Pavement Marking Call Outs
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Yellow	(4)	Pavement Markings, Yellow
Off White	(254)	Pavement Markings, White
Violet	(15)	Temporary barrier rail, Unpinned
Flush Orange	(228)	Temporary barrier rail, Pinned

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Orange	(6)	Proposed Granular Surface Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Pink, Dark	(13)	Temporary Pavement Shading
Brown, Light	(236)	Proposed Grading Limits Shading
Cyan	(7)	Proposed MSE or CIP Wall Shading
Red	(3)	Proposed Bridge Shading and Sign Trusses
Black w/Gray, Light Fill	(0,48)	Previously Constructed Structure

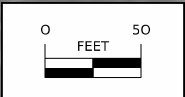
PLAN VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS			
	Channelizing Device		Crash Cushion (Temp or Perm)
	Drum		Traffic Signal
	Temporary Lane Separator		Flagger
	Tubular Marker		Temporary Floodlighting
	Channelizer Marker		Traffic Sign
	Concrete Barrier Marker		Type III Barricade
	Delineator		Type A Warning Light
	Temporary Barrier Rail		Direction of Traffic
	Pavement Removal		Safety Closure
	Sand Barrel Layout		Lane Identification

NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

TRAFFIC CONTROL
AND
STAGING
LEGEND AND SYMBOL
INFORMATION SHEET

(COVERS SHEET SERIES J)





SR J20
Stage 1B

