

Sheet A.1

UTILITY CONTACTS

City Cedar Rapids
City Arborist: (319) 286-5616
Fire: Business (319) 286-5200, Emergency 911
Police: Business (319) 286-5491, Emergency 911
Public Works: (319) 286-5802
Sanitary & Storm Sewer: (319) 286-5815
Transit: (319) 286-5573
Water: (319) 286-5900
Iowa One Call: 811

Utilities

Alliant: (319) 786-1908
AT&T: (319) 364-6111 (this is an unmanned number, but a message can be left on a machine)
Century Link: (319) 399-7600 or (319) 399-7487
ImOn Communications: (319) 261-4640 or (319) 261-4689
Iowa Network Service: (319) 533-2319
ITC Midwest: (319) 297-6765
Joint Communications Network (JCN):

- For fiber cuts, the contact is the City IT Service Desk: 319-286-5500
- For plan sets or JCN questions, the City IT department contracts with Martin Underground
 - Emily Rinacke, Account Manager, Martin Underground
 - 816-353-1352 or emily@martinunderground.com
 - The IT Infrastructure Manager Kris Sjobakken should also be copied for plan sets or JCN questions – 319-286-5119 or k.sjobakken@cedar-rapids.org

Linn County Rec: (319) 377-1587
Mediacom: (319) 395-9699, Ext. 354
MidAmerican Energy: (319) 298-5162
Windstream: (319) 538-1985

DESIGN INFORMATION	
POSTED SPEED	35 MPH
DESIGN SPEED	35 MPH
ADT (2013)	4,910
STREET CLASSIFICATION	MINOR ARTERIAL

UTILITY QUALITY SERVICE LEVELS

QUALITY LEVELS OF UTILITIES ARE SHOWN IN THE PARENTHESES WITH THE UTILITY TYPE AND WHEN APPLICABLE, SIZE. THE QUALITY LEVELS ARE BASED ON THE CI / ASCE 38-02 STANDARD.

QUALITY LEVEL (D) INFORMATION IS DERIVED FROM EXISTING UTILITY RECORDS OR ORAL RECOLLECTIONS.

QUALITY LEVEL (C) INFORMATION IS OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE- GROUND UTILITY FEATURES AND USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION WITH QUALITY D INFORMATION.

QUALITY LEVEL (B) INFORMATION IS OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES.

QUALITY LEVEL (A) IS HORIZONTAL AND VERTICAL POSITION OF UNDERGROUND UTILITIES OBTAINED BY ACTUAL EXPOSURE OR VERIFICATION OF PREVIOUSLY EXPOSED SUBSURFACE UTILITIES, AS WELL AS THE TYPE, SIZE, CONDITION, MATERIAL, AND OTHER CHARACTERISTICS.

UTILITY WARNING

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN COMPRISE ALL SUCH ITEMS IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN ARE IN THE EXACT LOCATION INDICATED EXCEPT WHERE NOTED AS QUALITY LEVEL A.

LEGEND

FEATURES

SPOT ELEVATION
CONTOUR ELEVATION
FENCE (BARBED, FIELD, HOG)
FENCE (CHAIN LINK)
FENCE (WOOD)
FENCE (SILT)
TREE LINE
TREE STUMP

DECIDUOUS TREE OR SHRUB
CONIFEROUS TREE OR SHRUB

COMMUNICATION
OVERHEAD COMMUNICATION
FIBER OPTIC
UNDERGROUND ELECTRIC
OVERHEAD ELECTRIC
GAS MAIN WITH SIZE
HIGH PRESSURE GAS MAIN WITH SIZE
WATER MAIN WITH SIZE
SANITARY SEWER WITH SIZE
DUCT BANK
TEST HOLE LOCATION FOR SUE W/ID

(*) DENOTES THE SURVEY QUALITY SERVICE LEVEL FOR UTILITIES

SANITARY MANHOLE
STORM SEWER WITH SIZE
STORM MANHOLE
SINGLE STORM SEWER INTAKE
DOUBLE STORM SEWER INTAKE
FIRE HYDRANT
WATER MAIN VALVE
WATER SERVICE VALVE
WELL
UTILITY POLE
GUY ANCHOR
UTILITY POLE WITH LIGHT
UTILITY POLE WITH TRANSFORMER
STREET LIGHT
YARD LIGHT
ELECTRIC BOX
ELECTRIC TRANSFORMER
TRAFFIC SIGN
COMMUNICATION PEDESTAL
COMMUNICATION MANHOLE
COMMUNICATION HANDHOLE
FIBER OPTIC MANHOLE
FIBER OPTIC HANDHOLE
GAS VALVE
GAS MANHOLE
GAS APPARATUS
FENCE POST OR GUARD POST
UNDERGROUND STORAGE TANK
ABOVE GROUND STORAGE TANK
SIGN
SATELLITE DISH
MAILBOX
SOIL BORING

UTILITY COORDINATION DURING CONSTRUCTION									
COUNT	UTILITY	SIDE	UTILITY CONTACT			ADVANCED NOTIFICATION BY PRIME CONTRACTOR TO FRANCHISE UTILITY	TIME ALLOWANCE FOR FRANCHISE UTILITY BY PRIME CONTRACTOR	DESCRIPTION OF WORK TO BE DONE BY FRANCHISE UTILITY	ADDITIONAL INFORMATION
			NAME	EMAIL	PHONE				
1	ITC MIDWEST	EAST SIDE OF THE BRIDGE	CHAD LEVI	CLEVI@ITCTRANSCO.COM	O: 319-297-6765 C: 319-899-9969	PROVIDE A MINIMUM OF TWO (2) MONTHS OF ADVANCED NOTICE TO ITC MIDWEST FOR DE-ENERGIZING EXISTING HIGH POWER (69 KV AND 161 KV) TRANSMISSION LINES ON THE EAST SIDE OF THE PROJECT. THE CONTRACTOR SHALL ALSO ENSURE THAT THE ITC CONTACTS LISTED HERE ARE INVITED TO THE PRECONSTRUCTION MEETING FOR THIS PROJECT.	AFTER PROVIDING TWO (2) MONTHS OF ADVANCED NOTICE AND RECEIVING CONFIRMATION OF DE-ENERGIZING TIMEFRAMES, ITC MIDWEST WILL CONFIRM WITH THE CONTRACTOR THAT THE POWER LINES HAVE BEEN DE-ENERGIZED AND THEY ARE READY FOR WORK TO BEGIN FOR THE CHOSEN DE-ENERGIZING TIMEFRAMES.	ITC WILL DE-ENERGIZE THE EXISTING HIGH POWER TRANSMISSION LINES ON THE EAST SIDE OF THE PROJECT FOR THREE (3) WEEK PERIODS OF TIME, PER REQUEST. IF ADDITIONAL TIME IS NEEDED, ITC MIDWEST NEEDS TO AUTHORIZE OR APPROVE THE OUTAGE DURATION DURING THE ADVANCED TWO (2) MONTH NOTIFICATION PROCESS.	ADVANCED NOTIFICATION SHALL BE SENT BY THE CONTRACTOR VIA EMAIL TO ALL ITC CONTACTS LISTED. CONFIRMATION OF RECEIPT FROM ITC MIDWEST SHALL BE ACQUIRED BY THE CONTRACTOR. ITC MIDWEST PROVIDED SUPPLEMENTAL INFORMATION RELATED TO THE APPROXIMATE HORIZONTAL AND VERTICAL SEPARATIONS FROM THE ROADWAY AND THE EXISTING GROUND. CONTRACTOR SHALL CONFIRM THE PROVIDED DIMENSIONS. ON THE NE SIDE, THE POWER LINES EXIST ABOUT 20 FEET HORIZONTALLY FROM THE ROADWAY AND RANGE FROM 52 FEET TO 85 FEET ABOVE THE EXISTING GROUND. ON THE SE SIDE, THE POWER LINES EXIST ABOUT 36 FEET HORIZONTALLY FROM THE ROADWAY AND RANGE FROM 38 FEET TO 75 FEET ABOVE THE EXISTING GROUND. WHEN THE CONTRACTOR IS NOT ON-SITE, ANY EQUIPMENT REMAINING ON-SITE SHALL BE STORED A MINIMUM CLEARANCE DISTANCE OF 15 FEET OR GREATER FROM THE EXISTING POWER LINES (PER OSHA 1926), IN CASE THE POWER NEEDS TO BE RESTORED IN AN EMERGENCY. FURTHER, IF ITC MIDWEST NEEDS TO REENERGIZE THE POWER LINES DURING THE OUTAGE WINDOW, THE CONTRACTOR SHALL BE PREPARED TO RELOCATE ALL EQUIPMENT TO MINIMUM CLEARANCE ZONES WITHIN 4 HOURS MAXIMUM FROM NOTIFICATION BY ITC MIDWEST.
	ITC MIDWEST		KEN PRICE	KPRICE@ITCTRANSCO.COM	O: 319-213-0672				
	ITC MIDWEST		CORY TURENNE	CTURENNE@ITCTRANSCO.COM	O: 262-689-3033				
	ITC MIDWEST		TODD MCNEIL (24 HOUR PRIMARY CONTACT)	TMCNEIL@ITCTRANSCO.COM	C: 309-525-0527				
	ITC MIDWEST		ROSS MENKE (24 HOUR SECONDARY CONTACT)	RMENKE@ITCTRANSCO.COM	C: 319-470-0484				
2	SEGRA (FORMERLY UPN)	NW CORNER	GREG TROEGER	GREG.TROEGER@SEGRAFIBER.COM	O: 515-419-4053	HANDHOLE ADJUSTMENT DURING CONSTRUCTION	PROVIDE 2 WEEKS OF ADVANCED NOTIFICATION.	ALLOW 2 WORKING DAYS FOR SEGRA TO COMPLETE THE HH ADJUSTMENT DURING CONSTRUCTION.	PROTECT EXISTING HANDHOLE DURING CONSTRUCTION.
3	ALLIANT ENERGY	NW CORNER	MATT WEDEKING	MATTHEWWEDEKING@ALLIANTENERGY.COM	O: 319-786-1913	GUY WIRE RELOCATION DURING CONSTRUCTION	PROVIDE 2 WEEKS OF ADVANCED NOTIFICATION.	ALLOW 2 WORKING DAYS FOR ALLIANT ENERGY TO COMPLETE THE GUY WIRE RELOCATION DURING CONSTRUCTION.	PROTECT EXISTING UTILITY POLES DURING CONSTRUCTION.

BHM-1187(826)--8K-57
C STREET BRIDGE DECK RECONSTRUCTION

LEGENDS

CITY OF CEDAR RAPIDS, IOWA

SNYDER & ASSOCIATES, INC.

900 BELL DRIVE S.W.
CEDAR RAPIDS, IA 52404
319-362-9394 | www.snyder-associates.com



Project No: 125.0693

Sheet A.2

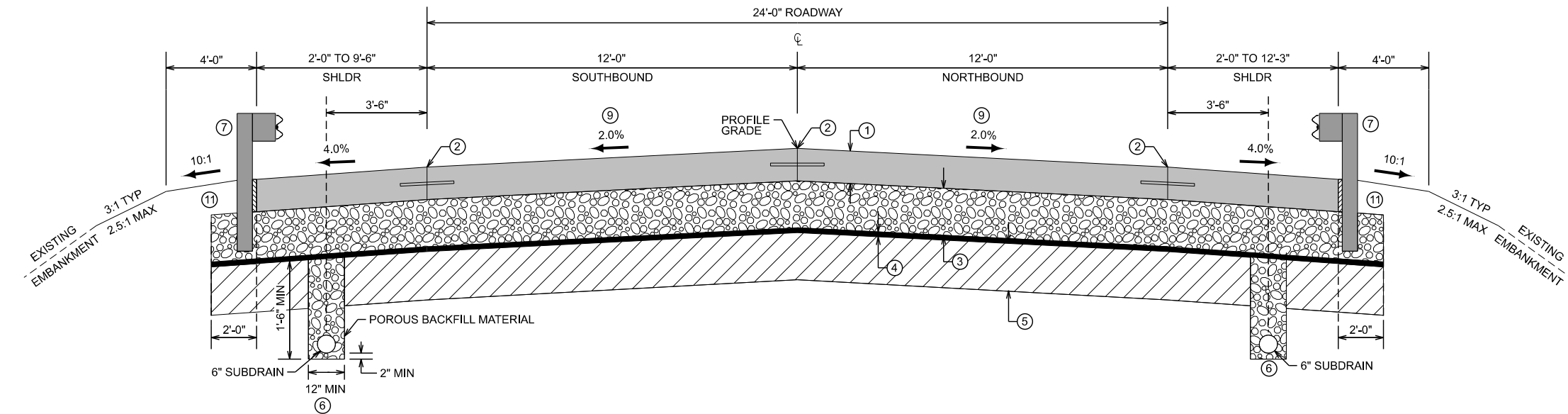
Sheet A.2

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B.1 (Sheet)

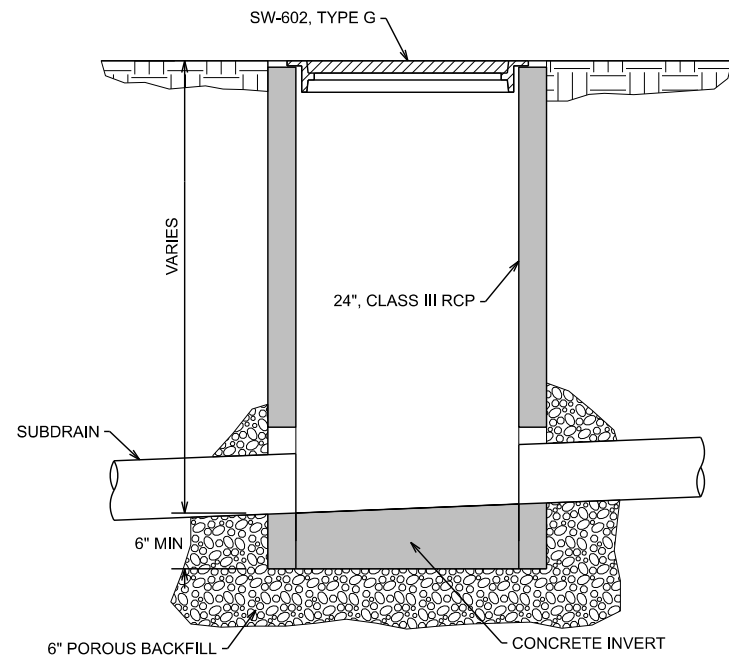
6/16/2026
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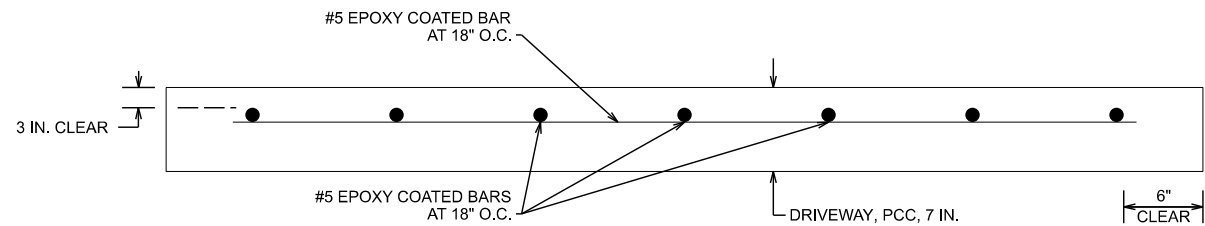


- NOTES
- STANDARD OR SLIP-FORM PCC PAVEMENT, CLASS C, CLASS 3 DUR, 9".
 - L-2, BT-2, OR CONTRACTION JOINT DEPENDING ON PAVEMENT THICKNESS AND CONSTRUCTION STAGING, PV-101.
 - MODIFIED SUBBASE, 12".
 - SUBGRADE STABILIZATION MATERIAL, POLYMER GRID TO BE INSTALLED BENEATH SUBBASE.
 - SPECIAL COMPACTION OF SUBGRADE.
 - REFER TO C AND D SHEETS FOR LOCATION OF SUBDRAINS.
 - REFER TO C AND D SHEETS FOR LOCATION OF STEEL BEAM GUARDRAIL
 - REFER TO THE W SHEETS FOR CROSS-SECTION INFORMATION.
 - REFER TO THE D, L, AND W SHEETS FOR SUPERELEVATION INFORMATION.
 - REFER TO IOWA DOT STANDARD ROAD PLAN BR-203 FOR STATION 10+14 TO STATION 10+84 AND STATION 13+04 TO STATION 13+79.
 - SHOULDER FINISHING, EARTH

1
B.1 C STREET TYPICAL SECTION (STA 10+00.00 TO STA 10+85 AND STA 13+04 TO STA 14+90)
NO SCALE



2
B.1 TYPE B SUBDRAIN CLEANOUT
NO SCALE



3
B.1 UTILITY CROSSING REINFORCEMENT
NO SCALE

BHM-1187(826)--8K-57
C STREET BRIDGE DECK RECONSTRUCTION

TYPICAL SECTIONS AND PAVEMENT DETAILS CITY OF CEDAR RAPIDS, IOWA

SNYDER & ASSOCIATES, INC.



Project No: 125.0693

Sheet B.1

900 BELL DRIVE S.W.
CEDAR RAPIDS, IA 52404
319-362-9394 | www.snyder-associates.com

Sheet B.1

Project No: 125.0693

Checked By: AUB
Date: 06/16/2026
T-R-S:

REVISION
Engineer: JMG
Technician: C/JN

MARK

DATE
BY

Project No:		125,0693		Sheet		B.2	
Engineer:	JMG	Checked By:	AJB	T-R-S:		DATE	BY
Technician:	C/N	Date:	06/16/2026				
MARK		REVISION					

GENERAL NOTES

1. Contractor is responsible for securing and providing the following permits and applications:
 - Public Right-of-Way Permit (available through the Public Works- Real Estate Division, Right of Way Management.)
 - Current bond for Grading, Opening or Working in Public Street and Public Property (file with the Public works- Real Estate Division, Right of Way Management).
 - Vendor Registration Certificate (obtain through the Cedar Rapids Finance Department).Permit fees will not be charged.
2. If Contractor obtains additional easements for storage of equipment and materials, copies of agreements with the property owners shall be provided to the City. Upon completion of the usage of the additional easements, Contractor shall also obtain written acceptance from the owner and provide a copy to the Engineer.
3. Contractor shall coordinate the construction schedule with City staff to avoid conflicts with City events. No additional compensation will be made for coordinating schedules around events.
4. Dewatering is allowed for projects where the City has previously obtained an NPDES General Permit No. 2 and where the contractor is managing appropriate controls to prevent erosion. The City Stormwater Official, or designee, shall be notified in advance when dewatering activities will be performed. For projects that are not covered by an NPDES General Permit No. 2, the contractor shall review the Iowa Department of Natural Resources website to determine permitting requirements and shall obtain any necessary permits (<https://www.iowadnr.gov/environmental-protection/water-quality/wastewater-permitting-npdes/general-permits/gp9-dewatering-geothermal>). In any case where 25,000 gallons per day or more of dewatering discharge is expected, the contractor must obtain water use and well construction permits from the Iowa Department of Natural Resources and Linn County Public Health.

GENERAL UTILITY NOTES

1. Refer to Iowa Department of Transportation Standard Specifications Section 1107.15 for general utility notes.
2. Abandoned utilities not shown on the plans may exist within the construction limits. If encountered, Contractor shall confirm said utilities are abandoned.
Contractor is responsible for removing these lines as necessary for construction.
3. Contractor shall verify sanitary and storm sewer pipe sizes and inverts prior to construction and prior to ordering manholes and/or pipe. No additional payment shall be made to the Contractor for material that is ordered and does not match pipe sizes and inverts that are to be confirmed prior to construction.
4. Repair all field/drain tiles encountered during construction as specified or at a minimum to allow flow using like material in new condition with City approved connections. Contractor shall record existing type, size, location and depth of all field/drain tiles encountered and repaired during construction. Provide data to the City for incorporation into record drawings.

EROSION CONTROL NOTES

1. Contractor is responsible for the protection and maintenance of all existing and constructed drainage channels and drainage structures. Contractor is liable for all damage to public or private property caused by their action or inaction in the handling of storm water flows during construction. Extra grading work necessary to maintain positive drainage within the construction limits is considered incidental to construction or related bid items.

WATER NOTES

1. Water inspection services are completed by Cedar Rapids Water Division personnel.
2. Contact Water Engineering at 319-286-5950 or water-engineering-admin@cedar-rapids.org to schedule the following work requests:
 - Five (5) day minimum advance notice is required for:
 - Water construction start and stop.
 - Forty-eight (48) hour minimum advance notice is required for:
 - Water shut-down or supply interruption.
 - Twenty-four (24) hour minimum advance notice is required for each of the following:
 - Water tap 2 inches or smaller.
 - Water tap larger than 2 inches and up to 12 inches.
 - Water main fill & flush.
 - Water main disinfection and hydrostatic testing.
 - Other water distribution related services.
3. For any excavation within 6 feet of a marked 16 inch or larger water main, the contractor is required to schedule stand-by Water Division personnel for that work. Coordinate with the Water Inspector assigned to the project or contact Water Engineering to schedule with 24-hour minimum notice.
4. For directional drilling crossings or installations within 6 feet of a marked 16 inch or larger water main, the contractor is required to locate and expose (pothole or vac excavate) the water main and Water Division personnel are to be on site during that work. Coordinate with the Water Inspector assigned to the project or contact Water Engineering to schedule with 24-hour minimum notice.
5. No monetary or time compensation will be made to accommodate customers by scheduling after-hours water service interruptions.

[illegible]

**BHM-1187(826)--8K-57
C STREET BRIDGE RECONSTRUCTION**

QUANTITIES AND GENERAL INFORMATION

CITY OF CEDAR RAPIDS, IOWA

SNYDER & ASSOCIATES, INC.

900 BELL DRIVE S.W.
CEDAR RAPIDS, IA 52404
319-362-9394 | www.snyder-associates.com



Project No:	125.0693
Sheet	C.1

ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES				Division 1: PARTICIPATING Division 2: NON-PARTICIPATING				
Note: All included work listed within the "Iowa Department of Transportation Standard Specifications" for each Bid Item shall apply. If additional work items are listed in the Estimate Reference Information, they shall be added to the work already included in the "Iowa Department of Transportation Standard Specifications" listed for that Bid Item and are not necessarily added by Special Provision.								
Item no.	Item Code	Item	Unit	Estimated Quantities				Estimate Reference Notes
				Division 1	Division 2	Total Quantity	As-Built Quantity	
1	2101-0850001	CLEARING AND GRUBBING	ACRE	0.3		0.3		Refer to Tab. 110-17 on the C Sheets. Refer to the Q Sheets for additional information and locations.
2	2101-0850002	CLEARING AND GRUBBING	UNIT	100		100		Refer to Tab. 110-17 on the C Sheets. Refer to the Q Sheets for additional information and locations. The estimated quantity includes 100 Units of contingency to be used as deemed required by the City of Cedar Rapids during construction.
3	2102-2625000	EMBANKMENT-IN-PLACE	CY	258		258		Any required embankment materials are to be contractor provided. This item shall only be utilized if materials cut from the project site are unsuitable to use as fill. Materials imported with this item shall comply with the requirements of Section 2102.02, D, 2. The estimated quantity based on the 224 CY of fill materials required for Excavation, Class 10, Roadway and Borrow plus a 15% contingency factor (224 CY X 1.15 = 258 CY).
4	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	849		849		Refer to the B, D, and W Sheets for additional information. The estimated project quantity includes 849 CY of cut excavation and 224 CY of fill (includes a 1.35 shrinkage factor). The net cut is 625 CY. Locating a waste location, off-site overhauling, and transporting waste excavation to the waste area is included with this item. Removal of reincorporation of existing driveway granular on the NE side of the bridge is included with the volume of the Class 10 cut and there is no separate bid item.
5	2105-8425005	TOPSOIL, FURNISH AND SPREAD	CY	124		124		The estimated quantity is for contingency use as directed by the City of Cedar Rapids. The estimated quantity is based on uniform bank volume placement of 4 inches of imported topsoil to disturbed areas that are to be seeded (R Sheets). This item shall be utilized if a shortfall in available on-site topsoil arises.
6	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	186		186		The estimated quantity assumes that 6 inches of suitable topsoil can be salvaged and spread at all disturbed areas that are to be seeded (R Sheets). Unsuitable material shall be removed from the site at no additional cost to the City.
7	2109-8225100	SPECIAL COMPACTION OF SUBGRADE	STA	3.8		3.8		Refer to the B Sheets (typical section) for additional information. The estimated quantity includes all paved areas of the roadway below the proposed subbase areas.
8	2113-0001100	SUBGRADE STABILIZATION MATERIAL, POLYMER GRID	SY	804		804		Refer to Tab. 100-24 and Tab. 112-09 on the C Sheets. Refer to the B Sheets (typical section) for additional information. The estimated quantity includes areas below the proposed subbase areas excluding the bridge approach pavement areas.
9	2115-0100000	MODIFIED SUBBASE	CY	268		268		Refer to Tab. 100-24 and Tab. 112-09 on the C Sheets. Refer to the B Sheets (typical section) for additional information. The estimated quantity includes subbase areas excluding the bridge approach pavement areas.
10	2122-5190006	PAVED SHOULDER, P.C. CONCRETE, 6 IN.	SY	84		84		Refer to Tab. 112-09 on the C Sheets. Provide Certified Plant Inspection for all concrete in accordance with Section 2521. Maturity testing is included with this item. Refer to the B, D, L, and W Sheets for additional information.
11	2123-7450020	SHOULDER FINISHING, EARTH	STA	6.9		6.9		The estimated quantity is based on the construction of earth shoulder for the entire length of the proposed roadway on both sides. The volume of earth shoulder is included in the Class 10 Excavation quantity.
12	2301-0690203	BRIDGE APPROACH, BR-203	SY	572		572		Refer to Tab. 112-06 on the C Sheets. Provide Certified Plant Inspection for all concrete in accordance with Section 2521. Maturity testing is included with this item. Refer to the D and L Sheets for additional information.
13	2301-1033090	STANDARD OR SLIP-FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS C, CLASS 3 DURABILITY, 9 IN.	SY	542		542		Refer to Tab. 100-24 on the C Sheets. Provide Certified Plant Inspection for all concrete in accordance with Section 2521. Maturity testing is included with this item. Refer to the D and L Sheets for additional information.
14	2401-6750001	REMOVALS, AS PER PLAN	LS	1		1		Refer to the V Sheets for Estimate Reference Information and additional Details.
15	2402-2720000	EXCAVATION, CLASS 20	CY	307		307		
16	2402-2722000	EXCAVATION, CLASS 22	CY	2		2		
17	2403-0100010	STRUCTURAL CONCRETE (BRIDGE)	CY	39.6		39.6		
18	2403-1000005	FIBER REINFORCEMENT FOR STRUCTURAL CONCRETE	CY	181.7		181.7		
19	2403-1000010	TRIAL BATCH AND TEST PLACEMENT (FIBER REINFORCED CONCRETE)	LS	1		1		
20	2403-7000210	HIGH PERFORMANCE STRUCTURAL CONCRETE	CY	181.7		181.7		
21	2404-7775005	REINFORCING STEEL, EPOXY COATED	LB	78362		78362		
22	2404-7775009	REINFORCING STEEL, STAINLESS STEEL	LB	3272		3272		
23	2414-6424110	CONCRETE BARRIER RAILING	LF	469.6		469.6		
24	2416-0100015	APRONS, CONCRETE, 15 IN DIA	EACH	1		1		Refer to Tab. 104-3 on the C Sheets and the D and W sheets for additional information.
25	2426-6772016	CONCRETE REPAIR	SF	60		60		Refer to the V Sheets for Estimate Reference Information and additional Details.
26	2435-0251224	INTAKE, SW-512, 24 IN.	EACH	1		1		Refer to the D Sheets for additional information.
27	2502-8213204	SUBDRAIN , PVC, STANDARD, PERFORATED, 4 IN.	LF	170		170		Refer to the D Sheets, V.23, V.24, and V.25 for additional information. This item is intended to cover the placement of subdrain as called for in the plans immediately adjacent to the abutments. This item includes furnishing and placing the subdrain (including excavation), floodable backfill, porous backfill, geotextile fabric, water flooding, and subdrain outlets as detailed.
28	2502-8213206	SUBDRAIN , PVC, STANDARD, PERFORATED, 6 IN.	LF	255		255		Refer to Tab. 104-09A on the C Sheets. Refer to the B and D sheets for additional information. The estimated quantity excludes subdrain that is incidental to the bridge approach pavements at the EF joint.
29	2502-8221305	SUBDRAIN OUTLET, DR-305	EACH	2		2		Refer to the D Sheets for locations. Outlets shall be Type A as shown on Standard Road Plan, DR-305.
30	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL	LF	256		256		Refer to Tab. 110-07A on the C Sheets. Refer to the Q Sheets for additional information and locations.
31	2505-4008300	STEEL BEAM GUARDRAIL	LF	162.5		162.5		Refer to Tab. 108-08A on the C Sheets. Refer to the D Sheets for additional information and locations. Refer to Standard Road Plan, SI-211 for Object Marker placement and installation.
32	2505-4008410	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION, BA-201	EACH	4		4		
33	2505-4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	EACH	4		4		
34	2505-4021720	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, BA-205	EACH	3		3		
35	2505-4021721	STEEL BEAM GUARDRAIL FLARED END TERMINAL, BA-206	EACH	1		1		
36	2507-2638650	BRIDGE WING ARMORING - EROSION STONE	SY	46		46		Refer to the V Sheets for Estimate Reference Information and additional Details.
37	2507-3250005	ENGINEERING FABRIC	SY	32		32		Refer to Tab. 100-23 and the D Sheets for additional information.
38	2507-6800061	REVTMENT, CLASS E	TON	15		15		
39	2510-6745850	REMOVAL OF PAVEMENT	SY	803		803		Refer to Tab. 110-01 on the C Sheets. Refer to the Q Sheets for additional information and locations.
40	2515-2475007	DRIVEWAY, P.C. CONCRETE, 7 IN	SY	64		64		Refer to the D, L, and W Sheets for additional information. The utility reinforcing show on the B and L Sheets is incidental to the driveway paving. Provide Certified Plant Inspection for all concrete in accordance with Section 2521. Maturity testing is included with this item.
41	2524-6765210	REMOVAL OF TYPE A SIGN ASSEMBLY	EACH	1		1		Refer to Tab. 190-62 on the C Sheets. Each sign and post assembly will be counted. Payment will be at the unit price for each sign and post assembly. The unit price includes, but is not limited to, removal, disposal, and backfilling as necessary. Salvage to City will be paid under bid item 2555-0000010. Refer to the Q Sheets for additional information and locations.

BHM-1187(826)--8K-57 C STREET BRIDGE DECK RECONSTRUCTION				QUANTITIES AND GENERAL INFORMATION				CITY OF CEDAR RAPIDS, IOWA			
SNYDER & ASSOCIATES, INC.				900 BELL DRIVE S.W. CEDAR RAPIDS, IA 52404 319-362-9394 www.snyder-associates.com							
Project No: 125,0693				Sheet				C.2			

232_03A
9/28/22

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.

APPROXIMATELY 0.15 ACRES OF RURAL SEEDING

232_03B
9/28/22

EROSION CONTROL (URBAN 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 as follows:

Place seed and fertilize according to the requirements of Article 2601.03,C,4 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 incidental to mobilization and will not be paid for separately.

APPROXIMATELY 0.08 ACRES OF URBAN SEEDING

232_11
6/21/23

EROSION CONTROL (STABILIZING CROP 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.

If outside of permanent seeding dates in Section 2601 of the Standard Specifications, or if required by a storm water permit, place stabilizing crop, fertilizer, and mulch on the disturbed area as follows:

Place seed and fertilize according to the requirements of Article 2601.03,C,1 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 incidental to mobilization and will will not be paid for separately.

DELIVERY AND STOCKPILING							
Line No.	Item Description	Quantity	Quantity Units	Delivery Location	Contact Name	Contact Number	Remarks
1.0	Aluminum Handrail	428	LF	3702 Bowling St. SW	Lee Gourley	319-286-5476	
2.0	Aluminum Handrail (Posts)	59	EACH	3702 Bowling St. SW	Lee Gourley	319-286-5476	
3.0	Type A Sign	1	EACH	3702 Bowling St. SW	Lee Gourley	319-286-5476	

282_03
9/28/22

TEMPORARY STREAM CROSSING, CAUSEWAY, OR EQUIPMENT PAD

Standard Road Plan EW-401 is listed in Tabulation 105-4; however, it is included for information purposes only since it is an option. No quantities associated with constructing EW-401 are included in any bid items.

MARK

Engineer: JMG

Technician: C-IN

REVISION

Checked By: AUB

Date: 06/16/2026

DATE

T-R-S:

BY

Project No: 125.0693

Sheet C.8

BHM-1187(826)--8K-57

C STREET BRIDGE DECK RECONSTRUCTION

QUANTITIES AND GENERAL INFORMATION

CITY OF CEDAR RAPIDS, IOWA



SNYDER & ASSOCIATES

Project No: 125.0693

Sheet C.8

900 BELL DRIVE S.W.

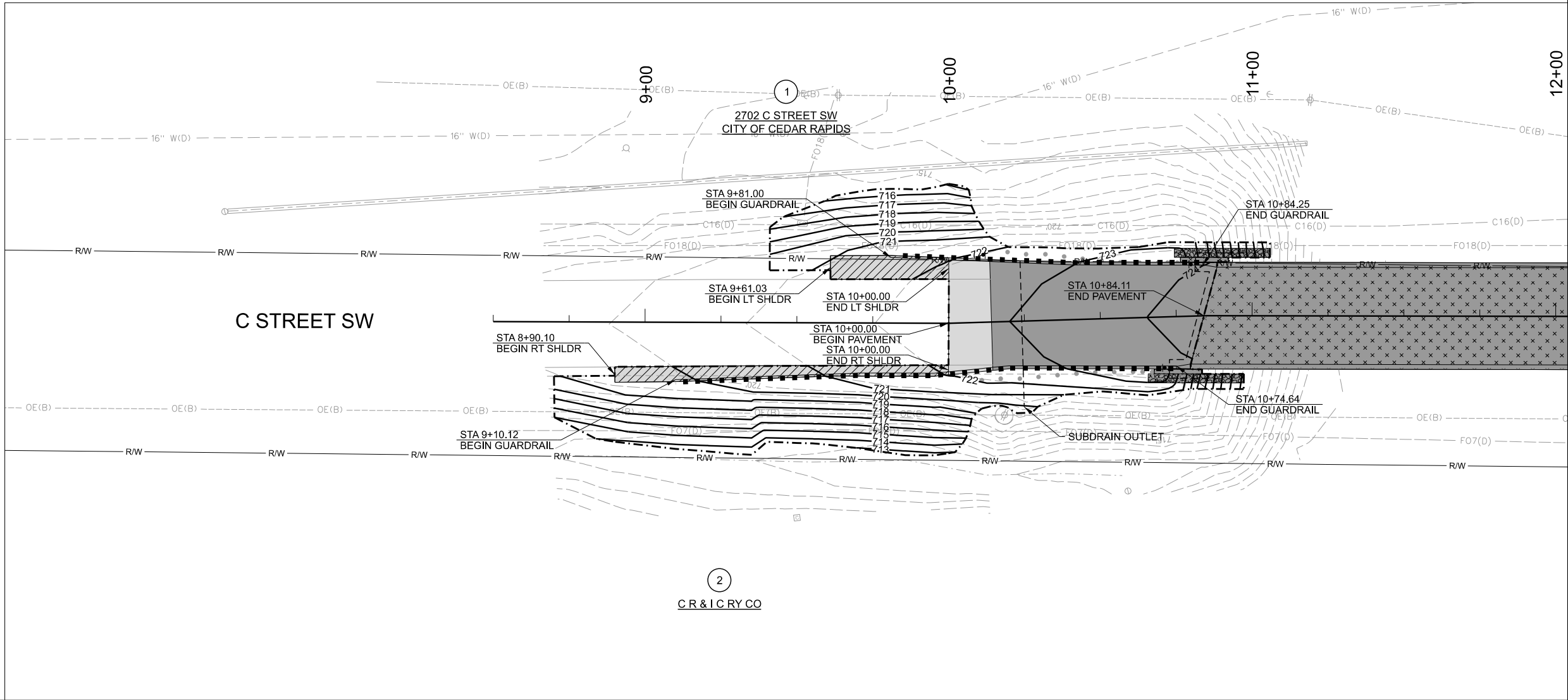
CEDAR RAPIDS, IA 52404

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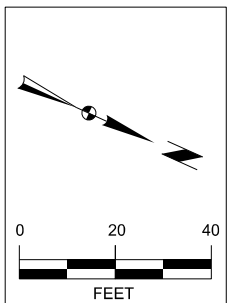
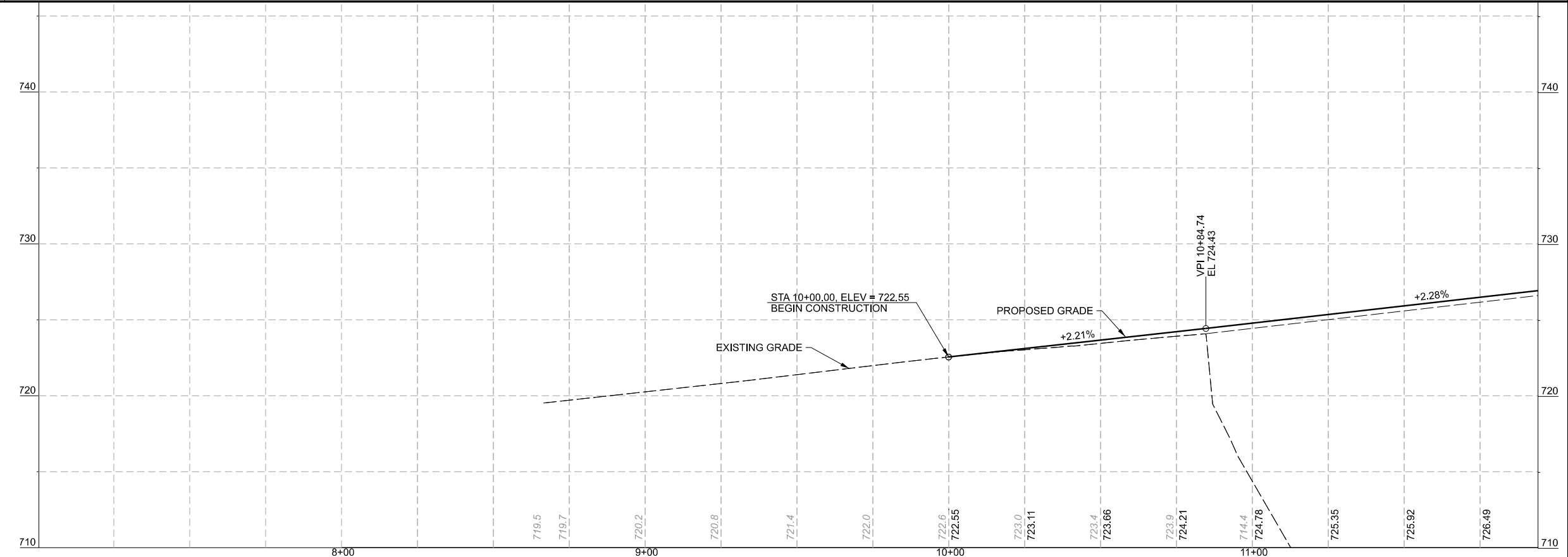
SNYDER & ASSOCIATES, INC.

CITY OF CEDAR RAPIDS, IOWA

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- LEGEND**
- STANDARD OR SLIP-FORM PCC, 9 IN.
 - BRIDGE APPROACH, BR-203
 - BRIDGE DECK REPLACEMENT
 - PAVED SHOULDER, PCC, 6 IN.
 - DRIVEWAY, PCC, 7 IN.
 - BRIDGE WING ARMORING - EROSION STONE
 - GRADING LIMITS



MARK

Engineer: JMG

Technician: C-JN

REVISION

Checked By: AUB

Date: 06/16/2026

DATE

T-R-S:

BY

Project No: 125.0693

BHM-1187(826)--8K-57

C STREET BRIDGE DECK RECONSTRUCTION

MAINLINE PLAN AND PROFILE

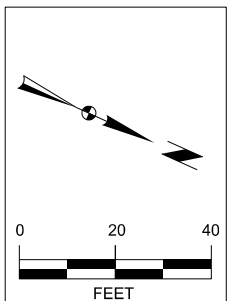
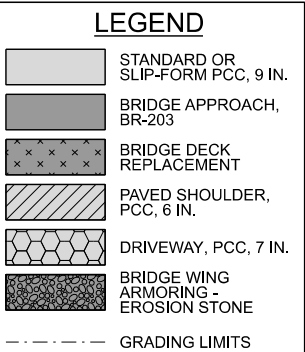
CITY OF CEDAR RAPIDS, IOWA

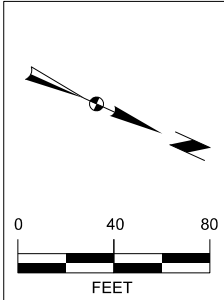
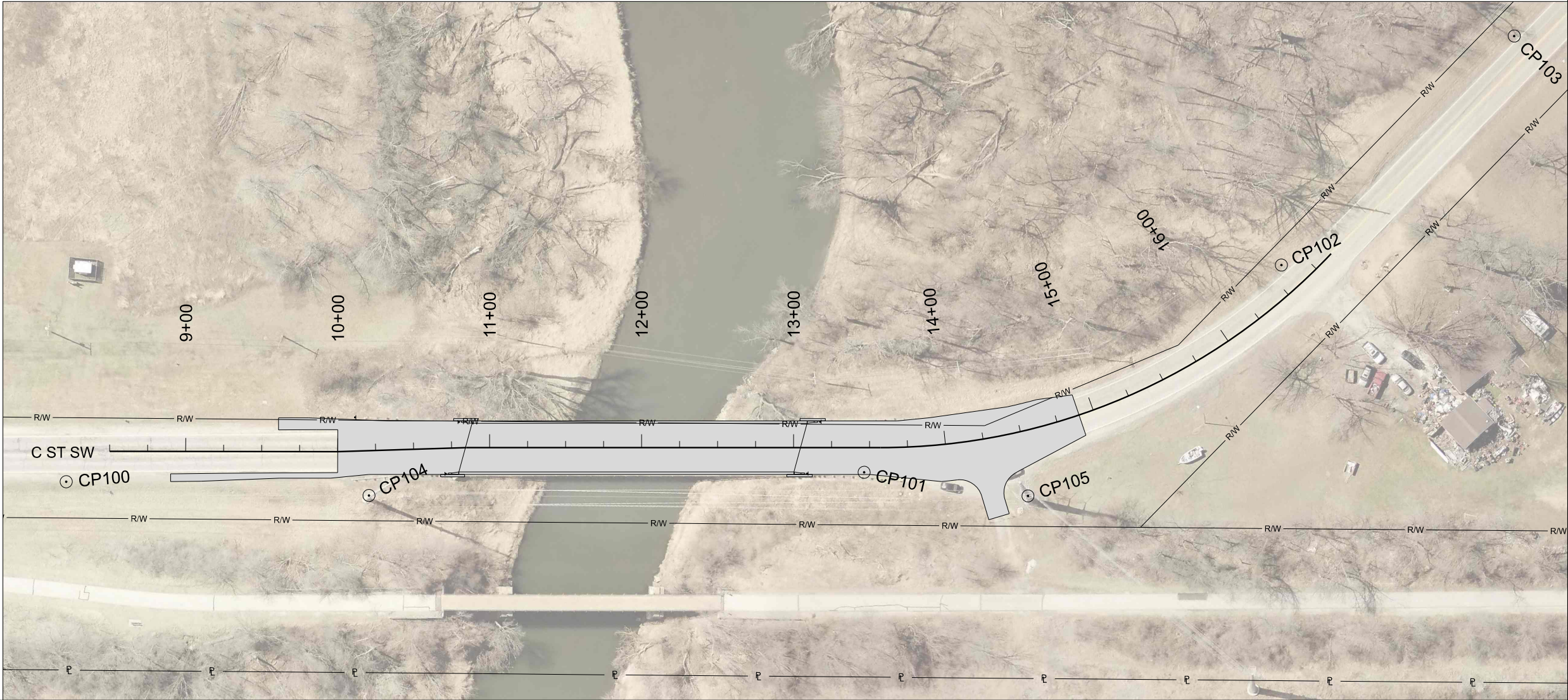
SNYDER & ASSOCIATES, INC.

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Project No: 125.0693

Sheet D.1





Horizontal Alignment Review Report

Report Created: Monday, May 4, 2026

Note: All units in this report are in feet unless specified otherwise.

Alignment Name: GeomBL1
Alignment Description:
Alignment Style: Alignment\Geom_Baseline

Element:		Station	Northing	Easting
Linear	START	(START)	849.995	3449976.263
	HPI	(E_ROW_TA1)	1000	3450113.059
		Tangential Direction:	N24.224°W	
		Tangential Length:	150.005	
Linear	HPI	(HPI)	1000	3450113.059
	HPI	(E_ROW_TA)	1084.741	3450189.15
		Tangential Direction:	N26.114°W	
		Tangential Length:	84.741	
Linear	HPI	(HPI)	1084.741	3450189.15
	PC	(GeomBL)	1357.267	3450437.49
		Tangential Direction:	N24.321°W	
		Tangential Length:	272.526	

Horizontal Alignment Review Report

Report Created: Monday, May 4, 2026

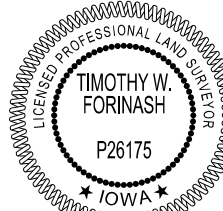
Note: All units in this report are in feet unless specified otherwise.

Alignment Name: GeomBL1
Alignment Description:
Alignment Style: Alignment\Geom_Baseline

Element:		Station	Northing	Easting
Circular	PC	(PC)	1357.267	3450437.49
	HPI	(HPI)	1532.9	3450597.536
	CC	(CC)		3450269.456
	PT	(PT)	1688.968	3450655
		Radius:	408	
		Delta:	46.581 Left	
		Degree of Curvature (Arc):	14.043	
		Length:	331.701	
		Tangent:	175.633	
		Chord:	322.642	
		External:	36.197	
		Back Tangent Direction:	N24.321°W	
		Back Radial Direction:	N65.679°E	
		Chord Direction:	N47.612°W	
		Ahead Radial Direction:	N19.098°E	
		Ahead Tangent Direction:	N70.902°W	

PROJECT CONTROL

IOWA STATE PLANE NORTH COORDINATE SYSTEM NAD83(2011)(EPOCH 2010.00) IARTN DERIVED - US SURVEY FEET			
Control Point	Northing	Easting	Elevation
CP100	3449958.44	5427478.15	717.70
1/2" Iron Rod with Red Plastic Cap			
CP101	3450434.26	5427256.28	730.42
Cut "X" on Bridge Approach			
CP102	3450628.33	5427018.96	739.91
1/2" Iron Rod with Red Plastic Cap			
CP103	3450705.72	5426819.03	744.37
1/2" Iron Rod with Red Plastic Cap			
CP104	3450143.68	5427404.35	719.76
Cut "X" on Pole Footing			
CP105	3450538.90	5427226.03	736.26
Cut "X" on Pole Footing			



I hereby certify that this land surveying document was prepared and the related survey work was performed by me or under my direct personal supervision and that I am a duly licensed Professional Land Surveyor under the laws of the State of Iowa.

Tim Forinash 6/16/26
Timothy W. Forinash, P.L.S. Date

License Number P26175
My License Renewal Date is December 31, 2027

Pages or sheets covered by this seal:
G SHEETS

BHM-1187(826)--8K-57

C STREET BRIDGE DECK RECONSTRUCTION

SURVEY SHEETS

CITY OF CEDAR RAPIDS, IOWA

SNYDER & ASSOCIATES, INC.

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Project No: 125.0693

Sheet G.1

Sheet G.1

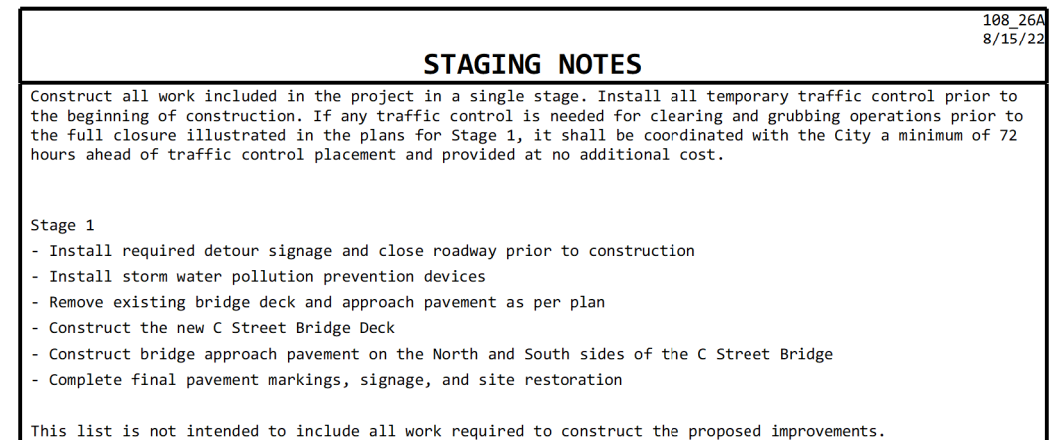
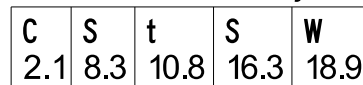
125.0693

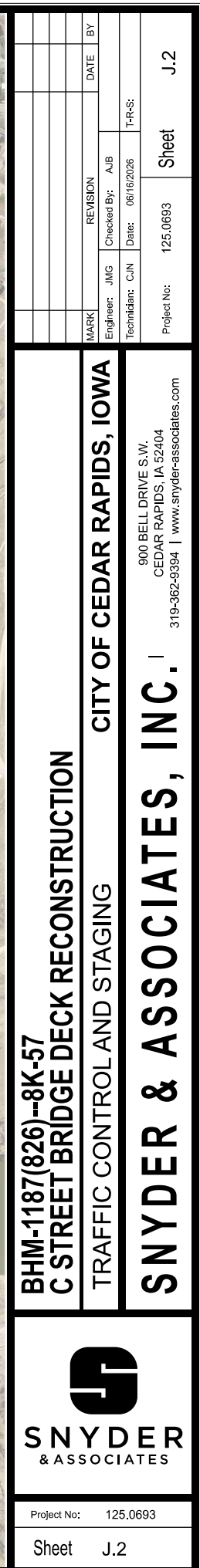
Project No:

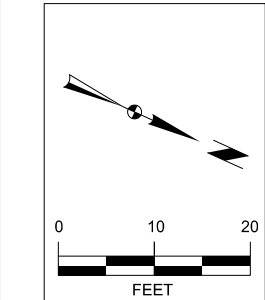
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G.1







LEGEND

	PROPOSED PAVEMENT IMPROVEMENTS
	UTILITY CROSSING REINFORCEMENT
	STEEL BEAM GUARDRAIL

[illegible]

**BHM-1187(826)--8K-57
C STREET BRIDGE DECK RECONSTRUCTION**

GEOMETRIC, STAKING, AND JOINTING

CITY OF CEDAR RAPIDS, IOWA

SNYDER & ASSOCIATES, INC.

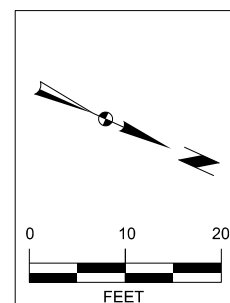
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 PROPOSED PAVEMENT IMPROVEMENTS
 UTILITY CROSSING REINFORCEMENT
 STEEL BEAM GUARDRAIL

NOTES

[illegible]

**BHM-1187(826)--8K-57
C STREET BRIDGE DECK RECONSTRUCTION
GEOMETRIC, STAKING, AND JOINTING
CITY OF CEDAR RAPIDS, IOWA**

SNYDER & ASSOCIATES, INC.

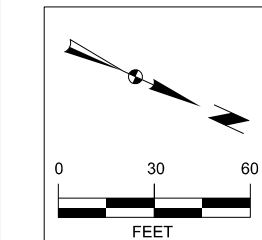


SNYDER
& ASSOCIATES

Project No: 125.0693

Sheet L.2





NOTES

- (A) REMOVAL OF STEEL BEAM GUARDRAIL
- (B) REMOVAL OF SIGN
- (C) REMOVAL OF EXISTING GRANULAR DRIVEWAY INCLUDED WITH CLASS 10 CUT QUANTITY

	MARK	REVISION	CHECKED BY:	DATE	BY
			JMB		
			Date: 08/16/2026	T-R-S-	
			Sheet Q.1		
Project No:			125.0693		

BHM-1187(826)--8K-57
C STREET BRIDGE DECK RECONSTRUCTION

CITY OF CEDAR RAPIDS, IOWA

PROJECT REMOVALS

SNYDER & ASSOCIATES, INC.

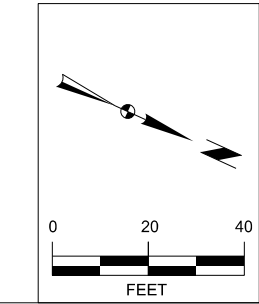
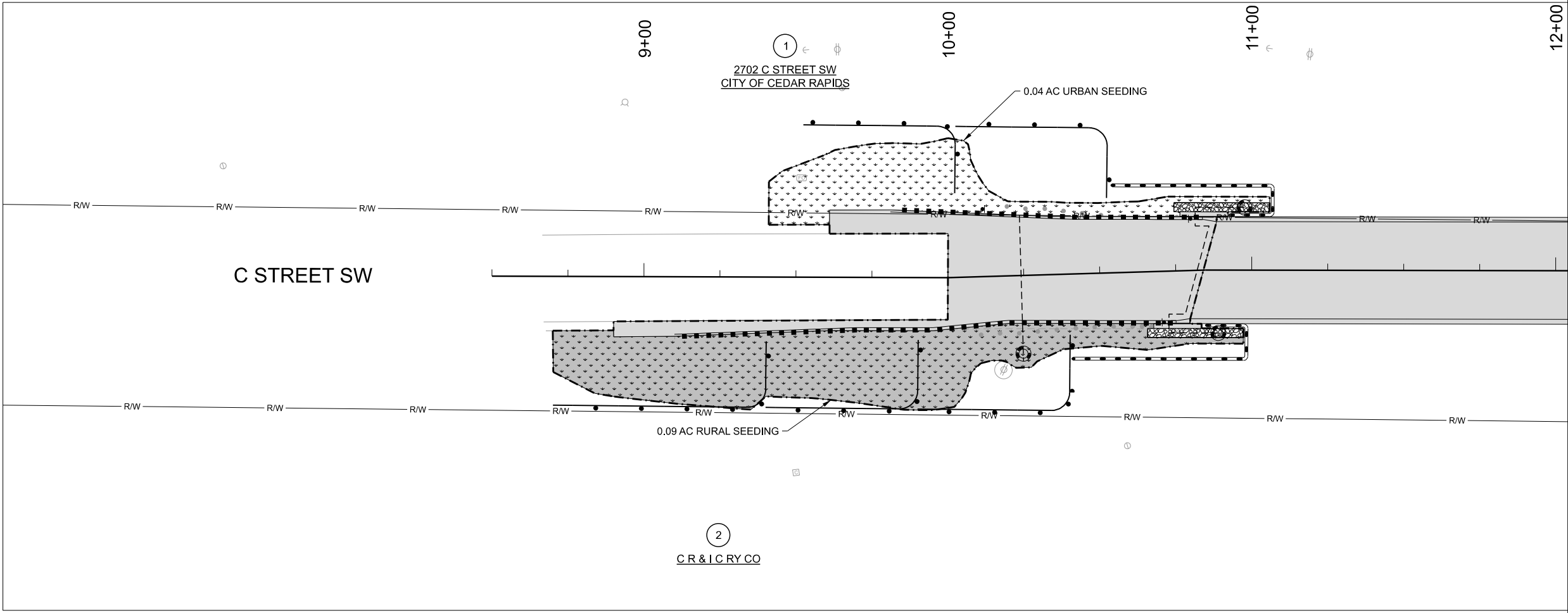
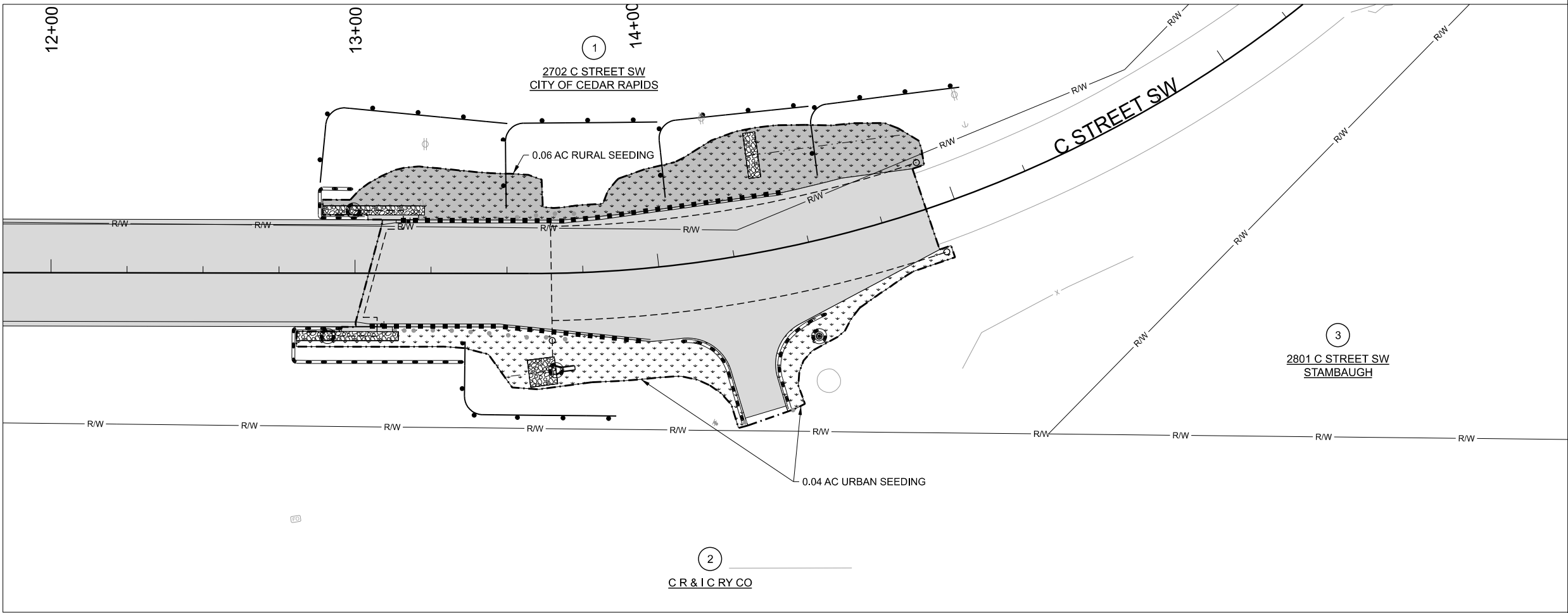
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Project No: 125.0693

Sheet Q.1

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LEGEND			
	URBAN SEEDING		
	RURAL SEEDING		
	PROPOSED REVTMENT / EROSION STONE		
	PROPOSED PAVEMENT IMPROVEMENTS		
	SILT FENCE		
	FILTER SOCKS		

BHM-1187(826)--8K-57
C STREET BRIDGE DECK RECONSTRUCTION

EROSION AND SEDIMENT CONTROL CITY OF CEDAR RAPIDS, IOWA
SNYDER & ASSOCIATES, INC.
900 BELL DRIVE S.W.
CEDAR RAPIDS, IA 52404
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Project No: 125.0693
Sheet R.1

MARK	REVISION	DATE	BY
Engineer: JMG	Checked By: AUB		
Technician: C-JN	Date: 06/16/2026		
Project No: 125.0693	Sheet R.1		

\\jgustafson\jgustafson\Projects\2025\125.0693.08\CADD\SSHT - 125.0693_S&L.dgn 11x17, pdf, Color, Reaster.ctb 6/12/2026 7:38:26 AM

Estimated Bridge Quantities and Reference Notes					
Item No.	Item Code	Item	Unit	Quantities Estimated	Estimate Reference Notes
14	2401-6750001	REMOVALS, AS PER PLAN	LS	1.00	Includes all work for removal and off-site disposal of a portion of the existing bridge as detailed 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 City. See roadway bid item "Deliver and Stockpile Salvaged Material" for additional information for protecting and salvaging existing aluminum handrails. Contractor to add the following information when submitting the Iowa DNR "Notification of Bridge Demolition and Renovation" form: Name of Asbestos Inspector: Jordan Smith Date Inspected: April 13, 2026 IA License Number: 26-14235 Inspector Phone: 319-721-4958 Procedure used to detect the presence of asbestos materials: Polarized Light Microscopy (PLM)
15	2402-2720000	EXCAVATION, CLASS 20	CY	307	----
16	2402-2722000	EXCAVATION, CLASS 22	CY	2	----
17	2403-0100010	STRUCTURAL CONCRETE (BRIDGE)	CY	39.6	Includes all resilient joint filler required. Includes furnishing and placing 3 inch diameter PVC plastic pipe and expanding foam in the abutment wing walls. Includes the cost of setting bars as dowels in the existing abutment. Includes abutment bearing material. Includes Contractor filling out top of beam shots in "Bridge Deck Grade Adjustment Spreadsheet" and forwarding electronic spreadsheet to the Engineer.
18	2403-1000005	FIBER REINFORCEMENT FOR STRUCTURAL CONCRETE	CY	181.7	This bid item includes fiber reinforcement in the concrete for the deck and abutment diaphragms. Refer to the Developmental Specification for Fiber Reinforcement for Structural Concrete for additional information.
19	2403-1000010	TRIAL BATCH AND TEST PLACEMENT (FIBER REINFORCED CONCRETE)	LS	1.00	Refer to the Developmental Specification for Fiber Reinforcement for Structural Concrete for additional information.
20	2403-7000210	HIGH PERFORMANCE STRUCTURAL CONCRETE	CY	181.7	This bid item includes the concrete for the deck and abutment diaphragms. Refer to the Developmental Specification for High Performance Concrete for Structures for additional information.
21	2404-7775005	REINFORCING STEEL, EPOXY COATED	LB	78,362	----
22	2404-7775009	REINFORCING STEEL, STAINLESS STEEL	LB	3272	----

Estimated Bridge Quantities and Reference Notes					
Item No.	Item Code	Item	Unit	Quantities Estimated	Estimate Reference Notes
23	2414-6424110	CONCRETE BARRIER RAILING	LF	469.6	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 include the cost of cast-in-place forms if required for placement of the concrete. Includes material and labor associated with providing and installing the rigid steel conduit, junction boxes and fittings. Includes 1016 lf of 2" diameter rigid steel conduit.
25	2426-6772016	CONCRETE REPAIR	SF	60	See Sheet V.7 for details.
36	2507-2638650	BRIDGE WING ARMORING - EROSION STONE	SY	46.0	Includes furnishing and placing engineering fabric, erosion stone, and all required excavating, shaping and compacting for wing armoring.

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. <table><tr><td>Signature</td><td><u>Jordan A. Gustafson</u></td><td>Date</td><td><u>06-16-2026</u></td></tr><tr><td colspan="4">Printed or Typed Name</td></tr><tr><td colspan="4">My license renewal date is December 31, <u>2027</u></td></tr></table>	Signature	<u>Jordan A. Gustafson</u>	Date	<u>06-16-2026</u>	Printed or Typed Name				My license renewal date is December 31, <u>2027</u>			
Signature	<u>Jordan A. Gustafson</u>	Date	<u>06-16-2026</u>										
Printed or Typed Name													
My license renewal date is December 31, <u>2027</u>													
Pages or sheets covered by this seal: <u>Sheets V.1 thru V.25</u>													

Roadway Quantities shown elsewhere in these plans.

Design For Repair To 15° Skew (LA)

217'-6" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge Rehabilitation

68'-1 1/2" End Spans81'-3" Interior Span

Estimated Bridge Quantities

STA. 11+94.33 (C St. SW)Turn-in Date: May 2026

Linn County

IOWA DEPARTMENT OF TRANSPORTATION

Design Sheet No. V.1 of V.25FHWA No. 001500

BHM-1187(826)--8K-57
C STREET BRIDGE DECK RECONSTRUCTION

BRIDGE PLANS

CITY OF CEDAR RAPIDS, IA



SHUCK • BRITSON

Project No: 125.0693.08

Sheet V.1

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CEDAR RAPIDS, IA 52404
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SHUCK - BRITSON, INC.

Summary of Concrete Quantities

Location	Structural Concrete	HPC Struct. Concrete
South Abut. Ftg. + Wings + Wingwalls	17.4	-----
North Abut. Ftg. + Wings + Wingwalls	22.2	-----
Bridge Deck + Abut. Diaphragms	-----	181.7 (F)
(F) Include Fiber Reinforcement in Structural Concrete		
Total (Cu, Yds.)	39.6	181.7

Summary of Reinforcing Steel

Location	Stainless Steel Reinforcing Steel	Epoxy Coated Reinforcing Steel
South Abut. Ftg. + Wings + Wingwalls	-----	2146
North Abut. Ftg. + Wings + Wingwalls	-----	2752
Bridge Deck + Abut. Diaphragms	-----	65,089
Barrier Rails	2612	7168
Barrier Rail End Sections	4 at 165	4 at 241
Barrier Rails - Conduit Support	-----	243
Total (Lbs.)	3272	78,362

Summary of Excavation

Location	Class 20 Excavation	Class 22 Excavation
South Abutment	140	----
North Abutment	167	2
Total (Cu. Yds.)	307	2

Summary of Bearings

[illegible]

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**BHM-1187(826)--8K-57
C STREET BRIDGE DECK RECONSTRUCTION**

BRIDGE PLANS

CITY OF CEDAR RAPIDS, IA

SHUCK - BRITSON, INC.

CEDAR RAPIDS, IA 52404
319-362-9394 | WWW.SNYDER-ASSOCIATES.COM

Sheet V.2

Project No: 125.0693.08



SHUCK ■ BRITSON

Project No: 125.0693.08

Sheet V.2

Design For Repair To 15° Skew (LA)

**217'-6" x 32'-0" Prestensioned Prestressed
Concrete Beam Bridge Rehabilitation**

68'-1 1/2" End Spans 81'-3" Interior Span

Summary Quantities Sheet

STA. 11+94.33 (C St. SW) Turn-in Date: May 2026

Linn County

IOWA DEPARTMENT OF TRANSPORTATION

Design Sheet No. V.2 of V.25 FHWA No. 001500

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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 High Performance Concrete for Structures,
Developmental Specifications for Fiber Reinforcement for Structural Concrete,
Developmental Specifications for Electronic Ticketing.

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.
Structural steel in accordance with Section 10. ASTM A709 Grade 36, Grade 50, and Grade 50W (AASHTO M270 Grade 36, Grade 50, and Grade 50W).

General Notes:

This design is for repairs to the existing 217'-6" x 28'-0" Pretensioned Prestressed Concrete Beam bridge (built in 1964), with a 15° skew (L.A.) on the alignment of C Street SW over Prairie Creek in the City of Cedar Rapids, Iowa. Electronic copies of the original design plans are available to the Contractor as a part of the E-Files supplied with the contract documents. Dimensions on these plans are based on original design plans. See Situation Plan for a description of work included with this project.

The "Engineer" as referenced in these plans, is the City of Cedar Rapids City Engineer or a designated representative.

This bridge is designed for H20 Loading, plus 19 lbs. per square foot of roadway for future wearing surface.

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.

Faint lines on plans indicate the existing structure.

The lump sum bid for "Removals, As Per Plan" shall include all costs associated with removing a portion of the structure as detailed in these plans. Removals 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 City. See roadway bid item "Deliver and Stockpile Salvaged Material" for additional information for protecting and salvaging existing aluminum handrails.

All such removals shall be to neat saw cuts to provide clean straight surfaces at interfaces between new concrete and remaining concrete. The removal shall be done in a manner which will prevent any damage to the existing structure to remain. The Contractor shall assume full responsibility for any damage caused, and shall repair any damaged area to its original condition, as directed by the Engineer, at the Contractor's expense. Any existing reinforcing steel which is to be reused and that is exposed during removal operations is to be carefully protected, cleaned and incorporated into new work unless noted otherwise.

After concrete removal, if any exposed lengths of the existing reinforcing bars are found to be deteriorated, corroded, or previously constructed with a different length, projection, bar size, or spacing than what is shown in the existing bridge plans and/or assumed in the design plans for incorporation into new work, the Contractor shall notify the Engineer immediately.

The Bridge Contractor is to use extreme care when removing the deck concrete at the girder locations to avoid damaging the top flange and shear stirrups of the girder prior to commencing any deck removal work.

The city and 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 construction starting date.

The Contractor shall be aware that unforeseen conditions may develop in repair projects of this type which may require additional computation work by the Engineer. If such conditions arise, the Engineer shall be afforded adequate time to perform the computation work and develop any revised concepts as required. During this time the Contractor shall adjust his work effort to other items of his construction schedule without claim for delay of the project.

The Contractor is to visit the site to ensure he or she is familiar with the existing site conditions. Utilities and misc. structures are indicated on the drawings to provide general location information only. The Contractor will be responsible for accurately locating all utilities and misc. structures within the work area prior to commencing work. All utilities and misc. structures to remain shall be protected by the contractor throughout the construction of the project. The Contractor shall be fully responsible for any and all damages which might be occasioned by his failure to exactly locate any and all utilities and misc. structures. If other utilities are discovered in the area or are not installed as plotted or shown, the facilities are to be protected and the Engineer notified immediately.

The Contractor shall call One Call at least 48 hours prior to beginning work. One Call: 1-800-292-8989.

It shall be the Bridge Contractor's responsibility to provide sites for excess excavated material. No payment for overhaul will be allowed for material hauled to these sites.

Class 20 excavation material unsuitable for backfilling shall be disposed of in a manner that will leave the site in a neat condition.

Excess class 20 excavation material suitable for backfilling shall be stockpiled at the construction site, as directed by the Engineer.

The Bridge Contractor shall dress up the slopes around the wings which are disturbed during construction. This work shall be considered incidental and no extra payment will be made.

These bridge plans label all reinforcing steel with English notation (5a1 is a 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.

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

Subdrain sloped downward 2% from C Approach Roadway to extend thru fill (typical both abutments).

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 slipformed method).

The Contractor shall be responsible for ensuring stability of prestressed concrete beams during removals 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 removals and construction. Temporary bracing shall not be welded to prestressed beam stirrups.

Traffic Control Plan

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

Wetland Protection Notes:

Equipment for handling and conveying materials during construction shall be operated to prevent dumping or spilling the material into water bodies, streams or wetlands except as approved herein.

Care shall be taken to prevent any petroleum products, chemicals, or other deleterious materials from entering water bodies, streams or wetlands.

Construction equipment, activities, and materials shall be kept out of the streams and wetlands to the maximum extent possible.

Inspection:

The Contractor shall contact the principal construction inspector a minimum of 24 hours before beginning construction. The Contractor shall also give the principal construction inspector a minimum of 24 hour notice for concrete placements.

The Contractor shall notify the Engineer when concrete removals, sandblasting, and cleaning are complete at each location to allow inspection by the Engineer prior to placement of formwork or concrete.

Record Drawings:

Contractor shall create and maintain a set of "As-Built" plans and specifications denoting locations, elevations, and quantity of work performed. In addition, any changes or modifications from the contract documents shall be recorded. These plans and specifications shall be available for viewing at the jobsite, shall be updated weekly, and shall be coordinated with pay estimates. The set shall become the property of the Owner at the end of the project. The owner will make one set of specifications and 11x17 drawings available to the contractor at the beginning of the project for use in preparing "As-Built" drawings.

All work associated with preparing and maintaining record drawings shall be incidental to the project, and no additional payment will be made.

Bridge Deck Dimension Table

No.	Item	Unit	Quantity
1	Deck Length	L.F.	220.4
2	Minimum Deck Width	L.F.	35.2
3	Maximum Deck Width	L.F.	35.2
4	Deck Area	S.F.	7,752

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

Design History at this Site

(Includes this Design)

Year	Type of Work
1964	Original Design
1998	Deck Repair
2026	Repair and Redeck

Design For Repair To 15° Skew (LA)

217'-6" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge Rehabilitation

68'-1 1/2" End Spans81'-3" Interior Span

General Notes

STA. 11+94.33 (C St. SW)Turn-in Date: May 2026

Linn County

IOWA DEPARTMENT OF TRANSPORTATION

Design Sheet No. V.3 of V.25FHWA No. 001500



Project No: 125.0693.08

Sheet V.3

BHM-1187(826)--8K-57
C STREET BRIDGE DECK RECONSTRUCTION

BRIDGE PLANS

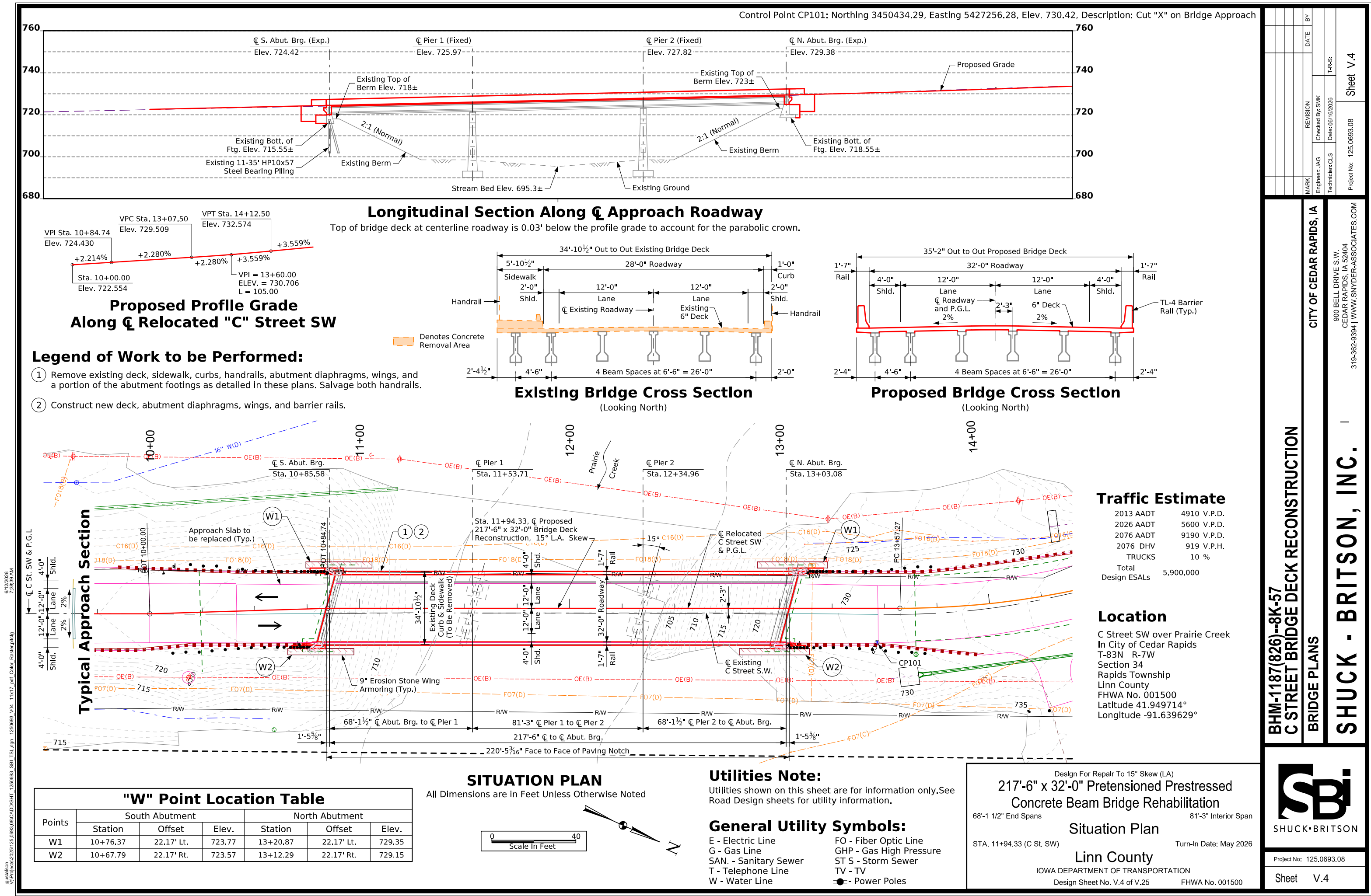
CITY OF CEDAR RAPIDS, IA

SHUCK - BRITSON, INC.

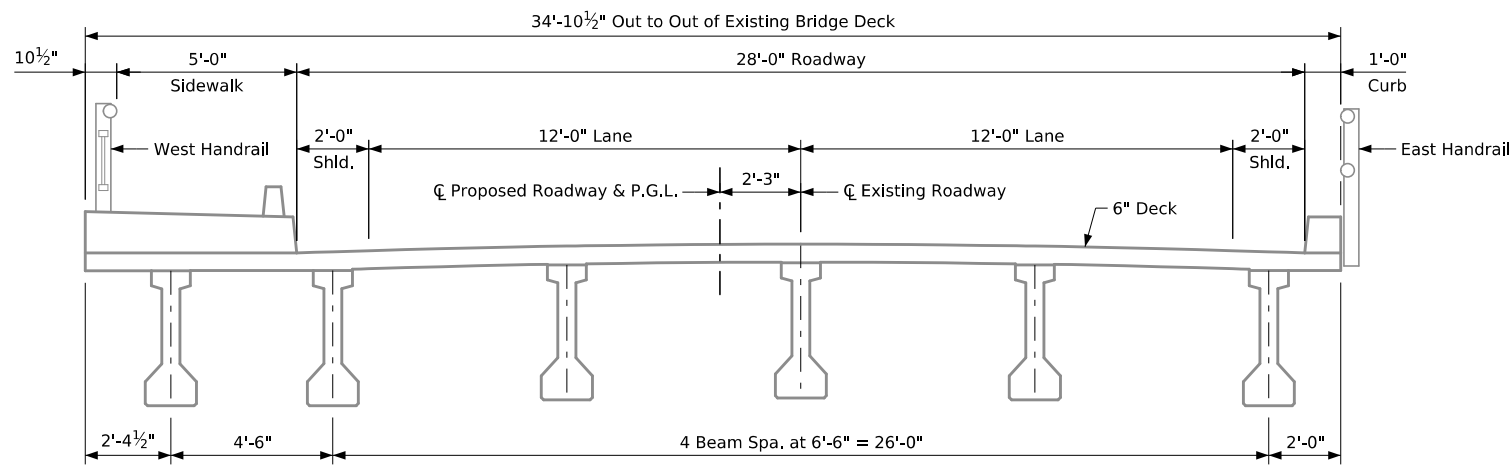
900 BELL DRIVE S.W.
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Sheet V.3

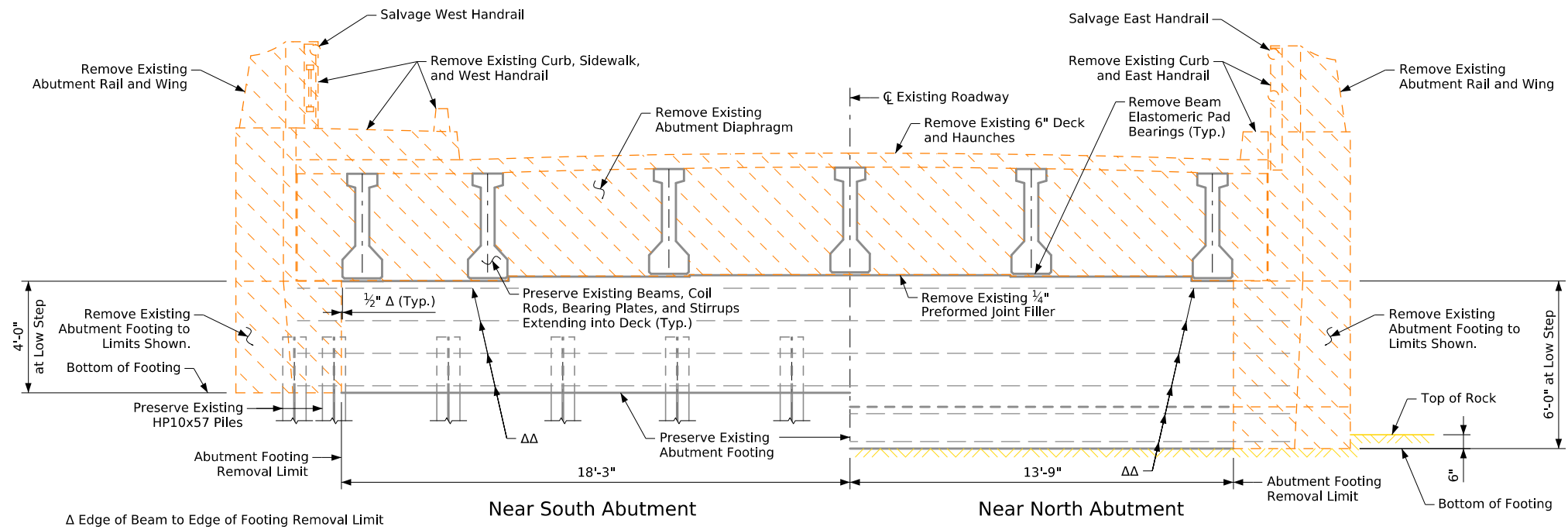
Project No: 125.0693.08



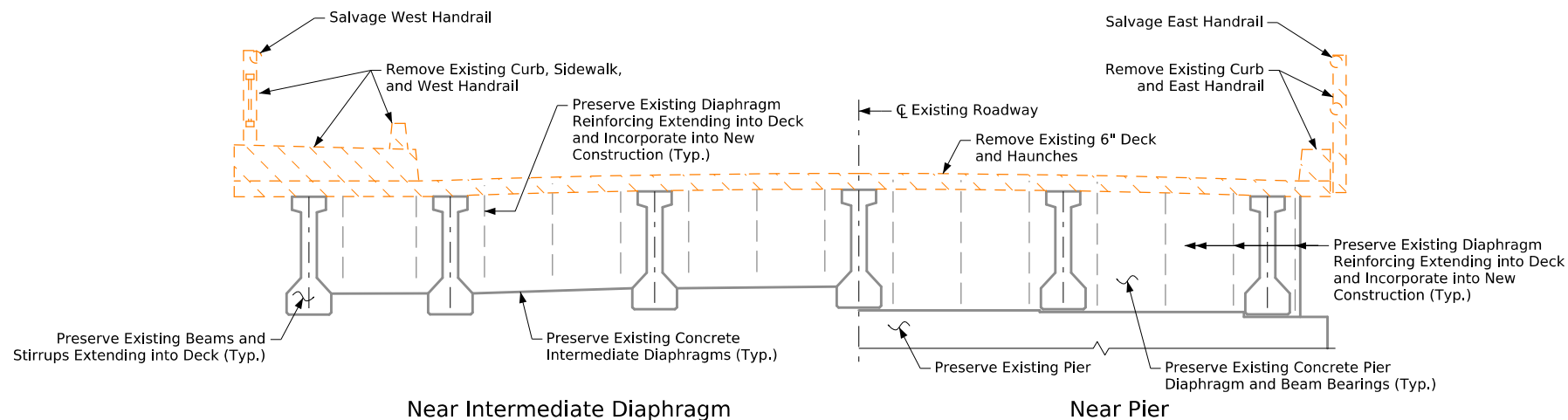
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Existing Bridge Cross Section
(Looking North)



Existing Bridge Cross Section at Abutment
(Showing Removals, Looking North)



Existing Bridge Cross Section
(Showing Removals, Looking North)

Removal Notes:

Removals of the abutment footing below the beam seat elevations shall not occur until all deck and abutment diaphragm concrete is removed.

The Contractor shall be responsible for ensuring stability of the prestressed concrete beams. See General Notes on Sheet V.3 for additional information.

All existing reinforcing bars that are exposed by concrete removal that are to be preserved shall be cleaned and carefully incorporated into the new work, except badly deteriorated existing reinforcing which shall be replaced as directed by the Engineer.

Indicates removal area.

Design For Repair To 15° Skew (LA)

217'-6" x 32'-0" Prestensioned Prestressed Concrete Beam Bridge Rehabilitation

68'-1 1/2" End Spans 81'-3" Interior Span

Removal Details

STA. 11+94.33 (C St. SW) Turn-in Date: May 2026

Linn County

IOWA DEPARTMENT OF TRANSPORTATION

Design Sheet No. V.5 of V.25 FHWA No. 001500

MARK	REVISION	DATE	BY
Engineer: JAG	Checked By: SMK		
Technician: CLS	Date: 06/16/2026		
Project No: 125.0693.08			
			Sheet V.5

BHM-1187(826)--8K-57

C STREET BRIDGE DECK RECONSTRUCTION

BRIDGE PLANS

CITY OF CEDAR RAPIDS, IA

SHUCK - BRITSON, INC.

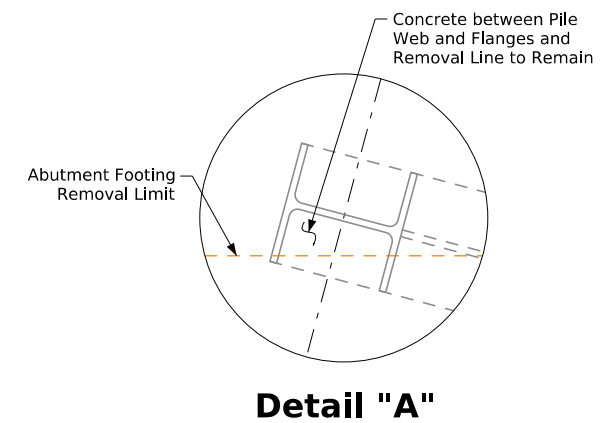
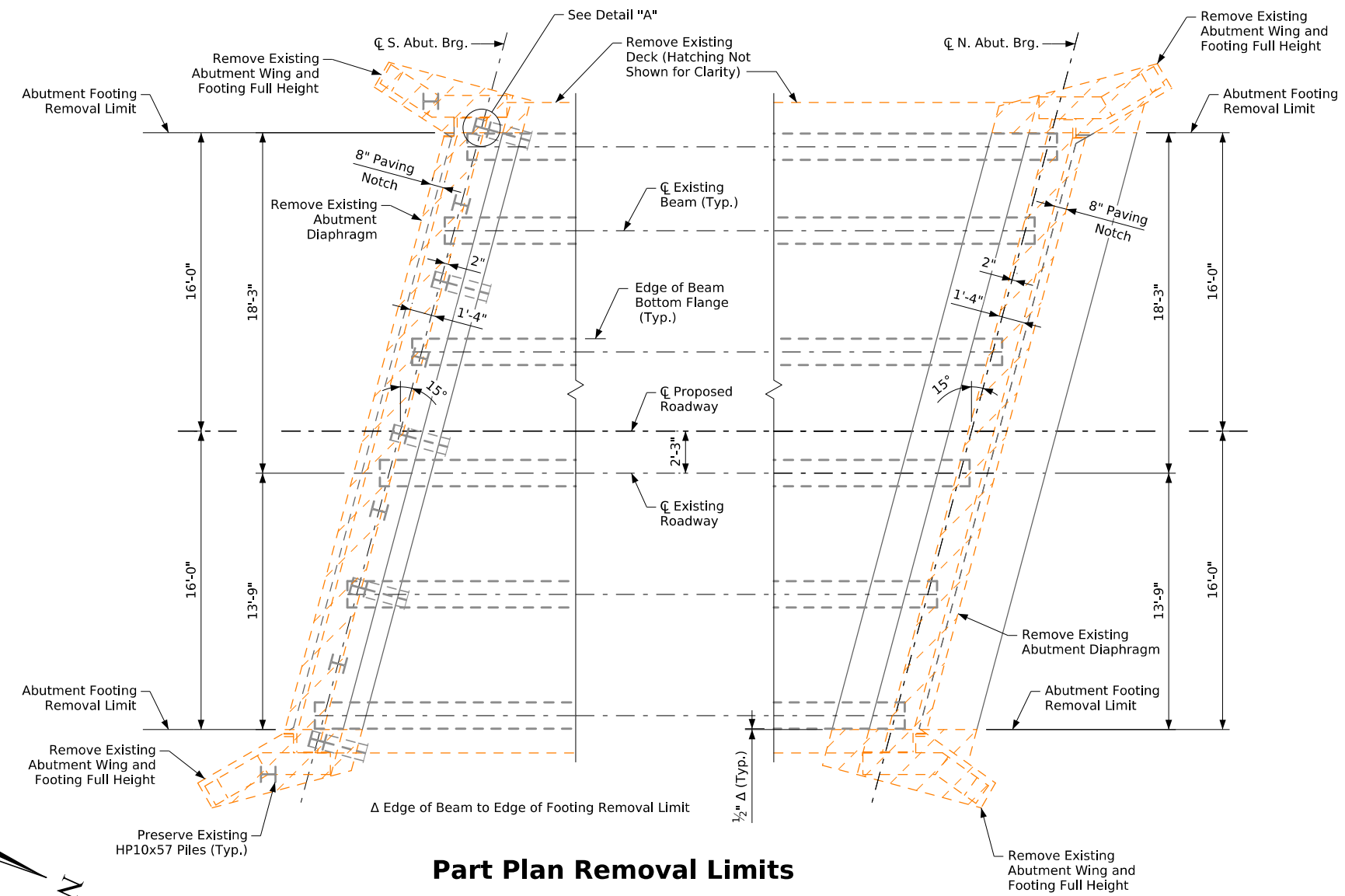
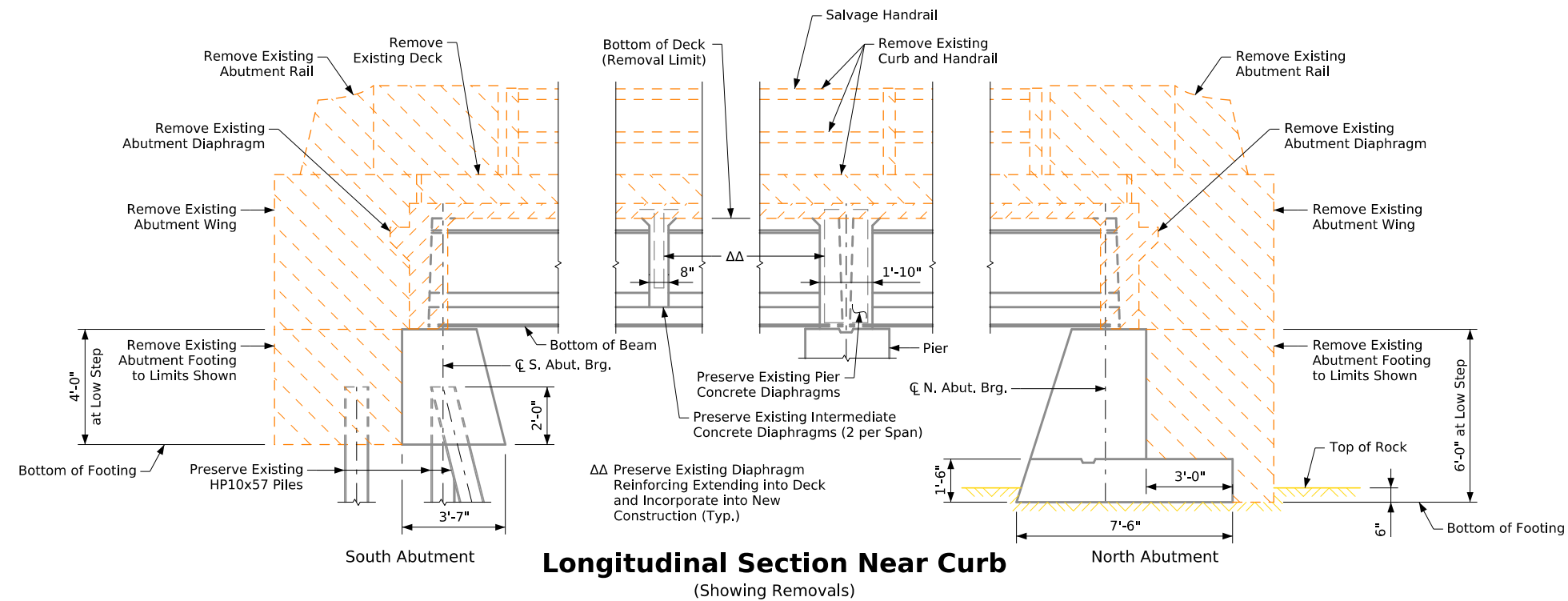
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Project No: 125.0693.08

Sheet V.5

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See Sheet V.5 for Removal Notes.
Indicates removal area.

Design For Repair To 15° Skew (LA)
217'-6" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge Rehabilitation
68'-1 1/2" End Spans 81'-3" Interior Span
Removal Details
STA. 11+94.33 (C St. SW) Turn-in Date: May 2026
Linn County
IOWA DEPARTMENT OF TRANSPORTATION
Design Sheet No. V.6 of V.25 FHWA No. 001500

MARK		REVISION		DATE		BY	
Engineer: JAG		Checked By: SMK		Date: 06/16/2026		T-R-S:	
Technician: CLS		Project No: 125.0693.08		Sheet V.6			

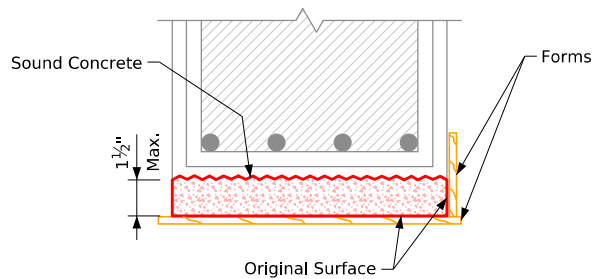
BHM-1187(826)--8K-57
C STREET BRIDGE DECK RECONSTRUCTION
BRIDGE PLANS
CITY OF CEDAR RAPIDS, IA
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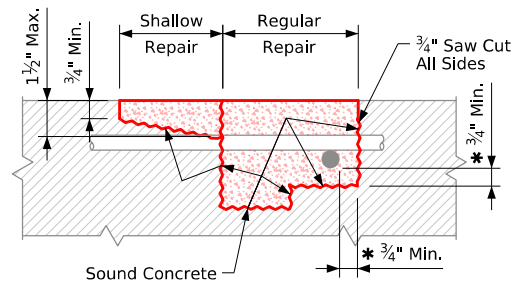
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Project No: 125.0693.08
Sheet V.6

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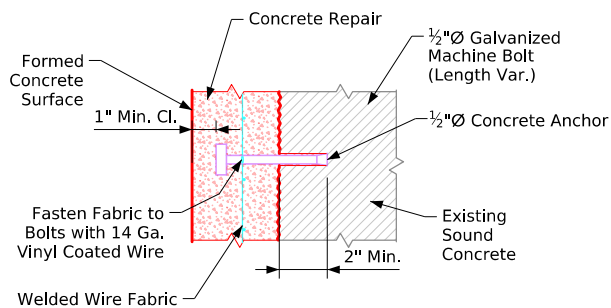


**Shallow Repair
Bottom Surface**



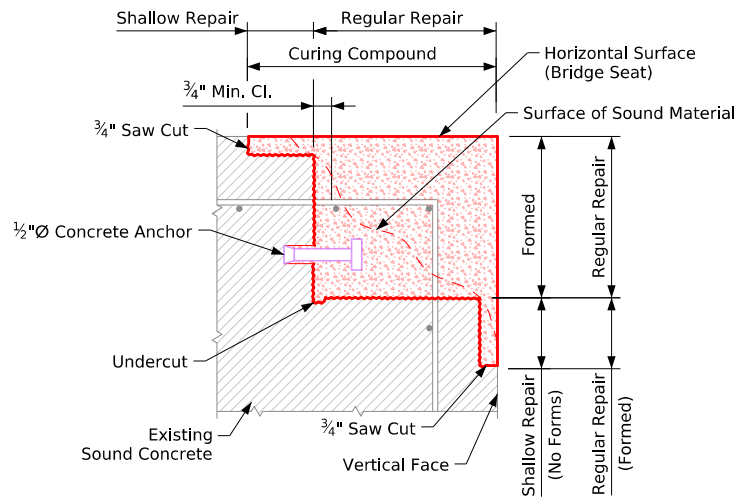
Repair Definition

* Indicates Clearance for an Un-Bonded Rebar.

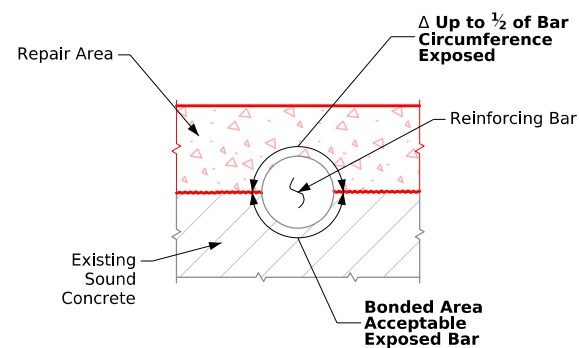


Anchor Detail

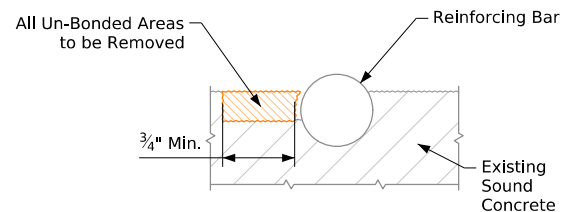
For Spacing and Use of Concrete Anchors and WWF See the Repair Notes.



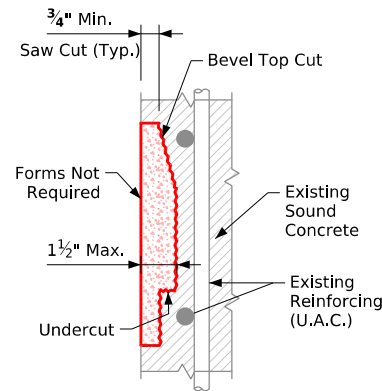
Corner Repair



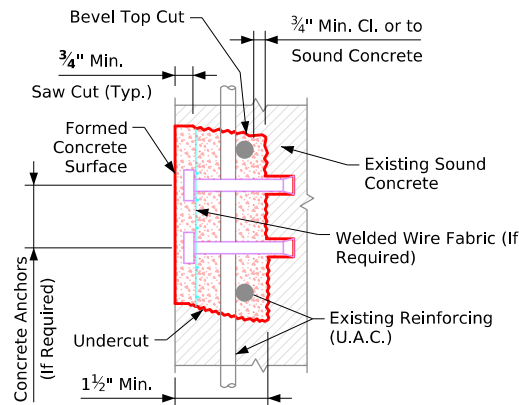
Δ If more than 1/2 of the rebar is exposed it shall be treated as an un-bonded rebar.



**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 sq in inclusive, example "WWF 3x3 - W1.4xW2.9".

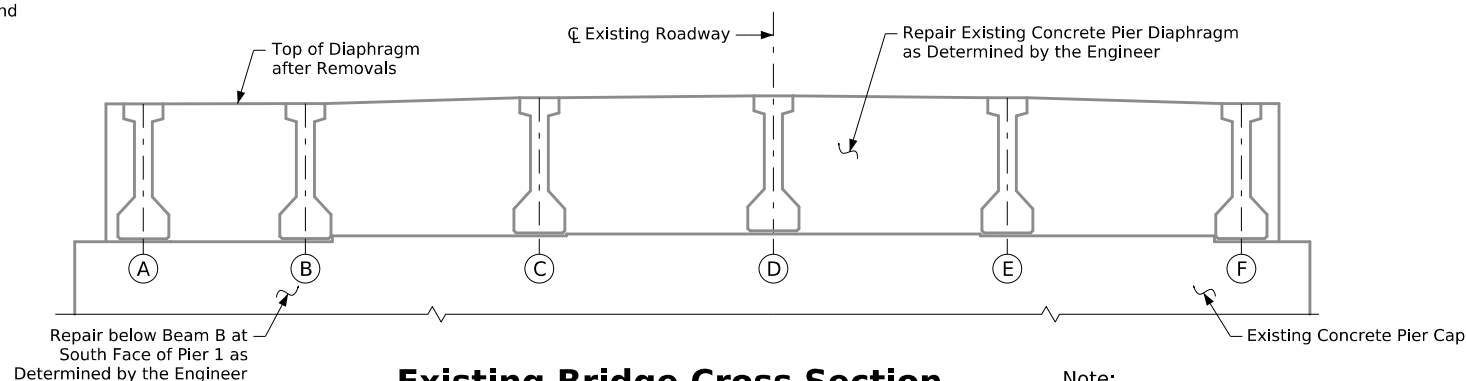
Where reinforcement has been exposed and clearance around the periphery of the existing bar is provided, no supplemental reinforcing is required, except where existing reinforcement density and pattern are such that individual open spaces between bars are of 1.5 sq ft or larger. For this condition 1/2" concrete anchors and welded wire fabric shall be installed at the rate of one concrete anchor with WWF per each 1.5 sq ft of area within each open space.

Repairing the structural concrete shall be in accordance with Section 2426, of the Standard Specifications.

No distinction is made between regular repair and shallow repair.

**Concrete Repair Quantities
Pier Diaphragms & Pier Caps**

Location	Total
Pier 1 Concrete Diaphragm	25
Pier 2 Concrete Diaphragm	25
Pier 1 South Face at Beam B	10
Concrete Repair - Total (Sq. Ft.)	60



Existing Bridge Cross Section

(Looking North)
(Showing Repair Areas at Pier Diaphragms & Caps after Removals)

Note:
If diaphragm concrete repair is adjacent to edge of beam, place 1/4" resilient joint filler between edge of beam and edge of concrete repair.

Design For Repair To 15° Skew (LA)
**217'-6" x 32'-0" Pretensioned Prestressed
Concrete Beam Bridge Rehabilitation**
68'-1 1/2" End Spans 81'-3" Interior Span
Concrete Repair Details
STA. 11+94.33 (C St. SW) Turn-in Date: May 2026
Linn County
IOWA DEPARTMENT OF TRANSPORTATION
Design Sheet No. V.7 of V.25 FHWA No. 001500

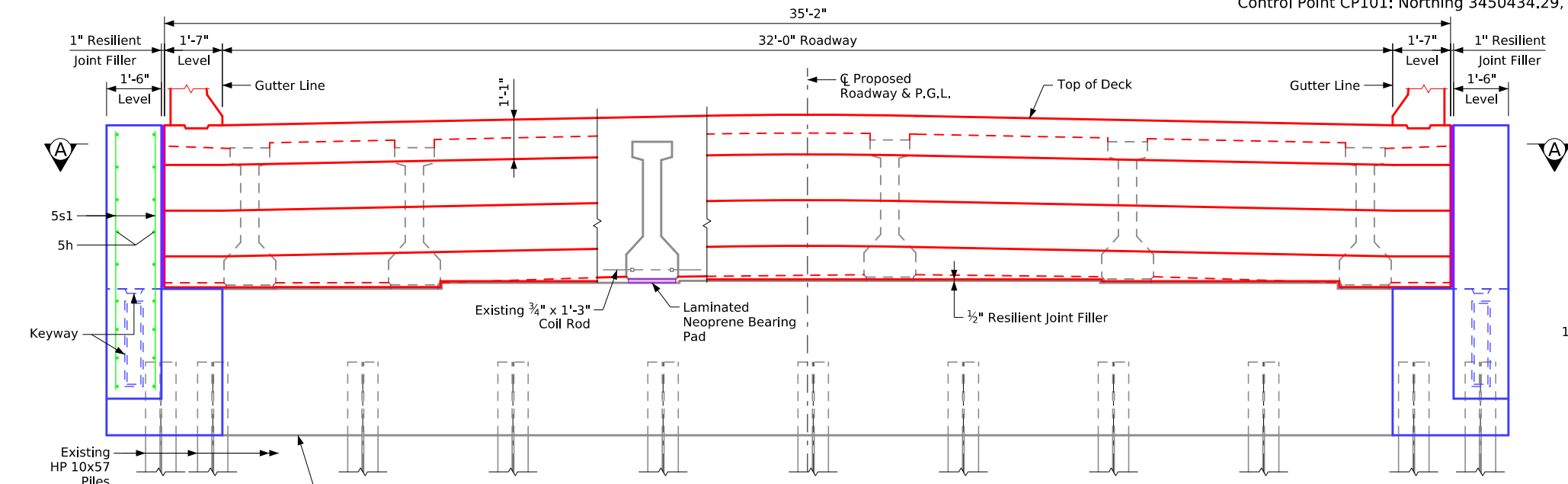
MARK	REVISION	DATE	BY
Engineer: JAG	Checked By: SMK	Date: 06/16/2026	T-R-S:
Technician: CLS			
Project No: 125.0693.08			Sheet V.7

**BHM-1187(826)--8K-57
C STREET BRIDGE DECK RECONSTRUCTION**
BRIDGE PLANS
CITY OF CEDAR RAPIDS, IA
SHUCK - BRITSON, INC.
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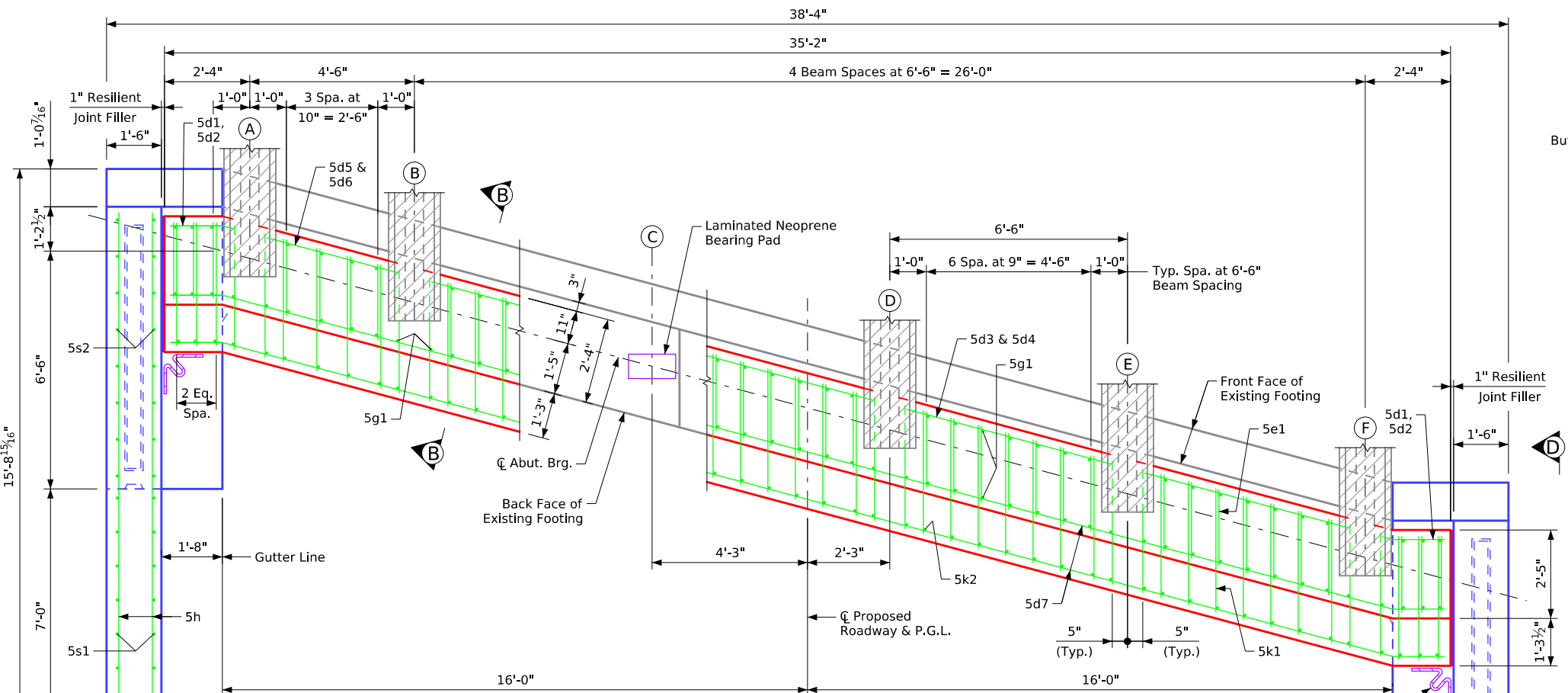


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Control Point CP101: Northing 3450434.29, Easting 5427256.28, Elev. 730.42, Description: Cut "X" on Bridge Approach

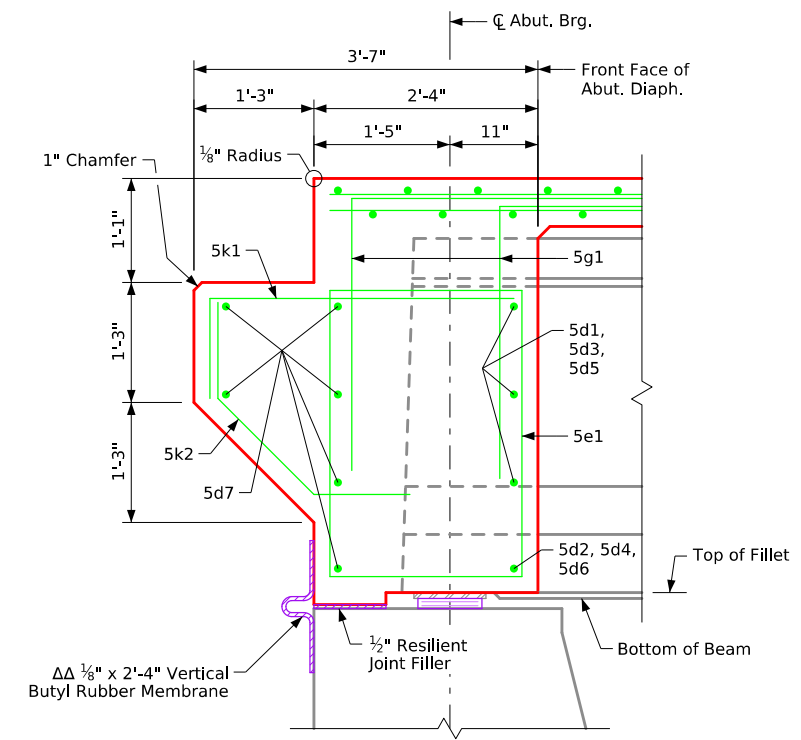


Rear Elevation at South Abutment
(Butyl Rubber Membranes Not Shown for Clarity)



Section A-A
South Abutment

ΔΔ Vertical butyl rubber membranes shall be placed after horizontal butyl rubber membrane. Vertical membrane shall extend from bottom of approach slab notch to 1/2" joint. Membrane shall be centered about vertical joint and fastened to both concrete faces with an approved waterproof adhesive. See Abutment Backfill Details Sheet for loop detail.



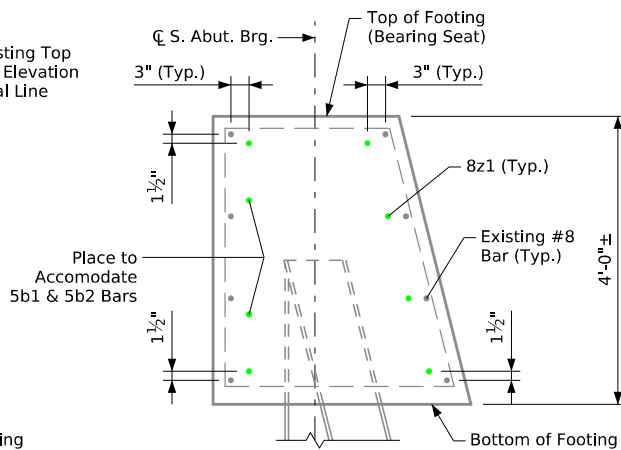
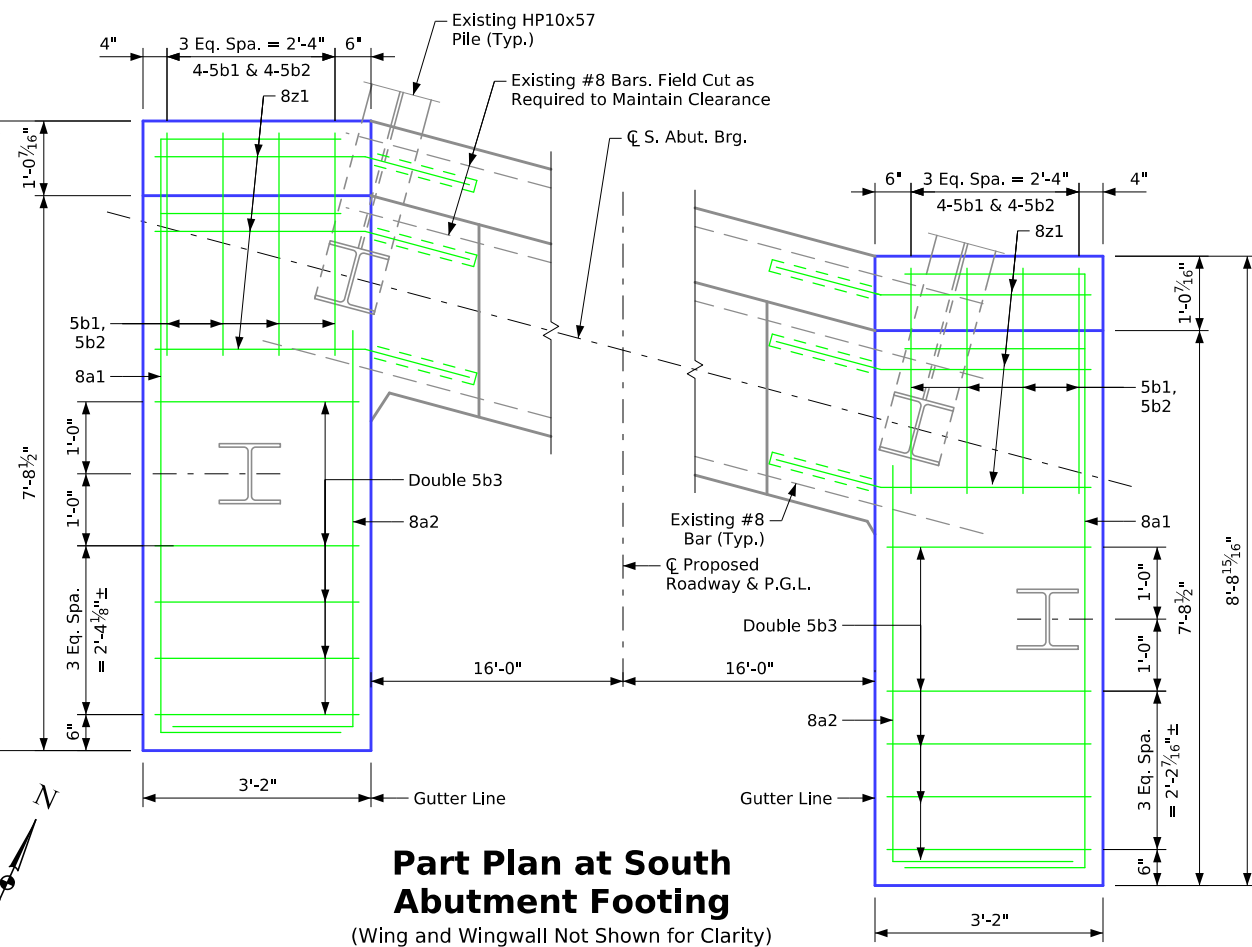
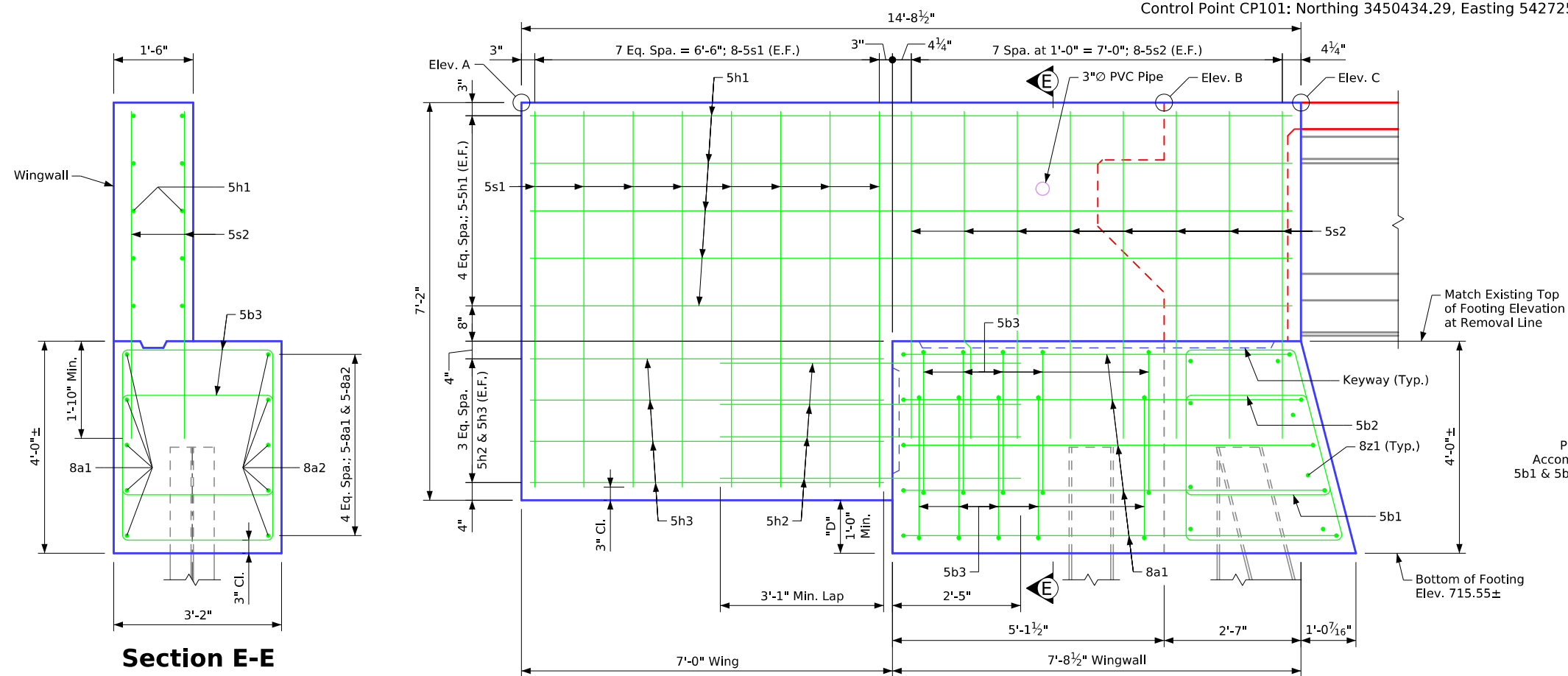
Section B-B

See Sheet V.9 for View D-D.
See Sheet V.12 for Abutment Notes.
See Sheet V.13 for details of laminated neoprene bearing pad.

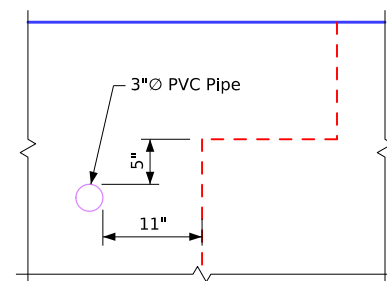
Design For Repair To 15° Skew (LA)
217'-6" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge Rehabilitation
68'-1 1/2" End Spans 81'-3" Interior Span
South Abutment Details
STA. 11+94.33 (C St. SW) Turn-in Date: May 2026
Linn County
IOWA DEPARTMENT OF TRANSPORTATION
Design Sheet No. V.8 of V.25 FHWA No. 001500

BHM-1187(826)--8K-57 C STREET BRIDGE DECK RECONSTRUCTION		CITY OF CEDAR RAPIDS, IA		SHUCK - BRITSON, INC.	
BRIDGE PLANS		Project No: 125.0693.08		Sheet V.8	
REVISION		Checked By: SMK		Date: 06/16/2026	
Engineer: JAG		Technician: CLS		T-R-S:	
MARK		DATE		BY	
900 BELL DRIVE S.W. CEDAR RAPIDS, IA 52404 319-362-8394 WWW.SNYDER-ASSOCIATES.COM		Project No: 125.0693.08		Sheet V.8	

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Project No: 125.0693.08
Sheet V.8



Note:
Footing dowel bars may be shifted slightly to
avoid conflicts with reinforcing steel and piles.



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

Table of Wingwall Elevations				
Location	Dim "D"	Elev. A	Elev. B	Elev. C
S.W. Corner	1'-2 $\frac{3}{8}$ "	723.92	724.19	724.25
S.E. Corner	1'-0"	723.72	724.00	724.06

See Sheet V.8 for location of View D-D.

See Sheet V.12 for 8z1 dowel notes and abutment footing, wing, and wingwall quantities.

Design For Repair To 15° Skew (LA)

217'-6" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge Rehabilitation

68'-1 1/2" End Spans 81'-3" Interior Span

South Abutment Details

STA. 11+94.33 (C St. SW) Turn-in Date: May 2026

Linn County

IOWA DEPARTMENT OF TRANSPORTATION

Design Sheet No. V.9 of V.25 FHWA No. 001500

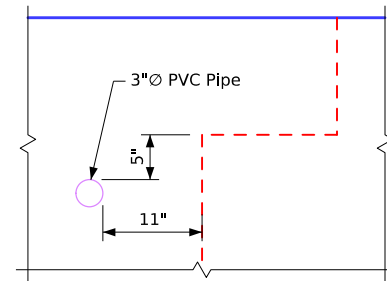
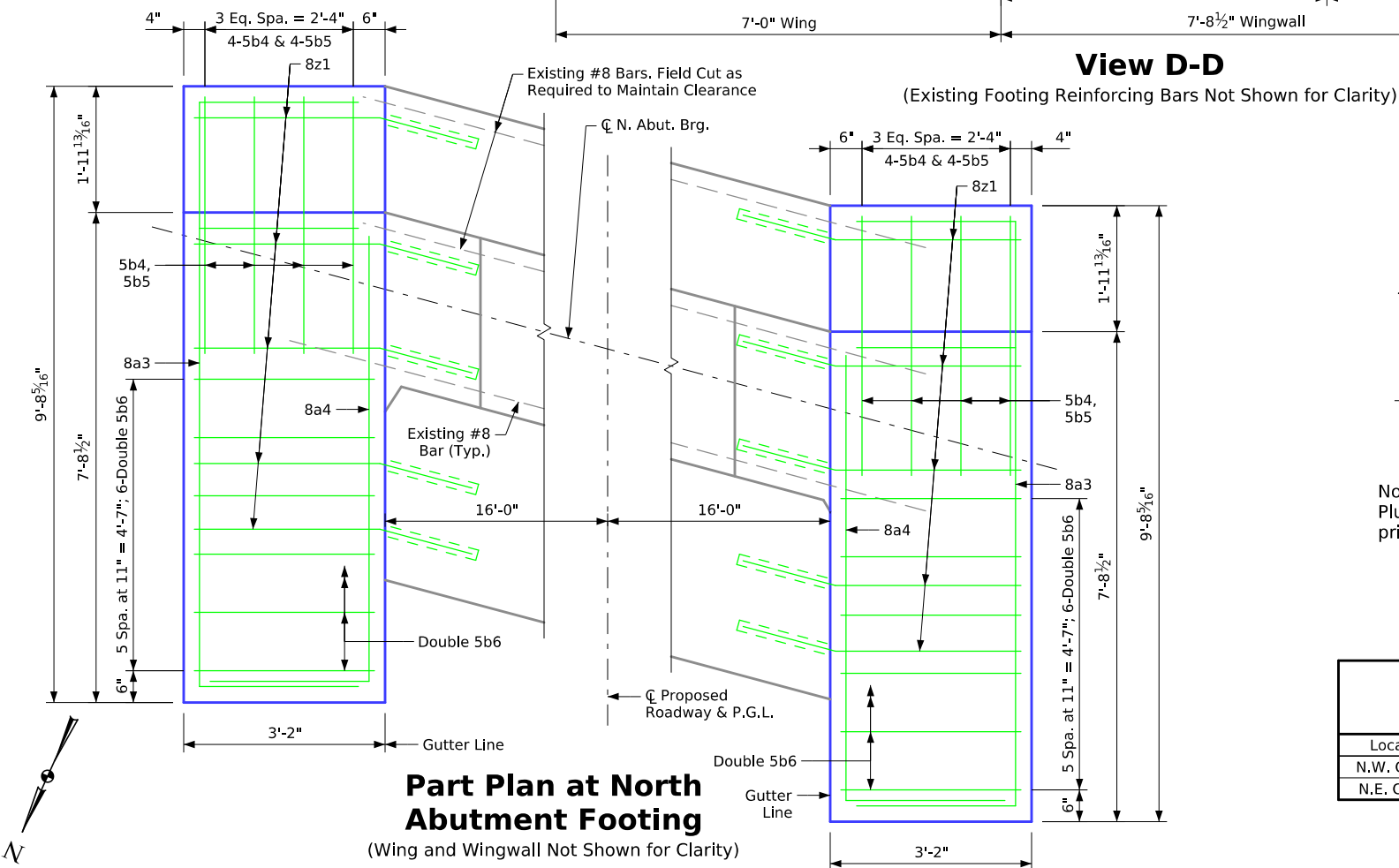
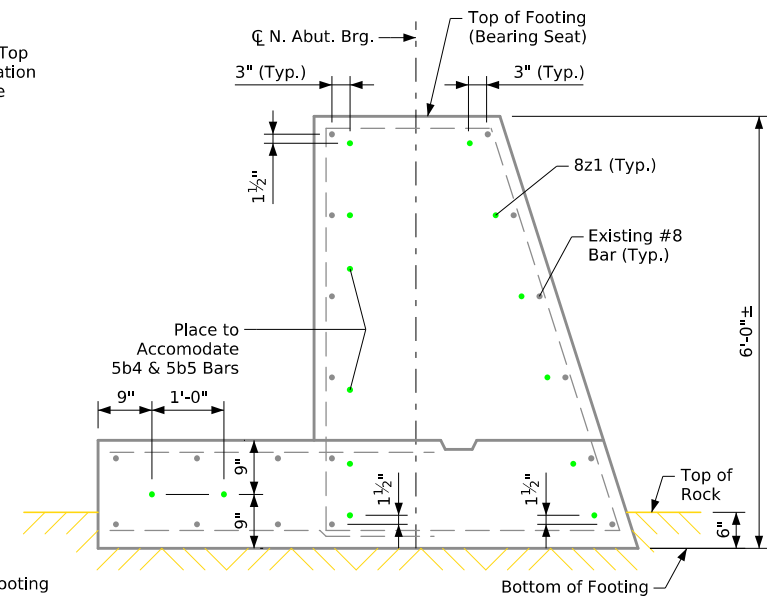
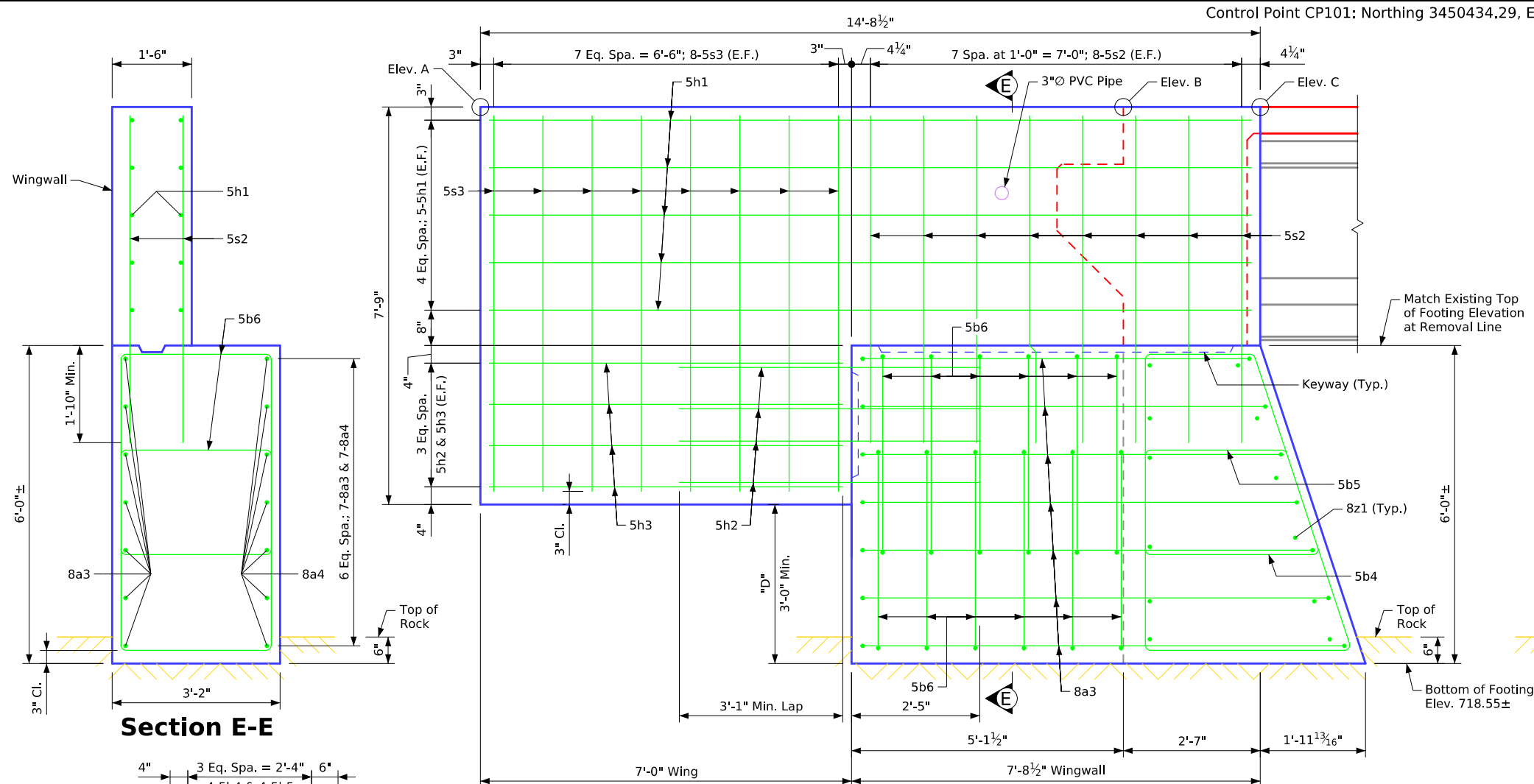


Table of Wingwall Elevations				
Location	Dim "D"	Elev. A	Elev. B	Elev. C
N.W. Corner	3'-2 $\frac{3}{8}$ "	729.50	729.22	729.16
N.E. Corner	3'-0"	729.30	729.02	728.96

The excavation limit for the north abutment footing notched into rock shall be paid for under the bid item "Excavation, Class 22."

Due to the possible variations in elevation of bedrock, the Contractor shall verify elevation of bedrock prior to fabrication of reinforcing steel for the north abutment footing. Submit elevations to the Engineer for review. Footings are to extend atleast 6 inches into bedrock with the final 6 inches of excavation to be to the neat lines of the footing. Footing concrete is to be placed not later than the day following excavation of any portion of the footing area to final elevation. The foundation shall be kept dry during the period between final excavation and placing of the footing concrete.

See Sheet V.10 for location of View D-D.

See Sheet V.12 for 8z1 dowel notes and abutment footing, wing, and wingwall quantities.

Design For Repair To 15° Skew (LA)

217'-6" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge Rehabilitation

68'-1 1/2" End Spans 81'-3" Interior Span

North Abutment Details

STA. 11+94.33 (C St. SW) Turn-in Date: May 2026

Linn County

IOWA DEPARTMENT OF TRANSPORTATION

Design Sheet No. V.11 of V.25 FHWA No. 001500

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BHM-1187(826)--8K-57

C STREET BRIDGE DECK RECONSTRUCTION

BRIDGE PLANS

CITY OF CEDAR RAPIDS, IA

900 BELL DRIVE S.W.
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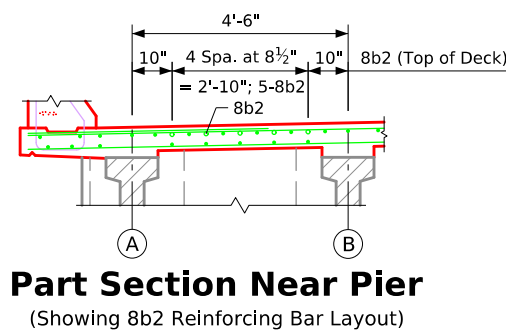
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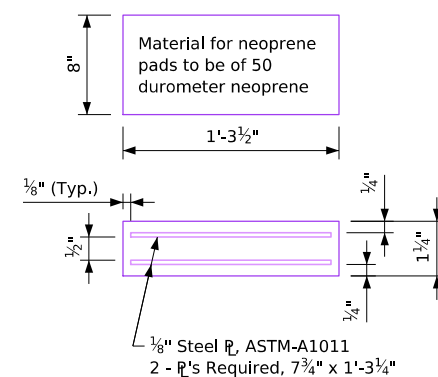
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Project No: 125.0693.08

Sheet V.11

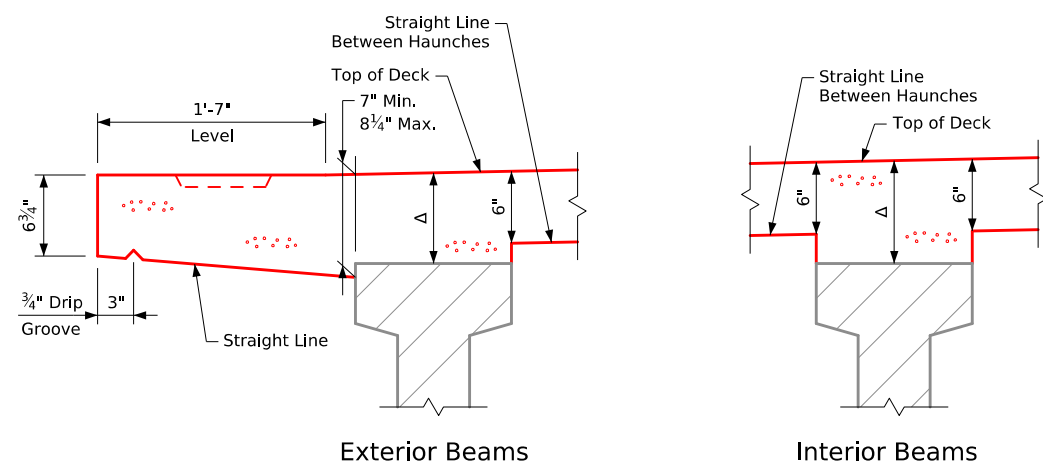


Deck area = 17.93 Sq. Ft.
Deck area does not
include the haunch.



Laminated Neoprene Pad

Note:
Center new bearing pads under existing
 $\frac{1}{2}$ " x 9" x 1'-3 $\frac{1}{2}$ " steel plates at abutment
beam bearings.



Typical Deck and Haunch Detail

Δ For Deck Thickness Over Beams See "Haunch and Camber Details" on Sheet V.15.

Superstructure Notes:

The pier and 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 "Structural Concrete (Bridge)".

All beams are to be set vertical.

Forms for the deck and barrier rail are to be supported by the prestressed 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 1½" clear below top of deck. Bottom transverse reinforcing steel is to be parallel to and 1" 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.

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.

Cost for laminated neoprene bearing pad is to be included in the price bid for "Structural Concrete (Bridge)".

217'-6" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge Rehabilitation

68'-1 1/2" End Spans

81'-3" Interior Span

Bridge Deck Cross Section

STA. 11+94.33 (C St. SW)

Turn-in Date: May 2026

Linn County

IOWA DEPARTMENT OF TRANSPORTATION

Design Sheet No. V.13 of V.25

FHWA No. 001500

MARK		REVISION	DATE	BY
	Engineer: JAG	Checked By: SMK		
	Technician: CLS	Date: 06/16/2026	T-R-S:	
Project No: 125.0693.08				Sheet V.13

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BHM-1187(826)--8K-57
C STREET BRIDGE DECK RECONSTRUCTION

BRIDGE PLANS

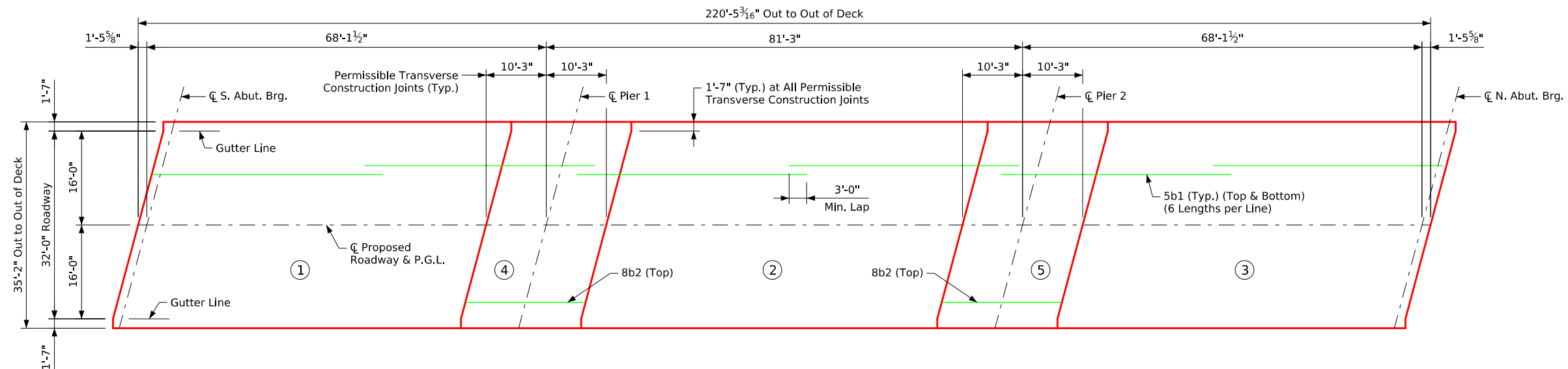
SHUCK - BRITSON, INC.



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Project No: 125.0693.08

Sheet V.13

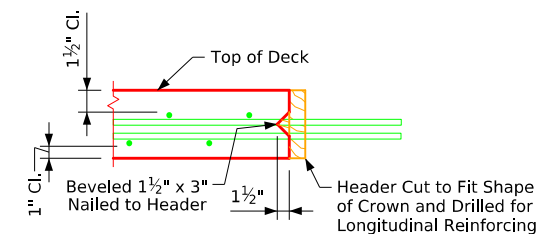


Concrete Placement Diagram and Longitudinal Reinforcing Steel Layout

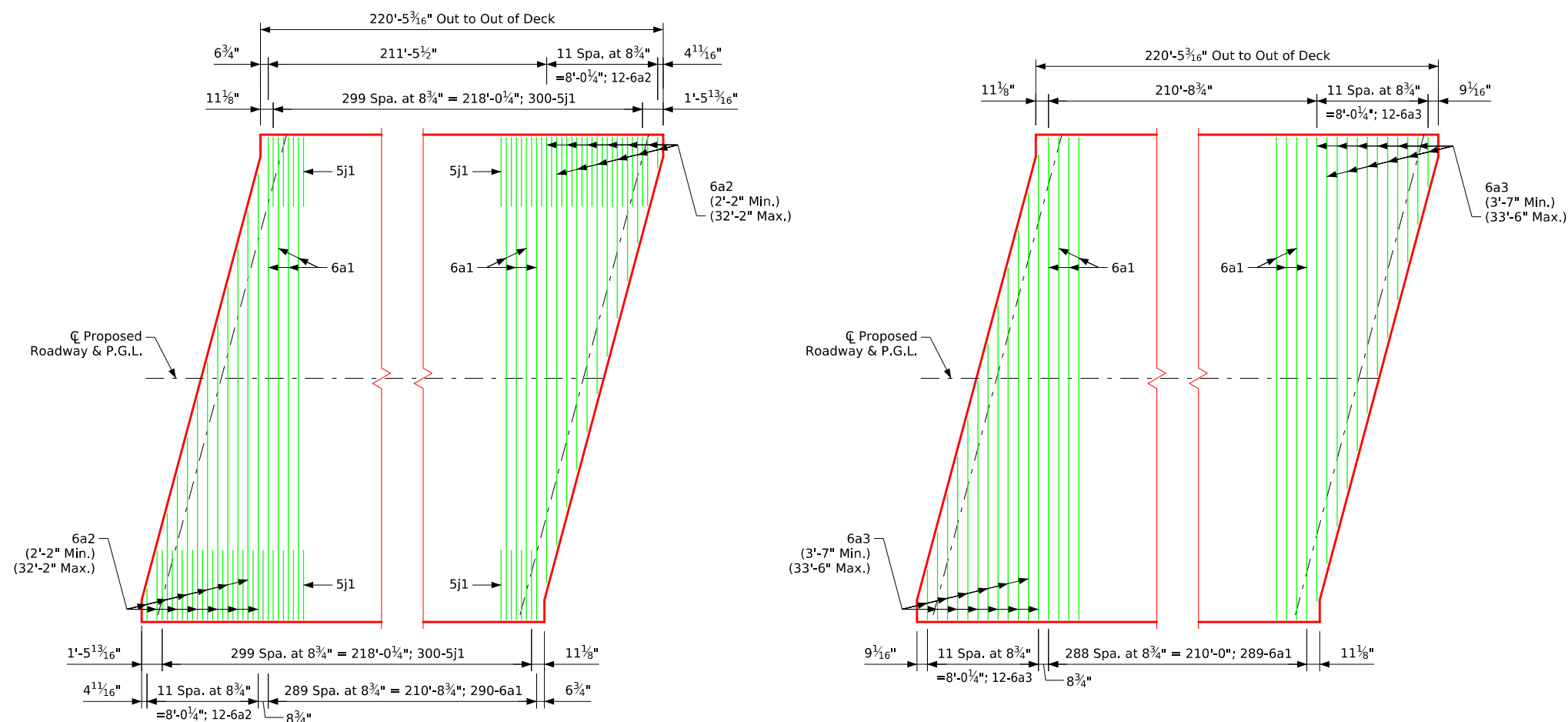
Note:

Concrete deck shall be placed in sections and sequences indicated. An approved alternate procedure is to place the concrete deck in one continuous pour beginning at one end of the bridge. Alternate procedures 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 results. The Bridge Engineer shall review any alternate procedures. The cost of any additional analysis and plan modifications 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 headers and beginning an adjacent pour.



Permissible Transverse Deck Construction Joint



Bottom of Deck Transverse Reinforcing Steel Layout

Design For Repair To 15° Skew (LA)

217'-6" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge Rehabilitation

68'-1 1/2" End Spans 81'-3" Interior Span

Concrete Placement / Deck Reinforcing

STA. 11+94.33 (C St. SW) Turn-in Date: May 2026

Linn County

IOWA DEPARTMENT OF TRANSPORTATION

Design Sheet No. V.14 of V.25

Turn-in Date: May 2026

FHWA No. 001500

BHM-1187(826)--8K-57
C STREET BRIDGE DECK RECONSTRUCTION

BRIDGE PLANS

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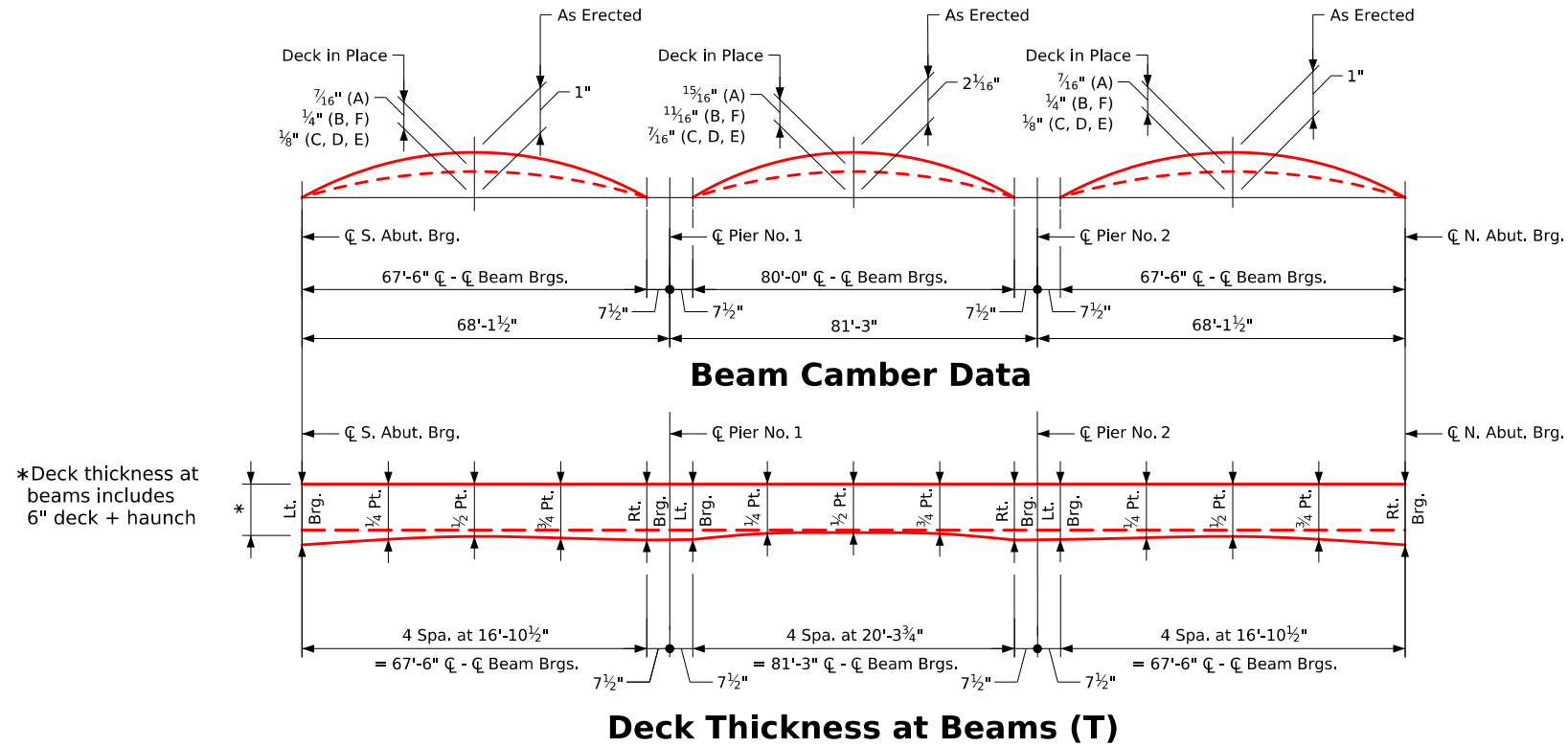
Project No: 125.0693.08



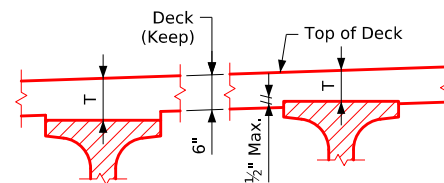
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Project No: 125.0693.08

Sheet V.14



Deck Thickness at Beams (T)															
Beam Line	Span 1					Span 2					Span 3				
	Lt. Brg.	¼ Pt.	½ Pt.	¾ Pt.	Rt. Brg.	Lt. Brg.	¼ Pt.	½ Pt.	¾ Pt.	Rt. Brg.	Lt. Brg.	¼ Pt.	½ Pt.	¾ Pt.	Rt. Brg.
A	7⅞	6⅞	6¾	6⅞	6⅞	7¼	6⅞	6⅞	6¼	6⅞	7⅞	6⅞	6⅞	6⅞	6⅞
B	8½	8⅞	8	7⅞	8	8⅞	7⅞	7⅞	7⅞	8⅞	8¼	8⅞	8⅞	8¼	8⅞
C	8⅞	7⅞	7⅞	7⅞	7⅞	8¼	7⅞	7⅞	8	8⅞	8¼	8¼	7⅞	7¼	7⅞
D	7⅞	7⅞	7½	7⅞	7⅞	7¼	7⅞	7⅞	7¼	8¼	8⅞	8⅞	7⅞	7½	7⅞
E	6⅞	6⅞	6½	6⅞	6½	6⅞	6⅞	6⅞	6⅞	7⅞	7⅞	7¼	6⅞	6⅞	6½
F	7⅞	7⅞	7	6⅞	7⅞	7⅞	6¼	6½	6⅞	6⅞	7⅞	6⅞	6⅞	6⅞	6⅞



Deck Thickness Details

Design For Repair To 15° Skew (LA)

217'-6" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge Rehabilitation

68'-1 1/2" End Spans 81'-3" Interior Span

Deck Thickness Details

STA. 11+94.33 (C St. SW) Turn-in Date: May 2026

Linn County

IOWA DEPARTMENT OF TRANSPORTATION

Design Sheet No. V.15 of V.25 FHWA No. 001500





Note:
The 4a4 bars may be tilted as necessary to fit between the mats of steel in the deck.

Δ All 4a4 bars are to match spacing of beam stirrups extending from the top of beams.

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BHM-1187(826)--8K-57
C STREET BRIDGE DECK RECONSTRUCTION
BRIDGE PLANS
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Project No: 125.0693.08

Sheet V.16

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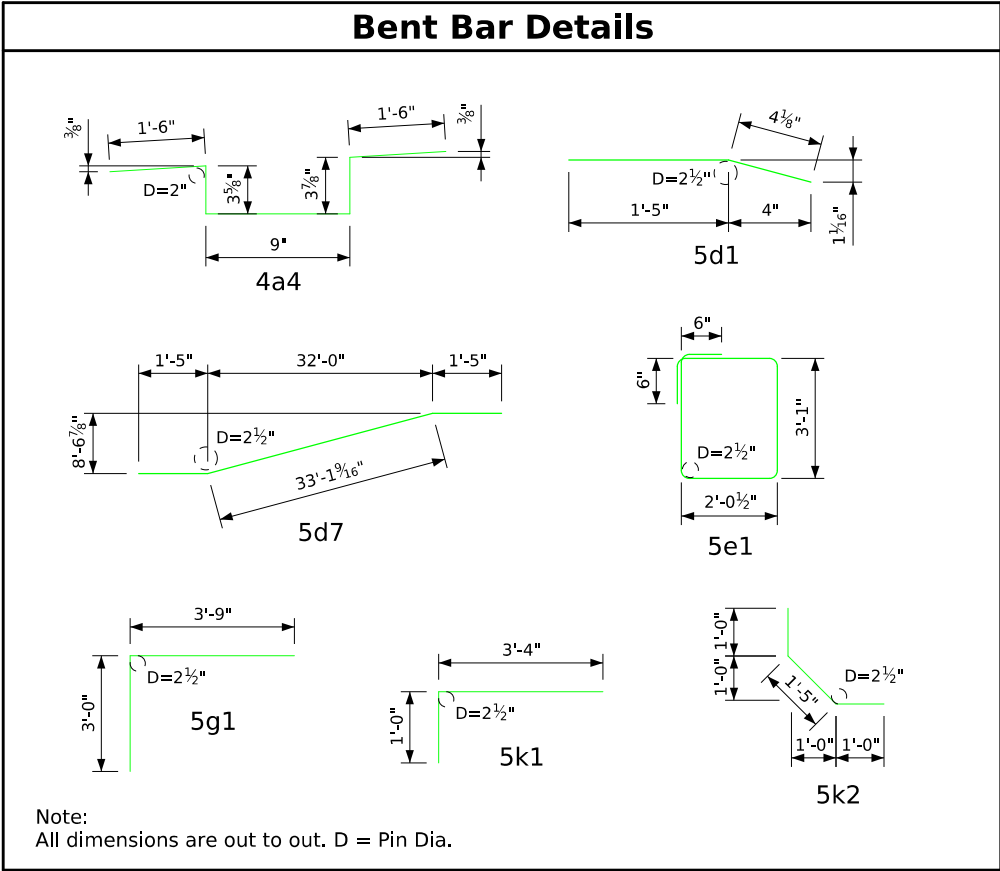
Epoxy Coated Reinforcing Steel - Deck & Diaphragms					
Bar	Location	Shape	No.	Length	Weight
6a1	Deck, Transverse, Top & Bottom		579	34'-10"	30,293
6a2	Deck, Transverse, Top Ends		24	Varies	619
6a3	Deck, Transverse, Bottom Ends		24	Varies	668
Δ 4a4	Haunch, Transverse		206	4'-5"	608
5b1	Deck, Longitudinal, Top & Bottom		534	39'-3"	21,861
8b2	Deck, Longitudinal, Top at Piers		66	20'-2"	3554
Δ 6b3	Haunch, Longitudinal, Beam B		2	35'-9"	107
Δ 6b4	Haunch, Longitudinal, Beams B & C		4	12'-0"	72
Δ 6b5	Haunch, Longitudinal, Beam B		6	28'-10"	260
Δ 6b6	Haunch, Longitudinal, Beam C		4	31'-2"	187
Δ 6b7	Haunch, Longitudinal, Beam D		2	32'-9"	98
5d1	Abut. Diaph. Ends, Longitudinal		12	1'-9"	22
5d2	Abut. Diaph. Ends, Longitudinal		4	1'-3"	5
5d3	Abut. Diaph. Longitudinal		24	5'-10"	146
5d4	Abut. Diaph. Longitudinal		8	4'-11"	41
5d5	Abut. Diaph. Longitudinal		6	3'-9"	23
5d6	Abut. Diaph. Longitudinal		2	2'-10"	6
5d7	Abut. Diaph. Longitudinal		12	36'-0"	451
5e1	Abut. Diaph. Hoops		76	11'-3"	892
5g1	Abut. Diaph. Vertical B.F.		176	6'-9"	1239
5j1	Top of Deck Transverse (At Rail)		600	5'-0"	3129
5k1	Paving Notch		100	4'-4"	452
5k2	Paving Notch		100	3'-5"	356
Epoxy Coated Reinforcing Steel - Total Weight (lbs.)					65,089

Δ Contractor shall fill out top of beam shots from field in "Bridge Deck Grade Adjustment Spreadsheet" and forward electronic spreadsheet to the Engineer for confirmation of haunch dimensions and limits of supplemental haunch reinforcing prior to ordering material.

Concrete Placement Quantities Deck & Diaphragms	
Location	Total
Section 1, Deck & Abut. Diaph.	55.6
Section 2, Deck	41.9
Section 3, Deck & Abut. Diaph.	55.6
Section 4, Deck	14.3
Section 5, Deck	14.3
High Performance Structural Concrete - Total (Cu. Yds.)	181.7 (F)

(F) Include Fiber Reinforcement in Structural Concrete.

Note:
Concrete and Reinforcing Steel Quantities are included on the Summary Quantities Sheet.



Design For Repair To 15° Skew (LA)

217'-6" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge Rehabilitation

68'-1 1/2" End Spans81'-3" Interior Span

Deck & Diaphragm Quantities

STA. 11+94.33 (C St. SW)Turn-in Date: May 2026

Linn County

IOWA DEPARTMENT OF TRANSPORTATION

Design Sheet No. V.17 of V.25FHWA No. 001500

MARKEngineer: JAGChecked By: SMKTechnician: CLS

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DATE

BY

BHM-1187(826)--8K-57

C STREET BRIDGE DECK RECONSTRUCTION

BRIDGE PLANS

CITY OF CEDAR RAPIDS, IA

SHUCK - BRITSON, INC.

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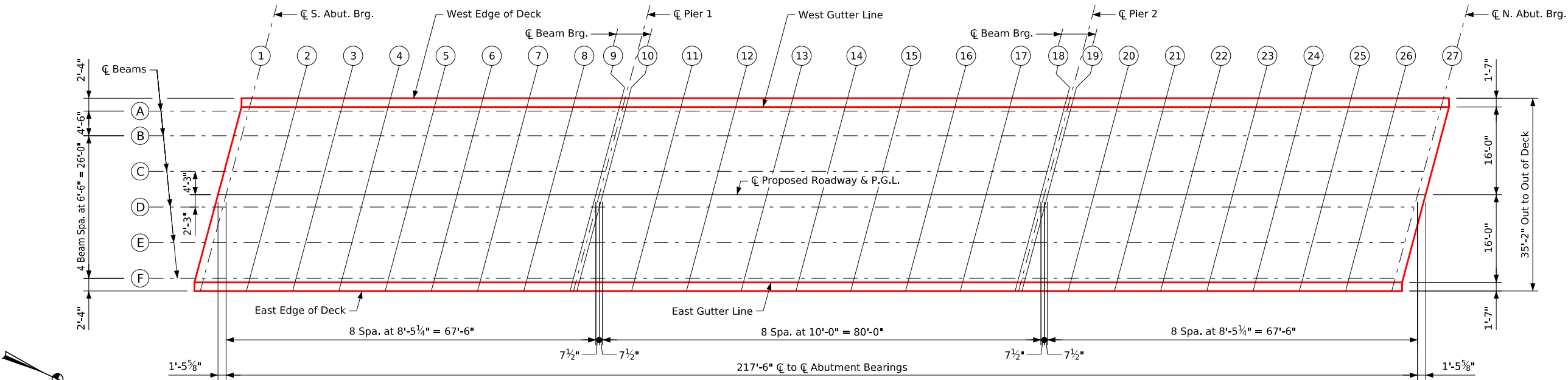
Project No: 125.0693.08

Sheet

V.17

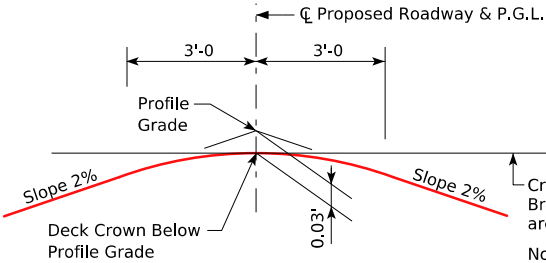
Sheet V.17

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Top of Deck Elevation Locations

Top of Deck Elevations																																
Location	Line Number	☐ S. Abut. Bearing										☐ Pier 1 Bearings										☐ Pier 2 Bearings										☐ N. Abut. Bearing
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27					
West Gutter Line	724.23	724.42	724.61	724.80	725.00	725.19	725.38	725.57	725.77	725.79	726.02	726.25	726.48	726.71	726.93	727.16	727.39	727.62	727.65	727.84	728.03	728.22	728.42	728.61	728.80	728.99	729.19					
Beam Line A	724.24	724.43	724.62	724.81	725.01	725.20	725.39	725.58	725.78	725.80	726.03	726.26	726.49	726.72	726.94	727.17	727.40	727.63	727.66	727.85	728.04	728.23	728.43	728.62	728.81	729.00	729.20					
Beam Line B	724.30	724.49	724.68	724.88	725.07	725.26	725.45	725.65	725.84	725.87	726.10	726.32	726.55	726.78	727.01	727.24	727.46	727.69	727.72	727.91	728.10	728.30	728.49	728.68	728.87	729.07	729.26					
Beam Line C	724.39	724.58	724.77	724.97	725.16	725.35	725.54	725.74	725.93	725.96	726.19	726.41	726.64	726.87	727.10	727.33	727.55	727.78	727.81	728.00	728.19	728.39	728.58	728.77	728.96	729.16	729.35					
☐ Proposed Roadway	724.42	724.61	724.80	725.00	725.19	725.38	725.57	725.77	725.96	725.99	726.21	726.44	726.67	726.90	727.13	727.35	727.58	727.81	727.84	728.03	728.22	728.42	728.61	728.80	728.99	729.19	729.38					
Beam Line D	724.39	724.58	724.77	724.97	725.16	725.35	725.54	725.74	725.93	725.96	726.18	726.41	726.64	726.87	727.10	727.32	727.55	727.78	727.81	728.00	728.19	728.39	728.58	728.77	728.96	729.15	729.35					
Beam Line E	724.22	724.41	724.61	724.80	724.99	725.18	725.37	725.57	725.76	725.79	726.02	726.24	726.47	726.70	726.93	727.16	727.38	727.61	727.64	727.83	728.03	728.22	728.41	728.60	728.79	728.99	729.18					
Beam Line F	724.05	724.24	724.44	724.63	724.82	725.01	725.21	725.40	725.59	725.62	725.85	726.07	726.30	726.53	726.76	726.99	727.21	727.44	727.47	727.66	727.86	728.05	728.24	728.43	728.62	728.82	729.01					
East Gutter Line	724.03	724.22	724.42	724.61	724.80	724.99	725.19	725.38	725.57	725.60	725.83	726.05	726.28	726.51	726.74	726.97	727.19	727.42	727.45	727.64	727.84	728.03	728.22	728.41	728.61	728.80	728.99					



Crown Template

Note:
The top of deck elevations for the high point on the bridge deck are 0.03 feet below the high point on the approach roadway to account for the rounding of the deck with a parabolic template at the cross slope intersection.

Design For Repair To 15° Skew (LA)

217'-6" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge Rehabilitation

68'-1 1/2" End Spans81'-3" Interior Span

Top of Deck Elevations

STA. 11+94.33 (C St. SW)Turn-in Date: May 2026

Linn County

IOWA DEPARTMENT OF TRANSPORTATION

Design Sheet No. V.18 of V.25FHWA No. 001500

Project No: 125.0693.08

Sheet V.18

MARK

Engineer: JAG

Checked By: SMK

Date: 06/16/2026

T-R-S:

REVISION

BY

DATE

BHM-1187(826)--8K-57

C STREET BRIDGE DECK RECONSTRUCTION

BRIDGE PLANS

SHUCK - BRITSON, INC.

CITY OF CEDAR RAPIDS, IA

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Project No: 125.0693.08

Sheet V.18

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BHM-1187(826)--8K-57

C STREET BRIDGE DECK RECONSTRUCTION

BRIDGE PLANS

CITY OF CEDAR RAPIDS, IA

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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 Repair To 15° Skew (LA)

**217'-6" x 32'-0" Pretensioned Prestressed
Concrete Beam Bridge Rehabilitation**

68'-1 1/2" End Spans 81'-3" Interior Span

Deck Haunch Data Details

STA. 11+94.33 (C St. SW) Turn-in Date: May 2026

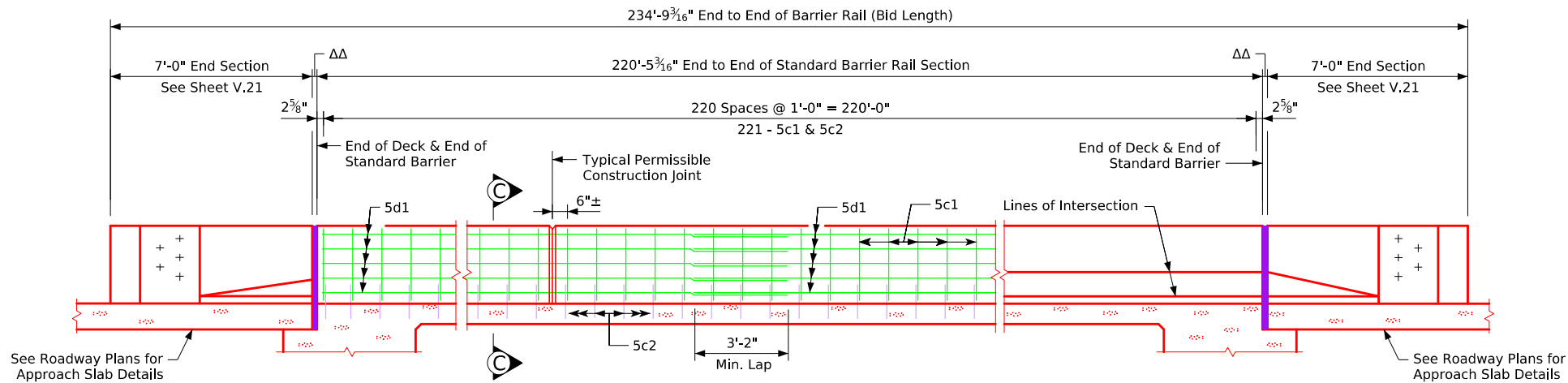
Linn County

IOWA DEPARTMENT OF TRANSPORTATION

Design Sheet No. V.19 of V.25 FHWA No. 001500

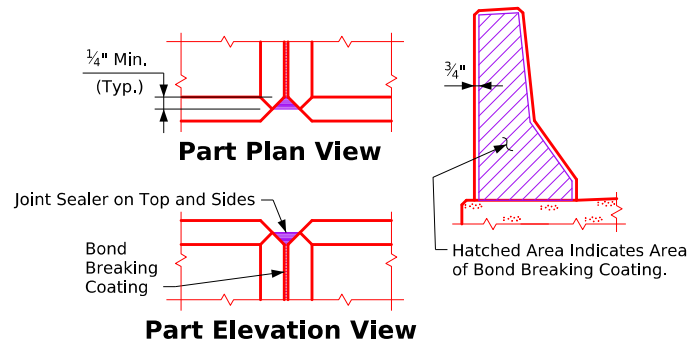


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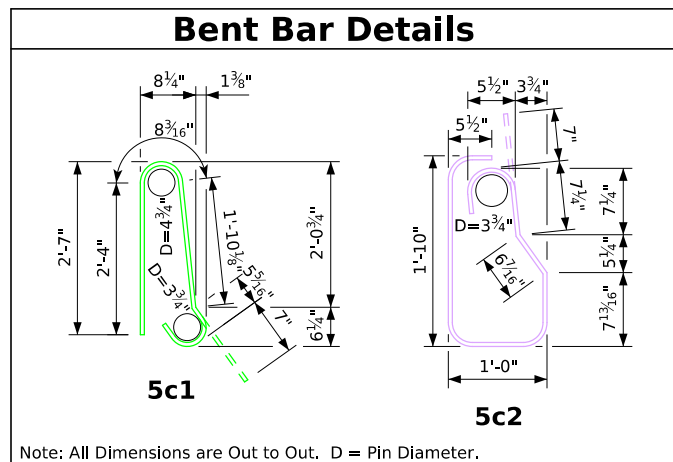
ΔΔ 2" Resilient Joint Filler:
Joint Sealer to be
Applied to Top and
Sides of Barrier Rail.

Elevation Of Barrier Rail Layout

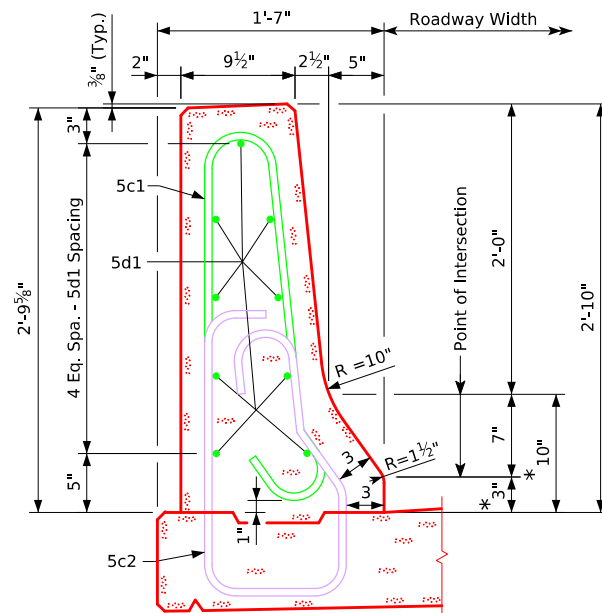


Barrier Rail Joint Details

Conduit Details and Additional
Reinforcing for Conduit Not Shown.
See Sheet V.22 for Details.



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



Part Section C-C

* Denotes the Maximum Value
for this Dimension. This
Dimension May Vary Due to
Construction Inaccuracies.

Concrete Placement Summary

SECTION	TOTAL
Standard Section (West Rail)	220'-5 3/16" @ 0.1052 Cu. Yd. Per Ft. 23.2
Standard Section (East Rail)	220'-5 3/16" @ 0.1052 Cu. Yd. Per Ft. 23.2
Total (Cu. Yd.)	46.4

Concrete Barrier Rail Quantities

Item	Unit	Quantity
Concrete Barrier Railing (2 at 234.8')	L.F.	469.6

Epoxy Coated Reinf. Steel - Two Rails

Section	Bar	Location	Shape	No.	Length	Weight
Standard Sections	5c1	Rail, Vertical		442	5'-11"	2728
	5d1	Rail, Longitudinal		108	39'-5"	4440
Epoxy Steel Total (lbs.)						7168

Stainless Steel Reinf. Steel - Two Rails

Section	Bar	Location	Shape	No.	Length	Weight
Standard Sections	5c2	Rail, Vertical		442	5'-8"	2612
Stainless Steel Total (lbs.)						2612

Note: Reinforcing Steel Quantities are
Included on the Summary Quantities Sheet.

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 resilient joint filler, 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 Materials I.M. 452.
- The concrete barrier rail is to be bid on a lineal foot basis. The number of lineal 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. If conduit is required in this plan the rigid steel conduit, junction boxes and fittings including labor and any additional work to do the installation is considered incidental to the cost of the railing.
- 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 C grade.
- Cross sectional area of the standard section of the barrier rail = 2.84 square feet.

Design For Repair To 15° Skew (LA)
217'-6" x 32'-0" Prestensioned Prestressed Concrete Beam Bridge Rehabilitation
68'-1 1/2" End Spans 81'-3" Interior Span
Barrier Rail Details
STA. 11+94.33 (C St. SW) Turn-in Date: May 2026
Linn County
IOWA DEPARTMENT OF TRANSPORTATION
Design Sheet No. V.20 of V.25 FHWA No. 001500

BY

DATE

REVISION

Checked By: SMK

Date: 06/16/2026

T-R-S:

Project No: 125.0693.08

Sheet V.20

CITY OF CEDAR RAPIDS, IA

BRIDGE PLANS

BHM-1187(826)--8K-57
C STREET BRIDGE DECK RECONSTRUCTION

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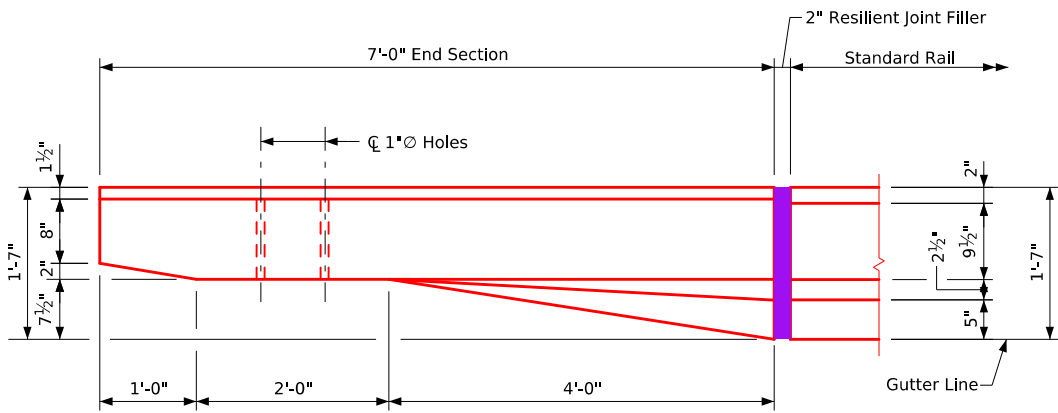
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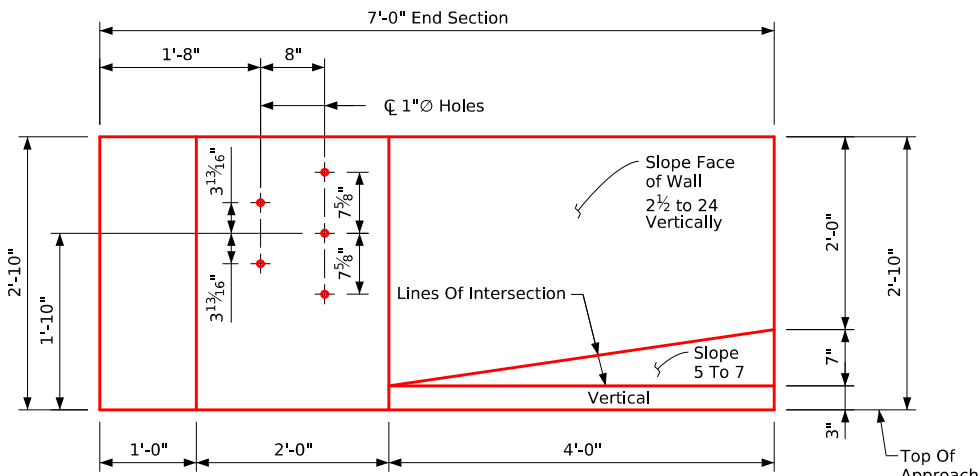
Project No: 125.0693.08

Sheet V.20

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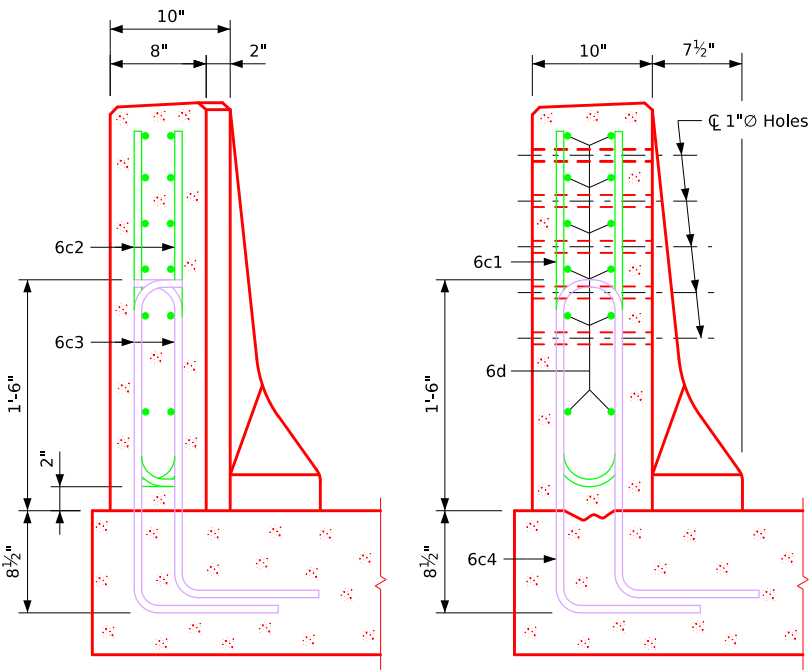


Part Plan View



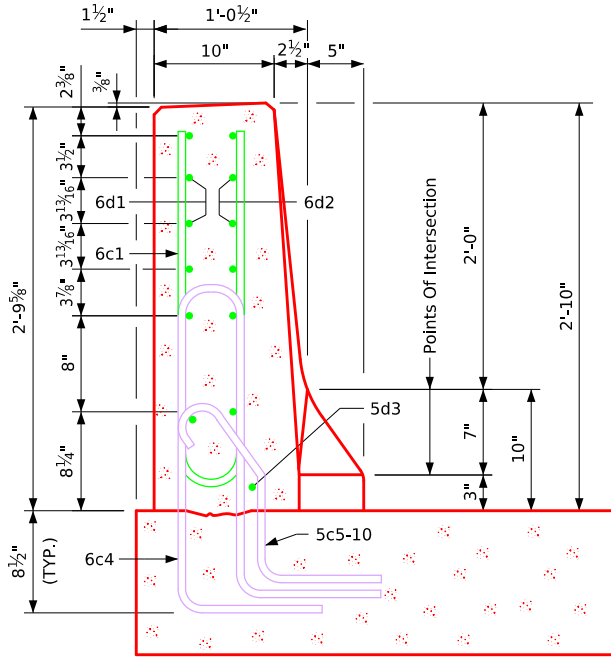
Part Elevation View

Provide 5 Holes Formed with 1"Ø Plastic Conduit. Cost to be Included in Price Bid for Concrete Barrier Railing.

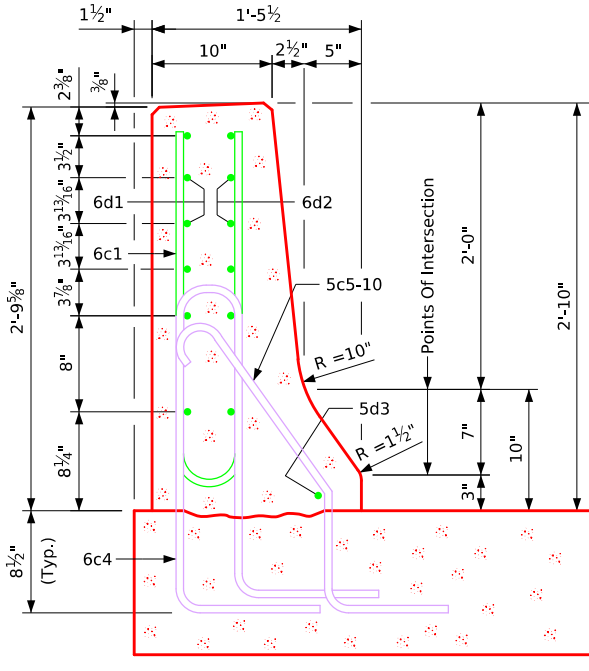


View A-A

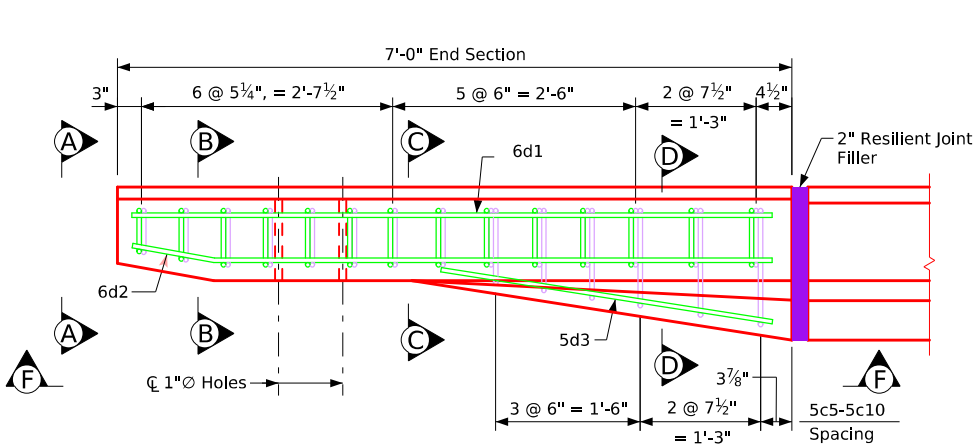
Section B-B



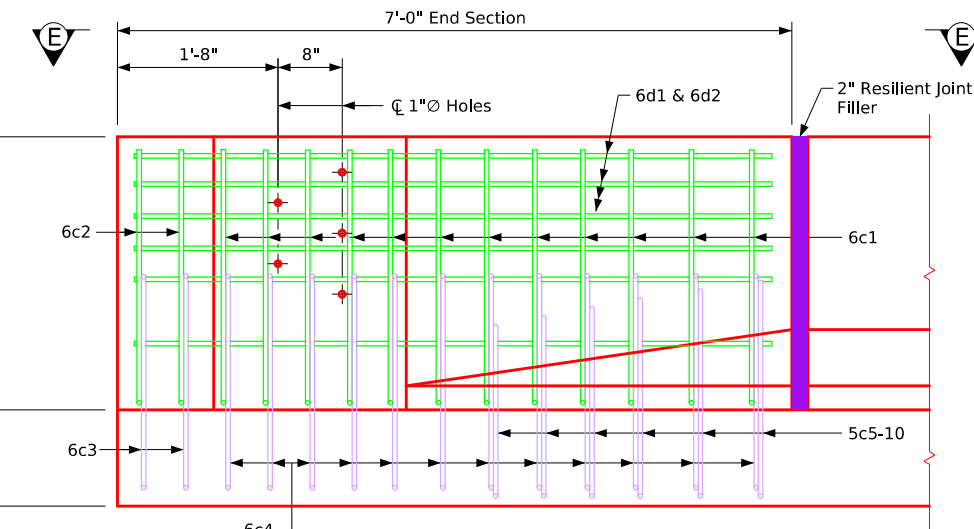
Section C-C



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'-6"	99
6c2	Rail, Vertical		4	2'-10"	17
6d1	Rail, Horizontal		6	6'-8"	60
6d2	Rail, Horizontal		6	6'-9"	61
5d3	Rail, Horizontal		1	3'-9"	4
Epoxy Reinf. Total Weight (lbs.)					241

Stainless Steel Reinforcing Steel One End Section

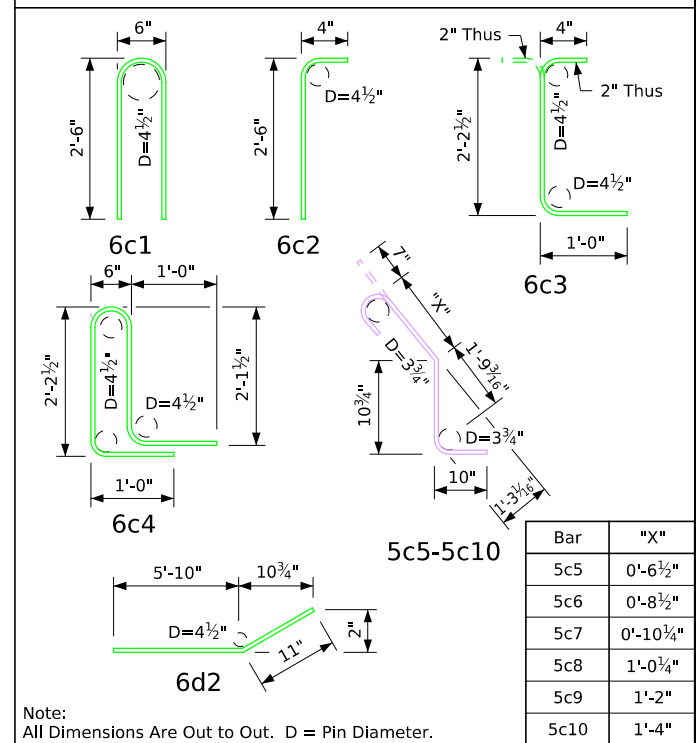
Bar	Location	Shape	No.	Length	Weight
6c3	Rail, Vertical		4	3'-7"	22
6c4	Rail, Vertical		12	6'-10"	123
5c5-10	Rail, Vertical		6	Varies	20
Stainless Steel Total Weight (lbs.)					165

Note: Reinforcing Steel Quantities Are Included On The Summary Quantities Sheet.

Concrete Placement Summary

Section	Total
Barrier Rail One End Section	0.65 Cu. Yd.

Bent Bar Details



Note: All Dimensions Are Out to Out. D = Pin Diameter.

Bar	"X"
5c5	0'-6 1/2"
5c6	0'-8 1/2"
5c7	0'-10 3/4"
5c8	1'-0 3/4"
5c9	1'-2"
5c10	1'-4"

Design For Repair To 15° Skew (LA)
217'-6" x 32'-0" Pretensioned Prestressed Concrete Beam Bridge Rehabilitation
68'-1 1/2" End Spans 81'-3" Interior Span
Barrier Rail End Section Details
STA. 11+94.33 (C St. SW) Turn-in Date: May 2026

Linn County
IOWA DEPARTMENT OF TRANSPORTATION
Design Sheet No. V.21 of V.25 FHWA No. 001500

CITY OF CEDAR RAPIDS, IA

BRIDGE PLANS

BHM-1187(826)--8K-57
C STREET BRIDGE DECK RECONSTRUCTION

SHUCK - BRITSON, INC.

REVISION

DATE

BY

MARK

Engineer: JAG

Checked By: SMK

T-RR-S:

Date: 06/16/2026

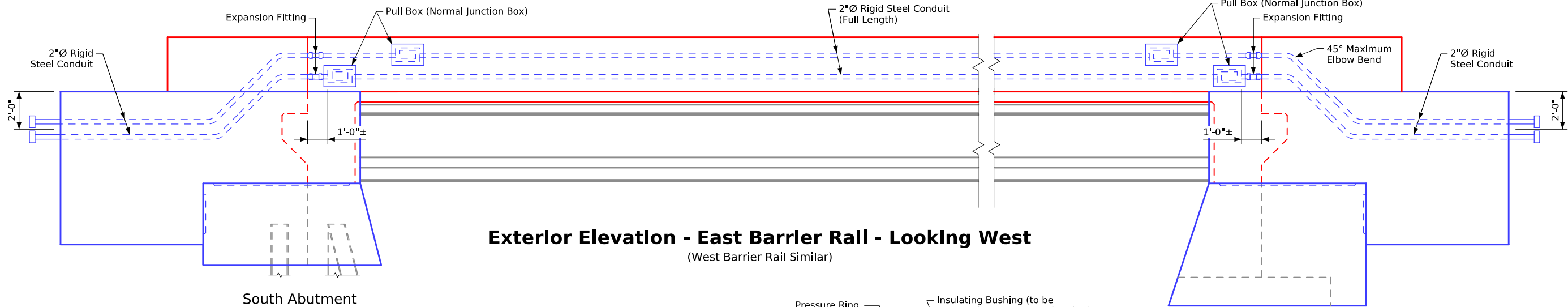
Project No: 125.0693.08

Sheet V.21

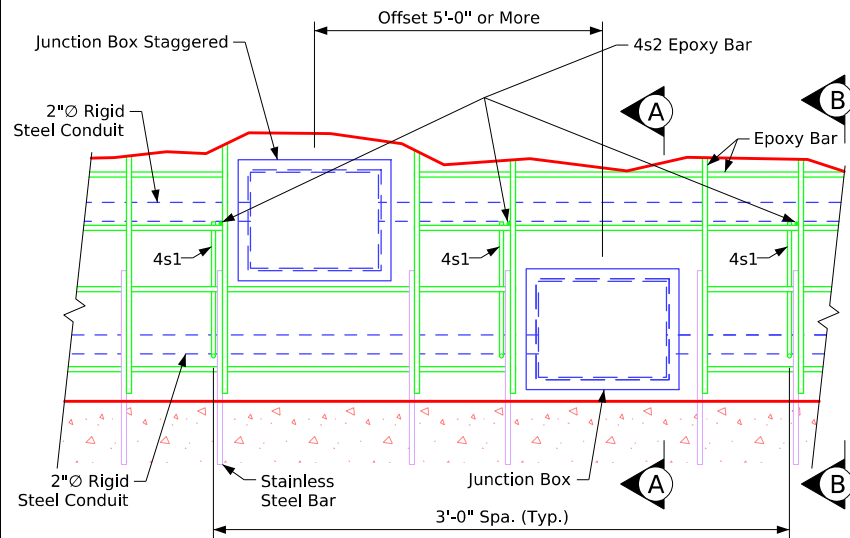


Project No: 125.0693.08
Sheet V.21

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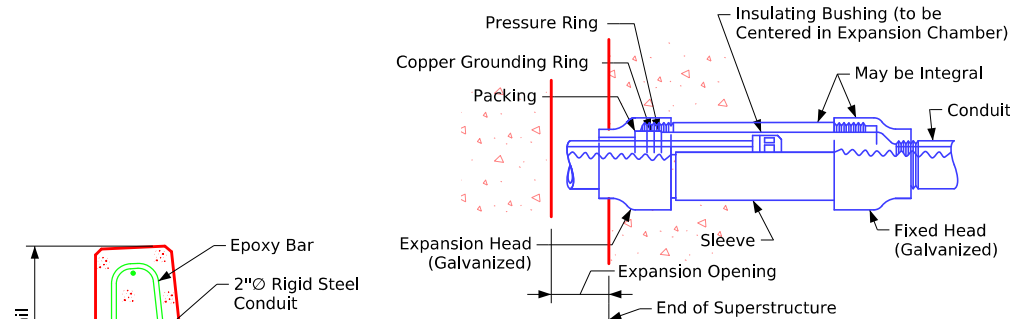


Exterior Elevation - East Barrier Rail - Looking West
(West Barrier Rail Similar)



Conduit Support - Rail Elev. Detail

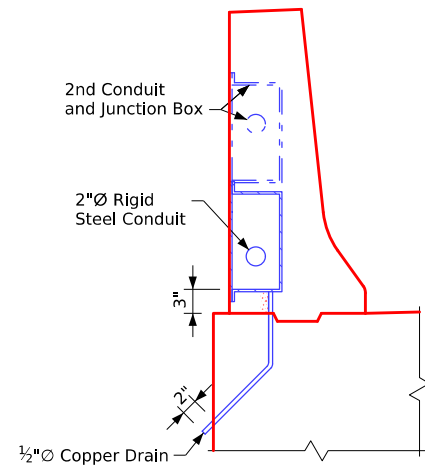
Two Junction Box Detail - Adjust reinforcing to clear junction box. Junction boxes are to be placed no further than 300'-0" apart.



Expansion Fitting Detail
(8 Required)

Section B-B - Conduit Support

Only used in rail with conduit, use 3'-0" spacing. Galvanized conduit shall not come into contact with the stainless steel reinforcing.



Section A-A Thru Junction Box

Section C-C

Bossed For	Hole	For Conduit Size
5 Threads	C	2" Ø Rigid Steel
None	E	1/2" Ø Copper Pipe

Note: The grounding buttons are to be blind drilled and tapped for 3/8" Ø x 0'-0 3/4" bolts.

Barrier Rail Conduit Notes:

See LI-104 Standard Road Plan for additional information on junction boxes.

Construction shall conform to the current Iowa D.O.T. Standard and Supplemental Specifications and Special Provisions.

Conduit installation shall be in accordance with Article 2523.03, N, of the Standard Specifications.

All "C" entrance holes in junction boxes shall be drilled and tapped for the specified conduit size. All other holes shall have a concrete - tight slip fit. Conduit ends shall not protrude into junction box more than 1/4". Drain pipe end shall be flush with inside surface of box. Grounding buttons shall be located approximately 3" from the inside surface of the box wall, and not closer than 3" to the edge of any hole in the box floor. Holes for drain pipe shall be placed in the low corner of the box, with a minimum clearance of 1" between the edge of the hole and the inside surface of the box wall. Typical details are shown on this sheet.

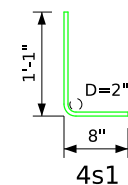
The rigid steel conduit, junction boxes and fittings including labor and any additional work to do the installation is considered incidental to the cost of the railing.

Expansion fitting shall be as specified or as approved by the Engineer. Typical details are shown on this sheet.

Stainless-steel reinforcement shall not be allowed to be in contact with the uncoated reinforcement, bare metal forming hardware, or to galvanized attachments or galvanized conduit.

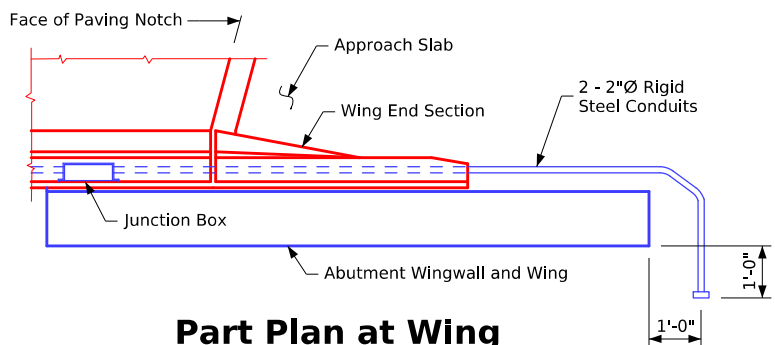
Epoxy Coated Reinf. Steel - Two Rails					
Bar	Location	Shape	No.	Length	Weight
4s1	Rail Conduit		156	1'-9"	182
4s2	Rail Conduit		156	0'-7"	61
Epoxy Reinforcing Total Weight (lbs.)					243

Bent Bar Details

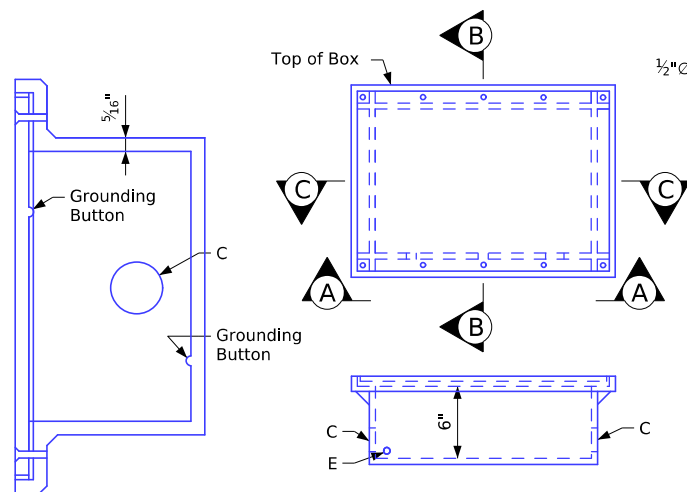


Note: All Dimensions are out to out. D = Pin Diameter

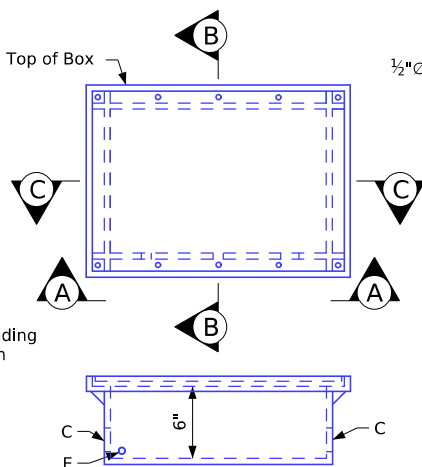
Note: Reinforcing steel quantities are included on the Summary Quantities Sheet.



Part Plan at Wing
(Approach Slab Linework Not Shown)



Section B-B



View A-A

LI-104 Junction Box
Watertight, Cast Iron - Flush Mount

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68'-1 1/2" End Spans 81'-3" Interior Span
STA. 11+94.33 (C St. SW) Turn-in Date: May 2026
Linn County
IOWA DEPARTMENT OF TRANSPORTATION
Design Sheet No. V.22 of V.25 FHWA No. 001500

MARK	REVISION	DATE	BY
Engineer: JAG	Checked By: SMK	Date: 06/16/2026	T-R-S:
Technician: CLS			
Project No:	125.0693.08		Sheet V.22

BHM-1187(826)--8K-57
C STREET BRIDGE DECK RECONSTRUCTION
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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.

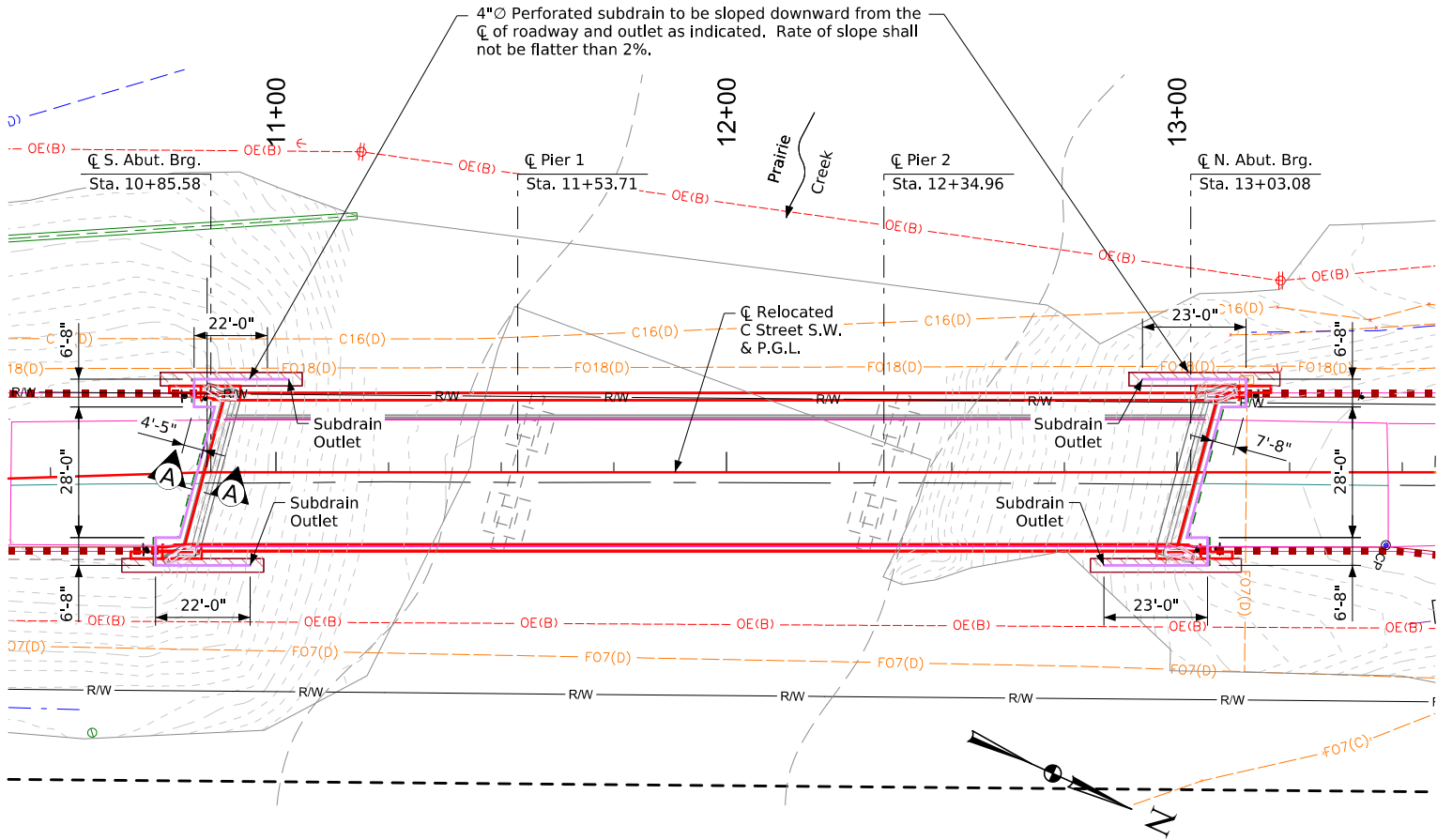
The subdrain outlet shall consist of a length of pipe with a removable rodent guard as detailed on this sheet. The length of the outlet pipe shall be determined by the revetment and it's placement location. The Contractor is to insure the outlet pipe is adequately strong enough and will not be damaged when revetment is placed. A check will be made at the subdrain outlet to insure that the subdrain is not damaged and is draining properly during the backfill flooding process. If a metal outlet pipe is used, it shall be 6"Ø and coupled to the 4"Ø subdrain in one of the two following ways.

- Use an inside fit reducer coupler (coupler must be inserted a minimum of 1'-0" into the metal outlet pipe).
- Insert 1'-0" of the 4"Ø subdrain into the 6"Ø metal outlet pipe, then fully seal the entire opening with grout.

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 "Subdrain, PVC, Standard, Perforated, 4 in."

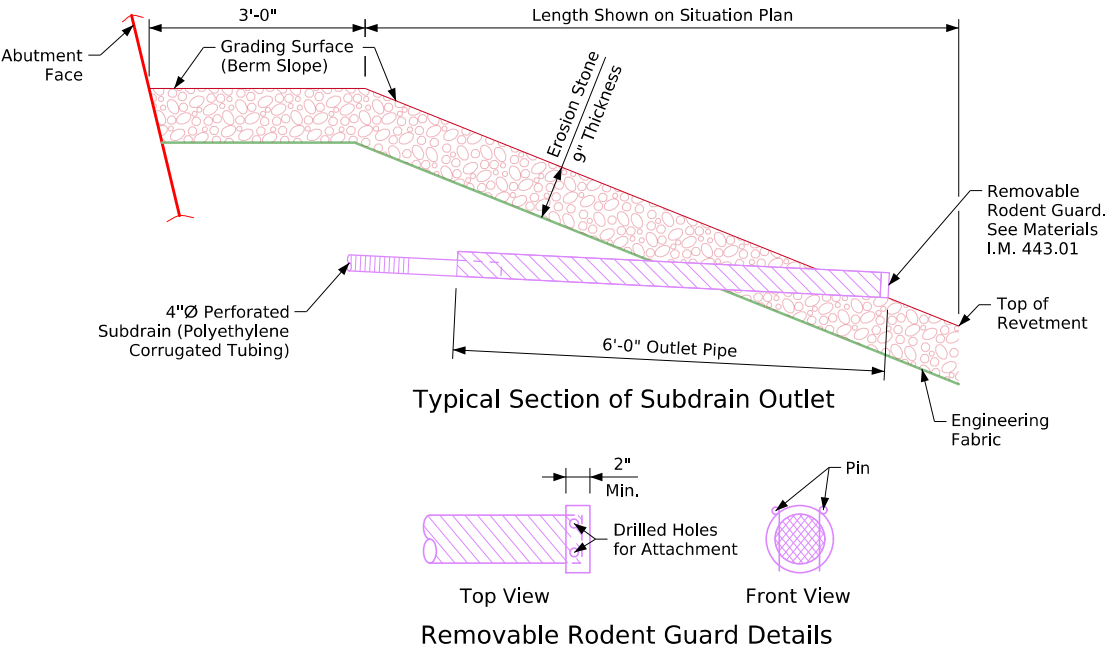
The dimensions shown for the proposed subdrains are based on the proposed grading layout of bridge berms. The dimensions shown are for estimating only. Required lengths and general locations of subdrains are subject to change due to field adjustments of the grading layout.

Subdrain Outlet Elevations	
Location	Elevation
South Abutment	714.5±
North Abutment	719.5±



Situation Plan
Showing Subdrain Locations.

Note:
Section A-A is shown on Abutment
Backfill Details sheet.



Erosion Stone (Embedded) Outlet Details

Design For Repair To 15° Skew (LA)

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68'-1 1/2" End Spans 81'-3" Interior Span

Subdrain Details

STA. 11+94.33 (C St. SW) Turn-in Date: May 2026

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Design Sheet No. V.23 of V.25 FHWA No. 001500

BHM-1187(826)--8K-57

C STREET BRIDGE DECK RECONSTRUCTION

BRIDGE PLANS

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Technician: CLS	Date: 06/16/2026		
T-R-S:		Sheet V.23	
Project No: 125.0693.08			



Subdrain shall slope downward 2% from C Approach Roadway.
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.

The cost of water required for flooding, subdrains, porous backfill, floodable backfill, and geotextile fabric furnished at the bridge abutments shall be included in the contract unit price bid for "Structural Concrete (Bridge)".

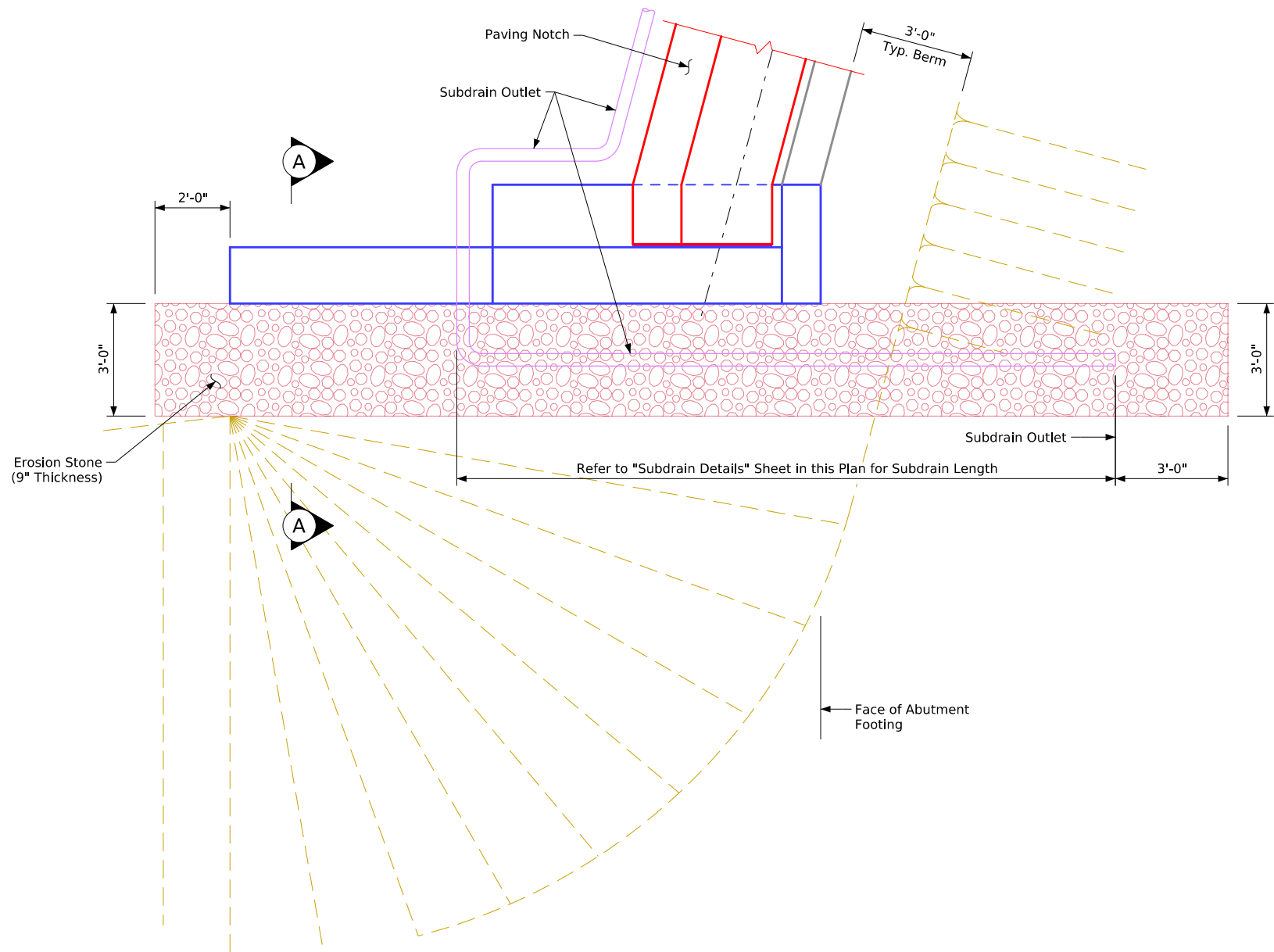


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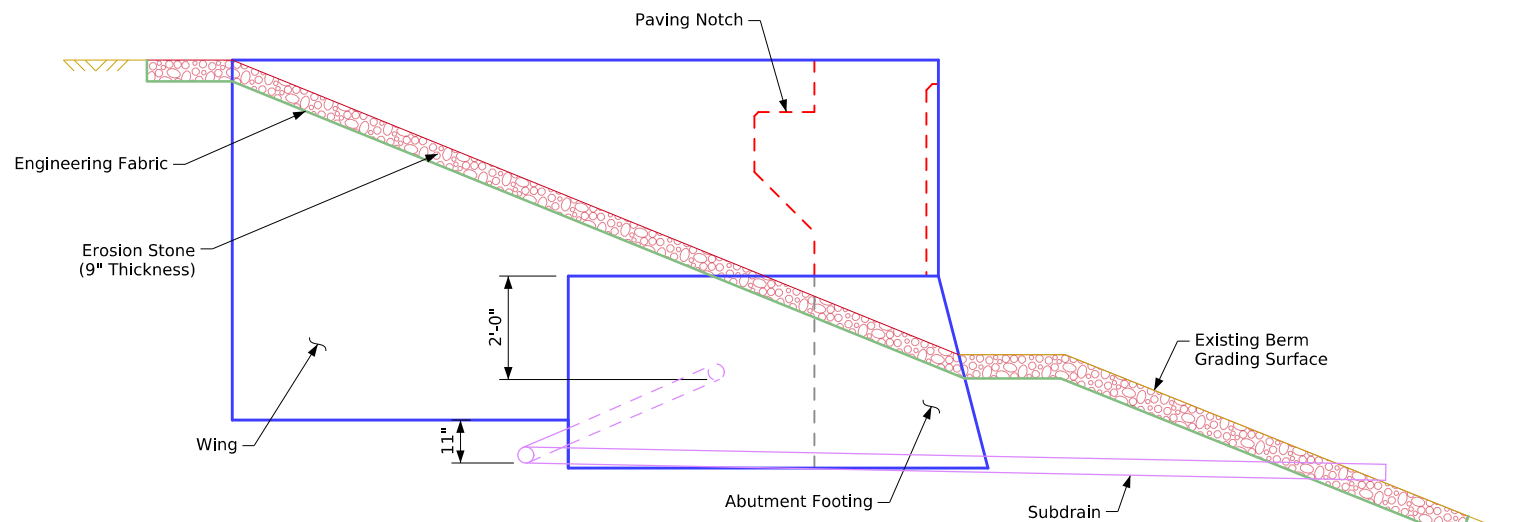
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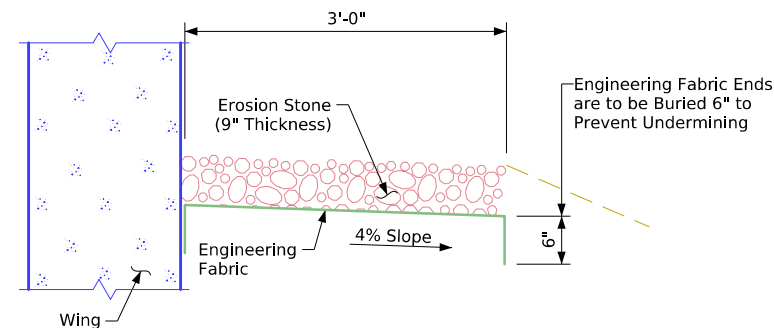


Top View of Wing Armoring with Extension
(SE Corner Shown, Others Similar)



Profile View of Wing Armoring with Extension
(South Abutment Shown, North Abutment Similar)

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



Section A-A

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 underlaid 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.

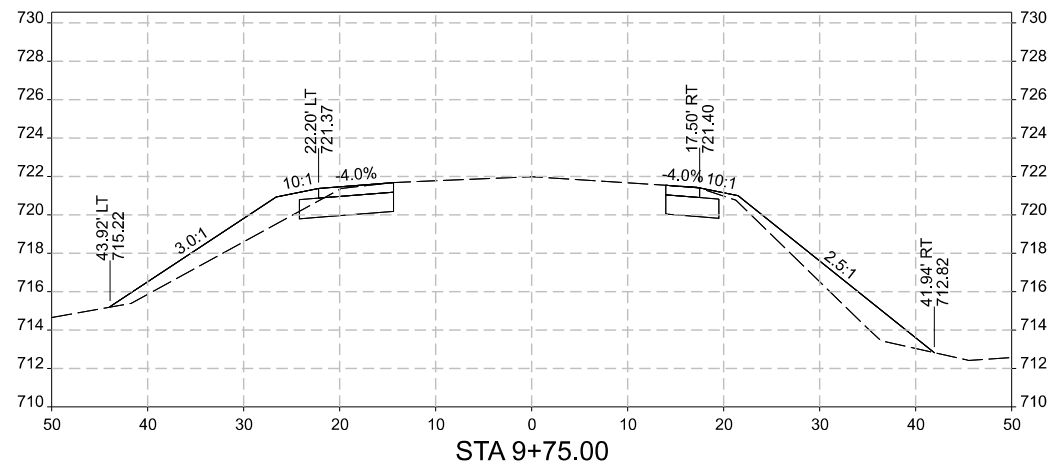
Payment for the bridge wing armoring will be bid per square yard. Cost will include engineering fabric, erosion stone, excavation, shaping, and compaction to dimensions shown in these plans. Bid item shall be "Bridge Wing Armoring - Erosion Stone".

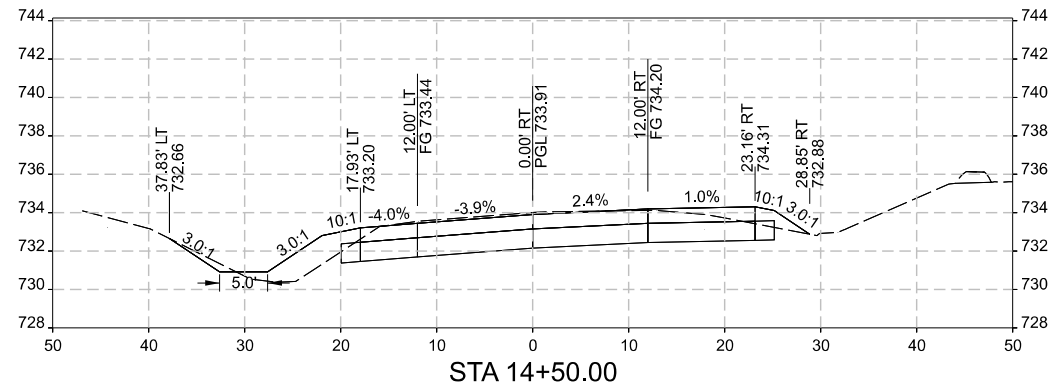
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Bridge Wing Armoring Details
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Linn County
IOWA DEPARTMENT OF TRANSPORTATION
Design Sheet No. V.25 of V.25 FHWA No. 001500

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