



Planning & Engineering
Office of Project Development
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February 10, 2025

ADDENDUM NO. 2

RE: Item #1, February 12, 2025 Letting - NH 0100(106)409, P 8042(00), P 8042(00), PCN 01V7, 08DG, 08DH, Lincoln County - Grading, Structure's (2-12x5 Precast RCBC, (2)12x10 CIP RCBC, 196.5' Steel Girder, 2-11x5 CIP RCBC, 9x5 Precast RCBC), PCC Surfacing, Curb & Gutter, Storm Sewer, Signals, Lighting

TO WHOM IT MAY CONCERN:

The following addenda to the plans shall be inserted and made a part of your proposal for the referenced project.

SPECIAL PROVISIONS: NONE

SDEBS BID PROPOSAL: *The electronic bid proposal for this contract has been revised to include the changes associated with this addendum. Bidders must log in to the SDEBS to retrieve and incorporate these changes into their bid.*

Quantities for Bid Items were changed:

Bid Item 635E8040 "4" Rigid Galvanized Steel Conduit" changed from 4,537 to 2,645 Ft

PLANS: Please destroy sheets A3, E2, E18, and E29 and replace with the enclosed sheets, dated 2/10/25.

Sheets A3, E2 & E18: Section E Structure No. 42-115-015
Bid Item 635E8040 "4" Rigid Galvanized Steel Conduit" was removed.

Sheet E29: Bid item and associated notes for 4" Rigid Galvanized Steel Conduit was removed from the Estimated Quantities. Note referencing Section L was added.

Sincerely,

Sam Weisgram
Engineering Supervisor

SW/cj

CC: Travis Dressen, Mitchell Region Engineer
Harry Johnston, Sioux Falls Area Engineer

Section E – Structures

REV DATE: 2/10/2025
INITIAL: LPR

Section E – Structures

Structure No. 42-113-015, 42-123-015, 42-120-015, MSE Wire Face Retaining Wall, Barrier and Moment Slabs						
Bid Item Number	Item	Quantity			Total	Unit
		PCN 01V7 Veterans	PCN 08DG Southeastern	PCN 08DH Sycamore		
260E2010	Gravel Cushion	9.7	-	-	9.7	Ton
380E2400	Concrete Barrier with Concrete Reinforced Footing	1,967	-	-	1,967	Ft
420E0200	Structure Excavation, Box Culvert	261	47	-	308	CuYd
420E0300	Structure Excavation, Retaining Wall	170	-	-	170	CuYd
420E1000	Foundation Preparation, Retaining Wall	159	-	-	159	CuYd
421E0200	Box Culvert Undercut	750	188	-	938	CuYd
430E0700	Precast Concrete Headwall for Drain	3	-	-	3	Each
460E0120	Class A45 Concrete, Box Culvert	627.8	-	-	627.8	CuYd
460E0204	Anti-Graffiti Coating	12,549.0	-	-	12,549.0	SqFt
470E0230	Steel Bicycle Railing on Concrete Barrier	88.0	-	-	88.0	Ft
480E0100	Reinforcing Steel	114,408	-	-	114,408	Lb
530E0400	MSE Wire Face Wall	957	-	-	957	SqFt
530E0704	Granular Backfill for MSE Wire Face Wall	461.0	-	-	461.0	CuYd
560E0110	9' x 5' Precast Concrete Box Culvert, Furnish	-	138.0	-	138.0	Ft
560E0111	9' x 5' Precast Concrete Box Culvert, Install	-	138.0	-	138.0	Ft
560E1110	9' x 5' Precast Concrete Box Culvert End Section, Furnish	-	2	-	2	Ea
560E1111	9' x 5' Precast Concrete Box Culvert End Section, Install	-	2	-	2	Ea
621E0240	Special 4' Chain Link Fence	268	60	-	328	Ft
680E0040	4" Underdrain Pipe	1,655	-	-	1,655	Ft
680E2500	Porous Backfill	1,258.2	-	-	1,258.2	Ton
700E0210	Class B Riprap	-	28.0	-	28.0	Ton
734E2020	Bridge Berm Slope Protection, Coated Crushed Aggregate	125.0	-	-	125.0	SqYd
831E0110	Type B Drainage Fabric	-	40	-	40	SqYd
831E0300	Reinforcement Fabric (MSE)	227	-	-	227	SqYd
831E1010	Geogrid Reinforcement	522	-	-	522	SqYd

Structure No. 42-111-016						
Bid Item Number	Item	Quantity			Total	Unit
		PCN 01V7 Veterans	PCN 08DG Southeastern	PCN 08DH Sycamore		
420E0200	Structure Excavation, Box Culvert	170	-	-	170	CuYd
421E0200	Box Culvert Undercut	540	-	-	540	CuYd
560E2164	2-12'x5' Precast Concrete Box Culvert, Furnish	198.0	-	-	198.0	Ft
560E2165	2-12'x5' Precast Concrete Box Culvert, Install	198.0	-	-	198.0	Ft
560E3164	2-12'x5' Precast Concrete Box Culvert End Section, Furnish	2	-	-	2	Each
560E3165	2-12'x5' Precast Concrete Box Culvert End Section, Install	2	-	-	2	Each
621E0240	Special 4' Chain Link Fence	91	-	-	91	Ft
700E0210	Class B Riprap	44.8	-	-	44.8	Ton
831E0110	Type B Drainage Fabric	65	-	-	65	SqYd

Structure No. 42-115-015 (Bridge)						
Bid Item Number	Item	Quantity			Total	Unit
		PCN 01V7 Veterans	PCN 08DG Southeastern	PCN 08DH Sycamore		
009E3310	Bridge Elevation Survey	Lump Sum	-	-	Lump Sum	LS
009E5000	Concrete Penetrating Sealer	2,128.8	-	-	2,128.8	SqYd
120E7000	Select Granular Backfill	36.7	-	-	36.7	Ton
410E0020	Structural Steel	Lump Sum	-	-	Lump Sum	LS
410E2600	Membrane Sealant Expansion Joint	371.4	-	-	371.4	Ft
411E0100	Bridge Painting	Lump Sum	-	-	Lump Sum	LS
430E0200	Bridge End Embankment	4,034	-	-	4,034	CuYd
430E0300	Granular Bridge End Backfill	318.7	-	-	318.7	CuYd
430E0700	Precast Concrete Headwall for Drain	4	-	-	4	Each
460E0030	Class A45 Concrete, Bridge Deck	623.0	-	-	623.0	CuYd
460E0050	Class A45 Concrete, Bridge	259.6	-	-	259.6	CuYd
460E0150	Concrete Approach Slab for Bridge	412.6	-	-	412.6	SqYd
460E0160	Concrete Approach Sleeper Slab for Bridge	149.6	-	-	149.6	SqYd
460E0380	Install Dowel in Concrete	376	-	-	376	Each
460E0500	Deck Drain, Girder Bridge	8	-	-	8	Each
470E0030	Special Steel Railing	231.0	-	-	231.0	Ft
470E0230	Steel Bicycle Railing on Concrete Barrier	232.0	-	-	232.0	Ft
480E0100	Reinforcing Steel	26,866	-	-	26,866	Lb
480E0200	Epoxy Coated Reinforcing Steel	10,319	-	-	10,319	Lb
480E0300	Stainless Reinforcing Steel	136,381	-	-	136,381	Lb
510E0300	Preboring Pile	1,242	-	-	1,242	Ft
510E3521	HP 14x73 Steel Test Pile, Furnish and Drive	240	-	-	240	Ft
510E3525	HP 14x73 Steel Bearing Pile, Furnish and Drive	5,060	-	-	5,060	Ft
651E0160	6" Reinforced Concrete Sidewalk	220	-	-	220	Sqft
680E0040	4" Underdrain Pipe	296	-	-	296	Ft
680E1200	Fiberglass Drain Pipe	204	-	-	204	Ft
680E2500	Porous Backfill	13.0	-	-	13.0	Ton
734E2022	Bridge Berm Slope Protection, Quarried Aggregate	1,514.8	-	-	1,514.8	SqYd
831E1030	Perforated Geocell	1,050	-	-	1,050	SqFt

Structure No. 42-121-015						
Bid Item Number	Item	Quantity			Total	Unit
		PCN 01V7 Veterans	PCN 08DG Southeastern	PCN 08DH Sycamore		
420E0200	Structure Excavation, Box Culvert	200	-	-	200	CuYd
421E0200	Box Culvert Undercut	526	-	-	526	CuYd
460E0120	Class A45 Concrete, Box Culvert	436.6	-	-	436.6	CuYd
480E0100	Reinforcing Steel	89,124	-	-	89,124	Lb
621E0240	Special 4' Chain Link Fence	91	-	-	91	Ft
700E0210	Class B Riprap	53.0	-	-	53.0	Ton
831E0110	Type B Drainage Fabric	68	-	-	68	SqYd
831E0300	Reinforcement Fabric (MSE)	763	-	-	763	SqYd

SECTION E - ESTIMATE OF STRUCTURE QUANTITIES

PCN 01V7

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
260E2010	Gravel Cushion	9.7	Ton
380E2400	Concrete Barrier with Concrete Reinforced Footing	1,967	Ft
420E0200	Structure Excavation, Box Culvert	261	CuYd
420E0300	Structure Excavation, Retaining Wall	170	CuYd
420E1000	Foundation Preparation, Retaining Wall	159	CuYd
421E0200	Box Culvert Undercut	750	CuYd
430E0700	Precast Concrete Headwall for Drain	3	Each
460E0120	Class A45 Concrete, Box Culvert	627.8	CuYd
460E0204	Anti-Graffiti Coating	12,549.0	SqFt
470E0230	Steel Bicycle Railing on Concrete Barrier	88.0	Ft
480E0100	Reinforcing Steel	114,408	Lb
530E0400	MSE Wire Face Wall	957	SqFt
530E0704	Granular Backfill for MSE Wire Face Wall	461.0	CuYd
621E0240	Special 4' Chain Link Fence	268	Ft
680E0040	4" Underdrain Pipe	1,655	Ft
680E2500	Porous Backfill	1,258.2	Ton
734E2020	Bridge Berm Slope Protection, Coated Crushed Aggregate	125.0	SqYd
831E0300	Reinforcement Fabric (MSE)	227	SqYd
831E1010	Geogrid Reinforcement	522	SqYd

PCN 08DG

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
420E0200	Structure Excavation, Box Culvert	47	CuYd
421E0200	Box Culvert Undercut	188	CuYd
560E0110	9' x 5' Precast Concrete Box Culvert, Furnish	138	Ft
560E0111	9' x 5' Precast Concrete Box Culvert, Install	138	Ft
560E1110	9' x 5' Precast Concrete Box Culvert End Section, Furnish	2	Each
560E1111	9' x 5' Precast Concrete Box Culvert End Section, Install	2	Each
621E0240	Special 4' Chain Link Fence	60	Ft
700E0210	Class B Riprap	28.0	Ton
831E0110	Type B Drainage Fabric	40	SqYd

**PCN 01V7
Str. No. 42-115-015**

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E3310	Bridge Elevation Survey	Lump Sum	LS
009E5000	Concrete Penetrating Sealer	2,128.8	SqYd
120E7000	Select Granular Backfill	36.7	Ton
410E0020	Structural Steel	Lump Sum	LS
410E2600	Membrane Sealant Expansion Joint	371.4	Ft
411E0100	Bridge Painting	Lump Sum	LS
430E0200	Bridge End Embankment	4,034	CuYd
430E0300	Granular Bridge End Backfill	318.7	CuYd
430E0700	Precast Concrete Headwall for Drain	4	Each
460E0030	Class A45 Concrete, Bridge Deck	623.0	CuYd
460E0050	Class A45 Concrete, Bridge	259.6	CuYd
460E0150	Concrete Approach Slab for Bridge	412.6	SqYd
460E0160	Concrete Approach Sleeper Slab for Bridge	149.6	SqYd
460E0380	Install Dowel in Concrete	376	Each
460E0500	Deck Drain, Girder Bridge	8	Each
470E0030	Special Steel Railing	231.0	Ft
470E0230	Steel Bicycle Railing on Concrete Barrier	232.0	Ft
480E0100	Reinforcing Steel	26,866	Lb
480E0200	Epoxy Coated Reinforcing Steel	10,319	Lb
480E0300	Stainless Reinforcing Steel	136,381	Lb
510E0300	Preboring Pile	1,242	Ft
510E3521	HP 14x73 Steel Test Pile, Furnish and Drive	240	Ft
510E3525	HP 14x73 Steel Bearing Pile, Furnish and Drive	5,060	Ft
635E0040	4" Rigid Galvanized Steel Conduit	1,892	Ft
651E0160	6" Reinforced Concrete Sidewalk	220	SqFt
680E0040	4" Underdrain Pipe	296	Ft
680E1200	Fiberglass Drain Pipe	204	Ft
680E2500	Porous Backfill	13.0	Ton
734E2022	Bridge Berm Slope Protection, Quarried Aggregate	1,514.8	SqYd
831E1030	Perforated Geocell	1,050	SqFt

**PCN 01V7
Str. No. 42-111-016**

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
420E0200	Structure Excavation, Box Culvert	170	CuYd
421E0200	Box Culvert Undercut	540	CuYd
560E2164	2 - 12' x 5' Precast Concrete Box Culvert, Furnish	198	Ft
560E2165	2 - 12' x 5' Precast Concrete Box Culvert, Install	198	Ft
560E3164	2 - 12' x 5' Precast Concrete Box Culvert End Section, Furnish	2	Each
560E3165	2 - 12' x 5' Precast Concrete Box Culvert End Section, Install	2	Each
621E0240	Special 4' Chain Link Fence	91	Ft
700E0210	Class B Riprap	44.8	Ton
831E0110	Type B Drainage Fabric	65	SqYd

**PCN 01V7
Str. No. 42-121-015**

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
420E0200	Structure Excavation, Box Culvert	200	CuYd
421E0200	Box Culvert Undercut	526	CuYd
460E0120	Class A45 Concrete, Box Culvert	436.6	CuYd
480E0100	Reinforcing Steel	89,124	Lb
621E0240	Special 4' Chain Link Fence	91	Ft
700E0210	Class B Riprap	53.0	Ton
831E0110	Type B Drainage Fabric	68	SqYd
831E0300	Reinforcement Fabric (MSE)	763	SqYd

CONSTRUCTION CHANGE



ESTIMATE OF STRUCTURE QUANTITIES

Str. No. 42-115-015		
Item	Quantity	Unit
Bridge Elevation Survey	Lump Sum	LS
Concrete Penetrating Sealer	2,128.8	SqYd
Select Granular Backfill	36.7	Ton
Structural Steel	Lump Sum	LS
Membrane Sealant Expansion Joint	371.4	Ft
Bridge Painting	Lump Sum	LS
Bridge End Embankment	4,034	CuYd
Granular Bridge End Backfill	318.7	CuYd
Precast Concrete Headwall for Drain	4	Each
Class A45 Concrete, Bridge Deck	623.0	CuYd
Class A45 Concrete, Bridge	259.6	CuYd
Concrete Approach Slab for Bridge	412.6	SqYd
Concrete Approach Sleeper Slab for Bridge	149.6	SqYd
Install Dowel in Concrete	376	Each
Deck Drain, Girder Bridge	8	Each
Special Steel Railing	231.0	Ft
Steel Bicycle Railing on Concrete Barrier	232.0	Ft
Reinforcing Steel	26,866	Lb
Epoxy Coated Reinforcing Steel	10,319	Lb
Stainless Reinforcing Steel	136,381	Lb
Preboring Pile	1,242	Ft
HP 14x73 Steel Test Pile, Furnish and Drive	240	Ft
HP 14x73 Steel Bearing Pile, Furnish and Drive	5,060	Ft
4" Rigid Galvanized Steel Conduit	1,892	Ft
6" Reinforced Concrete Sidewalk	220	SqFt
4" Underdrain Pipe	296	Ft
Fiberglass Drain Pipe	204	Ft
Porous Backfill	13.0	Ton
Bridge Berm Slope Protection, Quarried Aggregate	1,514.8	SqYd
Perforated Geocell	1,050	SqFt

SPECIFICATIONS FOR BRIDGE

- Design Specifications: AASHTO LRFD Bridge Design Specifications, 9th Edition.
- Construction Specifications: South Dakota Standard Specifications for Roads and Bridges, 2015 Edition and required provisions, supplemental specifications, and special provisions as included in the proposal.
- All welding and welding inspections will be in conformance with the latest edition of AASHTO/AWS D1.5/1.5M Bridge Welding Code unless noted otherwise in the plans.

BRIDGE DESIGN LOADING

- AASHTO HL-93
- Dead Load includes 22 psf for future wearing surface on the roadway.

DESIGN MATERIAL STRENGTHS

Class A45 Concrete	$f'_c = 4,500$ psi
Reinforcing Steel ASTM A615, Gr. 60	$f_y = 60,000$ psi
Stainless Steel (ASTM A955, Gr. 60)	$f_y = 60,000$ psi
Piling (ASTM A572 Grade 50)	$f_y = 50,000$ psi
Structural Steel (ASTM A709 Gr. 50WT2)	$f_y = 50,000$ psi

GENERAL CONSTRUCTION

- All lap splices shown are contact lap splices unless noted otherwise.
- All exposed concrete corners and edges will be chamfered 3/4-inch unless noted otherwise.
- Use 2-inch clear cover on all reinforcing steel except as shown otherwise on plans.
- Contractor will imprint on the structure the date of new construction as specified and detailed on Standard Plate No. 460.02.
- Barrier Curbs will be built perpendicular to the roadway grade line.
- Requests for construction joints or reinforcing steel splices at points other than those shown, must be submitted to the Engineer for prior approval. If additional splices are approved, no payment will be allowed for the added quantity of reinforcing steel.
- Bridge berms will be constructed to the plans template prior to any pile driving or construction of abutment footings. See Standard Plate 120.11. Berm slopes will not be disturbed after construction. Any alterations to the berm or slopes after berm construction will be submitted to the Engineer for approval. Allow 30 days for review of proposals.

DESIGN MIX OF CONCRETE

- All structural concrete will be Class A45 unless otherwise indicated.
- Type II cement conforming to Section 750 of the Construction Specifications is required in all concrete on the structure except in the abutments. Abutment concrete will use a Type III cement or an approved modified A45 mix. The modified mix will meet the requirements for A45 concrete specified in Section 460 of the Construction Specification with the following modifications: a high range water reducer is required at the manufacturers' recommended dosage, the maximum concrete slump is 6 inches, the maximum water/cementitious material ratio will be at least 0.02 less than the A45 mix used in the rest of the substructure, and the minimum concrete temperature at time of placement will be 65 degrees Fahrenheit. If used, type III cement will contain a maximum 8% Tricalcium Aluminate (C_3A) and a maximum 0.6% Alkalis ($Na_2O + 0.658K_2O$).

ABUTMENTS

- Preboring piling at each abutment is required to whichever is greater, ten feet or to natural ground.
- The HP 14x73 Piling were designed using a factored bearing resistance of 134 tons per pile. Piling will develop a field verified nominal bearing resistance of 335 tons per pile.
- One test pile will be driven at each abutment and will become part of the pile group.
- The Contractor will have sufficient pile splice material on hand before pile driving is started. See Standard Plate No. 510.40.
- Piles will not be driven out of position by more than three inches in the direction parallel to the girder centerline. A pile-driving template will be used to ensure this accuracy.
- Each finished abutment will include a Bridge Survey Marker. See Standard Plate No. 460.05.
- Wingwalls will not be cast until after the deck has been poured.
- Abutment backwalls may be poured with the deck if concrete mix additives are included to prevent the backwall concrete from setting up before the finishing machine reaches the opposite 3/4 span point.



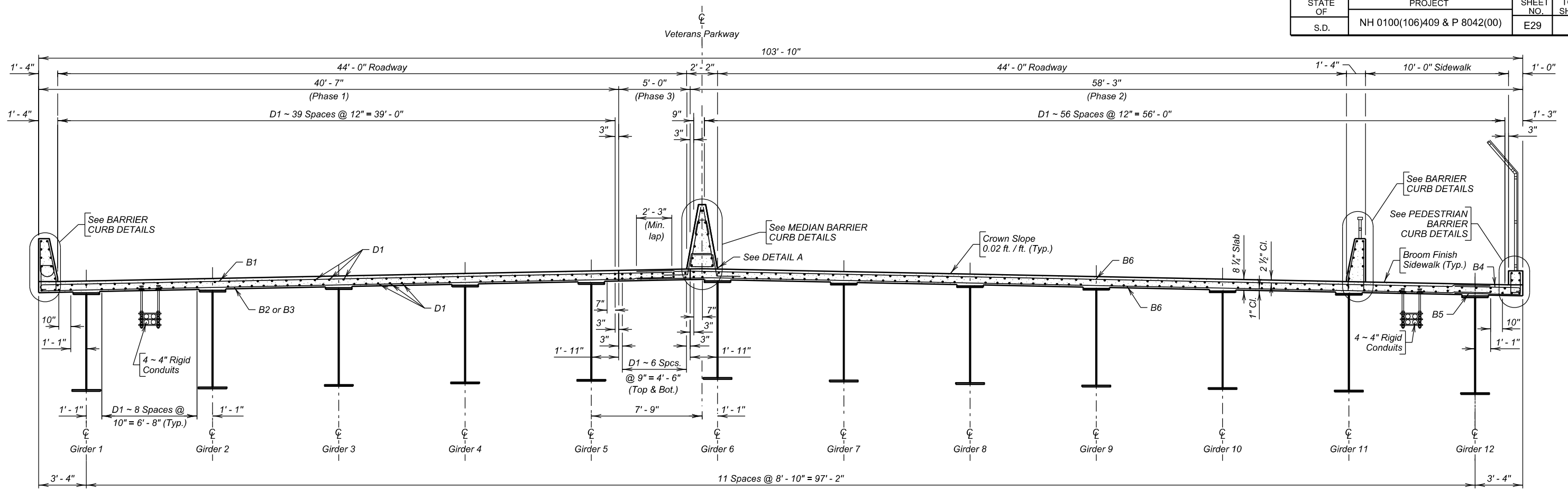
CONSTRUCTION CHANGE

ESTIMATE OF STRUCTURE QUANTITIES AND NOTES
FOR
196' - 6" STEEL COMP. GIRDER BRIDGE

Str. No. 42-115-015

OCTOBER 2024

2 OF 37



TYPICAL SECTION

REINFORCING SCHEDULE				
Mk	No	Size	Length	Type
B1	381	5	44' - 10"	1A
B2	164	5	44' - 3"	Str.
B3	163	5	42' - 2"	Str.
B4	381	5	5' - 2"	1A
B5	164	5	4' - 10"	Str.
B6	708	5	59' - 9"	Str.
C1	196	5	6' - 0"	T1A
C2	196	5	5' - 6"	S11
C3	392	5	4' - 1"	S4A
C4	196	5	10' - 3"	S10B
C5	196	5	2' - 7"	S10A
C6	196	5	3' - 4"	19B
C7	100	5	3' - 4"	Str.
C8	185	5	3' - 9"	S10
D1	856	5	50' - 4"	Str.
D2	120	4	50' - 1"	Str.
D3	16	4	47' - 3"	Str.
P1	104	3	2' - 6"	Str.
Z1	138	7	4' - 0"	Str.

Bending Details	

NOTES:
 All reinforcing steel will be stainless steel.
 All dimensions are out to out of bars.
 * At Contractors option, Z1 bars may be made 2' - 0" each, the count doubled, and couplers used.
 ♦ Epoxy Coated.
 ⚡ Drill and epoxy in place. Not included in reinforcing steel quantity.

ESTIMATED QUANTITIES		
ITEM	UNIT	QUANTITY
▲ Concrete Penetrating Sealer	Sq. Yd.	2128.8
⚡ Structural Steel	Lump Sum	LS
★ Bridge Painting	Lump Sum	LS
♦ Class A45 Concrete, Bridge Deck	Cu. Yd.	623.0
Install Dowel in Concrete	Each	296
Deck Drain, Girder Bridge	Each	8
Epoxy Coated Reinforcing Steel	Lb.	1227
Stainless Reinforcing Steel	Lb.	136384
⚡ 4" Rigid Galvanized Steel Conduit	Ft.	1892
⚡ Fiberglass Drain Pipe	Ft.	204

♦ Includes quantities for Barrier Curbs, Slab, and Haunches. (Average depth of 3/4" used for Haunch Quantity).

⚡ For informational purposes only, the estimated weight of the structural steel is 985,670 pounds.

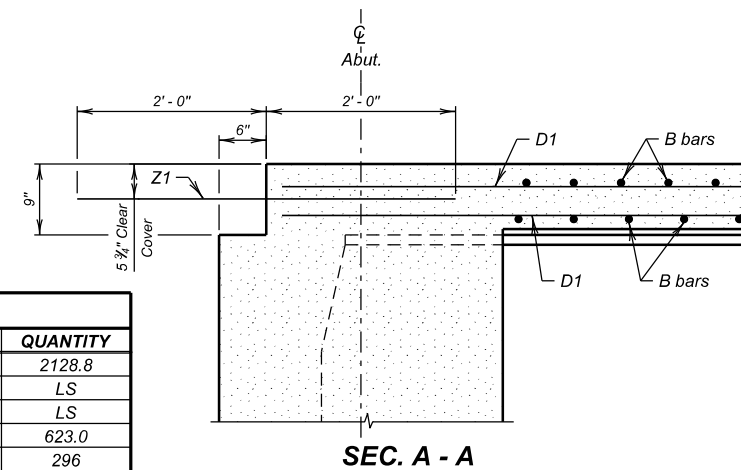
★ For informational purposes only, the estimated area to be painted is 5,380 Sq.Ft.

▲ Apply to bridge deck between barrier curbs and on sidewalk

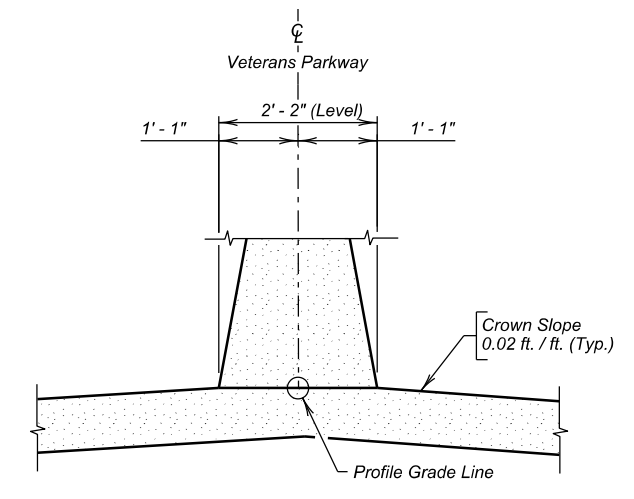
⚡ Payment length is from sleeper slab to sleeper slab. See Section L for junction boxes.

See Section L plans for payment of Rigid Galvanized Steel Conduit.

See plan notes for method of payment of Fiberglass Drain Pipe and Deck Drain, Girder Bridge.



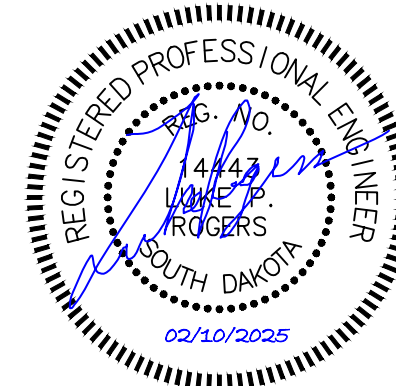
SEC. A - A



DETAIL A

⚠ CONSTRUCTION CHANGE
 SUPERSTRUCTURE DETAILS (C)

FOR
196' - 6" STEEL GIRDER BRIDGE
 2 - 44' - 0" RDWY'S & 10' - 0" SIDEWALK 0° SKEW
 OVER BNSF RAILROAD SEC 13-T100N-R50W
 STA. 350 + 76.36 TO 352 + 72.86 NH 0100(106)409
 STR. NO. 42-115-015 HL-93



⚠ Revised LPR February 10, 2025

DESIGNED BY LPR LINC01V7	CK. DES. BY NPC 01V7AM13	DRAFTED BY SEM	BRIDGE ENGINEER
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