

October 14, 2025

**ADDENDUM NO. 3**

**RE: Item #1, October 15, 2025 Letting - EM 0292(88)73, IM 2292(104)0, PCN 06JQ, 07D0,  
Lincoln County - Structures (276.5' Steel Girder, 313' Steel Girder, 11x10 CIP RCBC),  
Grading, PCC Surfacing, Storm Sewer, Pavement Marking, Lighting, Signal, Sidewalk**

**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:** NO CHANGE

**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 510E0300 "Preboring Pile" changed from 360 to 778 Ft

Bid Item 632E5020 "Overhead Cantilever Sign Support" changed from 3 to 2 Each

**PLANS:** Please destroy sheets A4, A7, E2, E4, E5, E12, E14, E62, E71, E75, S2 & S6 and replace with the enclosed sheets, dated 10/14/25.

**Sheets A4 & E2:** Section E – Structures PCN 06JQ Structure No. 42-065-016

**Quantities for Bid Items were changed:**

Bid Item 510E0300 "Preboring Pile" changed from 160 to 328 Ft

Section E – Structures PCN 06JQ Structure No. 42-065-020

**Quantities for Bid Items were changed:**

Bid Item 510E0300 "Preboring Pile" changed from 200 to 450 Ft

**Sheets A7 & S2:** Section S – Permanent Signing PCN 06JQ

**Quantities for Bid Items were changed:**

Bid Item 632E5020 "Overhead Cantilever Sign Support" changed from 2 to 1 Each

**Sheet E4:** Quantity for Bid Item 510E0300 "Preboring Pile" changed from 200 to 450 Ft.

**Sheet E5:** ABUTMENTS Note 1 was revised.

**Sheets E12 & E14:** Quantity for Preboring Pile was revised.

**Sheet E62:** Quantity for Bid Item 510E0300 “Preboring Pile” changed from 160 to 328 Ft.

**Sheets E71 & E75:** Quantity for Preboring Pile was revised.

**Sheet S6:** TABLE OF REMOVE AND INSTALL SIGN STRUCTURES was revised.

Sincerely,

Sam Weisgram  
Engineering Supervisor

SW/gp

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

Section D - Erosion and Sediment Control

(Continued)

PCN 07D0

| BID ITEM NUMBER | ITEM                                    | QUANTITY | UNIT |
|-----------------|-----------------------------------------|----------|------|
| 110E1690        | Remove Sediment                         | 3.2      | CuYd |
| 110E1693        | Remove Erosion Control Wattle           | 350      | Ft   |
| 110E1700        | Remove Silt Fence                       | 1,039    | Ft   |
| 120E6300        | Water for Vegetation                    | 2,632.5  | MGal |
| 230E0010        | Placing Topsoil                         | 4,875    | CuYd |
| 730E0212        | Type G Permanent Seed Mixture           | 236      | Lb   |
| 731E0200        | Fertilizing                             | 6.80     | Ton  |
| 732E0300        | Bonded Fiber Matrix                     | 17.7     | Ton  |
| 734E0044        | Soil Stabilizer                         | 9.1      | Acre |
| 734E0154        | 12" Diameter Erosion Control Wattle     | 1,400    | Ft   |
| 734E0165        | Remove and Reset Erosion Control Wattle | 350      | Ft   |
| 734E0602        | Low Flow Silt Fence                     | 4,199    | Ft   |
| 734E0610        | Mucking Silt Fence                      | 288      | CuYd |
| 734E0620        | Repair Silt Fence                       | 1,039    | Ft   |
| 734E5005        | Dewatering                              | Lump Sum | LS   |
| 734E5010        | Sweeping                                | 24       | Hour |
| 900E1310        | Concrete Washout Facility               | 2        | Each |
| 900E1320        | Construction Entrance                   | 1        | Each |

Section E - Structures

PCN 06JQ

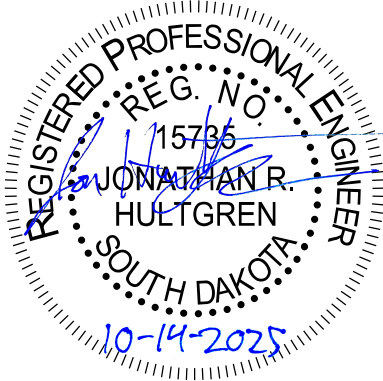
| BID ITEM NUMBER | ITEM                                       | QUANTITY | UNIT |
|-----------------|--------------------------------------------|----------|------|
| 420E0300        | Structure Excavation, Retaining Wall       | 2,750    | CuYd |
| 420E1000        | Foundation Preparation, Retaining Wall     | 1,277    | CuYd |
| 421E0200        | Box Culvert Undercut                       | 139      | CuYd |
| 430E0200        | Bridge End Embankment                      | 1,878    | CuYd |
| 430E0700        | Precast Concrete Headwall for Drain        | 1        | Each |
| 460E0100        | Class A45 Concrete, Miscellaneous          | 659.8    | CuYd |
| 460E0120        | Class A45 Concrete, Box Culvert            | 268.5    | CuYd |
| 460E0204        | Anti-Graffiti Coating                      | 26,543.0 | SqFt |
| 480E0100        | Reinforcing Steel                          | 49,688   | Lb   |
| 480E0200        | Epoxy Coated Reinforcing Steel             | 100,103  | Lb   |
| 530E0420        | MSE Large Panel Wall, Furnish              | 10,140   | SqFt |
| 530E0422        | MSE Large Panel Wall, Install              | 10,140   | SqFt |
| 530E0702        | Granular Backfill for MSE Large Panel Wall | 6,009.0  | CuYd |
| 651E0040        | 4" Concrete Sidewalk                       | 164      | SqFt |
| 680E0040        | 4" Underdrain Pipe                         | 1,345    | Ft   |
| 680E2500        | Porous Backfill                            | 660.0    | Ton  |

Structure No. 42-065-016

| BID ITEM NUMBER | ITEM                                             | QUANTITY | UNIT |
|-----------------|--------------------------------------------------|----------|------|
| 009E3310        | Bridge Elevation Survey                          | Lump Sum | LS   |
| 009E5000        | Concrete Penetrating Sealer                      | 939.0    | SqYd |
| 120E7000        | Select Granular Backfill                         | 14.9     | Ton  |
| 410E0020        | Structural Steel                                 | Lump Sum | LS   |
| 410E0700        | Abutment Joint Drain                             | 2        | Each |
| 410E2100        | Finger Type Expansion Joint Assembly             | 2        | Each |
| 420E0100        | Structure Excavation, Bridge                     | 465      | CuYd |
| 430E0200        | Bridge End Embankment                            | 1,720    | CuYd |
| 430E0300        | Granular Bridge End Backfill                     | 156.0    | CuYd |
| 430E0510        | Approach Slab Underdrain Excavation              | 2.0      | CuYd |
| 430E0700        | Precast Concrete Headwall for Drain              | 6        | Each |
| 460E0030        | Class A45 Concrete, Bridge Deck                  | 340.1    | CuYd |
| 460E0050        | Class A45 Concrete, Bridge                       | 560.6    | CuYd |
| 460E0150        | Concrete Approach Slab for Bridge                | 238.5    | SqYd |
| 460E0160        | Concrete Approach Sleeper Slab for Bridge        | 34.6     | SqYd |
| 460E0500        | Deck Drain, Girder Bridge                        | 9        | Each |
| 480E0100        | Reinforcing Steel                                | 73,346   | Lb   |
| 480E0200        | Epoxy Coated Reinforcing Steel                   | 8,496    | Lb   |
| 480E0300        | Stainless Reinforcing Steel                      | 67,897   | Lb   |
| 480E0518        | No. 18 Rebar Splice                              | 104      | Each |
| 510E0300        | Preboring Pile                                   | 328      | Ft   |
| 510E3521        | HP 14x73 Steel Test Pile, Furnish and Drive      | 420      | Ft   |
| 510E3525        | HP 14x73 Steel Bearing Pile, Furnish and Drive   | 7,120    | Ft   |
| 635E8020        | 2" Rigid Galvanized Steel Conduit                | 313      | Ft   |
| 680E0040        | 4" Underdrain Pipe                               | 380      | Ft   |
| 680E2500        | Porous Backfill                                  | 32.0     | Ton  |
| 734E2022        | Bridge Berm Slope Protection, Quarried Aggregate | 442.1    | SqYd |
| 831E0100        | Type A Drainage Fabric                           | 443      | SqYd |
| 831E0110        | Type B Drainage Fabric                           | 47       | SqYd |
| 831E1030        | Perforated Geocell                               | 425      | SqFt |

Structure No. 42-065-020

| BID ITEM NUMBER | ITEM                                             | QUANTITY | UNIT |
|-----------------|--------------------------------------------------|----------|------|
| 009E3310        | Bridge Elevation Survey                          | Lump Sum | LS   |
| 009E5000        | Concrete Penetrating Sealer                      | 2,470.0  | SqYd |
| 120E7000        | Select Granular Backfill                         | 37.0     | Ton  |
| 410E0020        | Structural Steel                                 | Lump Sum | LS   |
| 410E2600        | Membrane Sealant Expansion Joint                 | 184.5    | Ft   |
| 420E0100        | Structure Excavation, Bridge                     | 407      | CuYd |
| 430E0200        | Bridge End Embankment                            | 2,980    | CuYd |
| 430E0300        | Granular Bridge End Backfill                     | 408.0    | CuYd |
| 430E0510        | Approach Slab Underdrain Excavation              | 6.0      | CuYd |
| 430E0700        | Precast Concrete Headwall for Drain              | 4        | Each |
| 460E0030        | Class A45 Concrete, Bridge Deck                  | 820.2    | CuYd |
| 460E0050        | Class A45 Concrete, Bridge                       | 530.4    | CuYd |
| 460E0150        | Concrete Approach Slab for Bridge                | 407.4    | SqYd |
| 460E0160        | Concrete Approach Sleeper Slab for Bridge        | 150.4    | SqYd |
| 462E0100        | Class M6 Concrete                                | 40.9     | CuYd |
| 470E0220        | Steel Pedestrian Railing on Concrete Barrier     | 767.0    | Ft   |
| 480E0100        | Reinforcing Steel                                | 111,682  | Lb   |
| 480E0200        | Epoxy Coated Reinforcing Steel                   | 1,284    | Lb   |
| 480E0300        | Stainless Reinforcing Steel                      | 203,000  | Lb   |
| 480E0518        | No. 18 Rebar Splice                              | 132      | Each |
| 510E0300        | Preboring Pile                                   | 450      | Ft   |
| 510E3521        | HP 14x73 Steel Test Pile, Furnish and Drive      | 365      | Ft   |
| 510E3525        | HP 14x73 Steel Bearing Pile, Furnish and Drive   | 8,400    | Ft   |
| 635E8020        | 2" Rigid Galvanized Steel Conduit                | 277      | Ft   |
| 635E8040        | 4" Rigid Galvanized Steel Conduit                | 1,110    | Ft   |
| 680E0040        | 4" Underdrain Pipe                               | 117      | Ft   |
| 680E2500        | Porous Backfill                                  | 14.0     | Ton  |
| 734E2022        | Bridge Berm Slope Protection, Quarried Aggregate | 583.0    | SqYd |
| 831E0100        | Type A Drainage Fabric                           | 584      | SqYd |
| 831E0110        | Type B Drainage Fabric                           | 118      | SqYd |
| 831E1030        | Perforated Geocell                               | 1,056    | SqFt |



Section M - Pavement Marking  
PCN 06JQ

| BID ITEM NUMBER | ITEM                                                                        | QUANTITY | UNIT |
|-----------------|-----------------------------------------------------------------------------|----------|------|
| 633E0010        | Cold Applied Plastic Pavement Marking, 4"                                   | 48,166   | Ft   |
| 633E0019        | Cold Applied Plastic Pavement Marking, 4" with Contrast Border              | 11,216   | Ft   |
| 633E0021        | Cold Applied Plastic Pavement Marking, 8" with Contrast Border              | 2,109    | Ft   |
| 633E0025        | Cold Applied Plastic Pavement Marking, 12"                                  | 4,984    | Ft   |
| 633E0030        | Cold Applied Plastic Pavement Marking, 24"                                  | 532      | Ft   |
| 633E0040        | Cold Applied Plastic Pavement Marking, Arrow                                | 28       | Each |
| 633E0046        | Cold Applied Plastic Pavement Marking, Lane Reduction Arrow                 | 2        | Each |
| 633E0210        | Preformed Thermoplastic Pavement Marking, 4"                                | 5,463    | Ft   |
| 633E0211        | Preformed Thermoplastic Pavement Marking, 4" with Contrast Border           | 4,225    | Ft   |
| 633E0215        | Preformed Thermoplastic Pavement Marking, 8"                                | 650      | Ft   |
| 633E0220        | Preformed Thermoplastic Pavement Marking, 12"                               | 128      | Ft   |
| 633E0225        | Preformed Thermoplastic Pavement Marking, 24"                               | 1,001    | Ft   |
| 633E0230        | Preformed Thermoplastic Pavement Marking, Area                              | 210      | SqFt |
| 633E0235        | Preformed Thermoplastic Pavement Marking, Arrow                             | 33       | Each |
| 633E1220        | High Build Waterborne Pavement Marking Paint, 4" White                      | 719      | Ft   |
| 633E1222        | High Build Waterborne Pavement Marking Paint, 4" Yellow                     | 320      | Ft   |
| 633E1260        | High Build Waterborne Pavement Marking Paint, 24" White                     | 74       | Ft   |
| 633E1262        | High Build Waterborne Pavement Marking Paint, 24" Yellow                    | 68       | Ft   |
| 633E5000        | Grooving for Cold Applied Plastic Pavement Marking, 4"                      | 28,518   | Ft   |
| 633E5004        | Grooving for Cold Applied Plastic Pavement Marking, 4" with Contrast Border | 11,601   | Ft   |
| 633E5008        | Grooving for Cold Applied Plastic Pavement Marking, 8" with Contrast Border | 2,109    | Ft   |
| 633E5010        | Grooving for Cold Applied Plastic Pavement Marking, 12"                     | 3,909    | Ft   |
| 633E5015        | Grooving for Cold Applied Plastic Pavement Marking, 24"                     | 1,243    | Ft   |
| 633E5020        | Grooving for Cold Applied Plastic Pavement Marking, Area                    | 210      | SqFt |
| 633E5025        | Grooving for Cold Applied Plastic Pavement Marking, Arrow                   | 61       | Each |
| 633E5031        | Grooving for Cold Applied Plastic Pavement Marking, Lane Reduction Arrow    | 2        | Each |
| 633E5050        | Surface Preparation for Pavement Marking                                    | 35,879   | Ft   |
| 634E0560        | Remove Pavement Marking, 4" or Equivalent                                   | 21,781   | Ft   |
| 634E0565        | Remove Pavement Marking, Arrow                                              | 1        | Each |

PCN 07D0

| BID ITEM NUMBER | ITEM                                                                        | QUANTITY | UNIT |
|-----------------|-----------------------------------------------------------------------------|----------|------|
| 633E0010        | Cold Applied Plastic Pavement Marking, 4"                                   | 16,094   | Ft   |
| 633E0019        | Cold Applied Plastic Pavement Marking, 4" with Contrast Border              | 2,155    | Ft   |
| 633E0025        | Cold Applied Plastic Pavement Marking, 12"                                  | 1,923    | Ft   |
| 633E0225        | Preformed Thermoplastic Pavement Marking, 24"                               | 24       | Ft   |
| 633E0235        | Preformed Thermoplastic Pavement Marking, Arrow                             | 5        | Each |
| 633E5000        | Grooving for Cold Applied Plastic Pavement Marking, 4"                      | 12,407   | Ft   |
| 633E5004        | Grooving for Cold Applied Plastic Pavement Marking, 4" with Contrast Border | 1,305    | Ft   |
| 633E5010        | Grooving for Cold Applied Plastic Pavement Marking, 12"                     | 1,746    | Ft   |
| 633E5015        | Grooving for Cold Applied Plastic Pavement Marking, 24"                     | 24       | Ft   |
| 633E5025        | Grooving for Cold Applied Plastic Pavement Marking, Arrow                   | 5        | Each |
| 633E5050        | Surface Preparation for Pavement Marking                                    | 5,068    | Ft   |
| 634E0560        | Remove Pavement Marking, 4" or Equivalent                                   | 8,288    | Ft   |

Section S - Permanent Signing  
PCN 06JQ

| BID ITEM NUMBER | ITEM                                                                | QUANTITY | UNIT |
|-----------------|---------------------------------------------------------------------|----------|------|
| 110E0100        | Remove Concrete Footing(s)                                          | Lump Sum | LS   |
| 110E0130        | Remove Traffic Sign                                                 | 9        | Each |
| 110E0135        | Remove Delineator                                                   | 31       | Each |
| 110E0140        | Remove Extruded Panel Sign                                          | 19       | Each |
| 110E5000        | Salvage Sign Bridge                                                 | 3        | Each |
| 110E7150        | Remove Sign for Reset                                               | 10       | Each |
| 632E0014        | 1.75" Diameter Breakaway Support Concrete Footing                   | 52.0     | Ft   |
| 632E0072        | 4' Diameter Fixed Support Concrete Footing                          | 323.0    | Ft   |
| 632E1230        | W6x15 Steel Post                                                    | 143.3    | Ft   |
| 632E1235        | W6x20 Steel Post                                                    | 45.7     | Ft   |
| 632E1320        | 2.0"x2.0" Perforated Tube Post                                      | 1,029.1  | Ft   |
| 632E1340        | 2.5"x2.5" Perforated Tube Post                                      | 64.0     | Ft   |
| 632E2000        | 4"x4" Amber Delineator with 1.12 Lb/Ft Post                         | 12       | Each |
| 632E2004        | 4"x8" Amber Delineator with 1.12 Lb/Ft Post                         | 5        | Each |
| 632E2008        | 4" Tubular Amber Delineator with 1.12 Lb/Ft Post                    | 9        | Each |
| 632E2020        | 4"x4" White Delineator with 1.12 Lb/Ft Post                         | 6        | Each |
| 632E2024        | 4"x8" White Delineator with 1.12 Lb/Ft Post                         | 105      | Each |
| 632E2028        | 4" Tubular White Delineator with 1.12 Lb/Ft Post                    | 16       | Each |
| 632E2220        | Guardrail Delineator                                                | 302      | Each |
| 632E2510        | Type 2 Object Marker Back to Back                                   | 54       | Each |
| 632E2520        | Type 2 Object Marker                                                | 20       | Each |
| 632E3115        | Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity | 4,963.7  | SqFt |
| 632E3203        | Flat Aluminum Sign, Nonremovable Copy High Intensity                | 440.6    | SqFt |
| 632E3205        | Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity     | 618.2    | SqFt |
| 632E3500        | Reset Sign                                                          | 10       | Each |
| 632E5010        | Double Beam Sign Bridge                                             | 8        | Each |
| 632E5020        | Overhead Cantilever Sign Support                                    | 1        | Each |
| 632E5055        | Mast Arm Sign Support                                               | 2        | Each |
| 635E5302        | Type 2 Electrical Junction Box                                      | 2        | Each |
| 635E6200        | Miscellaneous, Electrical                                           | Lump Sum | LS   |
| 635E8120        | 2" Rigid Conduit, Schedule 40                                       | 290      | Ft   |
| 635E8220        | 2" Rigid Conduit, Schedule 80                                       | 90       | Ft   |
| 635E9020        | 1/C #10 AWG Copper Wire                                             | 1,220    | Ft   |
| 900E2030        | Miscellaneous Work                                                  | 1        | Site |

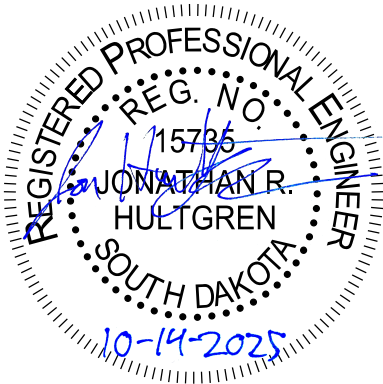
Section S - Permanent Signing  
PCN 07D0

| BID ITEM NUMBER | ITEM                                                                | QUANTITY | UNIT |
|-----------------|---------------------------------------------------------------------|----------|------|
| 110E0100        | Remove Concrete Footing(s)                                          | Lump Sum | LS   |
| 110E0135        | Remove Delineator                                                   | 44       | Each |
| 110E0140        | Remove Extruded Panel Sign                                          | 3        | Each |
| 110E7150        | Remove Sign for Reset                                               | 1        | Each |
| 632E0072        | 4' Diameter Fixed Support Concrete Footing                          | 24.0     | Ft   |
| 632E1320        | 2.0"x2.0" Perforated Tube Post                                      | 12.4     | Ft   |
| 632E2004        | 4"x8" Amber Delineator with 1.12 Lb/Ft Post                         | 6        | Each |
| 632E2020        | 4"x4" White Delineator with 1.12 Lb/Ft Post                         | 6        | Each |
| 632E2024        | 4"x8" White Delineator with 1.12 Lb/Ft Post                         | 37       | Each |
| 632E2220        | Guardrail Delineator                                                | 8        | Each |
| 632E2510        | Type 2 Object Marker Back to Back                                   | 6        | Each |
| 632E2520        | Type 2 Object Marker                                                | 2        | Each |
| 632E3115        | Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity | 405.6    | SqFt |
| 632E3205        | Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity     | 12.6     | SqFt |
| 632E3500        | Reset Sign                                                          | 1        | Each |
| 632E5020        | Overhead Cantilever Sign Support                                    | 1        | Each |

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 10-1-25 Version, Required Provisions, and Special Provisions as included in the Proposal. The Standard Specifications for Roads and Bridges is available for download and viewing at:

<https://dot.sd.gov/doing-business/contractors/standard-specifications>





SECTION E – ESTIMATE OF STRUCTURE QUANTITIES

PCN 06JQ:

Str. No. 42-065-016

| BID ITEM NUMBER | ITEM                                             | QUANTITY | UNIT |
|-----------------|--------------------------------------------------|----------|------|
| 009E3310        | Bridge Elevation Survey                          | Lump Sum | LS   |
| 009E5000        | Concrete Penetrating Sealer                      | 939.0    | SqYd |
| 120E7000        | Select Granular Backfill                         | 14.9     | Ton  |
| 410E0020        | Structural Steel                                 | Lump Sum | LS   |
| 410E0700        | Abutment Joint Drain                             | 2        | Each |
| 410E2100        | Finger Type Expansion Joint Assembly             | 2        | Each |
| 420E0100        | Structure Excavation, Bridge                     | 465      | CuYd |
| 430E0200        | Bridge End Embankment                            | 1,720    | CuYd |
| 430E0300        | Granular Bridge End Backfill                     | 156.0    | CuYd |
| 430E0510        | Approach Slab Underdrain Excavation              | 2.0      | CuYd |
| 430E0700        | Precast Concrete Headwall for Drain              | 6        | Each |
| 460E0030        | Class A45 Concrete, Bridge Deck                  | 340.1    | CuYd |
| 460E0050        | Class A45 Concrete, Bridge                       | 560.6    | CuYd |
| 460E0150        | Concrete Approach Slab for Bridge                | 238.5    | SqYd |
| 460E0160        | Concrete Approach Sleeper Slab for Bridge        | 34.6     | SqYd |
| 460E0500        | Deck Drain, Girder Bridge                        | 9        | Each |
| 480E0100        | Reinforcing Steel                                | 73,346   | Lb   |
| 480E0200        | Epoxy Coated Reinforcing Steel                   | 8,496    | Lb   |
| 480E0300        | Stainless Reinforcing Steel                      | 67,897   | Lb   |
| 480E0518        | No. 18 Rebar Splice                              | 104      | Each |
| 510E0300        | Preboring Pile                                   | 328      | Ft   |
| 510E3521        | HP 14x73 Steel Test Pile, Furnish and Drive      | 420      | Ft   |
| 510E3525        | HP 14x73 Steel Bearing Pile, Furnish and Drive   | 7,120    | Ft   |
| 635E8020        | 2" Rigid Galvanized Steel Conduit                | 313      | Ft   |
| 680E0040        | 4" Underdrain Pipe                               | 380      | Ft   |
| 680E2500        | Porous Backfill                                  | 32.0     | Ton  |
| 734E2022        | Bridge Berm Slope Protection, Quarried Aggregate | 442.1    | SqYd |
| 831E0100        | Type A Drainage Fabric                           | 443      | SqYd |
| 831E0110        | Type B Drainage Fabric                           | 47       | SqYd |
| 831E1030        | Perforated Geocell                               | 425      | SqFt |

Str. No. 42-065-020

| BID ITEM NUMBER | ITEM                                             | QUANTITY | UNIT |
|-----------------|--------------------------------------------------|----------|------|
| 009E3310        | Bridge Elevation Survey                          | Lump Sum | LS   |
| 009E5000        | Concrete Penetrating Sealer                      | 2,470.0  | SqYd |
| 120E7000        | Select Granular Backfill                         | 37.0     | Ton  |
| 410E0020        | Structural Steel                                 | Lump Sum | LS   |
| 410E2600        | Membrane Sealant Expansion Joint                 | 184.5    | Ft   |
| 420E0100        | Structure Excavation, Bridge                     | 407      | CuYd |
| 430E0200        | Bridge End Embankment                            | 2,980    | CuYd |
| 430E0300        | Granular Bridge End Backfill                     | 408.0    | CuYd |
| 430E0510        | Approach Slab Underdrain Excavation              | 6.0      | CuYd |
| 430E0700        | Precast Concrete Headwall for Drain              | 4        | Each |
| 460E0030        | Class A45 Concrete, Bridge Deck                  | 820.2    | CuYd |
| 460E0050        | Class A45 Concrete, Bridge                       | 530.4    | CuYd |
| 460E0150        | Concrete Approach Slab for Bridge                | 407.4    | SqYd |
| 460E0160        | Concrete Approach Sleeper Slab for Bridge        | 150.4    | SqYd |
| 462E0100        | Class M6 Concrete                                | 40.9     | CuYd |
| 470E0220        | Steel Pedestrian Railing on Concrete Barrier     | 767.0    | Ft   |
| 480E0100        | Reinforcing Steel                                | 111,682  | Lb   |
| 480E0200        | Epoxy Coated Reinforcing Steel                   | 1,284    | Lb   |
| 480E0300        | Stainless Reinforcing Steel                      | 203,000  | Lb   |
| 480E0518        | No. 18 Rebar Splice                              | 132      | Each |
| 510E0300        | Preboring Pile                                   | 450      | Ft   |
| 510E3521        | HP 14x73 Steel Test Pile, Furnish and Drive      | 365      | Ft   |
| 510E3525        | HP 14x73 Steel Bearing Pile, Furnish and Drive   | 8,400    | Ft   |
| 635E8020        | 2" Rigid Galvanized Steel Conduit                | 277      | Ft   |
| 635E8040        | 4" Rigid Galvanized Steel Conduit                | 1,110    | Ft   |
| 680E0040        | 4" Underdrain Pipe                               | 117      | Ft   |
| 680E2500        | Porous Backfill                                  | 14.0     | Ton  |
| 734E2022        | Bridge Berm Slope Protection, Quarried Aggregate | 583.0    | SqYd |
| 831E0100        | Type A Drainage Fabric                           | 584      | SqYd |
| 831E0110        | Type B Drainage Fabric                           | 118      | SqYd |
| 831E1030        | Perforated Geocell                               | 1,056    | SqFt |

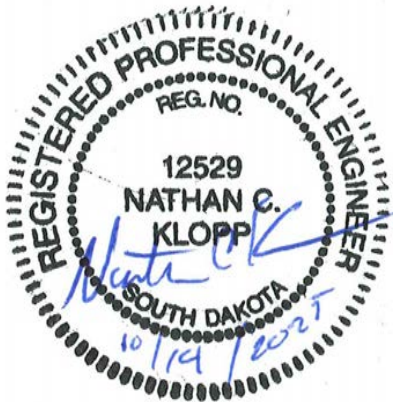
Str. No. 42-066-020, M.S.E. Large Panel Retaining Walls, and Reinforced Concrete Barriers

| BID ITEM NUMBER | ITEM                                       | QUANTITY | UNIT |
|-----------------|--------------------------------------------|----------|------|
| 420E0300        | Structure Excavation, Retaining Wall       | 2,750    | CuYd |
| 420E1000        | Foundation Preparation, Retaining Wall     | 1,277    | CuYd |
| 421E0200        | Box Culvert Undercut                       | 139      | CuYd |
| 430E0200        | Bridge End Embankment                      | 1,878    | CuYd |
| 430E0700        | Precast Concrete Headwall for Drain        | 1        | Each |
| 460E0100        | Class A45 Concrete, Miscellaneous          | 659.8    | CuYd |
| 460E0120        | Class A45 Concrete, Box Culvert            | 268.5    | CuYd |
| 460E0204        | Anti-Graffiti Coating                      | 26,543.0 | SqFt |
| 480E0100        | Reinforcing Steel                          | 49,688   | Lb   |
| 480E0200        | Epoxy Coated Reinforcing Steel             | 100,103  | Lb   |
| 530E0420        | MSE Large Panel Wall, Furnish              | 10,140   | SqFt |
| 530E0422        | MSE Large Panel Wall, Install              | 10,140   | SqFt |
| 530E0702        | Granular Backfill for MSE Large Panel Wall | 6,009.0  | CuYd |
| 651E0040        | 4" Concrete Sidewalk                       | 164      | SqFt |
| 680E0040        | 4" Underdrain Pipe                         | 1,345    | Ft   |
| 680E2500        | Porous Backfill                            | 660.0    | Ton  |

Revision Date: 10/14/2025  
Plot Date: 10/14/2025  
Initials: NCK



| PROJECT                        | SHEET NO. | TOTAL SHEETS |
|--------------------------------|-----------|--------------|
| EM 0292(88)73<br>IM 2292(104)0 | E2        | E130         |



ESTIMATE OF STRUCTURE QUANTITIES

| DESCRIPTION                                      | QUANTITY | UNIT    | REMARKS               |
|--------------------------------------------------|----------|---------|-----------------------|
| Bridge Elevation Survey                          | Lump Sum | L.S.    |                       |
| Concrete Penetrating Sealer                      | 2,470.0  | Sq. Yd. | See Special Provision |
| Select Granular Backfill                         | 37.0     | Ton     |                       |
| Structural Steel                                 | Lump Sum | L.S.    | See Special Provision |
| Membrane Sealant Expansion Joint                 | 184.5    | Ft.     |                       |
| Structure Excavation, Bridge                     | 407      | Cu. Yd. |                       |
| Bridge End Embankment                            | 2,980    | Cu. Yd. |                       |
| Granular Bridge End Backfill                     | 408.0    | Cu. Yd. |                       |
| Approach Slab Underdrain Excavation              | 6.0      | Cu. Yd. |                       |
| Precast Concrete Headwall for Drain              | 4        | Each    |                       |
| Class A45 Concrete, Bridge Deck                  | 820.2    | Cu. Yd. |                       |
| Class A45 Concrete, Bridge                       | 530.4    | Cu. Yd. |                       |
| Concrete Approach Slab for Bridge                | 407.4    | Sq. Yd. |                       |
| Concrete Approach Sleeper Slab for Bridge        | 150.4    | Sq. Yd. |                       |
| Class M6 Concrete                                | 40.9     | Cu. Yd. |                       |
| Steel Pedestrian Railing on Concrete Barrier     | 767.0    | Ft.     |                       |
| Reinforcing Steel                                | 111,682  | Lb.     |                       |
| Epoxy Coated Reinforcing                         | 1,284    | Lb.     |                       |
| Stainless Reinforcing Steel                      | 203,000  | Lb.     | See Special Provision |
| No. 18 Rebar Splice                              | 132      | Each    |                       |
| Preboring Pile                                   | 450      | Ft.     |                       |
| HP 14 x 73 Steel Test Pile, Furnish and Drive    | 365      | Ft.     |                       |
| HP 14 x 73 Steel Bearing Pile, Furnish and Drive | 8,400    | Ft.     |                       |
| 2" Galvanized Steel Conduit                      | 277      | Ft.     |                       |
| 4" Galvanized Steel Conduit                      | 1,110    | Ft.     |                       |
| 4" Underdrain Pipe                               | 177      | Ft.     |                       |
| Porous Backfill                                  | 14       | Ton     |                       |
| Bridge Berm Slope Protection, Quarried Aggregate | 583.0    | Sq. Yd. |                       |
| Type A Drainage Fabric                           | 584      | Sq. Yd. |                       |
| Type B Drainage Fabric                           | 118      | Sq. Yd. |                       |
| Perforated Geocell                               | 1,056    | Sq. Ft. |                       |

BRIDGE SPECIFICATIONS

1. Design Specifications: AASHTO LRFD Bridge Design Specifications, 9<sup>th</sup> Edition.
2. Construction Specifications: South Dakota Standard Specifications for Roads and Bridges, 2025 Edition and required Provisions, Supplemental Specifications and Special Provisions as included in the Proposal.
3. All welding and welding inspections will be in conformance with the latest edition of AASHTO/AWS D1.5/D1.5M Bridge Welding Code unless noted otherwise in the plans.

BRIDGE DESIGN LOADING

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

DESIGN MATERIAL STRENGTHS

Class A45 Concrete

Reinforcing Steel (ASTM A615, Gr. 60)

Piling (ASTM A572 Grade 50)

Structural Steel (ASTM A709 Gr. 50T2)

$f'_c = 4,500$  psi

$f_y = 60,000$  psi

$f_y = 50,000$  psi

$f_y = 50,000$  psi

GENERAL CONSTRUCTION

1. All lap splices shown are contact lap splices unless noted otherwise.
2. All exposed concrete corners and edges will be chamfered 3/4-inch unless noted otherwise.
3. Use 2-inch clear cover on all reinforcing steel except as shown otherwise on plans.
4. The Contractor will imprint on the structure the date of new construction as specified and detailed on Standard Plate 460.02.
5. Barrier curbs will be built perpendicular to the roadway grade line.
6. 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.
7. 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 Bridge Construction Engineer for approval. Allow 30 days for review of proposals.
8. The elevation of the bridge deck is 14 inches above subgrade elevation.

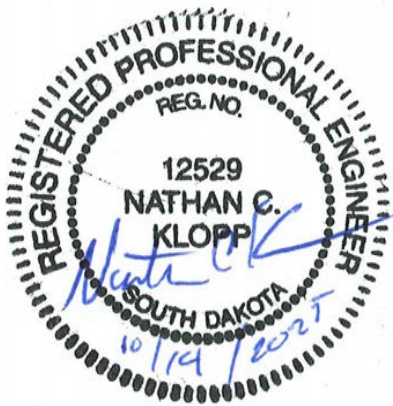
DESIGN MIX OF CONCRETE

1. All structural concrete will be Class A45 Concrete unless otherwise indicated.
2. 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 manufactures' 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<sub>3</sub>A) and a maximum 0.6% Alkalis (Na<sub>2</sub>O + O.658K<sub>2</sub>O).
3. Grout design mix will be as specified in Section 460.2 K of the Construction Specifications. A compressive strength of 2000 psi will be attained by the grout prior to erection of any beams. Chamfer edges of grout pads 3/4-inch. The quantity of grout is included in and will be paid for at the contract unit price per cubic yard for Class A45 Concrete, Bridge.

Revision Date: 10/14/2025  
Plot Date: 10/14/2025  
Initials: NCK



| PROJECT                        | SHEET NO. | TOTAL SHEETS |
|--------------------------------|-----------|--------------|
| EM 0292(88)73<br>IM 2292(104)0 | E4        | E130         |



ESTIMATE OF STRUCTURE QUANTITES AND NOTES  
FOR  
276'-6" STEEL GIRDER BRIDGE  
30'-0" & 42'-0" ROADWAYS 0° SKEW  
with 14'-0" PEDESTRIAN TRAIL SEC. 18/19 - T100N - R50W  
85TH STREET OVER I-29 EM 0292(88)73  
STA. 318+79.74EB to STA. 321+55.24EB HL-93  
STR. NO. 42-065-020

LINCOLN COUNTY  
S.D. DEPT. OF TRANSPORTATION  
MAY 2025

|                    |                    |                   |                                |
|--------------------|--------------------|-------------------|--------------------------------|
| DESIGNED BY<br>DKW | CK. DES. BY<br>NCK | DRAFTED BY<br>NCM | APPROVED BY<br>BRIDGE ENGINEER |
|--------------------|--------------------|-------------------|--------------------------------|





| PROJECT                        | SHEET NO. | TOTAL SHEETS |
|--------------------------------|-----------|--------------|
| EM 0292(88)73<br>IM 2292(104)0 | E5        | E130         |

ABUTMENTS

1. Preboring for all piling at each abutment (vertical and battered) is required to extend to natural ground.
2. 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.
3. One test pile will be driven at each abutment and will become part of the pile group. The test pile will be driven before any other pile and will be driven to the required field verified nominal resistance or as directed by the Engineer prior to driving any portion of the bearing piles.
4. The Contractor will have sufficient pile splice material on hand before pile driving is started. See Standard Plate 510.40.
5. 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.
6. Each finished abutment will include a Bridge Survey Marker. See Standard Plate 460.05
7. Abutment backwall and wings will not be cast until after the deck has been poured.

CONNECTION OF GIRDER TO PILE

1. Cut off piling at the elevations shown in the plans and weld bearing plates to the piling. Adjust as necessary to make bearing plates level, and to permit proper position of the girders. If piles are driven out of position to the extent that bearing plates will not fit, the Contractor will submit the method of correction to the Engineer for approval. Piles will not be pulled into position.
2. All girder erection will be complete with the splices fully bolted and diaphragms in place, before welding girders to bearing plates. (Diaphragms need not be secured with more than temporary bolting, prior to the pile to girder connections.)
3. An alternate connection, capable of transmitting a direct load of 8000 lbs. to the pile and developing 30,000 lbs. horizontal force, may be submitted to the Office of Bridge Design for prior approval.
4. This connection will not be made when the temperature is greater than 70° F or less than 30° F.
5. Steel for the bearing plates will conform to ASTM A709 Gr. 50.
6. Payment for furnishing and installing the bearing plates will be incidental to the contract lump sum price for Structural Steel.

POURING OF ABUTMENT CONCRETE

1. Abutment concrete will be placed, as directed by the Engineer, at a time when a relatively stable temperature can be expected. A relatively stable temperature is defined as an air temperature deviation of not more than 30° F within 12 hours of completing the abutment pour from the air temperature at the time when the abutment concrete is placed.

2. The forms will be secured to the girders in such a manner that they will be free to move longitudinally with the expansion or contraction of the girder.
3. The girders will be braced near the abutments in such a manner that their lateral movement or rotation will be prevented during the placing of concrete. The Contractor will include details for this bracing with the falsework plans.

BENT

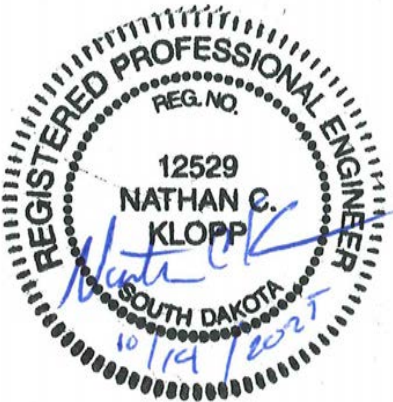
1. All Swedge Bolts will be 1 1/2-inch diameter x 2'-6" F1554, Grade 55 bolts with heavy hex nut and cut washer (listed with structural steel in Superstructure quantities). A minimum of 20% of the embedded bolt surface will be covered with deformations whose radial dimensions are 15 to 20% of the bolt diameter.
2. 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.
3. One test pile will be driven at each bent and will become part of the pile group. The test pile will be driven before any other pile pile and will be driven to the required field verified nominal resistance or as directed by the Engineer prior to driving any portion of the bearing piles.
4. The contractor will have sufficient pile splice material on hand before pile driving is started. See Standard Plate 510.40

SUPERSTRUCTURE

1. Structural steel will conform to ASTM A709 Gr. 50T2. Steel for diaphragms and stiffeners will conform to ASTM A709 Gr. 50. Shear connectors will conform to Section 7.3 Type B of the Bridge Welding Code.
2. Bolts, nuts and washers will conform to ASTM F3125, Grade A325.
3. Shear connectors will be field welded to the girders in accordance with the Shear Connector Field Installation Special Provision.
4. All butt-welded girder splices will be ultrasonically inspected.
5. The cost of welding and weld inspection will be incidental to the contract lump sum price for Structural Steel.
6. Structural steel will be painted in accordance with Section 411 of the Construction Specifications. The top coat will be an approved brown (AMS STD 595 Color 30045).
7. Structural steel used in all girder web plates, girder flanges, and girder splice plates will comply with the Charpy-V-Notch toughness requirements set forth in Section 970 of the Construction Specifications. Material greater than 1 1/2 inches in thickness will require frequency (P) testing in lieu of heat lot (H) testing. See Girder Layout for location of tension and stress reversal areas of girder flanges.
8. The use of an approved deck finishing machine will be required during placement of bridge deck concrete. The deck finishing machine will be

adjusted and operated in such a manner that the screed or screeds are parallel with the centerline of the bridge. The finish machine and concrete placement will be parallel to the skew of the bridge.

9. The concrete bridge deck will be placed and finished at a minimum rate of 54 feet of deck per hour measured along centerline roadway. If concrete cannot be placed and finished at this rate, the Engineer will order a header installed and operations stopped. If a header is required sometime during the pour operation, its location will be at or as near as possible to the three-quarter point of the span. Notify the Bridge Construction Engineer if deck pour operations are stopped. Operations may resume only when the Engineer is satisfied that a rate of 54 feet per hour can be maintained and the concrete has attained a minimum compressive strength of 2000 psi.
10. Snap ties, if used in the barrier curb formwork, will be corrosion resistant. The corrosion resistant ties will be inert in concrete and compatible with the reinforcing steel.
11. Dead Load camber will be cut into the girder webs. Do not induce or correct camber in plate girders by local heating without prior approval from the Engineer.
12. The Contractor is required to submit a detailed plan showing the proposed girder erection. The girder erection plan will be designed and stamped by a Professional Engineer registered with the State of South Dakota. The plan must be submitted 30 days prior to the start of work for approval by the Office of Bridge Design. The plan will include. But not limited to, complete sequencing details, splice bolt up procedures, girder pick point locations, temporary shoring details, and temporary bracing details.
13. All single girder segments will be adequately braced or held in position until the adjacent girder segment is placed and all diaphragms between the segments are fully installed and bolts fully tightened. Single girder segments will not be allowed to remain in place beyond the end of a work shift without connection to an adjacent girder segment with all diaphragms between the segments fully connected. At no time will a single girder segment be allowed over traffic.
14. See Special Provision for Concrete Penetrating Sealer.



NOTES (CONTINUED)  
FOR  
276'-6" STEEL GIRDER BRIDGE

30'-0" & 42'-0" ROADWAYS 0° SKEW  
with 14'-0" PEDESTRIAN TRAIL SEC. 18/19 - T100N - R50W  
85TH STREET OVER I-29 EM 0292(88)73  
STA. 318+79.74EB to STA. 321+55.24EB HL-93  
STR. NO. 42-065-020

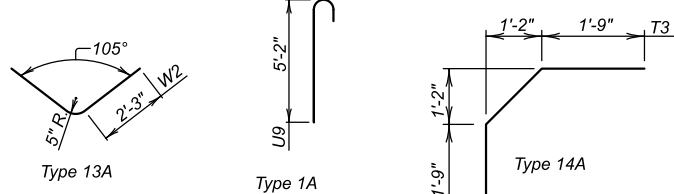
LINCOLN COUNTY  
S.D. DEPT. OF TRANSPORTATION  
MAY 2025

| DESIGNED BY | CK. DES. BY | DRAFTED BY | APPROVED BY     |
|-------------|-------------|------------|-----------------|
| DKW         | NCK         | NCM        | BRIDGE ENGINEER |



## REINFORCING SCHEDULE

| Mk. | No. | Size | Length    | Type | Bending Details |                 |                 |
|-----|-----|------|-----------|------|-----------------|-----------------|-----------------|
| L1  | 87  | 4    | 3' - 6"   | 17A  | <p>Type 17A</p> | <p>Type 17</p>  | <p>Type 14A</p> |
| M2  | 26  | 5    | 8' - 5"   | Str. |                 |                 |                 |
| M3  | 26  | 5    | 8' - 2"   | Str. |                 |                 |                 |
| M6  | 12  | 5    | 9' - 2"   | Str. |                 |                 |                 |
| S1  | 6   | 9    | 25' - 10" | Str. | <p>Type 17</p>  | <p>Type T9B</p> | <p>Type 17A</p> |
| S2  | 112 | 6    | 8' - 4"   | 14A  |                 |                 |                 |
| T1  | 20  | 6    | 49' - 10" | Str. |                 |                 |                 |
| T2  | 20  | 7    | 50' - 2"  | Str. |                 |                 |                 |
| T3  | 20  | 5    | 5' - 2"   | 14A  | <p>Type 17</p>  | <p>Type T9B</p> | <p>Type 17A</p> |
| U1  | 87  | 6    | 14' - 10" | 17   |                 |                 |                 |
| U2  | 87  | 6    | 5' - 9"   | T9B  |                 |                 |                 |
| U3  | 87  | 7    | 6' - 9"   | T9B  |                 |                 |                 |
| U6  | 20  | 5    | 11' - 6"  | Str. | <p>Type 17</p>  | <p>Type T9B</p> | <p>Type 17A</p> |
| U7  | 20  | 5    | 11' - 6"  | Str. |                 |                 |                 |
| U9  | 20  | 5    | 5' - 9"   | 1A   |                 |                 |                 |
| U10 | 20  | 5    | 6' - 10"  | 17A  |                 |                 |                 |
| W1  | 60  | 6    | 3' - 7"   | 17   | <p>Type 17</p>  | <p>Type T9B</p> | <p>Type 17A</p> |
| W2  | 40  | 8    | 4' - 6"   | 13A  |                 |                 |                 |



NOTES:  
All dimensions are out to out of bars.  
Δ Bars to be Epoxy Coated.

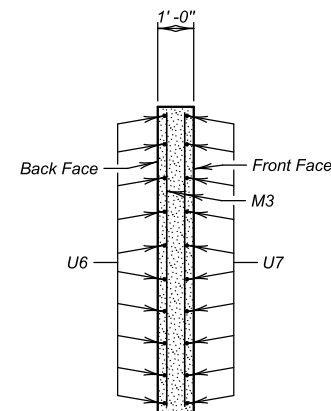
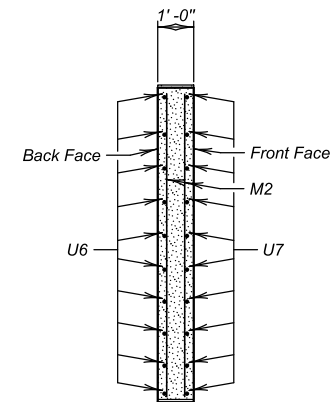
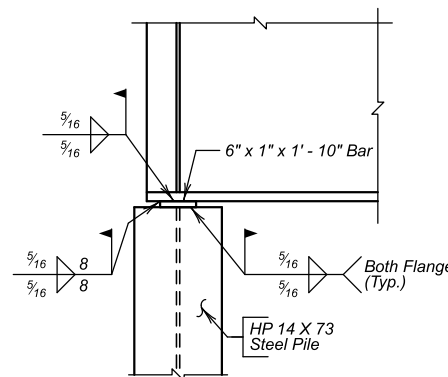
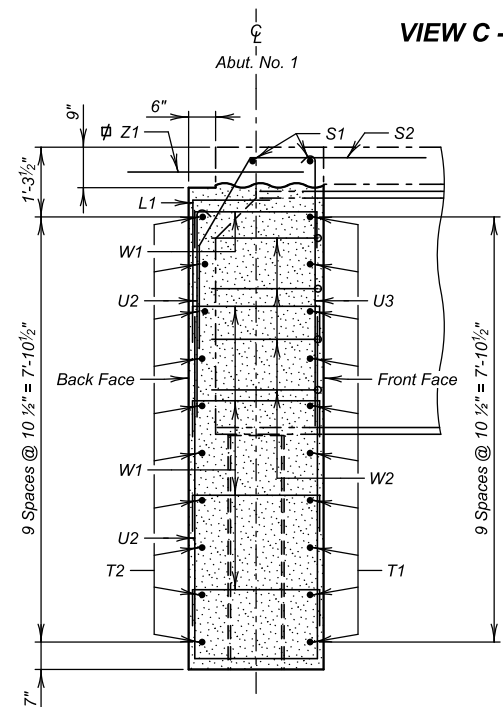
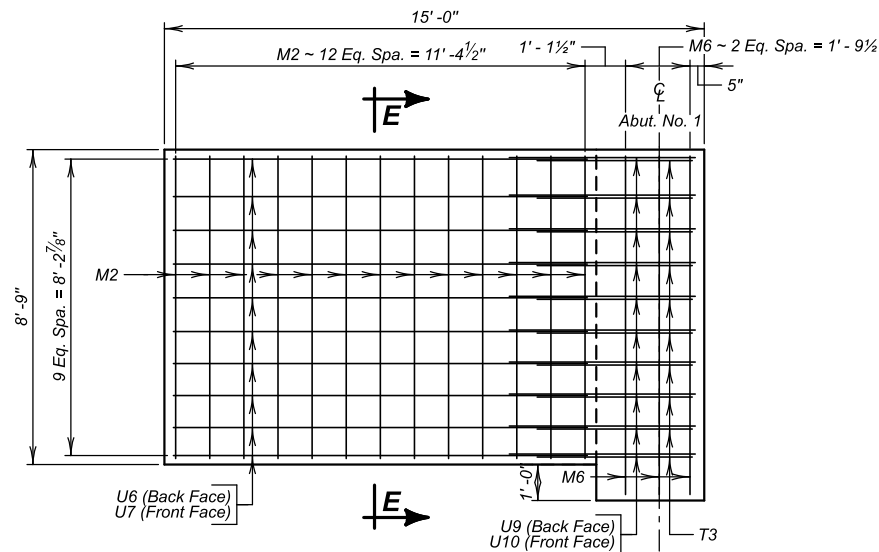
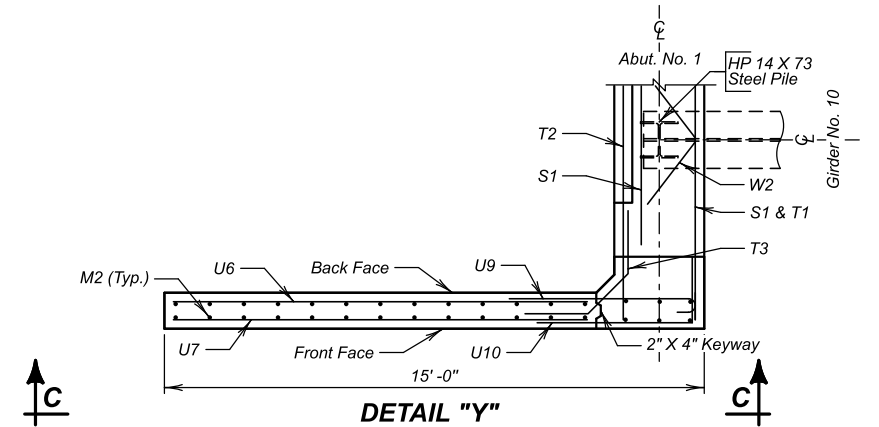
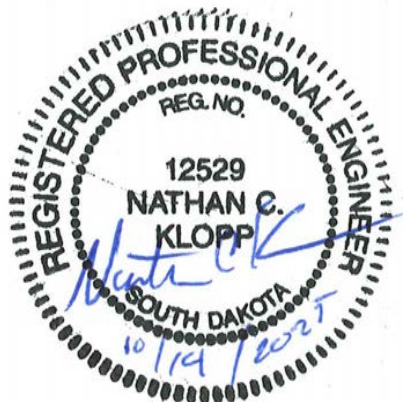
### ***ESTIMATED QUANTITIES***

|   | ITEM                                             | UNIT    | QUANTITY        |
|---|--------------------------------------------------|---------|-----------------|
| * | Structure Excavation, Bridge                     | Cu. Yd. | 20              |
|   | Class A45 Concrete, Bridge                       | Cu. Yd. | 100.1           |
|   | Reinforcing Steel                                | Lb.     | 11,146          |
|   | Epoxy Coated Reinforcing Steel                   | Lb.     | 642             |
|   | Preboring Pile                                   | Ft.     | 10 @ 20' = 200' |
|   | HP 14 X 73 Steel Test Pile, Furnish and Drive    | Ft.     | 1 @ 115' = 115' |
|   | HP 14 X 73 Steel Bearing Pile, Furnish and Drive | Ft.     | 9 @ 110' = 990' |

NOTE:  
See ABUTMENT NO. 1 DETAILS (A) for location of Section A-A and Detail 'X'

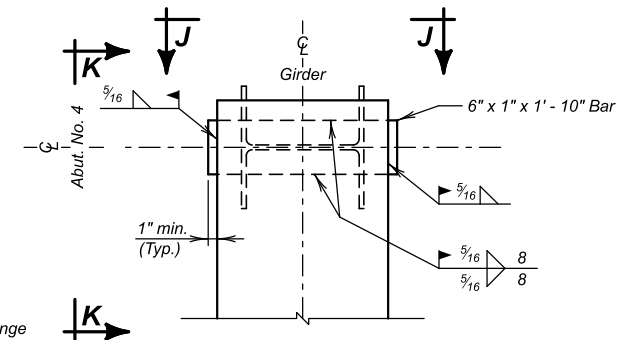
\* Includes 16 ft. of 2" dia. PVC Outlet Pipe as an approximate quantity contained in the Class A45 Concrete, Bridge.

Ø See SUPERSTRUCTURE DETAILS (B)

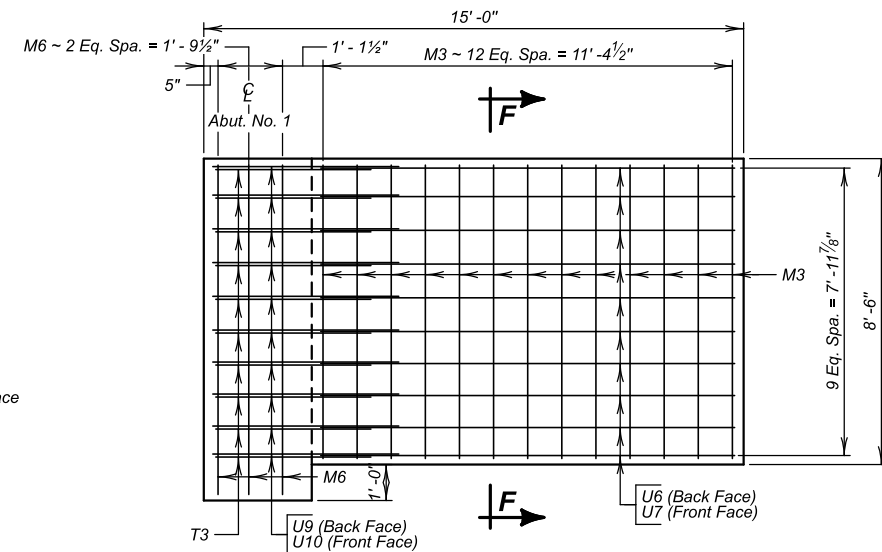
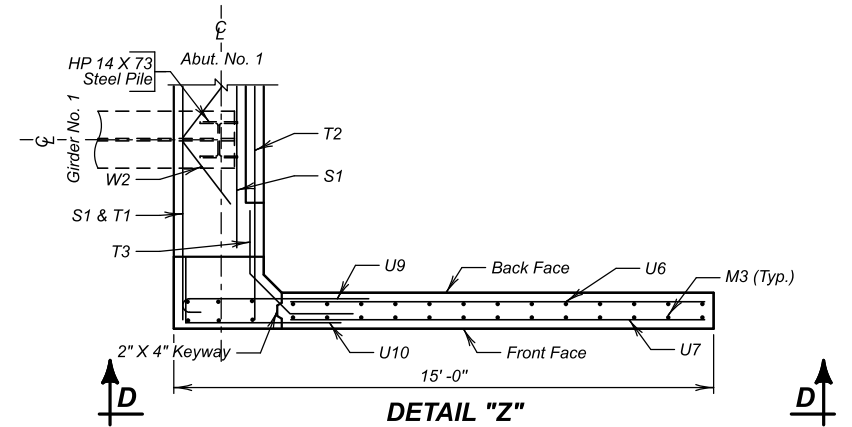


**SECTION E - E**

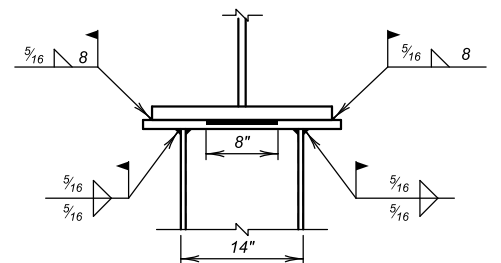
**SECTION F - F**



**SECTION B - B**



**VIEW D - D**



**VIEW J - J**  
(Showing Weld Locations)

ABUTMENT NO. 1 DETAILS (B)

276'-6" STEEL GIRDER BRIDGE

|                                      |                           |
|--------------------------------------|---------------------------|
| 30'-0" & 42'-0" ROADWAYS             | 0° SKEW                   |
| with 14'-0" PEDESTRIAN TRAIL         | SEC. 18/19 - T100N - R50W |
| 85TH STREET OVER I-29                | EM 0292(88)73             |
| STA. 318+79.74EB to STA. 321+55.24EB | HL-93                     |
| STR. NO. 42-065-020                  |                           |

LINCOLN COUNTY  
S.D. DEPT. OF TRANSPORTATION  
MAY 2025

10 OF 49

|                    |                    |                   |                                |
|--------------------|--------------------|-------------------|--------------------------------|
| DESIGNED BY<br>DKW | CK. DES. BY<br>NCK | DRAFTED BY<br>NCM | APPROVED BY<br>BRIDGE ENGINEER |
|--------------------|--------------------|-------------------|--------------------------------|



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ESTIMATE OF STRUCTURE QUANTITIES

| DESCRIPTION                                      | QUANTITY | UNIT    | REMARKS                |
|--------------------------------------------------|----------|---------|------------------------|
| Bridge Elevation Survey                          | Lump Sum | L.S.    |                        |
| Concrete Penetrating Sealer                      | 939.0    | Sq. Yd. | See Special Provisions |
| Select Granular Backfill                         | 14.9     | Ton     |                        |
| Structural Steel                                 | Lump Sum | L.S.    | See Special Provisions |
| Abutment Joint Drain                             | 2        | Each    |                        |
| Finger Type Expansion Joint Assembly             | 2        | Each    |                        |
| Structure Excavation, Bridge                     | 465      | Cu. Yd. |                        |
| Bridge End Embankment                            | 1720     | Cu. Yd. |                        |
| Granular Bridge End Backfill                     | 156.0    | Cu. Yd. |                        |
| Approach Slab Underdrain Excavation              | 2.0      | Cu. Yd. |                        |
| Precast Concrete Headwall for Drain              | 6        | Each    |                        |
| Class A45 Concrete, Bridge Deck                  | 340.1    | Cu. Yd. |                        |
| Class A45 Concrete, Bridge                       | 560.6    | Cu. Yd. |                        |
| Concrete Approach Slab for Bridge                | 238.5    | Sq. Yd. |                        |
| Concrete Approach Sleeper Slab for Bridge        | 34.6     | Sq. Yd. |                        |
| Deck Drain, Girder Bridge                        | 9        | Each    |                        |
| Reinforcing Steel                                | 73,346   | Lb.     |                        |
| Epoxy Coated Reinforcing                         | 8,496    | Lb.     |                        |
| Stainless Reinforcing Steel                      | 67,897   | Lb.     | See Special Provisions |
| No. 18 Rebar Splice                              | 104      | Each    |                        |
| Preboring Piles                                  | 328      | Ft.     |                        |
| HP 14 x 73 Steel Test Pile, Furnish and Drive    | 420      | Ft.     |                        |
| HP 14 x 73 Steel Bearing Pile, Furnish and Drive | 7,120    | Ft.     |                        |
| 2" Galvanized Steel Conduit                      | 313      | Ft.     |                        |
| 4" Underdrain Pipe                               | 380      | Ft.     |                        |
| Porous Backfill                                  | 32.0     | Ton     |                        |
| Bridge Berm Slope Protection, Quarried Aggregate | 442.1    | Sq. Yd. |                        |
| Type A Drainage Fabric                           | 443      | Sq. Yd. |                        |
| Type B Drainage Fabric                           | 47       | Sq. Yd. |                        |
| Perforated Geocell                               | 425      | Sq. Ft. |                        |

BRIDGE SPECIFICATIONS

1. Design Specifications: AASHTO LRFD Bridge Design Specifications, 9<sup>th</sup> Edition.
2. Construction Specifications: South Dakota Standard Specifications for Roads and Bridges, 2025 Edition and required Provisions, Supplemental Specifications and Special Provisions as included in the Proposal.
3. All welding and welding inspections will be in conformance with the latest edition of AASHTO/AWS D1.5/D1.5M Bridge Welding Code unless noted otherwise in the plans.

BRIDGE DESIGN LOADING

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

DESIGN MATERIAL STRENGTHS

Class A45 Concrete

Reinforcing Steel (ASTM A615, Gr. 60)

Piling (ASTM A572 Grade 50)

Structural Steel (ASTM A709 Gr. 50T2)

$f'_c = 4,500$  psi

$f_y = 60,000$  psi

$f_y = 50,000$  psi

$f_y = 50,000$  psi

GENERAL CONSTRUCTION

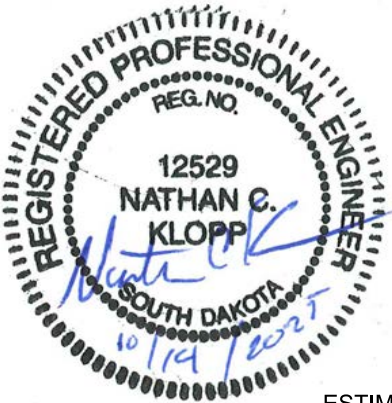
1. All lap splices shown are contact lap splices unless noted otherwise.
2. All exposed concrete corners and edges will be chamfered 3/4-inch unless noted otherwise.
3. Use 2-inch clear cover on all reinforcing steel except as shown otherwise on plans.
4. The Contractor will imprint on the structure the date of new construction as specified and detailed on Standard Plate 460.02.
5. Barrier curbs, and end blocks will be built perpendicular to the roadway grade line.
6. 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.
7. 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 Bridge Construction Engineer for approval. Allow 30 days for review of proposals.
8. The elevation of the bridge deck is 14 inches above subgrade elevation.

DESIGN MIX OF CONCRETE

1. All structural concrete will be Class A45 Concrete unless otherwise indicated.
2. Grout design mix will be as specified in Section 460.2 K of the Construction Specifications. A compressive strength of 2000 psi will be attained by the grout prior to erection of any beams. Chamfer edges of grout pads 3/4-inch. The quantity of grout is included in and will be paid for at the contract unit price per cubic yard for Class A45 Concrete, Bridge.

ABUTMENTS

1. Preboring for all piling at each abutment (vertical and battered) is required to extend to natural ground
2. 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.
3. One test pile will be driven at each abutment and will become part of the pile group. The test pile will be driven before any other pile and will be driven to the required field verified nominal resistance or as directed by the Engineer prior to driving any portion of the bearing piles.
4. The Contractor will have sufficient pile splice material on hand before pile driving is started. See Standard Plate 510.40.
5. Each finished abutment will include a Bridge Survey Marker. See Standard Plate 460.05.



ESTIMATE OF STRUCTURE QUANTITES AND NOTES

FOR

312'-11<sup>3</sup>/<sub>8</sub>" STEEL GIRDER BRIDGE

27'-0" ROADWAY

55° LHF SKEW

RAMP D OVER 229 RAMP C

SEC. 18 - T100N - R50W

STA. 60+35.34 to STA. 63+50.03

EM 0292(88)73

STR. NO. 42-065-016

HL-93

LINCOLN COUNTY

S.D. DEPT. OF TRANSPORTATION

MAY 2025

|                 |             |            |             |
|-----------------|-------------|------------|-------------|
| DESIGNED BY     | CK. DES. BY | DRAFTED BY | APPROVED BY |
| CAK             | NCK         | NCM        |             |
| BRIDGE ENGINEER |             |            |             |



### ESTIMATED QUANTITIES

| ITEM                                             | UNIT    | QUANTITY        |
|--------------------------------------------------|---------|-----------------|
| Structure Excavation, Bridge                     | Cu. Yd. | 96              |
| Class A45 Concrete Bridge                        | Cu. Yd. | 130.1           |
| Reinforcing Steel                                | Lb.     | 4544            |
| Epoxy Coated Reinforcing Steel                   | Lb.     | 4810            |
| Preboring Pile                                   | Ft.     | 8 @ 22' = 176'  |
| HP 14 x 73 Steel Test Pile, Furnish and Drive    | Ft.     | 1 @ 115' = 115' |
| HP 14 x 73 Steel Bearing Pile, Furnish and Drive | Ft.     | 7 @ 110' = 770' |

| Mk. | No. | Size | Length    | Type |
|-----|-----|------|-----------|------|
| a1  | 53  | 5    | 21' - 0"  | T1   |
| a2  | 13  | 5    | 11' - 2"  | 17   |
| a3  | 13  | 5    | 12' - 2"  | 17   |
| a4  | 9   | 5    | 13' - 2"  | 17   |
| e1  | 16  | 8    | 55' - 8"  | str. |
| e2  | 12  | 8    | 16' - 11" | str. |
| e3  | 6   | 8    | 8' - 10"  | str. |
| e4  | 2   | 6    | 9' - 9"   | str. |
| e5  | 4   | 6    | 26' - 0"  | str. |
| e6  | 1   | 6    | 23' - 4"  | str. |
| e7  | 1   | 6    | 7' - 8"   | str. |
| e8  | 1   | 6    | 4' - 7"   | str. |
| e9  | 2   | 6    | 9' - 11"  | str. |
| e10 | 5   | 6    | 26' - 2"  | str. |
| e11 | 1   | 6    | 23' - 5"  | str. |
| e12 | 1   | 6    | 4' - 10"  | str. |
| e13 | 1   | 6    | 1' - 9"   | str. |
| e14 | 5   | 4    | 27' - 8"  | str. |
| e15 | 3   | 6    | 9' - 11"  | str. |
| e16 | 4   | 6    | 24' - 0"  | str. |
| e17 | 4   | 6    | 26' - 0"  | str. |
| e18 | 1   | 6    | 23' - 0"  | str. |
| e19 | 1   | 6    | 23' - 5"  | str. |
| e20 | 1   | 6    | 19' - 11" | str. |
| e21 | 1   | 6    | 5' - 1"   | str. |
| e22 | 1   | 6    | 3' - 6"   | str. |
| e23 | 1   | 6    | 2' - 0"   | str. |
| e24 | 8   | 6    | 10' - 2"  | str. |
| e25 | 5   | 6    | 26' - 3"  | str. |
| e26 | 4   | 6    | 24' - 3"  | str. |
| e27 | 1   | 6    | 23' - 0"  | str. |
| e28 | 1   | 6    | 23' - 6"  | str. |
| e29 | 1   | 6    | 9' - 4"   | str. |
| e30 | 1   | 6    | 7' - 9"   | str. |
| e31 | 1   | 6    | 6' - 3"   | str. |
| e32 | 1   | 6    | 4' - 8"   | str. |
| e33 | 9   | 6    | 29' - 4"  | str. |
| e34 | 4   | 4    | 24' - 4"  | str. |
| e35 | 4   | 6    | 26' - 6"  | str. |
| S1  | 2   | 5    | 13' - 11" | 19B  |
| S2  | 2   | 5    | 11' - 3"  | 19B  |
| T1  | 5   | 4    | 13' - 5"  | str. |
| T2  | 5   | 4    | 15' - 5"  | str. |
| T3  | 4   | 4    | 9' - 10"  | 1A   |
| T4  | 5   | 5    | 13' - 4"  | str. |
| T5  | 5   | 5    | 15' - 4"  | str. |
| T6  | 4   | 6    | 10' - 11" | 1A   |
| U1  | 49  | 4    | 9' - 4"   | 1A   |
| U2  | 49  | 6    | 9' - 8"   | 1A   |
| U3  | 49  | 5    | 8' - 8"   | 17   |
| U4  | 49  | 5    | 8' - 2"   | 17   |
| U5  | 2   | 5    | 7' - 8"   | 17   |
| Z1  | 18  | 7    | 4' - 0"   | str. |

Type T1

Type 17

Type 1A

Type 17

Type 19B

Type 1A

Type 17

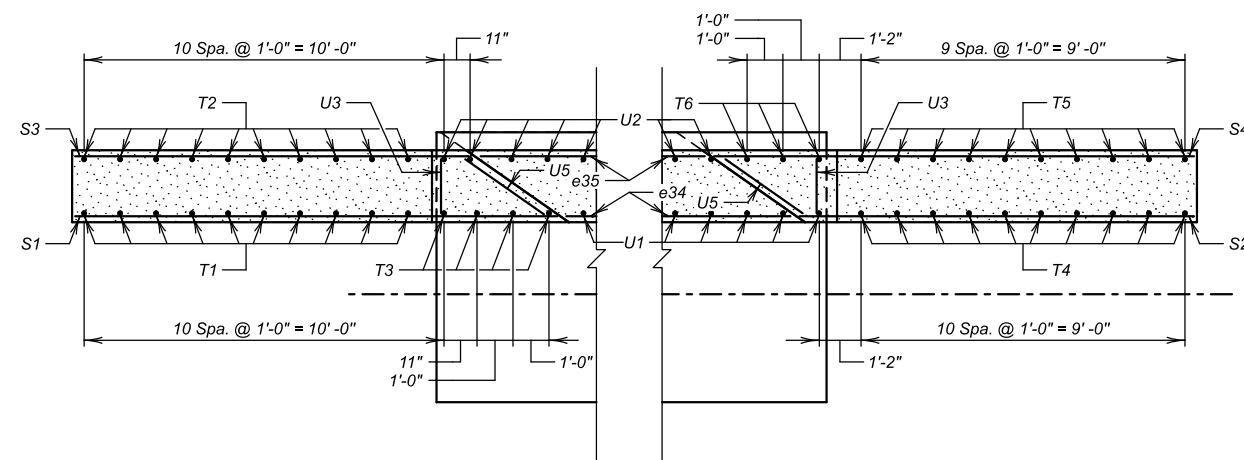
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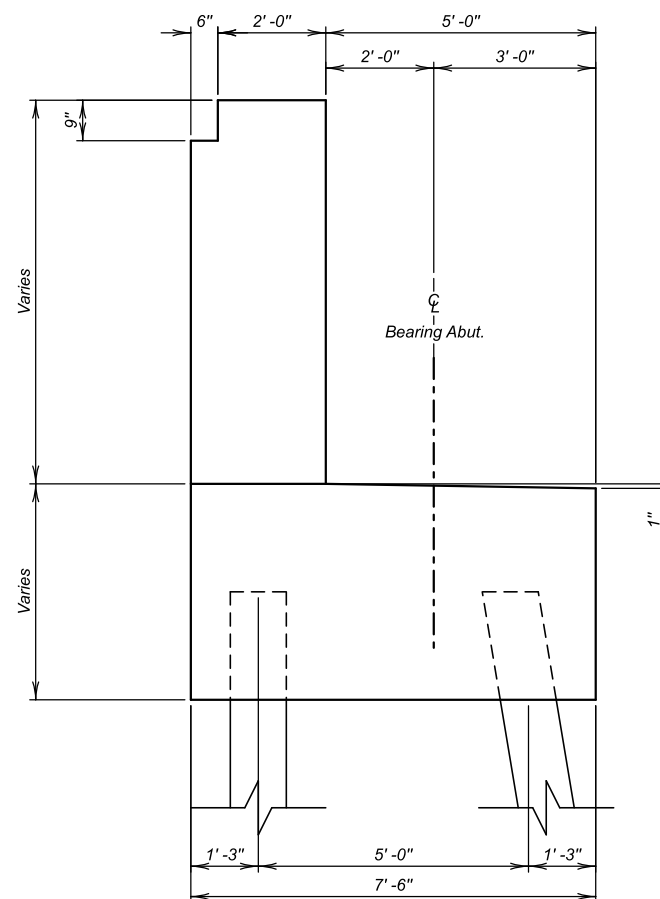
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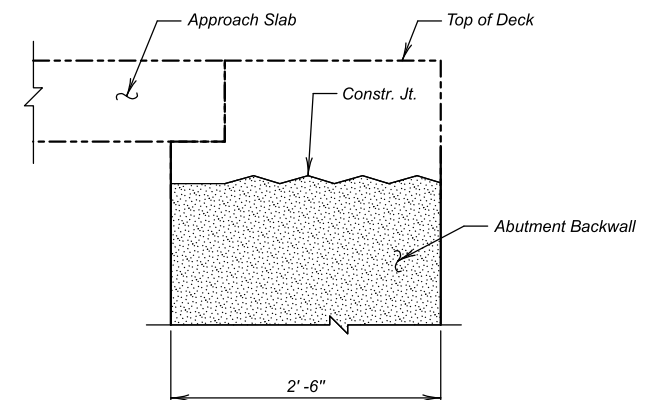
NOTES:  
All dimensions are out to out of bars.  
△ Bars to be Epoxy Coated.  
⌀ See cutting diagram.



### **Wing Wall Plan**



**TYPICAL SECTION**



**DETAIL "X"**  
(Resteel not shown)

ABUTMENT NO. 1 DETAILS (D)  
FOR

312'-11 $\frac{3}{8}$ " STEEL GIRDER BRIDGE

|                                |                        |
|--------------------------------|------------------------|
| 27'-0" ROADWAY                 | 55° LHF SKEW           |
| RAMP D OVER 229 RAMP C         | SEC. 18 - T100N - R50W |
| STA. 60+35.34 to STA. 63+50.03 | EM 0292(88)73          |
| STR. NO. 42-065-016            | HL-93                  |

LINCOLN COUNTY  
S.D. DEPT. OF TRANSPORTATION  
MAY 2025

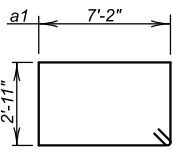
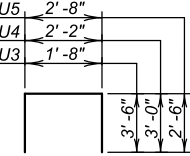
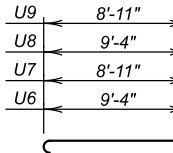
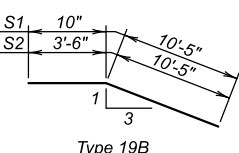
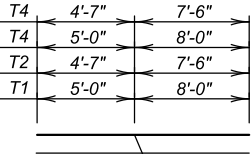
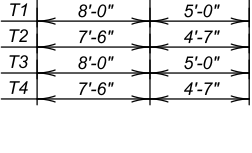
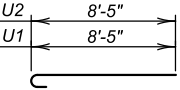
11 OF 53

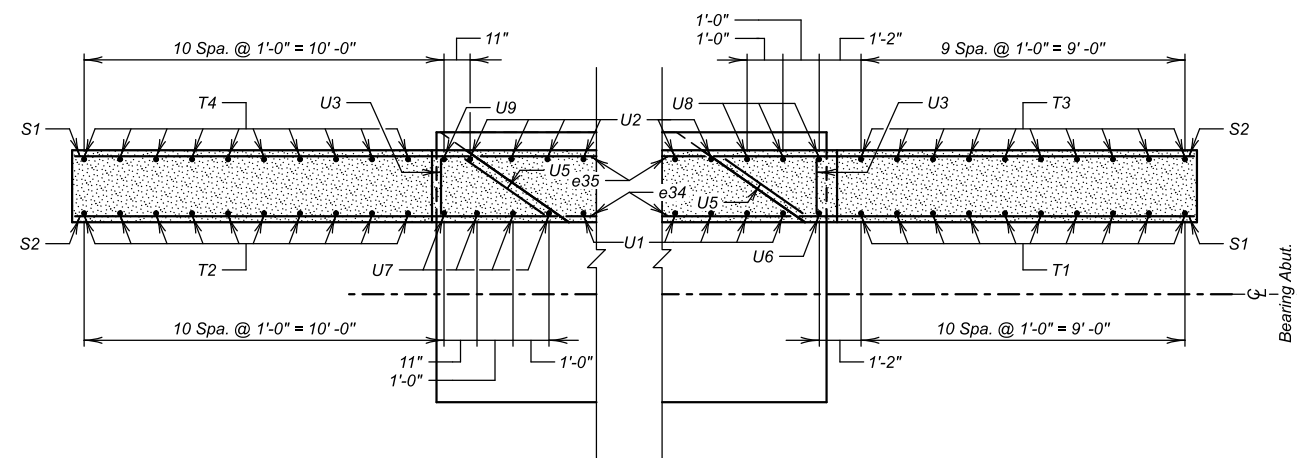
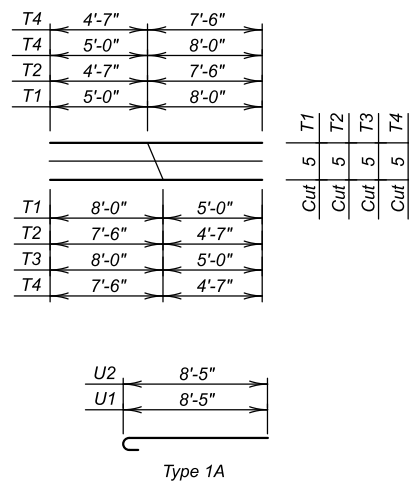
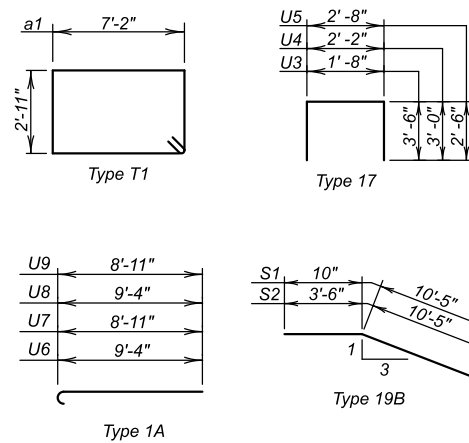
|                    |                    |                   |                                |
|--------------------|--------------------|-------------------|--------------------------------|
| DESIGNED BY<br>CAK | CK. DES. BY<br>NCK | DRAFTED BY<br>NCM | APPROVED BY<br>BRIDGE ENGINEER |
|--------------------|--------------------|-------------------|--------------------------------|



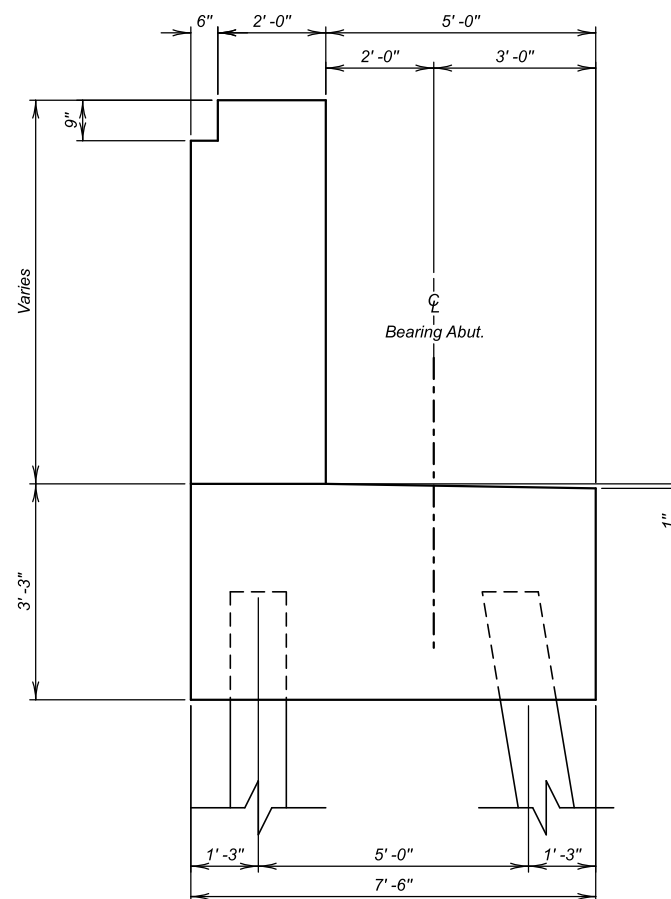
### ESTIMATED QUANTITIES

| ITEM                                             | UNIT    | QUANTITY        |
|--------------------------------------------------|---------|-----------------|
| Structure Excavation, Bridge                     | Cu. Yd. | 73              |
| Class A45 Concrete Bridge                        | Cu. Yd. | 130.1           |
| Reinforcing Steel                                | Lb.     | 4046            |
| Epoxy Coated Reinforcing Steel                   | Lb.     | 3686            |
| Preboring Pile                                   | Ft.     | 8 @ 19' = 152'  |
| HP 14 x 73 Steel Test Pile, Furnish and Drive    | Ft.     | 1 @ 115' = 115' |
| HP 14 x 73 Steel Bearing Pile, Furnish and Drive | Ft.     | 7 @ 110' = 770' |

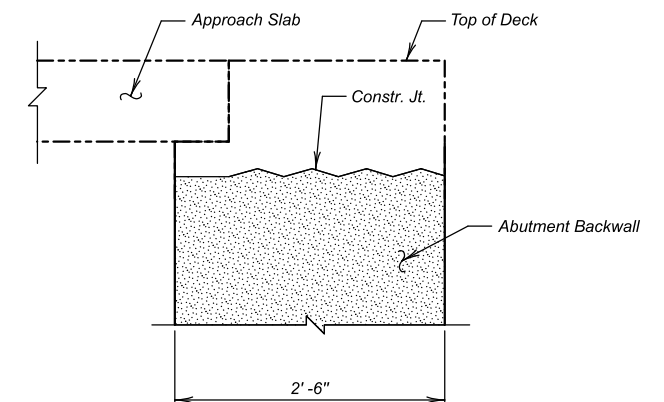
| Mk. | No. | Size | Length | Type      | Bending Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|-----|-----|------|--------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Δ   | a1  | 53   | 5      | 21' - 0"  | T1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| Δ   | e1  | 16   | 8      | 55' - 8"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e2  | 4    | 6      | 9' - 11"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e3  | 6    | 6      | 26' - 0"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e4  | 1    | 6      | 25' - 6"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e5  | 1    | 6      | 22' - 6"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e6  | 1    | 6      | 4' - 1"   | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e7  | 1    | 6      | 24' - 3"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e8  | 1    | 6      | 8' - 6"   | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e9  | 1    | 6      | 5' - 5"   | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e10 | 6    | 6      | 9' - 11"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e11 | 8    | 6      | 26' - 0"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e12 | 7    | 6      | 24' - 0"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e13 | 1    | 6      | 24' - 2"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e14 | 1    | 6      | 20' - 7"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e15 | 1    | 6      | 8' - 6"   | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e16 | 1    | 6      | 7' - 0"   | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e17 | 1    | 6      | 5' - 5"   | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e18 | 1    | 6      | 22' - 3"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e19 | 1    | 6      | 22' - 9"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e20 | 1    | 6      | 5' - 11"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e21 | 1    | 6      | 4' - 5"   | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e22 | 1    | 6      | 2' - 10"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e32 | 5    | 5      | 27' 6"    | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | e33 | 5    | 6      | 29' - 4"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Δ   | e34 | 4    | 4      | 24' - 4"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Δ   | e35 | 4    | 6      | 26' - 6"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     | S1  | 2    | 5      | 11' - 3"  | 19B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | S2  | 2    | 5      | 13' - 11" | 19B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| Φ   | T1  | 5    | 4      | 13' - 0"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Φ   | T2  | 5    | 4      | 12' - 1"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Φ   | T3  | 5    | 5      | 13' - 0"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Φ   | T4  | 5    | 5      | 12' - 1"  | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Φ   | U1  | 48   | 4      | 8' - 11"  | 17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| Φ   | U2  | 48   | 6      | 9' - 1"   | 17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| Δ   | U3  | 48   | 5      | 8' - 8"   | 17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| Δ   | U4  | 48   | 5      | 8' - 2"   | 17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|     | U5  | 4    | 5      | 7' - 8"   | 17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|     | U6  | 1    | 4      | 9' - 10"  | 1A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|     | U7  | 4    | 4      | 9' - 5"   | 1A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|     | U8  | 4    | 6      | 10' - 0"  | 1A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|     | U9  | 1    | 6      | 9' - 7"   | 1A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| Δ   | Z1  | 18   | 7      | 4' - 0"   | str.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|     |     |      |        |           |  <p>Type T1</p>  <p>Type 17</p>  <p>Type 1A</p>  <p>Type 19B</p>  <p>Type 1A</p>  <p>Type 1A</p>  <p>Type 1A</p> |  |



### Wing Wall Plan



**TYPICAL SECTION**



**DETAIL "X"**  
(Resteel not shown)

ABUTMENT NO. 4 DETAILS (D)  
FOR

**312'-11 $\frac{3}{8}$ " STEEL GIRDER BRIDGE**  
 27'-0" ROADWAY 55° LHF SKEW  
 RAMP D OVER 229 RAMP C SEC. 18 - T100N - R50W  
 STA. 60+35.34 to STA. 63+50.03 EM 0292(88)73  
 STR. NO. 42-065-016 HL-93

LINCOLN COUNTY  
S.D. DEPT. OF TRANSPORTATION  
MAY 2025

15 OF 53

|                    |                    |                   |                                |
|--------------------|--------------------|-------------------|--------------------------------|
| DESIGNED BY<br>CAK | CK. DES. BY<br>NCK | DRAFTED BY<br>NCM | APPROVED BY<br>BRIDGE ENGINEER |
|--------------------|--------------------|-------------------|--------------------------------|

NOTES:  
All dimensions are out to out of bars.  
△ Bars to be Epoxy Coated.  
⌧ See cutting diagram.

NOTE:  
Concrete shall be placed in the space under the beams ( within the backwall width) during the pour. Care shall be taken to get the concrete vibrated into this area. If upon form removal the space is not completely filled and consolidated, the contractor shall grout in the remaining voids.





SECTION S – ESTIMATE OF QUANTITIES

PCN 06JQ

| BID ITEM NUMBER | ITEM                                                                | QUANTITY | UNIT |
|-----------------|---------------------------------------------------------------------|----------|------|
| 110E0100        | Remove Concrete Footing(s)                                          | Lump Sum | LS   |
| 110E0130        | Remove Traffic Sign                                                 | 9        | Each |
| 110E0135        | Remove Delineator                                                   | 31       | Each |
| 110E0140        | Remove Extruded Panel Sign                                          | 19       | Each |
| 110E5000        | Salvage Sign Bridge                                                 | 3        | Each |
| 110E7150        | Remove Sign for Reset                                               | 10       | Each |
| 632E0014        | 1.75' Diameter Breakaway Support Concrete Footing                   | 52.0     | Ft   |
| 632E0072        | 4' Diameter Fixed Support Concrete Footing                          | 323.0    | Ft   |
| 632E1230        | W6x15 Steel Post                                                    | 143.3    | Ft   |
| 632E1235        | W6x20 Steel Post                                                    | 45.7     | Ft   |
| 632E1320        | 2.0"x2.0" Perforated Tube Post                                      | 1,029.1  | Ft   |
| 632E1340        | 2.5"x2.5" Perforated Tube Post                                      | 64.0     | Ft   |
| 632E2000        | 4"x4" Amber Delineator with 1.12 Lb/Ft Post                         | 12       | Each |
| 632E2004        | 4"x8" Amber Delineator with 1.12 Lb/Ft Post                         | 5        | Each |
| 632E2008        | 4" Tubular Amber Delineator with 1.12 Lb/Ft Post                    | 9        | Each |
| 632E2020        | 4"x4" White Delineator with 1.12 Lb/Ft Post                         | 6        | Each |
| 632E2024        | 4"x8" White Delineator with 1.12 Lb/Ft Post                         | 105      | Each |
| 632E2028        | 4" Tubular White Delineator with 1.12 Lb/Ft Post                    | 16       | Each |
| 632E2220        | Guardrail Delineator                                                | 302      | Each |
| 632E2510        | Type 2 Object Marker Back to Back                                   | 54       | Each |
| 632E2520        | Type 2 Object Marker                                                | 20       | Each |
| 632E3115        | Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity | 4,963.7  | SqFt |
| 632E3203        | Flat Aluminum Sign, Nonremovable Copy High Intensity                | 440.6    | SqFt |
| 632E3205        | Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity     | 618.2    | SqFt |
| 632E3500        | Reset Sign                                                          | 10       | Each |
| 632E5010        | Double Beam Sign Bridge                                             | 8        | Each |
| 632E5020        | Overhead Cantilever Sign Support                                    | 1        | Each |
| 632E5055        | Mast Arm Sign Support                                               | 2        | Each |
| 635E5302        | Type 2 Electrical Junction Box                                      | 2        | Each |
| 635E6200        | Miscellaneous, Electrical                                           | Lump Sum | LS   |
| 635E8120        | 2" Rigid Conduit, Schedule 40                                       | 290      | Ft   |
| 635E8220        | 2" Rigid Conduit, Schedule 80                                       | 90       | Ft   |
| 635E9020        | 1/C #10 AWG Copper Wire                                             | 1,220    | Ft   |
| 900E2030        | Miscellaneous Work                                                  | 1        | Site |

PCN 07D0

| BID ITEM NUMBER | ITEM                                                                | QUANTITY | UNIT |
|-----------------|---------------------------------------------------------------------|----------|------|
| 110E0100        | Remove Concrete Footing(s)                                          | Lump Sum | LS   |
| 110E0135        | Remove Delineator                                                   | 44       | Each |
| 110E0140        | Remove Extruded Panel Sign                                          | 3        | Each |
| 110E7150        | Remove Sign for Reset                                               | 1        | Each |
| 632E0072        | 4' Diameter Fixed Support Concrete Footing                          | 24.0     | Ft   |
| 632E1320        | 2.0"x2.0" Perforated Tube Post                                      | 12.4     | Ft   |
| 632E2004        | 4"x8" Amber Delineator with 1.12 Lb/Ft Post                         | 6        | Each |
| 632E2020        | 4"x4" White Delineator with 1.12 Lb/Ft Post                         | 6        | Each |
| 632E2024        | 4"x8" White Delineator with 1.12 Lb/Ft Post                         | 37       | Each |
| 632E2220        | Guardrail Delineator                                                | 8        | Each |
| 632E2510        | Type 2 Object Marker Back to Back                                   | 6        | Each |
| 632E2520        | Type 2 Object Marker                                                | 2        | Each |
| 632E3115        | Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity | 405.6    | SqFt |
| 632E3205        | Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity     | 12.6     | SqFt |
| 632E3500        | Reset Sign                                                          | 1        | Each |
| 632E5020        | Overhead Cantilever Sign Support                                    | 1        | Each |

|                                                                                                                                |                                                                         |       |              |
|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-------|--------------|
| <br><small>Plotting Date:</small> 10/14/2025 | PROJECT                                                                 | SHEET | TOTAL SHEETS |
|                                                                                                                                | EM 0292(88)73<br>IM 2292(104)0                                          | S2    | S112         |
|                                                                                                                                | <small>Revised Date:</small> 10/14/2025<br><small>Initials:</small> NBG |       |              |

GENERAL PERMANENT SIGNING

New sign installations will be staked in the field by the Contractor and checked by the Engineer. The Contractor will give the Engineer a minimum of one week to check staked locations prior to signpost installation. Lateral offset of signs will be as shown in the plans or as directed by the Engineer.

The Contractor will be responsible for contacting South Dakota One Call to locate the utilities at the staked sign installation locations.

When signs are mounted in an assembly, they will be 1-2 inches apart vertically and horizontally.

The height of the post must not exceed the minimum height needed by more than 0.5 feet. Any portion that extends above the sign will be cut off. No separate payment will be made for cutting the post or for that length cut off.

Aluminum U-Channel stiffeners will be used on all signs 36 inches or greater in width and will conform to ASTM B221 Alloy 6063-T6 or 6061-T6. The U-Channel will be 2 inches in width and free of holes. The U-Channel stiffeners will also be used to connect various signs together so that an entire sign assembly can be erected on a single installation. Stiffeners may be fastened to signs by use of 1/4-inch diameter drive rivets.

The Contractor will use 3/8-inch diameter rust proof machine sign bolts, flat metal washers, neoprene washers (against the sign sheeting), lock washers, and nuts to fasten the sign to the channel aluminum and posts. A minimum of two bolts will extend through each post.

Prior to ordering signs, the Contractor will verify dimensions, background, border, and legend of the signs.

Prior to use, the Contractor will provide documentation for the sign support devices showing they meet the applicable NCHRP 350 or MASH requirements.



TABLE OF REMOVE AND INSTALL SIGN STRUCTURES

| Station                        | Offset   | Salvage Sign Bridge (Each) | Remove Concrete Footing(s) (Each)** | Double Beam Sign Bridge (Each) | Cantilever Sign Support (Each) | Mast Arm Sign Support (Each) |
|--------------------------------|----------|----------------------------|-------------------------------------|--------------------------------|--------------------------------|------------------------------|
| EM 0292(88)73 - PCN 06JQ       |          |                            |                                     |                                |                                |                              |
| I-29 NORTHBOUND                |          |                            |                                     |                                |                                |                              |
| 47+32                          | Overhead |                            |                                     |                                | 1                              |                              |
| 52+69                          | Overhead | 1                          | 2                                   |                                |                                |                              |
| 61+75                          | Overhead |                            |                                     | 1                              |                                |                              |
| 87+20                          | Overhead |                            |                                     | 1                              |                                |                              |
| I-29 SOUTHBOUND                |          |                            |                                     |                                |                                |                              |
| 41+75                          | Overhead | 1                          | 1                                   |                                |                                |                              |
| 99+75                          | Overhead |                            |                                     | 1                              |                                |                              |
| 158+00                         | Overhead |                            |                                     | 1                              |                                |                              |
| 158+25                         | Overhead | 1                          | 2                                   |                                |                                |                              |
| RAMP B                         |          |                            |                                     |                                |                                |                              |
| 31+45                          | Overhead |                            |                                     |                                |                                | 1                            |
| RAMP D                         |          |                            |                                     |                                |                                |                              |
| 45+82                          | Overhead |                            |                                     |                                |                                | 1                            |
| 85TH STREET EASTBOUND          |          |                            |                                     |                                |                                |                              |
| 314+50                         | Overhead |                            |                                     | 1                              |                                |                              |
| 85TH STREET WESTBOUND          |          |                            |                                     |                                |                                |                              |
| 426+00                         | Overhead |                            |                                     | 1                              |                                |                              |
| I-229 RAMP C                   |          |                            |                                     |                                |                                |                              |
| 26+86                          | Overhead |                            |                                     | 1                              |                                |                              |
| 61+62                          | Overhead |                            |                                     | 1                              |                                |                              |
| 78+60                          | Overhead |                            |                                     |                                |                                |                              |
| EM 0292(88)73 - PCN 06JQ Total |          | 3                          | 5                                   | 8                              | 1                              | 2                            |
| IM 2292(104)0 - PCN 07D0       |          |                            |                                     |                                |                                |                              |
| I-229 NORTHBOUND               |          |                            |                                     |                                |                                |                              |
| 179+84                         | Overhead |                            |                                     |                                | 1                              |                              |
| IM 2292(104)0 - PCN 07D0 Total |          | 0                          | 0                                   | 0                              | 1                              | 0                            |

\*\* Incidental to the contract lump sum price "Remove Concrete Footing(s)".

