

February 15, 2025

ADDENDUM NO. 4

RE: Item #1, February 19, 2025 Letting - IM-B-CR 2292(101)3, PCN 05HN, Minnehaha County - Grading, PCC Surfacing, Structures (10x4 RCBC extension, 163' Temporary Bridge, (2) 400' Steel Girder, (2) 12x8 CIP RCBC), Retaining Walls, Curb & Gutter, Storm Sewer, Signals, Lighting

TO WHOM IT MAY CONCERN:

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

SPECIAL PROVISIONS: 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 628E1500 "Concrete Barrier End Protection" changed from 6 to 7 Each
Bid Item 632E1320 "2.0"x2.0" Perforated Tube Post" changed from 1,045.3 to 1,296.3 Ft
Bid Item 634E0750 "Temporary Concrete Barrier End Protection" changed from 4 to 5 Each

PLANS: Please destroy sheets A2, A6, B3, B19, C2, C8, C13, C17, C28, S2, S15-S23 & S77 and replace with the enclosed sheets, dated 2/14/25.

Sheets A2 & B3: Quantities for Bid Item 628E1500 "Concrete Barrier End Protection" changed from 6 to 7 Each

Sheets A2 & C2: Quantities for Bid Item 634E0750 "Temporary Concrete Barrier End Protection" changed from 4 to 5 Each

Sheets A6 & S2: Quantities for Bid Item 632E1320 "2.0"x2.0" Perforated Tube Post" changed from 1,045.3 to 1,296.3 Ft

Sheet B19: TABLE OF PERMANENT CONCRETE BARRIER END PROTECTION was revised.

Sheet C2: SECTION C ESTIMATE OF QUANTITIES (Exit 3 Crossover – Info Only)
Bid Item 634E0702 "Contractor Supplied Traffic Control Moveable Concrete Barrier" was removed.
Bid Item 634E0700 "Traffic Control Movable Concrete Barrier" was added.

Sheet C8: The first paragraph of the TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS note & the first paragraph of the TEMPORARY CONCRETE BARRIER END PROTECTION note was revised. TABLE OF TEMPORARY CONCRETE BARRIER END PROTECTION was revised.

Sheet C13: OTHER TRAFFIC CONTROL QUANTITIES (05HN: Exit 4) table was revised.

Sheet C17: OTHER TRAFFIC CONTROL QUANTITIES (05HN: Exit 3 Crossover) table was revised.

Sheet C28: TIE TO REMAINING BARRIER FROM TEMP BRIDGE PROEJCT notes were added.

Sheets S15-S23: Permanent Sign Installation Table was revised. *All (S)lip Base Post data was changed to (A)nchor Stub Post. Several sign location post data was revised to indicate 2P.*

Sheet S77: 2" SQUARE STEEL PERFORATED TUBE POST WINGED SLEEVE ANCHOR BASE DETAILS was added.

Sincerely,

Sam Weisgram
Engineering Supervisor

SW/cj

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

Section B – Grading (continued)

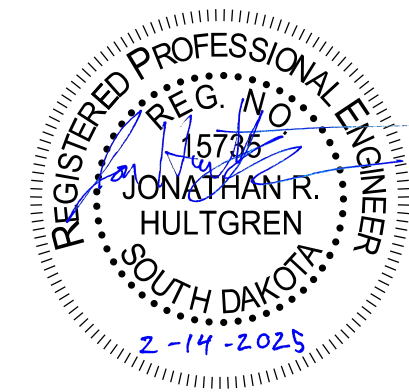
Section C – Traffic Control

Section D – Erosion and Sediment Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
621E0160	6' Chain Link Fence with Tension Wired Top	13,739	Ft
628E1100	Movable F Shape Concrete Barrier, Interior Section	91	Each
628E1500	Concrete Barrier End Protection	7	Each
628E1510	Concrete Barrier End Protection Module Set or Repair Kit	2	Each
629E0110	High Tension 4 Cable Guardrail	5,619	Ft
629E0290	High Tension Cable Guardrail Anchor Assembly	4	Each
629E1109	Furnish High Tension Cable Guardrail Post and Sleeve	50	Each
629E9000	Crossover Closure	178	Ft
630E0500	Type 1 MGS	4,049.0	Ft
630E0530	Type 3 MGS	150.0	Ft
630E1005	18'-9" Longspan MGS	1	Each
630E1500	Type 1 Guardrail Transition	2	Each
630E2017	MGS MASH Flared End Terminal	3	Each
630E2018	MGS MASH Tangent End Terminal	7	Each
630E2065	MGS Trailing End Terminal	6	Each
630E2200	W Beam Guardrail End Block Adapter	3	Each
634E0525	Linear Delineation System Panel, Barrier Mounted	91	Each
650E0060	Type B66 Concrete Curb and Gutter	1,813	Ft
650E0085	Type B68.5 Concrete Curb and Gutter	3,281	Ft
650E0105	Type B610.5 Concrete Curb and Gutter	9,970	Ft
650E0120	Type B612 Concrete Curb and Gutter	60	Ft
651E0040	4" Concrete Sidewalk	1,219	SqFt
651E0060	6" Concrete Sidewalk	60,159	SqFt
651E7000	Type 1 Detectable Warnings	718	SqFt
670E0200	Type A Frame and Grate	10	Each
670E2200	Type C Frame and Grate	4	Each
670E4205	Type M Frame and Grate Assembly	8	Each
670E5200	Special Frame and Grate Assembly	45	Each
670E5200	Special Frame and Grate Assembly	15	Each
670E5340	4' x 11' Precast Concrete Type S Drop Inlet Lid	5	Each
670E5400	Precast Drop Inlet Collar	4	Each
670E6000	Adjust Drop Inlet	1	Each
671E6008	Type A8 Manhole Frame and Lid	4	Each
671E6035	Special Manhole Frame and Lid	5	Each
671E6040	Manhole Frame	1	Each
671E6050	Manhole Lid	1	Each
671E7020	Connect Into Existing Manhole	1	Each
700E0210	Class B Riprap	651.0	Ton
831E0110	Type B Drainage Fabric	922	SqYd

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E0040	Cold Applied Plastic Pavement Marking, Arrow	9	Each
634E0010	Flagging	500.0	Hour
634E0110	Traffic Control Signs	3,014.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0135	Traffic Control Supervisor	Lump Sum	LS
634E0275	Type 3 Barricade	63	Each
634E0330	Temporary Raised Pavement Markers	12,673	Ft
634E0380	Tubular Marker	24	Each
634E0390	Replace Tubular Marker	2	Each
634E0420	Type C Advance Warning Arrow Board	3	Each
634E0525	Linear Delineation System Panel, Barrier Mounted	374	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	60,593	Ft
634E0565	Remove Pavement Marking, Arrow	5	Each
634E0640	Temporary Pavement Marking	125,212	Ft
634E0700	Traffic Control Movable Concrete Barrier	521	Each
634E0705	Remove and Reset Traffic Control Movable Concrete Barrier	534	Each
634E0750	Temporary Concrete Barrier End Protection	5	Each
634E0755	Remove and Reset Temporary Concrete Barrier End Protection	5	Each
634E0760	Temporary Concrete Barrier End Protection Module Set or Repair Kit	1	Each
634E0915	Short Term Temporary Traffic Control Signal	1	Site
634E1002	Detour and Restriction Signing	1,774.2	SqFt
634E1020	Temporary Business Signing	379.8	SqFt
634E1215	Contractor Furnished Portable Changeable Message Sign	12	Each
634E1235	Queue Detection System	18.0	Mth
634E1245	Maintenance of Queue Detection System	376	Hour
634E1255	Contractor Furnished Speed Monitoring Radar Trailer	2	Each
634E2000	Longitudinal Pedestrian Barricade	8	Ft
634E2020	Temporary Curb Ramp	2	Each
634E2025	Longitudinal Pedestrian Barrier	308	Ft
634E2050	Temporary Sidewalk	600	SqFt
635E7600	Maintenance of Traffic Signal(s)	40	Hour
900E1080	Orange Plastic Safety Fence	1,600	Ft

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	35.0	CuYd
110E1693	Remove Erosion Control Wattle	1,359	Ft
110E1695	Remove Sediment Filter Bag	2,516	Ft
110E1700	Remove Silt Fence	3,240	Ft
120E6300	Water for Vegetation	11,985.0	MGal
230E0010	Placing Topsoil	23,080	CuYd
730E0202	Type B Permanent Seed Mixture	133	Lb
730E0206	Type D Permanent Seed Mixture	12,585	Lb
731E0200	Fertilizing	34.31	Ton
732E0200	Fiber Mulching	14.5	Ton
732E0300	Bonded Fiber Matrix	80.5	Ton
734E0044	Soil Stabilizer	41.3	Acre
734E0102	Type 2 Erosion Control Blanket	10,567	SqYd
734E0133	Type 3 Turf Reinforcement Mat	997.0	SqYd
734E0154	12" Diameter Erosion Control Wattle	6,059	Ft
734E0160	20" Diameter Erosion Control Wattle	216	Ft
734E0165	Remove and Reset Erosion Control Wattle	1,569	Ft
734E0180	Sediment Filter Bag	2,516	Ft
734E0325	Surface Roughening	2.0	Acre
734E0510	Shaping for Erosion Control Blanket	4,093	Ft
734E0602	Low Flow Silt Fence	14,820	Ft
734E0610	Mucking Silt Fence	900	CuYd
734E0620	Repair Silt Fence	3,240	Ft
734E0630	Floating Silt Curtain	600	Ft
734E0845	Sediment Control at Inlet with Frame and Grate	29	Each
734E0847	Sediment Control at Type S Reinforced Concrete Drop Inlet	485	Ft
734E5005	Dewatering	Lump Sum	LS
734E5010	Sweeping	80	Hour
900E1310	Concrete Washout Facility	4	Each
900E1320	Construction Entrance	8	Each

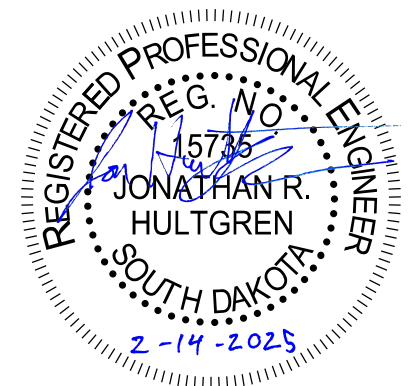


Section S – Permanent Signing

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E0100	Remove Concrete Footing(s)	Lump Sum	LS
110E0120	Remove Sign Bridge	3	Each
110E0130	Remove Traffic Sign	62	Each
110E0135	Remove Delineator	136	Each
110E0140	Remove Extruded Panel Sign	6	Each
110E5000	Salvage Sign Bridge	2	Each
110E5020	Salvage Traffic Sign	10	Each
110E7150	Remove Sign for Reset	25	Each
632E0014	1.75' Diameter Breakaway Support Concrete Footing	126.0	Ft
632E0072	4' Diameter Fixed Support Concrete Footing	38.0	Ft
632E1235	W6x20 Steel Post	353.9	Ft
632E1320	2.0"x2.0" Perforated Tube Post	1,296.3	Ft
632E1340	2.5"x2.5" Perforated Tube Post	51.5	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	15	Each
632E2008	4" Tubular Amber Delineator with 1.12 Lb/Ft Post	4	Each
632E2020	4"x4" White Delineator with 1.12 Lb/Ft Post	44	Each
632E2024	4"x8" White Delineator with 1.12 Lb/Ft Post	98	Each
632E2028	4" Tubular White Delineator with 1.12 Lb/Ft Post	5	Each
632E2220	Guardrail Delineator	95	Each
632E2510	Type 2 Object Marker Back to Back	63	Each
632E2520	Type 2 Object Marker	2	Each
632E3115	Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity	1,270.1	SqFt
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	306.7	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	325.5	SqFt
632E3500	Reset Sign	25	Each
632E5020	Overhead Cantilever Sign Support	3	Each
634E0275	Type 3 Barricade	3	Each



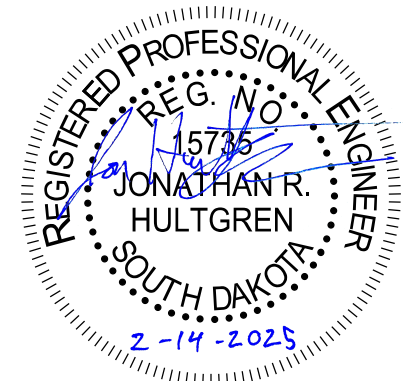
SECTION B ESTIMATE OF QUANTITIES (CONTINUED)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
621E0160	6' Chain Link Fence with Tension Wired Top	13,739	Ft
628E1100	Movable F Shape Concrete Barrier, Interior Section	91	Each
628E1500	Concrete Barrier End Protection	7	Each
628E1510	Concrete Barrier End Protection Module Set or Repair Kit	2	Each
629E0110	High Tension 4 Cable Guardrail	5,619	Ft
629E0290	High Tension Cable Guardrail Anchor Assembly	4	Each
629E1109	Furnish High Tension Cable Guardrail Post and Sleeve	50	Each
629E9000	Crossover Closure	178	Ft
630E0500	Type 1 MGS	4,049.0	Ft
630E0530	Type 3 MGS	150.0	Ft
630E1005	18'-9" Longspan MGS	1	Each
630E1500	Type 1 Guardrail Transition	2	Each
630E2017	MGS MASH Flared End Terminal	3	Each
630E2018	MGS MASH Tangent End Terminal	7	Each
630E2065	MGS Trailing End Terminal	6	Each
630E2200	W Beam Guardrail End Block Adapter	3	Each
634E0525	Linear Delineation System Panel, Barrier Mounted	91	Each
650E0060	Type B66 Concrete Curb and Gutter	1,813	Ft
650E0085	Type B68.5 Concrete Curb and Gutter	3,281	Ft
650E0105	Type B610.5 Concrete Curb and Gutter	9,970	Ft
650E0120	Type B612 Concrete Curb and Gutter	60	Ft
651E0040	4" Concrete Sidewalk	1,219	SqFt
651E0060	6" Concrete Sidewalk	60,159	SqFt
651E7000	Type 1 Detectable Warnings	718	SqFt
670E0200	Type A Frame and Grate	10	Each
670E2200	Type C Frame and Grate	4	Each
670E4205	Type M Frame and Grate Assembly	8	Each
670E5200	Special Frame and Grate Assembly	45	Each
670E5200	Special Frame and Grate Assembly	15	Each
670E5340	4' x 11' Precast Concrete Type S Drop Inlet Lid	5	Each
670E5400	Precast Drop Inlet Collar	4	Each
670E6000	Adjust Drop Inlet	1	Each
671E6008	Type A8 Manhole Frame and Lid	4	Each
671E6035	Special Manhole Frame and Lid	5	Each
671E6040	Manhole Frame	1	Each
671E6050	Manhole Lid	1	Each
671E7020	Connect Into Existing Manhole	1	Each
700E0210	Class B Riprap	651.0	Ton
831E0110	Type B Drainage Fabric	922	SqYd

SECTION B ESTIMATE OF QUANTITIES (Exit 3 Crossover)
(Included in overall estimate of quantities table, for information only)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3230	Grade Staking	1,214	Mile
009E3245	Final Cross Section Survey	1,214	Mile
009E3250	Miscellaneous Staking	1,214	Mile
009E3280	Slope Staking	1,214	Mile
009E3290	Structure Staking	3	Each
009E3301	Engineer Directed Surveying/Staking	40	Hour
009E4300	Construction Schedule, Category III	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E0700	Remove 3 Cable Guardrail	518	Ft
110E0730	Remove Beam Guardrail	78.0	Ft
110E0740	Remove 3 Cable Guardrail Anchor Assembly	3	Each
110E1100	Remove Concrete Pavement	3,232.3	SqYd
110E7510	Remove Pipe End Section for Reset	1	Each
120E0010	Unclassified Excavation	22,003	CuYd
120E0300	Borrow Unclassified Excavation	30,994	CuYd
120E1000	Muck Excavation	406	CuYd
120E2000	Undercutting	9,427	CuYd
120E6100	Water for Embankment	310.0	MGal
250E0020	Incidental Work, Grading	Lump Sum	LS
450E0143	24" RCP Class 3, Furnish	122	Ft
450E0150	24" RCP, Install	122	Ft
450E0416	24" RCP Bend, Furnish	1	Each
450E0417	24" RCP Bend, Install	1	Each
450E2016	24" RCP Flared End, Furnish	1	Each
450E2017	24" RCP Flared End, Install	1	Each
450E4748	15" CMP 14 Gauge, Furnish	286	Ft
450E4750	15" CMP, Install	286	Ft
450E4768	24" CMP 14 Gauge, Furnish	222	Ft
450E4770	24" CMP, Install	222	Ft
450E5015	24" CMP Elbow, Furnish	4	Each
450E5016	24" CMP Elbow, Install	4	Each
450E5207	15" CMP Flared End, Furnish	2	Each
450E5208	15" CMP Flared End, Install	2	Each
450E5215	24" CMP Flared End, Furnish	2	Each
450E5216	24" CMP Flared End, Install	2	Each
450E5402	15" CMP Safety End, Furnish	2	Each
450E5403	15" CMP Safety End, Install	2	Each
450E6119	15" Slotted CMP 16 Gauge, Furnish	160	Ft
450E6120	15" Slotted CMP, Install	160	Ft
450E9001	Reset Pipe End Section	1	Each
462E0100	Class M6 Concrete	13.9	CuYd

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
464E0100	Controlled Density Fill	28.9	CuYd
480E0100	Reinforcing Steel	951	Lb
628E1100	Movable F Shape Concrete Barrier, Interior Section	91	Each
628E1500	Concrete Barrier End Protection	4	Each
629E9000	Crossover Closure	178	Ft
630E0500	Type 1 MGS	1,572.4	Ft
630E0530	Type 3 MGS	150.0	Ft
630E2017	MGS MASH Flared End Terminal	3	Each
630E2065	MGS Trailing End Terminal	1	Each
630E2200	W Beam Guardrail End Block Adapter	3	Each
634E0525	Linear Delineation System Panel, Barrier Mounted	91	Each
670E2200	Type C Frame and Grate	4	Each
670E5400	Precast Drop Inlet Collar	4	Each
670E6000	Adjust Drop Inlet	1	Each



PERMANENT CONCRETE BARRIER END PROTECTION

The Contractor will provide a permanent concrete barrier end protection crash cushion from the Approved Products List (APL). The Contractor will be responsible for selecting a crash cushion from the APL that is appropriate width to protect the concrete barrier (or other hazard). If the crash cushion selected requires system specified transition panels to obtain the appropriate width, no additional payment will be made for the transition panels. Only one type of crash cushion will be used on a project; however, if conditions warrant a need for using more than one type of crash cushion on a project, then the Contractor will submit a proposal to the Engineer for approval. The approved products list may be viewed at the following internet site:

<https://apps.sd.gov/HC60ApprovedProducts/main.aspx>

The anchoring pad for the crash cushion will at a minimum be an 8-inch-thick PCC pavement that meets the requirements of Class M6 concrete. The pad will be in accordance with the Manufacturer's recommendations if the pad needs to have thicker pavement and/or a footing.

Documentation on the crash cushion, which includes the drawing details of the crash cushion, details for the transition to the concrete barrier, and details for the concrete anchoring pad, will be provided to the Project Engineer at the pre-construction meeting.

The crash cushion will be attached to the concrete barrier with a transition that meets test level 3 requirements of MASH at locations shown below in the Table of Permanent Concrete Barrier End Protection. For unidirectional traffic, the transition piece will be placed on the side of the cushion and barrier that is adjacent to the traffic. For bidirectional traffic, the transition will be placed on both sides of the crash cushion and barrier.

The Contractor will certify that the crash cushion was installed according to the Manufacturer's installation instructions.

All costs for furnishing and installing the crash cushion including the anchoring pad, anchors for connection to the pad, transitions to the concrete barrier (if required), strut backup, materials, labor, equipment, and incidental items will be paid for at the contract unit price per each for "Concrete Barrier End Protection".

The Contractor will supply two extra sets of modules or replacement kits required for resetting the crash cushion and will deliver these items to the DOT Area Shop in Sioux Falls. One set of modules or one replacement kit is considered a comprehensive repair kit which will include all parts that could potentially be necessary to repair and restore the crash cushion to properly functioning and like-new condition after a vehicle hit. Final payment for the modules or replacement kits will be executed once the items are delivered to the DOT Area Shop in Sioux Falls. All costs for furnishing and delivering the extra sets of modules or replacement kits will be incidental to the contract unit price per each for "Concrete Barrier End Protection Module Set or Repair Kit".

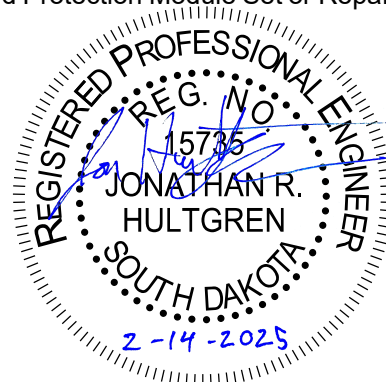


TABLE OF PERMANENT CONCRETE BARRIER END PROTECTION

Station	Location	Unidirectional/ Bidirectional	Quantity (Each)
NB I-229			
131+75	R	Unidirectional	1
148+88	R	Unidirectional	1
157+30	L	Unidirectional	1
157+40	R	Unidirectional	1
197+76	R	Unidirectional	1
210+68	L	Unidirectional	1
SB I-229			
220+06	L	Unidirectional	1
Total			7

TABLE OF PERMANENT CONCRETE BARRIER (Exit 3 Crossover)

Station	Type	Quantity (Each)
NB I-229		
131+75-53' R to 134+00-53' R	F-Shape	18
148+94-31' R to 152+31-28' R	F-Shape	27
154+53-4' L to 157+28-32' L	F-Shape	22
154+36-28' R to 157+36-32' R	F-Shape	24
Total		91

HIGH TENSION CABLE GUARDRAIL

The Contractor will furnish and install a high tension cable guardrail system that meets the Test Level 3 crash testing requirements of the Manual for Assessing Safety Hardware (MASH). The maximum dynamic deflection of the system will be less than 10'-0" and the maximum post spacing will be 10'-6" unless specified otherwise in the plans. High Tension 4 Cable Guardrail will be one of the following products:

- Valtir (Trinity) – CASS S3 M10
- Brifen – 4 Rope O-Post System

The high tension cable guardrail system will be in compliance with Specifications Section 6.9 Buy America.

The Contractor will install the system according to the manufacturer's installation recommendations except where stated otherwise in the plans. A copy of the detail drawings and installation instructions for the high tension cable guardrail and anchor assemblies will be given to the Engineer a minimum of 4 weeks prior to installation of the high tension cable guardrail system.

All posts will be galvanized and inserted into driven galvanized steel sleeves with soil plates. The driven sleeves must be designed for a minimum frost depth of 42" and to resist the additional lateral component of curved cable sections.

Delineation of the high tension cable guardrail will be in conformance with standard plate 632.40.

The cables provided will be pre-stretched in the factory.

The Contractor will check and adjust the tension of the cables a minimum of 3 weeks after installation and not longer than 6 weeks after installation. Cost for this work will be incidental to the contract unit price per foot for "High Tension 4 Cable Guardrail".

High tension cable guardrail will be installed on a 10:1 or flatter slope and the embankment limits will match the high tension cable guardrail limits. The embankment quantities may vary from plans quantity.

The lengths of high tension cable guardrail stated in the plans are based on a minimum effective length (length of need). The length and location of the high tension cable guardrail at each site will need to be adjusted during construction as necessary depending on the system provided and will be approved by the Design Engineer before installation. When the Valtir (Trinity) CASS S3 M10 system is installed adjacent to one-way traffic roadways, 26' of the anchor assembly on the approach end is considered non-effective, and 51' on the non-approach end is considered non-effective; however, when the same system is installed adjacent to two-way traffic roadways, 26' of the anchor assembly on both the approach and non-approach ends is considered non-effective. For Brifen 4 Rope O-Post System installations, the anchor assembly is non-effective.

The Contractor will provide a signed letter of compliance to the Engineer upon completion of the high tension cable guardrail installation(s) stating that the high tension cable barrier system has been installed in conformance to the manufacturer installation instructions and specifications, meets the Test Level 3 crash test requirements of MASH, and is terminated with an approved anchor assembly.

The high tension cable guardrail will be measured along the centerline of the cable guardrail from the beginning to the end of the minimum effective length. All costs for furnishing and installing the high tension cable guardrail system including all labor, materials, and equipment will be incidental to the contract unit price per foot for "High Tension 4 Cable Guardrail".

HIGH TENSION CABLE GUARDRAIL ANCHOR ASSEMBLY

The beginning and end of each "run" of high tension cable guardrail will terminate with an anchor assembly. The High Tension Cable Anchor Assemblies will be one of the following products:

- Valtir (Trinity) – CASS Cable Terminal (CCT)
- Brifen – MASH Gating Terminal (MGT)

The footing(s) for the anchor assembly will be designed to allow for 1 inch maximum of lateral deflection. The allowable design soil pressure will be 1000 psf. The top 2 feet of soil pressure will be neglected in the design of the footing(s). The footing(s) will be a minimum of 5' deep. The footing(s) design will be submitted through proper channels to the Office of Bridge Design for a one-time approval. Allow 15 working days for Office of Bridge Design review. Any changes to the anchor assembly that could affect footing size including configuration changes such as different number of cables and different number of footings will be resubmitted for approval. The approval will be obtained a minimum of 4 weeks prior to construction of the anchor footing(s).

Delineation of the high tension cable guardrail anchor assembly will be in conformance with standard plate 632.40.

SECTION C ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E0040	Cold Applied Plastic Pavement Marking, Arrow	9	Each
634E0010	Flagging	500.0	Hour
634E0110	Traffic Control Signs	3,014.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0135	Traffic Control Supervisor	Lump Sum	LS
634E0275	Type 3 Barricade	63	Each
634E0330	Temporary Raised Pavement Markers	12,673	Ft
634E0380	Tubular Marker	24	Each
634E0390	Replace Tubular Marker	2	Each
634E0420	Type C Advance Warning Arrow Board	3	Each
634E0525	Linear Delineation System Panel, Barrier Mounted	374	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	60,593	Ft
634E0565	Remove Pavement Marking, Arrow	5	Each
634E0640	Temporary Pavement Marking	125,212	Ft
634E0700	Traffic Control Movable Concrete Barrier	521	Each
634E0705	Remove and Reset Traffic Control Movable Concrete Barrier	534	Each
634E0750	Temporary Concrete Barrier End Protection	5	Each
634E0755	Remove and Reset Temporary Concrete Barrier End Protection	5	Each
634E0760	Temporary Concrete Barrier End Protection Module Set or Repair Kit	1	Each
634E0915	Short Term Temporary Traffic Control Signal	1	Site
634E1002	Detour and Restriction Signing	1,774.2	SqFt
634E1020	Temporary Business Signing	379.8	SqFt
634E1215	Contractor Furnished Portable Changeable Message Sign	12	Each
634E1235	Queue Detection System	18.0	Mth
634E1245	Maintenance of Queue Detection System	376	Hour
634E1255	Contractor Furnished Speed Monitoring Radar Trailer	2	Each
634E2000	Longitudinal Pedestrian Barricade	8	Ft
634E2020	Temporary Curb Ramp	2	Each
634E2025	Longitudinal Pedestrian Barrier	308	Ft
634E2050	Temporary Sidewalk	600	SqFt
635E7600	Maintenance of Traffic Signal(s)	40	Hour
900E1080	Orange Plastic Safety Fence	1,600	Ft

SECTION C ESTIMATE OF QUANTITIES (Exit 3 Crossover)

(Included in overall estimate of quantities table, for information only)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E0040	Cold Applied Plastic Pavement Marking, Arrow	9	Each
634E0010	Flagging	500	Hour
634E0110	Traffic Control Signs	1,928.1	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	15	Each
634E0380	Tubular Marker	24	Each
634E0390	Replace Tubular Marker	2	Each
634E0420	Type C Advance Warning Arrow Board	1	Each
634E0525	Linear Delineation System Panel, Barrier Mounted	374	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	9,413	Ft
634E0565	Remove Pavement Marking, Arrow	3	Each
634E0640	Temporary Pavement Marking	10,382	Ft
634E0700	Traffic Control Movable Concrete Barrier	374	Each
634E0705	Remove and Reset Traffic Control Movable Concrete Barrier	436	Each
634E0750	Temporary Concrete Barrier End Protection	3	Each
634E0755	Remove and Reset Temporary Concrete Barrier End Protection	5	Each
634E0760	Temporary Concrete Barrier End Protection Module Set or Repair Kit	1	Each
634E1002	Detour and Restriction Signing	309.1	SqFt
634E1215	Contractor Furnished Portable Changeable Message Sign	6	Each
634E1235	Queue Detection System	9.0	Mth
634E1245	Maintenance of Queue Detection System	104	Hour
634E2000	Longitudinal Pedestrian Barricade	8	Ft
634E2020	Temporary Curb Ramp	2	Each
634E2025	Longitudinal Pedestrian Barrier	308	Ft

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-B-CR 2292(101)3	C2	C107

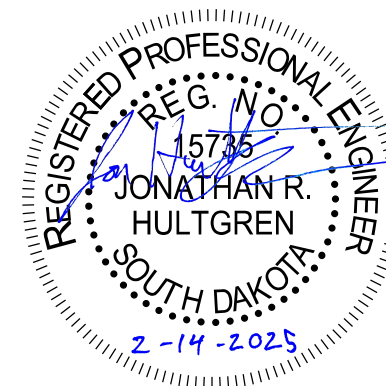
Revised Date: 02/14/2025
Initials: NBG

SEQUENCE OF OPERATIONS

Contractor requests to deviate from the sequence of operations will be submitted in writing to the Engineer for review. Approval of an alternate sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work. An alternate sequence will be submitted for review a minimum of one week prior to potential implementation.

General

- Maintain all accesses to Lincoln High School while classes are in session until the start of summer break, access to be restored prior to start of fall classes via 41st Street and proposed School Entrance Road at minimum.
- Limit full Cliff Avenue closures while Lincoln High School classes are in session to night and weekends until the start of summer break. If Day time closures are required they may not occur during school drop off or pick up and limited to 4 hrs. Daytime closures will require Engineer approval and coordination with Lincoln High School.
- Maintain access to Parks, residences, and business at all times.
- Trail Closure limited to Lincoln High School summer break. Coordinate closures with City of Sioux Falls.
- I-229 will maintain two lanes of traffic in each direction at all times.
- Detours will be installed as shown on the plans prior to closing any intersections or driveways.
- Through intersections, the Contractor's pavement installation sequence will correspond with joint details shown in Section F.
- The term "pavement" is used within in these Section C notes / plans only to simply refer to the surfacing for the project, to imply the barriers, sidewalk, medians would be installed during the "pavement" installation. Refer to Sections B and F for surfacing details.
- The movable barriers that are to be installed along the 41st Street and I-229 ramp pavements, are intended to be included in the term "pavement" that is used within these Section C notes / plans.
- The terms "bridge", "structures", "crash strut", "bent", "deck", "girder", etc. are used within in these Section C notes / plans only to simply refer to the Section E items of work. Refer to Section E for all bridge and structural work that will be completed for this project.
- Additional traffic control moveable barrier has been included in the Estimate of Quantities to allow for any field determined installations of the barrier that may be required due to the Contractors methods and means to construct the roadways / streets, bridge and structures for the project.
- Miscellaneous lane closures that may be required within the limits of a phase, before or after that phase of the project occurs, will need to be pre-approved by the SDDOT prior to their installation. Quantities for these miscellaneous lane closures have been included in the "Field Determined" column of the traffic control quantity tables. Examples of when these miscellaneous lane closures may be required, would be for work involving bridge barriers, ramp barriers, medians, sidewalks, utilities, etc.



TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS

Concrete barriers will be provided by the State and are available for pickup from either the SDDOT Maintenance Yard located at the NW quadrant of the intersection of W. 69th Street and Solberg Avenue, Sioux Falls, or the SDDOT Main Yard located at 5316 W 60th Street N, Sioux Falls, or located on the project site remaining from the previous temp bridge project. The barriers will be hauled back to the original SDDOT yard when they are no longer needed on the project, and for winter storage. It is estimated that there will be 144 sections available at the Maintenance Yard and 330 sections available in 2025 and an additional 550 sections available in 2026 at the Main Yard.

Barriers to be adjusted or moved will be disconnected from adjacent barriers to minimize damage to connecting pins. Pins damaged by the Contractor will be replaced at no cost to the Department.

Concrete barrier sections will be placed as depicted in the plans to comply with clear zone requirements and as required by the Engineer. The barriers will be pinned and bolted together as directed by the Engineer.

All costs associated with picking the barriers up from the SDDOT Maintenance Yard or Main Yard, transporting, setting, connecting, and hauling them back to the SDDOT Maintenance Yard or Main Yard will be incidental to the contract unit price per each for "Traffic Control Movable Concrete Barrier".

After the initial placement, the concrete barriers may need to be adjusted. Adjustment of the barriers, where they do not need to be loaded on a truck for transport, will be incidental to the contract unit price per each for Traffic Control Movable Concrete Barrier. All costs associated with removing, loading, unloading, and resetting of the barriers at a new site, will be incidental to the contract unit price per each for Remove and Reset Traffic Control Movable Concrete Barrier. No additional payment will be made for barriers that are not immediately reset at a new location on the project and stored on-site until they are either reset on the project or returned to the SDDOT as indicated in these plans.

Movable Concrete Barriers shall be used to separate I-229 head to head traffic on NB I-229 in Year 1 and on SB I-229 in Year 2 of construction.

Exit 3 Crossover: Phase 1

- Concrete barrier will be required on the shoulder closure for both the Northbound and Southbound direction of traffic on I-229 for the Exit 2 – Exit 3 crossover installation
- Concrete barrier will be required on the inside shoulder for Northbound traffic on I-229

Exit 3 Crossover: Phase 2a

- Concrete barrier will be required on the outside shoulder closure for Northbound traffic on I-229

Exit 3 Crossover: Phase 2b

Concrete barrier will be required on the outside shoulder closure for Northbound traffic and on the inside shoulder for Exit 3 Ramp B on I-229.

Exit 3 Crossover: Phase 2c

- Concrete barrier will be required on the outside shoulder closure for Northbound traffic and the Ramp C closure of I-229.

Exit 3 Crossover: Phase 3a

- Concrete barrier will be required on the lane closure for Southbound traffic on Minnesota Ave.

Exit 3 Crossover: Phase 3b

Concrete barrier will be required on the lane closure for Northbound traffic on Minnesota Ave.

TEMPORARY CONCRETE BARRIER END PROTECTION

5 Crash attenuators meeting the requirements of NCHRP 350 or MASH TL-3 will be provided and installed by the Contractor. Attachment of the attenuators to the concrete barriers will be by approved methods. 2 will be used at Exit 4, and 3 to be used for Exit 3.

All costs associated with furnishing, transporting, initial setup, connecting, maintaining, and removing the crash attenuators will be incidental to the contract unit price per each for Temporary Concrete Barrier End Protection.

All costs associated with moving and resetting crash attenuators to accommodate traffic flows after initial set-up will be paid for at the contract unit price per each for Remove & Reset Temporary Concrete Barrier End Protection. All costs associated with removing from initial placement and resetting at a new location will be incidental to the contract unit price per each. No additional payment will be made for crash attenuators that are not immediately reset at a new location on the project and stored on-site until they are either reset or removed from the project as determined by the Engineer. No additional payment will be made for minor adjustments.

The Contractor will have replacement hardware available so that in the event the crash attenuator is hit and made unusable, the crash attenuator can be made functional within 24 hours. The cost of replacement will be incidental to the contract unit price per each for Temporary Concrete Barrier Module Set or Repair Kit. No payment will be made for the Temporary Concrete Barrier Module Set or Repair Kit if no repairs are necessary. Upon completion of the project, crash attenuators will remain the property of the Contractor.

TABLE OF TEMPORARY CONCRETE BARRIER END PROTECTION

Station	Unidirectional/ Bidirectional	Quantity (Each)
Year 1		
177+95	Unidirectional	1
244+87	Unidirectional	1
Year 2		
179+04	Reuse from Year 1 Unidirectional	1
245+00	Unidirectional	1
Exit 3		
Phase 1		
123+09	Unidirectional	1
132+50	Unidirectional	1
156+35	Unidirectional	1
Phase 2		
125+21	Reuse from Phase 1 Unidirectional	1
146+56	Unidirectional	1
Phase 2 b		
155+73	Reuse from Phase 2 a Unidirectional	1
153+78	Unidirectional	1
Phase 2c		
139+36	Reuse from Phase 2b Unidirectional	1
	Payment Quantity	5

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-B-CR 2292(101)3	C8	C107

Revised Date: 02/14/2025
Initials: NBG

TABLE OF TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS

Station	Stage	Quantity (Each)
177+95 to 203+75	Year 1	206
213+04 to 244+87	Year 1	256
179+04 to 245+00	Year 2	521
Payment Quantity		521

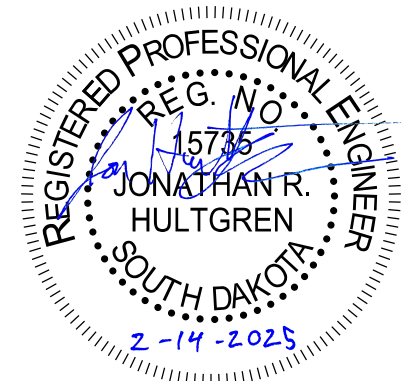
BARRIER MOUNTED LINEAR DELINEATION SYSTEM PANELS

A linear delineation system (LDS) panel will be attached to each barrier section. The color will be the same as the nearest pavement marking, white along outside edgelines or yellow for the left side on one way traffic sections. The LDS will be 34 inches long and 6 inches in height and be constructed of aluminum formed into a shape to provide retroreflective properties across a wide range of angles. It will be sheeted with sheeting meeting the requirements of ASTM D4956 Type XI. The panels will be evenly spaced, with the top of the panel 4 inches below the top of the barrier. Installation will be as per the manufacturer's recommendations. This will allow for easy removal for replacement of damaged panels or to replace with an alternate color. The Contractor will furnish and install one panel along each side of the barrier if any panels are missing from the barriers. Replacement of damaged linear delineation system panels will be furnished and replaced by the Contractor. All costs associated with furnishing, installing, and replacing, if needed, will be incidental to the contract unit price per each for Linear Delineation System Panel, Barrier Mounted.

All LDS panels will remain attached to the barrier sections and will become the property of the State of South Dakota upon completion of the project.

The Contractor will verify the number of LDS panels that will need to be installed or replaced on the Traffic Control Movable Concrete Barriers. The contract amount of LDS panels is an estimate and the full contract amount may not be needed.

Maintaining the linear delineation system, including moving LDS panels from one side of the barrier to the other side of the barrier to match the applicable color of the nearest pavement marking will be incidental to the contract lump sum price for Traffic Control, Miscellaneous.



OTHER TRAFFIC CONTROL QUANTITIES (05HN: Exit 4)

Item	Unit	Year 1 Phase 1A	Year 1 Phase 1B	Year 1 Phase 1C	Year 1 Phase 1C Winter	Year 2 Phase 2A	Year 2 Phase 2B	Year 2 Phase 2C	Field Determined	Payment Quantity
PCN 05HN - Exit 4										
Tubular Marker	Each									
Temporary Raised Pavement Marker	Ft				1,918		5,439	5,316		12,673
Type C Advance Warning Arrow Board	Each		1	1			2	2		2
Linear Delineation System Panel, Barrier Mounted	Each									
Remove Pavement Marking, 4" or Equivalent	Ft	36,800			2,000	600	7,300	800	3,680	51,180
Remove Pavement Marking, Arrow	Each				2					2
Traffic Control Movable Concrete Barrier	Each	462				521				521
Temporary Concrete Barrier End Protection	Each	2				2				2
Remove and Reset Traffic Control Movable Concrete Barrier	Each	46				52				98
Remove and Reset Temporary Concrete Barrier End Protection	Each									
Temporary Concrete Barrier End Protection Module Set or Repair Kit	Each									
Contractor Furnished Portable Changeable Message Sign	Each	6				6				6
Maintenance of Queue Detection System	Hour	40	40	40	20	40	40	40	12	272
Longitudinal Pedestrian Barricade	Ft									
Temporary Curb Ramp	Each									
Longitudinal Pedestrian Barrier	Ft									
Orange Plastic Safety Fence	Ft	1,600	1,600	1,600						1,600

TYPE 3 BARRICADES, 8' DOUBLE SIDED (05HN: Exit 4)

Description	Unit	PHASE							Payment Quantity
		1A	1B	1C	1C Winter	2A	2B	2C	
Lane Closure	Each	2	3	4					
Shoulder Closure	Each								
Ramp Closure	Each				12			8	
Road Closure	Each	36	15	24		9	5	7	
Sidewalk Closure	Each	5	6	4	3		3	5	
Field Determined	Each	5	5	5	5	5	5	5	
Total :		48	29	37	20	14	13	25	48

TEMPORARY PAVEMENT MARKING (05HN: Exit 4)

Phase	Location	634E0640							633E0040
		Continuous (White)	Continuous (Yellow)	10' Skip (White)	10' Skip (Yellow)	2' Skip (White)	2' Skip (Yellow)	24" Stop Bar	Arrow (White)
		(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Each)
1A	NB I-229 Crossover	25,997		18,414					
1B									
1C									
1C Winter		966	953	1,370			92		
2A	SB I-229 Crossover	36,659		18,185		2,032			
2B									
2C									
Field Determined		6,362	95	3,797					
Total :		69,984	1,048	41,766		2,032			



Plot Scale - 1:200

Plotted From - engiersvik

File - ...105HN_lc-table.dgn

OTHER TRAFFIC CONTROL QUANTITIES (05HN: Exit 3 Crossover)										
Item	Unit	Phase 1	Phase 2a	Phase 2b	Phase 2c	Phase 3a	Phase 3b	Phase 3c	Field Determined	Payment Quantity
PCN 05HN - Exit 3 Crossover										
Tubular Marker	Each					7	21		3	24
Replace Tubular Marker	Each					1	2			2
Type C Advance Warning Arrow Board	Each				1					1
Linear Delineation System Panel, Barrier Mounted	Each	340							34	374
Remove Pavement Marking, 4" or Equivalent	Ft			3,756	5,157	500				9,413
Remove Pavement Marking, Arrow	Each					3				3
Traffic Control Movable Concrete Barrier	Each	340							34	374
Temporary Concrete Barrier End Protection	Each	3								3
Remove and Reset Traffic Control Moveable Concrete Barrier	Each		210	86	76	32	32			436
Remove and Reset Temporary Concrete Barrier End Protection	Each		2	2	1					5
Temporary Concrete Barrier End Protection Module Set or Repair Kit	Each	1								1
Contractor Furnished Portable Changeable Message Sign	Each	2				6				6
Maintenance of Queue Detection System	Hour	24	24	24	24				8	104
Longitudinal Pedestrian Barricade	Ft					8	8			8
Temporary Curb Ramp	Each					2	2			2
Longitudinal Pedestrian Barrier	Ft					280	280		28	308

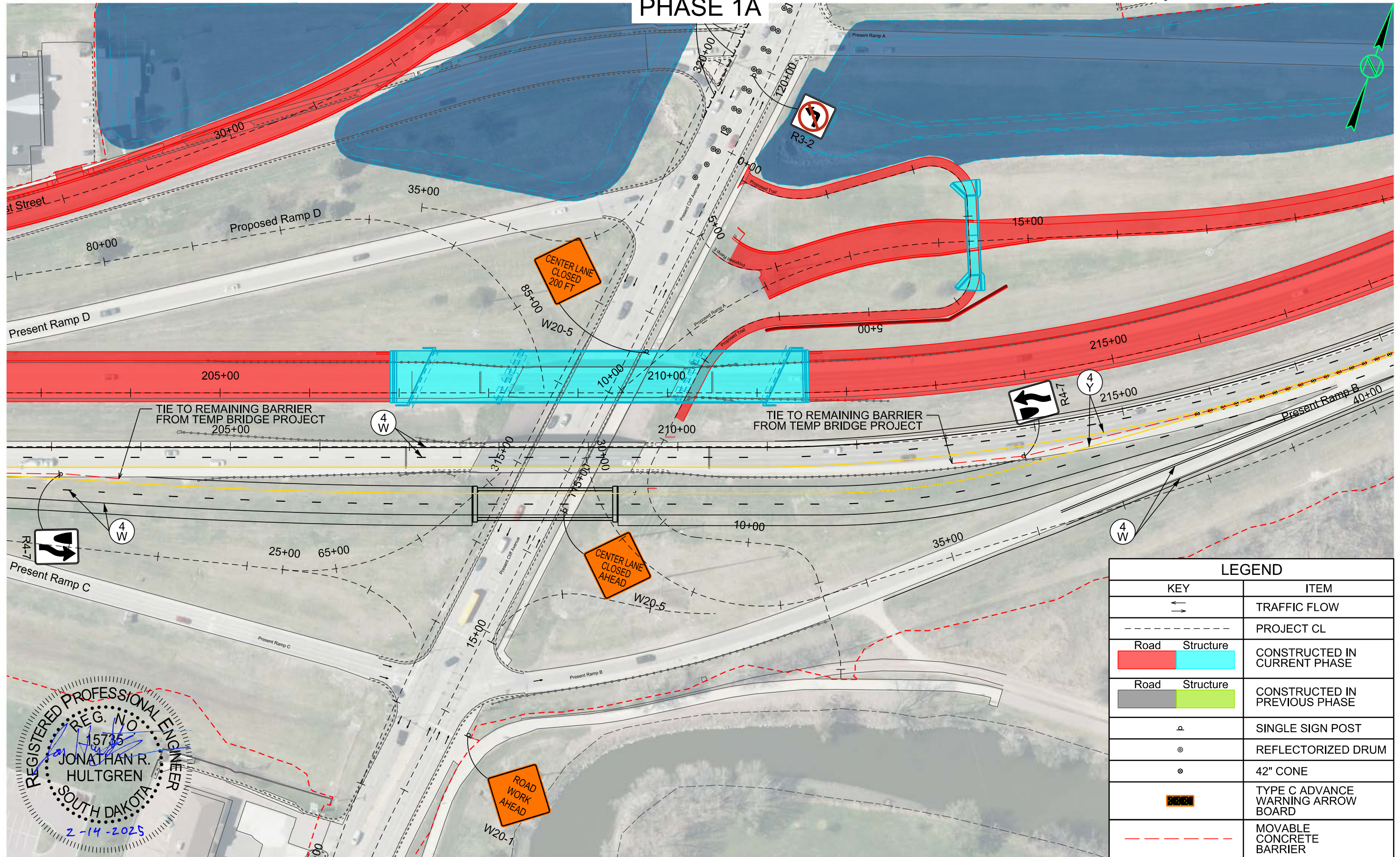
TYPE 3 BARRICADES, 8' DOUBLE SIDED (05HN: Exit 3 Crossover)										
Description	Unit	PHASE							Payment Quantity	
		1	2a	2b	2c	3a	3b	3c		
Lane Closure	Each				1					
Shoulder Closure	Each	2	2	1						
Ramp Closure	Each				3					
Road Closure	Each								10	
Field Determined	Each	5	5	5	5	5	5	5	5	
Total :		7	7	6	9	5	5	5	15	15

Temporary Pavement Marking (05HN: Exit 3 Crossover)						
Phase	Location	634E0640				633E0040
		Continuous (White)	Continuous (Yellow)	2' Skip (White)	2' Skip (Yellow)	Arrow (White)
		(Ft)	(Ft)	(Ft)	(Ft)	(Each)
2b	NB I-229 : 151+95 to 164+48	2,504	1,252			
2c	NB I-229 : 120+00 to 151+84	3,731	1,426			
3a	Minnesota Ave	75		200	200	7
3b	Minnesota Ave				50	2
	Field Determined	631	268	20	25	
	Total :	6,941	2,946	220	275	9



TRAFFIC CONTROL: YEAR 1

PHASE 1A



KEY		ITEM
↔		TRAFFIC FLOW
---		PROJECT CL
Road	Structure	CONSTRUCTED IN CURRENT PHASE
Road	Structure	CONSTRUCTED IN PREVIOUS PHASE
⊙		SINGLE SIGN POST
⊙		REFLECTORIZED DRUM
⊙		42" CONE
[Orange Sign]		TYPE C ADVANCE WARNING ARROW BOARD
---		MOVABLE CONCRETE BARRIER

REGISTERED PROFESSIONAL ENGINEER
 REG. NO. 15735
 JONATHAN R. HULTGREN
 SOUTH DAKOTA
 2-14-2025

Plot Scale - 1:100

Plotted From - engiersvik

File - ...1055HN_1c-layout-yr1.dgn

SECTION S ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E0100	Remove Concrete Footing(s)	Lump Sum	LS
110E0120	Remove Sign Bridge	3	Each
110E0130	Remove Traffic Sign	62	Each
110E0135	Remove Delineator	136	Each
110E0140	Remove Extruded Panel Sign	6	Each
110E5000	Salvage Sign Bridge	2	Each
110E5020	Salvage Traffic Sign	10	Each
110E7150	Remove Sign for Reset	25	Each
632E0014	1.75' Diameter Breakaway Support Concrete Footing	126.0	Ft
632E0072	4' Diameter Fixed Support Concrete Footing	38.0	Ft
632E1235	W6x20 Steel Post	353.9	Ft
632E1320	2.0"x2.0" Perforated Tube Post	1,296.3	Ft
632E1340	2.5"x2.5" Perforated Tube Post	51.5	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	15	Each
632E2008	4" Tubular Amber Delineator with 1.12 Lb/Ft Post	4	Each
632E2020	4"x4" White Delineator with 1.12 Lb/Ft Post	44	Each
632E2024	4"x8" White Delineator with 1.12 Lb/Ft Post	98	Each
632E2028	4" Tubular White Delineator with 1.12 Lb/Ft Post	5	Each
632E2220	Guardrail Delineator	95	Each
632E2510	Type 2 Object Marker Back to Back	63	Each
632E2520	Type 2 Object Marker	2	Each
632E3115	Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity	1,270.1	SqFt
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	306.7	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	325.5	SqFt
632E3500	Reset Sign	25	Each
632E5020	Overhead Cantilever Sign Support	3	Each
634E0275	Type 3 Barricade	3	Each

SECTION S ESTIMATE OF QUANTITIES (Exit 3 Crossover)

(Included in overall estimate of quantities table, for information only)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E0100	Remove Concrete Footing(s)	Lump Sum	LS
110E0130	Remove Traffic Sign	6	Each
110E0135	Remove Delineator	17	Each
110E5000	Salvage Sign Bridge	2	Each
110E7150	Remove Sign for Reset	2	Each
632E0014	1.75' Diameter Breakaway Support Concrete Footing	28.0	Ft
632E1235	W6x20 Steel Post	71.0	Ft
632E1340	2.5"x2.5" Perforated Tube Post	51.5	Ft
632E2000	4"x4" Amber Delineator with 1.12 Lb/Ft Post	4	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	4	Each
632E2020	4"x4" White Delineator with 1.12 Lb/Ft Post	4	Each
632E2024	4"x8" White Delineator with 1.12 Lb/Ft Post	12	Each
632E2028	4" Tubular White Delineator with 1.12 Lb/Ft Post	5	Each
632E2220	Guardrail Delineator	39	Each
632E2520	Type 2 Object Marker	2	Each
632E3115	Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity	257.0	SqFt
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	42.5	SqFt
632E3500	Reset Sign	2	Each
634E0275	Type 3 Barricade	3	Each

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-B-CR 2292(101)3	S2	S91

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.

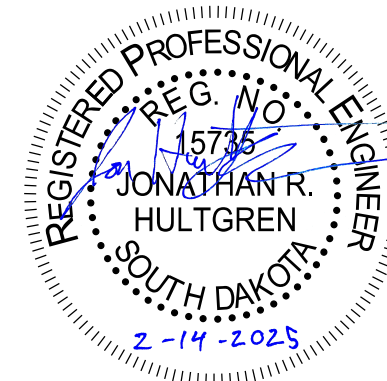
Prior to ordering signs, the Contractor will verify dimensions, background, border, and legend of the signs.

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

REMOVE TRAFFIC SIGN

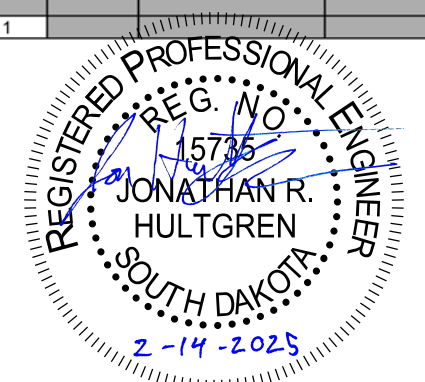
Existing signs that are shown as being removed in the Permanent Signing Table will become the property of the Contractor. Existing signposts and bases will be removed in their entirety. All existing signs, posts, and/or hardware removed will not be reused. Holes remaining from the removal of wood posts will be backfilled and compacted with material placed in layers not to exceed 6 inches in depth.

All costs associated with the removal of existing signs, posts, hardware, and backfilled holes will be incidental to the contract unit price per each for "Remove Traffic Sign". Quantities will be per assembly at the contract unit price per each.



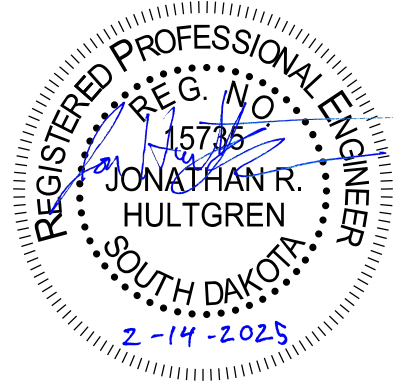
Permanent Sign Installation Table

Alignment		Sign and Delineator Install Data											Sign and Delineator Remove/Reset Data							Post Data				Footing Data														
Station	Offset	Sign Description	Sign Code	Sign Width (in)	Sign Height (in)	Sign Area HI (IV) (SqFt)	Sign Area VHI (XI) (SqFt)	Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity (XI) (SqFt)	Type 2 Object Marker Back to Back (Each)	4"x4" Amber Delineator with 1.12 Lb/Ft Post (Each)	4"x4" White Delineator with 1.12 Lb/Ft Post (Each)	4"x8" Amber Delineator with 1.12 Lb/Ft Post (Each)	4"x8" White Delineator with 1.12 Lb/Ft Post (Each)	Salvage Traffic Sign (City) (Each)	Salvage Traffic Sign (SDDOT) (Each)	Remove Traffic Sign (Each)	Remove Extruded Panel Sign (Each)	Remove Sign for Reset (Each)	Reset Sign (Each)	Remove Delineator (Each)	use Street Light (SL), use Power Pole (PP), use Mast Arm (MA), use 1 Post (1P), use 2 Posts (2P), or use 3 Posts (3P)	(F)ixed Base, Breakaway (S)lip Base, (A)nchor Stud Post, or (D)irect Drive	2.0"x2.0" Perforated Tube Post Height (Ft)	Post Sizes and Quantities (Ft)	Remove Concrete Footing(s)* (LS)	1'-9" Dia. Break-away (Ft)	4' Dia. Fixed (Ft)	5' - 6" Dia. Fixed (Ft)										
I-229 SOUTHBOUND																																						
179+73	L	4"x4" White Delineator (proposed)	Special	4	4								1																		D							
185+01	L	4"x4" White Delineator (proposed)	Special	4	4								1																		D							
188+84	L	Speed Limit 65 (proposed)	R2-1	48	60	20.0																2P	A	32.0														
190+27	L	I-229 SD115 Minnesota Ave 1/2 Mile Exit Only (proposed)	Special	210	156			227.5																							MA							
	L	Exit 3 (proposed)	E5-1P	114	30			23.8																							MA						18.0	
190+29	L	4"x4" White Delineator (proposed)	Special	4	4							1																			D							
190+61	L	4"x8" White Delineator (proposed)	Special	4	8								1																		D							
191+61	L	4"x8" White Delineator (proposed)	Special	4	8								1																		D							
192+61	L	4"x8" White Delineator (proposed)	Special	4	8								1																		D							
193+61	L	4"x8" White Delineator (proposed)	Special	4	8								1																		D							
193+88	L	Cardinal Direction South (proposed)	M3-3P	36	18		4.5																															
	L	I-229 Route Sign (proposed)	M1-1	45	36		11.3																2P	A	31.0													
196+26	L	Added Lane Right (proposed)	W4-3R	48	48		16.0																2P	A	30.0													
200+86	L	4"x4" White Delineator (proposed)	Special	4	4								1																		D							
206+15	L	Mile 4 (proposed)	D10-1	12	24	2.0																																
211+50	L	4"x4" White Delineator (proposed)	Special	4	4								1																		D							
212+80	L	4"x4" White Delineator (proposed)	Special	4	4								1																		D							
214+10	L	4"x4" White Delineator (proposed)	Special	4	4								1																		D							
215+40	L	4"x4" White Delineator (proposed)	Special	4	4								1																		D							
216+70	L	4"x4" White Delineator (proposed)	Special	4	4								1																		D							
217+04	L	Bridge Ices Before Road (folding) (proposed)	W8-13	48	48		16.0																2P	A	30.0													
218+00	L	4"x4" White Delineator (proposed)	Special	4	4								1																		D							
219+30	L	4"x4" White Delineator (proposed)	Special	4	4								1																		D							
219+51	L	4"x8" White Delineator (proposed)	Special	4	8																										D							
219+76	L	4"x8" White Delineator (proposed)	Special	4	8																										D							
220+01	L	4"x8" White Delineator (proposed)	Special	4	8																										D							
220+26	L	4"x8" White Delineator (proposed)	Special	4	8																										D							
220+51	L	4"x8" White Delineator (proposed)	Special	4	8																										D							
220+57	L	Exit 4 R 60 Deg (proposed)	E5-1A	78	60		32.5																2P	A	32.0													
220+66	L	4"x4" White Delineator (proposed)	Special	4	4								1																		D							
220+82	L	Type 2 Object Marker, Yellow (proposed)	OM2-2V	8	24		1.3																									D						
225+94	L	4"x4" White Delineator (proposed)	Special	4	4								1																		D							
226+03	L	4"x8" White Delineator (proposed)	Special	4	8																										D							
227+03	L	4"x8" White Delineator (proposed)	Special	4	8																										D							
227+26	L	4"x4" White Delineator (proposed)	Special	4	4								1																		D							
228+03	L	4"x8" White Delineator (proposed)	Special	4	8																										D							
228+56	L	4"x4" White Delineator (proposed)	Special	4	4								1																		D							
229+03	L	4"x8" White Delineator (proposed)	Special	4	8																										D							
229+86	L	4"x4" White Delineator (proposed)	Special	4	4									1																	D							
230+03	L	4"x8" White Delineator (proposed)	Special	4	8																										D							
230+11	L	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12											1																D						
230+25	L	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12											1																D						
231+03	L	4"x8" White Delineator (proposed)	Special	4	8																										D							
232+03	L	4"x8" White Delineator (proposed)	Special	4	8																										D							
232+54	L	4"x4" White Delineator (proposed)	Special	4	4								1																		D							
233+03	L	4"x8" White Delineator (proposed)	Special	4	8																										D							
234+02	L	4"x8" White Delineator (proposed)	Special	4	8																										D							
235+02	L	4"x8" White Delineator (proposed)	Special	4	8																										D							
235+57	L	Cliff Ave R 60 Deg	Special	150	84		87.5																															
	L	Exit 4 (proposed)	E5-1A	114	30		23.8																															
237+82	L	4"x4" White Delineator (proposed)	Special	4	4								1																		D						14.0	
240+97	L	Exit 4 Logo Sign (existing)	Existing	192	144		192.0																													21.0		
243+10	L	4"x4" White Delineator (proposed)	Special	4	4								1																									
251+47	L	Cliff Ave 1/2 Mile (proposed)	Special	125	60		52.1																															
	L	Exit 4 (proposed)	E5-1A	114	30		23.8																													14.0		
Subtotal						22.0	49.1	663.0	2			19		19						1				155.0	144.1			49.0				18						



Permanent Sign Installation Table

Alignment		Sign and Delineator Install Data											Sign and Delineator Remove/Reset Data						Post Data			Footing Data								
Station	Offset	Sign Description	Sign Code	Sign Width (in)	Sign Height (in)	Sign Area HI (IV) (SqFt)	Sign Area VHI (XI) (SqFt)	Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity (XI) (SqFt)	Type 2 Object Marker Back to Back (Each)	4"x4" Amber Delineator with 1.12 Lb/Ft Post (Each)	4"x4" White Delineator with 1.12 Lb/Ft Post (Each)	4"x8" Amber Delineator with 1.12 Lb/Ft Post (Each)	4"x8" White Delineator with 1.12 Lb/Ft Post (Each)	Salvage Traffic Sign (City) (Each)	Salvage Traffic Sign (SDDOT) (Each)	Remove Traffic Sign (Each)	Remove Extruded Panel Sign (Each)	Remove Sign for Reset (Each)	Reset Sign (Each)	Remove Delineator (Each)	use Street Light (SL), use Power Pole (PP), use Mast Arm (MA), use 1 Post (1P), use 2 Posts (2P), or use 3 Posts (3P)	(F)ixed Base, Breakaway (S)lip Base, (A)nchor Stud Post, or (D)irect Drive	2.0"x2.0" Perforated Tube Post Height (Ft)	Post Sizes and Quantities (Ft)	Remove Concrete Footing(s)* (LS)	1'-9" Dia. Break-away (Ft)	4' Dia. Fixed (Ft)	5' - 6" Dia. Fixed (Ft)		
I-229 SOUTHBOUND OFF-RAMP (RAMP A)																														
10+29	R	Do Not Enter (proposed)	R5-1	36	36		9.0															1P	A	14.0						
11+96	L	Double Arrow (proposed)	W12-1	36	36		9.0															1P	A	14.0						
12+39	L	4"x8" White Delineator (proposed)	Special	4	8								1																	
13+39	L	4"x8" White Delineator (proposed)	Special	4	8								1																	
14+03	L	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12				1																					
14+30	L	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12				1																					
14+30	R	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12				1																					
14+39	L	4"x8" White Delineator (proposed)	Special	4	8								1																	
14+48	L	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12				1																					
14+48	R	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12				1																					
14+97	L	Wrong Way (proposed)	R5-1A	42	30		8.8															1P	A	13.5						
15+20	L	Logo Sign (existing)	Existing	120	84														1						31.2		14.0			
15+39	L	4"x8" White Delineator (proposed)	Special	4	8								1																	
16+39	L	4"x8" White Delineator (proposed)	Special	4	8								1																	
17+21	R	Advance Intersection Lane Control (proposed)	R3-8ABLA	54	30																	2P	A	13.5						
17+21	L	Advance Intersection Lane Control (proposed)	R3-8ABLA	54	30																	2P	A	13.5						
17+39	L	4"x8" White Delineator (proposed)	Special	4	8								1																	
18+39	L	4"x8" White Delineator (proposed)	Special	4	8								1																	
19+39	L	4"x8" White Delineator (proposed)	Special	4	8								1																	
19+59	L	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12				1																					
19+97	R	4"x8" Amber Delineator (proposed)	Special	4	8							1																		
20+22	R	4"x8" Amber Delineator (proposed)	Special	4	8							1																		
20+39	L	4"x8" White Delineator (proposed)	Special	4	8								1																	
20+47	R	4"x8" Amber Delineator (proposed)	Special	4	8							1																		
20+72	R	4"x8" Amber Delineator (proposed)	Special	4	8							1																		
20+97	R	4"x8" Amber Delineator (proposed)	Special	4	8							1																		
21+39	L	4"x8" White Delineator (proposed)	Special	4	8								1																	
22+33	L	4"x4" White Delineator (proposed)	Special	4	4				1																					
22+39	L	4"x8" White Delineator (proposed)	Special	4	8								1																	
23+39	L	4"x8" White Delineator (proposed)	Special	4	8								1																	
23+70	L	4"x4" White Delineator (proposed)	Special	4	4				1																					
24+39	L	4"x8" White Delineator (proposed)	Special	4	8								1																	
25+00	L	4"x4" White Delineator (proposed)	Special	4	4				1																					
25+38	L	4"x8" White Delineator (proposed)	Special	4	8								1																	
				Subtotal				26.8	9			5	14						1				68.5	31.2		14.0				



Plot Scale - 1:200

Plotted From - engiersvik

File - ...1056HN_sgn-table.dgn

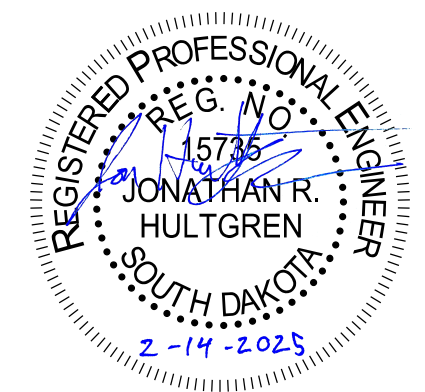
Plot Scale - 1/2"=100'

Permanent Sign Installation Table

Station	Alignment	Offset	Sign Description	Sign Code	Sign and Delineator Install Data										Sign and Delineator Remove/Reset Data							Post Data			Footing Data						
					Sign Width (in)	Sign Height (in)	Sign Area HI (IV) (SqFt)	Sign Area VHI (XI) (SqFt)	Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity (XI) (SqFt)	Type 2 Object Marker Back to Back (Each)	4"x4" Amber Delineator with 1.12 Lb/Ft Post (Each)	4"x4" White Delineator with 1.12 Lb/Ft Post (Each)	4"x8" Amber Delineator with 1.12 Lb/Ft Post (Each)	4"x8" White Delineator with 1.12 Lb/Ft Post (Each)	Salvage Traffic Sign (City) (Each)	Salvage Traffic Sign (SDDOT) (Each)	Remove Traffic Sign (Each)	Remove Extruded Panel Sign (Each)	Remove Sign for Reset (Each)	Reset Sign (Each)	Remove Delineator (Each)	use Street Light (SL), use Power Pole (PP), use Mast Arm (MA), use 1 Post (1P), use 2 Posts (2P), or use 3 Posts (3P)	(F)ixed Base, Breakaway (S)lip Base, (A)nchor Stud Post, or (D)irect Drive	2.0"x2.0" Perforated Tube Post Height (Ft)	Post Sizes and Quantities (Ft)	Remove Concrete Footing(s)* (LS)	1'-9" Dia. Break-away (Ft)	4' Dia. Fixed (Ft)	5' - 6" Dia. Fixed (Ft)		
I-229 NORTHBOUND ON-RAMP (RAMP B)																															
30+28	L		Cardinal Direction North (proposed)	M3-1P	24	12	2.0																								
	L		I-229 Route Sign (proposed)	M1-1P	45	36	11.3																								
	L		Diagonal Upward Arrow (plaque) (proposed)	M6-2PL	21	15	2.2																								
30+30	R		Keep Left (proposed)	R4-8	24	30	5.0																								
31+41	R		Merge Right (proposed)	W4-1R	36	36	9.0																								
32+11	L		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12									1																
32+90	R		4"x8" White Delineator (proposed)	Special	4	8																									
33+26	L		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12																									
33+45	L		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12																									
33+45	R		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12																									
33+62	L		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12																									
33+62	R		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12																									
33+90	R		4"x8" White Delineator (proposed)	Special	4	8																									
34+90	R		4"x8" White Delineator (proposed)	Special	4	8																									
35+90	R		4"x8" White Delineator (proposed)	Special	4	8																									
36+90	R		4"x8" White Delineator (proposed)	Special	4	8																									
37+90	R		4"x8" White Delineator (proposed)	Special	4	8																									
38+83	L		4"x4" Amber Delineator (proposed)	Special	4	4																									
38+90	R		4"x8" White Delineator (proposed)	Special	4	8																									
39+84	L		4"x4" Amber Delineator (proposed)	Special	4	4																									
39+90	R		4"x8" White Delineator (proposed)	Special	4	8																									
40+84	L		4"x4" Amber Delineator (proposed)	Special	4	4																									
40+90	R		4"x8" White Delineator (proposed)	Special	4	8																									
41+84	L		4"x4" Amber Delineator (proposed)	Special	4	4																									
41+90	R		4"x8" White Delineator (proposed)	Special	4	8																									
42+74	R		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12																									
42+90	R		4"x8" White Delineator (proposed)	Special	4	8																									
43+69	R		4"x4" White Delineator (proposed)	Special	4	4																									
43+82	R		Right Lane Ends (proposed)	W1-9R	48	48	16.0																								
	R		1000 Feet (proposed)	W16-2P	30	24	5.0																								
43+90	R		4"x8" White Delineator (proposed)	Special	4	8																									
					Subtotal																										
							20.5	30.0			7	4	1																		

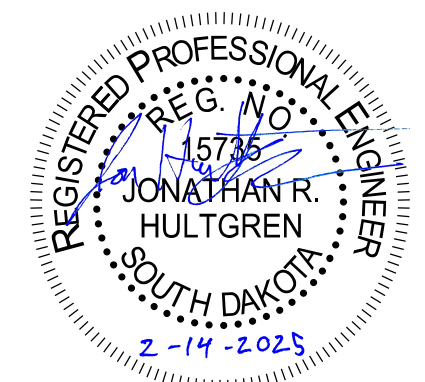
Plotted From - ngiersvik

File - ...105HN_sgn-table.dgn



Permanent Sign Installation Table

Alignment		Sign and Delineator Install Data										Sign and Delineator Remove/Reset Data							Post Data			Footing Data							
Station	Offset	Sign Description	Sign Code	Sign Width (in)	Sign Height (in)	Sign Area HI (IV) (SqFt)	Sign Area VHI (XI) (SqFt)	Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity (XI) (SqFt)	Type 2 Object Marker Back to Back (Each)	4"x4" Amber Delineator with 1.12 Lb/Ft Post (Each)	4"x4" White Delineator with 1.12 Lb/Ft Post (Each)	4"x8" Amber Delineator with 1.12 Lb/Ft Post (Each)	4"x8" White Delineator with 1.12 Lb/Ft Post (Each)	Salvage Traffic Sign (City) (Each)	Salvage Traffic Sign (SDDOT) (Each)	Remove Traffic Sign (Each)	Remove Extruded Panel Sign (Each)	Remove Sign for Reset (Each)	Reset Sign (Each)	Remove Delineator (Each)	use Street Light (SL), use Power Pole (PP), use Mast Arm (MA), use 1 Post (1P), use 2 Posts (2P), or use 3 Posts (3P)	(F)ixed Base, Breakaway (S)lip Base, (A)nchor Stub Post, or (D)irect Drive	2.0"x2.0" Perforated Tube Post Height (Ft)	Post Sizes and Quantities (Ft) W6x20	Remove Concrete Footing(s)* (LS)	1'-9" Dia. Break-away (Ft)	4' Dia. Fixed (Ft)	5' - 6" Dia. Fixed (Ft)	
I-229 NORTHBOUND OFF-RAMP (RAMP C)																													
51+00	R	4"x8" White Delineator (proposed)	Special	4	8								1										D						
52+00	R	4"x8" White Delineator (proposed)	Special	4	8								1										D						
52+62	R	4"x4" White Delineator (proposed)	Special	4	4					1													D						
53+00	R	4"x8" White Delineator (proposed)	Special	4	8								1										D						
53+22	R	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12				1														D						
54+00	R	4"x8" White Delineator (proposed)	Special	4	8								1										D						
54+19	R	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12				1														D						
55+00	R	4"x8" White Delineator (proposed)	Special	4	8								1										D						
55+88	R	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12				1														D						
56+00	R	4"x8" White Delineator (proposed)	Special	4	8								1										D						
56+08	L	4"x8" Amber Delineator (proposed)	Special	4	8							1											D						
56+33	L	4"x8" Amber Delineator (proposed)	Special	4	8							1											D						
56+38	R	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12				1														D						
56+58	L	4"x8" Amber Delineator (proposed)	Special	4	8							1											D						
56+83	L	4"x8" Amber Delineator (proposed)	Special	4	8							1											D						
57+00	R	4"x8" White Delineator (proposed)	Special	4	8								1										D						
57+08	L	4"x8" Amber Delineator (proposed)	Special	4	8							1											D						
58+00	R	4"x8" White Delineator (proposed)	Special	4	8								1										D						
58+22	R	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12				1														D						
58+33	R	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12				1														D						
59+00	R	4"x8" White Delineator (proposed)	Special	4	8								1										D						
59+13	L	Advanced Intersection Lane Control	R3-8ABLA	66	30	13.8																2P	A	13.5					
59+13	R	Advanced Intersection Lane Control	R3-8ABLA	66	30	13.8																2P	A	13.5					
60+00	R	4"x8" White Delineator (proposed)	Special	4	8								1										D						
61+00	R	4"x8" White Delineator (proposed)	Special	4	8								1										D						
61+13	R	Logo Sign (existing)	Special	120	84														1					31.2		14.0			
61+13	R	Wrong Way (proposed)	R5-1A	42	30		8.8																						
61+82	R	Bridge Ices Before Road (folding) (proposed)	W8-13	48	48		16.0															2P	A	30.0					
62+00	R	4"x8" White Delineator (proposed)	Special	4	8								1										D						
63+00	R	4"x8" White Delineator (proposed)	Special	4	8								1										D						
64+00	R	4"x8" White Delineator (proposed)	Special	4	8								1										D						
65+03	R	Double Arrow (proposed)	W12-1	36	36		9.0															1P	A	14.0					
				Subtotal			27.6	33.8		6		1	5	14									1		71.0	31.2		14.0	



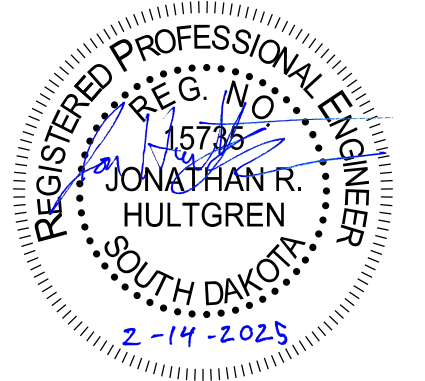
Plot Scale - 1:200

Plotted From - englersvik

File - ...105HN_sgn-table.dgn

Permanent Sign Installation Table

Alignment		Sign and Delineator Install Data									Sign and Delineator Remove/Reset Data								Post Data			Footing Data									
Station	Offset	Sign Description	Sign Code	Sign Width (in)	Sign Height (in)	Sign Area HI (IV) (SqFt)	Sign Area VHI (XI) (SqFt)	Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity (XI) (SqFt)	Type 2 Object Marker Back to Back (Each)	4"x4" Amber Delineator with 1.12 Lb/Ft Post (Each)	4"x4" White Delineator with 1.12 Lb/Ft Post (Each)	4"x8" Amber Delineator with 1.12 Lb/Ft Post (Each)	4"x8" White Delineator with 1.12 Lb/Ft Post (Each)	Salvage Traffic Sign (City) (Each)	Salvage Traffic Sign (SDDOT) (Each)	Remove Traffic Sign (Each)	Remove Extruded Panel Sign (Each)	Remove Sign for Reset (Each)	Reset Sign (Each)	Remove Delineator (Each)	use Street Light (SL), use Power Pole (PP), use Mast Arm (MA), use 1 Post (1P), use 2 Posts (2P), or use 3 Posts (3P)	(F)ixed Base, Breakaway (S)lip Base, (A)nchor Stud Post, or (D)irect Drive	2.0"x2.0" Perforated Tube Post Height (Ft)	Post Sizes and Quantities (Ft)	Remove Concrete Footing(s) (LS)	1'-9" Dia. Breakaway (Ft)	4" Dia. Fixed (Ft)	5' - 6" Dia. Fixed (Ft)			
I-229 SOUTHBOUND OFF-RAMP (RAMP E)																															
5+24	R	Pedestrian (proposed)	W11-2	36	36																										
	R	Diagonal Downward Arrow (plaque) (proposed)	W16-7PR	21	15																										
SEE SECTION L FOR RRFB INSTALLATION																															
5+36	L	Pedestrian (proposed)	W11-2	36	36																										
	L	Diagonal Downward Arrow (plaque) (proposed)	W16-7PL	21	15																										
SEE SECTION L FOR RRFB INSTALLATION																															
5+53	L	Yield (proposed)	R1-2	48	48		6.9														1P	A	15.0								
6+20	L	4"x8" White Delineator (proposed)	Special	4	8								1																		
I-229 NORTHBOUND ON-RAMP (RAMP F)																															
15+36	R	Pedestrian (proposed)	W11-2	36	36																										
	R	Diagonal Downward Arrow (plaque) (proposed)	W16-7PL	21	15																										
SEE SECTION L FOR RRFB INSTALLATION																															
15+47	L	Cardinal Direction North (proposed)	M3-3	24	12	2.0																									
	L	I-229 Route Sign (proposed)	M1-1P	30	24	5.0																									
	L	Diagonal Upward Arrow (plaque) (proposed)	M6-2PR	21	15	2.2															1P	A	15.5								
15+66	L	Pedestrian (proposed)	W11-2	36	36																										
	L	Diagonal Downward Arrow (plaque) (proposed)	W16-7PR	21	15																										
SEE SECTION L FOR RRFB INSTALLATION																															
16+39	R	4"x8" White Delineator (proposed)	Special	4	8								1																		
17+35	R	Yield (proposed)	R1-2	48	48		6.9														1P	A	15.0								
17+39	R	4"x8" White Delineator (proposed)	Special	4	8								1																		
I-229 NORTHBOUND OFF-RAMP (RAMP G)																															
25+39	R	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12				1																						
25+63	R	4"x8" White Delineator (proposed)	Special	4	8								1																		
26+27	R	One Way Right (proposed)	R6-1R	48	18	6.0																									
	R	Yield (proposed)	R1-2	48	48		6.9															2P	A	33.0							
26+30	L	One Way Right (proposed)	R6-1R	48	18	6.0																2P	A	33.0							
	L	Yield (proposed)	R1-2	48	48		6.9																								
26+40	R	Pedestrian (proposed)	W11-2	36	36																										
	R	Diagonal Downward Arrow (plaque) (proposed)	W16-7PL	21	15																										
SEE SECTION L FOR RRFB INSTALLATION																															
26+49	L	Pedestrian (proposed)	W11-2	36	36																										
	L	Diagonal Downward Arrow (plaque) (proposed)	W16-7PR	21	15																										
SEE SECTION L FOR RRFB INSTALLATION																															
26+65	L	One Way Left (proposed)	R6-1L	48	18	6.0																									
	L	Do Not Enter (proposed)	R5-1	36	36		9.0															2P	A	31.0							
I-229 SOUTHBOUND ON-RAMP (RAMP H)																															
35+22	L	4"x8" White Delineator (proposed)	Special	4	8								1																		
35+42	L	Yield (proposed)	R1-2	48	48		6.9														1P	A	15.0								
36+22	L	4"x8" White Delineator (proposed)	Special	4	8								1																		
36+23	L	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12				1																						
37+11	R	Pedestrian (proposed)	W11-2	36	36																										
	R	Diagonal Downward Arrow (plaque) (proposed)	W16-7PR	21	15																										
SEE SECTION L FOR RRFB INSTALLATION																															
37+14	L	Pedestrian (proposed)	W11-2	36	36																										
	L	Diagonal Downward Arrow (plaque) (proposed)	W16-7PL	21	15																										
SEE SECTION L FOR RRFB INSTALLATION																															
37+28	R	Cardinal Direction South (proposed)	M3-3	24	12	2.0																									
	R	I-229 Route Sign (proposed)	M1-1P	30	24	5.0																									
	R	Diagonal Upward Arrow (plaque) (proposed)	M6-2PR	21	15	2.2																1P	A	15.5							
Subtotal						36.4	43.5		2			6												173.0							



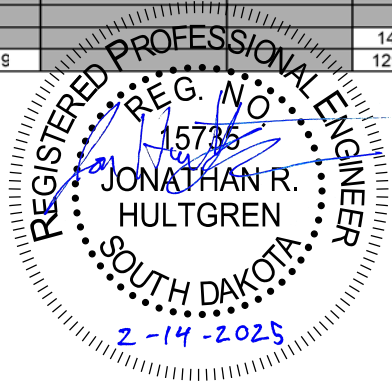
Permanent Sign Installation Table

Alignment	Sign and Delineator Install Data												Sign and Delineator Remove/Reset Data						Post Data			Footing Data											
	Station	Offset	Sign Description	Sign Code	Sign Width (in)	Sign Height (in)	Sign Area HI (IV) (SqFt)	Sign Area VHI (XI) (SqFt)	Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity (XI) (SqFt)	Type 2 Object Marker Back to Back (Each)	4"x4" Amber Delineator with 1.12 Lb/Ft Post (Each)	4"x4" White Delineator with 1.12 Lb/Ft Post (Each)	4"x8" Amber Delineator with 1.12 Lb/Ft Post (Each)	4"x8" White Delineator with 1.12 Lb/Ft Post (Each)	Salvage Traffic Sign (City) (Each)	Salvage Traffic Sign (SDDOT) (Each)	Remove Traffic Sign (Each)	Remove Extruded Panel Sign (Each)	Remove Sign for Reset (Each)	Reset Sign (Each)	Remove Delineator (Each)	use Street Light (SL), use Power Pole (PP), use Mast Arm (MA), use 1 Post (1P), use 2 Posts (2P), or use 3 Posts (3P)	(F)ixed Base, Breakaway (S)lip Base, (A)nchor Stud Post, or (D)irect Drive	2.0"x2.0" Perforated Tube Post Height (Ft)	Post Sizes and Quantities (Ft)	Remove Concrete Footing(s)* (LS)	1'-9" Dia. Breakaway (Ft)	4' Dia. Fixed (Ft)	5' - 6" Dia. Fixed (Ft)				
CLIFF AVENUE NORTHBOUND																																	
	R		Speed Limit 30 (existing)	R2-1	30	36																											
	R		No Parking (existing)	R8-3	24	30																											
107+63	R		Junction (plaque) (proposed)	M2-1P	21	15	2.2														1			1P		A		16.5					
	R		I-229 Route Sign (proposed)	M1-1	30	24	5.0																										
108+51	R		Road May Flood (proposed)	W8-18	36	36		9.0																									
	R		Right Lane Must Turn Right (existing)	R3-7R	36	36																											
109+40	Median		Keep Right (proposed)	R4-7	24	30	5.0																										
109+66	R		No Parking (existing)	R8-3	24	30																											
110+34	R		Cardinal Direction South (proposed)	M3-3	24	12	2.0																										
	R		I-229 Route Sign (proposed)	M1-1P	30	24	5.0																										
	R		Advance Turn Left Arrow (plaque) (proposed)	M5-2PL	21	15	2.2																										
111+89	R		Cardinal Direction North (proposed)	M3-3	24	12	2.0																										
	R		I-229 Route Sign (proposed)	M1-1P	30	24	5.0																										
	R		Advance Turn Right Arrow (plaque) (proposed)	M5-1PR	21	15	2.2																										
116+33	Median		Keep Right (proposed)	R4-7	24	30	5.0																										
119+07	R		Right Lane Must Turn Right (proposed)	R3-7R	36	36	9.0																										
119+33	R		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12			1																								
119+54	R		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12			1																								
119+67	R		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12			1																								
119+73	R		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12			1																								
120+25	R		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12			1																								
120+64	R		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12			1																								
124+08	R		Primary (plaque) (proposed)	M4-1P mod.	24	12	2.0																										
	R		Truck Route (proposed)	R14-1	24	18	3.0																										
	R		Directional Arrow (plaque) (proposed)	M6-3P	21	15	2.2																										
	R		No Parking (proposed)	R8-3	24	30	5.0																										
CLIFF AVENUE SOUTHBOUND																																	
306+12	L		Slippery When Wet (existing)	Existing	36	36																											
	L		When Icy or Wet (existing)	Existing	24	18																											
306+90	L		No Texting While Driving It's the Law (existing)	Existing																	1			1P		A		15.5					
307+72	L		No Parking (existing)	Existing	24	30																											
310+26	Median		One Way Right (proposed)	R6-1R	48	18	6.0																										
310+79	L		Speed Limit 30 (proposed)	R2-1	30	36	7.5																										
	L		No Parking (proposed)	R8-3	24	30	5.0																										
311+53	L		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12			1																								
	L		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12			1																								
312+26	L		Pedestrian (proposed)	W11-2	36	36																											
	L		Diagonal Downward Arrow (plaque) (proposed)	W16-7PL	21	15																											
314+58	Median		Narrow Keep Right (proposed)	R4-7c	24	30	5.0																										
314+92	L		Do Not Enter	R5-1	36	36	9.0																										
318+69	L		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12			1																								
319+50	L		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12			1																								
319+67	L		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12			1																								
319+80	L		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12			1																								
320+03	L		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12			1																								
320+31	L		Cardinal Direction South (proposed)	M3-3	24	12	2.0																										
	L		I-229 Route Sign (proposed)	M1-1P	30	24	5.0																										
	L		Advance Turn Right Arrow (plaque) (proposed)	M5-1PR	21	15	2.2																										
320+85	L		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12			1																								
321+45	L		Cardinal Direction North (proposed)	M3-3	24	12	2.0																										
	L		I-229 Route Sign (proposed)	M1-1P	30	24	5.0																										
	L		Advance Turn Left Arrow (plaque) (proposed)	M5-2PL	21	15	2.2																										
321+96	Median		Narrow Keep Right (proposed)	R4-7c	24	30	5.0																										
323+41	L		Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12			1																								
323+42	L		Junction (plaque) (proposed)	M2-1P	21	15	2.2																										
	L		I-229 Route Sign (proposed)	M1-1	30	24	5.0																										
326+01	L		Right Lane Must Turn Right (proposed)	R3-7R	36	36	9.0																										
				Subtotal			119.9	18.0		15											6			1P		A		313.3					

SEE SECTION L FOR RRFB INSTALLATION

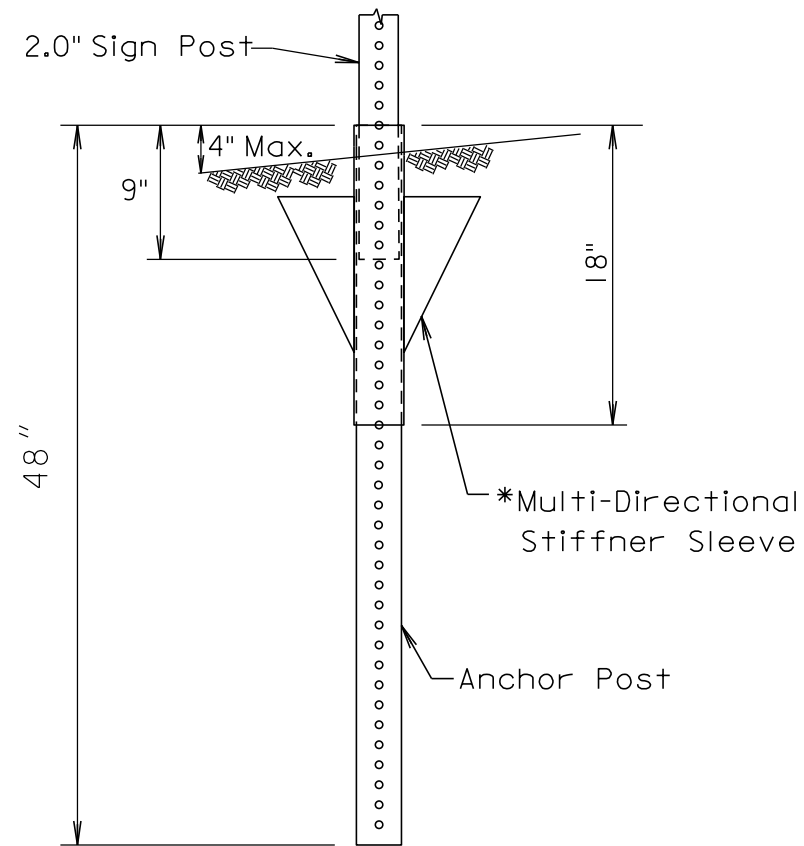
Permanent Sign Installation Table

Alignment	Station	Offset	Sign Description	Sign Code	Sign and Delineator Install Data									Sign and Delineator Remove/Reset Data							Post Data			Footing Data							
					Sign Width (in)	Sign Height (in)	Sign Area HI (IV) (SqFt)	Sign Area VHI (XI) (SqFt)	Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity (XI) (SqFt)	Type 2 Object Marker Back to Back (Each)	4"x4" Amber Delineator with 1.12 Lb/Ft Post (Each)	4"x4" White Delineator with 1.12 Lb/Ft Post (Each)	4"x8" Amber Delineator with 1.12 Lb/Ft Post (Each)	4"x8" White Delineator with 1.12 Lb/Ft Post (Each)	Salvage Traffic Sign (City) (Each)	Salvage Traffic Sign (SDDOT) (Each)	Remove Traffic Sign (Each)	Remove Extruded Panel Sign (Each)	Remove Sign for Reset (Each)	Reset Sign (Each)	Remove Delineator (Each)	use Street Light (SL), use Power Pole (PP), use Mast Arm (MA), use 1 Post (1P), use 2 Posts (2P), or use 3 Posts (3P)	(F)ixed Base, Breakaway (S)lip Base, (A)nchor Stud Post, or (D)irect Drive	2.0"x2.0" Perforated Tube Post Height (Ft)	Post Sizes and Quantities (Ft) W6x20	Remove Concrete Footing(s)* (LS)	1'-9" Dia. Break-away (Ft)	4' Dia. Fixed (Ft)	5' - 6" Dia. Fixed (Ft)		
41ST STREET																															
	21+20	L	No Parking Bus Stop (existing)	Existing																											
	22+22	R	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12						1																			
	25+99	L	Emergency Snow Route No Parking if Over 2 Inches (existing)	Existing																											
	29+18	R	Emergency Snow Route No Parking if Over 2 Inches (existing)	Existing																											
	30+58	R	No Parking Beyond This Point (Existing)	Existing																											
	30+58	L	No Parking Up To This Point	Existing																											
	31+27	R	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12						1																			
	32+26	R	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12						1																			
	32+26	L	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12						1																			
	32+42	R	Right Lane Must Turn Right (proposed)	R3-7R	36	36	9.0																								
	33+00	L	Bus Stop Sign (existing)	Existing																											
		L	Bus Stop Sign (existing)	Existing																											
	33+97	R	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12						1																			
	34+02	L	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12						1																			
	34+30	L	Speed Limit 30 (proposed)	R2-1	30	36	7.5																								
	35+21	L	Secondary Truck Route (existing)	Existing																											
		L	No Parking (existing)	Existing																											
	36+22	L	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12						1																			
	36+43	R	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12						1																			
	36+67	L	Right Lane Ends (proposed)	W9-1R	36	36	9.0																								
	36+99	L	Type 2 Object Marker, Yellow (proposed)	OM2-2V	6	12						1																			
SCHOOL ENTRANCE																															
	40+46	L	Compact Car Parking Only (existing)	Existing																											
	40+79	R	School Site Closed 10 PM to 5 AM (existing)	Existing																											
	41+24	L	No Texting While Driving It's The Law (existing)	Existing																											
	42+98	R	Compact Car Parking Only (existing)	Existing																											
PAM ROAD																															
	50+94	L	2 Hr Parking 8 AM to 4 PM School Days (existing)	Existing																											
		L	Beyond This Point (existing)	Existing																											
	51+57	R	2 Hr Parking 8 AM to 4 PM School Days (existing)	Existing																											
PARK ENTRANCE																															
	0+41	R	Stop (proposed)	R1-1	30	30	5.2																								
					Subtotal																										
					PCN 05HN Total	264.2	325.5	1013.1	63	8	40	10	86	10	56	4	23	23	119						145.0	1296.3	282.9	26	98.0	38.0	18.0



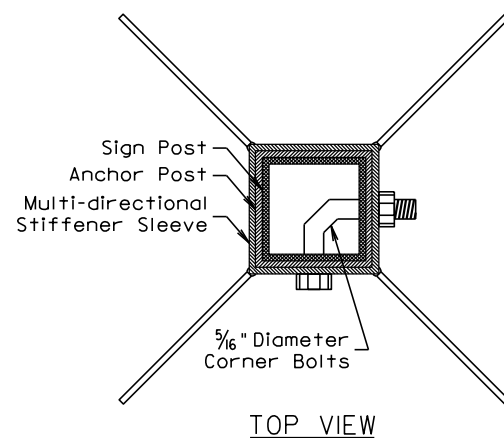
1:200
Plotted From: ngliers.vik
File - ...105HN_sgn-table.dgn

2" SQUARE STEEL PERFORATED TUBE POST WINGED SLEEVE ANCHOR BASE DETAILS (Typical)

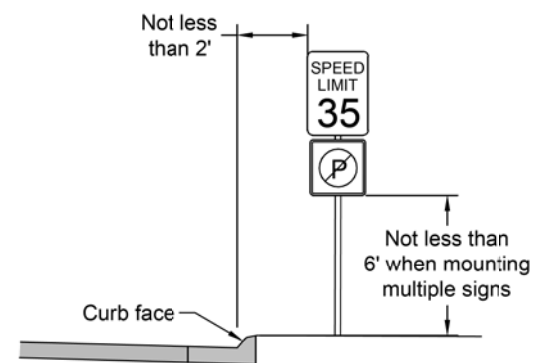
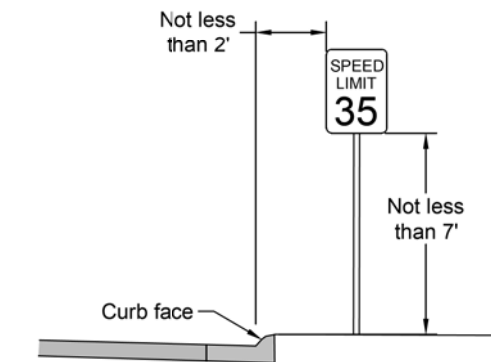


* 18" Multi-directional Sleeve w/4 Blades, or Equivalent.
 Manufacturer Recommended Dimensions and Installation.

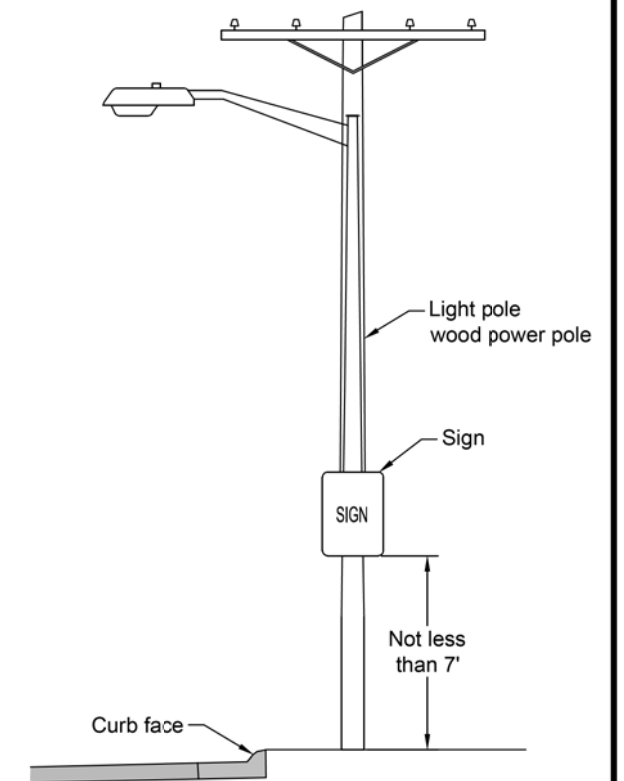
POST SIZE	
Sign Post	2"
Anchor Post	2 1/4"
Stiffener Sleeve	2 1/2"



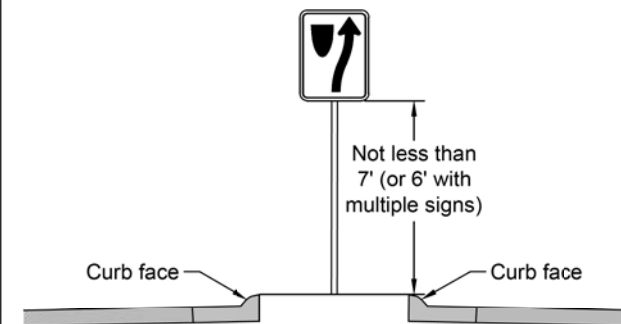
Roadside Signs



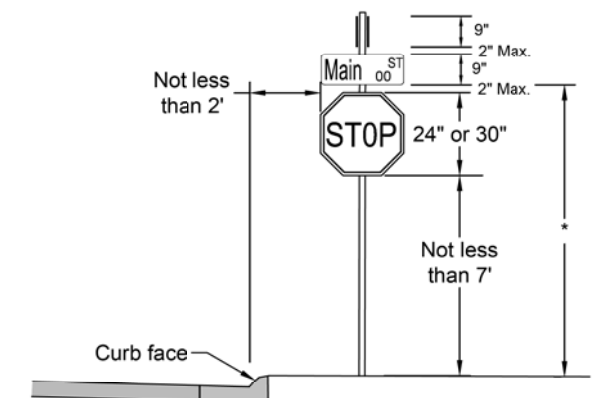
Street Light/Wooden Power Pole Mount



Median Signs



Stop/Street Name Signs



* 10' When street name signs are mounted alone on post.

Note: All R7 & R8 series signs with arrows shall be installed at a 45 degree angle to the street.

Revised: November 2017

<p>CITY OF SIOUX FALLS PUBLIC WORKS Providing a Better Quality of Life for You!</p>	Heights and Lateral Locations of Signs for Typical Urban Installation	Specification Reference	Plate Number
		No. 632	632.10