DEPARTMENT OF TRANSPORTATION

Planning & Engineering
Office of Project Development
700 E Broadway Avenue
Pierre, South Dakota 57501-2586
O: 605.773.3275 | F: 605.773.2614
dot.sd.gov

February 14, 2025

ADDENDUM NO. 1

RE: Item #3, February 19, 2025 Letting - P-PH-PT 0025(81)158, PCN 04EW, Clark County - Grading & Interim Surfacing

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 120E0500 "Option Borrow Excavation" changed from 138,020 to 155,250 CuYd
Bid Item 632E2510 "Type 2 Object Marker Back to Back" changed from 232 to 94 Each

PLANS: Please destroy sheets A1, A2, B2, B9, S2, S3, S4 & S5 and replace with the enclosed sheets, dated 2/13/25 & 2/14/25.

Sheets A1 & B2: Quantity for Bid Item 120E0500 "Option Borrow Excavation" changed from 138,020 to 155,250 CuYd.

Sheets A2 & S2: Quantity for Bid Item 632E2510 "Type 2 Object Marker Back to Back" changed from 232 to 94 Each.

Sheet B9: SALVAGED RIPRAP note was revised. The following sentence was removed:
In the instance that any salvaged Riprap is not reused on the project, it will be salvaged for future highway use and hauled to the Department of Transportation's De Smet Maintenance Office as directed by the Engineer.

Sheet S2: Note placement was adjusted.

Sheet S3: Object Marker Table was added & Note placement was adjusted.

Sheets S4-S5: Object Marker Table was removed. Pages are intentionally left blank.

Sincerely,

Sam Weisgram
Engineering Supervisor

SW/cj

CC: Mark Peterson, Aberdeen Region Engineer
Brad Letcher, Huron Area Engineer

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PH-PT 0025(81)158	A1	A6

Plotting Date: 02-14-2025

Revision Date: 02-14-2025 WJB
REVISED: 02-14-2025

Section B – Grading

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3220	Reestablish Right-of-Way and Property Corner	128	Each
009E3225	Reestablish Public Land Survey System Corner	19	Each
009E3230	Grade Staking	10.013	Mile
009E3245	Final Cross Section Survey	10.013	Mile
009E3250	Miscellaneous Staking	10.013	Mile
009E3280	Slope Staking	10.013	Mile
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
009E4300	Construction Schedule, Category III	Lump Sum	LS
009E4330	Project Management, Category III	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E0600	Remove Fence	30,941	Ft
110E1050	Remove Asphalt Concrete Approach Pavement	1,051.9	SqYd
110E5451	Salvage Riprap	14,798.6	Ton
110E7040	Remove Gate for Reset	4	Each
120E0010	Unclassified Excavation	574,282	CuYd
120E0500	Option Borrow Excavation	155,250	CuYd
120E0600	Contractor Furnished Borrow Excavation	65,558	CuYd
120E0900	Contaminated Material Excavation	100	CuYd
120E1000	Muck Excavation	28,362	CuYd
120E2000	Undercutting	139,548	CuYd
120E6100	Water for Embankment	5,837.0	MGal
250E0020	Incidental Work, Grading	Lump Sum	LS
260E6010	Granular Material	120.0	Ton
* 270E0022	Salvage Asphalt Mix Material	9,924.0	Ton
* 270E0040	Salvage and Stockpile Asphalt Mix and Granular Base Material	9,357.2	Ton
270E0040	Salvage and Stockpile Asphalt Mix and Granular Base Material	160,416.8	Ton
* 270E0210	Haul and Stockpile Granular Material	9,357.2	Ton
* 270E0230	Haul and Stockpile Asphalt Mix Material	9,924.0	Ton
421E0100	Pipe Culvert Undercut	880	CuYd
450E0123	18" RCP Class 3, Furnish	142	Ft
450E0130	18" RCP, Install	142	Ft
450E0143	24" RCP Class 3, Furnish	2,370	Ft
450E0150	24" RCP, Install	2,370	Ft
450E0163	30" RCP Class 3, Furnish	636	Ft
450E0170	30" RCP, Install	636	Ft
450E0183	36" RCP Class 3, Furnish	480	Ft
450E0190	36" RCP, Install	480	Ft
450E0193	42" RCP Class 3, Furnish	496	Ft
450E0200	42" RCP, Install	496	Ft
450E0203	48" RCP Class 3, Furnish	194	Ft
450E0210	48" RCP, Install	194	Ft

Section B – Grading (Continued)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
450E0213	54" RCP Class 3, Furnish	414	Ft
450E0220	54" RCP, Install	414	Ft
450E0223	60" RCP Class 3, Furnish	80	Ft
450E0230	60" RCP, Install	80	Ft
450E0243	72" RCP Class 3, Furnish	80	Ft
450E0250	72" RCP, Install	80	Ft
450E2028	36" RCP Flared End, Furnish	10	Each
450E2029	36" RCP Flared End, Install	10	Each
450E2032	42" RCP Flared End, Furnish	10	Each
450E2033	42" RCP Flared End, Install	10	Each
450E2036	48" RCP Flared End, Furnish	4	Each
450E2037	48" RCP Flared End, Install	4	Each
450E2040	54" RCP Flared End, Furnish	10	Each
450E2041	54" RCP Flared End, Install	10	Each
450E2044	60" RCP Flared End, Furnish	2	Each
450E2045	60" RCP Flared End, Install	2	Each
450E2052	72" RCP Flared End, Furnish	2	Each
450E2053	72" RCP Flared End, Install	2	Each
450E2200	24" RCP Sloped End, Furnish	42	Each
450E2201	24" RCP Sloped End, Install	42	Each
450E2204	30" RCP Sloped End, Furnish	16	Each
450E2205	30" RCP Sloped End, Install	16	Each
450E2304	18" RCP Safety End, Furnish	4	Each
450E2307	18" RCP Safety End, Install	4	Each
450E2308	24" RCP Safety End, Furnish	14	Each
450E2311	24" RCP Safety End, Install	14	Each
450E3023	30" RCP Arch Class 3, Furnish	128	Ft
450E3030	30" RCP Arch, Install	128	Ft
450E4604	30" RCP Arch Sloped End, Furnish	4	Each
450E4605	30" RCP Arch Sloped End, Install	4	Each
450E4759	18" CMP 16 Gauge, Furnish	1,030	Ft
450E4760	18" CMP, Install	1,030	Ft
450E4769	24" CMP 16 Gauge, Furnish	414	Ft
450E4770	24" CMP, Install	414	Ft
450E5406	18" CMP Safety End, Furnish	26	Each
450E5407	18" CMP Safety End, Install	26	Each
450E5410	24" CMP Safety End, Furnish	12	Each
450E5411	24" CMP Safety End, Install	12	Each
451E6080	Adjust Water Valve Box	1	Each
451E7300	Repair Drain Tile	500	Ft
464E0100	Controlled Density Fill	153.4	CuYd
560E5003	5'x7' Reinforced Concrete Cattle Pass, Furnish	84.0	Ft
560E5004	5'x7' Reinforced Concrete Cattle Pass, Install	84.0	Ft

Section B – Grading (Continued)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
560E5053	5'x7' Reinforced Concrete Cattle Pass End Section, Furnish	2	Each
560E5054	5'x7' Reinforced Concrete Cattle Pass End Section, Install	2	Each
600E0300	Type III Field Laboratory	1	Each
620E0020	Type 2 Right-of-Way Fence	30,354	Ft
620E0040	Type 4 Right-of-Way Fence	2,604	Ft
620E0515	Type 1A Temporary Fence	2,500	Ft
620E0520	Type 2 Temporary Fence	17,065	Ft
620E0530	Type 3 Temporary Fence	1,272	Ft
620E1020	2 Post Panel	73	Each
620E1030	3 Post Panel	40	Each
620E2012	12' Tubular Gate	2	Each
620E2100	Reset Gate	4	Each
700E0110	Class A Riprap	11,015.0	Ton
700E2010	Place Riprap	14,798.6	Ton
720E1010	PVC Coated Bank and Channel Protection Gabion	102.5	CuYd
831E0110	Type B Drainage Fabric	18,354	SqYd
900E0010	Refurbish Single Mailbox	6	Each
900E0012	Refurbish Double Mailbox	1	Each
900E1150	Right of Way Marker	70	Each

SPECIFICATIONS

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

INDEX OF SHEETS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PH-PT 0025(81)158	A2	A6

Plotting Date: 02-13-2025

Revision Date: 02-13-2025 WJB
REVISED: 02-13-2025

Section C – Traffic Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
632E2022	4"x4" White Delineator Back to Back with 1.12 Lb/Ft Post	71	Each
633E1200	High Build Waterborne Pavement Marking Paint, White	900	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	383	Gal
634E0010	Flagging	200.0	Hour
634E0020	Pilot Car	50.0	Hour
634E0110	Traffic Control Signs	1,288.2	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	52	Each
634E1002	Detour and Restriction Signing	4,201.2	SqFt

Section D – Erosion Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	1.2	CuYd
110E1693	Remove Erosion Control Wattle	135	Ft
110E1700	Remove Silt Fence	6,382	Ft
230E0010	Placing Topsoil	115,875	CuYd
730E0100	Cover Crop Seeding	110.0	Bu
730E0208	Type E Permanent Seed Mixture	91	Lb
730E0212	Type G Permanent Seed Mixture	3,088	Lb
731E0200	Fertilizing	61.10	Ton
732E0100	Mulching	196.2	Ton
732E0500	Fiber Reinforced Matrix	72.1	Ton
734E0103	Type 3 Erosion Control Blanket	49,356	SqYd
734E0154	12" Diameter Erosion Control Wattle	540	Ft
734E0165	Remove and Reset Erosion Control Wattle	135	Ft
734E0325	Surface Roughening	52.6	Acre
734E0510	Shaping for Erosion Control Blanket	27,614	Ft
734E0602	Low Flow Silt Fence	21,465	Ft
734E0604	High Flow Silt Fence	4,062	Ft
734E0610	Mucking Silt Fence	1,772	CuYd
734E0620	Repair Silt Fence	6,382	Ft
734E0630	Floating Silt Curtain	10,245	Ft
900E1320	Construction Entrance	3	Each

Section F – Surfacing

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
120E6200	Water for Granular Material	1,930.3	MGal
205E0010	Dust Control Chloride	33,792	Lb
260E1030	Base Course, Salvaged	160,281.4	Ton
260E3010	Gravel Surfacing	250.0	Ton
260E3500	Temporary Gravel Surfacing	400.0	Ton
320E1200	Asphalt Concrete Composite	3,200.0	Ton
330E0010	MC-70 Asphalt for Prime	301.6	Ton
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	40.6	Ton
330E1000	Blotting Sand for Prime	752.2	Ton
330E3000	Sand for Fog Seal	10.0	Ton
360E0020	AE150S Asphalt for Surface Treatment	256.3	Ton
360E1050	Type 3 Cover Aggregate	3,441.2	Ton

Section M – Pavement Marking

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E1200	High Build Waterborne Pavement Marking Paint, White	566	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	166	Gal
633E1272	High Build Waterborne Pavement Marking Paint, Arrow	6	Each

Section S – Permanent Signing

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E0130	Remove Traffic Sign	103	Each
110E0135	Remove Delineator	88	Each
110E7150	Remove Sign for Reset	1	Each
632E1320	2.0"x2.0" Perforated Tube Post	935.0	Ft
632E1340	2.5"x2.5" Perforated Tube Post	50.0	Ft
632E2022	4"x4" White Delineator Back to Back with 1.12 Lb/Ft Post	91	Each
632E2028	4" Tubular White Delineator with 1.12 Lb/Ft Post	22	Each
632E2510	Type 2 Object Marker Back to Back	94	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	321.3	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	198.5	SqFt
632E3500	Reset Sign	1	Each

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PH-PT 0025(81)158	B2	B88

Plotting Date: 02-14-2025

Revision Date: 02-14-2025 WJB
REVISED: 02-14-2025

SECTION B ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3220	Reestablish Right-of-Way and Property Corner	128	Each
009E3225	Reestablish Public Land Survey System Corner	19	Each
009E3230	Grade Staking	10.013	Mile
009E3245	Final Cross Section Survey	10.013	Mile
009E3250	Miscellaneous Staking	10.013	Mile
009E3280	Slope Staking	10.013	Mile
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
009E4300	Construction Schedule, Category III	Lump Sum	LS
009E4330	Project Management, Category III	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E0600	Remove Fence	30,941	Ft
110E1050	Remove Asphalt Concrete Approach Pavement	1,051.9	SqYd
110E5451	Salvage Riprap	14,798.6	Ton
110E7040	Remove Gate for Reset	4	Each
120E0010	Unclassified Excavation	574,282	CuYd
120E0500	Option Borrow Excavation	155,250	CuYd
120E0600	Contractor Furnished Borrow Excavation	65,558	CuYd
120E0900	Contaminated Material Excavation	100	CuYd
120E1000	Muck Excavation	28,362	CuYd
120E2000	Undercutting	139,548	CuYd
120E6100	Water for Embankment	5,837.0	MGal
250E0020	Incidental Work, Grading	Lump Sum	LS
260E6010	Granular Material	120.0	Ton
* 270E0022	Salvage Asphalt Mix Material	9,924.0	Ton
* 270E0040	Salvage and Stockpile Asphalt Mix and Granular Base Material	9,357.2	Ton
270E0040	Salvage and Stockpile Asphalt Mix and Granular Base Material	160,416.8	Ton
* 270E0210	Haul and Stockpile Granular Material	9,357.2	Ton
* 270E0230	Haul and Stockpile Asphalt Mix Material	9,924.0	Ton
421E0100	Pipe Culvert Undercut	880	CuYd
450E0123	18" RCP Class 3, Furnish	142	Ft
450E0130	18" RCP, Install	142	Ft
450E0143	24" RCP Class 3, Furnish	2,370	Ft
450E0150	24" RCP, Install	2,370	Ft
450E0163	30" RCP Class 3, Furnish	636	Ft
450E0170	30" RCP, Install	636	Ft
450E0183	36" RCP Class 3, Furnish	480	Ft
450E0190	36" RCP, Install	480	Ft
450E0193	42" RCP Class 3, Furnish	496	Ft
450E0200	42" RCP, Install	496	Ft
450E0203	48" RCP Class 3, Furnish	194	Ft
450E0210	48" RCP, Install	194	Ft

SECTION B ESTIMATE OF QUANTITIES (Continued)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
450E0213	54" RCP Class 3, Furnish	414	Ft
450E0220	54" RCP, Install	414	Ft
450E0223	60" RCP Class 3, Furnish	80	Ft
450E0230	60" RCP, Install	80	Ft
450E0243	72" RCP Class 3, Furnish	80	Ft
450E0250	72" RCP, Install	80	Ft
450E2028	36" RCP Flared End, Furnish	10	Each
450E2029	36" RCP Flared End, Install	10	Each
450E2032	42" RCP Flared End, Furnish	10	Each
450E2033	42" RCP Flared End, Install	10	Each
450E2036	48" RCP Flared End, Furnish	4	Each
450E2037	48" RCP Flared End, Install	4	Each
450E2040	54" RCP Flared End, Furnish	10	Each
450E2041	54" RCP Flared End, Install	10	Each
450E2044	60" RCP Flared End, Furnish	2	Each
450E2045	60" RCP Flared End, Install	2	Each
450E2052	72" RCP Flared End, Furnish	2	Each
450E2053	72" RCP Flared End, Install	2	Each
450E2200	24" RCP Sloped End, Furnish	42	Each
450E2201	24" RCP Sloped End, Install	42	Each
450E2204	30" RCP Sloped End, Furnish	16	Each
450E2205	30" RCP Sloped End, Install	16	Each
450E2304	18" RCP Safety End, Furnish	4	Each
450E2307	18" RCP Safety End, Install	4	Each
450E2308	24" RCP Safety End, Furnish	14	Each
450E2311	24" RCP Safety End, Install	14	Each
450E3023	30" RCP Arch Class 3, Furnish	128	Ft
450E3030	30" RCP Arch, Install	128	Ft
450E4604	30" RCP Arch Sloped End, Furnish	4	Each
450E4605	30" RCP Arch Sloped End, Install	4	Each
450E4759	18" CMP 16 Gauge, Furnish	1,030	Ft
450E4760	18" CMP, Install	1,030	Ft
450E4769	24" CMP 16 Gauge, Furnish	414	Ft
450E4770	24" CMP, Install	414	Ft
450E5406	18" CMP Safety End, Furnish	26	Each
450E5407	18" CMP Safety End, Install	26	Each
450E5410	24" CMP Safety End, Furnish	12	Each
450E5411	24" CMP Safety End, Install	12	Each
451E6080	Adjust Water Valve Box	1	Each
451E7300	Repair Drain Tile	500	Ft
464E0100	Controlled Density Fill	153.4	CuYd
560E5003	5'x7' Reinforced Concrete Cattle Pass, Furnish	84.0	Ft
560E5004	5'x7' Reinforced Concrete Cattle Pass, Install	84.0	Ft

SECTION B ESTIMATE OF QUANTITIES (Continued)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
560E5053	5'x7' Reinforced Concrete Cattle Pass End Section, Furnish	2	Each
560E5054	5'x7' Reinforced Concrete Cattle Pass End Section, Install	2	Each
600E0300	Type III Field Laboratory	1	Each
620E0020	Type 2 Right-of-Way Fence	30,354	Ft
620E0040	Type 4 Right-of-Way Fence	2,604	Ft
620E0515	Type 1A Temporary Fence	2,500	Ft
620E0520	Type 2 Temporary Fence	17,065	Ft
620E0530	Type 3 Temporary Fence	1,272	Ft
620E1020	2 Post Panel	73	Each
620E1030	3 Post Panel	40	Each
620E2012	12' Tubular Gate	2	Each
620E2100	Reset Gate	4	Each
700E0110	Class A Riprap	11,015.0	Ton
700E2010	Place Riprap	14,798.6	Ton
720E1010	PVC Coated Bank and Channel Protection Gabion	102.5	CuYd
831E0110	Type B Drainage Fabric	18,354	SqYd
900E0010	Refurbish Single Mailbox	6	Each
900E0012	Refurbish Double Mailbox	1	Each
900E1150	Right of Way Marker	70	Each

REGISTERED PROFESSIONAL ENGINEER
REG NO. 13208
BASIUS
08/14/2025

SALVAGED RIPRAP

All salvaged Riprap noted in the plans is intended to be reused on the project. The Riprap to be salvaged is a mixture of Class A and B sizes. Care will be taken not to damage the structural properties of the riprap during salvaging and transporting. All broken concrete and materials not salvaged will be disposed of in accordance with the Specifications. All costs for salvaging and stockpiling or transporting the riprap will be incidental to the contract unit price for “Salvage Riprap”. Plans quantity will be the basis of payment for the “Salvage Riprap” bid item. It is estimated that 9,866 CuYd (14,798.6 Ton) of Riprap will be salvaged on the project. Before preparing his/her bid, the Contractor will make a visual inspection of the project to verify the extent of the work and material involved.

PLACING RIPRAP

Contractor operations for placing riprap as noted in the plans will follow Section 700 of the Specifications. The Contractor will reuse salvaged riprap from the project for placing at locations noted in the plans. The Contractor will furnish the quantity of riprap necessary to complete placement that is beyond what is salvaged. All costs for placing the salvaged riprap will be incidental to the contract unit price for “Place Riprap”. All contractor furnished riprap will be weighed and measured for payment based on the actual quantity that is installed on the project, and all costs for placing will be incidental to the contract unit price for “Class A Riprap”. It is estimated that 14798.6 Ton of salvaged riprap will be used on the project. It is estimated that 11,015 Tons of Class A Riprap will be furnished and placed by the Contractor. It is estimated that 18,036 SqYd of Type B Drainage Fabric will be placed under the salvaged and furnished riprap. Before preparing his/her bid, the Contractor will make a visual inspection of the project to verify the extent of the work and material involved.

TABLE OF SALVAGE RIPRAP, RIPRAP, AND DRAINAGE FABRIC

Station	to	Station	L/R	Salvage & Place Riprap (Ton)	Class A Riprap (Ton)	Type B Drainage Fabric (SqYd)
6+07*			R	23.6		36
132+50		141+50	L	1500	1300	2000
132+50		141+50	R	1500	1300	2000
159+75		178+00	L	3000	2840	4050
157+75		178+30	R	3450	3130	4550
324+50		340+50	L	3450	1670	3550
331+30		339+60	R	1875	775	1850
			Totals:	14798.6	11015	18036

*Savaged Riprap at STA 6+07 will be placed at a different location on the project.

CORRUGATED METAL PIPE

Corrugated metal pipes will have 2 ⅔-inch x ½-inch corrugations for 42-inch and smaller round pipe and 48-inch and smaller arch pipe unless otherwise stated in the plans. Corrugated metal pipes will have 3-inch x 1-inch or 5-inch x 1-inch corrugations for 48-inch and larger round pipe and 54-inch and larger arch pipe unless otherwise stated in the plans.

The gauge of the corrugated metal ends will match the thickest gauge of corrugated metal pipe it is connected to.

PIPE FOR APPROACHES

Class 2 reinforced concrete pipe, high density polyethylene pipe, polypropylene pipe (will be in conformance with AASHTO M330), or steel reinforced polyethylene pipe may be substituted for corrugated metal pipe at approaches at no additional cost to the State.

If corrugated metal pipes are provided, the pipes will be as specified in the CORRUGATED METAL PIPE note.

If high density polyethylene pipe, polypropylene pipe (will be in conformance with AASHTO M330), or steel reinforced polyethylene pipe are provided, then the end sections will be metal, be compatible, and conform to the type of end section as shown in the plans.

CONTROLLED DENSITY FILL FOR PIPE

Controlled density fill will be in conformance with Section 464 of the Specifications.

The controlled density fill will be placed between the pipes from the base of pipe elevation to the haunch of the pipes and extend to the end of the end section.

Controlled density fill between metal pipes will require the pipes to be anchored to resist floating. Anchoring methods will be determined by the Contractor and approved by the Engineer. Payment for anchoring the pipes will be incidental to the pipe installation contract item.

TABLE OF CONTROLLED DENSITY FILL FOR PIPE

Station	Quantity (CuYd)
11+87 R	9.2
19+20	3.6
53+33 R	4.5
108+38	5.1
171+20	28.7
482+67	102.3
Total:	153.4

PIPE COVER

The earthen subgrade cover for some pipe installations is less than one foot. The Contractor will take the necessary precautions to ensure the structural properties of the pipes are not damaged after installation and prior to the placement of final surfacing. Any additional costs for preventing damage to these pipes will be incidental to the contract unit price per foot for the corresponding pipe installation contract item.

TABLE OF PVC COATED BANK AND CHANNEL PROTECTION GABIONS AND DRAINAGE FABRIC

Station	L/R	PVC Coated Bank and Channel Protection Gabion (CuYd)	Type B Drainage Fabric (SqYd)
6+07	R	21.5	57
11+54	R	18.0	57
52+92	R	9.0	30
96+86	R	4.5	15
118+42	R	4.5	15
186+97	L	6.0	19
318+37	L	6.0	19
380+30	R	4.5	15
396+63	R	6.0	19
451+76	L	6.0	19
464+62	L	6.0	19
476+06	L	6.0	19
497+89	L	4.5	15
Totals:		102.5	318

SECTION S – ESTIMATE OF QUANTITIES – PCN 04EW

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E0130	Remove Traffic Sign	103	Each
110E0135	Remove Delineator	88	Each
110E7150	Remove Sign for Reset	1	Each
632E1320	2.0"x2.0" Perforated Tube Post	935.0	Ft
632E1340	2.5"x2.5" Perforated Tube Post	50.0	Ft
632E2022	4"x4" White Delineator Back to Back with 1.12 Lb/Ft Post	91	Each
632E2028	4" Tubular White Delineator with 1.12 Lb/Ft Post	22	Each
632E2510	Type 2 Object Marker Back to Back	94	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	321.3	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	198.5	SqFt
632E3500	Reset Sign	1	Each

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.

NEW PERMANENT SIGNING

All signs will be manufactured in accordance with the sheeting manufacturer’s recommendations utilizing a matched component system, including inks, electronic cuttable films, and protective overlay films.

All Flat Aluminum Signs, Nonremovable Copy High Intensity will have sheeting in conformance with the requirements of ASTM D4956 Type IV. All Flat Aluminum Signs, Nonremovable Copy Super/Very High Intensity will have sheeting in conformance with the requirements of ASTM D4956 Type XI.

All costs associated with furnishing and installing the new permanent signs, and with furnishing and installing stiffeners and hardware will be incidental to the contract unit price per square foot for “Flat Aluminum Sign, Nonremovable Copy High Intensity” or “Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity”.

REMOVE SIGN FOR RESET AND RESET SIGN

Signs that are scheduled for reset will be dismantled and reassembled to the extent needed by the Contractor to properly reset the sign. Signs will be handled with care so that the existing signs, posts, and bases are not damaged during the relocation process. The Contractor will replace and pay for any reset signs damaged in their care. The Contractor will remove and dispose of any existing posts for all reset signs that require use of new posts as shown in the Table of Permanent Signing.

All costs for removing, dismantling, and disposing of any existing posts will be incidental to the contract unit price per each for “Remove Sign for Reset”.

All costs for resetting the existing signs will be incidental to the contract unit price per each for “Reset Sign”. All quantities for Remove Sign for Reset and Reset Sign will be per assembly at the contract unit price per each.

Any 911 Emergency Number signs within the project work limits will not be stockpiled but temporarily repositioned at a location outside the work limits but within the immediate proximity of the existing location. To complete the project sign work, the 911 Emergency Number signs will be permanently installed at their original locations, or as near as practicable where entrances have been reconfigured by the project. The existing supports will be reused. Cost for removing, temporarily repositioning, and permanently resetting 911 Emergency Number signs will be included in the contract unit price per each for “Remove Sign for Reset” and “Reset Sign”.

DIGITALLY PRINTED SIGNS

Digitally printed signs will be allowed on this project. If the Contractor elects to provide digitally printed signs, such signs will adhere to the following specifications.

PROTECTIVE OVERLAY FILM

Permanent traffic signs printed with digital ink systems will be fabricated with a full sign protective overlay film designed to provide a smooth surface needed for retroreflectivity, and to protect the sign from fading and UV degradation. The overlaminate will comply with the retroreflective sheeting manufacturer’s recommendations to ensure proper adhesion and transparency and will also meet the reflective film durability as identified in Table 1.

Table 1: Retroreflective Film Minimum Durability Requirements

ASTM D4956 Type	Full Sign Replacement Term (years)	Sheeting Replacement Term (years)
I	0	7
III	7	10
IV	7	10
VIII	7	10
IX	7	12
XI	7	12

FABRICATION

Retroreflective sheeting will be applied to a properly cleaned and prepared aluminum sign blank in accordance with the retroreflective sheeting manufacturer’s recommendations. Sign legend will be applied using digital print technologies and systems in accordance with the retroreflective sheeting manufacturer’s recommendations and the requirements of these plans.

Finished signs will be free of ragged edges and must be supplied clean and free of scratches, grease, oil, lubricants or other contaminants. Minor blemishes (dirt speck, dust, etc.) may settle on the fresh ink surface or become entrapped between the sheeting surface and transparent overlay film due to static charge within the sign shop environment. Any blemish must be minor and not interfere with the communication of the sign message to the motorist. The blemish must not be visible to the naked eye when viewed from 30 feet or greater.

After application of the retroreflective sheeting, sign blanks will be stacked and packaged face to face, back to back, and protected in accordance with the sheeting manufacturer’s recommendations. Finished signs will be securely packaged to prevent damage during transit or storage according to the sheeting manufacturer’s recommendations.

TRAFFIC SIGN PERFORMANCE WARRANTY PROVISIONS

Based on the ASTM Type of sheeting specified, traffic control signs will be warranted for the duration shown in Table 1. Full product terms and conditions are as established by each sheeting manufacturer and may contain certain limitations based on sheeting and ink colors, and geographic exposure of the sign. A copy of the warranty document with complete details of terms and conditions will be supplied if requested by the Engineer.

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PH-PT 0025(81)158	S3	S23

DIGITALLY PRINTED SIGNS (CONTINUED)

CERTIFIED DIGITAL SIGN FABRICATOR

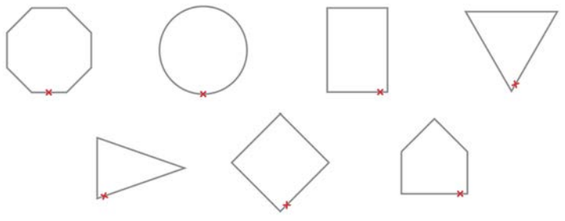
Sign fabricators using digital imaging methods to produce regulated traffic signs must be certified by the reflective sheeting manufacturer whose materials are used to produce the delivered signs.

DATE TAGGING SIGNS WITH PERTINENT INFORMATION

All digitally printed signs are required to be date-tagged with the following 2 components:

1. Date tags on the back of signs
   Tags will have the following information and be fabricated with material and printing system that are as durable as the warranted sign.
   - Name of Sign Fabricator
   - Date the sign was fabricated (month and year)
   - Process that was used for sign fabrication (digitally printed)
   - Supplier of sheeting that was used for fabricating the sign.

2. Border date
The month and year (mm/yyyy) of sign fabrication will be printed in the border of the sign in 3/8" sans serif font. Border date will be printed with the same warranted printed system as the sign face. The date should be printed in the locations indicated below.



SQUARE TUBE ANCHOR SLEEVE

The Contractor will furnish and install new 2.5" x 2.5" x 18", 12 Gauge square tube anchor sleeve or equivalent components as approved by the Engineer for 2.0" x 2.0" perforated tube posts. A 2.25" x 2.25" x 4', 12 Gauge perforated tube post will be used as the anchor post for installation with the square tube anchor sleeve.

SQUARE TUBE POST SLEEVE

All 2.5" x 2.5", 10 Gauge perforated tube post will be sleeved with a 2-3/16" x 2-3/16" x 4', 10 Gauge perforated tube post.

WINGED SLIP BASE ANCHOR

The Contractor will furnish and install new winged slip base anchors for 2.5" x 2.5" perforated tube posts as required in the Permanent Signing Table. Winged slip base anchors will be installed using the direct drive method. Winged slip base anchors will consist of a slip base (upper), a 48-inch long winged anchor (lower), and a hardware kit.

TYPE 2 OBJECT MARKERS

All costs associated with the removal of object markers including posts and hardware and the installation of the new back-to-back object markers will be incidental to the contract unit price per each for "type 2 object marker back-to-back".

DELINEATION

Delineation installation and spacing will be done according to Standard Plates 632.42, 632.44, and 632.46.

In accordance to Standard Plate 632.44, 4 tubular white delineators will be installed at each radius of SD 20, and 3 white tubular delineators will be installed at each radius of 155 Street.

Approaches for the junction of SD20 and SD25 will have 3 white delineators each.

Per the discretion of the Engineer, 79 delineators will be installed from Station 320+44 to Station 530+87.

MILEAGE REFERENCE MARKERS

SDDOT will be notified to do Mileage Reference Markers (MRMs) locates prior to project completion by calling the Aberdeen Region Traffic Engineer at (605)626-2245. Payment for this work will be incidental to the various signing contract items.

NO PASSING ZONE SIGNS

SDDOT will be notified to contact the Aberdeen Region Traffic Engineer to do NO PASSING ZONE sign locates a minimum of the 3 weeks prior to project completion. Payment for this work will be incidental to the various signing contract items.

Object Marker Table

Station	Type 2 Object Marker Back-to-Back (Each)	Description
6+07	4	2 Each Side of Road
19+20	4	2 Each Side of Road
39+59	2	1 Each Side of Road
43+59	2	1 Each Side of Road
64+59	2	1 Each Side of Road
89+34	2	1 Each Side of Road
96+86	2	1 Each Side of Road
108+38	2	1 Each Side of Road
114+68	2	1 Each Side of Road
118+42	2	1 Each Side of Road
138+35	4	2 Each Side of Road
145+63	4	2 Each Side of Road
171+20	4	2 Each Side of Road
176+61	2	1 Each Side of Road
186+97	2	1 Each Side of Road
200+87	2	1 Each Side of Road
219+21	2	1 Each Side of Road
253+30	2	1 Each Side of Road
271+06	2	1 Each Side of Road
289+49	2	1 Each Side of Road
299+09	2	1 Each Side of Road
308+22	2	1 Each Side of Road
318+37	2	1 Each Side of Road
325+12	2	1 Each Side of Road
335+94	2	1 Each Side of Road
355+07	2	1 Each Side of Road
364+16	2	1 Each Side of Road
370+61	2	1 Each Side of Road
373+62	2	1 Each Side of Road
380+30	2	1 Each Side of Road
396+63	2	1 Each Side of Road
418+40	2	1 Each Side of Road
438+85	2	1 Each Side of Road
451+76	2	1 Each Side of Road
464+62	2	1 Each Side of Road
476+06	2	1 Each Side of Road
482+67	4	2 Each Side of Road
497+61	2	1 Each Side of Road
506+64	2	1 Each Side of Road
516+61	2	1 Each Side of Road
525+62	2	1 Each Side of Road
Total	**94**	

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PH-PT 0025(81)158	S4	S23

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Revised: 2/12/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P-PH-PT 0025(81)158	S5	S23

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