

January 5, 2026

**ADDENDUM NO. 1**

**RE: Item #3, January 21, 2026 Letting - NH 0034(212)388, PCN 06PR, Lake County - Cold Milling, Asphalt Concrete Resurfacing, Pipe Work, Modify Intersection, Approach Slabs, Berm Repair, 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.*

**Bid Items were added:**

Bid Item 634E0380 "Tubular Marker"  
Bid Item 634E0390 "Replace Tubular Marker"  
Bid Item 634E0525 "Linear Delineation System Panel, Barrier Mounted"  
Bid Item 634E0560 "Remove Pavement Marking, 4" or Equivalent"  
Bid Item 634E0700 "Traffic Control Movable Concrete Barrier"  
Bid Item 634E0705 "Remove and Reset Traffic Control Movable Concrete Barrier"

**Quantities for Bid Items were changed:**

Bid Item 260E1010 "Base Course" changed from 1,281.5 to 1,481.5 Ton  
Bid Item 320E1200 "Asphalt Concrete Composite" changed from 159.3 to 269.3 Ton  
Bid Item 634E0110 "Traffic Control Signs" changed from 3,737.2 to 3,790.4 SqFt  
Bid Item 634E0630 "Temporary Pavement Marking" changed from 37.3 to 26.4 Mile

**PLANS:** Please destroy sheets 2, 10-16, 30, 31, 35, & 65 and replace with the enclosed sheets, dated 12/31/2025. Sheets 13b & 86b were added.

**Sheet 2:** **Bid Items were added:**

Bid Item 634E0380 "Tubular Marker"  
Bid Item 634E0390 "Replace Tubular Marker"  
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**Sheet 10:** INCIDENTAL WORK, GRADING note was revised.

**Sheet 11:** TABLE OF GUARDRAIL spacing was adjusted.

**Sheet 12:** SEQUENCE OF OPERATION note was revised.

**Sheet 13:** TEMPORARY PAVEMENT MARKING note was revised to clarify the double yellow pavement marking and note spacing was adjusted.

**Sheet 13b:** TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS and BARRIER MOUNTED LINEAR DELINEATION SYSTEM PANELS notes were added.

**Sheet 14:** TUBULAR MARKERS note was added and other note spacings were adjusted.

**Sheet 15:** Note spacings were adjusted.

**Sheet 16:** Note spacings were adjusted.

**Sheet 30:** TABLE OF MATERIALS QUANTITIES was revised.

**Sheet 31:** TABLE OF ADDITIONAL QUANTITIES was revised.

**Sheet 35:** ITEMIZED LIST FOR TRAFFIC CONTROL was revised.

**Sheet 65:** Pipe note for Station 2+76 R was revised.

**Sheet 86b:** Standard Plate 628.01 was added.

Sincerely,

Sam Weisgram  
Engineering Supervisor

SW/gp

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

# ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

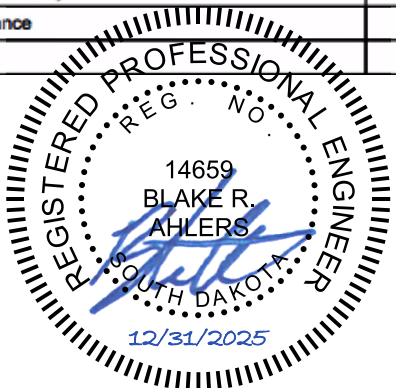
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0034(212)388	2	170

REV. 12/31/2025 BRA

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3220	Reestablish Right-of-Way and Property Corner	13	Each
009E3225	Reestablish Public Land Survey System Corner	1	Each
009E3230	Grade Staking	0.552	Mile
009E3250	Miscellaneous Staking	7.830	Mile
009E3280	Slope Staking	0.552	Mile
009E3301	Engineer Directed Surveying/Staking	20.0	Hour
009E3320	Checker	Lump Sum	LS
009E4200	Construction Schedule, Category II	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E0130	Remove Traffic Sign	2	Each
110E0600	Remove Fence	1,035	Ft
110E0700	Remove 3 Cable Guardrail	245	Ft
110E0730	Remove Beam Guardrail	460.0	Ft
110E0740	Remove 3 Cable Guardrail Anchor Assembly	2	Each
110E0745	Remove 3 Cable Guardrail Slip Base Anchor Assembly	2	Each
110E1010	Remove Asphalt Concrete Pavement	5,352.0	SqYd
110E1100	Remove Concrete Pavement	268.0	SqYd
110E1690	Remove Sediment	0.7	CuYd
110E1700	Remove Silt Fence	544	Ft
110E7150	Remove Sign for Reset	10	Each
120E0010	Unclassified Excavation	9,192	CuYd
120E0100	Unclassified Excavation, Digouts	270	CuYd
120E0600	Contractor Furnished Borrow Excavation	7,813	CuYd
120E1000	Muck Excavation	1,283	CuYd
120E2000	Undercutting	1,467	CuYd
210E0100	Shoulder Clearing	21.4	Mile
230E0010	Placing Topsoil	1,829	CuYd
250E0020	Incidental Work, Grading	Lump Sum	LS
260E1010	Base Course	1,481.5	Ton
260E1030	Base Course, Salvaged	1,984.7	Ton
260E6010	Granular Material	183.0	Ton
270E0110	Salvage and Stockpile Granular Material	2,030.4	Ton
270E0230	Haul and Stockpile Asphalt Mix Material	6,454.1	Ton
320E0032	PG 58H-34 Asphalt Binder	1,253.9	Ton
320E1200	Asphalt Concrete Composite	269.3	Ton
320E1203	Class Q3R Hot Mixed Asphalt Concrete	24,301.7	Ton
320E1800	Asphalt Concrete Blade Laid	1,677.2	Ton
320E4000	Hydrated Lime	258.5	Ton
320E7040	Grind 6" Transverse Rumble Strip in Asphalt Concrete	180.0	Ft
330E0100	SS-1h or CSS-1h Asphalt for Tack	153.7	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	60.6	Ton
330E2000	Sand for Flush Seal	787.2	Ton

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
332E0010	Cold Milling Asphalt Concrete	188,849	SqYd
421E0100	Pipe Culvert Undercut	108	CuYd
450E0222	60" RCP Class 2, Furnish	54	Ft
450E0230	60" RCP, Install	54	Ft
450E2028	36" RCP Flared End, Furnish	2	Each
450E2029	36" RCP Flared End, Install	2	Each
450E2032	42" RCP Flared End, Furnish	1	Each
450E2033	42" RCP Flared End, Install	1	Each
450E2044	60" RCP Flared End, Furnish	2	Each
450E2045	60" RCP Flared End, Install	2	Each
450E3112	108" RCP Arch Class 2, Furnish	128	Ft
450E3120	108" RCP Arch, Install	128	Ft
450E4605	30" RCP Arch Sloped End, Install	1	Each
450E4621	30" RCP Arch Sloped End with Bars, Furnish	1	Each
450E4639	108" RCP Arch Sectional End, Furnish	1	Each
450E4640	108" RCP Arch Sectional End, Install	1	Each
450E4767	24" CMP 12 Gauge, Furnish	70	Ft
450E4770	24" CMP, Install	70	Ft
600E0300	Type III Field Laboratory	1	Each
620E0020	Type 2 Right-of-Way Fence	948	Ft
620E0510	Type 1 Temporary Fence	140	Ft
620E1020	2 Post Panel	11	Each
620E1030	3 Post Panel	2	Each
630E0500	Type 1 MGS	525.0	Ft
630E1501	Type 1 Retrofit Guardrail Transition	4	Each
630E2018	MGS MASH Tangent End Terminal	4	Each
632E1320	2.0"x2.0" Perforated Tube Post	57.6	Ft
632E2220	Guardrail Delineator	20	Each
632E2510	Type 2 Object Marker Back to Back	8	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	18.0	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	12.0	SqFt
632E3500	Reset Sign	10	Each
633E1200	High Build Waterborne Pavement Marking Paint, White	586	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	421	Gal
634E0010	Flagging	560.0	Hour
634E0020	Pilot Car	240.0	Hour
634E0110	Traffic Control Signs	3,790.4	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	25	Each
634E0380	Tubular Marker	375	Each
634E0390	Replace Tubular Marker	50	Each
634E0420	Type C Advance Warning Arrow Board	2	Each

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0525	Linear Delineation System Panel, Barrier Mounted	34	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	100	Ft
634E0630	Temporary Pavement Marking	26.4	Mile
634E0700	Traffic Control Movable Concrete Barrier	34	Each
634E0705	Remove and Reset Traffic Control Movable Concrete Barrier	34	Each
634E0750	Temporary Concrete Barrier End Protection	2	Each
634E0755	Remove and Reset Temporary Concrete Barrier End Protection	2	Each
634E0760	Temporary Concrete Barrier End Protection Module Set or Repair Kit	1	Each
634E1215	Contractor Furnished Portable Changeable Message Sign	3	Each
634E2000	Longitudinal Pedestrian Barricade	40	Ft
634E2015	Temporary Pedestrian Access Route	Lump Sum	LS
635E0050	Breakaway Base Luminaire Pole with Arm, 50' Mounting Height	4	Each
635E0150	Breakaway Base Luminaire Pole with Twin Arms, 50' Mounting Height	7	Each
635E3700	Roadway Luminaire, LED with Photoelectric Cell	18	Each
635E5020	2' Diameter Footing	95.0	Ft
635E5301	Type 1 Electrical Junction Box	3	Each
635E5400	Electrical Service Cabinet	1	Each
635E8120	2" Rigid Conduit, Schedule 40	2,915	Ft
635E8220	2" Rigid Conduit, Schedule 80	300	Ft
635E9014	1/C #4 AWG Copper Wire	11,120	Ft
635E9710	2/C #10 AWG Copper Pole and Bracket Cable	840	Ft
720E1010	PVC Coated Bank and Channel Protection Gabion	10.0	CuYd
730E0204	Type C Permanent Seed Mixture	65	Lb
731E0100	Fertilizing	5,454	Lb
732E0100	Mulching	10.0	Ton
734E0103	Type 3 Erosion Control Blanket	5,650	SqYd
734E0132	Type 2 Turf Reinforcement Mat	1,096.0	SqYd
734E0154	12" Diameter Erosion Control Wattle	300	Ft
734E0165	Remove and Reset Erosion Control Wattle	75	Ft
734E0325	Surface Roughening	1.0	Acre
734E0510	Shaping for Erosion Control Blanket	1,100	Ft
734E0602	Low Flow Silt Fence	1,750	Ft
734E0604	High Flow Silt Fence	425	Ft
734E0610	Mucking Silt Fence	151	CuYd
734E0620	Repair Silt Fence	544	Ft
831E0110	Type B Drainage Fabric	29	SqYd
900E0010	Refurbish Single Mailbox	8	Each
900E1310	Concrete Washout Facility	1	Each
900E1320	Construction Entrance	2	Each
900E1980	Storage Unit	1	Each





STORM SEWER

Reinforced concrete pipe may be bell and spigot. The pipe sections will be adjoined such that the ends are fully entered and the inner surfaces are reasonably flush and even.

Lift holes in the reinforced concrete pipe will be plugged with grout.

Watertight joints are required for reinforced concrete pipe, drop inlets, manholes, and junction boxes where storm sewers run parallel to and within 10 feet horizontally from existing or proposed water mains.

Watertight joints are required where reinforced concrete pipes, drop inlets, manholes, or junction boxes cross water mains and are separated a distance of 18 inches or less, above or below, the water main.

If watertight joints are required then the watertight joints will extend for a distance of 10 feet beyond the water main. This measurement will be from the sealed concrete joint to the outer most surface of the water main.

Watertight joint seals will conform to the following requirements:

1. Reinforced Concrete Pipe (Circular): Gasketed pipe will conform to the requirements of ASTM C443 and the gasket will be in conformance with Section 990 of the Specifications. Non-gasketed concrete pipe will be sealed with a mastic joint seal conforming to the requirements of ASTM C990 and encased with a minimum 2-foot wide by 6-inch thick M6 concrete collar reinforced with 6x6 W2.9 x W2.9 wire mesh.
2. Reinforced Concrete Pipe (Arch): Gasketed pipe will conform to the requirements of ASTM C443 and the gasket will be in conformance with Section 990 of the Specifications. Non-gasketed concrete pipe joints will be sealed with a hydrophilic flexible water stop seal and wrapped with a 1-foot wide strip of fabric above the cradle. The fabric will conform to the requirements of Section 831 of the Specifications for Type A Drainage Fabric. The hydrophilic flexible water stop will be from the list below.
3. Drop Inlets, Manholes, and Junction Boxes: Joints will be sealed with one of the following methods:

A. A flexible strip seal placed in the joints conforming to the requirements of ASTM C990 and the perimeter encased with a minimum 2-foot wide by 6-inch thick M6 concrete collar reinforced with 6x6 W2.9 x W2.9 wire mesh.

B. A hydrophilic flexible water stop seal placed in the joints and a 1-foot wide strip of fabric wrapped around the perimeter of the pipe. The fabric will conform to the requirements of Section 831 of the Specifications for Type A Drainage Fabric. The hydrophilic flexible water stop will be from the list below.

C. A self-adhesive external joint seal wrap. The seal wrap will be from the list below.

Approved List of Self-adhesive Joint Wrap

Product	Manufacturer
Mar Mac Seal Wrap	Mar Mac Construction Products McBee, SC 843-335-5909 <a href="http://www.marmac.com">http://www.marmac.com</a>
ConWrap CS-212	Concrete Sealants, Inc. Tipp City, OH 800-332-7325 <a href="http://www.conseal.com">http://www.conseal.com</a>

Approved List of Hydrophilic Flexible Water Stop Seal:

Product	Manufacturer
Waterstop RX	Cetco Hoffman Estates, IL 800-527-9948 <a href="http://www.cetco.com">http://www.cetco.com</a>
Conseal CS-231	Concrete Sealants, Inc. Tipp City, OH 800-332-7325 <a href="http://www.conseal.com">http://www.conseal.com</a>

Gaskets and seals (mastic, waterstop, and seal wraps) will be installed in accordance with the Manufacturer's recommendations.

The cost for furnishing and installing all gaskets, mastic joint seal, water stop seal, seal wrap, concrete collars, and for plugging the lift holes will be incidental to the contract unit price per foot for the corresponding pipe contract item.

INCIDENTAL WORK, GRADING

Station	L/R	Remarks
150+90 (SD 34)	R	Eliminate Entrance
254+09 (SD 34)	L	Remove 36" RCP End Section
254+09 (SD 34)	R	Remove 36" RCP End Section
300+92 (SD 34)	R	Remove 30" Arch RCP End Section
309+60 (SD 34)	R	Remove 42" RCP End Section
4+47 (457 Ave)	R	Remove 108" Arch RCP End Section
8+13 (457 Ave)	L	Remove 24"-71' CMP
Removing and Replacing Topsoil for temp crossover widening 800' west of HWY 19		
Any necessary temporary drainage pipe necessary for temp crossover widening		
Removal and disposal of asphalt concrete composite and base course used to construct temp crossover widening		

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)
309+60 (SD 34)	R	10.0	29
Total:		10.0	29

BRACE PANELS FOR ROW FENCE

The E-Z Brace or an approved equal may be utilized as an alternate horizontal brace in the brace panels if approved by the Engineer. The E-Z Brace will be attached to each wood post utilizing two 5/16" x 3" lag screws. Holes of appropriate diameter, based on wood post condition, will be drilled before placement of lag screws. The following is the contact regarding the E-Z Brace:

Charlie Mack  
Macksteel E-Z Braces  
415 20<sup>th</sup> Ave. SE.  
Watertown, SD 57201  
605-882-2177



TABLE OF GUARDRAIL

Location	Remove 3 Cable Guardrail  (Ft)	Remove 3 Cable Guardrail Anchor Assembly  (Each)	Remove 3 Cable Guardrail Slip Base Anchor Assembly  (Each)	Remove Beam Guardrail  (Ft)	Type 1 MGS  (Ft)	Type 1 Retrofit Guardrail Transition  (Each)	MGS MASH Tangent End Terminal  (Each)
Structure No. 40-142-144 (SD 34 WB Bridge)							
Begin Bridge Lt.					125.0	1	1
Begin Bridge Rt.					137.5	1	1
Structure No. 40-142-145 (SD 34 EB Bridge)							
Begin Bridge Lt.					137.5	1	1
Begin Bridge Rt.					125.0	1	1
22+20.57-26' L to 23+51.63-19' L (SD 34 EB Bridge)	130	1	1				
15+06.23-18' R to 15+98.07- 26' R (SD 34 WB Bridge)				92			
22+32.00-27' R to 24+01.08-23' R (SD 34 EB Bridge)				166			
15+06.23-22' L to 16+12.64- 28' L (SD 34 WB Bridge)				110			
23+09.29-24' L to 24+01.08-19' L (SD 34 EB Bridge)				92			
15+70.38-19' R to 16+85.35- 26' R (SD 34 WB Bridge)	115	1	1				
Totals:	245	2	2	460	525.0	4	4

TABLE OF CONSTRUCTION STAKING (See Special Provision for Contractor Staking)

Roadway and Description	Begin Station	End Station	Number of Lanes	Length (Ft)	Grade Staking				Miscellaneous Staking Quantity (Mile)	Slope Staking Quantity (Mile)
					Length (Mile)	Lane Factor	*Sets of Stakes	**Grade Staking Quantity (Mile)		
SD HWY 34 (4 Lanes Asphalt)	10+54	178+25	4	16771	3.176	2	1	-	3.176	-
SD HWY 34 (Transition from 4 Lanes to 2 Lanes Asphalt)	178+25	189+00	4/2	1075	0.204	1.5	1	-	0.204	-
SD HWY 34 (2 Lanes Asphalt)	189+00	394+84	2	20584	3.898	1.0	1	-	3.898	-
Westbound SD HWY 34 (2 Lanes Asphalt)	10+00	19+10	2	910	0.172	1.0	1	0.172	0.172	0.172
Eastbound SD HWY 34 (2 Lanes Asphalt)	20+00	29+06	2	906	0.172	1.0	1	0.172	0.172	0.172
457 <sup>th</sup> AVE (2 Lanes Apshalt)	1+89	12+85	2	1096	0.208	1.0	1	0.208	0.208	0.208
							Totals:	0.552	7.830	0.552

\* 1 = Blue Top Stakes Only (Asphalt Concrete Pavement)

\*\* Grade Staking Quantity = (Length) x (Lane Factor) x (Sets of Stakes)



**PUBLIC LANDS SURVEY SYSTEM, RIGHT OF WAY, AND PROPERTY CORNERS**

The Contractor will have a Land Surveyor, licensed in the State of South Dakota, to set, reestablish or verify public land survey system (PLSS) corners, right of way (ROW) corners, and property corners as directed by the appropriate SDDOT Region Land Surveyor. It is estimated that 1 PLSS corner and 13 ROW and property corners will be set, reestablished, or verified for this project. The Contractor's Land Surveyor, under the direction of the Region Land Surveyor, will set, reestablish, or verify all corner monuments after surfacing and fencing operations are completed in accordance with the PUBLIC LANDS SURVEY SYSTEM CORNERS section and the RIGHT OF WAY AND PROPERTY CORNERS section in Chapter 8 of the SDDOT Survey Manual.

< <https://dot.sd.gov/doing-business/engineering/design-services/surveyors> >

All costs associated with furnishing and installing PLSS caps, rebar, and all other materials associated with setting, reestablishing, or verifying PLSS, ROW corners, and property corners in accordance with the SDDOT Survey Manual will be incidental to the contract unit price per each for "Reestablish Public Land Survey System Corner" and/or "Reestablish Right-of-Way and Property Corner".

**SEQUENCE OF OPERATIONS**

The Contractor will submit a sequence of operations for approval two weeks prior to the preconstruction meeting. If changes to the sequence of operations are proposed during the project, these must be submitted for review a minimum of one week prior to potential implementation. Approval for changes to the 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.

**Phase 1 (4 lane section)**

1. Widen out crossover approximately 800' west of HWY 19 as directed by the Engineer.
2. Remove and salvage any permanent signing that will interfere with work.
3. Use single lane closures to set up temporary concrete barrier end protection on westbound structure and place fixed location construction signing for westbound lanes.
4. Set up traffic control for two-way traffic and crossover locations.
5. Divert eastbound traffic through crossovers at MRM 388.05 and MRM 389.62 and maintain two-way traffic in the westbound lanes of HWY 34 to accomplish structure work.
6. Install sediment and erosion control along with perimeter control needed prior to grading operations.
7. Complete all work for 457<sup>th</sup> Avenue south of HWY 34 and shared use path under lane closures. Construction of 457<sup>th</sup> Ave North can also begin.
8. Begin work in 457<sup>th</sup> Avenue median. Complete as much pavement removal, grading and surfacing without impeding traffic.
9. Complete eastbound structure 40-142-144 work.
10. Extend crossed over traffic from MRM 389.62 to MRM 391.80 just prior to milling operations.

11. Complete Milling and Overlay in eastbound lanes.
12. Install eastbound permanent guardrail.
13. Restore crossed over traffic to normal directions. Remaining work to be accomplished under lane closures.
14. Install eastbound and 457<sup>th</sup> Avenue permanent seeding and erosion control.
15. Eastbound lanes: Set up traffic control for two-way traffic, place fixed location construction signing, and set up temporary concrete barrier end protection.

**Phase 2 (4 lane section)**

1. Divert westbound traffic through crossovers near MRM 388.05 and MRM 389.62 and maintain two-way traffic in the eastbound lanes of HWY 34.
2. Install sediment and erosion control along with perimeter control needed prior to grading operations.
3. Complete all work for 457<sup>th</sup> Avenue north of HWY 34 and in the 457<sup>th</sup> Avenue median.
4. Complete all work for westbound structure 40-142-145.
5. Extend crossed over traffic from MRM 389.62 to MRM 391.80 just prior to milling operations.
6. Complete Milling and Overlay in westbound lanes.
7. Install westbound permanent guardrail.
8. Restore crossed over traffic to normal directions. Remaining work to be accomplished under lane closures.
9. Install westbound and 457<sup>th</sup> Avenue permanent seeding and erosion control.
10. Install permanent signing and pavement markings for 457<sup>th</sup> Avenue and westbound lanes.

**GENERAL TRAFFIC CONTROL**

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

All temporary speed limit signs will have a minimum mounting height of 5 feet in rural locations, even when mounted on portable supports.

Portable sign supports will not be located on sidewalks, bicycle facilities, or other areas designated for pedestrian or bicycle traffic. If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

All fixed location signs, sign posts, and breakaway bases will be removed within 7 calendar days following pavement marking.

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights will be incidental to the various related contract items.

At no time will a vertical drop-off of greater than 3 inches be left overnight adjacent to the traveled way. The Contractor will utilize embankment material to ensure a 3-inch vertical drop-off is not exceeded. The slope of the embankment material will not be steeper than a 4:1 within 30 feet of the traveled way.

Traffic will be maintained on the driving lanes. Use of the shoulder as a driving lane will not be permitted. Any damage to the shoulder due to rerouted traffic or Contractor's equipment will be repaired at no expense to the Department.

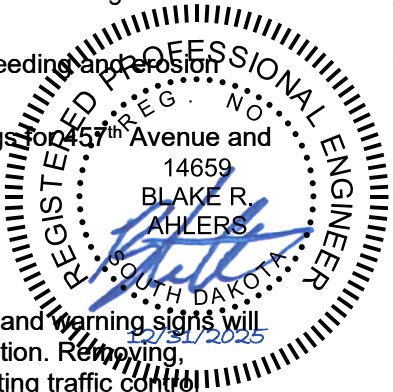
The Contractor will furnish, install, maintain, and remove TRUCK CROSSING (W8-6) signs daily. The TRUCK CROSSING signs will be displayed always when haul vehicles are hauling material. When hauling conditions no longer exist, the signs will be covered or removed from view. The exact number and location will be determined during construction. Payment for additional signs will be based on the contract unit price per square foot for "Traffic Control Signs".

GROOVED PAVEMENT (W8-15) signs with MOTORCYCLE (W8-15P) plaques are required in advance of areas that have been cold milled and are not resurfaced the same day. The GROOVED PAVEMENT sign assemblies will be installed a minimum of 1000 feet in advance of cold milled sections and remain in place until the sections have been resurfaced.

The Contractor will notify businesses/homeowners a minimum of two weeks prior to construction to inform them of upcoming construction and again a minimum of 48 hours prior to any blocked access to make appropriate arrangements.

A mobile work operation will be allowed provided the rumble strip or rumble stripe grooving, flush sealing, and pavement marking can be completed satisfactorily by a continuously moving work operation. A mobile work operation will require approval by the Engineer.

If inappropriate or conflicting pavement markings exist, the markings will be removed and replaced with applicable temporary pavement markings when the work duration is more than 3 days. When the work duration is less than 3 days, the channelizing devices in the area where the pavement markings conflict will be placed at one-half of the normal channelizing device spacing.





GENERAL TRAFFIC CONTROL (CONTINUED)

Pavement marking removals will be incidental to the contract unit price per foot for “Remove Pavement Marking, 4” or equivalent”. Temporary pavement marking will be paid for at the contract unit price per mile/foot for “Temporary Pavement Marking”. The additional channelizing devices will be incidental to the contract lump sum price for “Traffic Control, Miscellaneous”.

A Type 3 Barricade will be installed at the end of a lane closure taper as detailed in these plans.

FLAGGING

Operations will be conducted so that the traveling public will not have to wait longer than 15 minutes at the flagger station.

Additional flagger warning signs and flagger hours have been included in the Estimate of Quantities for use on intersecting roads. These flaggers will be used as directed by the Engineer and will be used primarily during daytime hours. Also included in the Estimate of Quantities are WAIT FOLLOW PILOT CAR signs for use on low volume intersecting roads as determined by the Engineer. WAIT FOLLOW PILOT CAR signs will not block the view of the stop sign.



It is required that the flaggers and pilot car operators be able to communicate with one another. If an emergency vehicle needs to pass through the project, the Contractor will be required to expedite traffic movement. All costs associated with this will be incidental to the contract unit price per hour for “Flagging”.

WORK ZONE SPEED REDUCTION

The Department is required to obtain a speed reduction resolution prior to the installation of any SPEED LIMIT (R2-1) signs shown on standard plate 634.63. To provide adequate time for the resolution to be enacted, the Contractor will inform the Engineer a minimum of 3 weeks prior to the scheduled installation of any work zone speed reduction signs on the project. The information provided by the Contractor will include the anticipated date of sign installation, the newly reduced speed limit, the location of the work zone, and the anticipated completion date of work requiring the speed reduction.

TEMPORARY PAVEMENT MARKING

Temporary Pavement Marking Paint will be used on milled and leveling surfaces for centerlines, lane lines, skips, and as directed by the Engineer. The Temporary Pavement Marking Paint will be placed at the location of the existing pavement markings except that centerline will be double yellow the entire 2 lane project length and will be offset 6-inches from centerline of the roadway. It will be the Contractor’s responsibility to determine which direction to offset so that the markings do not get covered up when the first half of the roadway is paved. Any markings that get covered by the paving operation will be reestablished as directed by the Engineer at the Contractor’s expense. The Contractor will be responsible for marking out those exact locations.

Temporary Flexible Vertical Markers (Tabs) will be used on the top lift of asphalt surfacing for centerline delineation, lane lines, skips, and as directed by the Engineer. Tabs will be offset 6-inches from the location shown for permanent pavement markings. Centerline will be double yellow lines with tabs spaced at 5’ the entire project length.

Temporary flexible vertical markers (tabs) may be used as detailed in the specifications.

Temporary pavement marking paint will not be allowed on the final lift of asphalt surfacing. Temporary pavement marking paint will not be allowed on the chip seal, fog seal, or flush seal. Temporary flexible vertical markers (tabs) must be used on the final lift of asphalt surfacing. The Contractor may use tabs with covers, uncovering them for the chip seal, fog seal, or flush seal. As an alternative, the Contractor may install new tabs for the fog seal or flush seal.

Covers on the tabs will be sufficiently secured to prevent traffic from dislodging the cover and when removed, the covers will be properly disposed of. The Contractor will remove and properly dispose of the tabs after permanent pavement marking is applied. Method of removal will be nondestructive to the road surface and will be accomplished within one week of completion of the permanent pavement marking.

Full reflectivity of all temporary flexible vertical markers (tabs) is required at all times. The Contractor will be required to replace any missing or non-reflective tabs after each installation as detailed below at no additional cost to the State.

- Quantities of Temporary Pavement Markings consist of:
- One pass on top of the milled surface
  - One pass on the first lift of asphalt concrete
  - One pass on top of the final lift of asphalt concrete
  - One pass prior to the flush seal, length as determined by the Engineer
  - One pass after the flush seal

If the Engineer determines that an additional pass prior to the flush seal is not required, this application of the temporary pavement marking will be eliminated. If the flush seal is eliminated for the project, the application of the temporary pavement marking on top of the flush seal as well as the additional pass prior to the flush seal will be eliminated.

No adjustment in the contract unit price for “Temporary Pavement Marking” will be made because of a variation in quantities.

In the absence of a signed lane closure or pilot car operation, FLAGGER (W20-7) symbol signs and flaggers, or a shadow vehicle with rotating yellow lights or strobe lights will be positioned on the shoulder in advance of workers for both directions of traffic during the installation and removal of the temporary flexible vertical markers (tabs). The traffic control device used will be moved intermittently to provide proper warning of the work operation. A ROAD WORK AHEAD (W20-1) sign, a WORKER (W21-1) symbol sign or a BE PREPARED TO STOP (W3-4) sign will be mounted on the rear of the shadow vehicle. The method of traffic control used by the Contractor for this work must be approved by the Engineer.

Prior to nightfall, tabs will be required to mark centerline on segments of roadway where existing centerline markings have been removed and new markings have not been installed.

TRAFFIC CONTROL FOR ASPHALT CONCRETE RESURFACING

The Contractor will need to install LOOSE GRAVEL (W8-7) signs with advisory speed plaques (W13-1P) in areas where loose sand is present during the flush seal operation. LOOSE GRAVEL signs have been included in these plans for this.

CONTRACTOR FURNISHED PORTABLE CHANGEABLE MESSAGE SIGN

One week prior to starting work affecting the traveling public, portable changeable message signs (PCMS) will be installed at both ends of the project and at MRM 391.80 to notify drivers of the upcoming construction. Crossover locations are detailed in Standard Plate 634.66. The Contractor will program the portable changeable message signs with the following message:

ROAD WORK  
STARTS  
(DATE)

CONSIDER  
ALTERNATE  
ROUTE

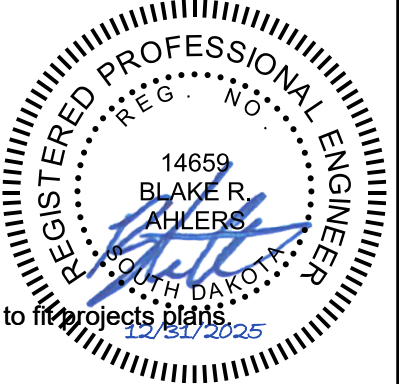
When work begins, that will affect traffic patterns, the Contractor will re-program the MRM 388.05 and MRM 391.80 PCMS with the following message:

REDUCED SPEED  
TWO WAY TRAFFIC

During incident management:

TRAFFIC CONG AHEAD  
BE PREPARED TO STOP

The Engineer shall approve alternate messages to fit projects plans



STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0034(212)388	13b	170

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**TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS**

Concrete barriers will be provided by the State and are available for pickup from the SDDOT Sioux Falls Maintenance Yard located at 5316 W 60<sup>th</sup> St N in Sioux Falls. The barriers will be hauled back to the SDDOT Sioux Falls Maintenance Yard when they are no longer needed on the project.

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, transporting, setting, connecting, and hauling them back to the SDDOT Maintenance 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.

**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. The LDS panel may be replaced by a 4" x 8" delineator of the appropriate color mounted on the top of the Traffic Control Movable Concrete Barrier at the discretion of the Engineer. 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.





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INCIDENTS

An incident is an emergency road user occurrence, a natural disaster, or other unplanned event that affects or impedes the normal flow of traffic such as a crash, hazardous materials spill, or other event.

The Contractor will set up a meeting prior to start of work to plan and coordinate responses to an incident. The Contractor will invite the Department of Transportation, the South Dakota Highway Patrol, the Lake County Sheriff and local emergency response entities to the meeting.

The Contractor will assist to maintain traffic as required by these plan notes and as agreed to at that meeting.

Emergency vehicle access through the project will be considered and discussed at the meeting.

The Contractor may be required to modify messages on portable changeable message signs or relocate portable changeable message signs, and to provide flaggers to direct or detour traffic. The Contractor should be prepared to relocate advance warning signs if determined to be necessary for a major traffic incident lasting more than two hours. Fixed location ground mounted signs may be covered and additional portable signs provided.

No additional payment will be made for the modification of portable changeable message sign messages or the relocation of portable changeable message signs. Cost for the relocation of an advance warning sign due to an incident will be 50% of the designated sign rate. Flaggers will be paid for at the contract unit price per hour for “Flagging”.

TUBULAR MARKERS

The color of the tubular markers on centerline will be predominately orange. The color of the tubular markers installed on the shoulders will be predominately white. The white tubular markers will be installed 2.0 feet from the existing edge line at intervals of approximately 480 feet.

All tubular markers will be a minimum of 28 inches in height. The base of the tubular marker should be attached to the roadway surface with a flexible non-permanent bituminous adhesive capable of being removed from the roadway surface after use. The pin used to connect the marker to the base will be of a type that will not puncture a vehicle tire if it should become dislodged from the base.

All costs for furnishing, installing, maintaining, and removing the tubular markers will be incidental to the contract unit price per each for “Tubular Marker”.

PRESS RELEASE ANNOUNCEMENTS

The SDDOT will prepare a press release to be released 5 days prior to any phase change or any other major change that affects traffic flow. The SDDOT will be responsible to keep law enforcement, emergency services, and the traveling public notified of changes in project access. The Contractor will provide the Engineer with pertinent information 7 days prior to any phase change or any other major change that affects traffic flow.

TEMPORARY CONCRETE BARRIER END PROTECTION

Crash attenuators meeting the requirements of NCHRP 350 or MASH TL-3 will be furnished and installed by the Contractor. Attachment of the attenuators to the concrete barriers will be by approved methods.

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.

TEMPORARY PEDESTRIAN ACCESS ROUTE

A Temporary Pedestrian Access Route (TPAR) will be provided when crosswalks, sidewalks, or other pedestrian facilities are blocked, closed, or relocated. A TPAR may consist of a combination of existing and/or temporary pedestrian facilities. The TPAR will be kept free of any obstructions and hazards, such as holes, debris, mud, snow, construction equipment, traffic control signing, stored materials, etc.

The Contractor will notify the Engineer at least 72 hours prior to start of any construction operation that will necessitate a change in pedestrian access. The method of Temporary Pedestrian Access Route used by the Contractor for this work must be approved by the Engineer.

Mill and Overlay locations where TPAR will be provided include the intersections at the following SD 34 Stations: 56+50, 89+25, 142+50, 156+25, and 168+75. Grade and Pave location where TPAR will be provided is at the intersection at SD 34 Station 115+50.

All costs associated with installing and maintaining a temporary pedestrian access route, including all surfacing materials, labor, and incidental work, will be incidental to the contract lump sum price for “Temporary Pedestrian Access Route”.

PLACING TOPSOIL

The thickness will be approximately 4 inches within the right-of-way and 6 inches on temporary easements.

Plans quantity is used for final payment for placing topsoil. The estimated amount of topsoil to be placed is as follows:

Station	to	Station	Topsoil (CuYd)
20+28		25+27 (SD 34 EB Bridge)	126
13+80		18+38 (SD 34 WB Bridge)	223
1+89		12+84 (457 Ave)	1480
Total:			1829

MYCORRHIZAL INOCULUM

Mycorrhizal inoculum will consist of mycorrhizal fungi spores and mycorrhizal fungi-infected root fragments in a solid carrier. The carrier may include organic materials, calcinated clay, or other materials consistent with application and good plant growth. The supplier will provide certification of the fungal species claimed and the live propagule count. The inoculum will include a minimum 25% the fungal species *Rhizophagus intraradices*. The remaining 75% may include other endomycorrhizal fungal species.

All seed will be inoculated by the seed supplier with a minimum of 100,000 live propagules of mycorrhizal fungi per acre. All costs of inoculating the seed will be incidental to the contract unit price per pound for the corresponding permanent seed mixture.

The Mycorrhizal Inoculum provided will be from the approved product list. The approved product list may be viewed at the following internet site:

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

FERTILIZING

The Contractor will apply an all-natural slow release fertilizer prior to seeding or placing sod. The all-natural fertilizer will have a minimum guaranteed analysis of 4-4-4 and be USDA Certified BioBased. It should provide a minimum of 4% (N) nitrogen with a minimum water insoluble nitrogen (WIN) fraction of 2.07%, a minimum of 4% (P2O5) available phosphate, a minimum of 4% (K2O) soluble potash, and a maximum carbon to nitrogen ratio (C:N ratio) of 5:1. The all-natural fertilizer will be free of weed-seed and pathogens accomplished through thermophilic composting, and not mechanical or chemical sterilization, to assure presence of beneficial soil microbiology. The fertilizer will have a near neutral pH, a low salt index, a low biological oxygen demand, contain organic humic and fulvic acids, and have high aerobic organism counts. The fertilizer will also be stable, free of bad odors, and be unattractive as a food source for animals. It should also be in a granular form that is easily spread.

The fertilizer will be applied at a rate of 1,500 pounds per acre in accordance with the manufacturer’s recommended method of application.

The Fertilizer provided will be from the approved product list. The approved product list may be viewed at the following internet site:

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



PERMANENT SEEDING

The areas to be seeded consist of all newly graded areas within the project limits except for the top of roadways, temporary easements under cultivation.

Type C Permanent Seed Mixture will consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Arriba, Flintlock, Rodan, Rosana, Walsh	16
Canada Wildrye	Mandan	2
Total:		18

MULCHING (GRASS HAY OR STRAW) FOR TEMPORARY STABILIZATION

Grass Hay or Straw Mulch for temporary stabilization is to be used on this project at locations noted in the table and at locations determined by the Engineer during construction. Two applications of Grass Hay or Straw Mulch on areas that receive temporary Grass Hay or Straw Mulch will not be required if the Engineer determines that there is sufficient Mulch remaining at the time permanent seeding takes place.

An additional 0.5 tons of Grass Hay or Straw Mulch has been added to the Estimate of Quantities for temporary erosion control on areas determined by the Engineer during construction.

If the Contractor uses a no-till drill, mulch may be applied prior to seeding and the mulch can then be punched into the soil by the no-till drill. If the Contractor uses this process, the no-till drill seeding will be completed immediately following the mulch application and the mulch will be punched into the soil at a 3-inch depth.

TABLE OF MULCHING (GRASS HAY OR STRAW) FOR TEMPORARY STABILIZATION APPLIED AT 2 TONS/ACRE

Station	Location	Quantity (Ton)
SD 34		
62+16 to 65+92 R	Inslope	0.4
63+46 to 65+92 L	Inslope	0.4
66+98 to 70+27 R	Inslope	0.4
66+98 to 70+25 L	Inslope	0.8
457 <sup>th</sup> Ave		
1+89 to 3+12 R	Inslope/Backslope/Ditch	0.2
1+89 to 3+11 L	Inslope/Backslope/Ditch	0.2
3+48 to 4+00 R	Inslope/Backslope/Ditch	0.2
3+48 to 4+00 L	Inslope/Backslope/Ditch	0.2
4+35 to 12+57 R	Inslope/Backslope/Ditch	2.1
4+37 to 12+84 L	Inslope/Backslope/Ditch	2.7
Additional Quantity:		0.5
Total Quantity for Temporary Stabilization:		9.5
Total Quantity:		10.0

SURFACE ROUGHENING

Surface roughening will be done after topsoil placement and before permanent seeding and mulching applications. Refer to Standard Plate 734.25 for details.

TABLE OF SURFACE ROUGHENING

Station	Location	Area (Acre)
62+16 to 65+92 R (SD 34)	Inslope	0.2
63+46 to 65+92 L (SD 34)	Inslope	0.2
66+98 to 70+27 R (SD 34)	Inslope	0.2
66+98 to 70+25 L (SD 34)	Inslope	0.4
Total:		1.0

EROSION CONTROL WATTLE

Erosion control wattles for restraining the flow of runoff and sediment will be installed at locations noted in the table and at locations determined by the Engineer during construction. Refer to Standard Plate 734.06 for details.

The Contractor will provide certification that the erosion control wattles do not contain noxious weed seeds.

Erosion control wattles will remain on the project to decompose.

An additional quantity of 12" Diameter Erosion Control Wattles has been added to the Estimate of Quantities for temporary erosion and sediment control in highway ditch channels and as an alternative to low flow or high flow silt fence at wetland areas adjacent to the highway.

The erosion control wattle provided will be from the approved product list. The approved product list for erosion control wattle may be viewed at the following internet site:

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

TABLE OF EROSION CONTROL WATTLE

Station	Location	Diameter (Inch)	Quantity (Ft)
457 <sup>th</sup> Ave			
5+54 R	Ditch	12	30
6+38 R	Ditch	12	30
6+65 R	Ditch	12	30
7+57 R	Ditch	12	30
8+66 R	Ditch	12	30
9+54 R	Ditch	12	30
10+54 R	Ditch	12	30
11+45 R	Ditch	12	30
12+30 R	Ditch	12	30
Additional Quantity:		12	30
Total:			300

LOW FLOW SILT FENCE

The low flow silt fence fabric provided will be from the approved product list. The approved product list for low flow silt fence may be viewed at the following internet site:

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

Low flow silt fence will be placed at the locations noted in the table and at locations that will minimize siltation of adjacent streams, lakes, dams, or drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.04 for details.

An additional quantity of Low Flow Silt Fence has been added to the Estimate of Quantities for temporary sediment control.

TABLE OF LOW FLOW SILT FENCE

Station	Location	Quantity (Ft)
SD 34		
62+16 to 65+92 R	Perimeter Control	380
63+46 to 65+92 L	Perimeter Control	250
66+98 to 70+27 R	Perimeter Control	335
66+98 to 70+25 L	Perimeter Control	335
457 <sup>th</sup> Ave		
1+89 to 2+92 R	Perimeter Control	120
1+89 to 2+91 L	Perimeter Control	140
4+35 to 5+65 R	Perimeter Control	150
Additional Quantity:		40
Total:		1,750

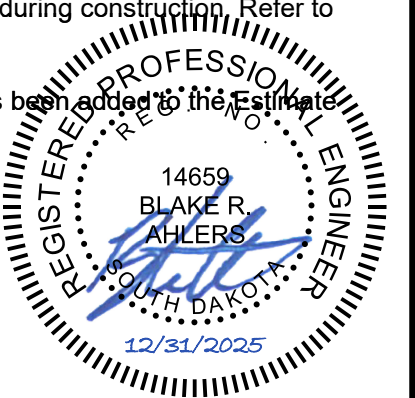
HIGH FLOW SILT FENCE

The high flow silt fence fabric provided will be from the approved product list. The approved product list for high flow silt fence may be viewed at the following internet site:

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

High flow silt fence will be placed at the locations noted in the table and at locations that will minimize siltation of adjacent streams, lakes, dams, or drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.05 for details.

An additional quantity of high flow silt fence has been added to the Estimate of Quantities for temporary sediment control.



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TABLE OF HIGH FLOW SILT FENCE

Station	Location	Quantity (Ft)
457 <sup>th</sup> Ave		
2+76 R	End of Pipe	100
5+83 L	End of Pipe	100
6+50 R	End of Pipe	100
6+51 L	End of Pipe	100
8+45 R	Inlet End of Pipe	18
Additional Quantity:		7
Total:		425

EROSION CONTROL BLANKET

Erosion control blanket will be installed 20 feet wide at the locations noted in the table and at locations determined by the Engineer during construction.

The erosion control blanket provided will be from the approved product list. The approved product list for erosion control blanket may be viewed at the following internet site:

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

TABLE OF EROSION CONTROL BLANKET

Station	Location	Type	Quantity (SqYd)
SD 34			
62+16 to 65+92 R	Inslope	3	983
63+46 to 65+92 L	Inslope	3	915
66+98 to 70+27 R	Inslope	3	726
66+98 to 70+25 L	Inslope	3	1,641
457 <sup>th</sup> Ave			
5+48 to 7+73 R	Ditch Channel	3	543
8+48 to 12+27 R	Ditch Channel	3	812
Additional Quantity:		3	30
Total Type 3 Erosion Control Blanket:			5,650

SHAPING FOR EROSION CONTROL BLANKET

The ditches will be shaped for the erosion control blanket as specified on Standard Plate 734.01.



TURF REINFORCEMENT MAT

Turf Reinforcement Mat will be installed at locations shown in the table at the widths specified, and at locations determined by the Engineer during construction. The Contractor will use a turf reinforcement mat from the approved products list. The approved product list for turf reinforcement mat may be viewed at the following internet site:

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

Turf Reinforcement Mat will be installed in accordance with the manufacturer's installation instructions.

TABLE OF TURF REINFORCEMENT MAT

Station	Location	Width (Ft)	Type	Quantity (SqYd)
457 <sup>th</sup> Ave				
5+60 to 7+77 L	Ditch Channel	60	2	1096
Total Type 2 Turf Reinforcement Mat:				1096

CONSTRUCTION ENTRANCE

The Contractor will install a Construction Entrance at locations where there is a potential for mud tracking and sediment flow from the construction site and work area onto a paved public roadway.

It is the Contractor's option to use the SDDOT Construction Entrance (See SDDOT Construction Entrance notes and details), a product from the list provided in these notes, or other products or processes as approved by the Engineer during construction.

If the Contractor elects to use one of the products listed in the table, then the Contractor will install the construction entrance product in accordance with the manufacturer's installation instructions or as directed by the Engineer.

The Contractor will maintain the construction entrance such that mud tracking and sediment flow will not enter the roadway or adjacent drainage areas. The construction entrance will be routinely inspected, and the Contractor will repair or replace material as deemed necessary by the Engineer.

The Construction Entrance provided will be from the approved product list. The approved product list may be viewed at the following internet site:

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

SDDOT CONSTRUCTION ENTRANCE

If the SDDOT Construction Entrance is utilized, then the Contractor will install the SDDOT Construction Entrance in accordance with these notes and the detail drawings.

Pit run material will be obtained from a granular source and will conform to the following gradation:

Sieve Size	Percent Passing
6"	100%
#4	0-60%
#200	0-20%

The pit run material will be compacted to the satisfaction of the Engineer.

The aggregate for the granular material will conform to the following gradation requirements:

Sieve Size	Percent Passing
3"	100%
2 1/2"	90-100%
1 1/2"	25-60%
3/4"	0-10%
1/2"	0-5%

The granular material will be placed in 6" maximum lifts.

It is anticipated that the granular material will need to be periodically removed and replaced as it becomes inundated with mud and sediment.

The Reinforcement Fabric (MSE) will be in conformance with Section 831 of the Specifications. The Reinforcement Fabric (MSE) will be on the Approved

Products List for this material or will be certified by the supplier to meet this specification prior to installation.

The Reinforcement Fabric (MSE) should be kept as taut as possible prior to placing.

Equipment will not be allowed on the Reinforcement Fabric (MSE) until the first lift of granular material is in place.

All seams in the Reinforcement Fabric (MSE) will be overlapped at least 2' and shingled.

CONCRETE WASHOUT

A concrete washout will be installed on the project site at a location approved by the Engineer if concrete trucks deliver concrete to the site. No washout area is necessary if all concrete trucks are going to wash out at approved site constructed by the concrete supplier.

The Concrete Washout provided will be from the approved products list. The approved product list may be viewed at the following internet site:

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



TABLE OF MATERIALS QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0034(212)388		
		30	170

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	UNCL. EXC. DIG- OUTS	REMOVE CONCRETE PAVEMENT	REMOVE ASPHALT CONCRETE PAVEMENT	SALVAGE AND STOCKPILE GRANULAR MATERIAL	BASE COURSE	BASE COURSE, SALVAGED	COLD MILLING ASPHALT CONCRETE	HAUL AND STOCK PILE ASPHALT MIX MATERIAL	CLASS Q3R HOT MIXED ASPHALT CONCRETE	PG 58H-34 ASPHALT BINDER	HYDRATED LIME	VIRG. AGGR. N.A.B.I.	SALV. MAT'L N.A.B.I.	ASPHALT CONCRETE COMPOSITE	ASPHALT CONCRETE BLADE LAID	SS-1h/ CSS-1h ASPH. FOR TACK	SS-1h/ 1h ASPH. FOR FLUSH SEAL	CSS- SAND FOR FLUSH SEAL
N.A.B.I. = Not A Bid Item																		
Section	CuYd	SqYd	SqYd	Ton	Ton	Ton	SqYd	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton
1	-	-	-	-	-	-	95866.3	3285.7	11164.5	518.9	109.9	8429.9	2105.9	-	-	68.0	27.4	343.8
2	-	-	-	-	-	-	4186.6	146.9	368.6	17.1	3.7	278.2	69.5	-	-	2.7	1.0	15.1
3	-	-	-	-	-	-	10168.0	385.1	949.7	44.2	9.4	716.9	179.2	-	-	6.5	2.4	35.7
4	-	-	-	-	-	-	50971.6	1582.5	6606.5	307.4	66.8	4985.8	1246.4	-	-	39.2	16.7	188.2
5	-	-	-	-	-	-	7441.8	269.6	759.7	35.3	7.5	573.5	143.4	-	-	4.7	1.9	23.6
6	-	-	-	-	-	-	7097.2	256.1	730.4	34.0	7.3	551.3	137.8	-	-	4.6	1.9	23.4
7 (457th Ave)	-	-	3247.0	1660.5	-	1614.9	-	-	938.4	43.7	9.3	708.4	177.0	-	-	1.9	1.5	10.5
Subtotals:	-	-	3247.0	1660.5	-	1614.9	175731.5	5925.9	21517.8	1000.6	213.9	16243.9	4059.4	-	-	127.6	52.8	640.3
Add. Quantities from Notes:	270	-	411.0	-	539.5	-	-	-	-	124.2	16.8	-	-	140.3	1677.2	-	-	-
Table of Add. Quantities:	-	268.0	1694.0	369.8	942.0	369.8	13117.4	528.2	2783.9	129.1	27.8	1350.7	321.5	129.0	-	26.1	7.8	146.9
Totals:	270	268.0	5352.0	2030.4	1481.5	1984.7	188849	6454.1	24301.7	1253.9	258.5	17594.6	4380.9	269.3	1677.2	153.7	60.6	787.2

\* Denotes Nonparticipating



STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0034(212)388	31	170

110.0  
129.0

REGISTERED PROFESSIONAL ENGINEER  
REG. NO. 14659  
BLAKE R. AHLERS  
SOUTH DAKOTA  
12/31/2025

110.0  
129.0

REGISTERED PROFESSIONAL ENGINEER  
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12/31/2025

ITEMIZED LIST FOR TRAFFIC CONTROL

REV. 12/31/2025 BRA

		CONVENTIONAL ROAD (457th Ave)				EXPRESSWAY / INTERSTATE (SD 34)			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
G20-1	ROAD WORK NEXT 2 MILES					1	48" x 24"	8.0	8.0
G20-1	ROAD WORK NEXT 6 MILES					1	48" x 24"	8.0	8.0
G20-1	ROAD WORK NEXT 8 MILES					6	48" x 24"	8.0	48.0
G20-2	END ROAD WORK	8	36" x 18"	4.5	36.0	18	48" X 24"	8.0	144.0
R1-1	STOP					2	48" x 48"	16.0	32.0
R2-1	SPEED LIMIT (65 MPH)					5	48" x 60"	20.0	100.0
R2-1	SPEED LIMIT (55 MPH)					10	48" x 60"	20.0	200.0
R2-1	SPEED LIMIT (45 MPH)					10	36" x 48"	12.0	120.0
R2-6aP	FINES DOUBLE (PLAQUE)					18	36" x 24"	6.0	108.0
R4-1	DO NOT PASS					4	48" x 60"	20.0	80.0
R4-7	KEEP RIGHT (SYMBOL)					2	48" x 60"	20.0	40.0
R4-7C	(NARROW) KEEP RIGHT (SYMBOL)					14	18" x 30"	3.8	53.2
R5-1	DO NOT ENTER					4	36" x 36"	9.0	36.0
R9-9	SIDEWALK CLOSED					2	24" x 12"	2.0	4.0
R11-2	ROAD CLOSED	2	48" x 30"	10.0	20.0	2	48" x 30"	10.0	20.0
R11-4	ROAD CLOSED TO THRU TRAFFIC	3	60" x 30"	12.5	37.5				
W1-4L	REVERSE CURVE	2	48" x 48"	16.0	32.0	1	48" x 48"	16.0	16.0
W1-4R	REVERSE CURVE	2	48" x 48"	16.0	32.0	1	48" x 48"	16.0	16.0
W1-6	LARGE ARROW					4	60" x 30"	12.5	50.0
W3-1	STOP AHEAD (SYMBOL)					2	48" x 48"	16.0	32.0
W3-4	BE PREPARED TO STOP					2	48" x 48"	16.0	32.0
W3-5	SPEED REDUCTION AHEAD (55 MPH)					2	48" x 48"	16.0	32.0
W3-5	SPEED REDUCTION AHEAD (45 MPH)					10	48" x 48"	16.0	160.0
W4-2	LEFT or RIGHT LANE ENDS (SYMBOL)					16	48" x 48"	16.0	256.0
W6-3	TWO WAY TRAFFIC (SYMBOL)					16	48" x 48"	16.0	256.0
W7-3aP	NEXT XX MILES (PLAQUE)					16	36" x 30"	7.5	120.0
W8-1	BUMP					8	48" x 48"	16.0	128.0
W8-6	TRUCK CROSSING					2	48" x 48"	8.0	16.0
W8-11	UNEVEN LANES					8	48" x 48"	16.0	128.0
W8-15	GROOVED PAVEMENT					2	48" x 48"	16.0	32.0
W8-15P	MOTORCYCLE (PLAQUE)					2	36" x 30"	7.5	15.0
W13-1P	ADVISORY SPEED (35 MPH) (PLAQUE)					4	30" x 30"	6.3	25.2
W13-1P	ADVISORY SPEED (15 MPH) (PLAQUE)	8	24" x 24"	4.0	32.0				
W16-2P	XX FEET (PLAQUE)					2	30" x 24"	5.0	10.0
W20-1	ROAD WORK AHEAD	8	36" x 36"	9.0	72.0	30	48" x 48"	16.0	480.0
W20-3	ROAD CLOSED 500 FT	2	36" x 36"	9.0	18.0				
W20-3	ROAD CLOSED 1000 FT	2	36" x 36"	9.0	18.0				
W20-4	ONE LANE ROAD AHEAD					6	48" x 48"	16.0	96.0
W20-5	RIGHT LANE CLOSED AHEAD					10	48" x 48"	16.0	160.0
W20-5	LEFT LANE CLOSED AHEAD					10	48" x 48"	16.0	160.0
W20-7	FLAGGER (SYMBOL)	8	36" x 36"	9.0	72.0	10	48" x 48"	16.0	160.0
W21-5	SHOULDER WORK					2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR					2	30" x 18"	3.8	7.5
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 369.5				EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT 3420.9			

TYPE 3 BARRICADES

ITEM DESCRIPTION	QUANTITY
Type 3 Barricade, 8' Double Sided	25 Each





# 457th Ave



PROJECT	SHEET	TOTAL SHEETS
NH 0034(212)388	65	170

Plotting Date: 12/31/2025

REV. 12/31/2025 BRA

Present 457th Avenue  
Retain Berm  
Remove Asphalt and Base  
Place Topsoil  
Place Type C Permanent Seed  
7+55 L  
Retain 56"-53" RCP  
& 2 End Sections



2+76 R  
Retain 108"-211" RCP Arch  
& 1 End Section

4+76 L  
Retain 18"-101" RCP  
& 1 End Section

4+47 R  
Take Out 1 End Section  
(Incidental Work, Grading)  
4+47-13' R to 5+82-49' L  
Install 108"-128" RCP Arch  
& 1 End Section

6+50-46' L to 6+50-44' R  
Install 60"-54" RCP  
& 2 End Sections

Sec 16 - T106N - R52W

Lake Madison Sanitary District  
(Information Only)

Lake Madison Sanitary District  
(Information Only)

Present 457th Avenue

457th Avenue

Type 2 Fence

Sec 15 - T106N - R52W

Albert and Karen Yager Living Trust

Tract 3 of B.Brice Addition in the West 1/2  
of of Section 15 - Township 106 North -  
Range 52 West of the 5th P.M.

Parcel 1  
0.91 ac. Permanent Easement  
(39428 sq ft) more or less.



Parcel 1  
5+18.00 to 8+40.77 R  
Temporary Easement containing  
0.45 ac, more or less

5+20.17- 59' R  
Begin Type 2 Fence  
Tie Into Existing Fence

5+18.00-80.03'  
5+19.38-50.00'  
5+19.38-50.00'

6+50.00-120.00'

