

West Site

Begin Project: MRM 24+0.185 End Project: 24+0.4527

STATE OF SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED

PROJECT P 016A(00)24 **US HIGHWAY 16A CUSTER COUNTY**

Shared Use Path PCN 09LG

SECTION DOT P 016A(00)24 Non

SHEET

1/37

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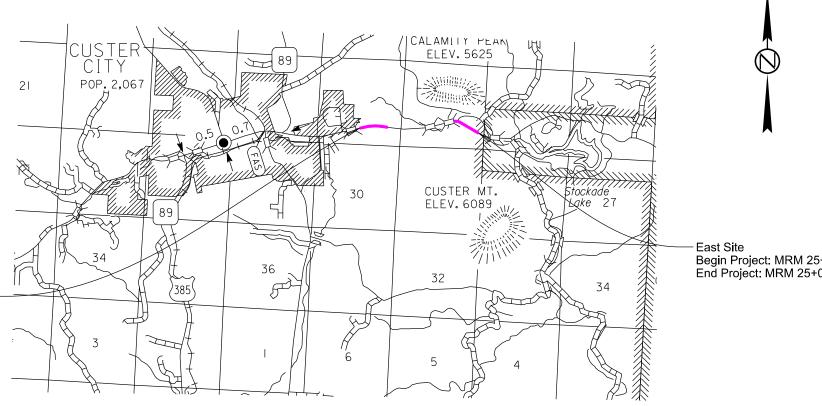
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Begin Project: MRM 25+0.284 End Project: MRM 25+0.626

DESIGN DESIGNATION

ADT (2022) ADT (2042) DHV 1643 2680 439 51% D D T DHV T ADT 1.1% 2.5% 55 MPH

STORM WATER PERMIT

Major Receiving Body of Water: French Creek Area Disturbed: 1.8 ac. Total Project Area 2.6 ac Approx. Begin Lat, Long. 43.77040, -103.56238

March 20, 2024

Estimate of Quantities

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
100E0020	Clear and Grub Tree	12	Each
100E0100	Clearing	Lump Sum	LS
110E1010	Remove Asphalt Concrete Pavement	2,067.0	SqYd
110E1100	Remove Concrete Pavement	9.0	SqYd
110E1690	Remove Sediment	0.6	CuYd
110E1700	Remove Silt Fence	110	Ft
110E7150	Remove Sign for Reset	9	Each
120E1100	Unclassified/Rock Excavation	10,994	CuYd
120E6200	Water for Granular Material	11.5	MGal
230E0010	Placing Topsoil	363	CuYd
250E0020	Incidental Work, Grading	Lump Sum	LS
260E1010	Base Course	954.0	Ton
320E1200	Asphalt Concrete Composite	392.0	Ton
450E4738	12" CMP 14 Gauge, Furnish	26	Ft
450E4740	12" CMP, Install	26	Ft
450E4758	18" CMP 14 Gauge, Furnish	24	Ft
450E4760	18" CMP, Install	24	Ft
450E5203	12" CMP Flared End, Furnish	2	Each
450E5204	12" CMP Flared End, Install	2	Each
450E5406	18" CMP Safety End, Furnish	2	Each
450E5407	18" CMP Safety End, Install	2	Each
632E3500	Reset Sign	9	Each
634E0010	Flagging	50.0	Hour
634E0110	Traffic Control Signs	546.5	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	1	Each
634E1002	Detour and Restriction Signing	168.6	SqFt
634E2000	Longitudinal Pedestrian Barricade	80	Ft
651E7010	Type 2 Detectable Warnings	96	SqFt
730E0210	Type F Permanent Seed Mixture	47	Lb
731E0200	Fertilizing	1.35	Ton
734E0102	Type 2 Erosion Control Blanket	1,315	SqYd
734E0132	Type 2 Turf Reinforcement Mat	525.0	SqYd
734E0154	12" Diameter Erosion Control Wattle	250	Ft
734E0604	High Flow Silt Fence	434	Ft
734E0610	Mucking Silt Fence	31	CuYd
734E0620	Repair Silt Fence	110	Ft

SPECIFICATIONS

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

ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate

an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.pdf >

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

Once construction is complete, the Project Engineer will review all environmental commitments for the project and document their completion.

COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B2: WHOOPING CRANE

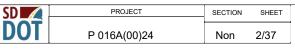
The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight, and their long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

Action Taken/Required:

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pits, or staging areas associated with the project, cease construction activities in the affected area until the Whooping Crane departs and immediately contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

COMMITMENT C: WATER SOURCE

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥140 °F) and completely dried for a minimum of 7 days prior to subsequent use. South Dakota administrative rule 41:10:04:02 forbids the possession and transport of AIS; therefore, all attached dirt, mud, debris and vegetation must be removed and all compartments and tanks capable of holding standing water must be drained. This includes, but is not limited to, all equipment, pumps, lines, hoses and holding tanks.



Revised 2-2-24

Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies such as the South Dakota Department of Agriculture and Natural Resources (DANR) and the United States Army Corps of Engineers (USACE) prior to water extraction activities.

Additional information and mapping of water sources impacted by Aquatic Invasive Species in South Dakota can be accessed at:

< https://sdleastwanted.sd.gov/maps/default.aspx >

South Dakota Administrative Rule 41:10:04 Aquatic Invasive Species: https://sdleqislature.gov/rules/DisplayRule.aspx?Rule=41:10:04 >

COMMITMENT D: WATER QUALITY STANDARDS

COMMITMENT D1: SURFACE WATER QUALITY

This project may be in the vicinity of multiple streams and wetlands. These waters are considered waters of the state and are protected under Administrative Rules of South Dakota (ARSD) Chapter 74:51. Special construction measures may have to be taken to ensure that this water body is not impacted.

Action Taken/Required:

The Contractor is advised that the South Dakota Surface Water Quality Standards, administered by the South Dakota Department of Agriculture and Natural Resources (DANR), apply to this project. Special construction measures will be taken to ensure the above standard(s) of the surface waters are maintained and protected.

COMMITMENT E: STORM WATER

Construction activities constitute 1 acre or more of earth disturbance and/or work in a waterway.

Action Taken/Required:

The DANR General Permit for Stormwater Discharges Associated with Construction Activities is required for construction activity disturbing one or more acres of earth and work in a waterway. The SDDOT is the owner of this permit and will submit the NOI to DANR 15 days prior to project start in order to obtain coverage under the General Permit. Work can begin once the DANR letter of approval is received.

The Contractor must adhere to the "Special Provision Regarding Storm Water Discharges to Waters of the State."

The Contractor will complete the DANR Contractor Certification Form prior to the pre-construction meeting. The form certifies under penalty of law that the Contractor understands and will comply with the terms and conditions of the permit for this project. Work may not begin on this project until this form is signed and submitted to DANR.

CONTINUED: COMMITMENT E: STORM WATER

The form can be found at:

<

https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR_CGPAppendixCCA2018Fillable.pdf >

The Contractor is advised that permit coverage may also be required for offsite activities, such as borrow and staging areas, which are the responsibility of the Contractor.

Storm Water Pollution Prevention Plan

The Storm Water Pollution Prevention Plan (SWPPP) will be developed prior to the submittal of the NOI and will be implemented for all construction activities for compliance with the permit. The SWPPP must be kept on-site and updated as site conditions change. Erosion control measures and best management practices will be implemented in accordance with the SWPPP.

The DOT 298 Form will be used for site inspections and to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents and retained for a minimum of three years.

The inspection will include disturbed areas of the construction site that have not been finally stabilized, areas used for storage materials, structural control measures, and locations where vehicles enter or exit the site. These areas will be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the SWPPP will be observed to ensure that they are operating correctly, and sediment is not tracked off the site.

Information on storm water permits and SWPPPs are available on the following websites:

SDDOT: < https://dot.sd.gov/doing-business/environmental/stormwater>

DANR:<

https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/stormwater/default.aspx >

EPA: < https://www.epa.gov/npdes >

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) will be managed and reclaimed in accordance with the following from the General Permit for Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Agriculture and Natural Resources.

The waste disposal site(s) will not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic

value of an area, or any threatened or endangered species, as approved by the Environmental Office and the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements will apply:

- 1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials will be buried in a trench separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with fences, gates, and placement of a sign or signs at the entrance to the site stating, "No Dumping Allowed".
- 2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period not to exceed the duration of the project. Prior to project completion, the waste will be removed from view of the ROW or buried, and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) will be incidental to the various contract items.

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require a cultural resource review prior to scheduling the pre-construction meeting. This work includes but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view in which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.



The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 150 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

COMMITMENT S: FIRE PREVENTION IN THE BLACK HILLS AREA

This project is located within the Black Hills Forest Fire Protection Boundary.

Action Taken/Required:

The Contractor will adhere to the "Special Provision for Fire Plan".

GRADING OPERATIONS

The estimated cubic yards of excavation and/or embankment required to construct outlet ditches, ditch blocks, and approaches are included in the earthwork balance notes on the profile sheets.

Special ditch grades and other sections of the roadway different than the typical sections will be constructed to the limits shown on the cross sections. If significant changes to the cross sections are necessary during construction, the Engineer will contact the Designer for the proposed change.

Generally, all shallow inlet and outlet ditches as noted on the plan sheets will be cut with a 10-foot wide bottom with 5:1 backslopes. However, the Engineer may direct the Contractor to adjust the ditch width for proper alignment with the drainage structure.

Temporary fence and/or permanent fence will be placed ahead of the grading operation unless otherwise directed by the Engineer.

UTILITIES

The Contractor will contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It will be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

The Contractor will be aware that the existing utilities shown in the plans were surveyed prior to the design of this project and might have been relocated or replaced by a new utility facility prior to construction of this project, might be relocated or replaced by a new utility facility during the construction of this project, or might not require adjustment and may remain in its current location. The Contractor will contact each utility owner and confirm the status of all existing and new utility facilities. The utility contact information is provided elsewhere in the plans or bidding documents.

CLEARING AND DISPOSAL OF TIMBER

U.S. Forest Service Land

Merchantable timber will be defined as any species of tree with an inside, small end diameter of 6 inches or greater.

Slash, stumps and nonmerchantable timber shall be disposed of by chipping or hauling off of USFS lands and US Highway 16 ROW. If chipping is used, all residue from chipping shall be distributed evenly and no chip depth shall exceed 3". Burying or burning of slash, non-merchantable timber or stumps shall not be allowed.

The Contractor will haul merchantable timber to and stockpile merchantable timber at the location shown in the **Forest Service Timber Stockpile Location** section.

Forest Service Timber Stockpile Location



TABLE OF CLEAR AND GRUB TREE (>6" DIAMETER)

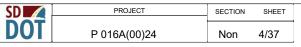
East Site											
	Quantity										
Station	L/R	(Each)									
5+47	R	1									
6+87	R	1									
7+01	R	1									
7+15	R	1									
7+63	R	1									
7+85	R	1									
8+48	R	2									
9+39	R	2									
10+90	R	1									
11+50	R	1									
	Tota	al: 12									

SHRINKAGE FACTOR: Embankment 0%

TABLE OF EXCAVATION QUANTITIES BY BALANCES

West Site

Station to	Station	Excavation (CuYd)	Fill (CuYd)	** Waste (CuYd)
0+00	3+00	6	295	-289
3+00	12+00	4632	18	4614
12+00	15+00	5	344	-339
	Totals:	4643	657	3986



Revised 2-2-24

East Site

	Station to	Station	Excavation (CuYd)	Fill (CuYd)	** Waste (CuYd)
Ī	1+00	14+00	5988	0	5988
		Totals:	5988	0	5988

- * The quantities for these items are in the Estimate of Quantities under their respective contract items.
- ** The quantities for these items are for information only.

TABLE OF UNCLASSIFIED/ROCK EXCAVATION

		(CuYd)
Excavation		10631
Topsoil		363
	Total	10994

GENERAL GEOLOGY

The geology consists of metamorphic and igneous intrusive rocks common to the Central Black Hills. Sills and dikes of Harney Peak Granite will be encountered. The South Dakota Geologic Survey describes units that will be encountered as:

Metagraywacke consists of light- to dark-gray, siliceous mica schist and impure quartzite.

Metamorphosed conglomerate consists of gray to grayish-brown, conglomeratic biotite phyllite, siliceous biotite phyllite, mica schist, quartzite, and iron-formation.

Harney Peak Granite consists of pink to tan, fine-grained to pegmatitic, peraluminous, muscovite granite and pegmatite containing accessory biotite, garnet, apatite, and tourmaline.

CLASSIFICATION OF EXCAVATION

Rock may be encountered within the project limits. Blasting and other techniques associated with Unclassified/Rock Excavation may be necessary to complete the required grading.

PROCEDURES FOR DETERMINING UNCLASSIFIED/ROCK **EXCAVATION QUANTITY**

When plan quantities are used for payment, the Unclassified/Rock Excavation quantity will be used for final payment and the plans quantity of Topsoil and salvaged surfacing items listed in the Table of Unclassified/Rock Excavation will not be adjusted according to field measurements.

The following paragraphs are general earthwork information and information in regard to computing the Unclassified/Rock Excavation quantity when final cross sections are taken in the field:

The Topsoil quantity in the Table of Unclassified/Rock Excavation is an estimate. When finaling a project, the total quantity of field measured Topsoil will be used in place of the estimated Topsoil quantity. The quantity of Topsoil from the cuts will be paid for twice as Unclassified/Rock Excavation, as it will be in both the Excavation and Topsoil quantities. This will be full compensation for Excavation, which includes necessary undercutting to provide space for placement of topsoil.

BLASTING OPERATIONS

(See Special Provision for Blasting Operations)

INCIDENTAL WORK, GRADING

		West Site
Station	L/R	Remarks
3+79	•	Take out 6" – 13' CMP
		East Site
Station	L/R	Remarks
5+58	-	Take out 6" – 14' CMP
8+10	R	Remove for Reset Park Bench

REMOVAL OF EXISTING CONCRETE PAVEMENT WEST SITE STA. 8+37 to STA. 8+55

The Contractor will dispose of the concrete pavement at a site approved by the Engineer.

REMOVAL OF ASPHALT CONCRETE PAVEMENT

An Estimated 2067 Square Yards (173 Cubic Yards) of the in-place 3-inchthick asphalt concrete surfacing will be removed from the existing shared use path and wasted as property of the Contractor.

CORRUGATED METAL PIPE

Corrugated metal pipes will have 2 \(^2_3\)-inch x \(^1_2\)-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 5inch x 1-inch corrugations for 48-inch and larger round pipe and 54-inch and larger arch pipe unless otherwise stated in the plans.

Table of Pipe Quanitites								
18" CN								
		12" CMP	18" CMP	12" CMP	Safety			
	Flared End	End						
Site	Station	(Ft)	(Ft)	(Ea)	(Ea)			
West	3+78	26		2				
West	13+23		24		2			
	Totals:	26	24	2	2			

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.

DETECTABLE WARNINGS

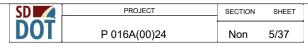
Detectable warnings will be in compliance with the Americans with Disabilities Act regulations.

The detectable warnings will be installed according to the manufacturer's installation instructions.

Type 2 Detectable Warning Panels will be one of the following products:

Type 2 Detectable Warnings

<u>Product</u>	<u>Manufacturer</u>
TufTile Surface Applied Replaceable Polymer Tile System	TufTile 1200 Flex Court Lake Zurich, IL 60047 888-960-8897 http://www.tuftile.com/
Armor Tile Surface Applied System	Engineered Plastics Inc. 300 International Drive, Suite 100 Williamsville, NY 14221 800-682-2525 http://www.armor-tile.com/
Detectable Warning Tile Surface Mount System	ADA Solutions, Inc. North Billerica, MA 01862 888-407-4492 http://adatile.reachlocal.com/
DWT Detectable Warning Tile) Surface Mount System	3D Traffic Works 4320 N. Varney St. Burbank, CA 91502 877-843-9757 http://www.trafficwks.com/



Revised 2-2-24

RediMat Detectable Warning Systems, Inc. Surface Applied System 8081 Phillips Hwy, Suite 22 Jacksonville, FL 32256 866-999-7452

http://www.detectable-warning.com/

Access Products Inc. Access Tile Surface Applied System 241 Main Street, Suite 100

Buffalo, NY 14203 888-679-4022

https://accesstile.com/surface-

applied/

Alerttile Cape Fear Systems, III, LLC 215 South Water Street. Suite 103 Surface Applied System

Wilmington, NC 28401 877-232-6287

http://www.alerttile.com/

Ultra-ADA Pads Surface Mount System Ultra Tech International, Inc. 11542 Davis Creek Court Jacksonville, FL 32256

800-764-9563

http://www.spillcontainment.com/ada-

pads

TABLE OF TYPE 2 DETECTABLE WARNINGS

West Site

		Quantity
Station	L/R	(SqFt)
0+60		16
3+34		16
3+75		16
10+80		16
11+10		16
13+41		16
	Total:	96

ASPHALT CONCRETE COMPOSITE

Asphalt Concrete Composite will include MC-70 Asphalt for Prime placed at the rate of 0.30 gallons per square yard. The Asphalt for Prime will be applied to the Base Course for the full width of the bottom layer of Asphalt Concrete Composite plus one foot additional on the outside shoulder.

SURFACING THICKNESS DIMENSIONS

At those locations where material must be placed to achieve a required elevation, the depth/quantity may be varied to achieve the required elevation.

WATER FOR GRANULAR MATERIAL

Included in the Estimate of Quantities are 0.012 MGal of Water for Granular Material per ton for compaction.

	Table of Material Quanitites									
			Length	Width	Surface Area	Base Course	Asphalt Concrete Composite			
Site	Station to	Station	(ft)	(ft)	SqYd	Ton	(Ton)			
West	0+37	13+52	1315	8	1169	529	218.6			
East	3+18	13+42	1024	8	910	412	170.2			
		12	2.7							
					Totals:	954	392			

	Table of Additional Quantities									
			Length	Width	Surface Area	Base Course	· ·			
Site	Station to	Station	(ft)	(ft)	SqYd	Ton	(Ton)	Comments		
West	10+87	11+01				7		Tie-in Gravel Driveway to Path		
East	5+85	6+03	18	8	16	5	2.7	AC Pad for Park Bench		
					Totals:	12	2.7			

SD	PROJECT	SECTION	SHEET
DOT	P 016A(00)24	Non	6/37

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".

TABLE FOR PERMANENT SIGNING

West	Site
------	------

Station	L/R	Remove Sign for Reset	Reset Sign	Description
Station	ь/ к	(Each)	(Each)	Description
0+70	L	1	1	R1-2: Pedestrian Yield
3+35	R	1	1	R1-2: Pedestrian Yield
3+75	L	1	1	R1-2: Pedestrian Yield
4+47	L	1	1	S3-1: School Bus Stop Ahead
10+80	R	1	1	R1-1: Pedestrian Stop
11+10	L	1	1	R1-1: Pedestrian Stop
13+41	R	1	1	R1-1: Pedestrian Stop
13+41	R	1	1	911 Address Sign
	Totals:	8	8	

Fact Site

Last Site				
		Remove Sign	Reset	
		for Reset	Sign	
Station	L/R	(Each)	(Each)	Description
				Tourist-Oriented
9+60	L	1	1	Directional Sign for
				Custer Gulch Camp
	Totals:	1	1	

PLACING TOPSOIL

Available topsoil will be salvaged and stockpiled prior to grading. Limits of this work, depth of salvage, and stockpile location will be directed by the Engineer. The Contractor will minimize the damage to existing vegetation. Following completing of grading, topsoil will be spread evenly over the disturbed areas prior to placement of Turf Reinforcement Mats.

The estimated amount of Topsoil to be placed is 363 CuYd.

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.

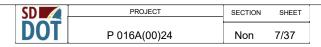
The mycorrhizal inoculum will be as shown below or an approved equal:

<u>Product</u>	<u>Manufacturer</u>
MycoApply	Mycorrhizal Applications, Inc. Grants Pass, OR Phone: 1-866-476-7800 www.mycorrhizae.com
AM 120 Multi Species Blend	Reforestation Technologies Int Gilroy, CA Phone: 1-800-784-4769 www.reforest.com
LALRISE Prime and Max WP	Lallemand Specialties Inc. Milwaukee, WI Phone: 1-844-590-7781

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

www.lallemandplantcare.com



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 all-natural slow release fertilizer will be as shown below or an approved equal:

Product

Sustane

Sustane Corporate Headquarters
Cannon Falls, Minnesota
Phone: 1-800-352-9245
www.sustane.com

Perfect Blend, LLC

Bellevue, WA

Phone: 1-866-456-8890 www.perfect-blend.com

Nature Safe Fertilizers

Irving, TX

Phone: 1-605-759-5622

www.naturesafe.com

PERMANENT SEEDING

Type F Permanent Seed Mixture will consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Arriba, Flintlock, Rodan, Rosana, Walsh	7
Green Needlegrass	Lodorm, AC Mallard Ecovar	4
Sideoats Grama	Butte, Pierre	3
Blue Grama	Bad River	2
Oats or Spring Wheat: April through May;		10
Winter Wheat: August through November		
	Total:	26

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

	East Site			
		Diameter	Quantity	
Station	Location	(Inch)	(Ft)	
9+50 to 12+00 L	Highway Ditch Bottom	12"	150	
	Additional Quantity:	12"	100	
		Total:	250	

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.

TABLE OF HIGH FLOW SILT FENCE

West Site

		Quantity
Station	Location	(Ft)
0+62 L	Pipe Inlet	18
3+70 L	Pipe Inlet	18
3+82 R	Pipe Inlet	12
13+26 L	Pipe Inlet	18
10+50 to 13+00 R	Perimeter Control	250
	Additional Quantity:	50
	Total:	366

East Site

		Quantity
Station	Location	(Ft)
5+45 L	Pipe Inlet	18
	Additional Quantity:_	50
	Total:	68

EROSION CONTROL BLANKET

Erosion control blanket will be installed 8 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

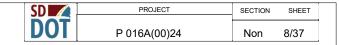
TABLE OF EROSION CONTROL BLANKET

West Site

Station	Location	Туре	Quantity (SqYd)
3+95 to 10+85 R	Cut Ditch	2 _	615
	Total Type 2 Erosion Control	Blanket:	615

East Site

			Quantity
Station	Location	Type	(SqYd)
4+10 to 11+95 R	Cut Ditch	2	700
	Total Type 2 Erosion Control	Blanket:	700



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

West Site

		Width		Quantity
Station	Location	(Ft)	Type	(SqYd)
3+80 to 9+70 L	Highway Ditch Bottom	8	2	525
	Total Type 2 Turf R	einforceme	ent Mat:	525

STORMWATER POLLUTION PREVENTION PLAN CHECKLIST (The numbers left of the title headings are **reference numbers** to the <u>GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED</u> WITH CONSTRUCTION ACTIVITIES (Stormwater Permit))

5.3 (2): STAFF TRAINING/SWPPP IMPLEMENTATION

To promote stormwater management awareness specific for this project, the Contractor's Erosion Control Supervisor should provide correspondence of how the SWPPP will be implemented. The Contractor's Erosion Control Supervisor is responsible for providing this information at the preconstruction meeting, and subsequently completing an attendance log, which should identify site-specific implementation of the SWPPP and the names of the personnel who attended the preconstruction meeting. Documentation of the preconstruction meeting will be filed with the SWPPP documents.

5.3 (3): DESCRIPTION OF CONSTRUCTION ACTIVITIES

- > 5.3 (3a): Project Limits (See Title Sheet)
- > 5.3 (3a): Project Description (See Title Sheet)
- > 5.3 (4): Site Map(s) (See Title Sheet and Plans)
- Major Soil Disturbing Activities (check all that apply)
 - ⊠Clearing and grubbing
- ⊠Excavation/borrow
- ⊠Grading and shaping
- ☐Filling
- Other (describe):
- > 5.3 (3b): Total Project Area 2.6 acres
- > 5.3 (3b): Total Area to be Disturbed 1.8 acres
- > 5.3 (3c): Maximum Area Disturbed at One Time 1.0 acres
- > 5.3 (3d): Existing Vegetative Cover (%) 70%
- > 5.3 (3d): Description of Vegetative Cover
- > 5.3 (3e): Soil Properties: Buska, dry-Rock outcrop complex
- > 5.3 (3f): Name of Receiving Water Body/Bodies French Creek
- > 5.3 (3g): Location of Construction Support Activity Areas

5.3 (3h): ORDER OF CONSTRUCTION ACTIVITIES

> Special sequencing requirements (see sheet).
The Contractor will enter the Estimated Start Date

Description	Estimated Start Date
Install stabilized construction entrance(s).	
Install perimeter protection where runoff may exit site.	
Install perimeter protection around stockpiles.	
Install channel and ditch bottom protection.	
Clearing and grubbing.	
Remove and stockpile topsoil.	
Stabilize disturbed areas.	
Install inlet and culvert protection after completing storm drainage and other installations.	
Final grading.	
Final paving.	
Removal of protection devices.	
Reseed areas disturbed by removal activities.	

5.3 (5): DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES

All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report. Include the technical reasoning for selecting each control. (check all that apply)

Perimeter Controls (See Detail Plan Sheets)

Description	Estimated Start Date
☐ Natural Buffers (within 50 ft of Waters of State)	
⊠ Silt Fence	
☐ Erosion Control Wattles	
☐ Temporary Berm / Windrow	
☐ Floating Silt Curtain	
☐ Stabilized Construction Entrances	
☐ Entrance/Exit Equipment Tire Wash	
Other:	

Structural Erosion and Sediment Controls

Estimated

Description	Start Date
⊠ Silt Fence	
☐ Temporary Berm/Windrow	
☐ Erosion Control Wattles	
☐ Temporary Sediment Barriers	
☐ Erosion Bales	
☐ Temporary Slope Drain	
☐ Turf Reinforcement Mat	
Riprap	
Gabions	
☐ Rock Check Dams	
☐ Sediment Traps/Basins	
☐ Culvert Inlet Protection	
☐ Transition Mats	
☐ Median/Area Drain Inlet Protection	
☐ Curb Inlet Protection	
☐ Interceptor Ditch	
☐ Concrete Washout Facility	
☐ Work Platform	
☐ Temporary Water Barrier	
☐ Temporary Water Crossing	
☐ Permanent Stormwater Ponds	
☐ Permanent Open Vegetated Swales	
☐ Natural Depressions to allow for Infiltration	
☐ Sequential Systems that combine several practices	
Other:	

SD 🔏	PROJECT	SECTION	SHEET
DOT	P 016A(00)24	Non	9/37

Dust Cor

Description	Estimated Start Date
☐ Tarps & Wind impervious fabrics	
Watering Watering	
☐ Stockpile location/orientation	
☐ Dust Control Chlorides	
☐Other	

Dewatering BMPs

Description	Estimated Start Date
☐ Sediment Basins	
☐ Dewatering bags	
☐ Weir tanks	
☐ Temporary Diversion Channel	
Other:	

Stabilization Practices (See Detail Plan Sheets)

(Stabilization measures will begin the following work day whenever earth disturbing activity on any portion of the site has temporarily or permanently ceased. Temporary stabilization will be completed as soon as practicable but no later than 14 days after initiating soil stabilization activities (3.18))

Description	Estimated Start Date
☐Vegetation Buffer Strips	
☐ Temporary Seeding (Cover Crop Seeding)	
□ Permanent Seeding	
Sodding	
☐ Planting (Woody Vegetation for Soil Stabilization)	
☐ Mulching (Grass Hay or Straw)	
☐ Fiber Mulching (Wood Fiber Mulch)	
☐ Soil Stabilizer	
☐ Bonded Fiber Matrix	
☐ Fiber Reinforced Matrix	
☐ Erosion Control Blankets	
☐ Surface Roughening (e.g. tracking)	
Other:	

Wetland Avoidance

Will construction and/or erosion and sediment controls impinge on regulated wetlands? Yes \(\subseteq \) No \(\subseteq \) If yes, the structural and erosion and sediment controls have been included in the total project wetland impacts and have been included in the 404 permit process with the USACE.

5.3 (6): PROCEDURES FOR INSPECTIONS

- Inspections will be conducted at least once every 7 days.
- All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report.
- Silt fence will be inspected for depth of sediment and for tears to ensure the fabric is securely attached to the posts and that the posts are well anchored. Sediment buildup will be removed from the silt fence when it reaches 1/3 of the height of the silt fence.
- Sediment basins and traps will be checked. Sediment will be removed when depth reaches approximately 50 percent of the structure's capacity, and at the conclusion of the construction.
- Check dams will be inspected for stability. Sediment will be removed when depth reaches ½ the height of the dam.
- All seeded areas will be checked for bare spots, washouts, and vigorous growth free of significant weed infestations.
- Inspection and maintenance reports will be prepared on form DOT 298 for each site inspection, this form will also be used to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents.
- The SDDOT Project Engineer and Contractor's Erosion Control Supervisor are responsible for inspections. Maintenance and repair activities are the responsibility of the Contractor. The SDDOT Project Engineer will complete the inspection and maintenance reports and distribute copies per the distribution instructions on DOT 298.

5.3 (7): POST CONSTRUCTION STORMWATER MANAGEMENT

Stormwater management will be handled by temporary controls outlined in "DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES" above, and any permanent controls needed to meet permanent stormwater management needs in the post construction period will be shown in the plans and noted as permanent.

5.3 (8): POLLUTION PREVENTION PROCEDURES

5.3 (8a): Spill Prevention and Response Procedures

Material Management

- Housekeeping
 - Only needed products will be stored on-site by the Contractor.
 - Except for bulk materials the contractor will store all materials under cover and/or in appropriate containers.
 - Products must be stored in original containers and labeled.
 - Material mixing will be conducted in accordance with the manufacturer's recommendations.
 - When possible, all products will be completely used before properly disposing of the container off-site.
 - The manufacturer's directions for disposal of materials and containers will be followed.
 - The Contractor's site superintendent will inspect materials storage areas regularly to ensure proper use and disposal.
 - Dust generated will be controlled in an environmentally safe manner.

Hazardous Materials

- Products will be kept in original containers unless the container is not resealable and provide secondary containment as applicable.
- Original labels and material safety data sheets will be retained in a safe place to relay important product information.

- If surplus product must be disposed of, manufacturer's label directions for disposal will be followed.
- Maintenance and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, de-greasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants will be conducted on an impervious surface and under cover during wet weather to prevent the release of contaminants onto the ground.
- Wheel wash water will be collected and allowed to settle out suspended solids prior to discharge. Wheel wash water will not be discharged directly into any stormwater system or stormwater treatment system.
- Potential pH-modifying materials such as: bulk cement, cement kiln dust, fly ash, new concrete washings, concrete pumping, residuals from concrete saw cutting (either wet or dry), and mixer washout waters will be collected on site and managed to prevent contamination of stormwater runoff.

Spill Control Practices

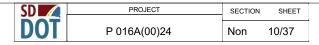
In addition to the previous housekeeping and management practices, the following practices will be followed for spill prevention and cleanup if needed.

- For all hazardous materials stored on site, the manufacturer's recommended methods for spill cleanup will be clearly posted. Site personnel will be made aware of the procedures and the locations of the information and cleanup supplies.
- Appropriate cleanup materials and equipment will be maintained by the Contractor in the materials storage area on-site. As appropriate, equipment and materials may include items such as brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for cleanup purposes.
- All spills will be cleaned immediately after discovery and the materials disposed of properly.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- After a spill a report will be prepared describing the spill, what caused it, and the cleanup measures taken. The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring, as well as clean up instructions in the event of reoccurrences.
- The Contractor's site superintendent, responsible for day-to-day operations, will be the spill prevention and cleanup coordinator.

> Spill Response

The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize migration into stormwater runoff and conveyance systems. If the release has impacted on-site stormwater, it is critical to contain the released materials on-site and prevent their release into receiving waters. If a spill of pollutants threatens stormwater or surface water at the site, the spill response procedures outlined below must be implemented in a timely manner to prevent the release of pollutants.

- The Contractor's site superintendent will be notified immediately when a spill or the threat of a spill is observed. The superintendent will assess the situation and determine the appropriate response.
- If spills represent an imminent threat of escaping erosion and sediment controls and entering receiving waters, personnel will be directed to respond immediately to contain the release and notify the superintendent after the situation has been stabilized.



- Spill kits containing appropriate materials and equipment for spill response and cleanup will be maintained by the Contractor at the site.
- If oil sheen is observed on surface water (e.g. settling ponds, detention ponds, swales), action will be taken immediately to remove the material causing the sheen. The Contractor will use appropriate materials to contain and absorb the spill. The source of the oil sheen will also be identified and removed or repaired as necessary to prevent further releases.
- If a spill occurs the superintendent or the superintendent's designee will be responsible for completing the spill reporting form and for reporting the spill to SDDANR.
- Personnel with primary responsibility for spill response and cleanup will receive training by the Contractor's site superintendent or designee. The training must include identifying the location of the spill kits and other spill response equipment and the use of spill response materials.
- Spill response equipment will be inspected and maintained as necessary to replace any materials used in spill response activities.

5.3 (8b): WASTE MANAGEMENT PROCEDURES

Waste Disposal

• All liquid waste materials will be collected and stored in approved sealed containers. All trash and construction debris from the site will be deposited in the approved containers. Containers will be serviced as necessary, and the trash will be hauled to an approved disposal site or licensed landfill. All onsite personnel will be instructed in the proper procedures for waste disposal and notices stating proper practices will be posted. The Contractor is responsible for ensuring waste disposal procedures are followed.

> Hazardous Waste

 All hazardous waste materials will be disposed of in a manner specified by local or state regulations or by the manufacturer. Site personnel will be instructed in these practices, and the Contractor will be responsible for seeing that these practices are followed.

> Sanitary Waste

Portable sanitary facilities will be provided on all construction sites.
 Sanitary waste will be collected from the portable units which must be secured to prevent tipping and serviced in a timely manner by a licensed waste management Contractor or as required by any local regulations.

5.3 (9): CONSTRUCTION SITE POLLUTANTS

The following materials or substances are expected to be present on the site during the construction period. These materials will be handled as noted under the heading "POLLUTION PREVENTION PROCEDURES" (check all that apply).

	Concrete and Portland Cemer
\triangleright	☐ Detergents
\triangleright	☐ Paints
\triangleright	☐ Metals
\triangleright	
\triangleright	☐ Petroleum Based Products
\triangleright	☐ Diesel Exhaust Fluid
\triangleright	☐ Cleaning Solvents
\triangleright	Wood
\triangleright	☐ Cure
\triangleright	☐ Texture
\triangleright	☐ Chemical Fertilizers
\triangleright	Other:

Product Specific Practices

Petroleum Products

All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled.

Fertilizers

Fertilizers will be applied only in the amounts specified by the SDDOT. Once applied, fertilizers will be worked into the soil to limit the exposure to stormwater. Fertilizers will be stored in an enclosed area. The contents of partially used fertilizer bags will be transferred to sealable containers to avoid spills.

Paints

All containers will be tightly sealed and stored when not required for use. The excess will be disposed of according to the manufacturer's instructions and any applicable state and local regulations.

Concrete Trucks

Contractors will provide designated truck washout facilities on the site. These areas must be self-contained and not connected to any stormwater outlet of the site. Upon completion of construction, the area at the washout facility will be properly stabilized.

5.3 (10): NON-STORMWATER DISCHARGES

The following non-stormwater discharges are anticipated during the course of this project (check all that apply).

☐ Discharges from water line flushing.
☐ Pavement wash-water, where no spills or leaks of toxic or
hazardous materials have occurred.
☐ Uncontaminated ground water associated with dewatering activities.

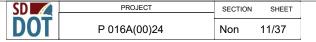
5.3 (11): INFEASIBILITY DOCUMENTATION

If it is determined to be infeasible to comply with any of the requirements of the Stormwater Permit, the infeasibility determination must be thoroughly documented in the SWPPP.

7.0: SPILL NOTIFICATION

In the event of a spill, the Contractor's site superintendent will make the appropriate notification(s), consistent with the following procedures:

- A release or spill of a regulated substance (includes petroleum and petroleum products) must be reported to SDDANR immediately **if any one of the following** conditions exists:
 - The release or spill threatens or is able to threaten waters of the state (surface water or ground water)
 - The release or spill causes an immediate danger to human health or safety
 - The release or spill exceeds 25 gallons
 - The release or spill causes a sheen on surface water
 - The release or spill of any substance that exceeds the ground water quality standards of ARSD Chapter 74:54:01
 - The release or spill of any substance that exceeds the surface water quality standards of ARSD Chapter 74:51:01
 - The release or spill of any substance that harms or threatens to harm wildlife or aquatic life
 - The release or spill is required to be reported according to Superfund Amendments and Reauthorization Act (SARA) Title III List of Lists, Consolidated List of Chemicals Subject to Reporting Under the Emergency Planning and Community Right to Know Act, US Environmental Protection Agency.
- ➤ To report a release or spill, call SDDANR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central Standard Time). To report the release after hours, on weekends or holidays, call South Dakota Emergency Management at 605-773-3231. Reporting the release to SDDANR does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, you must also contact local authorities to determine the local reporting requirements for releases. A written report of the unauthorized release of any regulated substance, including quantity discharged, and the location of the discharge will be sent to SDDANR within 14 days of the discharge.



5.4: SWPPP CERTIFICATIONS

> Certification of Compliance with Federal, State, and Local Regulations

The Storm Water Pollution Prevention Plan (SWPPP) for this project reflects the requirements of all local municipal jurisdictions for storm water management and sediment and erosion control as established by ordinance, as well as other state and federal requirements for sediment and erosion control plans, permits, notices or documentation as appropriate.

> South Dakota Department of Transportation

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Signature (See the General Permit, Section 7.4 (1))

Prime Contractor

This section is to be executed by the General Contractor after the award of the contract. This section may be executed any time there is a change in the Prime Contractor of the project.

I certify under penalty of law that this document and all attachments will be revised or maintained under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Signature	

CONTACT INFORMATION

The following personnel are duly authorized representatives and have signatory authority for modifications made to the SWPPP:

> Contractor Information:

•	Prime Contractor Name:	• • • • • • • • • • • • • • • • • • • •	
•	Contractor Contact Name: _		
•	Address:		
•			-
•	City:	State:	Zip:
•	Office Phone:	Field:	
•	Cell Phone:	Fax:	
Er	Erosion Control Supervisor		

. . .

Address:			
•			
• City:	State:	Zip:	
Office Phone:	Field:		

■ Name:

■ Name:

SDDOT Project Engineer

•	Business Address:		····	
•	Job Office Location:		· · · · · · · · · · · · · · · · · · ·	
•	City:	State:	Zip:	
•	Office Phone:	Field:		
	Cell Phone:	Fax:		

■ Cell Phone: Fax:

> SDDANR Contact Spill Reporting

- Business Hours Monday-Friday (605) 773-3296
- Nights and Weekends (605) 773-3231

> SDDANR Contact for Hazardous Materials.

(605) 773-3153

> National Response Center Hotline

(800) 424-8802.

> SDDANR Stormwater Contact Information

- SDDANR Stormwater (800) 737-8676
- Surface Water Quality Program (605) 773-3351



5.5: REQUIRED SWPPP MODIFICATIONS

> 5.5 (1): Conditions Requiring SWPPP Modification The SWPPP must be modified, including the site map(s), in response to any of the following conditions:

- When a new operator responsible for implementation of any part the SWPPP begins work on the site.
- When changes to the construction plans, sediment and erosion control measures, or any best management practices on site that are no longer accurately reflected in the SWPPP. This includes changes made in response to corrective actions triggered by inspections.
- To reflect areas on the site map where operational control has been transferred (including the date of the transfer) or has been covered under a new permit since initiating coverage under this general permit.
- If inspections by site staff, local officials, SDDANR, or U.S. EPA determine that SWPPP modifications are necessary for compliance with the Stormwater Permit.
- To reflect any revisions to applicable federal, state, or local requirements that affect the control measures implemented at the
- If approved by the Secretary, to reflect any changes in chemical water treatment systems or controls, including the use of a different water treatment chemical, age rates, different areas, or methods of application.

> 5.5 (2): Deadlines for SWPPP Modification

Any required revisions to the SWPPP must be completed within 7 calendar days following any of the items listed above.

> 5.5 (3): Documentation of Modifications to the Plan

All SWPPP modification records are required to be maintained showing the dates of when the modification occurred. The records must include the name of the person authorizing each change and a brief summary of all changes.

> 5.5 (4): Certification Requirements

All modifications made to the SWPPP must be signed and certified as required in Section 7.4.

> 5.5 (5): Required Notice to Other Operators

If there are multiple operators at the site, the Contractor's Erosion Control Supervisor must notify each operator that may be impacted by the change to the SWPPP within 24 hours.

When modifications as described above occur, the SWPPP will be modified to provide appropriate protection to disturbed areas, all storm water structures, and adjacent waters. The SDDOT Project Engineer will modify the SWPPP using the DOT 298 form and drawings on the plan will be modified to reflect the needed changes. Copies of the DOT 298 forms and the SWPPP will be retained on site in a designated place for review throughout the course of the project. A copy of the DOT 298 form will be given to the Contractor Erosion Control Supervisor and a copy will be emailed to the SDDOT Environmental Section in accordance with the DOT 298 Form.

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.

Portable sign supports will not be located on sidewalks, bicycle facilities, or other areas designated for pedestrian or bicycle traffic.

All construction operations will be conducted in the general direction of traffic movement.

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.

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".

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.

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.

The Contractor will have a total of two traffic control setups. One for the West and one for the East trail reconstruction areas.

OVERWIDTH RESTRICTION AND DETOUR SIGNING

The Contractor will furnish and install the overwidth restriction and detour signs as shown in these plans. Prior to installing the signs, the Contractor will mark the sign locations and review them with the Engineer. Overwidth restriction and detour signs will be installed on fixed location, ground mounted, breakaway supports. It will be the responsibility of the Contractor to maintain and reinstall these signs during the project as required by the construction progress. Upon completion of the project, the Contractor will remove the overwidth restriction and detour signs.

All costs for furnishing the signs, posts, and mounting hardware, and for installing, maintaining, covering, and removing the overwidth restriction and detour signs will be incidental to the contract unit price per square foot for "Detour and Restriction Signing".

FLAGGING

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

It is required that the flaggers 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 in the plans. 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.

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.



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 Custer 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 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.

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".

LONGITUDINAL PEDESTRIAN BARRICADE

Longitudinal pedestrian barricades should not be used to provide positive protection for pedestrians.

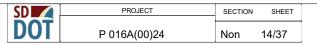
To prevent any tripping hazard to pedestrians, ballast will be located behind or internal to the device.

When longitudinal pedestrian barricades are combined in a series, the maximum gap between devices that do not interlock will be one inch. Joints between devices that do interlock will be closed and flush to prevent canes or small wheels from being trapped and to facilitate safe hand trailing. When used as a trail closure mechanism, longitudinal pedestrian barricade must run the entire width of the sidewalk. Longitudinal pedestrian barricade should provide a color contrasting pattern. Black should not be used to color any base on a device. The devices should comply with the general color and stripe pattern requirements of Section 6K.07 of the MUTCD.

Longitudinal pedestrian barricade will have continuous bottom and top surfaces. The top surface will be smooth to allow safe hand trailing. Both upper and lower surfaces will share a common vertical plane.

All costs will be incidental to the contract unit price per foot for "Longitudinal Pedestrian Barricade".

INVENTORY OF TRAFFIC CONTROL DEVICES

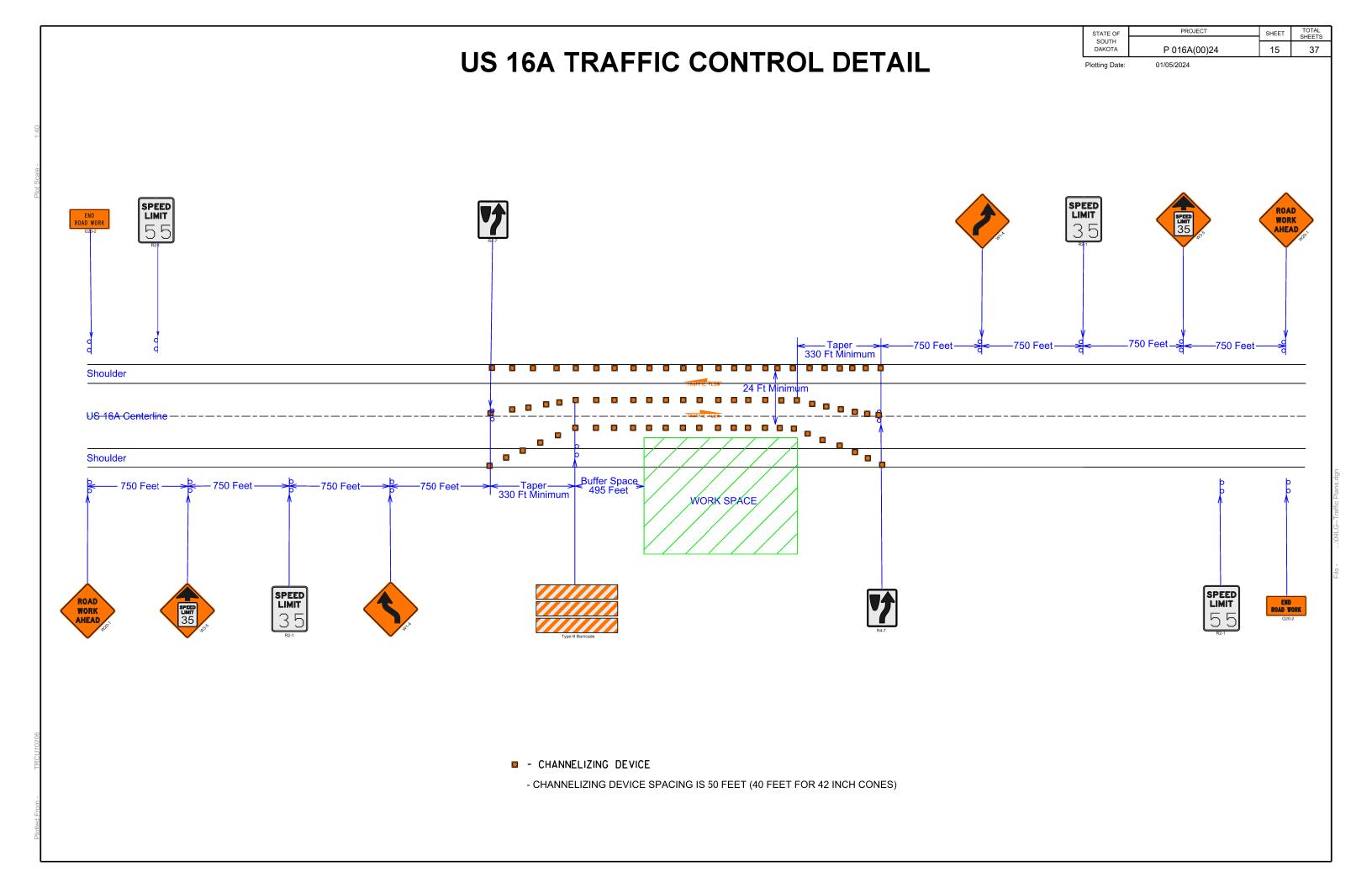


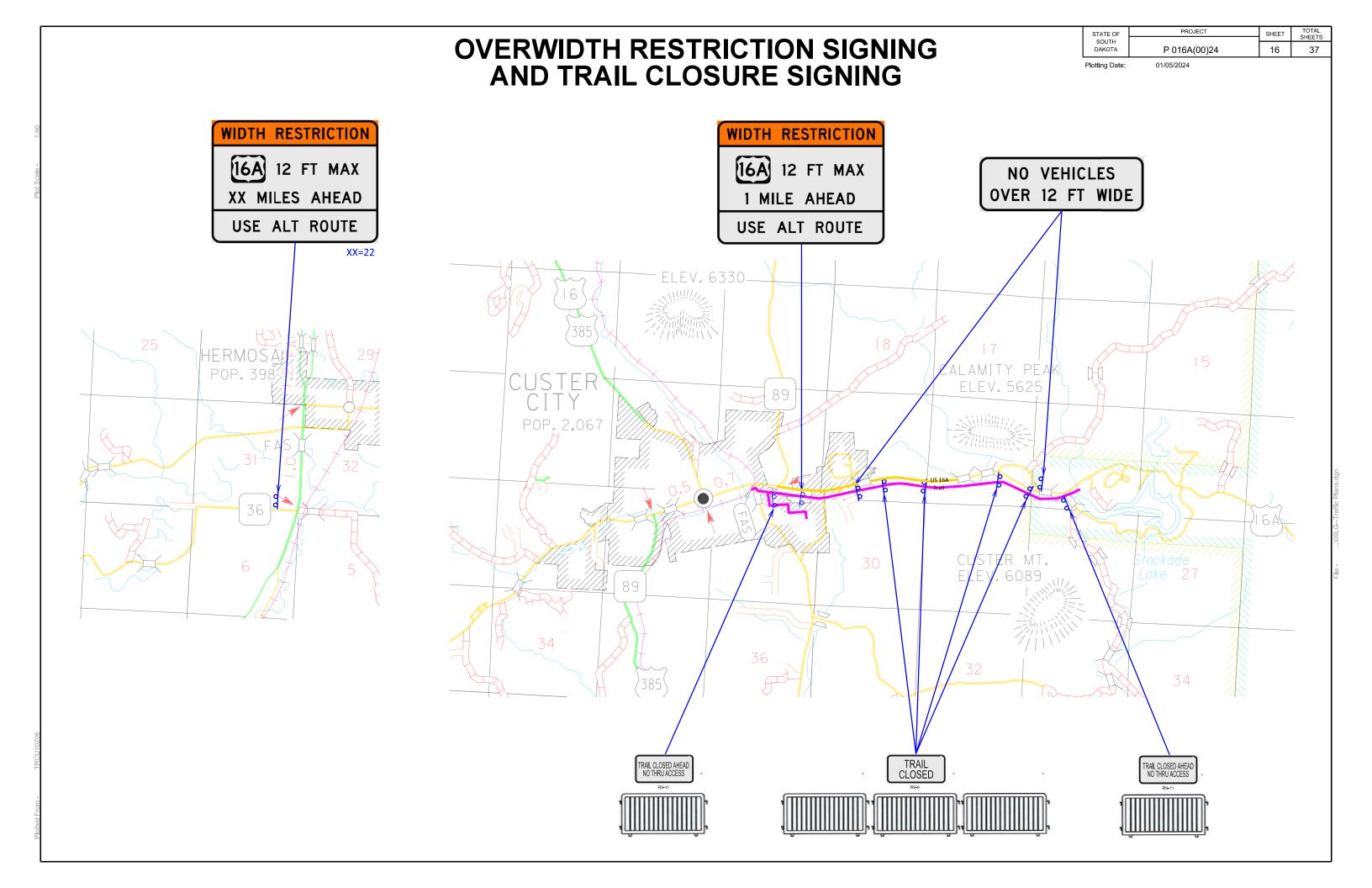
ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R2-1	SPEED LIMIT 35	4	24" x 30"	5.0	20.0
R2-1	SPEED LIMIT 55	4	24" x 30"	5.0	20.0
R4-7	KEEP RIGHT (symbol)	4	24" x 30"	5.0	20.0
W1-4	REVERSE CURVE (L or R)	4	48" x 48"	16.0	64.0
W3-4	BE PREPARED TO STOP	4	48" x 48"	16.0	64.0
W3-5	SPEED REDUCTION AHEAD (35 MPH)	4	48" x 48"	16.0	64.0
W8-6	TRUCK CROSSING	4	48" x 48"	16.0	64.0
W20-1	ROAD WORK AHEAD	5	48" x 48"	16.0	80.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
W21-5	SHOULDER WORK	2	48" x 48"	16.0	32.0
W21-5a	LEFT or RIGHT SHOULDER CLOSED	2	48" x 48"	16.0	32.0
G20-2	END ROAD WORK	5	36" x 18"	4.5	22.5
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT		546.5			

ITEMIZED LIST FOR DETOUR AND RESTRICTION SIGNING

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUM BER	SIGN SIZE	SQFT PER SIGN	SQFT
R9-9	TRAIL CLOSED	2	24" x 12"	2.0	4.0
R9-11	TRAIL CLOSED AHEAD NO THRU ACCESS	2	24" x 18"	3.0	6.0
SPECIAL	WIDTH RESTRICTION US 16A 12 FT MAX 1 MILE AHEAD USE ALT ROUTE	1	114" x 66"	52.3	52.3
	WIDTH RESTRICTION US 16A 12 FT MAX XX MILE AHEAD USE ALT ROUTE NO VEHICLES OVER 12 FT WIDE	1 2	114" x 66" 108" x 36"	52.3 27.0	52.3 54.0
	CONVENTIONAL ROAD DETOUR AND RESTRICTION 168.0 SIGNING SQFT		168.6		

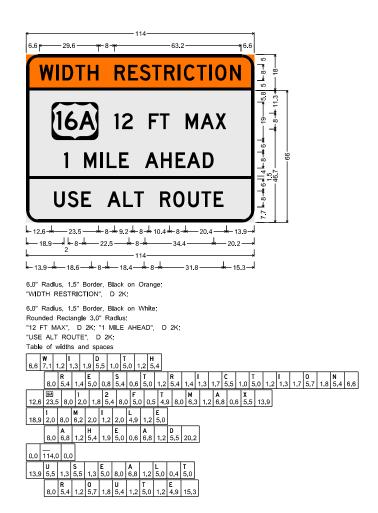


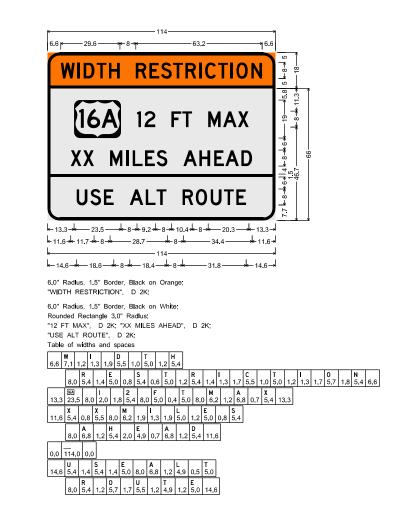


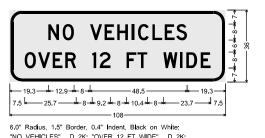
WIDTH RESTRICTION SIGNING DETAILS

Ī	STATE OF	PROJECT	SHEET	TOTAL SHEETS
١	SOUTH			SHEETS
١	DAKOTA	P 016A(00)24	17	37

Plotting Date: 11/21/2023







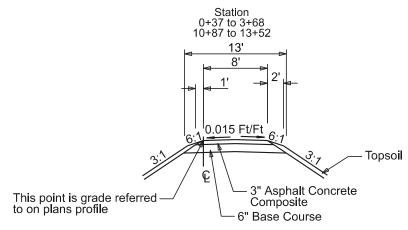
"NO VEHICLES", D 2K; "OVER 12 FT WIDE", D 2K; Table of widths and spaces

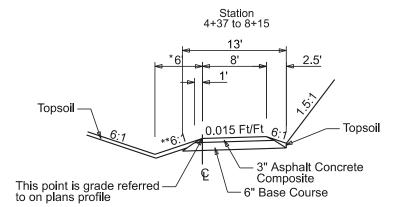
V E H I I C L E S S 8.0 6.0 1.2 5.0 1.4 5.4 1.9 1.3 1.8 5.4 1.8 4.9 1.2 5.0 0.8 5.4 19.3 | 0 | V | E | R | 1 | 2 | 7.5 | 5.7 | 1.0 | 6.1 | 1.2 | 4.9 | 1.4 | 5.4 | 8.0 | 2.0 | 1.8 | 5.4 |

F T W I D E 8.0 5.0 0.5 4.9 8.0 7.2 1.2 1.2 2.0 5.4 1.8 4.9 7.5

TYPICAL GRADING SECTION

US 16A West Location



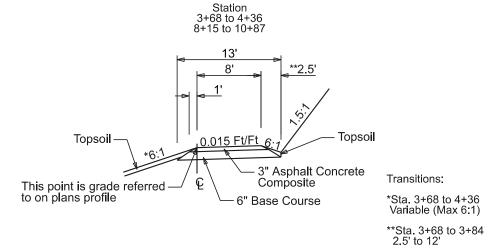


Transitions:

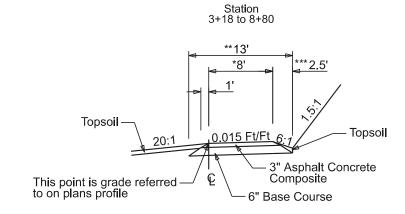
*Sta. 4+37 to 4+87 12' to 6'

**Sta. 4+37 to 4+87 12:1 to 6:1

**Sta.3+84 to 4+00 12' to 2.5'



US 16A East Location



Transitions:

*Sta. 5+85 to 5+89 8' to 16'

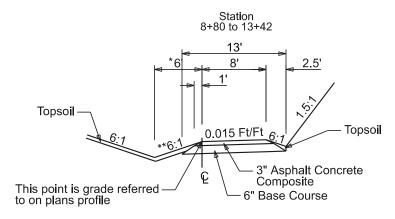
*Sta. 5+99 to 6+03 16' to 8'

**Sta. 5+85 to 5+89 13' to 21'

**Sta. 5+99 to 6+03 21' to13'

***Sta. 5+85 to Sta. 5+99 2.5' to 3.25'

***Sta. 5+99 to 6+03 3.25' to 2.5'



Transitions:

*Sta. 8+80 to 9+50 14' to 6'

*Sta 12+00 to 13+42 6' to 3'

**Sta. 8+80 to 9+50 14:1 to 6:1

LEGEND

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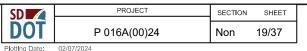
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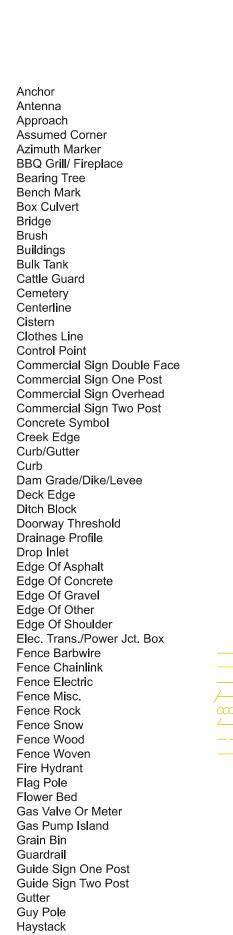
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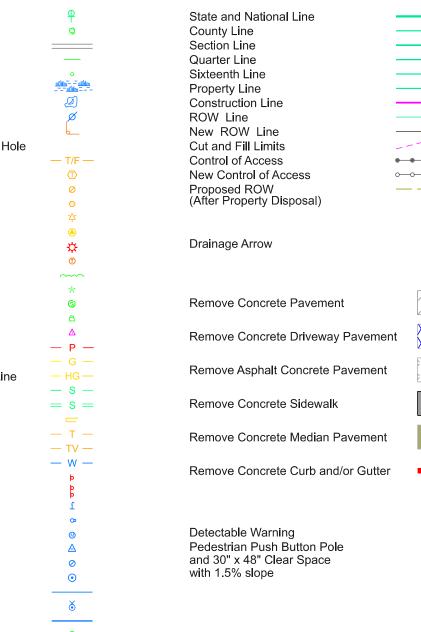
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Lladge
Hedge Highway ROW Marker
Interstate Close Gate
Iron Pin
Irrigation Ditch
Lake Edge
Lawn Sprinkler
Mailbox
Manhole Electric Manhole Gas
Manhole Misc
Manhole Sanitary Sewer
Manhole Storm Sewer
Manhole Telephone
Manhole Water
Merry-Go-Round
Microwave Radio Tower
Misc. Line
Misc. Property Corner
Misc. Post Overhang Or Encroachment
Overhead Utility Line
Parking Meter
Pedestrian Push Button Pole
Pipe With End Section
Pipe With Headwall
Pipe Without End Section
Playground Slide
Playground Swing
Power And Light Pole
Power And Telephone Pole
Power Meter Power Pole
Power Pole And Transformer
Power Tower Structure
Propane Tank
Property Pipe
Property Pipe With Cap
Property Stone
Public Telephone
Railroad Crossing Signal
Railroad Milepost Marker Railroad Profile
Railroad Profile Railroad R.O.W. Marker
Railroad Signs
Railroad Switch
Railroad Track
Railroad Trestle
Rebar
Rebar With Cap
Reference Mark
Regulatory Sign One Post
Regulatory Sign Two Post
Retaining Wall
Riprap River Edge
Rock And Wire Baskets
Destries

Rockpiles

Satellite Dish

O and 'a Tank	Ф
Septic Tank	P
Shrub Tree	©
Sidewalk	
Sign Face	
Sign Post	onlitte = -milite
Slough Or Marsh	<u></u>
Spring	22)
Stream Gauge	Ø
Street Marker	6
Subsurface Utility Exploration Test Hole	
Telephone Fiber Optics	— T/F —
Telephone Junction Box	
Telephone Pole	Ø
Television Cable Jct Box	0
Television Tower	夲
Test Wells/Bore Holes	
Traffic Signal	₩
Trash Barrel	•
Tree Belt	~~~
Tree Coniferous	*
Tree Deciduous	©
Tree Stumps	A
Triangulation Station	Δ
Underground Electric Line	— P —
Underground Gas Line	— G —
Underground High Pressure Gas Line	— HG —
Underground Sanitary Sewer	— s —
Underground Storm Sewer	= s =
Underground Tank	
Underground Telephone Line	— T —
Underground Television Cable	— TV —
Underground Water Line	— w —
Warning Sign One Post	þ
Warning Sign Two Post	þ
Water Fountain	Ţ
Water Hydrant	Op.
Water Meter	<u>(0)</u>
Water Tower	\triangle
Water Valve	0
Water Well	•
Weir Rock	
Windmill	8
Wingwall	
Witness Corner	₩



US16A West Site

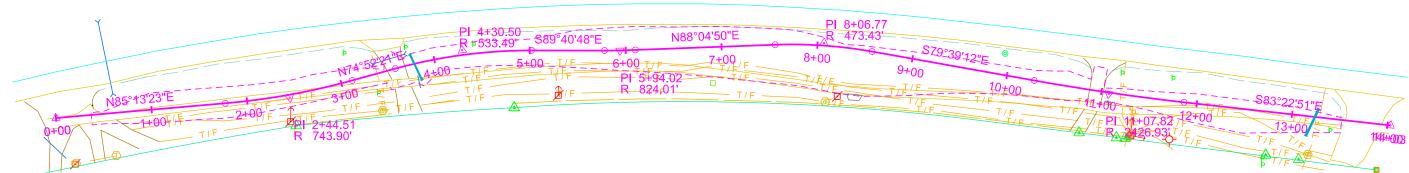
Sta 3+78 Take out 6" - 13' CMP (Incidental Work, Grading)

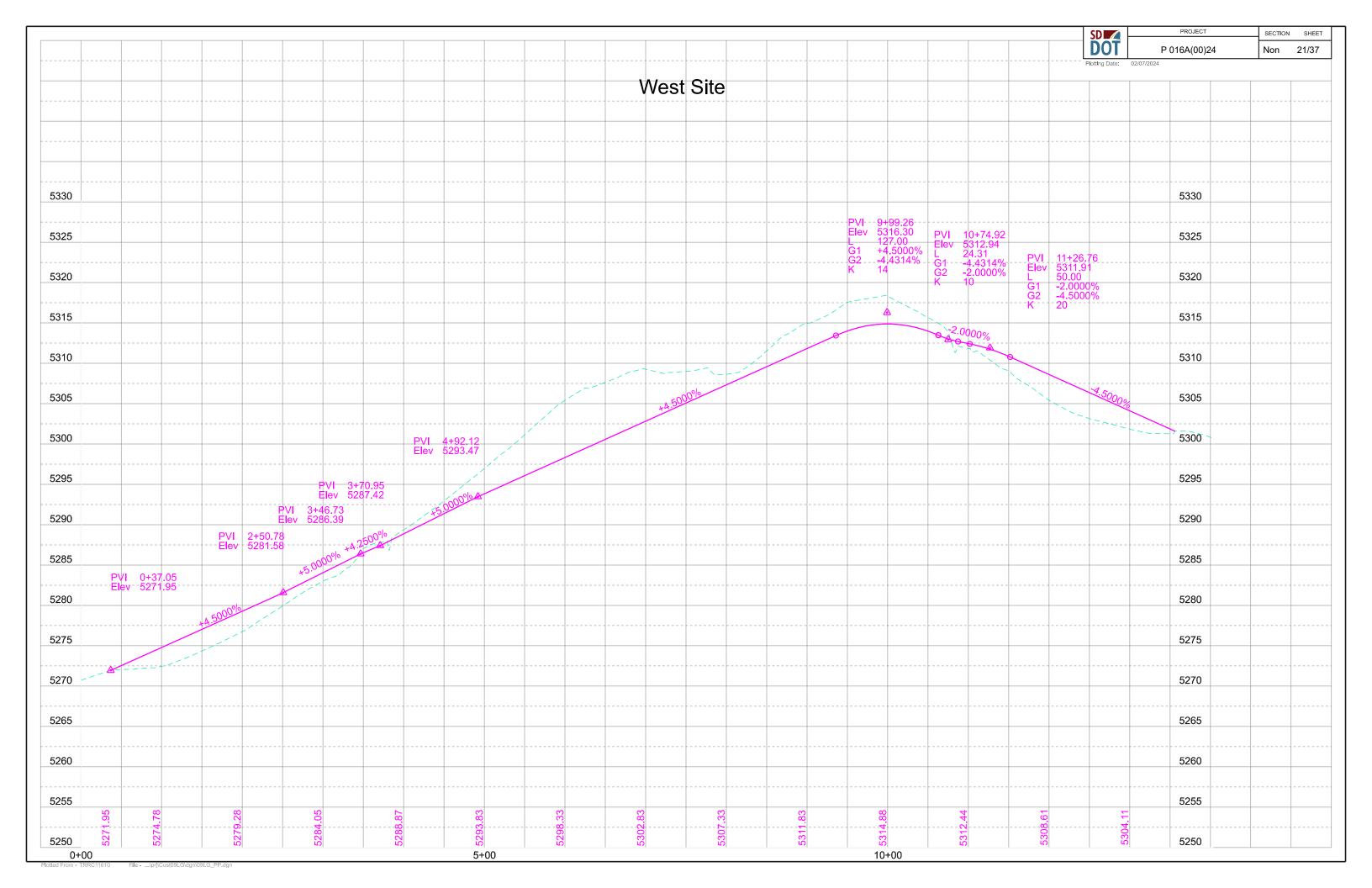
Sta 3+78 Install 12" - 26' CMP & 2 Flared Ends

Sta 13+23 Install 18" - 24' CMP & 2 Safety Ends



Present US Hwy 16A





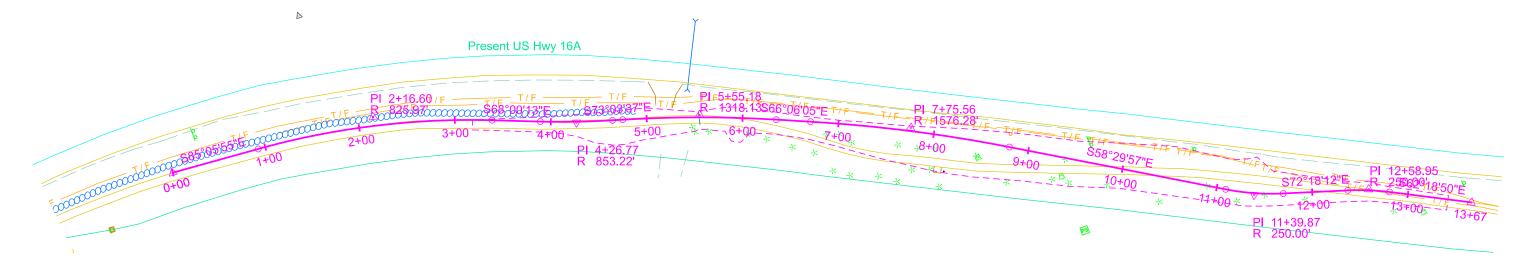
SD	PROJECT	SECTION	SHEET
DOT	P 016A(00)24	Non	22/37
Distilian Dates	00/07/0004		

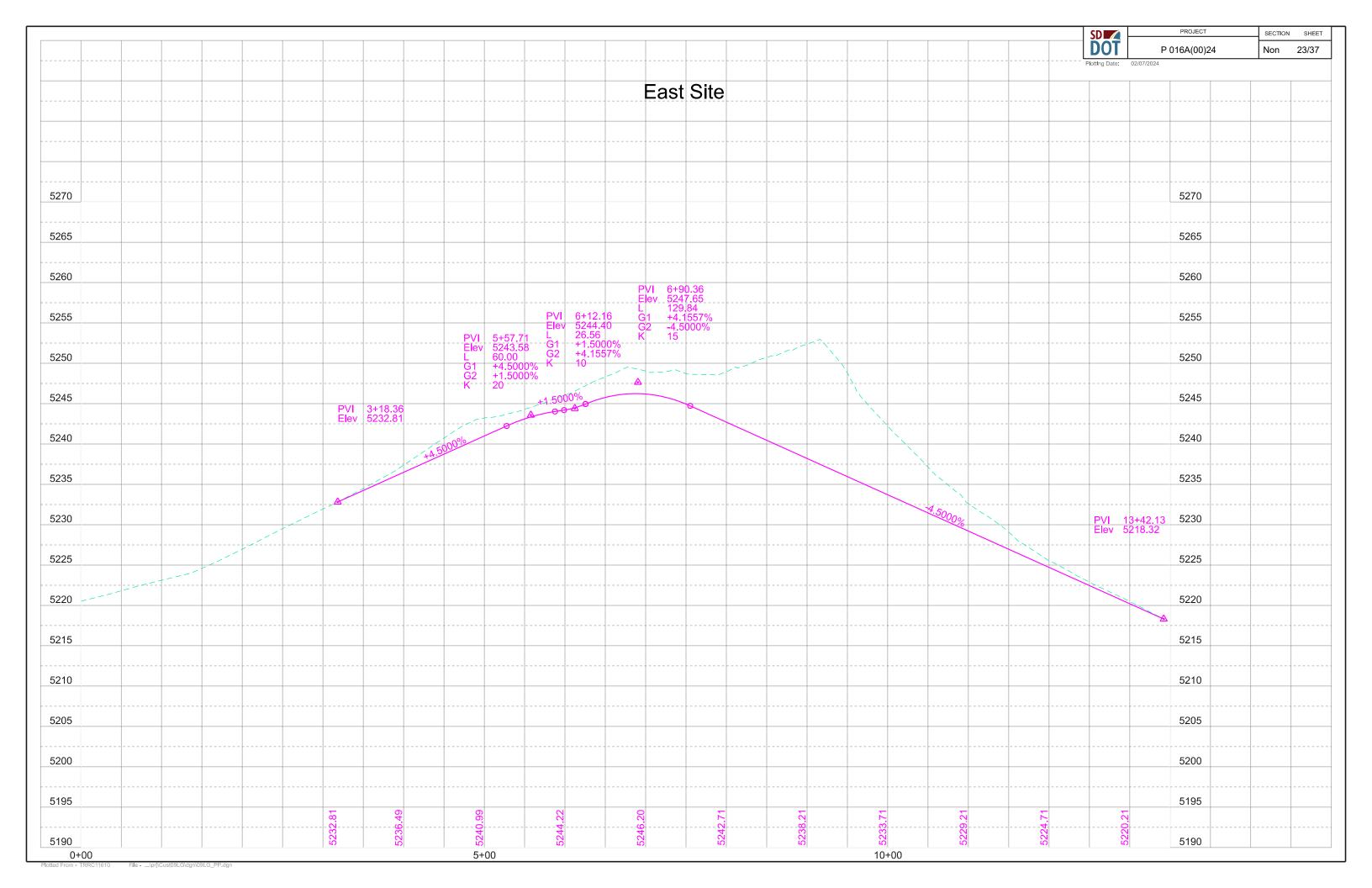
US16A East Site

Sta 5+58 Take Out 6" - 14' CMP (Incidental Work, Grading)

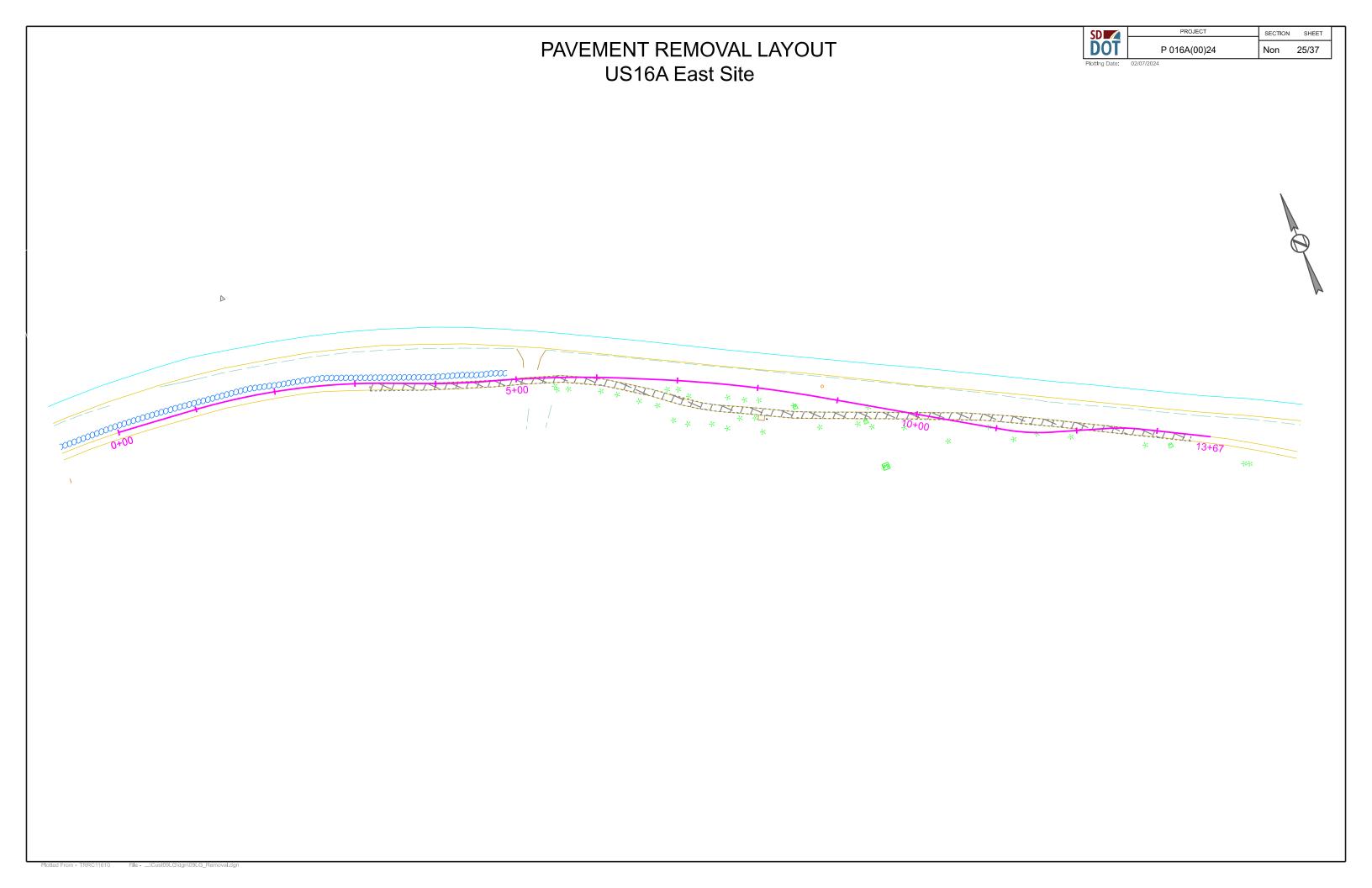
Sta 8+10 R Remove Park Bench for Reset Reset at Sta 5+95 (Incidental Work, Grading)







DOT PAVEMENT REMOVAL LAYOUT P 016A(00)24 Non 24/37 **US16A West Site**



SD	PROJECT	SECTION	SHEET
DOT	P 016A(00)24	Non	26/37
Plotting Date:	02/07/2024		

EROSION CONTROL PLAN US16A West Site

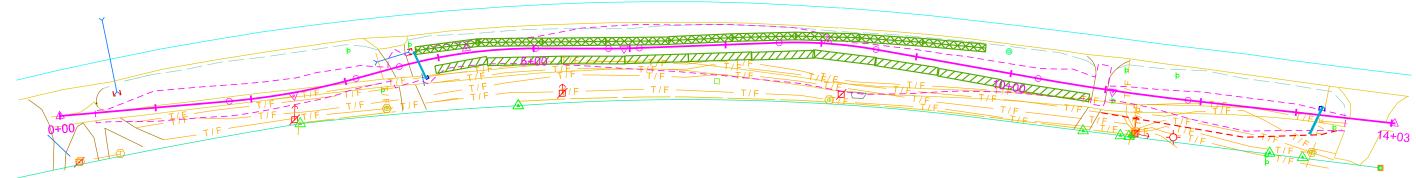
Install High Flow Silt Fence at the following locations: 0+62 L At pipe inlet 18' 3+70 L At pipe inlet 18' 11+00 to 13+50 R Perimeter Control 250 Ft Install Type 2 Turf Reinforcement Mat in the Highway ditch channel bottom Sta. 3+80 L to 9+70 L - 525 SqYd

Install Type 2 Erosion Control Blanket in the Path's Cut Ditch at the following locations: Sta. 3+95 R to 10+85 R - 615 SqYd

Install High Flow Silt Fence at the following locations: 3+82 R At pipe inlet 12 Ft 13+26 L At pipe inlet 18 Ft



Present US Hwy 16A



SD	PROJECT	SECTION	SHEET
DOT	P 016A(00)24	Non	27/37
Latitude Dates	00/07/0004	•	

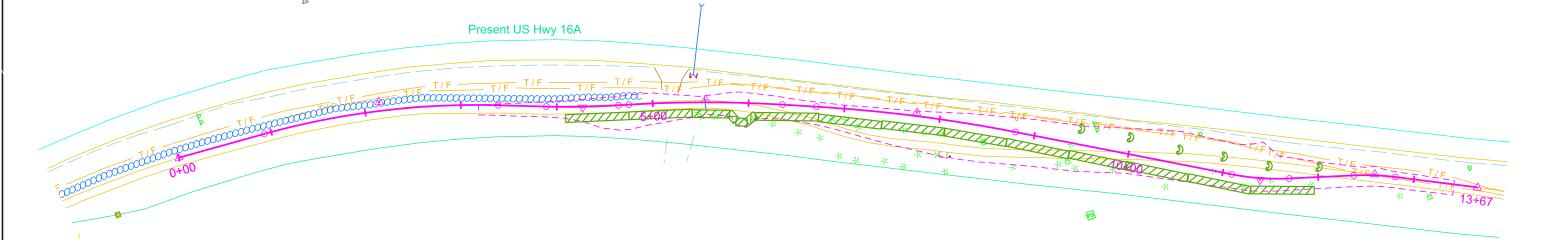
EROSION CONTROL PLAN US16A East Site

Install High Flow Silt Fence at the following locations: 5+45 L At pipe inlet 18 Ft

Install 12" Diameter Erosion Control Wattles across the highway ditch channel bottom at the following locations:
Sta. 9+50 to 12+00 L Highway ditch channel spaced 50' 150 Ft

Install Type 2 Erosion Control Blanket in Path's Cut Ditch at the following locations: Sta. 4+10 R to 11+95 R - 700 SqYd





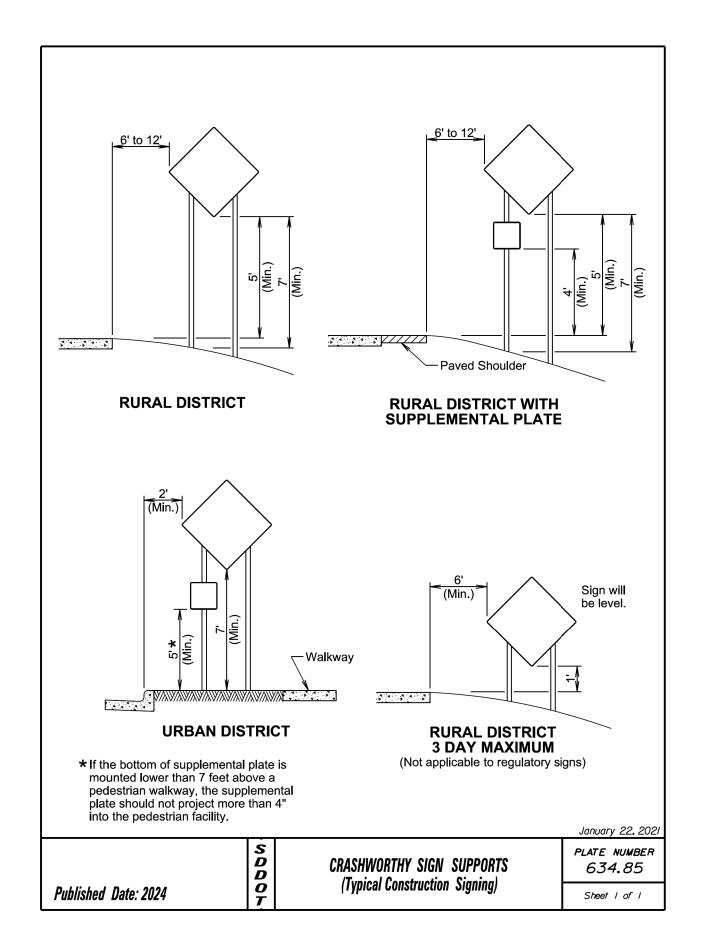
SD	PROJECT	SECTION	SHEET
DOT	P 016A(00)24	Non 28/37	28/37
Plotting Date:	02/07/2024		

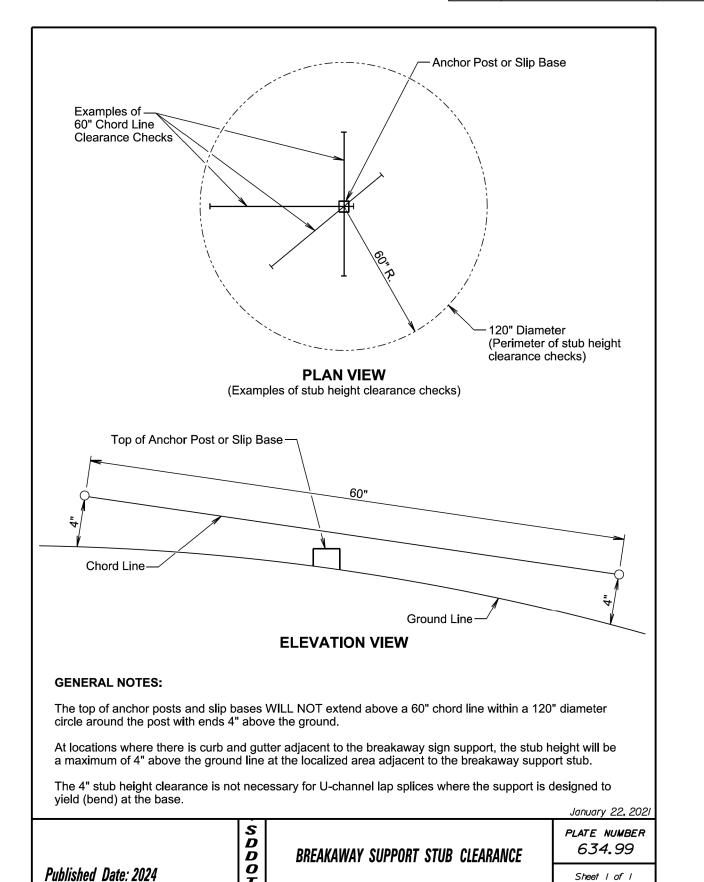
Spacing of Advance Warning The signs illustrated are not required Posted if the work space is behind a barrier, Speed more than 2 feet behind the curb, or 15 Prior to Signs feet or more from the edge of any (Feet) Work (M.P.H.) (A) roadway. 0 - 30 200 The signs illustrated will be used where there are distracting situations; such as: 35 - 40 350 45 - 50 500 vehicles parked on shoulder, vehicles 55 750 accessing the work site via the highway, and equipment traveling on or crossing 60 - 80 1000 the roadway to perform work operations. The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder. * If the work space is on a divided WORK SPACE highway, an advance warning sign should also be placed on the left side of the directional roadway. For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used. January 22, 2021 S D D O T PLATE NUMBER 634.01 WORK BEYOND THE SHOULDER

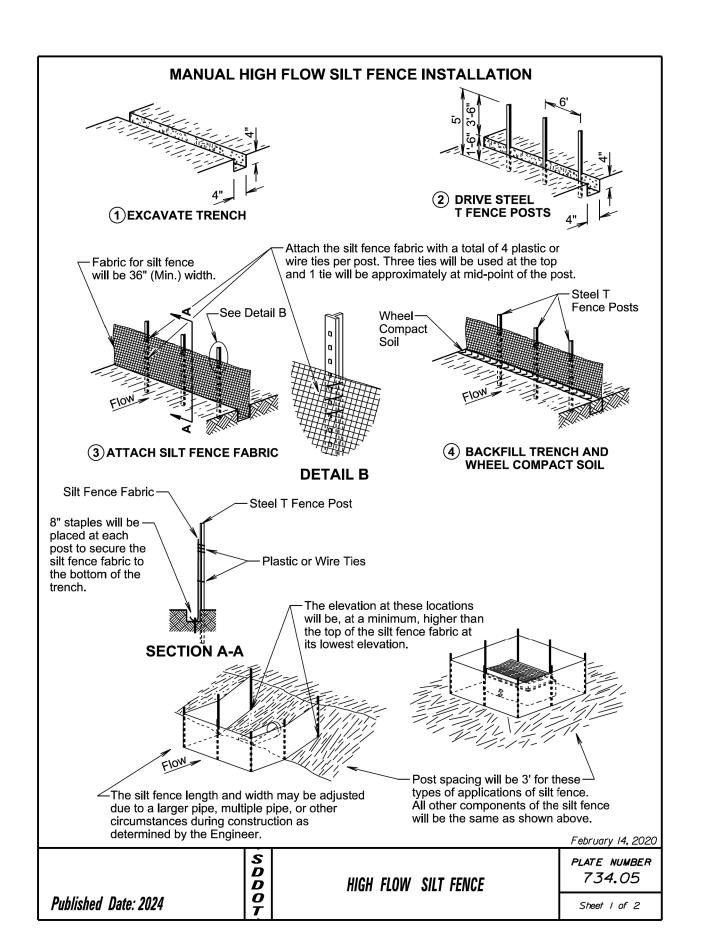
Sheet I of I

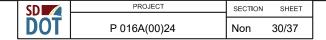
BE PREPARED WORK AHEAD WORK AHEAD	Posted Speed Adva Prior to Work (M.P.H.) 0 - 30 35 - 40 45 - 50 55 60 - 65	Spacing of ance Warning Signs (Feet) (A) 200 350 500 750 1000
Conditions represented are for work	Speed Prior to Buff Work (M.P.H.) 20 25 30 35	ength of ngitudinal fer Space (Feet) 115 155 200 250
that requires closings during daytime hours only. This application is intended for a planned temporary closing not to exceed 15 to 20 minutes.	SPACE 40 45 50 55 60 65 Buffer space on work site li	305 360 425 495 570 645 dependent mitations.
END WORK G20-2 (Optional)	BE PREPATO S WOR AHEA	ARED TOP
Published Date: 2024	TEMPORARY ROAD WORK	PLATE NUMBER 634.30 Sheet I of I

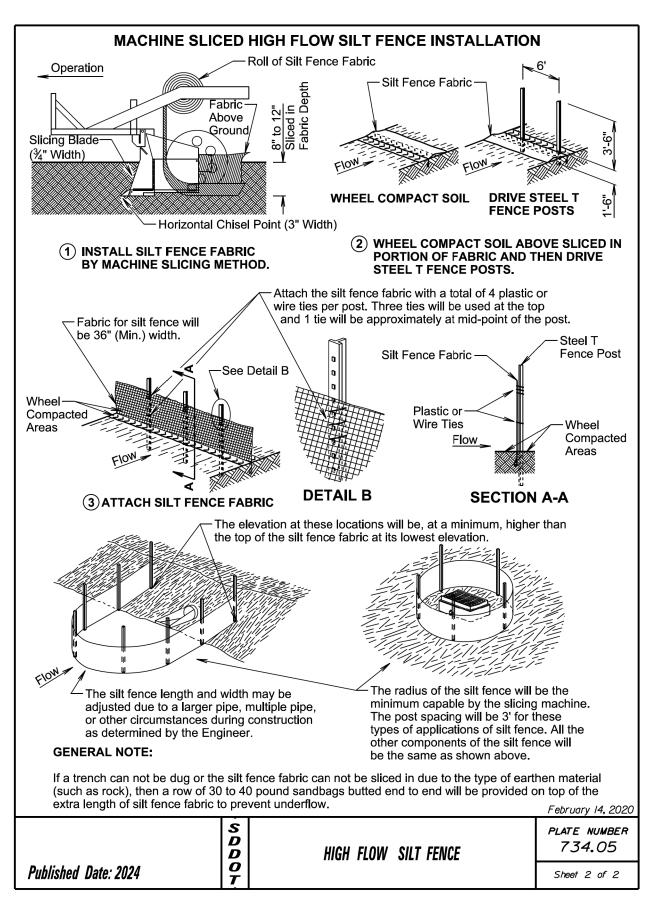
Published Date: 2024

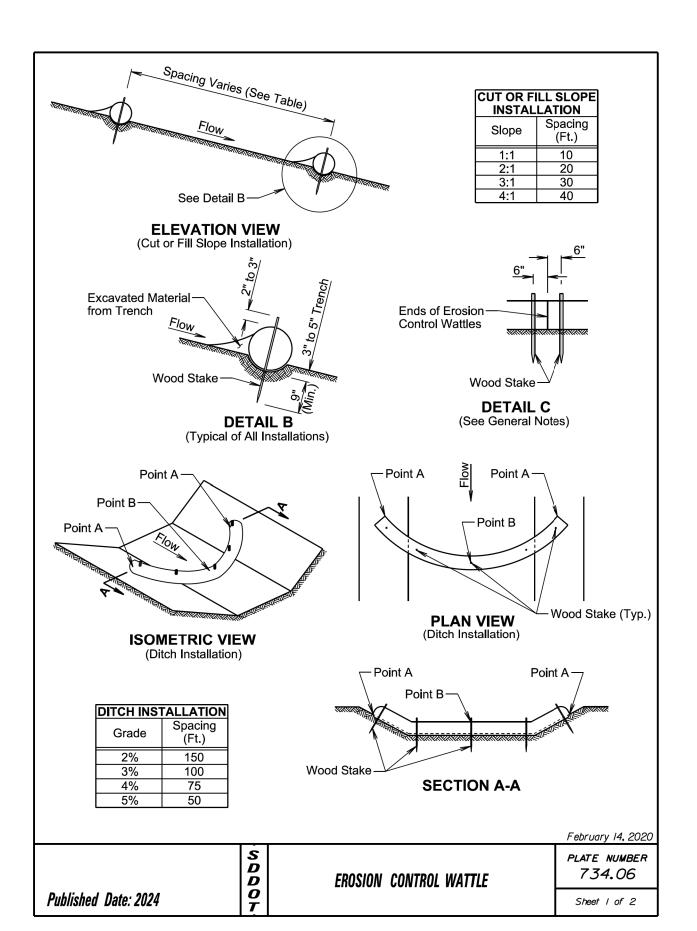














GENERAL NOTES:

At cut or fill slope installations, wattles will be installed along the contour and perpendicular to the water flow.

At ditch installations, point A must be higher than point B to ensure that water flows over the wattle and not around the ends.

The Contractor will dig a 3" to 5" trench, install the wattle tightly in the trench so that daylight can not be seen under the wattle, and then compact the soil excavated from the trench against the wattle on the uphill side. See Detail B.

The stakes will be 1"x2" or 2"x2" wood stakes, however, other types of stakes such as rebar may be used only if approved by the Engineer. The stakes will be placed 6" from the ends of the wattles and the spacing of the stakes along the wattles will be 3' to 4'.

Where installing running lengths of wattles, the Contractor will butt the second wattle tightly against the first and will not overlap the ends. See Detail C.

The Contractor and Engineer will inspect the erosion control wattles in accordance with the storm water permit. The Contractor will remove, dispose, or reshape the accumulated sediment when necessary as determined by the Engineer.

Sediment removal, disposal, or necessary shaping will be as directed by the Engineer. All costs for removing accumulated sediment, disposal of sediment, and necessary shaping will be incidental to the contract unit price per cubic yard for "Remove Sediment".

All costs for furnishing and installing the erosion control wattles including labor, equipment, and materials will be incidental to the contract unit price per foot for the corresponding erosion control wattle contract item.

All costs for removing the erosion control wattle from the project including labor, equipment, and materials will be incidental to the contract unit price per foot for "Remove Erosion Control Wattle".

February 14, 2020

Published Date: 2024

EROSION CONTROL WATTLE

PLATE NUMBER 734.06

Sheet 2 of 2

