

STATE OF SOUTH	PROJECT	SHEET	TOTAL SHEETS
DAKOTA	034-451	1	13
Plottin	g Date: 05/08/2023		
INDEX	OF SECTIONS		

Sheet	1	Title and Index
Sheet	2 - 4	Estimate, Notes, and Tables
Sheet	5 - 8	Special Details
Sheet	9 - 13	Standard Plates



ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
320E1200	Asphalt Concrete Composite	1,320.0	Ton
332E0010	Cold Milling Asphalt Concrete	11,733	SqYd
633E0010	Cold Applied Plastic Pavement Marking, 4"	3,845	Ft
633E0030	Cold Applied Plastic Pavement Marking, 24"	24	Ft
633E0040	Cold Applied Plastic Pavement Marking, Arrow	12	Each
633E1220	High Build Waterborne Pavement Marking Paint, 4" White	1,000	Ft
633E5000	Grooving for Cold Applied Plastic Pavement Marking, 4"	3,845	Ft
633E5015	Grooving for Cold Applied Plastic Pavement Marking, 24"	24	Ft
633E5025	Grooving for Cold Applied Plastic Pavement Marking, Arrow	12	Each
634E0110	Traffic Control Signs	291.3	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	5	Each
634E0420	Type C Advance Warning Arrow Board	2	Each
634E0640	Temporary Pavement Marking	2,640	Ft
634E1002	Detour and Restriction Signing	630.0	SqFt
634E1215	Contractor Furnished Portable Changeable Message Sign	2	Each
734E0847	Sediment Control at Type S Reinforced Concrete Drop Inlet	24	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: <<u>https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.pdf</u> >

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 E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

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

State Historic Preservation Office (SHPO or THPO) concurrence has not been obtained for this project.

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 100 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.

The Contractor is responsible 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.

<u>UTILITIES</u>

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.

Utilities are not planned to be affected on this project. If utilities are identified near the improvement area through the SD One Call Process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25, the Contractor will contact the Engineer to determine modifications that will be necessary to avoid utility impacts.

	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		034-451	2	13

COLD MILLING ASPHALT CONCRETE

Cold milling asphalt concrete will be done according to the typical section(s). In areas where maintenance patches have raised and/or widened the road, additional asphalt concrete will be milled to provide a uniform typical section from centerline to the edge of the finished shoulder. These areas also include farm, residential, field entrances and intersecting roads. Milling will be daylighted to the outside edge of the roadway. Any additional costs associated with this additional cold milling will be incidental to the contract unit price per square yard for Cold Milling Asphalt Concrete.

Cold milling asphalt is estimated to produce 1300 tons of cold milled asphalt concrete material.

The salvaged asphalt concrete material will become the property of the Contractor for disposal and may not be reused on the project.

SURFACING THICKNESS DIMENSIONS

The thickness may vary from that shown in the plans. At those locations where material must be placed to achieve a required elevation for smoothness, plans tonnage may be varied to achieve the required elevation.

ASPHALT CONCRETE COMPOSITE

Asphalt Concrete Composite will be furnished by the Contractor.

Asphalt for tack SS-1h or CSS-1h will be applied prior to each lift of Asphalt Concrete Composite. Asphalt for tack will be applied at a rate of 0.09 gallons per square yard on existing pavement or milled asphalt concrete surfaces and at a rate of 0.06 gallons per square yard on primed base course or new asphalt concrete pavement. The Asphalt for tack will be applied for the full width of the bottom layer of Asphalt Concrete Composite plus one-half foot additional on the outside shoulder. The Asphalt for tack will be applied for the full width of the bottom layer of Asphalt Concrete Composite where curb and gutter exist.

A Flush Seal will be required on the asphalt concrete patching.

Locations and quantities of asphalt repair are subject to change. The exact locations will be determined in the field by the Engineer. The Engineer reserves the right to adjust quantities and/or add locations at no additional cost to the state.

PERMANENT PAVEMENT MARKING

The Contractor will be required to repaint all existing pavement markings including centerline, edge line, lane lines, turn arrows stop bars railroad, and pedestrian crossings. This list is approximate. The Contractor will be required to document and be able to relocate for replacement of the existing turn arrows, etc. before the markings are obliterated. The cost to duplicate the existing marking locations will be incidental to the contract unit prices for the various contract items.

COLD APPLIED PLASTIC PAVEMENT MARKING

All materials will be applied as per the manufacturer's recommendations.

Cold Applied Plastic Pavement Markings will be 3M Series 380 AW or an approved equal.

Final locations of markings will be determined by Engineer.

GROOVING FOR COLD APPLIED PLASTIC PAVEMENT MARKING

The Contractor will establish a positive means for the removal of the grinding and/or grooving residue. Residue from dry grooving will be vacuumed. Solid residue will be removed from the pavement surfaces before being blown by traffic action or wind. The Contractor will conduct this work to control and minimize airborne dust and similar debris that may become a hazard to motor vehicle operation or nuisance to property owners. Residue from wet grooving will not be permitted to flow across lanes being used by public traffic or into gutter or drainage facilities. Residue, whether in solid or slurry form, will be disposed of in a manner that will prevent it from reaching any waterway in a concentrated state. The cleaning of the residue for grooving will be to the satisfaction of the Engineer and may require more than one pass to adequately remove material. All costs for removal of grinding and/or grooving residue will be included in the contract unit price per foot, square foot, or each, for "Grooving for Cold Applied Plastic Pavement Marking" contract items.

HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

All materials will be applied as per manufacturer's recommendations. High build waterborne pavement marking paint will conform to the supplemental specifications for Section 980.1 B.

Reflective media will consist of glass beads.

High Build Waterborne Pavement Marking Paint applied after October 15 must be formulated as cold-weather waterborne paint. Cold weather waterborne paint will meet the requirements of Section 980.1 C.

RATES OF MATERIALS FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

Solid 4" line = 22.5 Gals/Mile Dashed 4" line = 6.2 Gal/Mile Glass Beads = 8 Lbs/Gal.

All cost for materials, labor and equipment necessary to furnish and install the pavement markings will be incidental to the contract unit price for the respective High Build Waterborne Pavement Marking Paint items.

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 sta 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.

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.

Construction vehicles will exit or enter the construction work zone at locations identified by the Engineer. At no time will construction vehicles utilize the maintenance crossovers or the Interstate median to exit or enter Interstate traffic.

	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		034-451	3	13

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

SEQUENCE OF OPERATIONS

<u>Phase 1</u>

- 1. Set up traffic control for two way traffic in the westbound lanes using Standard Plates No. 634.46, 634.58 & 634.59.
- 2. Complete AC mill and overlay in the eastbound lanes.
- 3. Install all new pavement markings up to centerline.

Phase 2

- 4. Set up traffic control for two way traffic in the eastbound lanes using Standard Plates No. 634.46, 634.58 & 634.59.
- 1. Complete AC mill and overlay in the eastbound lanes.
- 2. Remove all traffic control.

TEMPORARY PAVEMENT MARKING

Temporary Pavement Marking will be used on all temporary surfacing or surfacing which is to be removed, or as directed by the Engineer.

Payment for temporary pavement marking will be by the foot. All temporary pavement markings, including stopbars, will be measured as an equivalent of 4" temporary pavement marking, and will be paid for at the contract unit price per foot for Temporary Pavement Marking. Any temporary pavement marking arrows that are needed will be paid for as 250' of Temporary Pavement Marking. Payment will be for all costs to furnish, and install temporary pavement markings.

CONTRACTOR FURNISHED PORTABLE CHANGEABLE MESSAGE SIGN

The Contractor will furnish portable changeable message signs to be used for the duration of the project. Message signs will be installed to inform the traveling public of when construction will begin for each phase (2 week advance notice), advising the general public of the conditions ahead, and as directed by the Engineer. The changeable message signs will be furnished, programmed, and maintained for the entire project duration. The Engineer will assist in determining the location and messages to be programmed into the message sign. The message boards will be clearly visible from a minimum of 900 feet and will be solar powered or wired directly to a power source. Diesel and gas powered message panels will not be allowed.

The portable message panels will be paid for at the contract unit price per each for Contractor Furnished Portable Changeable Message Sign. Payment will be full compensation for furnishing, maintaining, and relocating as many times as required by the Engineer and the Contractor's operations.

WIDTH RESTRICTION

A 10' width restriction will need to be put in place prior to two way traffic flows.

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 changes that affect traffic flow.

payment for the contractor-furnished schedule. All costs associated with the schedule will be incidental to the related items. Failure to properly submit the required construction schedules will result in the withholding of progress payments until an approved schedule is received.

WIDTH RESTRICTION SIGNING

Details of the approximate location of the Width Restriction signing are as shown in these plans. Prior to installing the signs the Contractor will mark out the sign locations and review them with the Engineer.

Width Restriction signing will be furnished and installed by the Contractor as detailed in these plans. 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 Width Restriction signing. Width Restriction signing will be installed on fixed location, ground mounted, breakaway supports.

Payment for furnishing, installing, maintaining and removing the signs and hardware will be incidental to the contract unit price per square foot for Detour Signing.

INVENTORY OF TRAFFIC CONTROL DEVICES

			CONVENTIO	NAL ROAD		
SIGN CODE	SIGN DESCRIPTION	NUM BER	SIGN SIZE	SQFT PER SIGN	SQFT	EZ-Cli
R3-2	LEFT TURN PROHIBITION (symbol)	1	24" x 24"	4.0	4.0	
W1-3	REVERSE TURN (L or R)	2	48" x 48"	16.0	32.0	
W1-4	REVERSE CURVE (L or R)	1	48" x 48"	16.0	16.0	
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0	
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0	
W8-11	UNEVENLANES	2	48" x 48"	16.0	32.0	TSLI
W8-15	GROOVED PAVEMENT	2	48" x 48"	16.0	32.0	1021
W9-3	CENTER LANE CLOSED AHEAD	1	48" x 48"	16.0	16.0	
W13-1P	ADVISORY SPEED (plaque)	1	30" x 30"	6.3	6.3	
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0	
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	3	48" x 48"	16.0	48.0	
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0	12" S
		_	VENTIONAL CONTROL S		291.3	

INVENTORY OF TRAFFIC CONTROL DEVICES - DETOUR

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUM BER	SIGN SIZE	SQFT PER SIGN	SQFT
SPECIAL	WIDTH RESTRICTION 10 FT WIDE (Legend Varies)	9	120" x 84"	70.0	630.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			630.0

GeoCurve

Smart Curb Fil

SEDIMENT CONTRO

The sediment control to Standard Plate 734

Product

Dandy Curb

Gutterbuddy

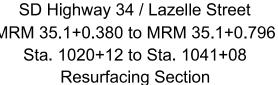
Curb Inlet Guar

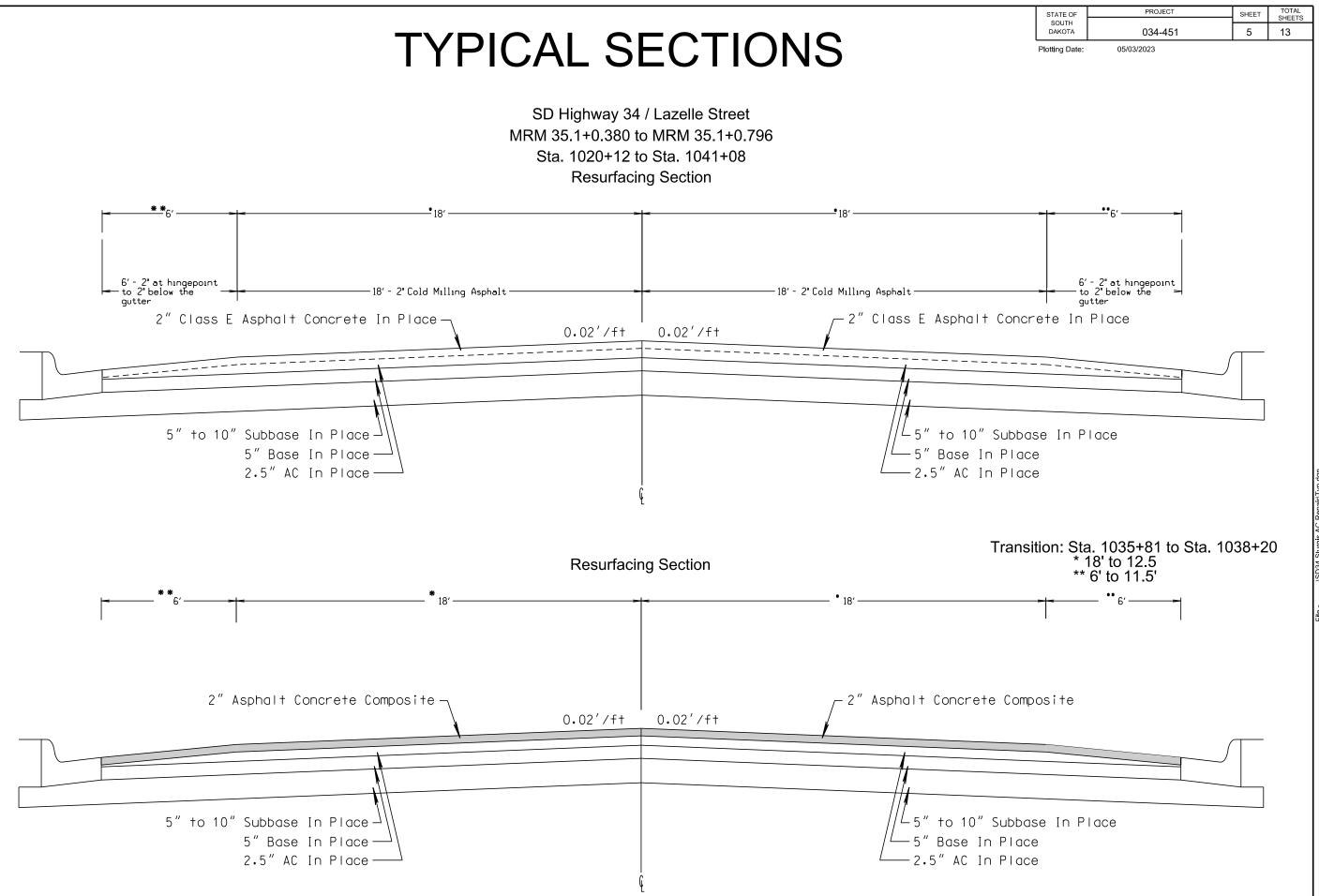
EZ-ClipGuard

TSL E-Sock

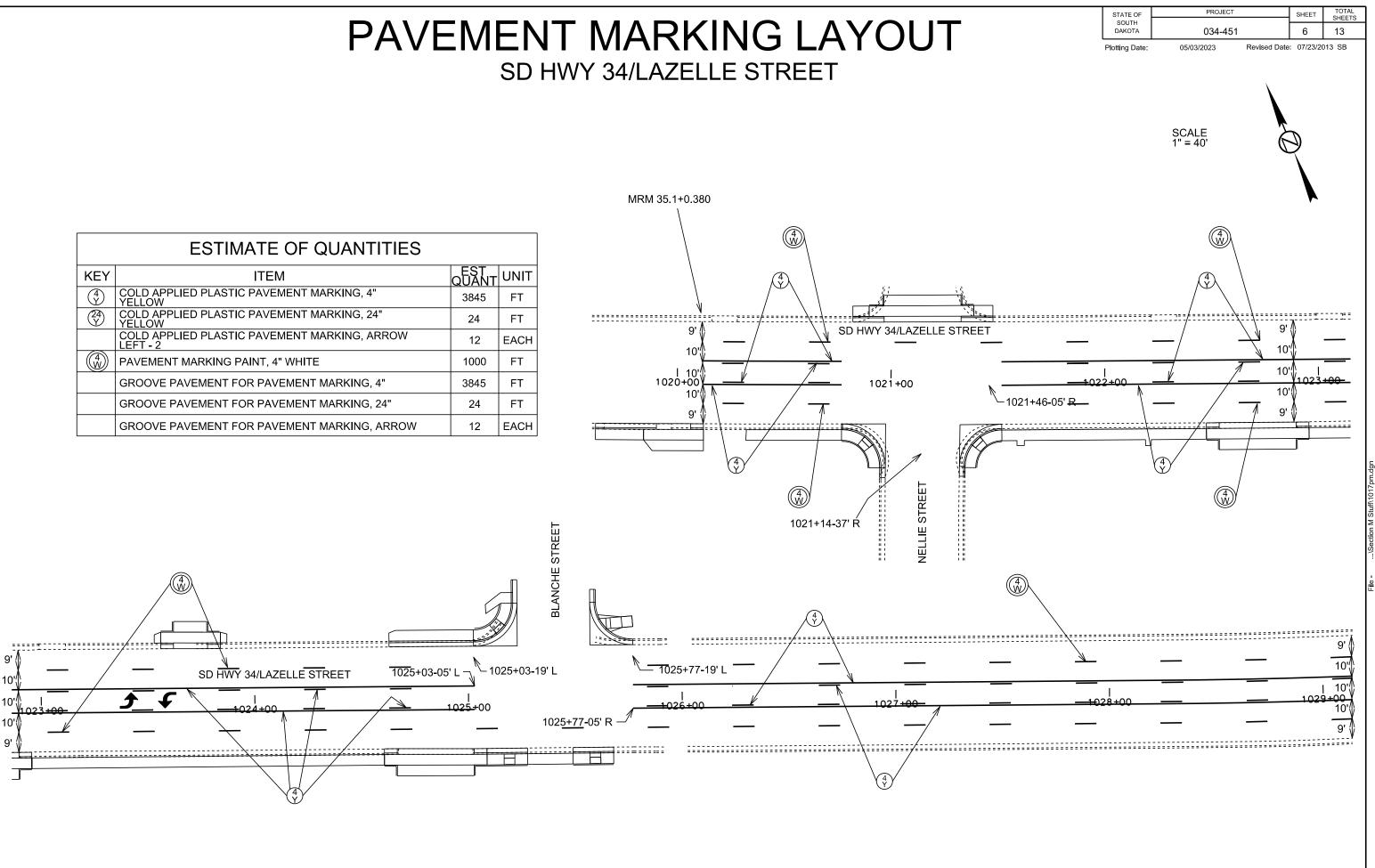
2" Silt Sock

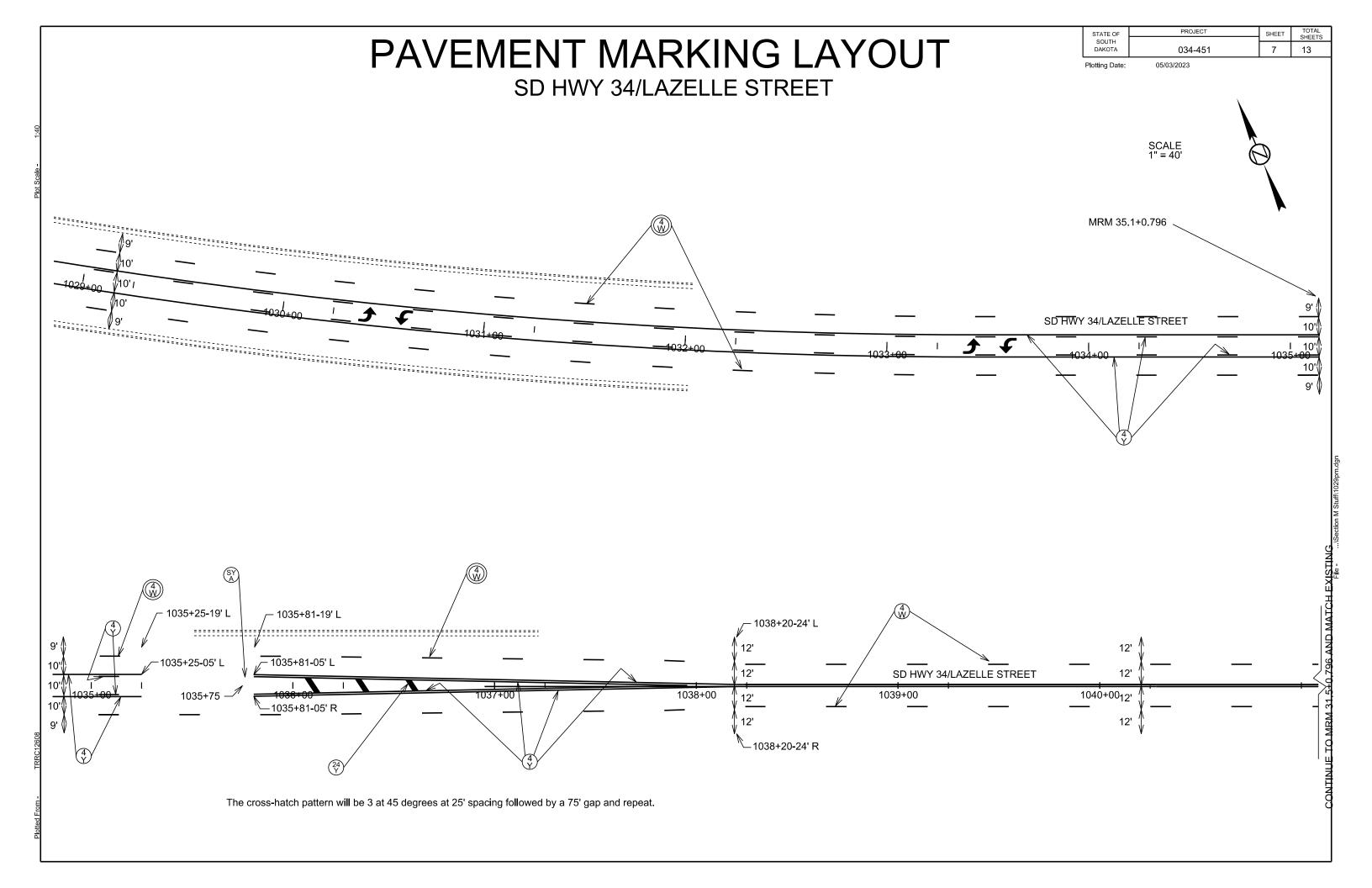
	STATE OF	PROJECT	SHEET	TOTAL SHEETS
	SOUTH DAKOTA	034-451	4	13
OL AT TYPE S	6 REINFO	RCED CONCRETE DROP	5	
			-	
l device provid	led will be	from the list shown below	/ Rofor	-
4.11 for details				
	_			
		lanufacturer		
1	Dandy Pro Powell, O	oducts Inc. H		
		-800-591-2284		
	www.dano	dyproducts.com		
/	ACF Envi			
	Richmond	I, VA -800-448-3636		
		<u>nvironmental.com</u>		
ard	ECTEC E	nvironmental Systems LL0	.	
	Alameda,		<i>,</i>	
		-866-521-0724		
	www.erteo	<u>csystems.com</u>		
d	Flo-Wate			
		s Moines, IA -515-577-6763		
	www.flo-v			
	Three Sor	ns Landscaping		
	Rapid City	y, SD		
	Phone: 1	-605-391-1903		
K		dge Lawn and Landscapin	g,LLC	
	Rapid City	y, SD -605-716-4080		
		penridgelandscaping.com/		
	GeoSoluti	ons Inc		
	Austin, TX			
		-512-330-0796		
	www.geos	solutionsinc.com		
lter	NoFlood,			
	Fort Myer: Phone: 1	s, FL -239-776-1671		
		v.noflood.com		

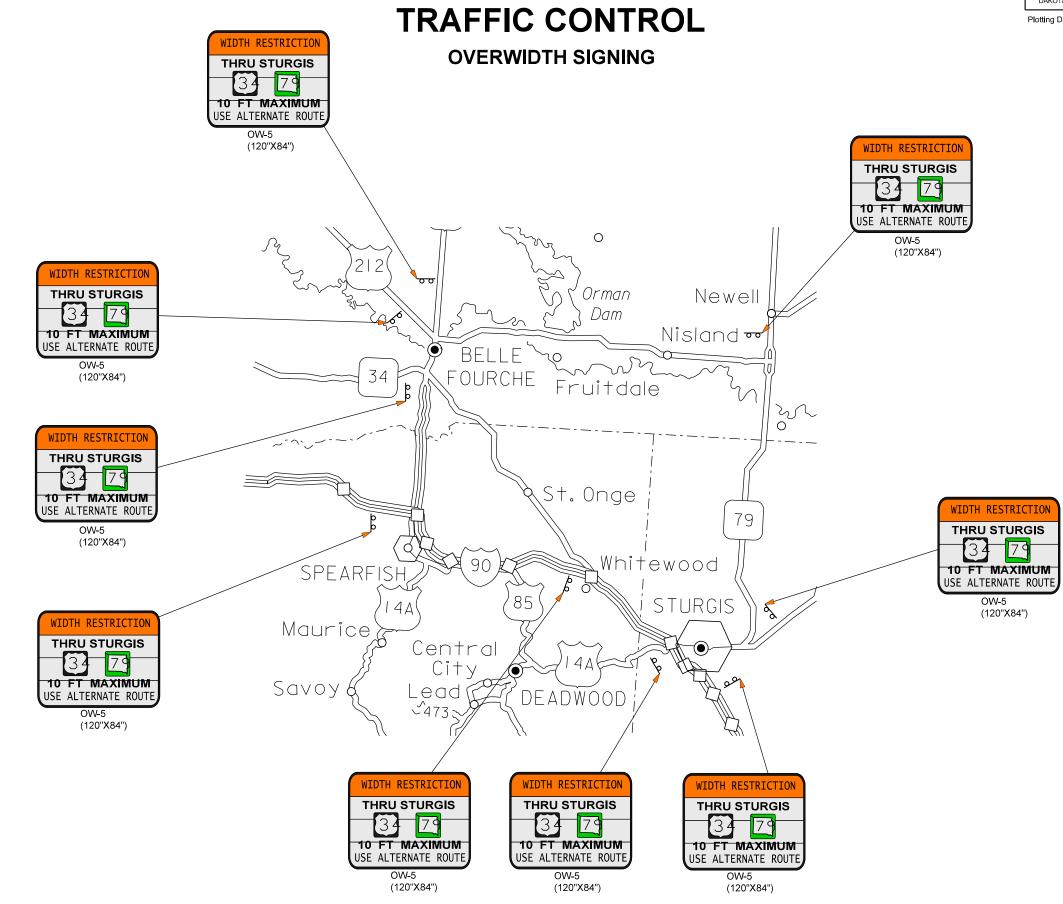




SD HWY 34/LAZELLE STREET

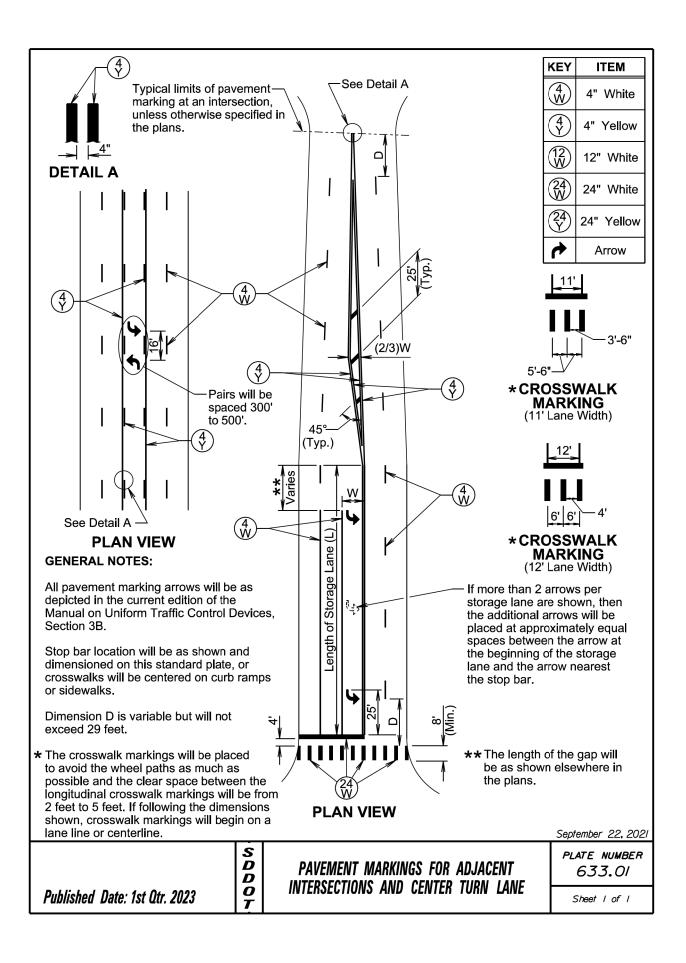






STATE OF SOUTH	PROJECT	SHEET	TOTAL SHEETS
DAKOTA	034-451	8	13
Plotting Date:	05/03/2023		



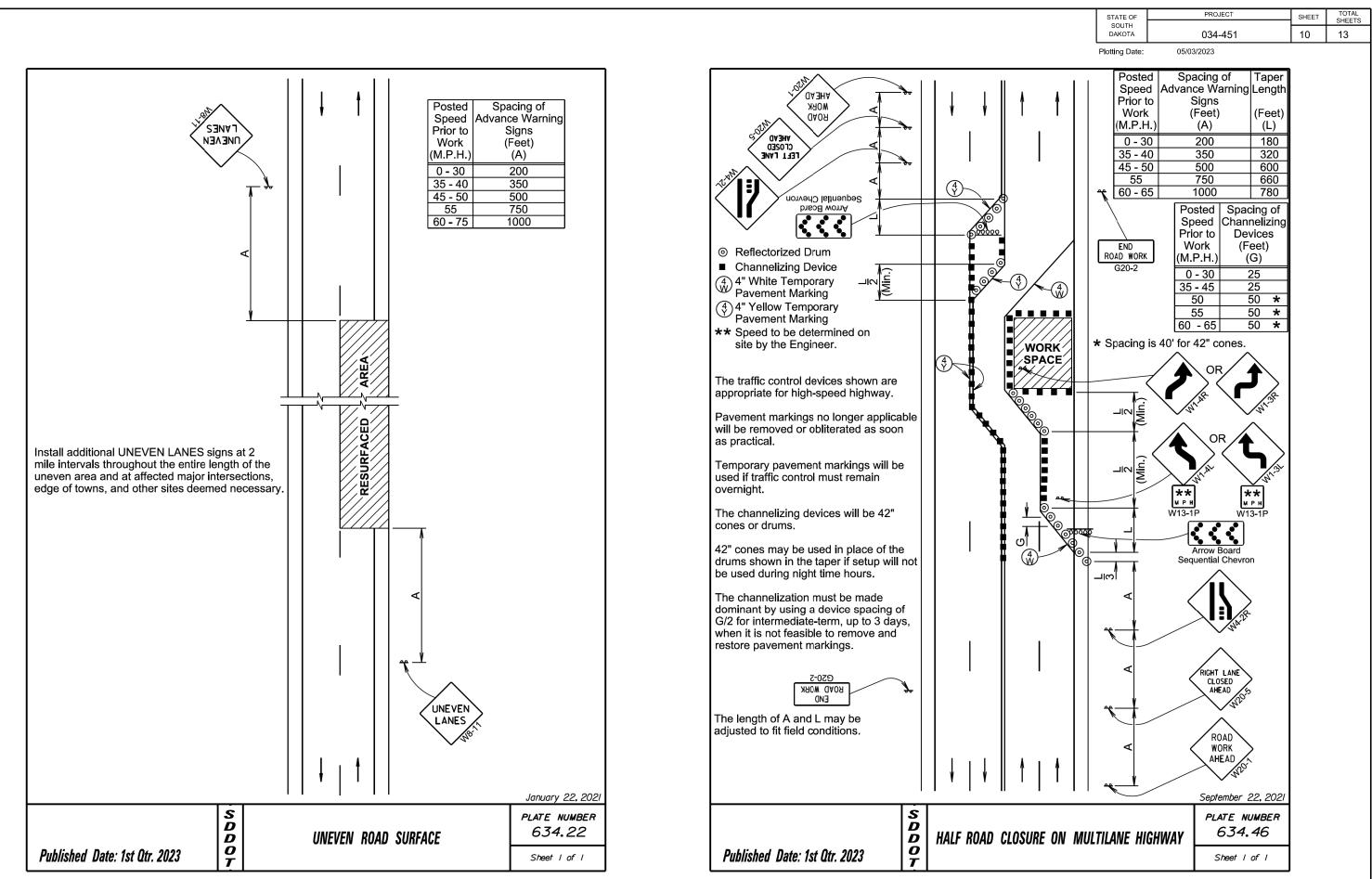


ile - 1.200

ted From - TRRC10608

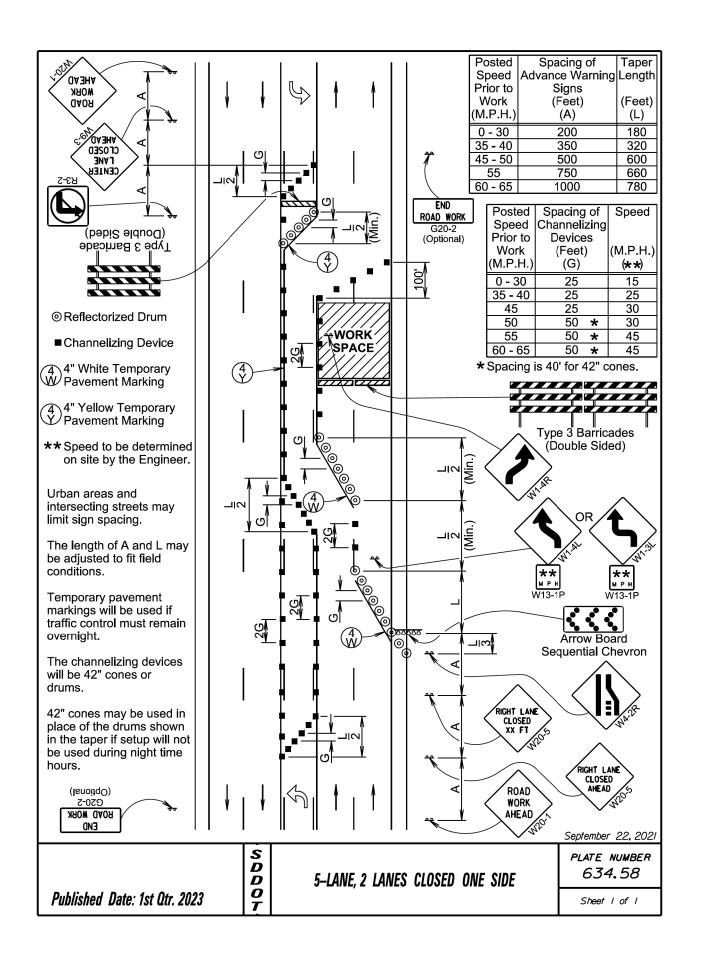
STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH DAKOTA	034-451	9	13
Plotting Date:	05/03/2023		

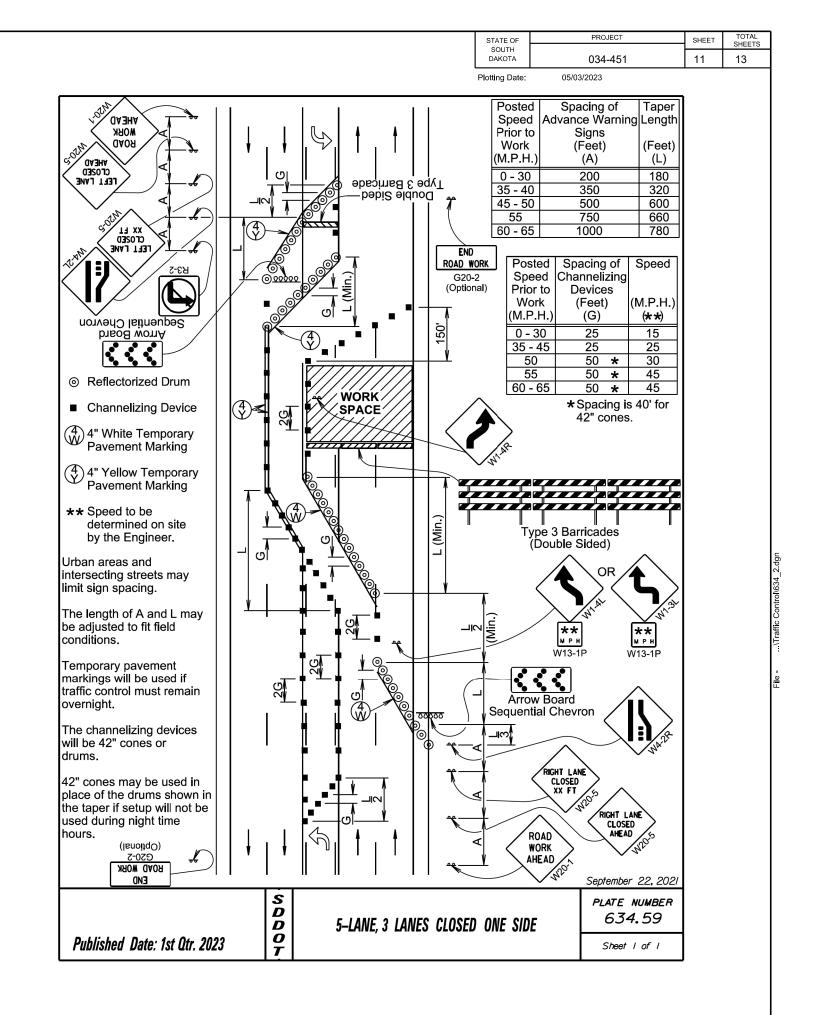
...\Traffic Control\633_1.dgn

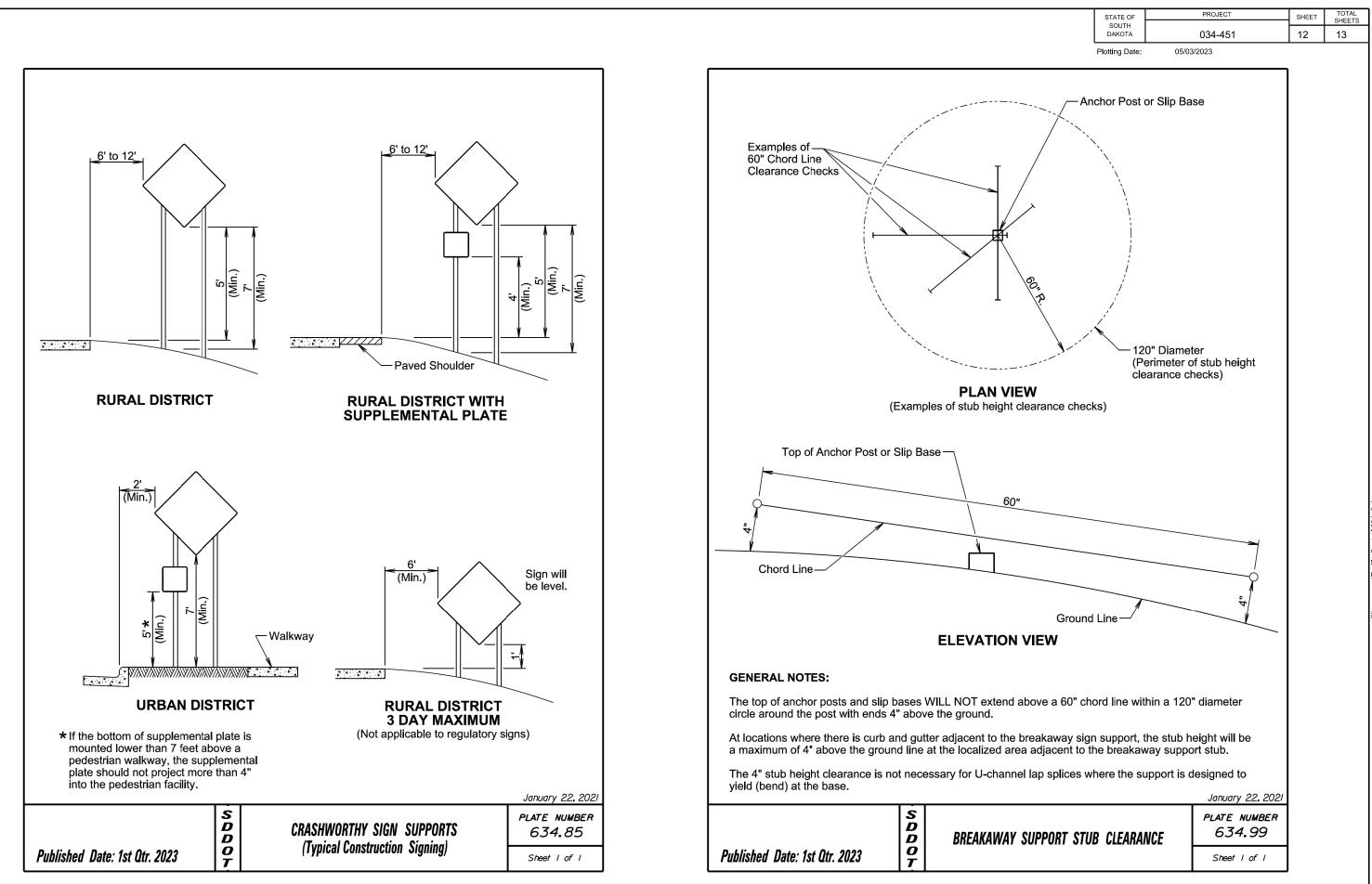


Inted From - TRRC12608

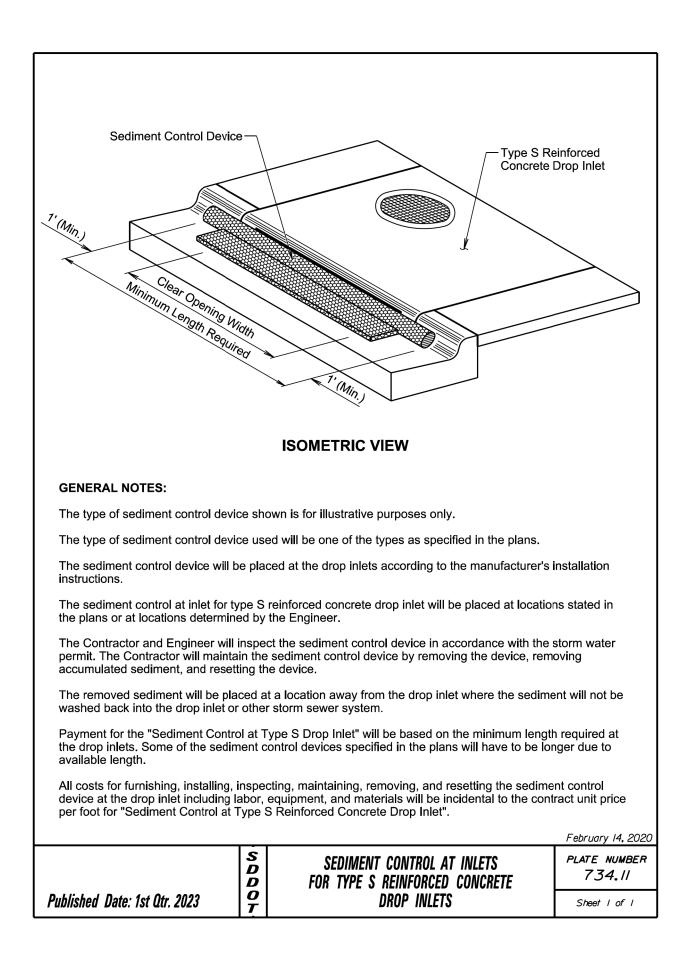
...\Traffic Control\634 1.dgi







...\Traffic Control\634 3.dgn



STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH DAKOTA	034-451	13	13
Plotting Date:	05/03/2023		

...\Traffic Control\734_1 dgn