

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0295(46)139	1	168

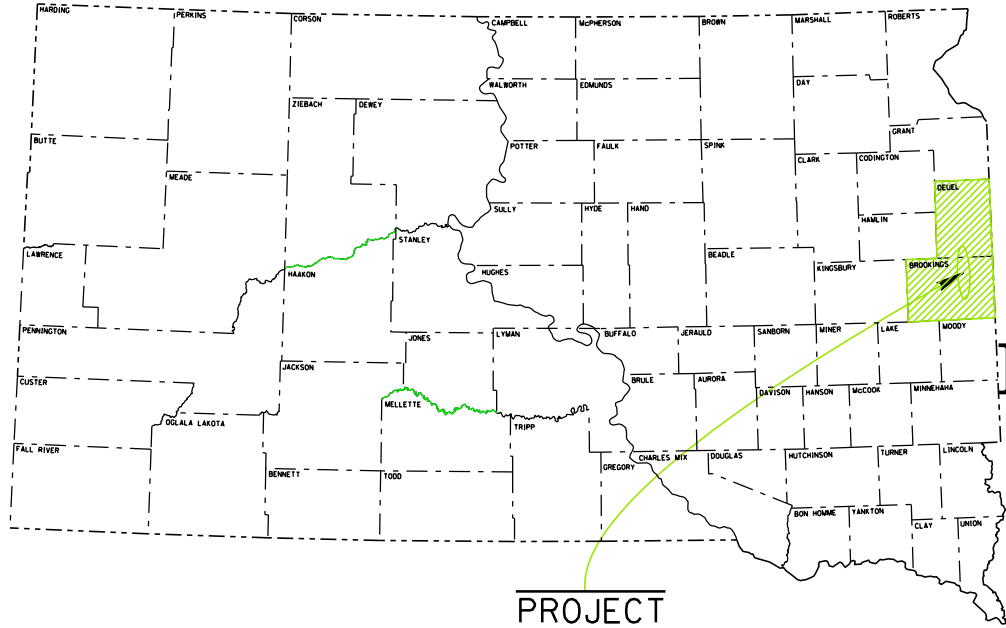
Plotting Date: 05/14/2024

PLANS FOR PROPOSED
PROJECT
IM 0295(46)139
INTERSTATE 29 SOUTH
BROOKINGS & DEUEL COUNTIES

INDEX OF SECTIONS

Section A:	Estimate of Quantities and Environmental Commitments
Section C:	Traffic Control Plans
Section D:	Erosion and Sediment Control Plans
Section F:	Surfacing Plans
Section M:	Pavement Marking Plans
Section X:	Cross Sections
Section Z:	Pipe Sections

ASPHALT CONCRETE SURFACING, MILL &
ASPHALT CONCRETE RESURFACING OF RAMPS,
GUARDRAIL, PIPE WORK, RAMP DETOURS,
ACCELERATION & DECELERATION LANE MODIFICATION
PCN 06P3



PROJECT

RCBC
Str. No. 06-185-089
MRM 139.89

Exit 140 Underpass
Str. No. 06-185-080
MRM 140.78

Sta. 92+52.22 to Sta. 94+58.54 SBL
Continuous Concrete Bridge
Str. No. 06-184-074
MRM 141.45

Sta. 217+31.22 to Sta. 218+90.55 SBL
Continuous Concrete Bridge
Str. No. 06-184-050
MRM 143.80

Sta. 251+24.00 to Sta. 252+37.83 SBL
Continuous Concrete Bridge
Str. No. 06-184-044
MRM 144.44

RCBC
Str. No. 20-064-299
MRM 149.00

RCBC
Str. No. 20-064-288
MRM 150.06

Exit 150 Underpass
Str. No. 20-061-280
MRM 150.88

END IM 0295(46)139
Sta. 632+66.47
MRM 151.00+0.684
Median Crossover
In Place

Note:
Section Line Stationing
is approximate

DESIGN DESIGNATION

ADT (2023)	4789
ADT (2043)	7648
DHV	957
D	50%
T DHV	12.9%
T ADT	28.4%
V	80 MPH

STORM WATER PERMIT

MAJOR STREAM - Tributaries to:
North Deer Creek

ACRES DISTURBED - 52 Acres

TOTAL PROJECT AREA - 107 Acres

LATITUDE = 44.5785 (Google Maps)

LONGITUDE = -96.7630 (Google Maps)

BEGIN IM 0295(46)139
Sta. 10+00
MRM 139.30+0.559
Median Crossover
In Place

Sta. 320+82.47 to Sta. 322+23.78 SBL
Continuous Concrete Bridge
Str. No. 06-184-031
MRM 145.85

Sta. 428+38.01 to Sta. 429+97.35 SBL
Continuous Concrete Bridge
Str. No. 06-184-010
MRM 147.80

GROSS LENGTH	62,266.47 FEET	11.793 MILES
LENGTH OF EXCEPTIONS	1,316.81 FEET	0.249 MILES
NET LENGTH	60,949.66 FEET	11.543 MILES

November 6, 2024

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ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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Section C - Traffic Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
632E2530	Type 3 Object Marker	8	Each
634E0110	Traffic Control Signs	2,673.2	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	51	Each
634E0380	Tubular Marker	898	Each
634E0390	Replace Tubular Marker	100	Each
634E0420	Type C Advance Warning Arrow Board	2	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	4,210	Ft
634E0600	4" Temporary Pavement Marking Tape Type I	26,820	Ft
634E1002	Detour and Restriction Signing	1,326.8	SqFt
634E1215	Contractor Furnished Portable Changeable Message Sign	2	Each

Section D - Erosion and Sediment Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	4.0	CuYd
110E1693	Remove Erosion Control Wattle	500	Ft
110E1700	Remove Silt Fence	500	Ft
230E0020	Contractor Furnished Topsoil	1,016	CuYd
230E0100	Remove and Replace Topsoil	Lump Sum	LS
730E0212	Type G Permanent Seed Mixture	1,393	Lb
731E0200	Fertilizing	13.40	Ton
732E0100	Mulching	107.1	Ton
734E0044	Soil Stabilizer	15.0	Acre
734E0154	12" Diameter Erosion Control Wattle	2,000	Ft
734E0165	Remove and Reset Erosion Control Wattle	500	Ft
734E0602	Low Flow Silt Fence	2,000	Ft
734E0610	Mucking Silt Fence	139	CuYd
734E0620	Repair Silt Fence	500	Ft
900E1320	Construction Entrance	2	Each

SPECIFICATIONS

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

INDEX OF SHEETS

A1 Estimate of Quantities for Sections C, D, F and M
A2 to A3 Environmental Commitments

Section F - Surfacing

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
004E0050	Remove Traffic Diversion(s)	Lump Sum	LS
009E0010	Mobilization	Lump Sum	LS
009E3230	Grade Staking	0.985	Mile
009E3240	Graded Centerline Staking	0.985	Mile
009E3250	Miscellaneous Staking	13.084	Mile
009E3280	Slope Staking	12.341	Mile
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
009E3320	Checker	Lump Sum	LS
009E4200	Construction Schedule, Category II	Lump Sum	LS
110E0500	Remove Pipe Culvert	37	Ft
110E0510	Remove Pipe End Section	16	Each
110E0700	Remove 3 Cable Guardrail	1,206	Ft
110E0707	Remove High Tension 4 Cable Guardrail	303	Ft
110E0730	Remove Beam Guardrail	456.3	Ft
110E0740	Remove 3 Cable Guardrail Anchor Assembly	10	Each
110E0749	Remove High Tension 4 Cable Guardrail Anchor Assembly	2	Each
110E1010	Remove Asphalt Concrete Pavement	5,122.8	SqYd
110E6410	Remove Type 1 MGS for Reset	1,137.5	Ft
110E6617	Remove MGS Tangent End Terminal for Reset	5	Each
110E7000	Remove Crossover Closure for Reset	448	Ft
110E7500	Remove Pipe for Reset	100	Ft
110E7510	Remove Pipe End Section for Reset	40	Each
120E0010	Unclassified Excavation	3,420	CuYd
120E0100	Unclassified Excavation, Digouts	626	CuYd
120E0600	Contractor Furnished Borrow	7,877	CuYd
120E2000	Undercutting	4,313	CuYd
120E4100	Reprofiling Ditch	33.0	Sta
120E6100	Water for Embankment	101.9	MGal
120E6200	Water for Granular Material	320.5	MGal
120E9000	Pit Run	14,767.7	Ton
260E1010	Base Course	11,928.0	Ton
320E0008	PG 64-34 Asphalt Binder	3,217.2	Ton
320E1004	Class Q4 Hot Mixed Asphalt Concrete	35,739.7	Ton
320E1090	Modified Class S Asphalt Concrete	14,984.0	Ton
320E1200	Asphalt Concrete Composite	2,109.8	Ton
320E1810	Asphalt Concrete Leveling Lift	5,241.9	Ton
320E3000	Compaction Sample	3	Each
320E3100	Stabilizing Additive for Asphalt Concrete	46.7	Ton
320E4000	Hydrated Lime	407.0	Ton
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	22.6	Mile
330E0010	MC-70 Asphalt for Prime	0.5	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	203.7	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	11.0	Ton
330E2000	Sand for Flush Seal	154.4	Ton
332E0010	Cold Milling Asphalt Concrete	20,907	SqYd
380E6500	Planing PCC Pavement	9,824.0	SqYd
450E0122	18" RCP Class 2, Furnish	6	Ft
450E0130	18" RCP, Install	6	Ft
450E0142	24" RCP Class 2, Furnish	34	Ft
450E0150	24" RCP, Install	34	Ft

Section F - Surfacing - Continued

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
450E2008	18" RCP Flared End, Furnish	1	Each
450E2009	18" RCP Flared End, Install	1	Each
450E2016	24" RCP Flared End, Furnish	2	Each
450E2017	24" RCP Flared End, Install	2	Each
450E2200	24" RCP Sloped End, Furnish	3	Each
450E2201	24" RCP Sloped End, Install	3	Each
450E2204	30" RCP Sloped End, Furnish	1	Each
450E2205	30" RCP Sloped End, Install	1	Each
450E2208	36" RCP Sloped End, Furnish	1	Each
450E2209	36" RCP Sloped End, Install	1	Each
450E2308	24" RCP Safety End, Furnish	3	Each
450E2311	24" RCP Safety End, Install	3	Each
450E4748	15" CMP 14 Gauge, Furnish	14	Ft
450E4750	15" CMP, Install	14	Ft
450E5203	12" CMP Flared End, Furnish	1	Each
450E5204	12" CMP Flared End, Install	1	Each
450E5402	15" CMP Safety End, Furnish	3	Each
450E5403	15" CMP Safety End, Install	3	Each
* 450E8900	Cleanout Pipe Culvert	57	Each
450E9000	Reset Pipe	100	Ft
450E9001	Reset Pipe End Section	40	Each
600E0300	Type III Field Laboratory	1	Each
629E0110	High Tension 4 Cable Guardrail	303	Ft
629E0290	High Tension Cable Guardrail Anchor Assembly	2	Each
629E9050	Reset Crossover Closure	448	Ft
630E0500	Type 1 MGS	1,162.5	Ft
630E1501	Type 1 Retrofit Guardrail Transition	5	Each
630E2019	MGS Tangent End Terminal	5	Each
630E2110	Beam Guardrail Post and Block	192	Each
630E5010	Reset Type 1 MGS	1,137.5	Ft
630E5206	Reset MGS Tangent End Terminal	5	Each
632E2220	Guardrail Delineator	67	Each
632E2510	Type 2 Object Marker Back to Back	2	Each
634E0700	Traffic Control Movable Concrete Barrier	171	Each
634E0750	Temporary Concrete Barrier End Protection	10	Each
634E0760	Temporary Concrete Barrier End Protection Module Set or Repair Kit	2	Each
670E4200	Type M Median Drain	1	Each
831E0210	Non-woven Separator Fabric	7,950	SqYd
900E1980	Storage Unit	1	Each

* - Denotes Non-Participating

Section M - Pavement Marking

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E1220	High Build Waterborne Pavement Marking Paint, 4" White	73,300	Ft
633E1222	High Build Waterborne Pavement Marking Paint, 4" Yellow	68,205	Ft
633E1250	High Build Waterborne Pavement Marking Paint, 12" White	1,540	Ft
633E1260	High Build Waterborne Pavement Marking Paint, 24" White	130	Ft
633E3000	Durable Pavement Marking, 4" White	78,712	Ft
633E3005	Durable Pavement Marking, 4" Yellow	62,969	Ft
633E5100	Grooving for Durable Pavement Marking, 4"	283,186	Ft
633E5110	Grooving for Durable Pavement Marking, 12"	1,540	Ft
633E5115	Grooving for Durable Pavement Marking, 24"	130	Ft

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

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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 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.

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://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04](https://sdlegislature.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.

The form can be found at:

<

https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR_CGPApendixCCA2018Fillable.pdf >

The Contractor is advised that permit coverage may also be required for off-site 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> >

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

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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.