

DESIGN DESIGNATION

AADT (2021)	6245
AADT (2041)	9630
DHV	1415
D	51%
DHV T%	6.1%
AADT T%	13.5%
V	75 mph

STORM WATER PERMIT None Required



Plotting Date: 10/16/2024

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ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

Section C - Traffic Control

BID ITEM	ITEM	QUANTITY	UNIT
634E0010	Flagging	200.0	Hour
634E0110	Traffic Control Signs	587.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	1	Each
634E0420	Type C Advance Warning Arrow Board	2	Each
634E0525	Linear Delineation System Panel, Barrier Mounted	23	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	4,600	Ft
634E0640	Temporary Pavement Marking	12,240	Ft
634E0700	Traffic Control Movable Concrete Barrier	224	Each
634E0750	Temporary Concrete Barrier End Protection	2	Each
634E0755	Remove and Reset Temporary Concrete Barrier End Protection	2	Each
634E0760	Temporary Concrete Barrier End Protection Module Set or Repair Kit	2	Each
634E1002	Detour and Restriction Signing	1,124.6	SqFt

Section E – Structure Structure No. 41-229-111

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E3310	Bridge Elevation Survey	Lump Sum	LS
110E0010	Remove Concrete Bridge Approach Slab	245.7	SqYd
410E2600	Membrane Sealant Expansion Joint	79.8	Ft
430E0200	Bridge End Embankment	4	CuYd
430E0300	Granular Bridge End Backfill	29.0	CuYd
430E0510	Approach Slab Underdrain Excavation	3.1	CuYd
430E0700	Precast Concrete Headwall for Drain	2	Each
460E0150	Concrete Approach Slab for Bridge	181.5	SqYd
460E0160	Concrete Approach Sleeper Slab for Bridge	64.3	SqYd
480E0504	No. 4 Rebar Splice	28	Each
480E0505	No. 5 Rebar Splice	48	Each
480E0506	No. 6 Rebar Splice	44	Each
550E0010	Low Slump Dense Concrete Bridge Deck Overlay	29	CuYd
550E0100	Concrete Removal Type 1A	388.5	SqYd
550E0105	Concrete Removal Type 2A	97.1	SqYd
550E0110	Concrete Removal Type 1B	38.9	SqYd
550E0120	Concrete Removal Type 1C	19.4	SqYd
550E0130	Concrete Removal Type 1D	19.4	SqYd
550E0140	Concrete Removal Type B	20.0	Ft
550E0200	Class A45 Concrete Fill	7.8	CuYd
550E0500	Finishing and Curing	388.5	SqYd
680E0040	4" Underdrain Pipe	81	Ft
680E2500	Porous Backfill	5.8	Ton

Structure No. 41-229-112

BID ITEM	ITEM	QUANTITY	UNIT
009E3310	Bridge Elevation Survey	Lump Sum	LS
110E0010	Remove Concrete Bridge Approach Slab	245.7	SqYd
410E2600	Membrane Sealant Expansion Joint	79.8	Ft
430E0200	Bridge End Embankment	3	CuYd
430E0300	Granular Bridge End Backfill	29.0	CuYd
430E0510	Approach Slab Underdrain Excavation	3.1	CuYd
430E0700	Precast Concrete Headwall for Drain	2	Each
460E0150	Concrete Approach Slab for Bridge	181.5	SqYd
460E0160	Concrete Approach Sleeper Slab for Bridge	64.3	SqYd
480E0504	No. 4 Rebar Splice	28	Each
480E0505	No. 5 Rebar Splice	48	Each
480E0506	No. 6 Rebar Splice	44	Each
550E0010	Low Slump Dense Concrete Bridge Deck Overlay	30	CuYd
550E0100	Concrete Removal Type 1A	388.5	SqYd
550E0105	Concrete Removal Type 2A	97.1	SqYd
550E0110	Concrete Removal Type 1B	38.9	SqYd
550E0120	Concrete Removal Type 1C	19.4	SqYd
550E0130	Concrete Removal Type 1D	19.4	SqYd
550E0140	Concrete Removal Type B	20.0	Ft
550E0200	Class A45 Concrete Fill	7.8	CuYd
550E0500	Finishing and Curing	388.5	SqYd
680E0040	4" Underdrain Pipe	81	Ft
680E2500	Porous Backfill	5.8	Ton

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BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E0420	Remove Drop Inlet Frame and Grate Assembly	2	Each
110E1010	Remove Asphalt Concrete Pavement	3,985.4	SqYd
110E6410	Remove Type 1 MGS for Reset	1,212.5	Ft
110E6501	Remove Type 1 Retrofit Guardrail Transition for Reset	4	Each
110E6617	Remove MGS Tangent End Terminal for Reset	4	Each
110E7802	Remove Fence for Reset	80	Ft
120E0010	Unclassified Excavation	892	CuYd
230E0100	Remove and Replace Topsoil	Lump Sum	LS
250E0020	Incidental Work, Grading	Lump Sum	LS
260E2010	Gravel Cushion	832.0	Ton
320E1200	Asphalt Concrete Composite	267.4	Ton
380E0800	PCC Shoulder Pavement	3,206.0	SqYd
380E5100	Continuously Reinforced PCC Pavement Repair	231.2	SqYd
380E6000	Dowel Bar	2,400	Each
380E6110	Insert Steel Bar in PCC Pavement	832	Each
410E2600	Membrane Sealant Expansion Joint	159.5	Ft
460E0700	Joint Nosing Material	32	SqFt
480E0504	No. 4 Rebar Splice	20	Each
620E4100	Reset Fence	80	Ft
630E5010	Reset Type 1 MGS	1,212.5	Ft
630E5206	Reset MGS Tangent End Terminal	4	Each
630E5301	Reset Type 1 Retrofit Guardrail Transition	4	Each
633E1220	High Build Waterborne Pavement Marking Paint, 4" White	434	Ft
633E1222	High Build Waterborne Pavement Marking Paint, 4" Yellow	346	Ft
670E0200	Type A Frame and Grate	2	Each
700E0310	Class C Riprap	35.0	Ton
734E0010	Erosion Control	Lump Sum	LS
831E0110	Type B Drainage Fabric	30	SqYd

SPECIFICATIONS

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



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INDEX OF SHEETS

Estimate of Quantities for Sections C, E, and F Environmental Commitments

Section F - Surfacing

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 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 B4: BALD EAGLE

Bald eagles are known to occur in this area.

Action Taken/Required:

If a nest is observed within one mile of the project site, notify the Project Engineer immediately so that he/she can consult with the Environmental Office for an appropriate course of action.

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>

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

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 by an individual solid waste perm 6-1.13, and ARSD 74:27:10:06. Failure to comply with the rec penalties in accordance with So 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.

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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-

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 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.

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 N: SECTION 404 PERMIT

The SDDOT has obtained a Section 404 Permit from the USACE for the permanent actions associated with this project.

Action Taken/Required:

The Contractor will comply with all requirements contained in the Section 404 Permit.

The Contractor will also be responsible for obtaining a Section 404 Permit for any dredge, excavation, or fill activities associated with material sources, storage areas, waste sites, and Contractor work sites outside the plan work limits that affect wetlands, floodplains, or waters of the United States.

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