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ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

Estimate of Quantities

Non-Section	n Method		
BID ITEM	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E1140	Remove Concrete Sidewalk	32.0	SqYd
120E0010	Unclassified Excavation	16	CuYd
260E3010	Gravel Surfacing	65.0	Ton
634E0110	Traffic Control Signs	77.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E2000	Longitudinal Pedestrian Barricade	20	Ft
651E0040	4" Concrete Sidewalk	360	SqFt
651E0060	6" Concrete Sidewalk	235	SqFt
651E7000	Type 1 Detectable Warnings	20	SqFt
734E0845	Sediment Control at Inlet with Frame and Grate	2	Each
734E5010	Sweeping	5	Hour
998E0100	Railroad Protective Insurance	Lump Sum	LS

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.

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GRADING OPERATIONS

Water for Embankment is estimated at the rate of 10 gallons of water per cubic yard of Embankment minus Waste. No separate payment will be made for the Water for Embankment and all costs associated will be incidental to the contract unit price per cubic yard of "Unclassified Excavation".

UTILITIES

The Contractor will be aware that the existing utilities were not surveyed prior to the design of this project. The utilities are not expected to be impacted.

Prior to excavation in or adjacent to BNSF (Burlington Northern Santa Fe) Railway ROW and in conjunction with contacting the SD One-Call, the Contractor will call the BNSF Utility Locate number 1-800-533-2891.

PROCEDURES FOR DETERMINING UNCLASSIFIED EXCAVATION QUANTITY

The Unclassified Excavation plans quantity will be used for final payments and will not be adjusted according to field measurements.

Compaction will be to the satisfaction of the Engineer.

REMOVAL OF EXISTING CONCRETE SIDEWALK

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



The existing P.C.C. Sidewalk is typically 5 feet wide. The sidewalk detail shown above is typical for this project; however, other special details are shown on the Original Construction Plans for project P 0025(21)181 PCN 3241 included in this plan set. This information is from original construction plans and actual sidewalk thickness may vary.

6" CONCRETE SIDEWALK

The concrete sidewalk will be constructed in accordance with Section 651.

Concrete will be 6" for RR Approach at the following locations.

Station	Offset		Station	Offset	
669+62.58	41.27	to	669+63.35	22.00	

GRAVEL CUSHION

All costs associated with the estimated 15 tons of gravel cushion material will be incidental to the contract unit price per square foot for 6" Concrete Sidewalk and 4" Concrete Sidewalk.

The gravel cushion will meet the requirements of Section 882. Compaction will be to the satisfaction of the Engineer.

TYPE 1 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.

A concrete thickness equal to the adjacent concrete sidewalk thickness and 2 inches of granular cushion material will be placed below the Type 1 Detectable Warnings. When concrete is placed below the detectable warnings then the concrete thickness will be transitioned at the rate of 1" per foot to match the adjacent concrete sidewalk thickness.

The detectable warnings will be a brick red color for application in concrete curb ramps. Cast iron plates may be a natural patina (weathered steel).

Type 1 Detectable Warning Panels will be one of the following products:

Type 1 Detectable Warnings

Product

Detectable Warning Plate Cast Iron Plate

Detectable Warning Plate Cast Iron Plate

Detectable Warning Plate Cast Iron Plate(No Coating)

Iron Dome Cast Iron Detectable Warning Tile

Neenah Foundry Company Neenah. WI 800-558-5075 http://www.neenahfoundry.com/

Manufacturer

Deeter Foundry Lincoln. NE 800-234-7466 http://www.deeter.com/

East Jordan Iron Works, Inc. 301 Spring Street East Jordan, MI 49727 800-626-4653 http://www.ejiw.com

ADA Solutions. Inc. 323 Andover Street Suite 3 Wilmington, MA 01887 800-372-0519 https://adatile.com

TufTile (wet-s Cast Iron Replaceable

> Advantage Detectable V Cast Iron

COORDINATION WITH RAILROAD

A separate project to remove, replace, and relocate the signal pole and lever arm to northwest of the industrial railroad crossings on SD 25 that will be done prior to this project. A railroad crossing extension will also be added prior in preparation for this project.

The Contractor will coordinate with the Railroad to provide traffic control and when scheduling construction.

REGION BRIDGE ENGINEER CLEARANCES

The Engineer will contact Senior Region Bridge Engineer Josh Olson after the new RR crossing signals and final surfacing are installed for measurement of vertical and horizontal clearances. Office phone is (605)626-7894.

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.

SD HWY 25 TRAFFIC CONTROL

Access to businesses will be maintained at all times.

Highway 25.

Traffic control for the sidewalk work will be according to standard plate 634.03. A 12' driving lane must be maintained in each direction at all times on SD 25. Typical Section for SD 25 has 22' width of concrete from centerline to Curb and Gutter as determined from Original Construction Plans. The work areas will be separated from traffic using channelizing devices, as per standard plate 634.03. Pedestrian traffic control will be according to Standard Plate 634.33.

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set)	TufTile 1200 Elex Court	
Tile	Lake Zurich, IL 60047	
	888-960-8897	
	http://www.tuftile.com/	
Tactile	Advantage Tactile Systems, Inc.	
Varning	241 Main Street, Suite 100	
Plate	Buffalo, NY 14203	
	800-679-4022	
	https://advantagetactile.com/	

Pedestrians will be directed to the side of the project where no work is taking place. Pedestrian traffic control will be according to standard plate 634.33. The pedestrian crossings will be at 4th Avenue and 5th Avenue respectively on SD

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.

The bottom of signs on portable or temporary supports will not be less than seven feet above the pavement in urban areas. Portable sign supports may be used as long as the duration is less than 3 days. If the duration is more than 3 days the signs will be on fixed location, ground mounted, breakaway supports.

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 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.

TRAFFIC CONTROL SIGNS

Traffic control sign estimates have been included in a table. Contractor's operation may require adjustments in quantities. Payment will only be for those signs used.

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 sidewalk 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 6F.68 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".

PEDESTRIAN CHANNELIZING DEVICE DETAILS



Longitudinal Pedestrian Barrier

Longitudinal Pedestrian Barricade

- 1. Barricade rail supports may not extend into the pedestrian walkway more than 4 inches from the face of the barricade.
- 2. The top edge of the bottom portion will be a minimum of 8 inches above the walkway.
- 3. Devices will not block water drainage from the walkway. A gap height or opening from the walkway surface up to a maximum of 2 inches in height is allowed for drainage purposes.
- 4. The top edge of the longitudinal pedestrian barricade is to be used as a guiderail to provide visual and tactile guidance to pedestrians along a designated route. The top surface should have a minimum width of 0.5 inches to allow the hand to feel the surface. The surface should be smooth and free of any sharp or abrasive elements to allow safe hand trailing.
- 5. Longitudinal pedestrian barrier used to provide positive protection from traffic to pedestrians should be crashworthy.

SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES

This type of sediment control device should be used where there is pavement in the vicinity of the drop inlets and storm water or sediment could possibly enter the frame and grate. Sediment Control at Inlet with Frame and Grate will be installed prior to working in the vicinity of the drop inlets.

The Contractor will be responsible for maintaining and repairing the sediment control devices for the duration of the project for which sediment control measures are required. Maintenance will be scheduled to prevent storm water from backing up into the driving lane.

"Sediment Control at Inlet with Frame and Grate" will be paid for one time at each location, regardless of the number of times the sediment control devices are installed, inspected, cleaned, removed, repaired, or replaced. All costs associated with furnishing, installing, inspecting, maintaining, cleaning, sediment removal, and repairing Sediment Control at Inlet with Frame and Grate will be incidental to the contract unit price per each for "Sediment Control at Inlet with Frame and Grate".

Sediment collection devices will be:

following internet site:

http://sddot.com/business/certification/products/Default.aspx

DEBRI CLEANUP

Vehicle tracking of sediment from the construction site will be minimized. Street sweeping will be used if sediment control best management practices are not adequate to prevent sediment from being tracked onto the street.

The Contractor will use a pickup broom having integral self-contained storage to clean the roadway. The pickup broom used will be a minimum of 6 feet wide and have working gutter brooms.

roadway to traffic.

All costs for cleaning the roadway with a pickup broom will be incidental to the contract unit price per hour for "Sweeping".

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A sediment control device as shown on Standard Plate 734.10. Filter fabric used for constructing the sediment control at inlets with frames and grates will be the same type of fabric that is used in high flow silt fence from the approved product list. The approved product list may be viewed at the

At a minimum, sweeping will be required prior to opening any segment or

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

			CONVENTIONAL ROAD		
SIG N CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R9-11a	SIDEWALK CLOSED (ARROW L or R) CROSS HERE	2	24" x 12"	2.0	4.0
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W21-5	SHOULDER WORK	2	48" x 48"	16.0	32.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT		77.0	

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PLOT SCAL

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TYPICAL SECTIONS

Drawings not to scale.



TYPICAL 4" - 5' WIDE SIDEWALK SECTION



TYPICAL 6" - 5' WIDE SIDEWALK SECTION

* Cross Slope for sidewalk will be 1.5% (2.0% max)

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Drawing not to scale.









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ESTRIAN RSSWALK R9-8 ptional)	MIE-TP	W16-9P			
	Temp Mark Cros	porary Pavement ings for swalk Lines			PLOT NAME - 1
SIDEWALK CLOSED R9-9 WALK CLOSED R0-9 WALK CLOSED R0-9 WALK CLOSED R0-9 WALK CLOSED R0-9 R0-11 Curb parking will be 50 feet in advance Pedestrian traffic s closed crosswalks deactivated. Only the traffic con pedestrian flows ar be needed to contr Use lane closure si signs as needed. Street lighting shou For nighttime closu lights may be used signs and closing s The channelizing d type 2 barricades if remain overnight.	 Channelizir Longitudina Barricade prohibited for of midblock cross gnal displays of should be cover trol devices core shown. Other of traffic on the gning or ROAL Id be considered res, Type A flaton barricades idewalks. evices will be of traffic control to 	ng Device al Pedestrian at least osswalk. controlling r devices may streets. D NARROWS ed. shing warning supporting drums or must January 22, 2021 PLATE NUMBER			FILE · NIGJN_TC STANDARD PLATES.DGN
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NOC PLATES.





NOC PLATES.

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