

#### BROOKINGS, CODINGTON, DEUEL, GRANT, HAMLIN, MOODY, AND ROBERTS COUNTIES

### **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: <a href="https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.pdf">https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.pdf</a> >

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.

#### BROOKINGS, CODINGTON, DEUEL, GRANT, HAMLIN, MOODY, AND ROBERTS COUNTIES

#### **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.

The Contractor will not withdraw water directly from streams of the James, Big Sioux, and Vermillion watersheds without prior approval from the SDDOT Environmental Office.

#### 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:

< http://sdleastwanted.com/maps/default.aspx >

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

#### **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:

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".

#### BROOKINGS, CODINGTON, DEUEL, GRANT, HAMLIN, MOODY, AND ROBERTS COUNTIES

#### **COMMITMENT H: WASTE DISPOSAL SITE (Cont.)**

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: HISTORICAL PRESERVATION OFFICE CLEARANCES**

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

#### Action Taken/Required:

All earth disturbing activities 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.

#### BROOKINGS, CODINGTON, DEUEL, GRANT, HAMLIN, MOODY, AND ROBERTS COUNTIES

#### **SPECIFICATIONS**

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

#### **SCOPE OF WORK**

Contractor will furnish all necessary vehicles, equipment, supervision, labor, materials, tools, water, debris disposal and incidentals necessary to complete the work to the satisfaction of the Engineer. Work to be done consists of cleaning/sweeping bridge decks, adjacent approach slabs, and transverse joints located within the bridge deck and approach slabs. The cleaning/sweeping operation will consist of removing all dirt, mud, silt, sand, paper, rocks, cans, glass, dead animal carcasses, tire retreads, vehicle parts and other debris. Unforeseen conditions, such as weather, can bring unusual amounts of debris to bridge sites. Removal of all debris regardless of scope and magnitude is the responsibility of the Contractor.

Contractor will be required to provide specialized heavy equipment such as sweepers, haul trucks and air compressors to remove debris, sand, mud and silt from bridge sites as indicated in the Contract.

For each bridge site the Contractor will perform a cleaning/sweeping twice during the terms of this contract. The first cleaning/sweeping will be conducted during the months of April and May. The second cleaning/sweeping will be conducted during the months of September and October.

#### **GENERAL REQUIREMENTS**

Contractor will evaluate actual bridge site characteristics before submitting a bid. It is the intent of this Contract to provide for cleaning and sweeping of all bridge decks, adjacent approach slabs, and transverse joints located within the bridge deck and approach slabs within the areas described herein.

The TABLE OF BRIDGES (Attachment 1) contained within these plans provides the list of bridge sites that require cleaning/sweeping. This table also provides information on bridge length, width and size of approach slabs. Not all bridges contain approach slabs. The cover map(s) provide a general idea of bridge site locations.

Contractor will comply with all Federal, State, County and local regulations, including disposal of debris collected.

All work will be accomplished during daylight hours.

Equipment and vehicles will not be stored in the highway Right-of-Way.

Approach Slabs as defined for this contract are reinforced concrete slabs located at each end of the bridge deck. Approach slabs typically have curbs located along the edges of the slab. The length of approach slabs varies in length and in some cases, consist of 2 slabs. The end of an approach slab is typically defined by a wide joint of over 6 inches or 2 joints located with approximately 2 feet between the joints.

#### **CLEANING SCHEDULE**

The Contractor will provide the Engineer a cleaning schedule for the upcoming week, no later than 10AM Friday. The Contactor will provide the Engineer a phone number to be able to contact the onsite Forman of the crew during working hours.

#### BROOKINGS, CODINGTON, DEUEL, GRANT, HAMLIN, MOODY, AND ROBERTS COUNTIES

#### TRAFFIC CONTROL

For a 2 lane roadway with traffic in opposing directions, traffic control will be as per Standard Plate 634.23. As an alternate, the Contractor may use the traffic control plan MOBILE SWEEPING OPERATIONS ON A 2 LANE ROADWAY contained within this document.

For a 4 lane divided roadway, traffic control will be as per Standard Plate 634.64. As an alternate, the Contractor may use the traffic control plan MOBILE SWEEPING OPERATIONS ON DIVIDED 4-LANE ROADWAY contained within this document.

For a 4 lane undivided roadway, traffic control will be as per Standard Plate 634.47. On those roadways where there is a center raised median that requires sweeping, traffic control will be as per Standard Plate 634.48. As an alternate, the Contractor may use the traffic control plan MOBILE SWEEPING OPERATIONS ON DIVIDED 4-LANE ROADWAY contained within this document.

Vehicles and equipment working in traffic or alongside traffic will be equipped with a flashing amber light visible from all directions at a minimum distance of 1/2 mile. The amber light will be mounted on the uppermost part of the Contractor's vehicle. Lights must flash at 75 ±15 flashes per minute. The sweeper will have lights, meeting the aforementioned requirements, at the front and back of the equipment. Vehicle flasher/hazard lights are not acceptable.

The Contractor's equipment will be required to enter and leave the sites on Interstate only at interchanges. Crossing of the median will not be allowed.

#### **SWEEPING REQUIREMENTS**

Sweeping areas will include all curb lines along both sides of the bridge deck and approach slabs, or to the edge of the pavement or guardrail where no curbs exist, along all curbs on raised medians, and over all portions of painted medians. Contractor is responsible for sweeping from the marked white or yellow edge line to the edge of bridge deck or approach slab regardless of the width. If there are no marked white or yellow edge lines, a minimum width of 5 feet will be swept along the edges of the bridge deck or approach slab.

All refuse materials and debris will be collected.

Effort beyond a mechanical sweeper may be required to loosen harden and packed material on the surface and along the curb face.

Sweeping will be accomplished in the same direction as traffic flow at all times.

Contractor will make every reasonable effort to minimize streaks left by sweepers.

At least 2 passes of the sweeper will be made over areas that require sweeping. The total number of passes required will vary based upon the width of sweeping required and the width of the sweeper used.

Sweeping operations will extend at least 50 feet beyond both ends of the approach slab, or end of bridge deck if no approach slab is present. There should be no ridge or pile of material left on the roadway or shoulder surface at the end of the sweeping operations. This may require hand work under the guardrail.

#### BROOKINGS, CODINGTON, DEUEL, GRANT, HAMLIN, MOODY, AND ROBERTS COUNTIES

#### JOINT CLEANING REQUIREMENTS

Transverse joint openings located on the bridge deck and approach slabs will be cleaned of debris with compressed air, or other methods approved by the Engineer. Joint cleaning will be accomplished at the same time as sweeping of the bridge deck and approach slabs. Debris will not be blown over the edge of the deck onto the underlying roadway or waterway channel. The entire length of the joint will be cleaned.

#### **BRIDGE CLEANING EXCEPTIONS**

The 2 bridges within the City of Watertown on US212 do not require cleaning.

#### **BRIDGE CLEANING CONFLICTS**

There are bridges that are scheduled for construction during the calendar year. This construction may conflict with the completion of 2 bridge cleanings. These potential conflicts are noted in The TABLE OF BRIDGES (Attachment 1) in the far-right column. It is anticipated that one cleaning can be accomplished on these bridges. Quantities for the project are based upon these conflict bridges being cleaned one time. The Contractor will work with the Engineer to determine what locations have conflicts at the time cleaning is planned.

#### **DISPOSAL**

All refuse materials and debris collected will become the property of the Contractor and will be properly disposed of.

NO "on road" storage or dumping will be permitted.

#### **EQUIPMENT**

All equipment will be adequately maintained both mechanically and visually, and will be fully operational during all sweeping operations.

All equipment will be properly registered and insured according to motor vehicles laws of the state of South Dakota.

All units will be clearly and prominently marked with Contractor's company name.

#### • <u>AIR COMPRESSOR</u>

Compressor will have a rated pressure of 100 psi with a minimum pressure level of 80 psi. Compressor will be capable of delivering a minimum of 180 CFM.

#### SWEEPER

Minimum width of main broom or pickup head will be 54 inches. Sweeper will utilize both left side and right side brooms for picking up debris. Sweeper will have an internal self-contained storage hopper. Storage hopper will be a minimum capacity of 4 Cubic Yards.

#### BROOKINGS, CODINGTON, DEUEL, GRANT, HAMLIN, MOODY, AND ROBERTS COUNTIES

#### SWEEPER BRUSH/BROOM REPLACEMENT

Worn brushes and brooms will be replaced and adjusted to insure maximum efficiency.

- a. Six (6) inches on the gutter brushes;
- b. As required on trash direction brush;
- c. Six (6) inches on the main broom.

These will be minimum criteria and final determination will be on the effectiveness of all brushes and brooms.

#### • ATTENUATOR

Truck mounted or trailer attenuators may be utilized, provided attenuators conform to and are maintained in accordance with the requirements of Section 634.2 and Part 6 of the MUTCD for Category III traffic control devices.

#### **DUST CONTROL**

Contractor will use all reasonable methods to minimize dust emissions during the performance of this Contract. Contractor will not create dust in such a quantity to create a nuisance, danger, or impair visibility.

Spraying of water during sweeping operations may be required to control dust.

#### **PERFORMANCE**

Primary objectives of the cleaning/sweeping program are:

- Remove debris buildup to reduce infiltration of roadway deicers into concrete.
- Prevent debris from enter storm drains and bridge deck drains.
- · Prevent debris from entering waterways.
- Maintain gutter flow lines free of debris for free flow of water.
- Maintain a state of cleanliness for safety and acceptable to travelers.

Sweeping will normally consist of a pass (or passes) over an area. Contractor will make as many passes or such extra effort as may be required to adequately clean the bridge deck and approach slabs. Obstructions such as accumulations of silt, compacted dirt, leaves and similar debris will be removed. Items such as small tree limbs, dead animal carcasses, tire retreads, vehicle parts and rocks may require removal prior to sweeping with a mechanical sweeper.

Inspections will be performed on a regular basis, as well as spot checks and response to complaints.

Engineer will decide adequacy of cleaning/sweeping.

In the event that the results of a cleaning/sweeping are considered to be unsatisfactory, Contractor will reclean/sweep unsatisfactory area(s) at Contractor's expense within 10 days after notification.

SDDOT reserves the right to withhold payment for missed, incomplete or unsatisfactory sweeping performance.

#### BROOKINGS, CODINGTON, DEUEL, GRANT, HAMLIN, MOODY, AND ROBERTS COUNTIES

#### **DEFICIENT PERFORMANCE**

Liquidated Damages will be applied to deficient performance and/or late completion.

Repeated instances of failure to perform will result in cancellation of the Contract.

#### **RECORD KEEPING**

Contractor will complete RECORD OF BRIDGE CLEANING (Attachment 2) contained within the contract. Contractor will document arrival time at each bridge site, start and finish time of sweeping operations, number of passes made with sweeper, and departure time from each bridge site. Payment for services will not be made until document is completed and submitted to Engineer. Recording keeping will be kept up to date at all times and records will be made available to Engineer at any time.

The Contractor may submit to the Area Engineer, other methods of documenting cleaning progress. The Contractor will submit alternate documenting methods a minimum of 1 week prior to the preconstruction meeting.

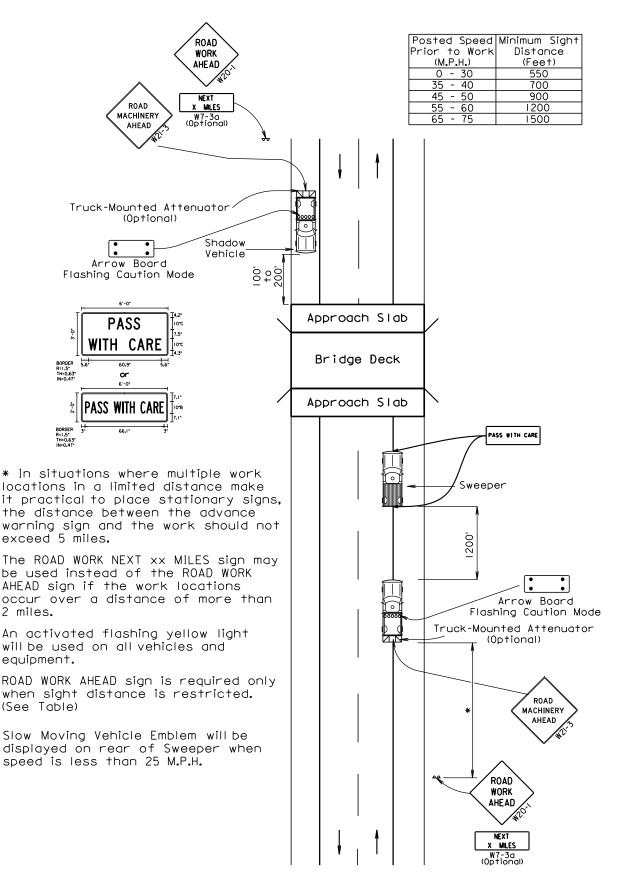
#### BASIS OF MEASUREMENT AND PAYMENT

All costs for equipment, materials, labor and incidentals to clean/sweep will be incidental to the contract unit price per site for MISCELLANEOUS WORK. A cleaning/sweeping during the months of April and/or May will constitute 1 site payment and the second cleaning/sweeping in September and/or October will constitute 1 site payment. The cost for disposal of all refuse materials and debris, including dump fees, will be included in the contract unit price per site for MISCELLANEOUS WORK.

All costs for shadow vehicles, traffic control signs, arrow boards, flaggers, impact attenuators and other safety devices will be incidental to the contract lump sum price for TRAFFIC CONTROL, MISCELLANEOUS.

#### BROOKINGS, CODINGTON, DEUEL, GRANT, HAMLIN, MOODY, AND ROBERTS COUNTIES

# MOBILE SWEEPING OPERATIONS ON A 2-LANE ROADWAY



BROOKINGS, CODINGTON, DEUEL, GRANT, HAMLIN, MOODY, AND ROBERTS COUNTIES

# MOBILE SWEEPING OPERATIONS ON A DIVIDED 4-LANE ROADWAY

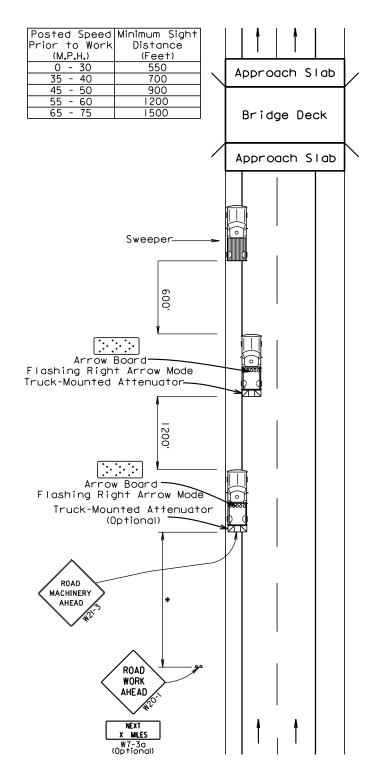
\* In situations where multiple work locations in a limited distance make it practical to place stationary signs, the distance between the advance warning sign and the work should not exceed 5 miles.

The ROAD WORK NEXT xx MILES sign may be used instead of the ROAD WORK AHEAD sign if the work locations occur over a distance of more than 2 miles.

An activated flashing yellow light will be used on all vehicles and equipment.

ROAD WORK AHEAD sign is required only when sight distance is restricted. (See Table)

Slow Moving Vehicle Emblem will be displayed on rear of Sweeper when speed is less than 25 M.P.H.



BROOKINGS, CODINGTON, DEUEL, GRANT, HAMLIN, MOODY, AND ROBERTS COUNTIES

# MOBILE SWEEPING OPERATIONS ON A DIVIDED 4-LANE ROADWAY

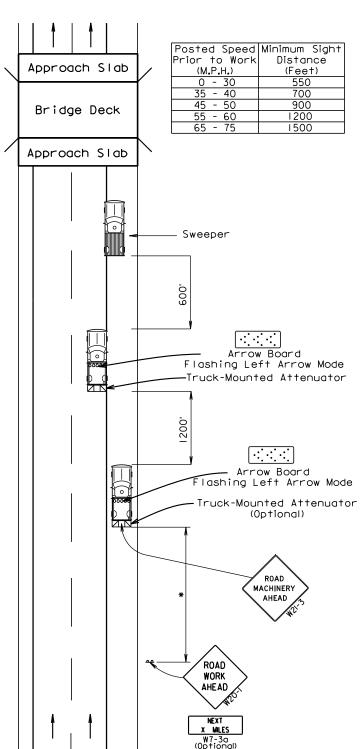
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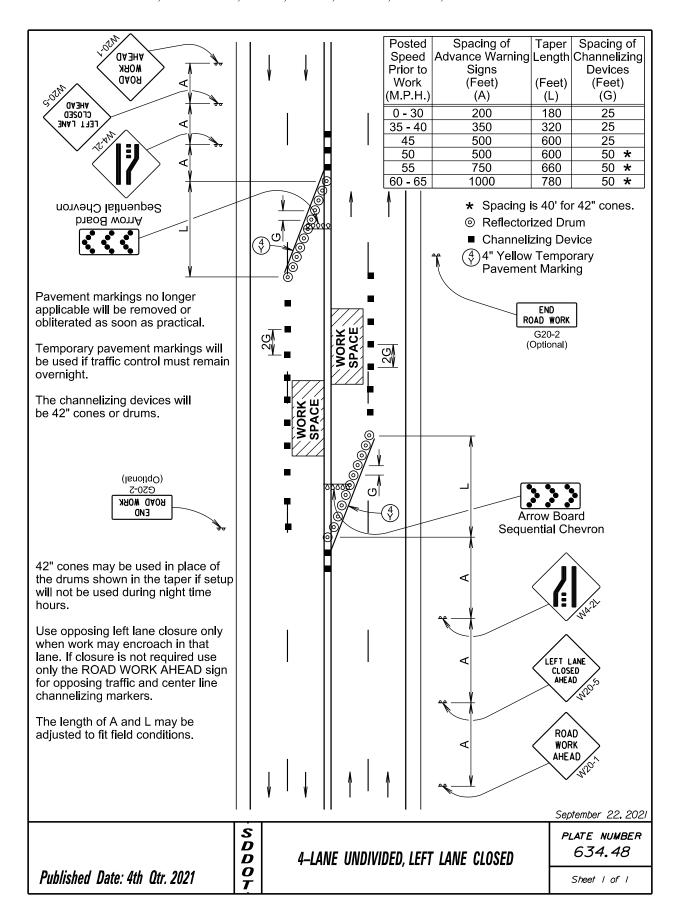
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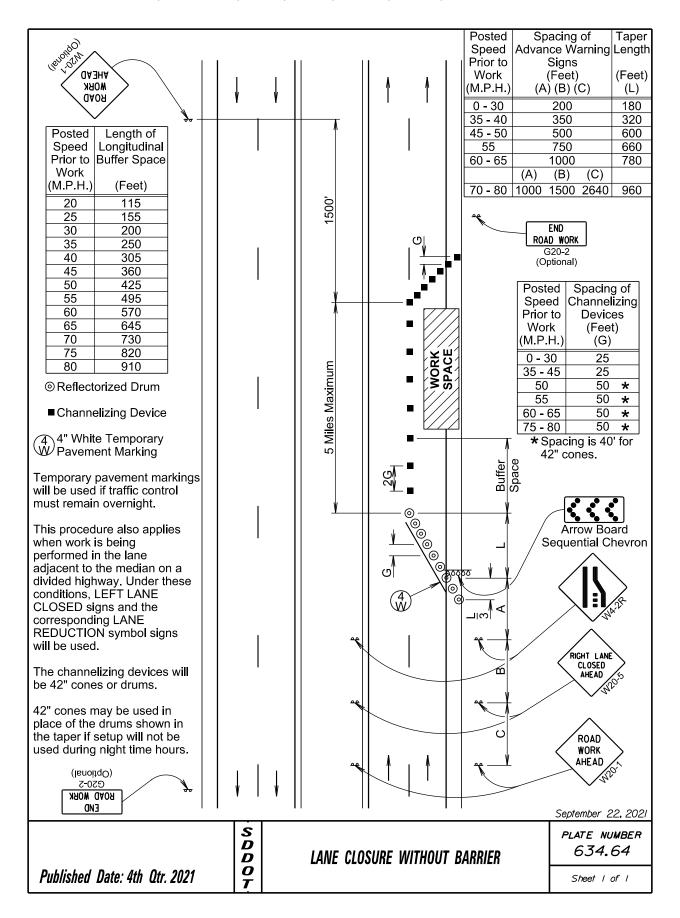
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Work (M.P.H.)	(Feet) (A)	(Feet) (L)	(Fee		11'			•	•		
0 - 30	200		25								END
35 - 40	350	180 320	25								ROAD WORK
45	500	600	25								G20-2
50	500	600	50	) <b>*</b>		'		1			(Optional)
55	750	660	50								
60 - 65	1000	780	50	<b>*</b>							
* Spac	ing is 40' for 42" co	ones.						ı	<u>.</u> ••• -	100' Max.)	
	ectorized Drum					1		<b>■</b>			
_	nnelizing Device										
4 4" W Pave	hite Temporary ement Marking					ı			WORK		
The cha	nnelizing devices v r drums.	vill be 42	<u>'</u>						<b>S S</b>		
drums s	es may be used in hown in the taper i be used during nigh	f setup	the								
will be u	ary pavement mark sed if traffic contro main overnight.	ings I								<u> </u>	
The leng	gth of A and L may I to fit field conditio	be ns.									Arrow Board Sequential Chevror
								ני	) <sup>†</sup>   <b>\</b> @	<b>A</b>	
						1		1			NW 28
										A A	RICHT LANE CLOSED AHEAD
								<b>Λ</b>	<b>A</b>		ROAD WORK AHEAD
					<u> </u>		<u>  </u>	·	<u> </u>		September 22, 2021
			S D D		4–LANE	UNDIVI	DED,	RIGHT	LANE (	CLOSED	PLATE NUMBER 634.47
Publishe	ed Date: 4th Qtr. 20	<i>121</i>					•				Sheet I of I





BROOKI	NGS,	, COI	OING	TON	, DE	UEL,	GR	ANT,	HAN	MLIN	I, M(	OOD	Y, AN	ID R	OBE	RTS	COU	NTII	ES		
, n n o c t c i i t																					
Deck Joint Quantity (LF)					64								89	78							
Approach Joint Quantity (LF)	80	80	89	89		64	64		64	89	80	80			80	80	80	80	80	80	80
Approach Quantity (SF)	1635	1635	1387	1387		1337	1337		1312	1312	1633	1633			2159	2159	1633	1633	1633	1633	2159
Skew Angle	0	0	0	0	0	0	0	0	17.68	17.68	0	0	0	0	30	30	0	0	0	0	30
Deck Area (SF)	4522	4522	12747	12747	7620	4545	4545	7112	4593	4593	4883	4883	9026	10044	2169	2169	4522	4522	2793	2793	3299
Bridge Roadway Width (Ft)	38	38	32	32	30	30	30	28	30	30	38	38	32	36	38	38	38	38	38	38	38
Structure Length (Ft)	119	119	398.33	398.33	254	151.5	151.5	254	153.1	153.1	128.5	128.5	283	279	151.81	151.81	119	119	73.5	73.5	86.81
Location	7.0 N of SD 32 & I-29 Interchange	7.0 N of SD 32 & I-29 Interchange	1.0 S of Brooking County Line	51-065-010 1.0 S of Brooking County Line	1.0 N of Moody County Line	2.3 N of Moody County Line	2.2 N of Moody County Line	3.0 S of US 14 & I-29 Interchange	0.9 S of US 14 & I-29 Interchange	0.9 S of US14 & I-29 Interchange	1.1 N of US 14 Bypass	1.1 N of US 14 Bypass	2.0 N of US 14 Bypass	3.0 S of SD 30 & I-29 Interchange	06-185-074 0.6 N of SD 30 & I-29 Interchange	0.6 N of SD 30 & I-29 Interchange	3.0 N of SD 30 & I-29 Interchange	3.0 N of SD 30 & I-29 Interchange	4.4 S of Deuel County Line	06-184-044   4.4 S of Deuel County Line	3.1 S of Deuel County Line
Structure	51-066-030	51-065-030	51-066-010	51-065-010	06-185-230	06-185-218	06-184-218	06-185-190	06-185-169	06-184-169	06-185-139	06-184-139	06-185-130	06-185-110	06-185-074	06-184-074	06-185-050	06-184-050	06-185-044	06-184-044	06-185-031
MRM	121.83	121.83	123.84	123.84	125.80	127.05	127.05	129.80	131.89	131.89	134.94	134.94	135.81	137.79	141.45	141.45	143.80	143.80	144.44	144.44	145.85
Route	I-29 N	I-29 S	I-29 N	I-29 S	1-29	I-29 N	I-29 S	1-29	I-29 N	I-29 S	I-29 N	I-29 S	1-29	1-29	I-29 N	I-29 S	I-29 N	I-29 S	I-29 N	I-29 S	I-29 N

# TABLE OF BRIDGES

BROOKI	NGS,	, COI	OING	TON	, DE	UEL	, GR	ANT,	HAN	ИLIN	I, M(	OOD	Y, AN	D R	OBE	RTS	COU	NTII	ES		
0 C + 0 t										*	*										
Deck Joint Quantity (LF)						54	54			54	54					58	58	66			53
Approach Joint Quantity (LF)	80	80	80	80	80			80	80			80	80	80	80	40	40		80	80	40
Approach Quantity (SF)	2159	1633	1633	1635	1635	2584	2584	2094	2094	2583	2635	1635	1635	1704	1971	2875	2875	2875	1633	1594	2611
Skew	30	0	0	0	0	40	40	28.25	28.25	40	40	0	0	23.55	23.55	45	45	45	0	0	40
Deck Area (SF)	3299	4522	4522	5225	5225	5974	5974	5162	5162	7095	6487	8854	8854	5272	5272	9905	9905	13621	6954	6954	6924
Bridge Roadway Width (Ft)	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	32	38	38	38
Structure Length (Ft)	86.81	119	119	137.5	137.5	157.21	157.21	135.83	135.83	186.7	170.71	233	233	138.73	138.73	260.67	260.67	425.67	183	183	182.21
Location	3.1 S of Deuel County Line	1.0 S of Deuel County Line	1.0 S of Deuel County Line	0.9 N of SD 28 & I-29 Interchange	0.9 N of SD 28 & I-29 Interchange	3.5 NW of SD 28 & I-29 Interchange	3.5 NW of SD 28 & I-29 Interchange	6.9 NW of SD 28 & I-29 Interchange	6.9 NW of SD 28 & I-29 Interchange	6.0 SE of SD 22 & I-29 Interchange	6.0 SE of SD 22 & I-29 Interchange	5.5 SE of SD 22 & I-29 Interchange	5.5 SE of SD 22 & I-29 Interchange	2.5 SE of SD 22 & I-29 Interchange	2.5 SE of SD 22 & I-29 Interchange	SD 22 & I-29 Interchange	29-299-040 SD 22 & I-29 Interchange	2.8 NW of SD 22 & I-29 Interchange	4.0 NW of SD 22 & I-29 Interchange	4.0 NW of SD 22 & I-29 Interchange	Hamlin/Codington County Line
Structure	06-184-031	06-185-010	06-184-010	20-061-271	20-060-271	20-050-248	20-049-248	20-035-220	20-034-220	20-030-211	20-029-211	20-028-207	20-027-207	20-015-180	20-014-180	29-300-040	29-299-040	29-280-020	29-272-012	29-271-012	29-261-000
MRM	145.85	147.80	147.80	151.85	151.85	154.50	154.50	157.63	157.63	158.74	158.74	159.16	159.21	162.10	162.15	164.58	164.65	167.40	168.59	168.59	170.23
Route	I-29 S	I-29 N	I-29 S	I-29 N	I-29 S	I-29 N	I-29 S	I-29 N	I-29 S	I-29 N	I-29 S	I-29 N	I-29 S	I-29 N	I-29 S	I-29 N	I-29 S	1-29	I-29 N	I-29 S	I-29 N

# TABLE OF BRIDGES

BROOKI	105,	COI	71110	101	, DE	OEL,	, GIV	1111,	11/1/	, IIIII	1, 111	JOD.	.,	ID IX	ODE	KIS	COU	1111	25		
t c + 1 0 c																					
Deck Joint Quantity (LF)	54	66	58	58	82	82			69			98	98	69							70
Approach Joint Quantity (LF)	40		40	40			82	82		80	80	84	84	69	84	84	84	84	84	84	89
Approach Quantity (SF)	2583	2942	2770	2873	1635	1635	1635	1635	1389	1633	1633	1715	1715	2372	1715	1715	1715	1715	1715	1715	2372
Skew	40	45	45	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deck Area (SF)	6924	13365	6637	6637	11704	11704	8474	8474	9440	4788	4788	21160	18160	9488	4760	4760	5280	5280	4760	4760	9376
Bridge Roadway Width (Ft)	38	32	38	38	38	38	38	38	32	38	38	40	40	32	40	40	40	40	40	40	32
Structure Length (Ft)	182.21	417.67	174.67	174.67	308	308	223	223	295	126	126	529	454	296.5	119	119	132	132	119	119	293
Location	Hamlin/Codington County Line	2.9 N of Hamlin County Line	2.3 SE of US 212 & I-29 Interchange	2.3 SE of US 212 & I-29 Interchange	US 212 & I-29 Interchange	US 212 & I-29 Interchange	1.7 N of US 212 & I-29 Interchange	1.7 N of US 212 & I-29 Interchange	6.0 N of US 212 & I-29 Interchange	8.0 N of US 212 & I-29 Interchange	8.0 N of US 212 & I-29 Interchange	4.8 S of SD 20 & I-29 Interchange	4.8 S of SD 20 & I-29 Interchange	4.0 S of SD 20 & I-29 Interchange	2.0 N of Codington County Line	2.0 N of Codington County Line	6.2 S of US 12 & I-29 Interchange	6.2 S of US 12 & I-29 Interchange	2.0 S of Roberts County Line	2.0 S of Roberts County Line	Grant/Roberts County Line
Structure	29-260-000	15-240-220	15-220-199	15-220-200	15-215-180	15-214-180	15-215-163	15-214-163	15-215-120	15-216-100	15-215-100	15-216-078	15-215-078	15-215-070	26-086-100	26-085-100	26-086-070	26-085-070	26-085-040	26-084-040	55-085-440
MRM	170.23	173.02	175.93	175.93	177.96	177.96	179.64	179.64	183.94	185.95	185.95	188.17	188.17	189.00	197.96	197.96	201.05	201.05	204.06	204.06	206.08
Route	I-29 S	1-29	I-29 N	I-29 S	I-29 N	I-29 S	I-29 N	I-29 S	I-29	I-29 N	I-29 S	I-29 N	I-29 S	1-29	I-29 N	I-29 S	I-29 N	I-29 S	I-29 N	I-29 S	1-29

BROOKI	NGS,	COI	OING	TON	, DE	UEL.	, GR	ANT,	HAN	иLIN	I, M(	OOD	Y, AN	D R	OBE	RTS	COU	NTII	ES		
005404	*	*																			
Deck Joint Quantity (LF)			65	65			70	70									78				
Approach Joint Quantity (LF)	84	84				84			84	84	84	84	84	84	84	84		84	84	89	84
Approach Quantity (SF)	1876	1876	4017	4017	1564	1564	2372	2372	1715	1715	2779	2779	2779	2779	1607	1607	1551	3096	3096	2423	1715
Skew	18.23	18.23	48.32	48.32	7.3	7.3	0	0	0	0	40	40	40	40	10	10	0	15	15	18.15	0
Deck Area (SF)	6564	6564	11640	11240	3981	3981	9352	9352	5120	5120	3744	3744	3744	3744	5482	5482	10512	5862	5862	10563	3200
Bridge Roadway Width (Ft)	40	40	40	40	40	40	32	32	40	40	40	40	40	40	40	40	36	40	40	32	40
Structure Length (Ft)	164.1	164.1	291	281	99.52	99.52	292.25	292.25	128	128	93.6	93.6	93.6	93.6	137.04	137.04	292	146.54	146.54	330.1	80
Location	0.6 S of US 12 & I-29 Interchange	0.6 S of US 12 & I-29 Interchange	1.6 SW of SD 15 & I-29 Interchange	1.6 SW of SD 15 & I-29 Interchange	1.9 NE of SD 15 & I-29 Interchange	1.9 NE of SD 15 & I-29 Interchange	4.0 N of SD 15 & I-29 Interchange	2.0 S of Peever Interchange	Peever Interchange	Peever Interchange	1.4 N of Peever Interchange	1.4 NW of Peever	1.8 NW of Peever	1.8 NW of Peever	5.1 S of SD 10 & I-29 Interchange	5.1 S of SD 10 & I-29 Interchange	3.0 S of SD 10 & I-29 Interchange	0.8 N of SD 10 & I-29 Interchange	0.8 N of SD 10 & I-29 Interchange	2.0 N of SD 10 & I-29 Interchange	5.5 NE of SD 10 & I-29 Interchange
Structure	55-085-433	55-084-433	55-060-380	55-089-380	55-109-350	55-108-350	55-115-330	55-115-290	55-116-270	55-115-270	55-116-256	55-115-256	55-115-252	55-114-252	55-115-241	55-114-241	55-115-220	55-119-183	55-118-183	55-124-170	55-140-140
MRM	206.82	206.82	212.24	212.24	215.79	215.79	218.00	222.02	224.02	224.02	225.38	225.38	225.78	225.78	226.84	226.84	229.03	232.76	232.76	234.11	237.42
Route	I-29 N	I-29 S	I-29 N	I-29 S	I-29 N	I-29 S	1-29	1-29	I-29 N	I-29 S	I-29 N	1-29 S	I-29 N	I-29 S	I-29 N	1-29 S	1-29	I-29 N	I-29 S	1-29	I-29 N

BROOKI	NGS,	COI	DING	TON	l, DE	UEL,	GR	ANT,	HAN	ALIN	I, M(	OOD	Y, AN	ID R	OBE	RTS	COU	NTII	ES		
, t c + n o c																					
Deck Joint Quantity (LF)									70												
Approach Joint Quantity (LF)	84		84	84	84	84	95	84	89	84	84	115	84	84							84
Approach Quantity (SF)	1715	2764	2901	2901	1817	1817	1879	1715	2370	2038	2038	4012	2932	2315		1405					1715
Skew Angle	0	26.97	29.17	29.17	17.73	17.73	0	0	0	22.83	22.83	0	19.58	30	0	0	0	0	0	0	0
Deck Area (SF)	3200	11336	5572	5572	8844	8844	6160	2600	9376	5207	5207	4844	13685	5682	3570	6953	2490	6270	3555	2280	9240
Bridge Roadway Width (Ft)	40	32	40	40	40	40	44	40	32	40	40	26	40	40	30	34	30	30	30	30	40
Structure Length (Ft)	80	354.25	139.29	139.29	221.1	221.1	140	140	293	130.17	130.17	86.5	342.13	142.06	119	204.5	83	209	118.5	9/	231
Location	5.5 NE of SD 10 & I-29 Interchange	6.5 NE of SD 10 & I-29 Interchange	4.4 S of SD 127 & I-29 Interchange	4.4 S of SD 127 & I-29 Interchange	SD 127 & I-29 Interchange	SD 127 & I-29 Interchange	0.5 N of SD 127 & I-29 Interchange	0.5 N of SD 127 & I-29 Interchange	2.0 N of SD 127 & I-29 Interchange	1.0 S of North Dakota State Line	1.0 S of North Dakota State Line	0.7 W of Jct SD 10 & SD 127 N	SD 10 & I-29 Interchange	1.7 E of SD 10 & I-29 Interchange	3.2 W of Jct SD 106 & SD 127	0.1 N of Jct US 12 & SD 109	0.9 N of Jct SD 10 & SD 127	2.7 N of Jct SD 10 & SD 127 N	4.7 S of North Dakota State Line	0.8 S Jct US 14 & SD 13	1.1 S of Jct SD 22 & SD 15
Structure	55-139-140	55-144-130	55-161-100	55-160-100	55-176-060	55-175-060	55-176-055	55-175-055	55-175-040	55-181-010	55-180-010	55-093-190	55-116-190	55-132-190	25-068-060	26-373-023	55-101-181	55-100-164	55-290-047	06-320-198	20-100-171
MRM	237.42	238.51	242.02	242.02	246.44	246.44	247.03	247.03	248.38	251.50	251.50	359.66	361.77	363.63	334.32	153.56	214.90	216.66	246.61	127.08	139.35
Route	I-29 S	1-29	I-29 N	I-29 S	I-29 N	I-29 S	I-29 N	I-29 S	1-29	I-29 N	I-29 S	SD 10	SD 10	SD 10	SD 106	SD 109	SD 127	SD 127	SD 127	SD 13	SD 15

#### BROOKINGS, CODINGTON, DEUEL, GRANT, HAMLIN, MOODY, AND ROBERTS COUNTIES Quantity Deck Joint (LF) 139 92 35 Approach Quantity Joint (F.) 92 89 Approach Quantity 1385 3212 2137 4467 (SF) Angle 51.9 25 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 19332 12892 Deck 4248 3855 5235 4545 2010 3510 2925 4005 4005 2985 2010 2790 2010 4905 Area 9672 2490 8120 5580 2205 (SF) Roadway Bridge Width (FE) 4 30 30 30 4 44 30 30 30 30 30 30 30 30 30 30 30 30 30 52 32 Structure 253.75 483.29 Length 106.21 128.5 174.5 151.5 133.5 133.5 163.5 97.5 99.5 73.5 (Ft) 186 293 186 117 83 93 67 29 67 1.3 SE of Jct SD20 & N Lake Dr (Old SD 139) 3.3 E of Jct SD 28 E & US 81 N S 26-332-220 4.1 E of Jct SD 20 E & SD 15 S 3.2 E of SD 22 E & Jct US 81 S 5.0 E of Jct SD 28 E & US 81 S 3.7 W of Jct SD 28 & SD 21 N 1.5 E of Jct SD 28 & SD 21 N 3.7 E of Jct SD 20 E & SD 15 2.3 W of Deuel County Line 7.4 E of Jct SD 22 E & US 81 0.3 N of Jct SD 106 & SD 25 11.4 E of Jct SD 22 & SD 15 1.4 E of Jct SD 15 & SD 123 0.7 N of Jct US 12 & SD 15 3.6 N of Jct US 12 & SD 15 6.0 N of Jct US 12 & SD 15 Location 20-105-160 | 0.6 E of Jct SD 22 & SD 15 8.7 E of Jct SD 22 & SD 15 9.3 E of Jct SD 22 & SD 15 SD 15 & I-29 Interchange SD 20 & I-29 Interchange 15-156-143 29-213-140 29-277-160 29-222-050 20-211-165 26-290-038 20-187-160 55-060-047 29-227-144 26-290-014 55-100-367 15-215-030 26-327-220 29-264-050 20-193-160 29-099-150 29-151-149 26-290-068 55-195-360 Structure Number 352.00 371.19 382.10 236.78 175.68 178.68 180.98 197.34 206.62 395.64 418.77 449.75 450.23 356.32 379.91 332.91 353.53 345.23 379.32 338.10 346.94 MRM Route SD 15 SD 15 SD 15 SD 20 SD 20 SD 20 SD 25 SD 28 SD 28 SD 28 SD 28 SD 28 SD 15 SD 20 SD 22 SD 22 SD 22 SD 22 SD 22 SD 22

BROOKI	NGS,	COI	DING	TON	, DE	UEL,	GRA	ANT,	HAN	ALIN	I, MC	OOD	Y, AN	D R	OBE	RTS	COU	NTII	ES		
005404											_										
Deck Joint Quantity (LF)		95			94		64						88							33	
Approach Joint Quantity (LF)	92								89	92		84		151				92			92
Approach Quantity (SF)	1551	2132						1987	2370	2943		1678		3089				1881	3521	1305	1881
Skew	0	8.36	0	0	0	0	0	30	0	36.66	30	0	30	0	0	0	0	0	0	0	0
Deck Area (SF)	3762	13024	2820	3510	12276	3570	7620	842	8899	15818	8516	6120	11692	18796	3234	4664	4664	4950	5628	7620	3234
Bridge Roadway Width (Ft)	36	44	30	30	44	30	30	32	32	44	40	40	30	74	44	44	44	44	84	30	44
Structure Length (Ft)	104.5	296	94	117	279	119	254	26.31	509	359.5	212.89	153	389.73	254	73.5	106	106	112.5	67	254	73.5
Location	1.5 E of Hamlin County Line	SD 28 & I-29 Interchange	1.5 W of Minnesota State Line	0.8 W of SD 30 & I-29 Interchange	SD 30 & I-29 Interchange	3.4 E of SD 30 & I-29 Interchange	SD 324 & I-29 Interchange	0.4 E of SD 324 & I-29 Interchange	0.8 E of SD324 & I-29 Interchange	US 12 & I-29 Interchange	0.9 W of Jct US 12 & SD 15	0.6 SW of Jct US 12 & SD 109	0.6 E of Jct US 12 & SD 109	US 14 & I-29 Interchange	0.9 E of US 14 & I-29 Interchange	1.6 E of US 14 & I-29 Interchange	1.9 E of US 14 & I-29 Interchange	2.0 W of US 14B & I-29 Interchange	1.6 W of US 14 B & I-29 Interchange	06-185-150 US 14 Bypass & I-29 Interchange	1.4 E of US 14 & I-29 Interchange
Structure	20-015-280	20-061-280	20-201-280	06-178-080	06-185-080	06-219-080	06-185-210	06-189-211	06-193-211	55-085-429	26-282-072	26-369-027	26-379-024	06-185-159	06-194-160	06-201-160	06-204-160	06-166-150	06-169-150	06-185-150	06-196-156
MRM	357.02	361.61	375.67	357.71	358.53	361.95	357.54	357.88	358.37	366.40	388.27	398.56	399.66	421.97	422.54	423.53	423.85	419.47	419.85	421.34	422.86
Route	SD 28	SD 28	SD 28	SD 30	SD 30	SD 30	SD 324	SD 324	SD 324	US 12	US 12	US 12	US 12	US 14	US 14	US 14	US 14	US 14 B	US 14 B	US 14 B	US 14 B

BROOKI	NGS,	COI	DING	TON	, DE	UEL,	GR.	ANT,	HAN	ИLIN	I, M(	OODY	Y, AN	ID R	OBE	RTS	COU	NTII	ES	
0 C + 0 t																				
Deck Joint Quantity (LF)		214																		92
Approach Joint Quantity (LF)	84	84	84	84	84	84	80	80	84	84	84	84	84	84	80	80	80		138	
Approach Quantity (SF)	2838	202	2932	2795	2985	2324	1635	1635	1944	1675	1715	1937	2315	1715	2840	1635	1635		5104	1881
Skew Angle	20	0	0	20	30	0	0	0	20	0	0	20	30	0	44	0	0	0	30	0
Deck Area (SF)	3985	27940	3980	3985	7452	2940	3781	4522	3985	27960	3980	3985	7452	2940	14174	3781	4522	3806	7874	12782
Bridge Roadway Width (Ft)	40	40	40	40	40	40	38	38	40	40	40	40	40	40	38	38	38	44	99	44
Structure Length (Ft)	99.63	698.5	99.5	99.63	186.31	73.5	99.5	119	99.63	669	99.5	99.63	186.31	73.5	373	99.5	119	86.5	119.31	290.5
Location	1.7 E of Volga	1.9 E of Volga	2.4 E of Volga	2.5 E of Volga	3.9 E of Volga	4.1 E of Volga	0.2 SE of Jct US 14 & US 14 Bypass	1.0 SE of Jct US 14 & US 14 Bypass	1.7 E of Volga	1.9 E of Volga	2.4 E of Volga	2.5 E of Volga	3.9 E of Volga	4.1 E of Volga	1.0 N & 1.6 W of Brookings	0.2 SE of Jct US 14 & US 14 Bypass	1.0 SE of Jct US 14 & US 14 Bypass	1.6 W of Minnesota State Line	0.7 S of Jct US 212 & US 81	3.0 N of US 212 & I-29 Interchange
Structure	06-116-151	06-119-151	06-124-151	06-126-151	06-139-151	06-141-151	06-154-153	06-158-158	06-116-150	06-119-150	06-124-150	06-126-150	06-139-150	06-141-150	06-154-150	06-155-153	06-159-158	20-194-030	15-190-186	15-215-150
MRM	414.60	415.13	415.31	415.45	416.84	417.08	418.40	419.11	414.60	415.13	415.31	415.45	416.84	417.08	418.23	418.44	419.15	410.27	155.40	161.64
Route	US 14 E	US 14 E	US 14 W	US 14 W	US 14 W	US 212	US 81	US 81												

		RECORD (	OF BRIDG	E CLEANI	NG	
ROUTE	MRM	STR. NO.	Arrival Date and Time	Time Sweeping Started	Time Sweeping Ended	Departure Time
Contractor Sig	gnature				Date	

		RECORD (		E CLEANI		
ROUTE	MRM	STR. NO.	Arrival Date and Time	Time Sweeping Started	Time Sweeping Ended	Departure Time
(Example	entry)					
CD 20	422.57	42 224 550	4/6/18	4.05 014	4:20 DM	4:40 004
SD 28	123.57	12-224-558	3:35 PM	4:05 PM	4:30 PM	4:40 PM
(Example	entry when do	ing multiple bridge	s on divided highw	ay)		
I-29 N B &	Exit 140 to	C huidean kakal	4/10/18	0.20 AAA	10:30 414	10.45.484
SB	Exit 150	6 bridges total	7:50am	8:20 AM	10:30 AM	10:45 AM
					Date	
Contractor Si	gnature				Date	