

PLOT SCALE - 1:8910

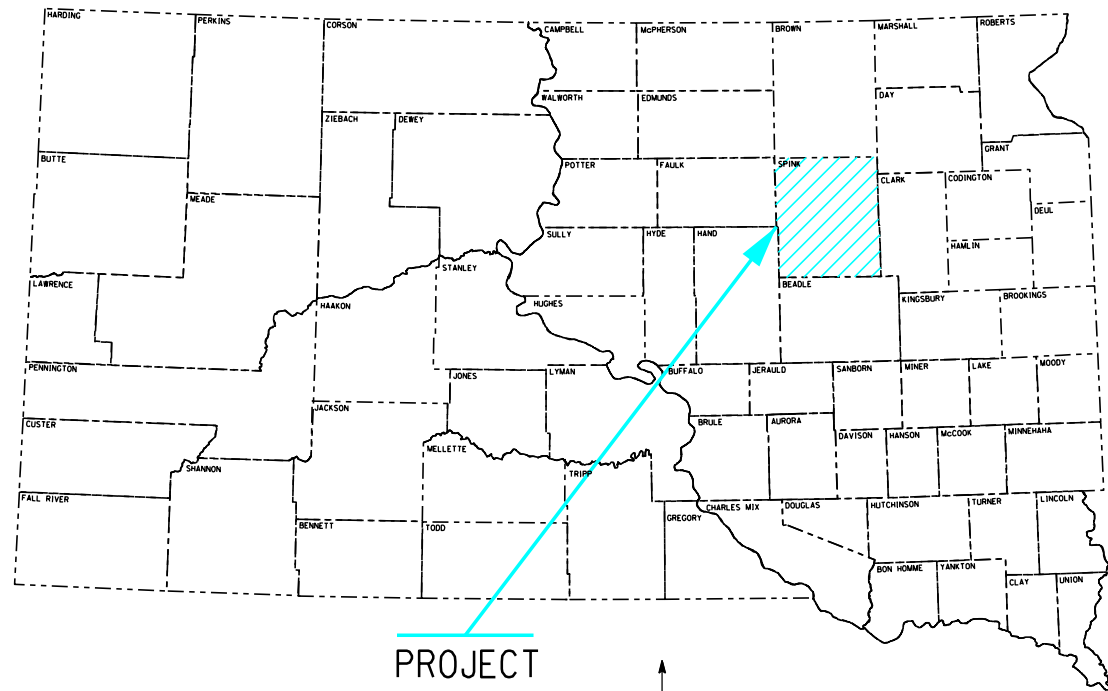
PLOTTED FROM - TRAB17613

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

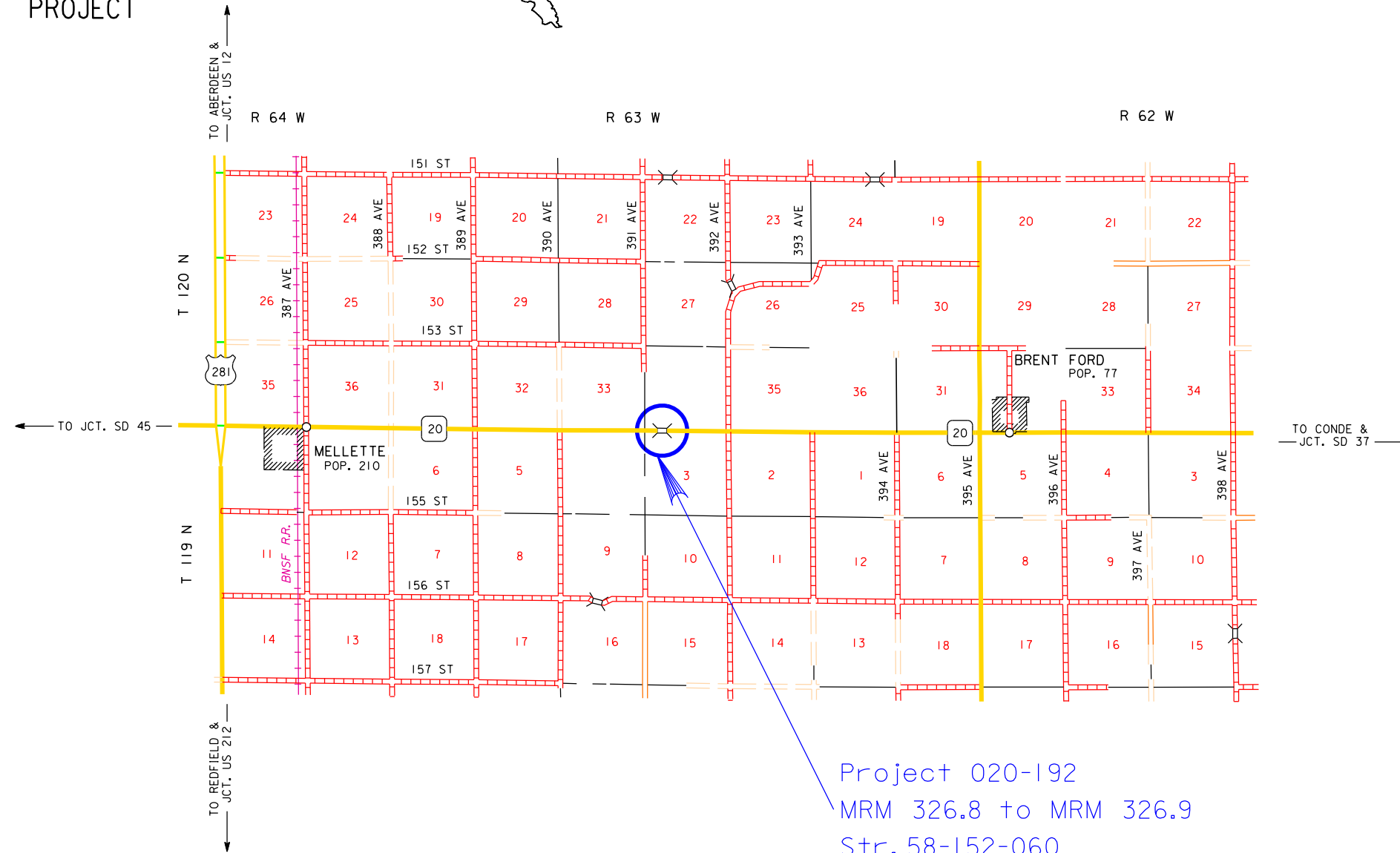
PROJECT 020-192
SD HIGHWAY 20
SPINK COUNTY

POLYMER MODIFIED ASPHALT GROWTH JOINTS
PCN 145Y

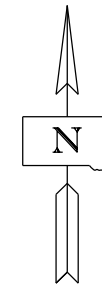
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	020-192	1	6
Plotting Date: 03/25/2016			



PROJECT



Project 020-192
MRM 326.8 to MRM 326.9
Str. 58-152-060
Over James River



INDEX OF SHEETS

- Sheet 1: Title Sheet and Layout Map
- Sheet 2-4: Estimate of Quantities, Environmental Commitments, and Plan Notes
- Sheet 5: Details
- Sheet 6: Standard Plates

Storm Water Permit
Not Required

PLOT NAME - 1

FILE - ... \TITLE_SHEET.DGN

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	020-192	2	6

ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
320E7500	Polymer Modified Asphalt Growth Joint	56	Ft
634E0010	Flagging	20	Hour
634E0110	Traffic Control Signs	106	SqFt
634E0120	Traffic Control, Miscellaneous	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.

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	020-192	3	6

ENVIRONMENTAL COMMITMENTS

An Environmental Commitment is a measure that SDDOT commits to implement in order to avoid, minimize, and/or mitigate a real or potential environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency mentioned below with permitting authority can influence a project if perceived 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. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office. The environmental commitments associated with this project are as follows:

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 pit, or staging site associated with the project, cease construction activities in the affected area until the Whooping Crane departs and 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 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 shall 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) shall 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 Environment and Natural Resources.

The waste disposal site(s) shall 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 Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements shall apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials shall be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the Public ROW through the use of 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 of time not to exceed the duration of the project. Prior to project completion, the waste shall 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) shall be incidental to the various contract items.

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historical 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 review of cultural resources impacts. 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 shall arrange and pay for a cultural resource survey and/or records search. 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; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor shall provide ARC with the following: a topographical map or aerial view on 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 shall submit the records search or cultural resources survey report and if the location of the site is within the current geographical or historic boundaries of any South Dakota reservation to SDDOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3180). 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.

If evidence for cultural resources is uncovered during project construction activities, then such activities shall cease and the Project Engineer shall be immediately notified. The Project Engineer will contact the SDDOT Environmental Engineer in order 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 shall provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

SCOPE OF WORK

Work on this project involves placement of an asphalt growth joints over several bridge approach joints.

SEQUENCE OF OPERATIONS

All work shall be accomplished under traffic, in phases, as shown in the traffic control standard plates. Once work starts at the bridge location the work shall be vigorously pursued to complete the work in the shortest amount of time. Work shall be coordinated so as to cause the least amount of traffic interruption.

One lane of traffic shall be maintained at all times.

When performing the joint placement, the joint placement shall be limited to one half of the roadway at a time. All placement work shall be completed on the one half of the roadway prior to starting work on the other half of the roadway.

The Contractor shall be responsible for maintaining over width vehicles up to 16 feet in width through the work zone.

The work required for this project involves, but is not limited to, the sequence as follows:

1. Install traffic control required for Phase 1.
2. Saw cut and prepare the joint blockout area as required by the joint manufacturer.
3. Place the polymer modified asphalt growth joint material as required by the joint manufacturer for ½ of the roadway.
4. Repeat Steps 1-3 for Phase 2 work.
5. Remove all traffic control.

TRAFFIC CONTROL

Traffic control shall be per the standard plates included in this set of plans.

Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage to the vegetation, surfacing, embankment, delineators and existing signs resulting from such indiscriminate use shall be repaired and/or restored by the Contractor, at no expense to the State, and to the satisfaction of the Engineer.

Work activities during non-daylight hours are subject to prior approval.

Traffic control devices are to be removed at the end of each working day and the roadway shall be opened to normal traffic flow prior to nightfall.

TRAFFIC CONTROL (CONT.)

The bottom of signs on portable or temporary supports shall not be less than seven feet above the pavement in urban areas and one foot above the pavement in rural 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 shall be on fixed location, ground mounted, breakaway supports.

Equipment and vehicles entering or exiting the roadway, traveling on the shoulders or driving lanes at low speeds or working within the right-of-way shall display a flashing amber light visible for a minimum distance of 1/4 mile in all directions.

The Traffic Control sign square footage, as shown in the Estimate of Quantities, are estimates. The Contractor’s operation may require adjustments in quantities, either more or less. Payment will be for those signs actually ordered by the Engineer and used.

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

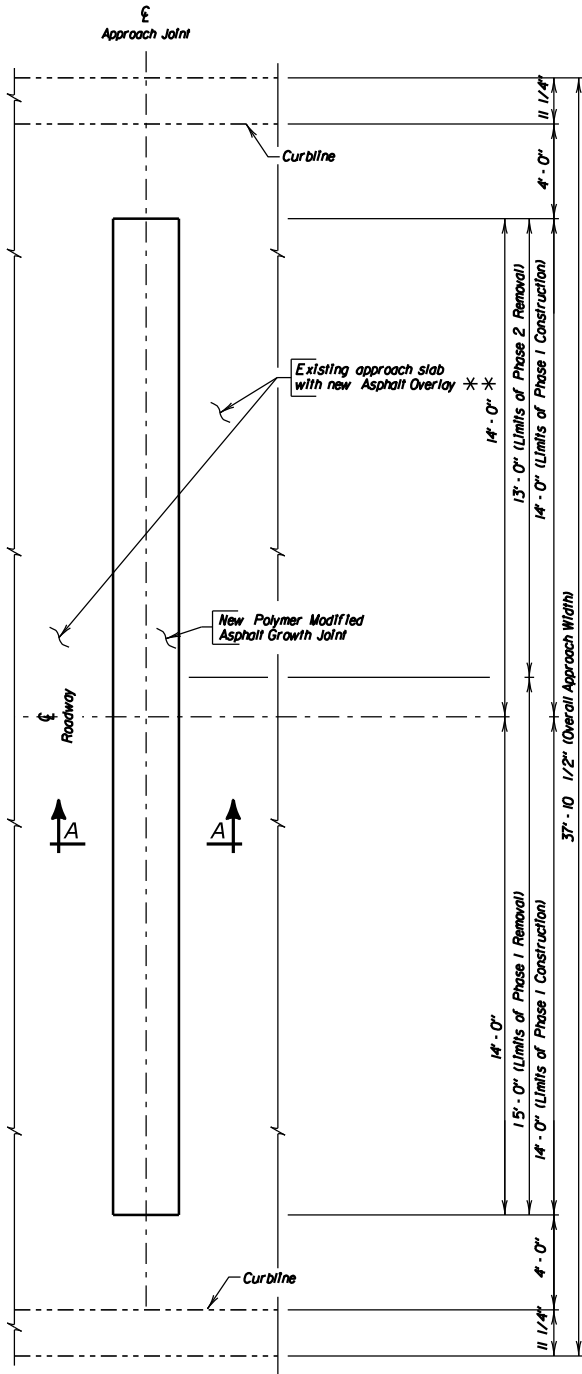
		CONVENTIONAL ROAD					
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE			SQFT PER SIGN	SQFT
W20-1	ROAD WORK AHEAD	2	48"	x	48"	16	32
W20-4	ONE LANE ROAD AHEAD	2	48"	x	48"	16	32
W20-7	FLAGGER (symbol)	2	48"	x	48"	16	32
G20-2	END ROAD WORK	2	36"	x	18"	5	10
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 106					

POLYMER MODIFIED ASPHALT GROWTH JOINT

1. A polymer modified asphalt growth joint shall be placed over the existing approach joint for the east and west approaches. The polymer modified asphalt growth joint system shall be one of the polymer modified asphalt growth joints from the Department’s Approved Products List.
<http://www.sddot.com/business/certification/products/Default.aspx>
2. An Asphalt Concrete Overlay for both approaches has been completed by SDDOT maintenance forces. The respective overlay extends past the ends of the proposed polymer modified asphalt growth joint and then is to be sawn to the limits of the joint in order to create a joint block out area.
3. The steel plates typically required for these joints have already been installed by SDDOT maintenance forces. The steel plates shall be cleaned and roughened per the manufacturer’s recommendations prior to the polymer modified asphalt growth joint placement.
4. The polymer modified asphalt growth joint shall be installed in accordance with the manufacturer’s recommendations. The Contractor shall submit the installation instructions in writing to the Engineer a minimum of 7 days prior to joint installation.

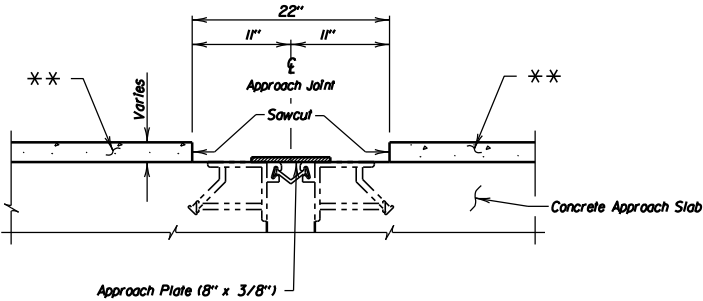
5. The polymer modified asphalt growth joint shall not be installed when the asphalt roadway surface temperature is below 40° F or at the manufacturer’s minimum temperature requirement if more stringent. The joint shall not be installed when rain is expected for the duration of the period of time required for joint installation.
6. The cost of furnishing and placing all material for the joint system including sawing and removing overlay material for the joint block out and all labor, equipment, tools, materials and any incidentals necessary to complete the work satisfactorily shall be paid for at the contract price per foot for “Polymer Modified Asphalt Growth Joint”.

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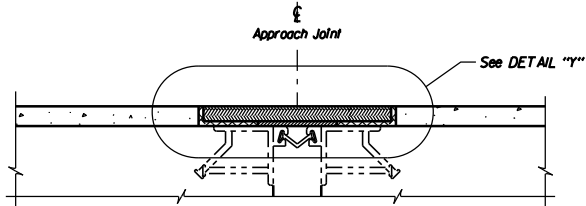


PLAN VIEW

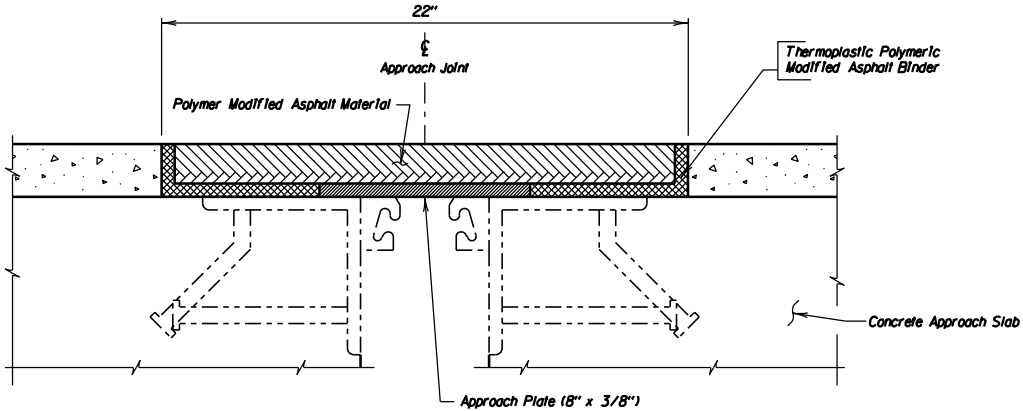
* See notes regarding POLYMER MODIFIED ASPHALT GROWTH JOINT
 ** The in-place asphalt overlay is approximately 30 - 32' wide.
 The west approach is approximately 2" thick at centerline.
 The east approach is approximately 4" thick at centerline.



SEC. A - A
(Following Overlay)



SEC. A - A
(Joint Completed)



DETAIL "Y"

ESTIMATED QUANTITIES (For One Approach Joint)		
ITEM	UNIT	QUANTITY
△ Polymer Modified Asphalt Growth Joint	Ft	28.0

△ For informational purposes, the estimated quantity for Phase 1 is 14 L.F. per approach joint, and Phase 2 is 14 L.F. per approach joint.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	020-192	6	6

Plotting Date: 05/05/2016

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	25
35 - 40	350	25
45 - 50	500	50
55	750	50
60 - 65	1000	50

- Flagger
- Channelizing Device

For low-volume traffic situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger may be used.

The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

For tack and/or flush seal operations, when flaggers are not being used, the FRESH OIL sign (W21-2) shall be displayed in advance of the liquid asphalt areas.

Flashing warning lights and/or flags may be used to call attention to the advance warning signs.

The channelizing devices shall be drums or 42" cones.

Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.

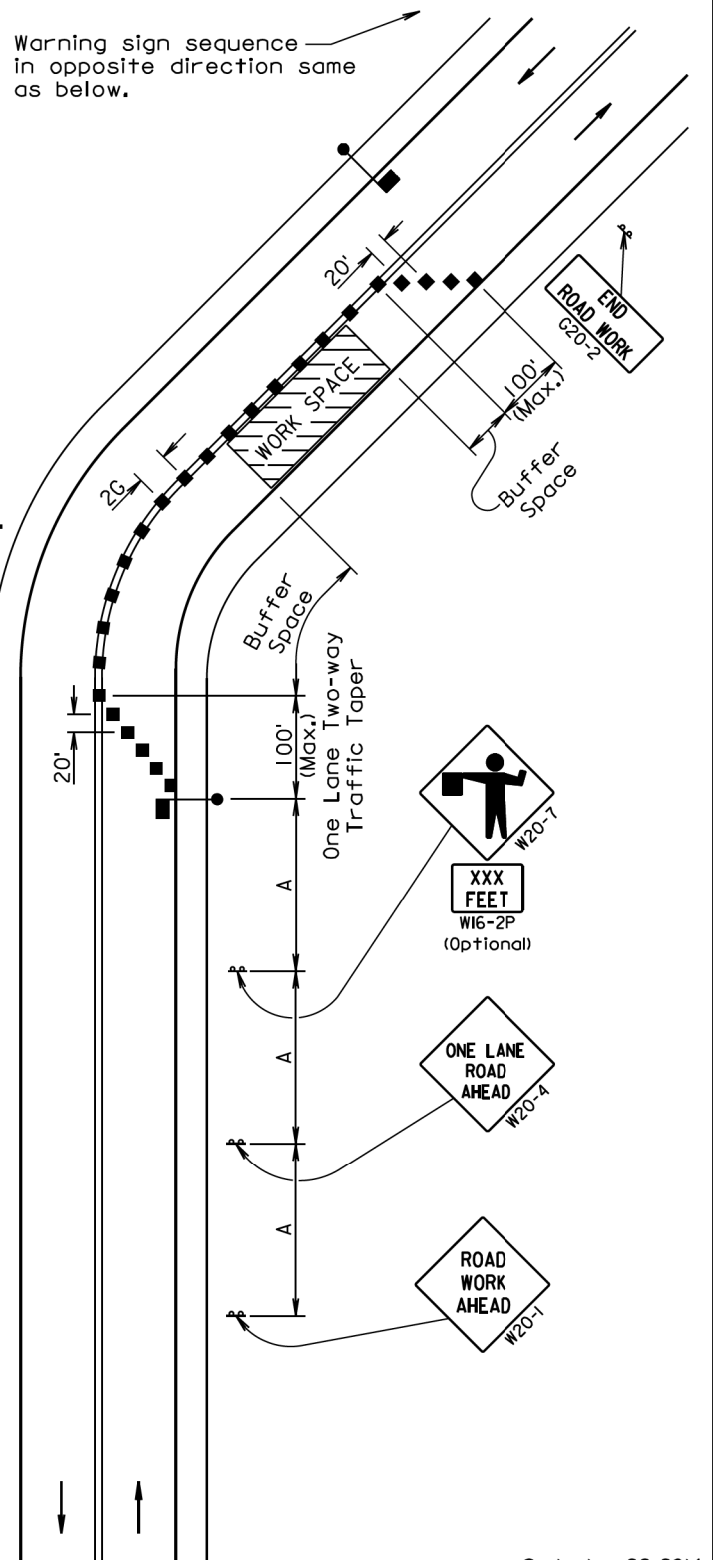
END
ROAD WORK
G20-2

Channelizing devices and flaggers shall be used at intersecting roads to control intersecting road traffic as required.

The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

The length of A may be adjusted to fit field conditions.

Warning sign sequence
in opposite direction same
as below.



September 22, 2014

Published Date: 2nd Qtr. 2016	S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
			Sheet 1 of 1