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ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

ESTIMATE OF QUANTITIES PCN i48L

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E0300	Remove Concrete Curb and/or Gutter	341	Ft
110E1010	Remove Asphalt Concrete Pavement	46.7	SqYd
110E1100	Remove Concrete Pavement	101.7	SqYd
110E7700	Remove Drop Inlet Frame and Grate Assembly for Reset	1	Each
120E0010	Unclassified Excavation	50	CuYd
260E2010	Gravel Cushion	50.0	Ton
320E1200	Asphalt Concrete Composite	15.6	Ton
380E3540	8" PCC Approach Pavement	83.3	SqYd
634E0110	Traffic Control Signs	73.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0265	Type 3 Barricade, 6' Double Sided	8	Each
634E0420	Type C Advance Warning Arrow Board	1	Each
650E0060	Type B66 Concrete Curb and Gutter	311	Ft
650E4660	Type P6 Concrete Gutter	102	Ft
651E0060	6" Concrete Sidewalk	1,570	SqFt
670E7000	Reset Drop Inlet Frame and Grate Assembly	1	Each

ESTIMATE OF QUANTITIES PCN i4Q9

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E1010	Remove Asphalt Concrete Pavement	548.5	SqYd
120E0010	Unclassified Excavation	91	CuYd
380E0500	8" Continuously Reinforced PCC Pavement	441.0	SqYd
650E6080	8" Concrete Valley Gutter	121	Ft

SPECIFICATIONS

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

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 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 includes, but is not limited to removal of existing curb and gutter, asphalt and concrete driveways, along with replacement of curb and gutter, driveways, installation of sidewalk and continuously reinforced concrete slab.

PCN i4L8 SIDEWALK AND CURB AND GUTTER

The purpose of this project is to install sidewalk and to consolidate and eliminate existing driveways. The curb and gutter shall be installed at the same elevation as the existing cub and gutter. Care shall be taken not to disturb the existing subgrade material. The side walk shall slope towards US 212 at a rate of 1%. The Contractor shall place 4" of gravel cushion prior to the placement of the sidewalk. The granular material that is currently in place shall be used to tie the sidewalk into the curb and gutter and the existing parking lot. The boulevard shall be shaped for positive drainage. Payment for sidewalk excavation and boulevard work shall be incidental to the contract unit price per cubic yard for unclassified excavation. Payment will be plans quantity.

There will be a city sewer project administered by Helms & Associates of Aberdeen SD near this project.

PCN i4Q9 CONCRETE WORK AT DOT SHOP

The purpose of this project is to get positive drainage away from the current slab and fuel islands. The Contractor shall remove the asphalt concrete and enough subgrade material to place 6 inches of state furnished granular material and 8 inches of concrete. It is estimated that there is 4 inches of asphalt in place. The state furnished granular material is located in the Faulkton DOT yard where the work is taking place. The contractor shall water and compact the material before placing concrete. Compaction shall be to the satisfaction of the Engineer. The area between where the forms are placed and where the asphalt has been sawed and removed will be filled in by DOT maintenance forces. The Contractor shall match the joints in the existing slab and seal them with hot pour elastic joint sealer.

MAINTENANCE OF TRAFFIC

Removing, relocating, covering, salvaging and resetting of existing traffic control devices, including delineation, shall be the responsibility of the Contractor. Cost of this work shall be incidental to the various contract items unless otherwise specified in the plans. Delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State

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.

In the City of Faulkton one lane of traffic near the curb and gutter replacement area may be closed during construction, as per Standard Plate 634.47. The remaining west bound lane shall remain unimpeded.

The Contractor shall maintain at least one access point to businesses located in the removal areas.

At the DOT Shop access must be maintained to the gas pumps at all times.

Barricades have been included in the estimate of quantities to block business driveways as deem necessary by the Engineer.

The Contractor will be required to remove the lane closure at the end of each working day.

REMOVEALS

All removed material from both projects shall become property of the Contractor for their disposal. All asphalt to be removed shall be saw cut full depth prior to removal.

CONCRETE

All concrete for both projects shall meet the Class M6 requirements. The course aggregate shall be crushed ledge rock.

CURING OF CONCRETE

Portland Cement Concrete Pavement Repair shall be cured with Linseed Oil Base Emulsion Compound in accordance with section 821 of specifications.

STATE FURNISHED GRANULAR MATERIAL

The cost per ton of the State Furnished Granular Material for excise tax purposes has been calculated to be \$18.27 per ton.

STATE	OF	PROJECT	SHEET	TOTAL
SOU		410AZZE	NO.	SHEETS
DAKO		000P-152	3	13

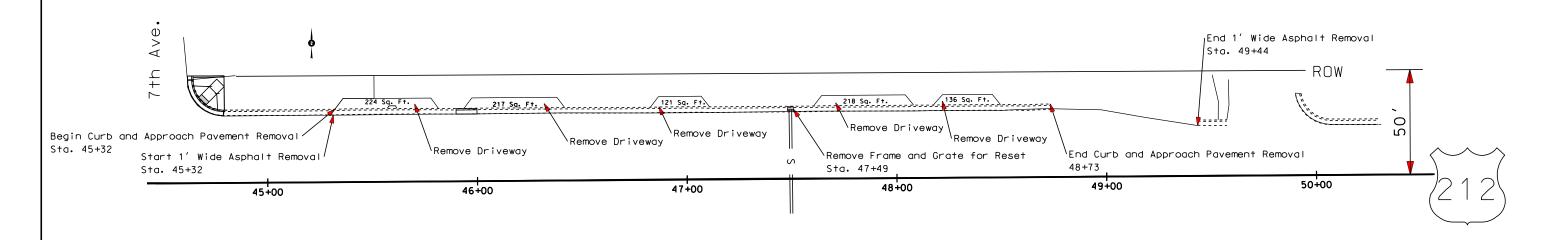
Plotting Date: 03/28/2017

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
SOUTH DAKOTA	410A375 000P-152	4	13

Plotting Date: 04/12/2017

Removals





Curb and Gutter Removal=341 Ft.

Approach Pavement Removal = 916 Sq. Ft.

One Foot of Asphalt Removal = 420.5 Sq. Ft.

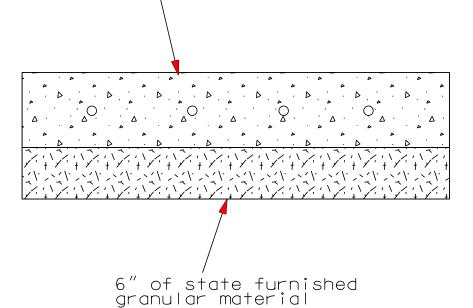
. SCALE - 1:37,0604		SOUTH 41	ROJECT SHEET TOTAL SHEETS 0A375 0P-152 5 13 2017
PL01	Motor Existing A7+49 Reset Frome and Grate A8+73.0 31.76' L Start Curb Taper A9+47.5 24.0' L Tie Into Ei A9+47.5 24.0' L Tie Int		MALL. DGN
PLOTTED FROM - TRABINTØ1	45+00 46+00 47+00 48+00 49+00		20+00

SOUTH DAKOTA 000P-152

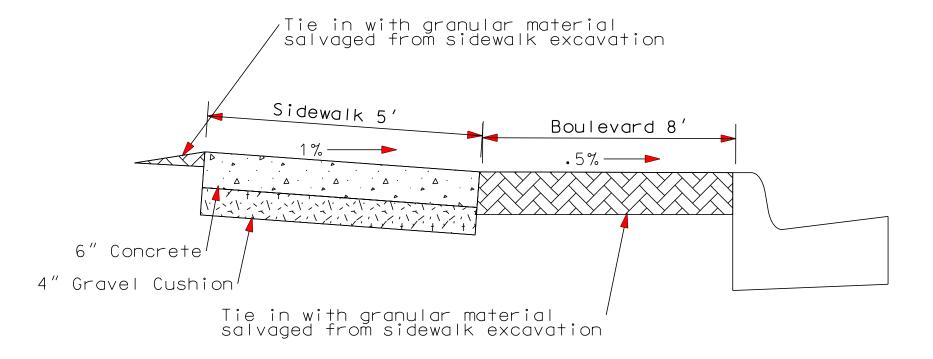
Plotting Date: 04/12/2017

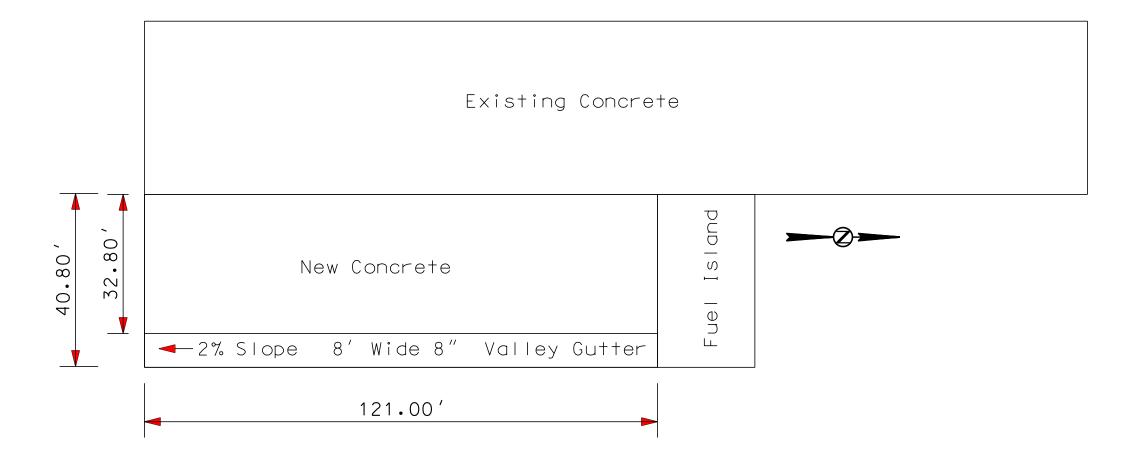
DOT Shop Tyical Section

8" Concrete with No. 4 Bars Spaced 16 inches on center in both directions vertically in the center of the slab



Tyical Curb and Gutter Section





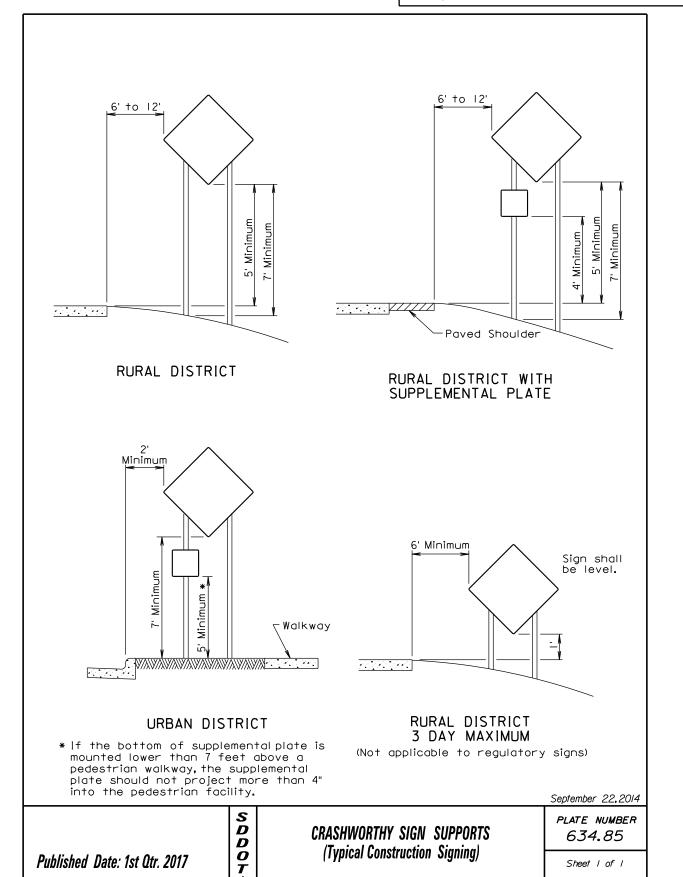
- -The Contractor shall remove and dispose of the existing asphalt concrete and excavate enough material to place 6" of state furnished base course. (UNCLASSIFIED EXCAVATION)
- -The new concete pavement shall be 8" continuously reinforced concrete. (8" PCC PAVEMENT)
- -The reinforcing shall be number 4 bars spaced 16 inches on center in both directions the vertical spacing of the bars shall be at the center of the slab.(incidental 8" PCC PAVEMENT)
- -The Contractor shall match the joints on the existing concrete.(incidental 8" PCC PAVEMENT)
- -The Contractor shall pour the valley gutter first and then pour the new concrete pavement.

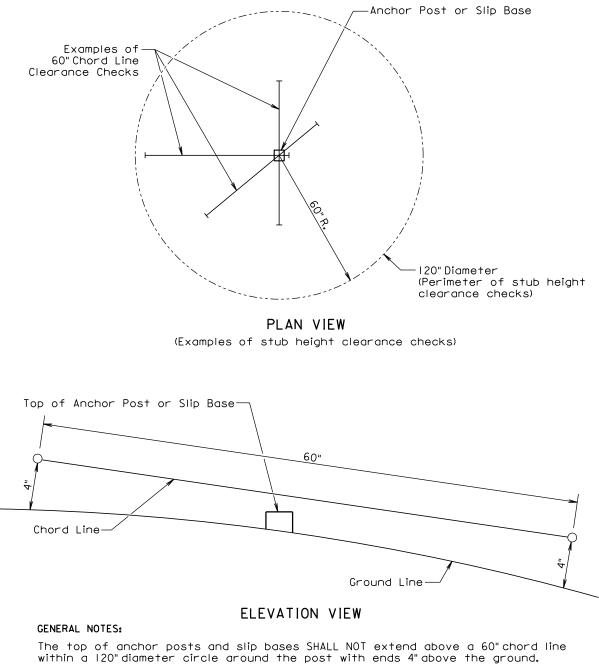
 The valley gutter shall be constructed according to standard plate 650.40, except it will be 8' wide
- -The valley gutter and the new concrete shall be tied together but no new concrete shall be tied to existing concrete

Posted Spacing of Speed Advance Warning Taper Prior to Signs Length (Feet) (Feet)	Chai	cing of nnellzing evices Feet) (G) 25 25 50 * 50 * 50 *	\	↓	†	† 		END ROAD WORK G20-2 (Optional)
 					†	WORK	.00 	
The channelizing devices shall cones or drums. 42" cones may be used in place drums shown in the taper if swill not be used during night hours. Temporary pavement markings shall be used if traffic contrast remain overnight. The length of A and L may be adjusted to fit field condition	e of setup time	the					4	Arrow Board Sequential Chevron
			ļ		 	†	A A	RIGHT LANE CLOSED AHEAD WORK AHEAD
Published Date: 1st Qtr. 2017	S D D O T					NTROL T LANI		June 3, 2016 PLATE NUMBER 634.47 Sheet of

STATE OF	PROJECT	SHEET	TOTAL
SOUTH		NO.	SHEETS
DAKOTA	410A375 000P-152	8	13

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At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height shall be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

July I. 2005

D D O T Published Date: 1st Qtr. 2017

BREAKAWAY SUPPORT STUB CLEARANCE

PLATE NUMBER *634.99*

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ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

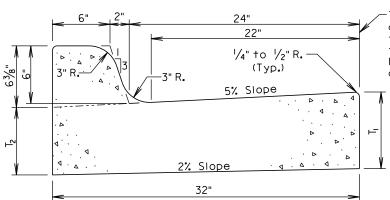
		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W4-2	LEFT or RIGHT LANE ENDS (symbol)	1	48" x 48"	16.0	16.0
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	1	48" x 48"	16.0	16.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT		73.0	

TYPE 3 BARRICADES

ITEM DESCRIPTION	QUANTITY
Type 3 Barricade, 6' Double Sided	8 Each

ARROW BOARDS

ITEM DESCRIPTION	QUANTITY
Type C Advance Warning Arrow Board	1 Each



-The stated radii on the plans and cross sections refer to this line and it shall also be the basis for horizontal linear foot measurement and payment.

Туре	T _I (Inches)	T ₂ (Inches)	Cu. Yd. Per Lin. Ft.	Lin.Ft. Per Cu.Yd.
B66	6	51/16	0.057	17.7
B67	7	61/16	0.065	15.4
B68	8	7½ ₆	0.073	13.7
B68.5	8.5	7% ₆	0.077	13.0
B69	9	8 ¹ / ₁₆	0.081	12.3
B69.5	9.5	8%	0.085	11.7
B610	10	91/16	0.090	11.2
B610.5	10.5	9%	0.094	10.7
B611	11	101/16	0.098	10.2
B611 . 5	11.5	10%	0.102	9.8
B612	12	111/16	0.106	9.4

GENERAL NOTES:

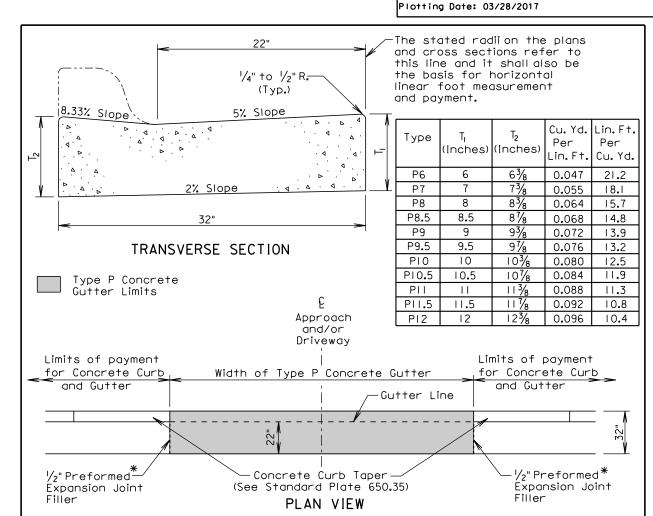
When concrete curb and gutter longitudinally adjoins new concrete pavement, the method of attachment shall be by one of the methods shown on Standard Plate 380.11.

See Standard Plate 650.90 for expansion and contraction joints in the curb and gutter.

September 6, 2008

	S D D O T	TYPE B CONCRETE CURB AND GUTTER	PLATE NUMBER 650.01
Published Date: 1st Qtr. 2017			Sheet Lof L

SOUTH 410A375	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
1 0001 132 1 10 1 10			10	



* Joint will not be needed if concrete curb and gutter and type P concrete gutter is placed at the same time. If the $\frac{1}{2}$ Preformed Expansion Joint Filler is provided, then the joint shall be sealed in accordance with Standard Plate 650.90.

GENERAL NOTES:

The concrete for the Type P Concrete Gutter shall comply with the requirements of the Specifications for Class M6 Concrete.

When concrete gutter longitudinally adjoins new concrete pavement, the method of attachment shall be by one of the methods shown on Standard Plate 380.11.

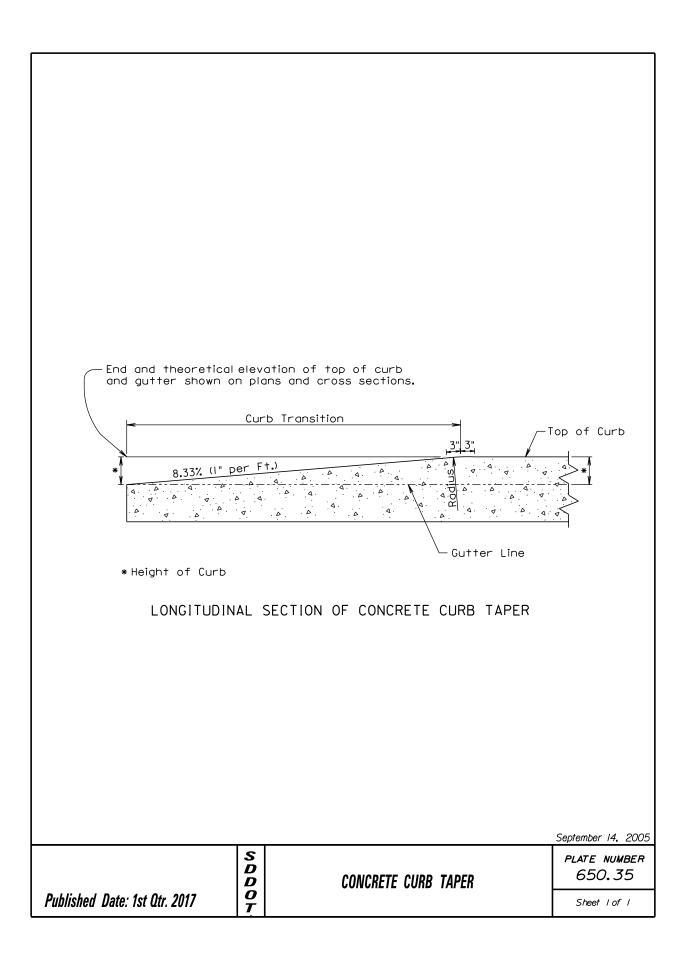
Transverse contraction joints shall be constructed at 10' intervals in the concrete gutter except when concrete gutter is constructed adjacent to mainline PCC pavement. When concrete gutter is constructed adjacent to mainline PCC pavement, a transverse contraction joint shall be constructed in the concrete gutter at each mainline PCC pavement transverse contraction joint location.

When concrete gutter is placed monolithically with mainline PCC pavement, the transverse contraction joints in the concrete gutter shall be sawed and sealed the same as the transverse contraction joints in the mainline PCC pavement.

When concrete gutter is not placed monolithically with the mainline PCC pavement and when the adjacent mainline surfacing is not PCC concrete, the transverse contraction joints in the concrete gutter shall be $1\frac{1}{2}$ inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint shall be at least $\frac{1}{4}$ the thickness of the concrete.

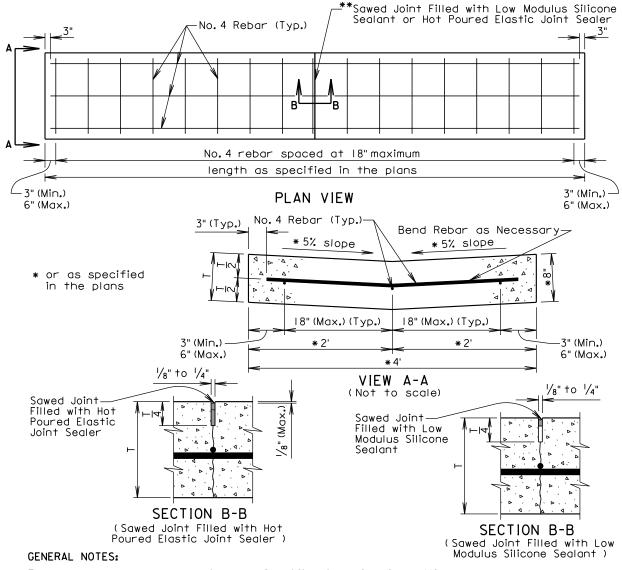
June 26, 2015

	S D D O T	TYPE P CONCRETE GUTTER	PLATE NUMBER 650.30
Published Date: 1st Qtr. 2017			Sheet Lof L



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SOUTH DAKOTA	410A375 000P-152	11	13

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The concrete shall comply with the Specifications for Class M6 concrete.

The reinforcing steel shall comply with the requirements of the Specification Sections 480 and 1010.

If a lap splice is provided the No.4 rebar shall be lapped a minimum of 12".

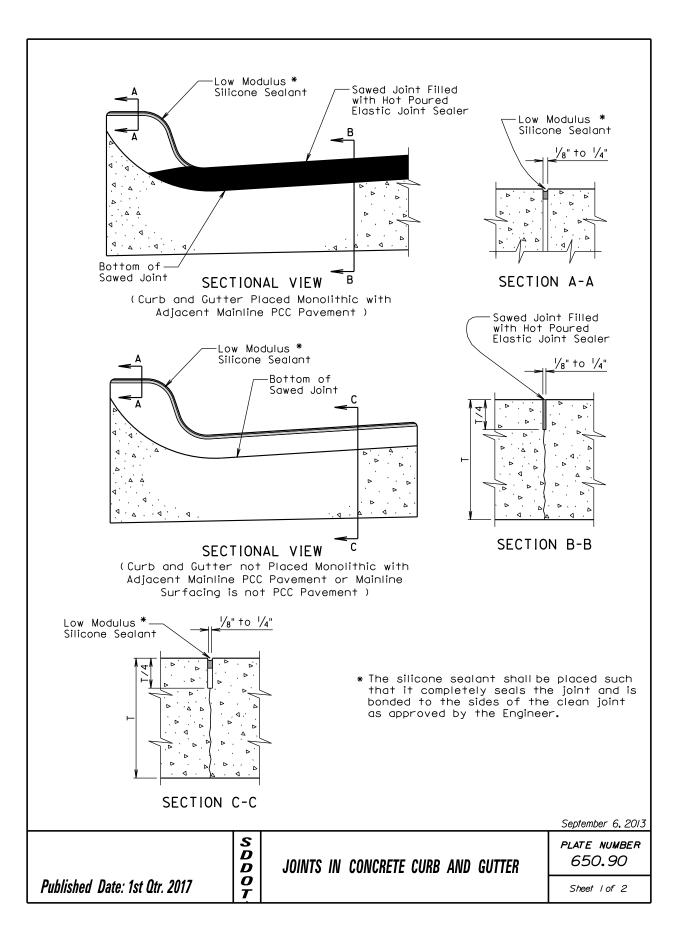
** The sawed joints shall be spaced at 12'; however, when the length of the valley gutter is 12' to 24' there shall be a joint at the midpoint of the length. The saw cut to control cracking shall be a minimum of $\frac{1}{4}$ the thickness of the pavement.

All hot poured elastic joint sealer material spilled on the surface of the concrete pavement shall be removed as soon as the material has cooled. The extent of removal of material shall be to the satisfaction of the Engineer. All costs for removal of the spilled joint sealer material shall be borne by the Contractor.

The silicone sealant shall be be bonded to the sides of a clean joint to completely seal the joint as approved by the Engineer.

All costs for furnishing and installing the valley gutter including materials, equipment, labor, and incidentals shall be included in the contract unit price per square yard for the corresponding Valley Gutter bid item.

	S D D	VALLEY GUTTER	PLATE NUMBER 650.40
	O T		Sheet of



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SOUTH DAKOTA	410A375 000P-152	12	13

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