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### **ESTIMATE OF QUANTITIES – SDDOT** PARTICIPATION

BID ITEM	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E0300	Remove Concrete Curb and Gutter	7	Ft
110E0320	Remove Concrete Gutter	8	Ft
110E0600	Remove Fence	41	Ft
110E1010	Remove Asphalt Concrete Pavement	785.6	SqYd
110E1140	Remove Concrete Sidewalk	42.2	SqYd
110E1700	Remove Silt Fence	79	Ft
110E1800	Remove Railroad Track	126	Ft
120E0010	Unclassified Excavation	546	CuYd
120E2000	Undercutting	299	CuYd
230E0020	Placing Contractor Furnished Topsoil	9	CuYd
260E1010	Base Course	342.7	Ton
260E3010	Gravel Surfacing	98.5	Ton
320E1200	Asphalt Concrete Composite	211.6	Ton
380E3540	8" PCC Approach Pavement	60	SqYd
632E1340	2.5"x2.5" Perforated Tube Post	22	Ft
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	9.8	SqFt
632E3520	Remove, Salvage, Relocate, and Reset Traffic Sign	2	Each
633E1430	Pavement Marking Paint, 24" White	149	Ft
633E1460	Pavement Marking Paint, Symbol	2	Each
634E0100	Traffic Control	1172	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E1002	Detour Signing	58	SqFt
650E0079	Modified Type B68 Concrete Curb and Gutter	68	Ft
650E4679	Modified Type P8 Concrete Gutter	182	Ft
651E0060	6" Concrete Sidewalk	456	SqFt
651E7000	Type 1 Detectable Warnings	20	SqFt
734E0010	Erosion Control	Lump Sum	LS
734E0180	Sediment Filter Bag	20	Ft
734E0602	Low Flow Silt Fence	79	Ft
734E0610	Mucking Silt Fence	5	CuYd
831E0300	MSE Geotextile Fabric	100	SqYd
900E5149	Landscaping Rock	9.6	CuYd
900E5152	Weed Barrier Fabric	58	SqYd
998E0100	Railroad Protective Insurance	Lump Sum	LS

### **ESTIMATE OF QUANTITIES – CITY PORTION** (SDDOT NON-PARTICIPATION)

BID ITEM	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E0600	Remove Fence	32	Ft
110E1010	Remove Asphalt Concrete Pavement	266.9	SqYd
110E1140	Remove Concrete Sidewalk	33.8	SqYd
110E1700	Remove Silt Fence	12	Ft
120E0010	Unclassified Excavation	168	CuYd
120E2000	Undercutting	84	CuYd
230E0020	Placing Contractor Furnished Topsoil	5	CuYd
260E1010	Base Course	109.2	Ton
320E1200	Asphalt Concrete Composite	68.5	Ton
380E3540	8" PCC Approach Pavement	3.2	SqYd
380E4050	8" PCC Fillet Section	14.8	SqYd
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
650E4679	Modified Type P8 Concrete Gutter	26	Ft
651E0060	6" Concrete Sidewalk	194	SqFt
651E7000	Type 1 Detectable Warnings	10	SqFt
734E0010	Erosion Control	Lump Sum	LS
734E0180	Sediment Filer Bag	5	Ft
734E0602	Low Flow Silt Fence	12	Ft
734E0610	Mucking Silt Fence	1	CuYd

#### SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2004 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.

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#### 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 State ROW.

The waste disposal site(s) shall be managed and reclaimed in accordance with the following from the General Permit for Highway, Road, and Railway 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:

Construction and/or demolition debris consisting of concrete, asphalt 1. 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 State 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 State 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.

#### **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: staging areas, borrow sites, waste disposal sites, and all material processing sites.

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 gualified 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 staging areas, borrow sites, waste disposal sites, or material processing sites 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

This project includes reconstruction of roadway, as well as installation of curb and gutter and sidewalk adjacent to the Burlington Northern Sante Fe (BNSF) Railroad Crossing on Main Street in Parkston, SD.

This project includes work that is SDDOT Participation and work that is SDDOT Non-Participation (hereafter referred to as City Portion). All work will be handled treated as equal and will be a part of one single bid tab. The bid will be awarded to the low bidder of all work.

#### COORDINATION OF WORK WITH RAILROAD

The contractor shall coordinate work with the BNSF Railway Company. See the following special provision "Special Provision Regarding Working on Railroad Property" and "Special Provision Regarding Railroad Insurance Requirements."

#### STAKING

All construction staking will be provided by the engineer. The Contractor shall coordinate with the engineer and provide 48 hour notification prior to any staking needs.

Staking will include finished grade stakes for back of curb and centerline, cut/fill lathe at centerline for subgrade if requested, and blue top stakes for finished base course elevation. Any additional staking or resetting of stakes that are disturbed will be paid for by the Contractor.

#### TESTING

The contractor shall hire a qualified testing company to perform all compaction testing and concrete testing. This company shall be approved by the engineer before any grading work or concrete work can begin.

Aggregate Base Course shall be a minimum density of 98% of the max dry density as determined by the Standard Proctor. A minimum of two tests shall be completed per side of the mainline track. If areas of base course instability are present, more testing may be required.

Concrete Tests shall include the following: one set of concrete cylinders shall be made for each day's production. Concrete air content, unit weight, slump, and temperature determinations shall be made each time a concrete cylinder for compressive strength determination is made. No more than 1 set of tests per day will be required, except in instances of failing fresh concrete tests. A set of cylinders shall consist of a minimum of 4 cylinders.

The contractor will be responsible for all failing tests and will pay for all retesting costs until a passing test is accomplished.

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The contractor shall coordinate with the testing company to have tests taken according to the specifications. All tests must be approved by the engineer before any work can continue in the tested area. The engineer can hire a testing company to verify any disputed tests provided by the contractor. The engineer has final approval on all compaction testing and concrete testing. All cost associated with testing shall be incidental to the project.

Subgrade shall have a minimum density of 96% of the max dry density as determined by the Standard Proctor. A minimum of two tests shall be completed per side of the mainline track. If areas of subgrade instability are present, more testing may be required.



#### **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 shall be incidental to the contract unit price per cubic yard of "Unclassified Excavation".

#### UTILITIES

The Contractor shall be aware that the existing utilities shown in the plans were surveyed prior to the design of this project and might have been relocated or replaced by a new utility facility prior to construction of this project, might be relocated or replaced by a new utility facility during the construction of this project, or might not require adjustment and may remain in its current location. The Contractor shall contact each utility owner and confirm the status of all existing and new utility facilities. The utility contact information is provided elsewhere in the plans or bidding documents.

#### SHRINKAGE FACTOR Embankment +20%

#### TABLE OF EXCAVATION QUANTITIES BY BALANCES

			*	Total	**
Station	Station	Excavation	Undercut	Excavation	Waste
to		(CuYd)	(CuYd)	(CuYd)	(CuYd)
1+96	2+66	123	156	279	65
2+76	3+40	124	143	267	61
3+40	4+05	84	84	168	61
	TOTALS:	331	383	714	187

\* The quantities for these items are in the Estimate of Quantities under their respective bid items.

\*\* The quantities for these items are for information only.

#### TABLE OF UNCLASSIFIED EXCAVATION

		(CuYd)
Excavation		331
Undercut		383
	Total:	714

The plan shown quantity shall be the basis of payment for Unclassified Excavation, However, if there are additional areas of excavation other than what is shown in the plans, the Engineer shall direct removal of these areas and the additional areas will be measured according to the Engineer.

The Excavation guantities from individual balances and the Table of Unclassified Excavation have been reduced by the volume of in place surfacing that will be removed.

#### UNDERCUTTING

In all cut sections the earthen subgrade shall be undercut 1 foot below the earthen subgrade surface. The undercut material or other suitable material, as directed by the Engineer, shall then be replaced and compacted to the density specified for the section being constructed.

Shallow embankment sections, fills less than 1 foot in height measured at the finished subgrade shoulders, shall be undercut to ensure a minimum 1 foot height of earth embankment for the entire width of roadbed. The undercut material or other suitable material, as directed by the engineer, shall then be replaced and recompacted to the density specified for the section being constructed.

The plan shown quantity will be the basis of payment for Undercutting. However, if there are additional areas of undercut other than what is shown in the plans, the Engineer shall direct removal of these areas and the additional areas will be measured according to the Engineer.

#### TABLE OF UNDERCUTTING

			Quantity
Station	to	Station	(CuYd)
1+96		2+66	156
2+76		3+40	143
3+40		4+05	84
		Total:	383

#### **UNSTABLE SUBGRADE**

Should any area become unstable, additional undercut and or replacement of the undercut material with suitable material should be considered.

If, in the opinion of the Engineer, the area will not stabilize by this method or there are conflicts with utilities, MSE Geotextile fabric and granular material may be used. Stabilization will be accomplished by undercutting the subgrade and placing a layer of MSE Geotextile Fabric at the bottom of the undercut. The undercut will then be backfilled with granular material and compacted. 100 sg. vds. of MSE Geotextile have been included in the materials quantities for bidding purposes. Additional quantities of granular material can be added by CCO, depending on field conditions.

The geotextile will conform to specification for Geotextiles and Impermeable Plastic Membranes, MSE Geotextile Fabric (Section 831.1 of the Specifications). The geotextile will be on the Approved Products List for this material or will be certified by the supplier to meet this specification prior to installation.

Geotextile will be paid for at the contract unit price per sq. yd. for MSE Geotextile Fabric. Payment quantities will be based on area covered plus 15%. Overlaps are accounted for by the additional 15%. Payment will be full compensation for furnishing and installing the geotextile only. Granular backfill materials will be paid for under a different bid item.

The geotextile will be placed as taut as possible with minimal wrinkles. Placement will be done so that subsequent granular cover does not shove. wrinkle, or distort the in place geotextile. The overlaps will be shingled in a manner that assures that granular material will not be forced under the geotextile during backfilling operations. The geotextile may be held in place with small piles of granular material or staples.

The top of the subgrade shall be prepared by smoothing the surface to minimize any ruts, ridges, and depressions. Any rocks or other protrusions that might damage the geotextile will be removed. The geotextile will be unrolled parallel to centerline and overlapped a minimum of 2 feet.

Granular Material will conform to the specification for Aggregates for Granular Bases and Surfacing, Aggregate Base Course (Section 882 of the Specifications). Granular Material will be paid for at the contract unit price for Base Course. Payment will be full compensation for furnishing and placing this material.

The granular material will be placed by back dumping onto the geotextile from the truck and dozing or pushing the granular material from the covered areas to the uncovered areas. No traffic will be allowed on the uncovered geotextile. The first lift of granular material will be placed in an 8 inch lift or as directed by the Engineer. After the subgrade is stabilized, the remaining granular material will be placed in 4 inch max. lifts. The granular material will be compacted by the Specified Density Method.

#### **UTILITY LIST**

City Of Parkston Brenda Huether, Finance Officer Phone: 605-928-3321 Email: parkstoncity@santel.net

NorthWestern Energy 1-800-245-6977 Terry Meyer, Local Contact Phone: 605-770-1308

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#### TABLE OF ASPHALT CONCRETE PAVEMENT REMOVAL

				Quantity
Station	to	Station	L/R	(SqYd)
1+95		2+11	L/R	102.0
2+20		2+67	L/R	310.0
2+76		3+40	L/R	373.6
			Total :	785.6

#### TABLE OF ASPHALT CONCRETE PAVEMENT REMOVAL (CITY PORTION)

				Quantity
Station	to	Station	L/R	(SqYd)
3+40		4+05	L/R	266.9
			Total :	266.9

#### TABLE OF CONCRETE CURB AND GUTTER REMOVAL

		Quantity
Station to	Station	(Ft)
1+95.73 - 28.8' L	2+02.74 - 29.4' L	7.0
	Total:	7.0

#### TABLE OF CONCRETE GUTTER REMOVAL

		Quantity
Station to	Station	(Ft)
1+95.73 - 26.8' R	2.03.40 - 26.8' R	7.7
	Total:	7.7

#### TABLE OF CONCRETE SIDEWALK REMOVAL

		Quantity
Station to	Station	(SqYd)
1+95.62 - 38.5' L	2+02.83 - 37.8' L	7.2
2+75.38 - 36.9' L	3+40.00 - 39.2' L	35.0
	Total:	42.2

#### TABLE OF CONCRETE SIDEWALK REMOVAL (CITY PORTION)

		Quantity
Station to	Station	(SqYd)
3+40.00 - 39.2' L	3+83.50 - 46.8' L	33.8
	Total:	33.8

#### **REMOVE RAILROAD TRACK**

A portion of the west spur line will be required to be removed by the Contractor. The unit price per foot for the bid item "Remove Railroad Track" shall be full compensation for unbolting the track at the joints located at the indicated stationing, removal of both steel rails, removal of the ties and removal of the existing crossing wherever it is located.

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#### TABLE OF RAILROAD TRACK REMOVAL

		Quantity
Station to	Station	(Ft)
2+15.11 - 68.5' L	2+15.71 - 57.5' R	126.0
	Total:	126.0

#### TABLE OF FENCE REMOVAL

		Quantity
Station to	Station	(Ft)
2+99.34 - 38.2' L	3+40.00 - 38.8' L	41.0
	Total:	41.0

#### TABLE OF FENCE REMOVAL (CITY PORTION)

		Quantity
Station to	Station	(Ft)
3+40.00 - 38.8' L	3+69.56 - 38.1' L	32.0
	Total:	32.0

...

#### TABLE OF REMOVE, SALVAGE, RELOCATE, AND RESET TRAFFIC SIGN

		Quantity
Station		(Each)
2+99.3 - 23.4' R		1
2+99.5 - 39.7' L	_	1
	Total:	1

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## AND GUTTER

		Quantity
Station to	Station	(Ft)
1+95.73 - 26.95' L	2+03.00 - 25.42' L	7.43
2+33.00 - 24.00' L	2+61.09 - 24.00' L	28.08
2+81.09 - 24.00' L	3+13.04 - 24.00' L	31.95
	Total:	67.5

# GUTTER

Station	to
1+95.73 - 26	.95'
2+03.00 - 25	.42'
2+09.74 - 24	.00'
2+09.74 - 24	.00'
2+81.35 - 24	.00'
3+13.04 - 24	.00'

## GUTTER (CITY PORTION)

Station to 3+40.00 - 24.00'

#### **<u>8" PCC FILLET SECTIONS</u>**

Payment for "8" PCC Fillet Section" shall be based on plans quantity. If additions or reductions to the area of PCC fillet sections are ordered by the Engineer, payment will be made in accordance with the contract unit price per square yard for "8" PCC Fillet Section".

TABLE OF 8" PCC FILLET SECTION (CITY PORTION)				
			Radius	Quantity
Station to	Station	L/R	(Ft)	(SqYd)
3+66.01	3+83.51	L	25	14.78
			Total:	14.78

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#### TABLE OF MODIFIED TYPE B68 CONCRETE CURB

#### **TABLE OF MODIFIED TYPE P8 CONCRETE**

		Quantity
	Station	(Ft)
R	2+09.74 - 24.00' R	14.32
L	2+09.74 - 24.00' L	7.15
R	2+61.35 - 24.00' R	51.61
L	2+33.00 - 24.00' L	23.00
R	3+40.00 - 24.00' R	58.65
L	3+40.00 - 24.00' L	26.96
	Total:	181.7

## **TABLE OF MODIFIED TYPE P8 CONCRETE**

		Quantity
	Station	(Ft)
L	3+66.01 - 24.00' L	26.01
	Total:	26.0

#### **TYPE 1 DETECTABLE WARNINGS**

Detectable warnings shall be in compliance with the Americans with Disability Act regulations.

The detectable warnings shall 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 shall be placed below the Type 1 Detectable Warnings. When concrete is placed below the detectable warnings then the concrete thickness shall be transitioned at the rate of 1" per foot to match the adjacent concrete sidewalk thickness.

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

When Type 1 Detectable Warnings are specified, the Contractor shall furnish and install only one of the products listed in the Type 1 Detectable Warnings table.

#### Type 1 Detectable Warnings

Neenah, WI 800-558-5075

Deeter Foundry

301 Spring Street

http://www.ejiw.com

555 West 25<sup>th</sup> Street

Hibbing, MN 55746

http://key3casting.com

218-263-8871

800-626-4653

http://www.deeter.com/

East Jordan, MI 49727

East Jordan Iron Works, Inc.

Key 3 Casting (Northern Foundry)

Lincoln. NE 800-234-7466

Manufacturer

http://www.neenahfoundry.com/

Neenah Foundry Company

### Detectable Warning Plate Cast Iron Plate

Product

Detectable Warning Plate Cast Iron Plate

Detectable Warning Plate Cast Iron Plate(No Coating)

> CAST-DWD Cast Iron Plate



#### **DETECTABLE WARNINGS (CONTINUED)**

#### TABLE OF TYPE 1 DETECTABLE WARNINGS

		Quantity
Station	L/R	(SqFt)
2+61.02	37.25' L	10
2+81.02	37.19' L	10
	Total:	20

#### TABLE OF TYPE 1 DETECTABLE WARNINGS (CITY PORTION)

		Quantity
Station	L/R	(SqFt)
3+76.56	33.59' L	10
	Total:	10

#### **TABLE OF 8" PCC APPROACH PAVEMENT**

		Opening		Quantity
Station	L/R	(Ft)	Туре	(SqYd)
2+30.00	L	30	А	60.0
			Total:	60.0

#### **TABLE OF 8" PCC APPROACH PAVEMENT** (CITY PORTION)

		Quantity
Station to	Station	(SqYd)
3+74.38 - 46.64' L	3+83.51 - 41.79' L	3.2
	Total:	3.2

#### **INSTALL 6" CONCRETE SIDEWALK**

			Width	Quantity
Station	to	Station	(Feet)	(SqFt)
2+39.00 - 39.	75' L	2+66.00 - 39.75' L	5	135.1
2+76.01 - 39.	64' L	3+40.00 - 34.50' L	5	321.3
			Total:	456.4

#### **INSTALL 6" CONCRETE SIDEWALK (CITY PORTION)**

			Width	Quantity	
Station	to	Station	(Feet)	(SqFt)	
3+40.00 - 34.	50' L	3+80.13 - 36.46' L	5	193.8	
			Total:	193.8	

#### **BASE COURSE**

Aggregate Base Course shall be in accordance with Specifications Section 260. Material for Aggregate Base Course shall conform to Specifications Section 882 for Aggregates for Granular Bases and Surfacing using Table 1 "Aggregate Base Course" for specifics. Aggregate Base Course shall be compacted to a minimum density of 98% of the max dry density as determined by Standard Proctor.

Water for compaction shall be incidental to base course installation

Payment shall be made on a per ton basis. Any aggregate base course delivered to the site without a scale ticket will not be measured for payment.

#### TABLE OF 6" GRAVEL SURFACING

		Quantity
Station to	Station	(Ton)
1+95.62 - 38.45' L	2+66.00 - 39.75' L	53.9
1+95.73 - 29.50' R	2+61.36 - 26.50' R	31.0
2+76.01 - 39.64' L	3+01.81 - 39.56' L	13.7
	Total:	98.5

#### **ASPHALT CONCRETE COMPOSITE**

placed in two lifts of equal depth.

Bituminous material for asphalt concrete shall be Penetration Grade 64-28, ASTM D946, Viscosity Grade AS-10, and ASTM 3361.

Tack coat (SS-1h or Css-1h) shall be applied between each lift of asphalt and along existing concrete and asphalt faces and any areas as determined by the Engineer at a rate of .05 gal/sq. yd. Tack coat shall be incidental to the unit bid price for "Asphalt Concrete Composite".

Assumed standard unit weight for Asphalt is 148 Lb/CuFt.

Asphalt Concrete may be obtained from a hot plant producing asphalt concrete for the SDDOT in accordance to Class Q, high volume traffic, and asphalt concrete specifications. All other requirements in the Specifications for Asphalt Concrete Composite shall apply.

The Contractor shall provide a Job-Mix Formula to the Engineer with supporting mix design data 2 weeks prior to production. The Engineer may adjust the asphalt binder content.

The Contractor will also provide a paving schedule to the Engineer 2 weeks prior to production. This may be adjusted due to Traffic Control or other property owner conflicts. No paving will start until the paving schedule is approved.

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Mineral aggregate for the Asphalt Concrete shall conform to the requirements of the Specifications for Class E, Type 1 (3/4" Mix) for the bottom lift and Class E, Type 2 (1/2" Mix) for the top lift. Asphalt shall be

#### ASPHALT CONCRETE COMPOSITE (CONTINUED)

Placement of asphalt concrete shall be by self-propelled pavers. Compaction of the asphalt concrete shall be by methods and equipment satisfactory to the Engineer. Asphalt concrete shall be placed to the satisfaction of the Engineer. Asphalt will be paved so final elevation of asphalt surface is approximately 1/2 inch above all manholes and valve boxes and the pan of the concrete curb and gutter.

#### TABLE OF ASPHALT CONCRETE COMPOSITE

		Thickness	Quantity
Station to	Station	(Inches)	(Ton)
1+95.73	2+66.22	5	110.9
2+76.22	3+40.00	5	99.1
3+13.04	3+40.00	3	1.6
	Total:		211.6

#### TABLE OF ASPHALT CONCRETE COMPOSITE (CITY PORTION)

		Thickness	Quantity
Station to	Station	(Inches)	(Ton)
3+40.00	4+05.38	5	66.4
3+40.00	3+76.83	3	2.1
	Total:		68.5

#### **TRAFFIC CONTROL**

The Contractor will be required to maintain traffic in accordance with Section 4.4 of the Specifications. Traffic Control shall be in accordance with Section 634 of the Specifications, and The Manual on Uniform Traffic Control Devices (MUTCD). When warranted, 24 hour a day protection shall be undertaken.

All existing traffic control signs (stop, speed limit, yield, etc.) that are removed prior to or during construction shall be replaced in their proper positions after construction. Said work will be incidental to this project and must be completed in a timely manner to ensure safe conditions.

Erect only those signs that are applicable to the work in progress. When the Contractor is working at specific work areas within the project, only those traffic control devices applicable to that operation should be displayed. Non-applicable traffic control devices shall be removed. The Fixed Location Signs at the ends of the project shall be installed prior to work beginning on the project.

Removing, relocating, covering, salvaging and resetting of permanent traffic control devices, including delineation, shall be the responsibility of the Contractor. The cost of this work shall be incidental to Traffic Control. Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the City.

Traffic Control includes all necessary traffic control devices and any relocation required to suit construction needs at that time. It also includes removing devices from the project at construction completion.

#### TRAFFIC CONTROL (CONTINUED)

The Contractor shall designate an employee whose responsibility is the maintenance of traffic, 24 hours a day and 7 days a week. The person so designated must have training and experience in the field of construction traffic control and be knowledgeable about the Manual on Uniform Traffic Control Devices (MUTCD). The cost of the traffic control person shall be incidental to Traffic Control. The Engineer must approve the employee selected. The name, phone number (including cell number), and location of person(s) shall be provided to the local law enforcement and the Engineer.

The contract unit price per unit for "Traffic Control" and the contract price per square foot for "Detour Signing" shall include all labor, equipment and materials necessary to furnish, erect and maintain the traffic control devices for the duration of the project.

The project shall not be open to traffic until all permanent traffic control devices are in place.

Traffic control devices shall meet the crashworthy requirements of the National Cooperative Highway Research Program Report 350 (NCHRP 350) for Category I, II, and III devices. It shall be the responsibility of the Contractor to insure that all devices meet the applicable NCHRP 350 requirements.

Category I traffic control devices include low mass, single piece traffic cones, tubular markers, single piece drums, and delineators. Auxiliary lights or signs shall be attached to these devices, unless approval has been granted by FHWA. The manufacturer may certify these devices as being NCHRP 250 crashworthy.

Category II traffic control devices include those which are larger than the Category I devices and may weigh up to 100 pounds. This includes plastic barricades and portable sign supports. Acceptable Category II devices are those, which have been crash-tested and have received an acceptance letter from the Federal Highway Administration.

Category III traffic control devices include barriers or other fixed or high mass devices, including portable sign trailers.

The following Traffic control devices: reflectorized drums, cones, tubular markers and detour signs (M4-8, M4-9, or M4-10 series) shall be sheeted with micro-cube corner prismatic material. Orange colored material shall be fluorescent.

Signs can be mounted on mobile units or on breakaway posts. These will meet MUTCD standards.

#### TRAFFIC CONTROL (CONTINUED)

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

Orange safety fence shall be used to protect pedestrian traffic from open excavations. All costs to furnish, install, maintain and remove the safety fence shall be incidental to the contract lump sum price for Traffic Control, Miscellaneous. The Contractor shall make every effort to maintain or open a path for pedestrian traffic as soon as possible. Construction traffic should also be protected with cones or other alternatives.

Storage of vehicles and equipment shall be as near the right-of-way as possible. Any damage to vegetation, surfacing, grading, and existing signs resulting from such individuals from indiscriminate use shall be repaired and/or restored by the contractor, at no expense to the Owner, and to the satisfaction of the Engineer.

The parking of vehicles in front of the full roadway closure barricades will not be permitted. The Contractor's equipment and employee vehicles should be parked at a location where they will not obscure the traffic control or be hazard to approaching traffic.

Water will be used to control dust as necessary. Any cost for dust control would be at the contractor's expense.

Affected parties and the engineer shall be notified two (2) business days prior to any access closures.

The Contractor shall utilize channelization devices as necessary to aid in directing traffic and closing off the work area. The Contractor shall have a minimum of 25 channelization devices to control the work area. These devices may be moved as needed and shall be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

STATE OF	PROJECT	SHEET	TOTAL SHEETS
DAKOTA	PP 8034(30)	7	39

Revised 03/9/15 JDL



#### FURNISH AND INSTALL TRAFFIC SIGNS

The signs listed on the Sign Installation Table in the plans as new installations shall be provided for the locations specified. Flat aluminum signs greater than 24" on the horizontal axis when installed shall be 0.100" flat sheet aluminum. Flat aluminum signs 24" or less on the horizontal axis when installed shall be 0.080" flat sheet aluminum.

#### SIGN LEGEND, BORDER AND BACKGROUND

All signs are to be installed in accordance with Sections 632 and 982 of the Specifications.

Sheeting material on warning signs shall be fluorescent yellow and meet or exceed standards for ASTM D4956 classified Type XI super/very high intensity microprismatic sheeting.

#### DATE DECAL

The Contractor shall affix a date decal to each new sign installed. Each decal is an approximately 2" X 2" self-adhesive sticker with removable paper backing and black numerals on a white background. The date decal displays the last two digits of the year the sign was manufactured (as illustrated).



One decal shall be placed in the extreme lower left corner of the back of flat aluminum signs, except street signs.

Sign supports or other obstructions shall not block the view of the date decal upon completion of the sign installation.

Cost for furnishing and installing of date decals on new signs shall be incidental to the contract unit price for the various signing bid items.

#### SIGN POSTS

The plan post lengths shall be field verified by the Contractor. Breakaway anchor perforated tube post lengths listed in the Post Size/ Quantity columns of the SIGN INSTALLATION TABLE include 0.8' (9")/post minimum subarade length.

Supports shall be cut to provide the proper sign height where necessary.

Perforated tube posts shall be fabricated from 12 gauge galvanized steel unless otherwise specified in the plans.

Post anchors shall be 48" long. Two-piece anchor post systems are required for 2" perforated tube post anchor stub posts. Heavy duty 7 gauge galvanized steel anchor stub posts that do not require stiffener sleeves are required for 2 1/2" perforated tube post non slip base post installations.

All sign support bases shall conform to Plate number 634.99.

Direct drive perforated tube post lengths listed in the Post Size/ Quantity columns of the Sign Installation table include the minimum 4'/post subgrade length.

#### **DETOUR SIGNING**

The Contractor will be required to install, maintain and remove the detour traffic signing in accordance with the Specifications, the MUTCD and as detailed in these plans. Detour signing shall be installed on breakaway ground mounted supports. All costs for furnishing, installing, maintaining and removing detour signs, posts and mounting hardware shall be incidental to the contract unit price per square foot for "Detour Signing".

#### **PAVEMENT MARKING**

The pavement marking material shall be as defined in Section 980 & 981 of the Specifications.

#### PLACING CONTRACTOR FURNISHED TOPSOIL

It is anticipated that a larger volume of topsoil will be needed for the new grade than can be salvaged from the existing grade. The Contractor will be required to furnish and place 4 inches of topsoil on roadway inslopes and areas as determined by the Engineer during construction.

All costs to furnish and place the topsoil shall be incidental to the contract unit price per cubic yard for "Placing Contractor Furnished Topsoil".

The estimated amount of topsoil to be placed is 14 CuYd.

#### **EROSION CONTROL**

Erosion Control shall include all costs to furnish and install all Mycorrhizal Inoculum, Fertilizer, Permanent Seeding, and Fiber Mulch as shown on the plan sheets.

### TABLE OF EROSION CONTROL

		**	Permanent	Fiber	
		Fertilizer	Seeding	Mulching	
Station to	Station	(Lb)	(Lb)	(Lb)	
2+96	3+40	29	7	39	
3+40	3+81	16	4	22	

only.

#### MYCORRHIZAL INOCULUM

Glomus intraradice Glomus aggregatu Glomus mosseae Glomus etunicatun

All seed shall be inoculated by the seed supplier with a minimum of 20,000 live propagules of mycorrhizal fungi per 1,000 square feet. All costs of inoculating the seed shall be incidental to the contract unit price per lump sum for "Erosion Control".

The mycorrhizal inoculum shall be from the list below or an approved equal:

Product MycoApply



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SOUTH DAKOTA	PP 8034(30)	8	39

\*\* The quantities for these items are for information

Mycorrhizal inoculum shall consist of mycorrhizal fungi spores and mycorrhizal fungi-infected root fragments in a solid carrier. The carrier may include organic materials, calcinated clay, or other materials consistent with application and good plant growth. The supplier shall provide certification of the fungal species claimed and the live propagule count. The inoculum shall include the following fungal species:

Manufacturer

Mycorrhizal Applications, Inc. Grants Pass. OR Phone: 1-866-476-7800 http://www.mycorrhizae.com/

#### **EROSION CONTROL (CONTINUED)**

#### FERTILIZING

The Contractor shall apply an all-natural slow release fertilizer prior to seeding or placing sod. The all-natural fertilizer shall have a minimum guaranteed analysis of 4-6-4 and be USDA Certified BioBased. It should provide a minimum of 4% (N) nitrogen with a minimum water insoluble nitrogen (WIN) fraction of 3.2%, a minimum of 6% (P2O5) available phosphate, a minimum of 4% (K2O) soluble potash, and a maximum carbon to nitrogen ratio (C:N ratio) of 5:1. The all-natural fertilizer shall be free of weed-seed and pathogens accomplished through thermophilic composting, and not mechanical or chemical sterilization, to assure presence of beneficial soil microbiology. The fertilizer shall have a near neutral pH. a low salt index. a low biological oxygen demand, contain organic humic and fulvic acids, and have high aerobic organism counts. The fertilizer shall also be stable, free of bad odors, and be unattractive as a food source for animals. It should also be in a granular form that is easily spread.

The all-natural slow release fertilizer shall be applied according to the manufacturer's application recommendations.

The application rate is 34 pounds per 1,000 square feet.

The all-natural slow release fertilizer shall be from the list below or an approved equal:

> Product Sustane

## Manufacturer

Sustane Corporate Headquarters Cannon Falls, Minnesota Phone: 1-800-352-9245 http://www.sustane.com/

#### DRILLS

In addition to the drills specified in Section 730 of the Specifications, other types of drills including no-till drills will be allowed as long as they have baffles, partitions, agitators, or augers which keep the seed distributed throughout the seed box and the seed is planted at a depth of  $\frac{1}{4}$  to  $\frac{1}{2}$ .



#### **EROSION CONTROL (CONTINUED)**

#### PERMANENT SEEDING

The areas to be seeded consist of all newly graded areas within the project limits except for the top of roadways.

All permanent seed shall be planted in the topsoil at a depth of  $\frac{1}{4}$ " to  $\frac{1}{2}$ ".

All seed broadcast must be raked or dragged in (incorporated) within the top  $\frac{1}{4}$ " to  $\frac{1}{2}$ " of topsoil when possible. This requirement may be waived by the Engineer during construction when raking or dragging is deemed not feasible by conventional methods.

The varieties listed for seed mixtures are preferred varieties.

Type D Permanent Seed Mixture shall consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/1000 SqFt)
Kentucky Bluegrass	Avalanche, Appalachian, Wildhorse, Blue Bonnet	1.4
Perennial Ryegrass	Turf Type Varieties	1.4
Creeping Red Fescue	Epic, Boreal	1.4
Chewings Fescue	Ambrose, K2, VNS, Zodiac	1.4
Alkali Grass	Fults, Fults II, Quill, Salty	1.4
	Total:	7

#### FIBER MULCHING

Fiber mulch shall be applied in a separate operation following permanent seedina.

Fiber mulch shall be applied at the rate of 2000 pounds per acre.

The Contractor shall allow the fiber mulch to cure a minimum of 18 hours prior to watering or any storm event to ensure proper cohesion between the soil and fiber particles.

All costs for the additional tackifier added to the fiber mulch including labor, equipment, and materials shall be incidental to the contract unit price per lump sum for "Erosion Control".

The fiber mulch provided shall be from the approved product list. The approved product list for the fiber mulch may be viewed at the following internet site:

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

#### WEED BARRIER FABRIC/LANDSCAPE FABRIC

be placed.

Weed barrier fabric shall be anchored to the ground with 6" U shaped staples. The staples shall be placed at a 4' spacing along all edges, overlaps, and throughout the area of weed barrier fabric. The weed barrier fabric shall be overlapped 4" between rolls.

Weed barrier fabric shall be measured to the nearest square vard. Measurement of the overlaps will not be made.

All costs for furnishing, handling, and placing the weed barrier fabric including the materials, equipment, labor, and incidentals necessary shall be incidental to the contract unit price per square yard for "Weed Barrier Fabric".

alternate:

Pr Green Line

Green Lin

Purple Lin

Geot

Earthsc

Mirafi

Mirafi M

Typar P Landscape

	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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Weed barrier fabric shall be placed in all areas where landscaping rock is to

The weed barrier fabric shall be provided from the list below or an approved

Weed Barrier Fabric/Landscape Fabric

<u>oduct</u>	<u>Manufacturer</u>
Ground Cover	Thrace-LINQ, Inc. Summerville, SC Phone: 1-800-445-4675
e Landscape	Thrace-LINQ, Inc. Summerville, SC Phone: 1-800-445-4675
e Landscape	Thrace-LINQ, Inc. Summerville, SC Phone: 1-800-445-4675
tex 351	Propex Inc. Chattanooga, TN Phone: 1-800-621-1273 www.geotextile.com
cape 4530	Propex Inc. Chattanooga, TN Phone: 1-800-621-1273
Mscape	TenCate Geosynthetics Pendergrass, GA Phone: 1-706-693-2226
scape Plus	TenCate Geosynthetics Pendergrass, GA Phone: 1-706-693-2226
rofessional e Fabric 3301	Fiberweb, Inc. Old Hickory, TN Phone: 1-800-382-8467 www.typarlandscape.com

#### LANDSCAPING ROCK

The landscaping rock shall be placed at a thickness of 6 inches at the areas as shown in the plans. The landscaping rock shall be  $2^{\circ} - 3^{\circ}$  washed river rock or similar landscaping rock as approved by the Engineer during construction.

The Contractor shall provide a sample of the landscaping rock to the Engineer for approval two weeks prior to installation.

All costs for furnishing, handling, and placing the landscaping rock including the materials, equipment, labor, and incidentals necessary shall be incidental to the contract unit price per cubic yard for "Landscaping Rock".

#### TABLE OF LANDSCAPE ROCK

		Quantity
Station to	Station	(CuYd)
2+39 - 26.5' L	2+66 - 26.5' L	4.4
2+76 - 26.5' L	3+13 - 26.5' L	5.3
	Total <sup>.</sup>	96

#### LOW FLOW SILT FENCE

The low flow silt fence fabric provided shall be from the approved product list. The approved product list for low flow silt fence may be viewed at the following internet site:

#### http://apps.sd.gov/Applications/HC54ApprovedProducts/main.asp

Low flow silt fence shall be placed at the locations noted in the table and at locations that will minimize siltation of adjacent streams, lakes, dams, or drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.04 for details.

#### TABLE OF LOW FLOW SILT FENCE

			Quantity
Station	L/R	Location	(Ft)
3+21	L	Bottom of Slope	25
3+45	R	Bottom of Slope	54
3+69	L	Bottom of Slope	12
		Total:	91

#### **MUCKING SILT FENCE**

Mucking silt fence shall consist of removing muck trapped by the silt fence and spreading the material evenly over the adjacent area to conform to the existing grade.

#### **REMOVE SILT FENCE**

Silt fence shall be removed when vegetation is established. Some or all of the silt fence may be left on the project until vegetation is established.

#### **SEDIMENT FILTER BAG**

The sediment filter bags shall be the Snake Bag from Sacramento Bag Manufacturing Company or an approved equal.

Sediment Filter Bag

<u>Product</u> Snake Bag Manufacturer Sacramento Bag Manufacturing Co. Sacramento, CA Phone: 1-800-287-2247 www.sacbag.com

The sediment filter bags shall be filled with clean aggregate 2" minus or smaller

All costs for furnishing, installing, and removing the sediment filter bags shall be incidental to the contract unit price per foot for "Sediment Filter Bag."

#### TABLE OF SEDIMENT FILTER BAGS

	Quantity
Station	(Ft)
1+86 - 28.3' L	5
1+86 - 28.3' R	5
3+79 - 51.7' L	10
4+40 - 25.3' L	5
Total:	25

#### STREET SWEEPING

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

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

At a minimum, sweeping will be required:

- 1. Prior to opening any segment or roadway to traffic.
- 2. When dirt has been tracked off of the project onto adjacent paved streets.

All costs for cleaning the roadway with a pickup broom shall be incidental to the project. No additional payment shall be made for sweeping.

STATE OF	PROJECT	SHEET	TOTAL SHEETS
DAKOTA	PP 8034(30)	10	39
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# **TYPICAL GRADING**

## **MAIN STREET** STA 1+95.73 TO 2+61.08 STA 2+81.08 TO 3+13.04





	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL
		PP 8034(30)	11	39

## MAIN STREET STA 3+40.00 TO 4+05.38



ROW



# HORIZONTAL ALIGNMENT DATA

Main Street							
Туре	Station			Northing	Easting		
POB	0+00.00			395702.343	2592624.574		
		TL= 440.15	N 88°12'14" E				
POE	4+40.15			395716.138	2593064.508		



# EXISTING TOPOGRAPHY SYMBOLOGY AND LEGEND

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Anchor
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Approach
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Azimuth Marker
BBQ Grill/ Fireplace
Bearing Tree
Bench Mark
Box Culvert
Bridge
Brush
Buildings
Bulk Topk
Cottle Cuard
Centerline
Centenine
Cistern
Clothes Line
Commercial Sign Double Face
Commercial Sign One Post
Commercial Sign Overhead
Commercial Sign Two Post
Concrete Symbol
Creek Edge
Curb/Gutter
Curb
Dam Grade/Dike/Levee
Deck Edge
Ditch Block
Doorway Threshold
Drainage Profile
Drop Inlet
Edge Of Asphalt
Edge Of Concrete
Edge Of Gravel
Edge Of Other
Edge Of Shoulder
Elec. Trans./Power Jct. Box
Fence Barbwire
Fence Chainlink
Fence Electric
Fence Misc.
Fence Rock
Fence Snow
Fence Wood
Fence Woven
Fire Hydrant
Flag Pole
Flower Bed
Gas Valve Or Meter
Gas Pump Island
Grain Bin
Guardrail
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Manhole Storm Sewer
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Manhole Water
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Microwave Radio Tower
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Misc. Property Corner
Misc. Post
Overhang Or Encroachment
Overhead Utility Line
Parking Meter
Pipe With End Section
Pipe With Headwall
Pipe Without End Section
Playground Slide
Playaround Swing
Power And Light Pole
Power And Telephone Pole
Power Meter
Power Pole
Power Pole And Transformer
Power Tower Structure
Propane Tank
Property Pipe
Property Pipe With Can
Property Stone
Public Telephone
Railroad Crossing Signal
Railroad Milepost Marker
Railroad Profile
Railroad R.O.W. Marker
Railroad Signs
Railroad Switch
Railroad Track
Railroad Trestle
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	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS	
		PP 8034(30)	14	39	

RIGHT OF WAY AND EASEMENT OWNERSHIP TABLE						STATE OF SOUTH	PROJECT PP 8034 (30)	SHEET NO.	TOTAL SHEETS		
Parcel No	Station (Begin) Station (End)	Side	Type	Purnose	Δrea	Property Owner	Property Description	DAKOTA		15	39
A1	1+98.21 to 2+06.51	LT	TEMP	Cut, Fill	256 Sq.Ft.	Kaylor Grain Company, Inc.	Lot E, of Railroad Subdivision to the City of Parkston, Hutchinson County, S	South Dakota.			
A2	2+05.74 to 2+25.74	RT	TEMP	Cut, Fill, Driveway	499 Sq.Ft.	BNSF Railway Company	Lot F, of Railroad Subdivision to the City of Parkston, Hutchinson County, S	South Dakota.			
A3	2+06.51 to 3+20.95	LT	TEMP	Rail Removal	2369 Sa.Ft.	BNSF Railway Company	Lot C. of Railroad Subdivision to the City of Parkston. Hutchinson County	South Dakota.			
Δ.1	3+20.05 to 3+70.05	IT		Rail Removal	553 Sa Et	Kaylor Grain Company, Inc.	Lat D of Pailroad Subdivision to the City of Parkston, Hutchinson County	South Dakota			
	3+20.95 (0 3+70.95				555 Sq.Ft.						
A5	3+21.47 to 3+71.47	RI	IEMP	Cut, Fill	500 Sq.Ft.	James Weiss & Joanne Weiss	Lot G, of Railroad Subdivision to the City of Parkston, Hutchinson County,	South Dakota.			
									EGNQ BIG1 JOSH LARSON I-19-15 SOUTH DAVOT	A SP - CONCER	



# SIGN INSTALLATION TABLE

SIGN DATA					POST DATA							
SIGN # ST	TATION	DESCRIPTION	SIGN CODE	SIGN SIZE (FT)	SIGN AREA (SQ. FT.) Type XI	OFFSET* RIGHT/ LEFT OVERHEAD	POST LENG GROU	GTHS (ABOVE ND) ***	FIXED OR BREAK- AWAY**	(N)EW OR (R)EUSE POST	POST SIZES AND QUANTITIES (FT) 2.5" x 2.5" TUBE	-
	MAIN STR	REET			632E3205		INSIDE	OUTSIDE		IN OUT	632E1340	]
1 0	0+81 R	R	W10-1	2.5 X 2.5	4.9	2.4' R	10	"09"	A	Ν	10.8	
2 4	4+41 L	R	W10-1	2.5 X 2.5	4.9	2.4' L	10	"09"	A	N	10.8	

PP 8034(30) TOTALS	9.8		21.6				
-Distance from Back of Curb to Edge of Sign ****-Plan post lengths are estimates. The post lengths shall be field verified by Contractor.							
*- (F)ixed Base, or Breakaway (S)lip Base, (A)nchor Stub Post, (M)ulti-directional Surface Moutn, (D)irect drive, or (W)ood Post.							

STATE OF	PROJECT	SHEET	TOTAL
SOUTH DAKOTA	PP 8034(30)	16	SHEETS 20
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		STATE OF	PR	DJECT	SHEET	TOTAL				
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	SIGN SPACING MAY BE ADJUSTED FOR SITE CONDITIONS.									
N	N.T.S.     N. DEPOT STREET, E. MAPLE STREET       AND N. RAILROAD STREET TRAFFIC       SHALL NOT BE INTERUPTED       DURING CONSTRUCTION.									
	CONTRACTOR WILL BE REQUIRED TO KEEP AN OPEN PATH FOR EMERGENCY VEHICLES AT ALL TIMES.									
USE TYPE III BARICADES TO CLOSE MAIN STREET AND POST ROAD CLOSURE SIGNS. A MINUMUM OF 15 BARICADES ARE NEEDED.										
			ONE MUTCD R11- PER GROUPING () BARRICADES.	2 SIGN IS REQUI 2 OR 3) OF TYPE	RED III					
	CHANNELIZATION DEVICES SHALL BE UTILIZED AS NECESSARY TO AID IN DIRECTING TRAFFIC AND CLOSING OFF WORK AREA. CHANNELIZATION DEVICES SHALL BE INCIDENTAL TO THE CONTRACT UNIT PRICE PER LUMP SUM FOR TRAFFIC CONTROL. MISCELLANFOUS									
		ITEMIZED LIS	T FOR DETOUR !	SIGNING						
N	SIGN SIZE	DESC	RIPTION	NUMBER	SQ. FT.	UNITS				
-2	36" X 36"	DETO	UR 300FT	2	9	18				
9	30" X 24"	DETOUR WITH	ARROW (RIGHT)	4	5	20				
9	30" X 24"	DETOUR WIT	HARROW (LEFT)	4	5	20				
			F	101 R11-2 48"X 30")	AL SQ. FT.	58				
			ROAD CLOSED	MOUNTED ON TYPE III BARRICA SINGLE SIDED)	DES					
TYP	E III BARRICADI	E TYPE	III BARRICADE	TYPE III E	ARRICADE	: 				
-		FULL	ROADWAY CLOS	SURE		<b>_</b>				
	N	IAIN STREET	·							
RC	MAIN STREET DETOUR R11-4 (60"X 30") MOUNTED ON TYPE III BARRICADE (DOUBLE SIDED)									





	STATE OF	PROJECT	SHEET	TOTAL
	SOUTH DAKOTA	NH 0050(99)381	19	39
5E				
	1405			
PVI 3+63 10	1400			
Elev 1398.98 PVI 3+78.				
000% Elev 1397	.74 1400			
<del>6</del> °.2224 <sub>9</sub>				
	1395			
	4+00			
				1425
				1420
				1420
				1415
	4+04-L&R 40' Int Str			1410
				1410
00 PVI 3+83.8	0			
47 Elev 1398.8	35 D) (1 4 1 05 28			1405
	Elev 1398.18			
3 60700				1400
A-3.1	700%			
<u>2.2499%</u>				
	0)			1395
STA 3+40.00	•/			
				1390
0 Lt EP PVI 3+	83.80			
	•••			
				1385
				1380
				1375
136				1370
1	4+00			1070



	STATE OF			PROJE	CT			SHEE	ET	TOTAL	٦
	SOUTH DAKOTA		F	P 803	4(30)			20	)	39	
	<u>NO</u> All S Driv	TES: Sidewa re is Ty	lk is 5 ⁄pe A	.0'							
24.00' L 'PE P GUTTER 1400.45 (THEOR.)	1										
24.00' L E P GUTTER FILLET SECTION 1399.09 (THEOR.)	1										
41.79' L LLET SECTION 1397.81 (THEOR.)	1									l	
Rairoad Sueer											
Z											
-04											
<u>A</u>											
18.28'											
20.37'											
		асн	ΡΔ\		=NIT						
		_									
		_									
PLAN VIE	W										
5'-0"		>	1 /	Theo	oreti line	cal <b>T</b> Curb	op Ele	of evat	ior	ı	
Max.)											
<u>&gt;</u>	•		┢	i L					1		
	<b>√</b> √										
roach	· · · · ·	· · · ·		/	<u>/</u> °	°.	• •	.° · · ;	]		
nt ←4"Gran Materi		••••••••••••••••••••••••••••••••••••••	•••••	··/·。	<u>° . c</u>	<u></u>	· ·.· .	·.°.	-	++~~	
PROFILE V	/IEW			∠ T	/pe F	- Co	ncre	ете	GU	TTER	

![](_page_20_Figure_0.jpeg)

![](_page_21_Figure_0.jpeg)

![](_page_22_Figure_0.jpeg)

	STATE OF	PROJECT	SHEET	TOTAL SHEETS
	SOUTH DAKOTA	PP 8034(30)	23	39
Ireel	DAKOTA	PP 8034(30)	23	39
N Kallroad S				
+25		4+79 (24 W 4+49 (SEE STANDARD PLATE N	NO. 633	.10)

ITEM	ESTIMATED QUANTITY	UNIT
KING PAINT, 24" WHITE	149	FT
KING PAINT, SYMBOL	2	EACH

![](_page_23_Figure_0.jpeg)

STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH DAKOTA	PP 8034(30)	24	39
	4+41 L W10-1		

SIGN NUMBER	W10-1
RADIUS (A)	15"
BORDER WIDTH	0.625" WIDTH / 0.375" INSET
CORNER RADIUS	N/A
MOUNTING	GROUND
BACKGROUND	TYPE: Nonremovable Copy Super/Very High Intensity
	COLOR: YELLOW (RETROREFLECTIVE)
LEGEND/BORDER	TYPE: Nonremovable Copy Super/Very High Intensity
	COLOR: BLACK

![](_page_24_Figure_0.jpeg)

![](_page_24_Figure_1.jpeg)

![](_page_25_Figure_0.jpeg)

![](_page_25_Figure_1.jpeg)

STATE OF	PROJECT	SHEET	TOTAL SHEETS
DAKOTA	PP 8034(30)	26	39

Posted Speed Limit (M.P.H.)	L (F†.)
<u>≤</u> 30	100
35	100
40	125
45	175
50	250
55	325
60	400
65	475
70	550

![](_page_25_Figure_4.jpeg)

![](_page_26_Figure_0.jpeg)

![](_page_26_Figure_1.jpeg)

STA	TE OF	PROJECT	SHEET	TOTAL	
SO DAF	SOUTH DAKOTA	PP 8034(30)	27	39	

![](_page_27_Figure_0.jpeg)

#### 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.

STATE OF	PROJECT	SHEET	TOTAL
SOUTH DAKOTA	PP 8034(30)	28	39

shall be 1 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 1/4 the thickness of the concrete.

![](_page_27_Picture_9.jpeg)

![](_page_28_Figure_0.jpeg)

![](_page_28_Figure_1.jpeg)

Source proved by the Engineer. Source proved by the Engineer.
-Sawed Joint Filled liastic Joint Seder - Low Modulus * - Silicone Sedent - Silicone Sedent - Section A-A - Nic with - Sawed Joint Filled - Section A-A - Sawed Joint Filled - Sawed Joint Sawed - Sawed Joint Filled - Sawed Joint Sawed - Sawed J
-Sawed Joint Filled Elastic Joint Sealer
B SECTION A-A hic with ent ) G Sawed Joint Filled with Hot Poured Elastic Joint Sealer Wa to 1/4" Wa to 1/4" Wa to 1/4" Wa to 1/4" SECTION B-B Section B-B Nithic with or Mainline ent ) * The silicone sealant shall be placed such that it completely seals the joint and is bonded to the sides of the clean joint as approved by the Engineer.
<pre>hic with http://with Hot Poured Elastic Joint Sealer</pre>
<pre>* The silicone secient shall be placed such that it completely seals the joint and is bonded to the sides of the clean joint as approved by the Engineer.</pre>
<ul> <li>* The silicone sealant shall be placed such that it completely seals the joint and is bonded to the sides of the clean joint as approved by the Engineer.</li> </ul>
* The silicone sealant shall be placed such that it completely seals the joint and is bonded to the sides of the clean joint as approved by the Engineer.
September 6, 2013
CONCRETE CURB AND GUTTER
Sheet I of 2

![](_page_29_Figure_0.jpeg)

SOUTH PP 8034(30) 20 30	STATE OF	PROJECT	SHEET	TOTAL
DAKOTA 11 0001(00) 30 39	SOUTH DAKOTA	PP 8034(30)	30	39

![](_page_29_Figure_2.jpeg)

![](_page_30_Figure_0.jpeg)

![](_page_30_Figure_1.jpeg)

	STATE OF		PROJECT	SHEET	TOTAL SHEETS
	SOUTH DAKOTA		PP 8034(30)	31	39
			]		
arnings a	re shown	in the d	rawings.		
ay be use rb and gu	ed with a tter. The	PCC fille curb ro	t section, mp shall be		
o flares w	vhen a 2'	curb tra	nsition is		
n the ram	np,free o	f sags a	nd short		
y coarse	brooming	transver	se to the		
through <sup>.</sup>	the area	of the r	amp.		
e adjacent	to the	detectab	le warnings		
of the de	etectable	warnings	are clean		
sary to f detectal	it the pl ble warnir	an specif ngs shall	fied limits be incidental		
s. The cur foot for etectable k.	-b ramp s the corre warnings	shall be m esponding shall be	easured and concrete included		
asured a and gutte aning shal the corre	nd paid f r bid iter l be meas esponding	or at th n when c ured and PCC fille	e contract surb and paid for t section		
ion area foot for d shall be g PCC fille	at the bo the cor incidento t section	nse of th respondir n to the n bid iten	ne ramp ng curb and contract n when a		
to the n le warning contract	earest sa gs includir unit pria	quare foo ng labor, ce per so	ot. All costs equipment, quare foot		
to the r le warning t or grou re foot f	nearest s gs includir it, and ne or "Type	quare fo ng labor, cessary o 2 Detect	ot. All costs equipment, grinding shall able Warnings".		
			September 6, 2013		
2 CURB R	RAMP		PLATE NUMBER 651.02		
IONAL CUR	B RAMP)		Sheet 3 of 3		

![](_page_31_Figure_0.jpeg)

![](_page_31_Figure_1.jpeg)

	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL	
		PP 8034(30)	32	39	

![](_page_32_Figure_0.jpeg)

![](_page_32_Figure_1.jpeg)

	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS 39	
		PP 8034(30)	33		

![](_page_33_Figure_0.jpeg)

![](_page_33_Figure_1.jpeg)

	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS	
		PP 8034(30)	34	39	

![](_page_34_Figure_0.jpeg)

STATE OF	SHEET	TOTAL SHEETS	
SOUTH DAKOTA	PP 8034(30)	35	39

								MAIN S	STREET			
			· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·								
				· · ·		1400 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-38.44 -38.44 1400.06 -28.54	1400.90	00.0-	1399.75 28.54		
				· · ·								
-1	150	· · · · · · · · · · · · · · · · · · ·	·····	·····	·······			· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·
							<u></u>	76				
				· · · ·			-38.44 -38.44 1399.88 -29.44	1400	00 0	1399.57 29.44		
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				· · · · · · · · · · · · · · · · · · ·								
-1	: 150								; D		•	

![](_page_35_Figure_1.jpeg)

MAIN STREET

![](_page_36_Figure_1.jpeg)

![](_page_36_Figure_2.jpeg)

![](_page_37_Figure_0.jpeg)

MAIN STREET 4+05-L&R 40' Int Str 1398 19 0 00 . . . . . -150 1398 35 0 00

0

-150

![](_page_38_Figure_1.jpeg)