

PLOT SCALE - 1:200

PLOTTED FROM - TRRC11610

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

PROJECT 090EF-452
STURGIS ROAD
MEADE COUNTY

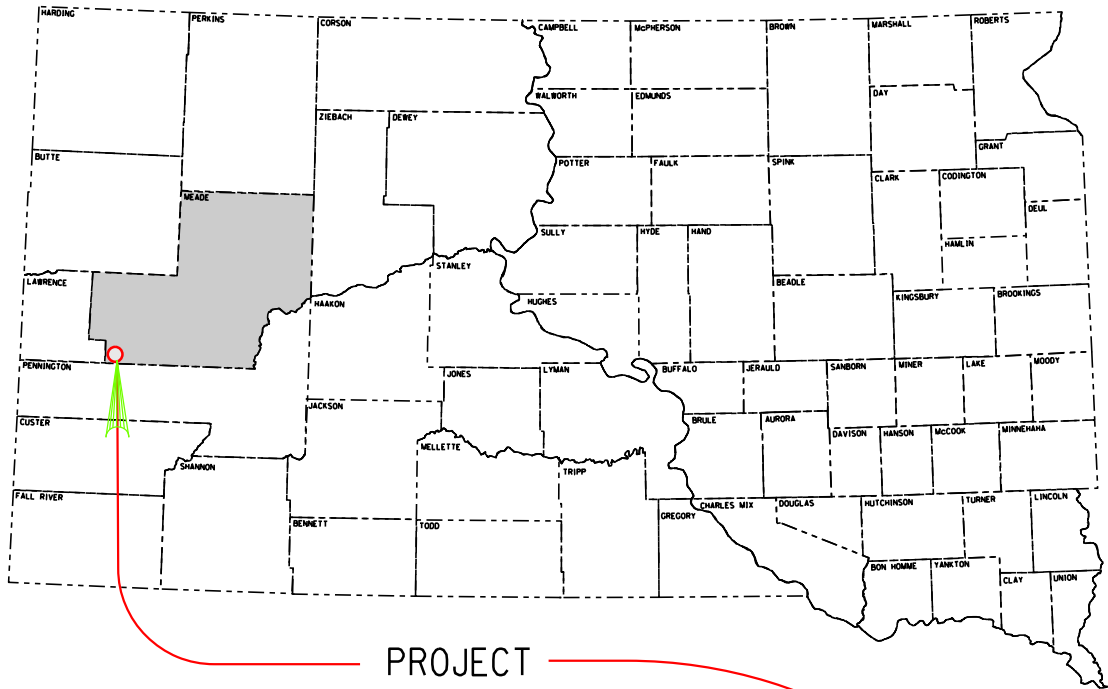
Grading & Asphalt Surfacing
PCN i2e2

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090EF-452	1	18

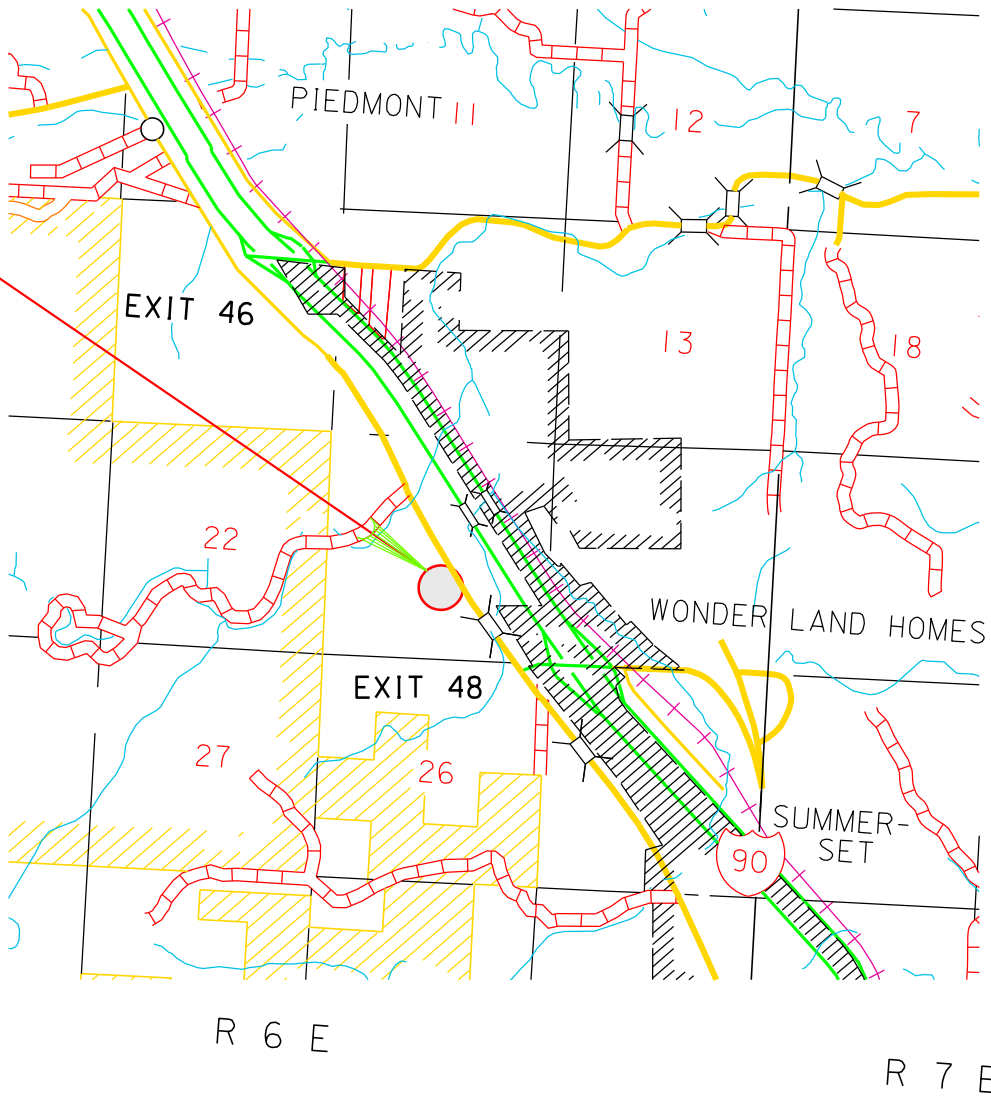
Plotting Date: 05/01/2012

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PROJECT



STORM WATER PERMIT
None Required

SCALES

	URBAN
PLAN	1"=40'
PROFILE,	{ HORIZONTAL: 1"=40' VERTICAL: 1"=10'
CROSS SECTIONS	{ HORIZONTAL: 1"=20' VERTICAL: 1"=10'

PLOT NAME - 1

FILE - ...\\MEAD0556\\NAVAJO DR\\TITLE.DGN

ESTIMATE OF QUANTITIES

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
110E0300	Remove Concrete Curb and Gutter	12	Ft
110E1010	Remove Asphalt Concrete Pavement	315.6	SqYd
110E1130	Remove Concrete Driveway Pavement	54.9	SqYd
120E0010	Unclassified Excavation	286	CuYd
230E0010	Placing Topsoil	32	CuYd
260E1010	Base Course	141.8	Ton
260E1030	Base Course, Salvaged	76.0	Ton
320E1200	Asphalt Concrete Composite	52.6	Ton
380E3000	4" PCC Driveway Pavement	54.9	SqYd
634E0010	Flagging	40	Hour
634E0100	Traffic Control	323	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
650E1060	Type F66 Concrete Curb and Gutter	184	Ft
730E0206	Type D Permanent Seed Mixture	18	Lb
731E0100	Fertilizing	8	Lb
732E0250	Fiber Mulching	119	Lb
734E0154	12" Diameter Erosion Control Wattle	220	Ft
734E0845	Sediment Control at Inlet with Frame and Grate	1	Each

SPECIFICATIONS

Standard Specifications for Roads & Bridges, 2004 Edition and Required Provisions, Supplemental Specifications and/or Special Provisions as included in the Proposal.

GRADING OPERATIONS

Special ditch grades and other sections of the roadway different than the typical section shall be constructed to the limits shown on the cross sections. If significant changes to the cross sections are necessary during construction, the Engineer shall contact the Designer for the proposed change.

UTILITIES

The Contractor shall be responsible for locating and protecting any utility that would conflict with any work. Utilities are not planned to be affected on this project. If utilities are identified near the improvement area through the SD One Call Process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25, the contractor shall contact the project engineer to determine modifications that will be necessary to avoid utility impacts.

Any damage done to a utility will be the Contractor’s responsibility to repair.

Utilities within the limits of the proposed construction shall be adjusted by the owner unless otherwise indicated in these plans.

STORM WATER

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.

HISTORICAL PRESERVATION OFFICE CLEARANCES

To obtain State Historical Preservation Office (SHPO) clearance, a cultural resources survey may need to be conducted by a qualified archaeologist. In lieu of a cultural resources survey, the Contractor could request a records search from Jim Donohue, State Archaeological Research Center (SARC). Provide SARC 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 no artifacts have been found on the site. The Contractor shall arrange and pay for the cultural resource survey and/or records search.

If any earth disturbing activities occur within the current geographical or historic boundaries of any South Dakota reservation, the Contractor shall obtain Tribal Historical Preservation Office (THPO) clearance. If no THPO exists, the required SHPO clearance shall suffice, with documentation of Tribal contact efforts provided to SHPO.

To facilitate SHPO or THPO responses, the Contractor should submit a records search or cultural resources survey report to the DOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3268). Allow 30 days from the date this information is submitted to the Environmental Engineer for SHPO/THPO approval. The Contractor is responsible for obtaining all required permits and clearances for staging areas, borrow sites, waste disposal sites, and all material processing sites. The Contractor shall provide the required permits and clearances to the Engineer at the preconstruction meeting.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090EF-452	2	18

WASTE DISPOSAL SITE

The Contractor will be required to furnish a site(s) for the disposal of construction/demolition debris generated by this project.

Construction/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 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/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/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”.
- 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.

SHRINKAGE FACTOR: Embankment +20%

TABLE OF EXCAVATION QUANTITIES BY BALANCES

Station to	Station	Excavation (CuYd)	Total Excavation (CuYd)	** Waste (CuYd)
0+48.5	2+00	189	189	167
	Totals:	189	189	167

* 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.

Plan quantities will be used for payment, the Unclassified Excavation quantity shall be used for final payment. The Topsoil quantity in the Table of Unclassified Excavation is an estimate. The quantity of Topsoil from the cuts will be paid for twice as Unclassified Excavation, as it will be in both the Excavation and Topsoil quantities. This will be full compensation for Excavation, which includes necessary undercutting to provide space for placement of topsoil.

The Excavation quantities in Table of Unclassified Excavation have been reduced by the volume of in place surfacing that will be removed.

TABLE OF UNCLASSIFIED EXCAVATION

Excavation	189
Topsoil	32
Asphalt Mix and Salvaged Granular	65
Base Material (from cut sections)	
Total	286

Plan quantities will be basis for payment, the Unclassified Excavation quantity shall be used for final payment.

The Topsoil quantity in the Table of Unclassified Excavation is an estimate. The quantity of Topsoil from the cuts will be paid for twice as Unclassified Excavation, as it will be in both the Excavation and Topsoil quantities. This will be full compensation for Excavation, which includes necessary undercutting to provide space for placement of topsoil.

SAWING IN EXISTING SURFACING

Where new asphalt concrete is placed adjacent to existing asphalt concrete, the existing pavement shall be sawed full depth to a true line with a vertical face. No separate payment shall be made for sawing.

TABLE OF ASPHALT CONCRETE PAVEMENT REMOVAL

Station	to	Station	L/R	Quantity (SqYd)
0+28.4		1+34.4		54.9
		Total:		54.9

TABLE OF CONCRETE CURB AND GUTTER REMOVAL

Station	to	Station	L/R	Quantity (Ft)
0+41.62		0+48.4	L	6
0+41.31		0+48.4	R	6
		Total:		12.

TABLE OF CONCRETE DRIVEWAY PAVEMENT REMOVAL

Station	to	Station	L/R	Quantity (SqYd)
1+03.9		1+28.4	R	54.9
		Total:		54.9

GUTTER SLOPE FOR F CONCRETE CURB AND GUTTER

The Contractor shall be aware of the new standard gutter slope required for this project. The new standard gutter slope shall be 5% as detailed on standard plate 650.20 (Type F Concrete Curb and Gutter).

TABLE OF TYPE F66 CONCRETE CURB AND GUTTER

Station	to	Station	L/R	Quantity (Ft)
0+41.3		1+66.82	L	125.5
1+66.82		2+00.0	L	31.6
0+41.6		0+68.19	R	26.6
		Totals:		183.7

BASE COURSE, SALVAGED

Base Course, Salvaged shall be obtained from the material produced on this project and may be used without further testing.

The estimated amount of Base Course, Salvaged is 38 Cu Yd (76 Ton)

All other requirements of the Standard Specifications for Base Course, Salvaged shall apply.

BASE COURSE

Base Course shall be furnished by the Contractor.

All other requirements of the Standard Specifications for Base Course shall apply.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090EF-452	3	18

TABLE OF BASE COURSE & BASE COURSE, SALVAGED

Station	to	Station	Quantity (Ton)
0+28.4		0+68.2	54.7
0+68.2		1+35	95.7
1+35		2+00	67.4
		Total:	217.8

ASPHALT CONCRETE COMPOSITE

Mineral aggregate for the Asphalt Concrete Composite shall conform to the requirements of the Standard Specifications for Class E, Type 1

All other requirements in the Standard Specifications for Asphalt Concrete Composite shall apply.

The asphalt binder used in the mixture shall be PG 64-22, PG 64-28 or PG 64-34 Asphalt Binder.

TABLE OF ASPHALT CONCRETE COMPOSITE

Station	to	Station	Quantity (Ton)
0+28.4		0+68.2	19.4
0+68.2		1+35	33.2
		Total:	52.6

4” CONCRETE DRIVEWAY PAVEMENT

The 4” Concrete Driveway Pavement shall consist of a Nonmetallic Fiber Reinforced Concrete. The nonmetallic fiber reinforced concrete shall conform to Class M6 with longitudinal and transverse #4 Rebar placed 4’ on center. All Rebar shall have a minimum of 2” clear cover.

The Nonmetallic Fiber Reinforcement shall be a macro fiber approximately 1.5 inch or longer (W.R. Grace – STRUX 90/40 or approved equal) at an addition rate of 8 lb/cubic yard. The fiber shall be designed specifically for use in concrete and shall be supplied by a manufacturer with a documented history of providing fibers for use in concrete.

The cost for all materials, labor, and incidentals necessary to construct the 4” Concrete Driveway Pavement shall be incidental to the contract unit price per square yard for “4” Concrete Driveway Pavement”.

The Contractor shall contact the Indian Hills Sanitary District (Lyle Larson 484-7398) for the removal, placement and compensation for 1 additional driveway panel. The Contractor shall provide the additional work to the Navajo Road District at the contract unit price per square yard for “Remove Concrete Driveway Pavement” and “4” Concrete Driveway”.

TABLE OF 4” CONCRETE DRIVEWAY PAVEMENT

Station	to	Station	L/R	Quantity (SqYd)
1+03.9		1+28.4	R	54.9
			Total:	54.9

PLACING TOPSOIL

The thickness will be approximately 4 inches within the right-of-way.

FERTILIZING

A commercial fertilizer with a minimum guaranteed analysis of 13-13-13, 18-46-0, 11-52-0, or an approved alternate fertilizer sold for use as a lawn starter fertilizer shall be applied to all areas designated for permanent seeding. The application rate of fertilizer shall be 3 pounds per 1000 SqFt.

PERMANENT SEEDING

The areas to be seeded comprise 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 ¼” to ½”.

All seed broadcast must be raked or dragged in (incorporated) within the top ¼” to ½” 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.

Type D Permanent Seed Mixture shall consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/1000 SqFt)
Kentucky Bluegrass	Alene, Avalanche	1.4
Perennial Ryegrass	Turf Type, Ascend	1.4
Creeping Red Fescue	Epic	1.4
Chewings Fescue	Ambrose	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 seeding.

An additional 2% by weight of tackifier shall be added to the fiber mulch product selected from the list below. If the product selected has guar gum tackifier included, then the additional 2% of tackifier shall be guar gum. If the product selected has synthetic tackifier included, then the additional 2% of tackifier shall be synthetic.

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 pound for “Fiber Mulching”.

The fiber mulch used on this project shall be one from the list below:

Product	Manufacturer
Mat-Fiber Plus	Mat, Inc. Floodwood, MN Phone: 1-888-477-3028 www.matinc.biz
Conwed Hydro Mulch 2000	Profile Products LLC Buffalo Grove, IL Phone: 1-800-366-1180 www.conwedfibers.com
EcoFibre Plus Tackifier	Profile Products LLC Buffalo Grove, IL Phone: 1-800-366-1180 www.profile-eco.com
Terra-Mulch Wood with Tacking Agent 3	Profile Products LLC Buffalo Grove, IL Phone: 1-800-726-6371 www.terra-mulch.com
Excel Fiber Mulch II with Tackifier	American Excelsior Co. Arlington, TX Phone: 1-800-777-7645 www.curlex.com

TABLE OF FIBER MULCHING

Station	to	Station	L/R	Quantity (Lb)
0+42		2+00	L	61.5
0+42		1+11	R	32.6
1+27		2+00	R	40.2
			Total:	134.3

EROSION CONTROL WATTLE

Erosion control wattles for restraining the flow of runoff and sediment shall be installed at locations noted in the table and at locations determined by the Engineer during construction. Refer to Standard Plate 734.06 for details.

The Contractor shall provide certification that the erosion control wattles do not contain noxious weed seeds.

The erosion control wattle provided shall be from the list shown below:

Product	Manufacturer
AEC Premier Straw Wattles	American Excelsior Company Arlington, TX Phone: 1-800-777-7645 www.amerexcel.com
Excel Straw Logs	Western Excelsior Corporation Mancos, CO Phone: 1-800-833-8573 www.westernexcelsior.com
Earth Saver Rice Straw Wattles	R.H. Dyck Inc. Winters, CA Phone: 1-866-928-8537 www.earth-savers.com
Amber Waves Straw Wattles	GroNatural Winsted, MN Phone: 1-320-485-2800 www.gronatural.com
EarthTec Erosion Control Wattles	EarthTec/the Dukes, Inc. Devils Lake, ND Phone: 1-701-662-6666
Bio Logs	Flaxtech, LLC Rock Lake, ND Phone: 1-866-444-3529
Stenlog	Erosion Control Blanket Riverton, MB Phone: 1-866-280-7327 www.erosioncontrolblanket.com
Winters Wattles	Winters Excelsior Company Birmingham, AL Phone: 1-800-248-7237 www.wintersexcelsior.com
Patriot Wood Fiber Logs and Patriot Straw Wattles	Patriot Environmental Products, Inc. Mesa, AZ Phone: 1-480-345-7293 www.digitaldesigncore.com/patriot/WattleSpecs.pdf

TABLE OF EROSION CONTROL WATTLE

Station	L/R	Diameter (Inch)	Location	Quantity (Ft)
0+48 to 2+00	L	12	Back of Curb	150
0+48 to 1+00	R	12	Back of Curb	50
1+37	R	12	Ditch	20
Total:				220

SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES

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

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

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

Sediment collection devices shall be:

A commercial made sediment collection device from the “Sediment Control at Inlet with Frame and Grate” list or an approved equal. The device shall be installed in reinforced concrete drop inlets according to the manufacturer’s recommendations.

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

<http://apps.sd.gov/Applications/HC54ApprovedProducts/main.asp>

SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES (Cont.)

Sediment Control at Inlet with Frame and Grate Approved List:	
Product	Manufacturer
InfraSafe Debris Collection Device with filter sock	Royal Environmental Systems, Inc. Stacy, MN Phone: 1-800-817-3240 www.royalenterprises.net
Dandy Curb Sack	Dandy Products Inc. Dublin, OH Phone: 1-800-591-2284 www.dandyproducts.com
Silt Trapper	Storm Water Solutions Lakeville, MN Phone: 1-952-461-4376 www.silttrapper.com
DIP Basket	Skyview Construction Co., LLC Waubay, SD Phone: 1-605-520-0555 www.skyviewconst.com
FLEXSTORM Inlet Filters	Inlet and Pipe Protection, Inc. Naperville, IL Phone: 1-866-287-8655 www.inletfilters.com
GR-8 Guard or Combo Guard	ERTEC Environmental Systems LLC Alameda, CA Phone: 1-866-521-0724 www.ertecsystems.com
Sediment Catchers	Shaun Jensen Brookings, SD Phone: 1-605-690-4950

TABLE OF SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES

Station	L/R	Quantity (Each)
0+25.6	R	1
Total:		1

GENERAL MAINTENANCE OF TRAFFIC

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090EF-452	6	18

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

Storage of vehicles and equipment shall be outside the clear zone and as near as possible to the right-of-way line. Contractor's employees should mobilize at a location off the right-of-way and arrive at the work sites in a minimum number of vehicles necessary to perform the work.

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.

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 supports.

The Contractor shall provide documentation that all breakaway sign supports comply with FHWA NCHRP 350 or MASH crash-worthy requirements. The Contractor shall provide installation details at the preconstruction meeting for all breakaway sign support assemblies.

All vehicles entering and exiting closed lanes of traffic shall display a flashing amber light.

Work activities shall only be during daylight hours. Daylight hours are considered to be ½ hour before sunrise until ½ hour after sunset.

If the Contractor elects not to work in an area for more than 3 days, for reasons within the control of the Contractor, the Contractor shall remove applicable traffic control devices and replace them when work resumes. There will be no payment for this work.

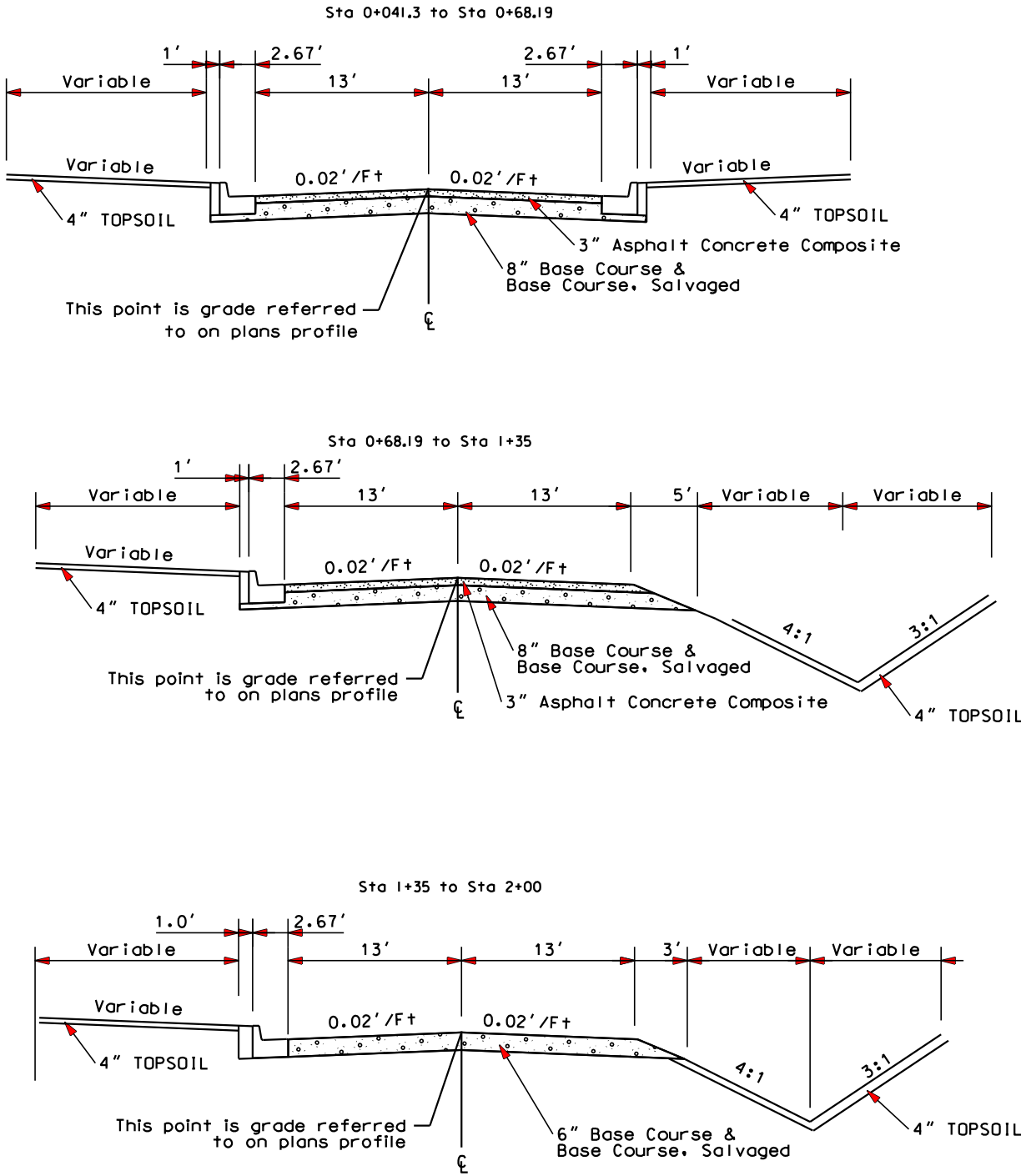
TRAFFIC CONTROL DEVICES INVENTORY

SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
G20-2	36" x 18"	END ROAD WORK	3	17	51
W20-1	48" x 48"	ROAD WORK #### FT. OR AHEAD	4	34	136
W20-4	48" x 48"	ONE LANE ROAD #### FT. OR AHEAD	2	34	68
W20-7a	48" x 48"	FLAGGER	2	34	68
TOTAL UNITS					323

TYPICAL SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090EF-452	7	18

Plotting Date: 05/01/2012



PLOT SCALE - 1:100

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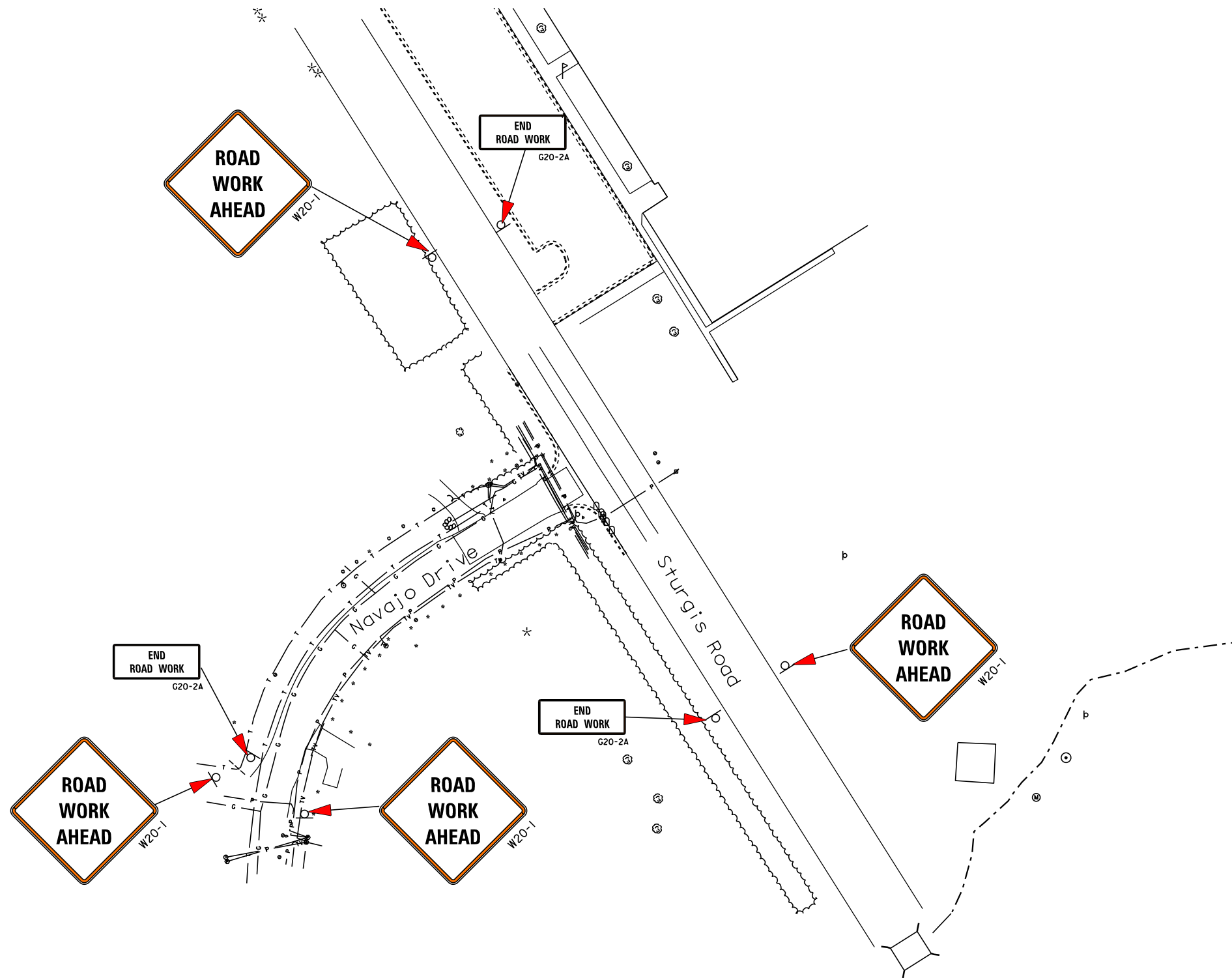
FIXED SIGN LOCATIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090EF-452	8	18

Plotting Date: 05/01/2012

PLOT NAME - 3

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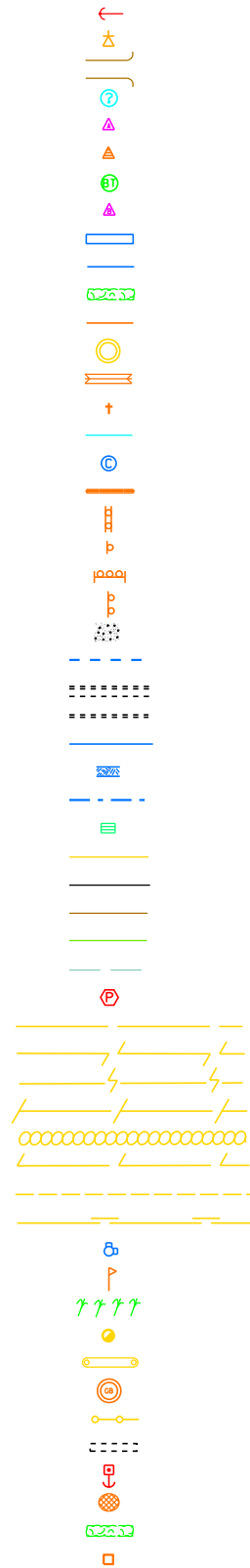


EXISTING TOPOGRAPHY SYMBOLOLOGY AND LEGEND

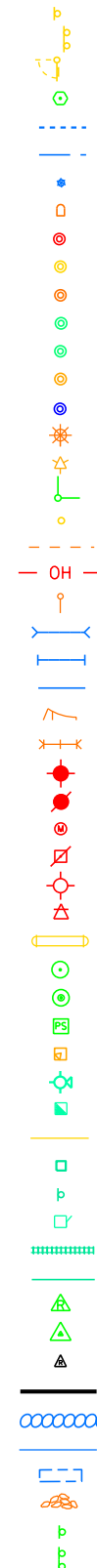
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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Plotting Date: 05/01/2012

Anchor
Antenna
Approach
Assumed Corner
Azimuth Marker
Bbq Grill/ Fireplace
Bearing Tree
Bench Mark
Box Culvert
Bridge
Brush
Buildings
Bulk Tank
Cattle Guard
Cemetery
Centerline
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
Ditch Block
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
Gutter
Guy Pole
Haystack
Hedge
Highway R.O.W. Marker

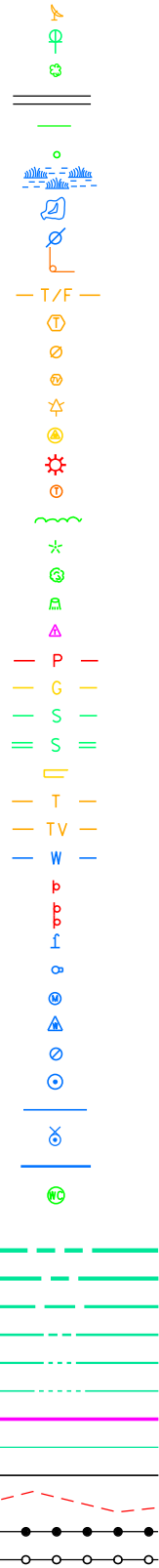


Information Sign One Post
Information Sign Two Post
Interstate Close Gate
Iron Pin
Irrigation Ditch
Lake Edge
Lawn Sprinkler
Mailbox
Manhole Electric
Manhole Gas
Manhole Misc
Manhole Sanitary Sewer
Manhole Storm Sewer
Manhole Telephone
Manhole Water
Merry-Go-Round
Microwave Radio Tower
Misc. Property Corner
Misc. Post
Overhang Or Encroachment
Overhead Utility Line
Parking Meter
Pipe With End Section
Pipe With Headwall
Pipe Without End Section
Playground Slide
Playground 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 Cap
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
Rebar
Rebar With Cap
Reference Mark
Retaining Wall
Riprap
River Edge
Rock And Wire Baskets
Rockpiles
Route Sign One Post
Route Sign Two Post



Satellite Dish
Septic Tank
Shrub Tree
Sidewalk
Sign Face
Sign Post
Slough Or Marsh
Spring
Stream Gauge
Street Marker
Telephone Fiber Optics
Telephone Junction Box
Telephone Pole
Television Cable Jct Box
Television Tower
Test Wells/Bore Holes
Traffic Signal
Trash Barrel
Tree Belt
Tree Coniferous
Tree Deciduous
Tree Stumps
Triangulation Station
Underground Electric Line
Underground Gas Line
Underground Sanitary Sewer
Underground Storm Sewer
Underground Tank
Underground Telephone Line
Underground Television Cable
Underground Water Line
Warning Sign One Post
Warning Sign Two Post
Water Fountain
Water Hydrant
Water Meter
Water Tower
Water Valve
Water Well
Weir Rock
Windmill
Wingwall
Witness Corner

State and National Line
County Line
Section Line
Quarter Line
Sixteenth Line
Property Line
Construction Line
R. O. W. Line
New R. O. W. Line
Cut and Fill Limits
Control of Access
New Control of Access



HORIZONTAL ALIGNMENT DATA

MAINLINE

Type	Station			Northing	Easting
POB	0+00.00			152890.223	1088037.663
		TL= 166.84	S 57°59'02" W		
PC	1+66.84			152801.772	1087896.201
PI	2+46.62	R = 270.00	Delta = 32°55'19" L	152759.477	1087828.557
PT	3+21.98			152687.210	1087794.764
		TL= 41.99	S 25°03'43" W		
POE	3+63.97			152649.170	1087776.976

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. Xxxx Zone (NAD 83/xx) SF = 0.xxxxxxxxxx

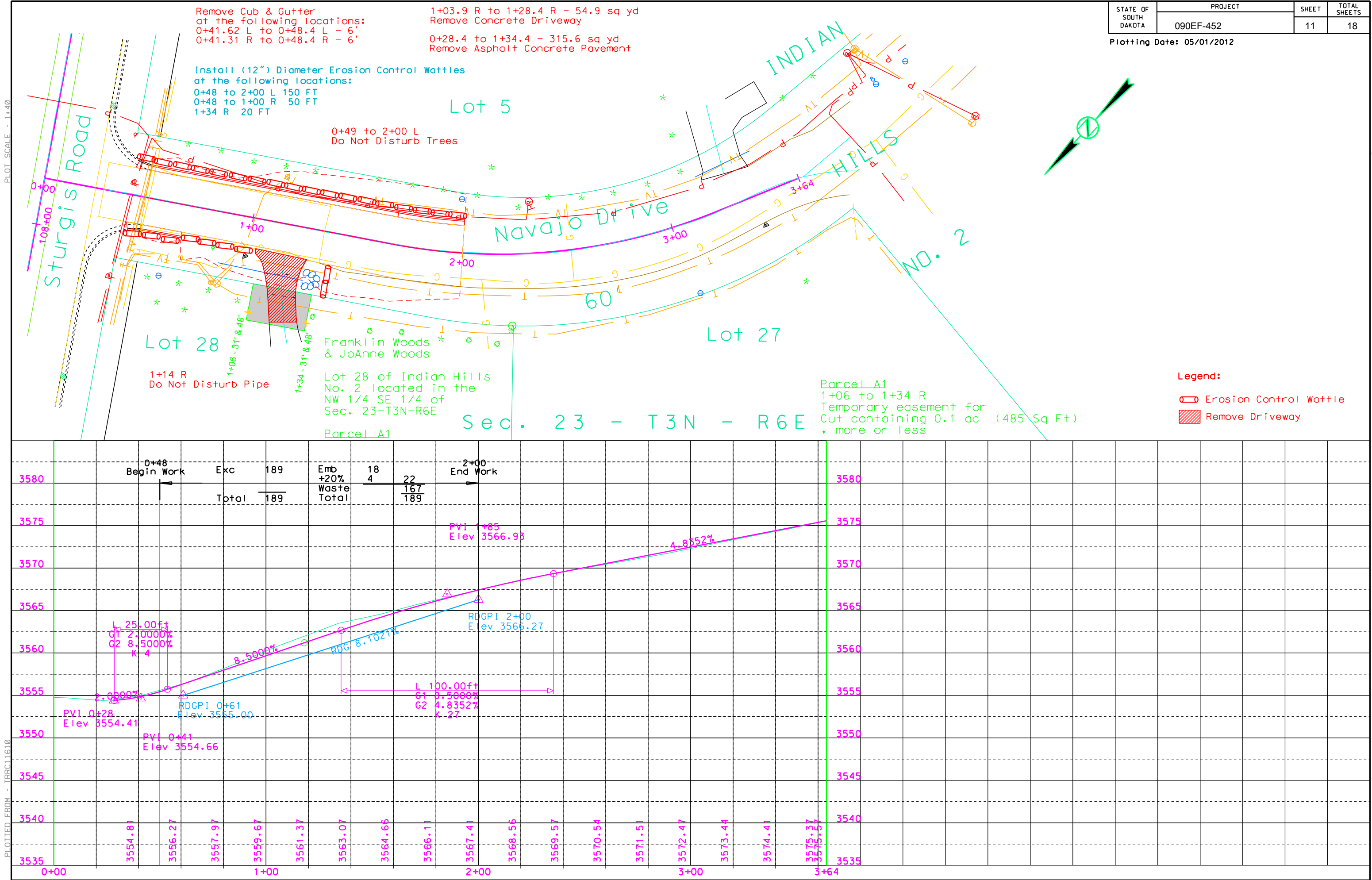
PLOT SCALE - 1"=40'

PLOTTED FROM - TRR011610

FILE - ...\\NEAD6556\\NAVAJO DR\\PLAN1.DGN PLOT NAME - 5

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090EF-452	11	18

Plotting Date: 05/01/2012



PLOT SCALE - 1"=40'

PLOTTED FROM - TRRC11610

CURB & GUTTER LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090EF-452	12	18

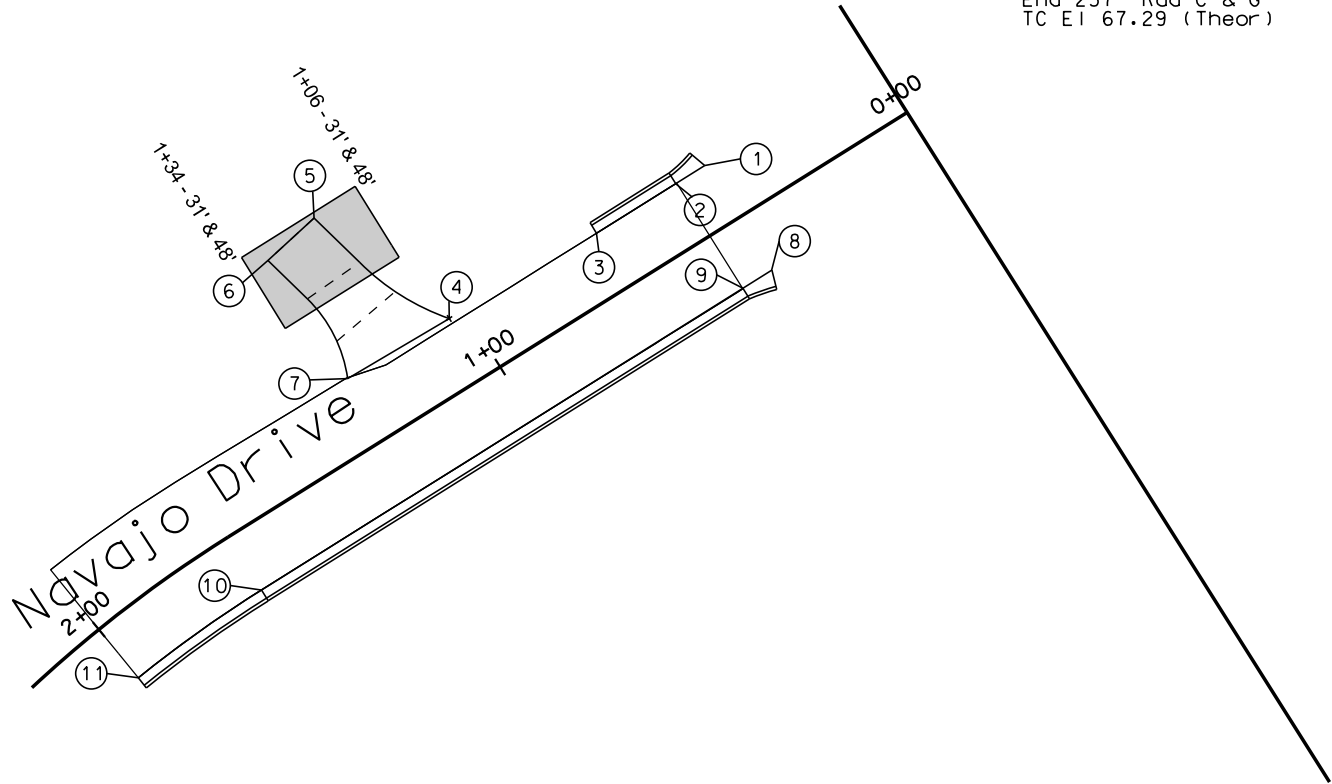
Plotting Date: 05/01/2012

NOTE: All Curb & Gutter shown on this sheet
is Type F66 unless noted.

- 1 0+41.62-13.0'R
Begin 25' Rad C & G
TC El Match Existing
- 2 0+48.74-13.0'R
End 25' Rad C & G
Begin Str C & G
TC El 55.54
- 3 0+68.19-13.0'R13
End Str C & G
TC El 57.28 (Theor)

- 4 1+03.67-14.21'R
Edge of 4" Driveway Pavement
Pave. El 60.46
- 5 1+16.44-46.91'R
Edge of 4" Driveway Pavement
Match Existing
- 6 1+29.30-44.47'R
Edge of 4" Driveway Pavement
Match Existing
- 7 1+28.30-14.62'R
Edge of 4" Driveway Pavement
Pave. El 62.82

- 8 0+41.31-12.89'L
Begin 25' Rad C & G
TC El Match Existing
- 9 0+48.44-12.9'L
End 25' Rad C & G
Begin Str C & G
TC El 55.76
- 10 1+66.82-13.0'L
End Str C & G
Begin 257' Rad C & G
TC El 65.16
- 11 2+00-13.0' L
End 257' Rad C & G
TC El 67.29 (Theor)



PLOT NAME - 6

FILE - ... \MEAD6556\NAVAJO DR\CG_12E2.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090EF-452	13	18

Plotting Date: 05/01/2012

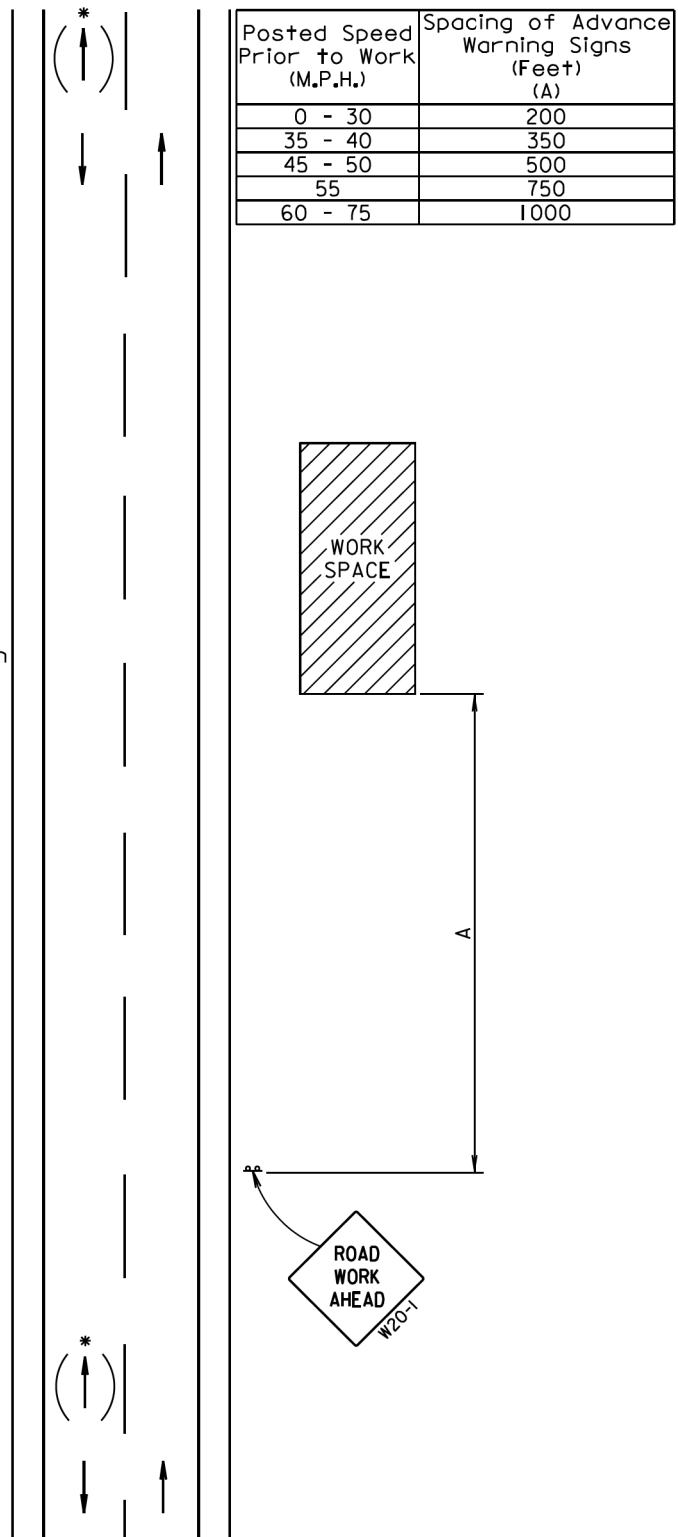
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

The signs illustrated shall be used where there are distracting situations; such as: vehicles parked on shoulder, vehicles accessing the work site via the highway, and equipment traveling on or crossing the roadway to perform work operations.

The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

- * If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.



July 1, 2005

Published Date: 2nd Qtr. 2012



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GUIDES FOR TRAFFIC CONTROL DEVICES WORK BEYOND THE SHOULDER

PLATE NUMBER
634.01

Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Spacing of Channelizing Devices (Feet) (C)
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.

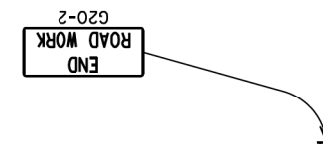
The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

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.

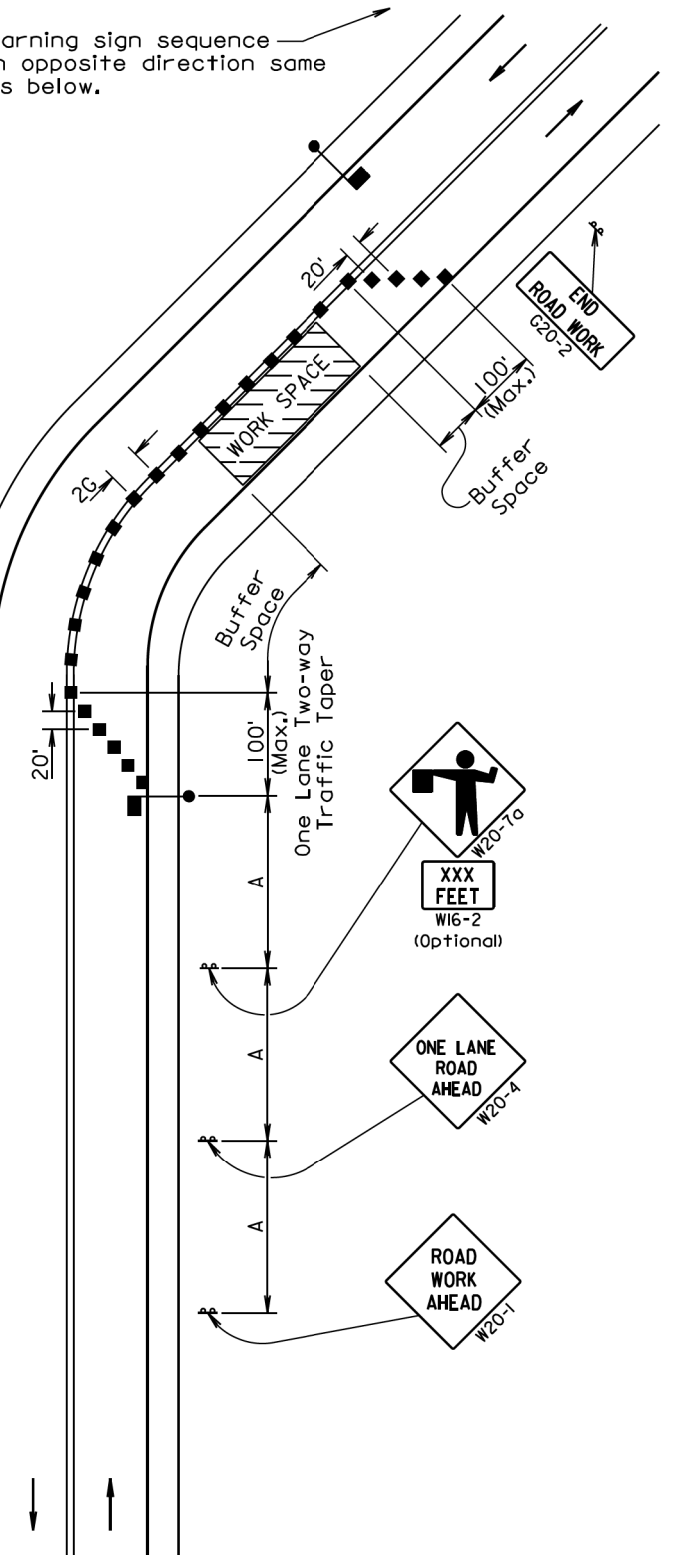
Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.



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.

Warning sign sequence —
in opposite direction same
as below.



February 14, 2011

Published Date: 2nd Qtr. 2012

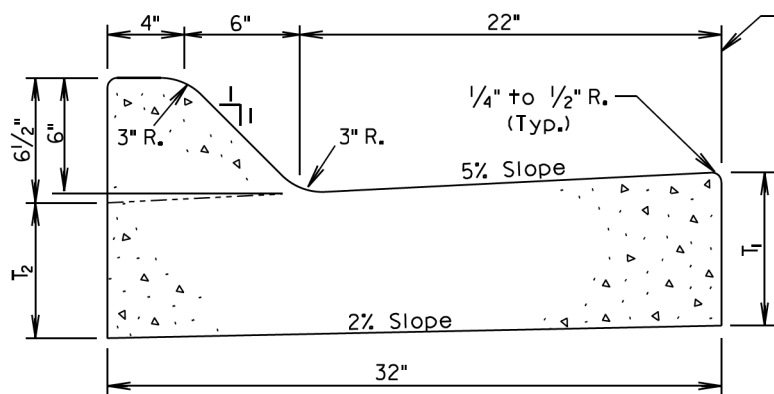
SDOT

GUIDES FOR TRAFFIC CONTROL DEVICES

LANE CLOSURE WITH FLAGGER PROVIDED

PLATE NUMBER
634.23

Sheet 1 of 1



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.

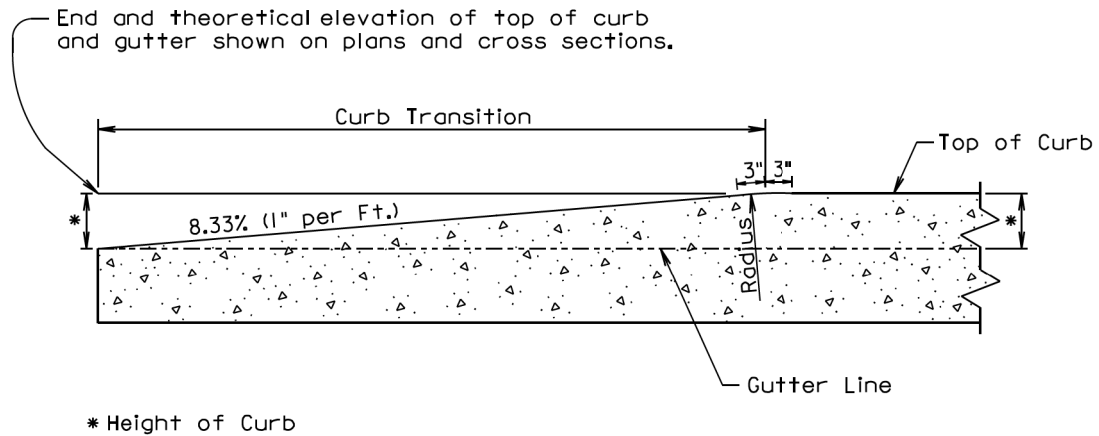
Type	T ₁ (Inches)	T ₂ (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.
F66	6	5 ¹ / ₁₆	0.057	17.6
F67	7	6 ¹ / ₁₆	0.065	15.4
F68	8	7 ¹ / ₁₆	0.073	13.6
F68.5	8.5	7 ⁹ / ₁₆	0.077	12.9
F69	9	8 ¹ / ₁₆	0.082	12.3
F69.5	9.5	8 ⁹ / ₁₆	0.086	11.7
F610	10	9 ¹ / ₁₆	0.090	11.1
F610.5	10.5	9 ⁹ / ₁₆	0.094	10.7
F611	11	10 ¹ / ₁₆	0.098	10.2
F611.5	11.5	10 ⁹ / ₁₆	0.102	9.8
F612	12	11 ¹ / 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

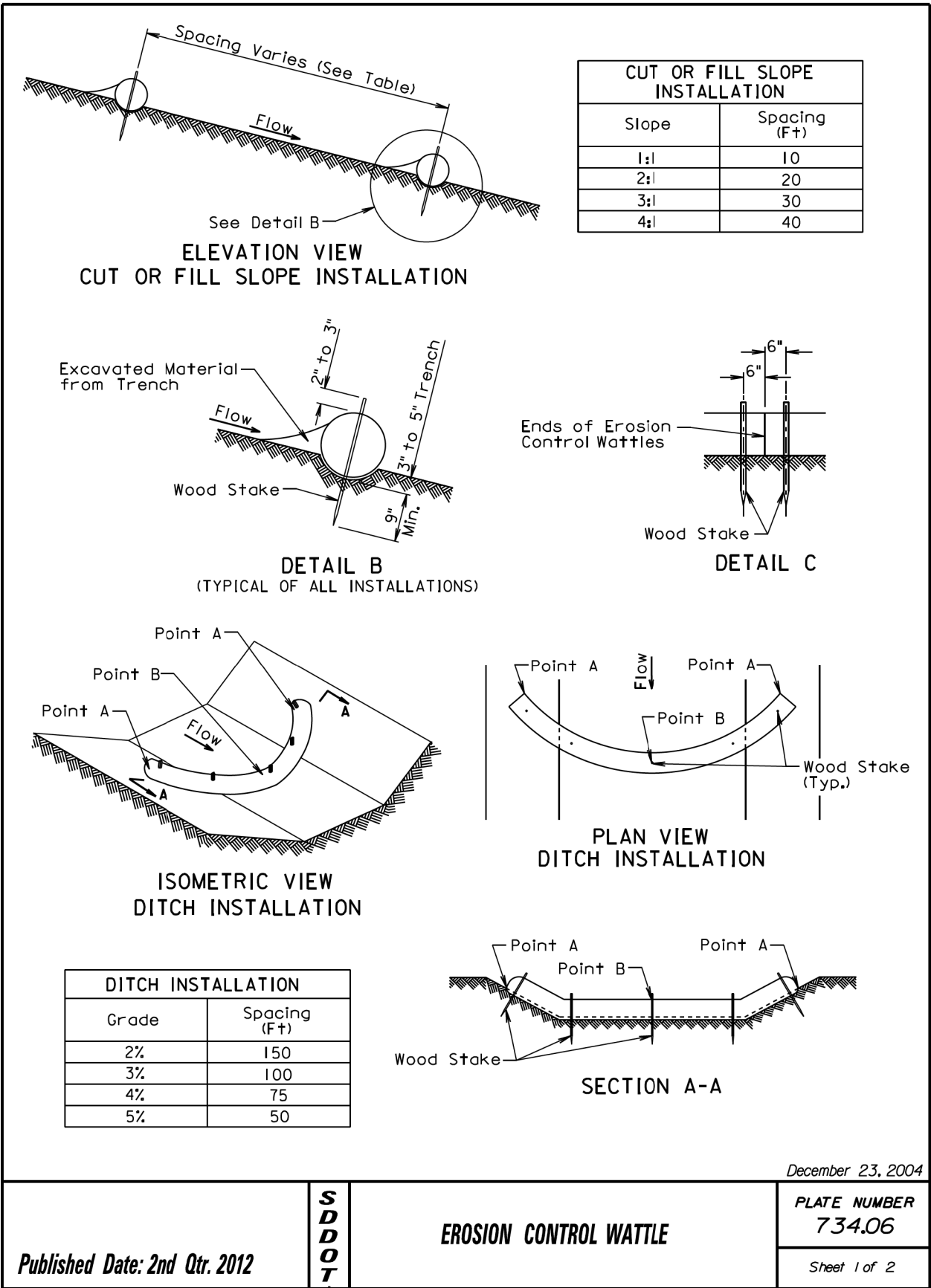
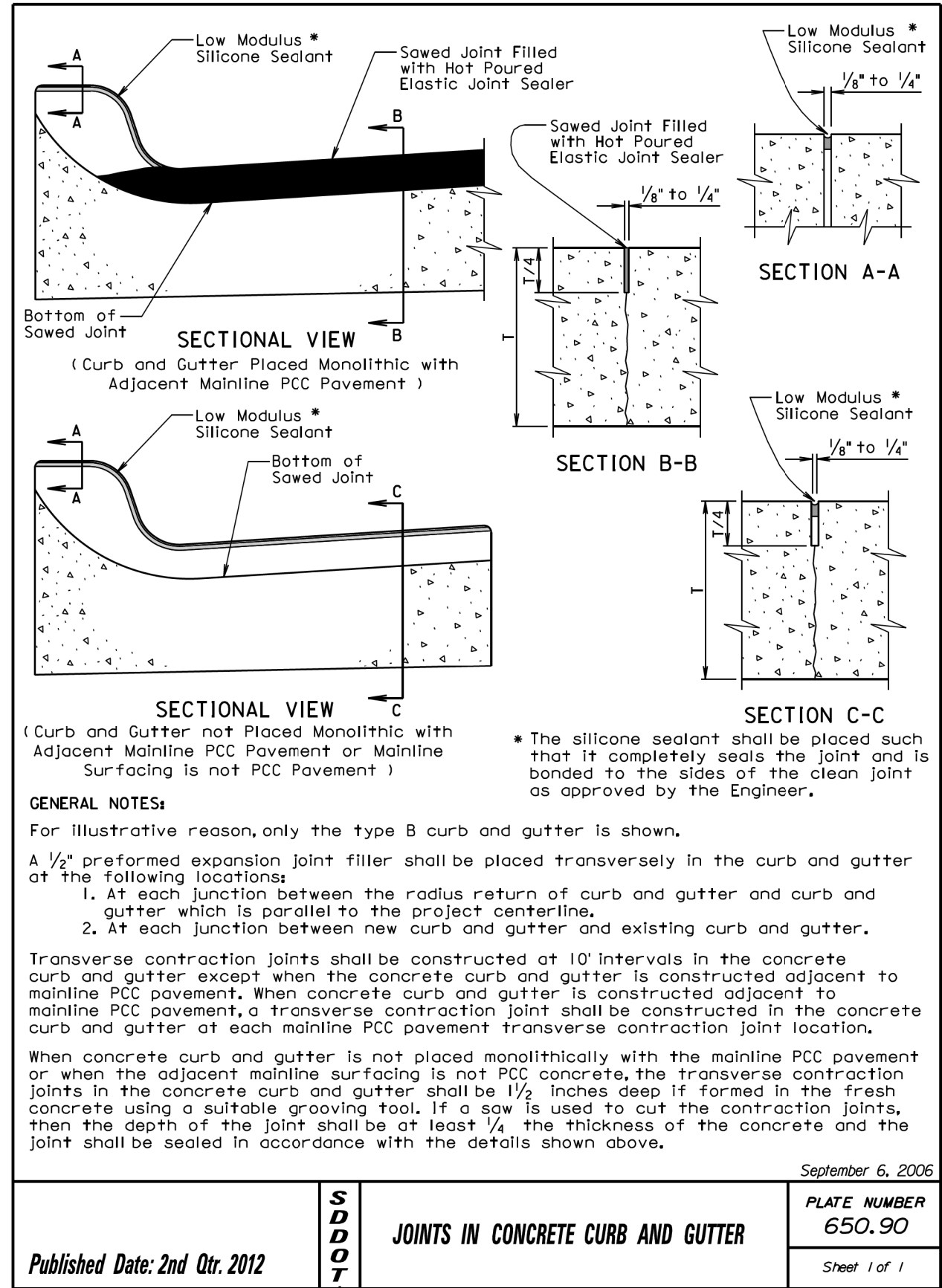
Published Date: 2nd Qtr. 2012	S D D O T	TYPE F CONCRETE CURB AND GUTTER	PLATE NUMBER 650.20
			Sheet 1 of 1



LONGITUDINAL SECTION OF CONCRETE CURB TAPER

September 14, 2005

Published Date: 2nd Qtr. 2012	S D D O T	CONCRETE CURB TAPER	PLATE NUMBER 650.35
			Sheet 1 of 1



PLOT SCALE - 1:200

-PLOTTED FROM - TRRC11610

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090EF-452	16	18

Plotting Date: 05/01/2012

GENERAL NOTES:

At cut or fill slope installations, wattles shall be installed along the contour and perpendicular to the water flow.

At ditch installations, point A must be higher than point B to ensure that water flows over the wattle and not around the ends.

The Contractor shall dig a 3" to 5" trench, install the wattle tightly in the trench so that daylight can not be seen under the wattle, and then compact the soil excavated from the trench against the wattle on the uphill side. See Detail B.

The stakes shall be 1"x2" or 2"x2" wood stakes, however, other types of stakes such as rebar may be used only if approved by the Engineer. The stakes shall be placed 6" from the ends of the wattles and the spacing of the stakes along the wattles shall be 3' to 4'.

Where installing running lengths of wattles, the Contractor shall butt the second wattle tightly against the first and shall not overlap the ends. See Detail C.

The Contractor and Engineer shall inspect the erosion control wattles once every week and within 24 hours after every rainfall event greater than 1/2". The Contractor shall remove, dispose, or reshape the accumulated sediment when necessary as determined by the Engineer.

Sediment removal, disposal, or necessary shaping shall be as directed by the Engineer. All costs for removing accumulated sediment, disposal of sediment, and necessary shaping shall be incidental to the contract unit price per cubic yard for "Remove Sediment".

All costs for furnishing and installing the erosion control wattles including labor, equipment, and materials shall be incidental to the contract unit price per foot for the corresponding erosion control wattle bid item.

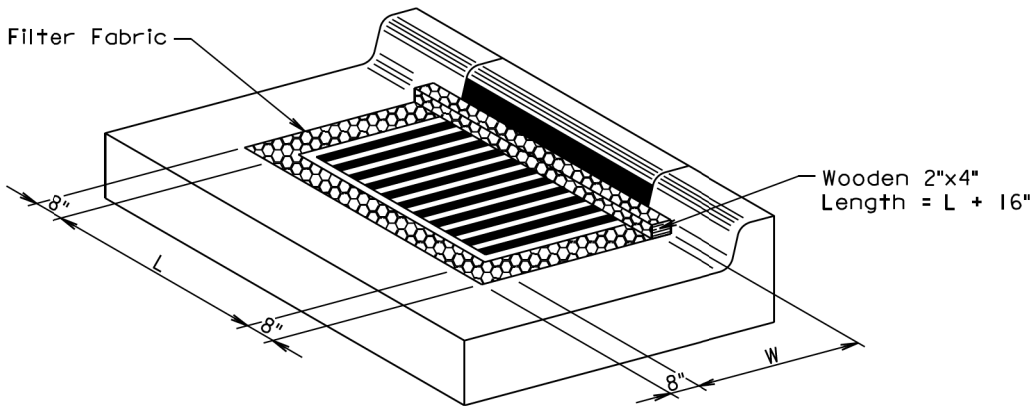
All costs for removing the erosion control wattle from the project including labor, equipment, and materials shall be incidental to the contract unit price per foot for "Remove Erosion Control Wattle".

December 23, 2004

<i>Published Date: 2nd Qtr. 2012</i>	S D D O T	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 2 of 2

L = Length of Grate

W = Width of Grate



ISOMETRIC VIEW

GENERAL NOTES:

The grate and curb and gutter shown are for illustrative purposes only.

The sediment control at inlet with frame and grate shall be placed at locations stated in the plans or at locations determined by the Engineer.

The filter fabric shall be the type specified in the plans.

The filter fabric shall be placed in the inlet opening prior to placing the grate. Approximately 18 inches of excess filter fabric shall be wrapped around the 2"x4" and stapled securely to the 2"x4" after the grate has been placed.

The Contractor shall inspect and maintain the sediment control device once every week and within 24 hours after every rainfall event. The Contractor shall maintain the sediment control device by removing accumulated sediment and replacing torn filter fabric with new filter fabric.

The removed sediment shall be placed at a location away from the drop inlet where the sediment will not be washed back into the drop inlet or other storm sewer system.

All costs for furnishing, installing, inspecting, maintaining, removing, and replacing the sediment control device at the inlet including labor, equipment, and materials shall be incidental to the contract unit price per each for "Sediment Control at Inlet with Frame and Grate".

September 14, 2005

<i>Published Date: 2nd Qtr. 2012</i>	S D D O T	SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES	PLATE NUMBER 734.10
			Sheet 1 of 1

PLOT NAME - 10

FILE - ... \NAVAJO DR\STDPLATEPAGE4.DGN

