SECTION D: EROSION AND SEDIMENT CONTROL PLANS

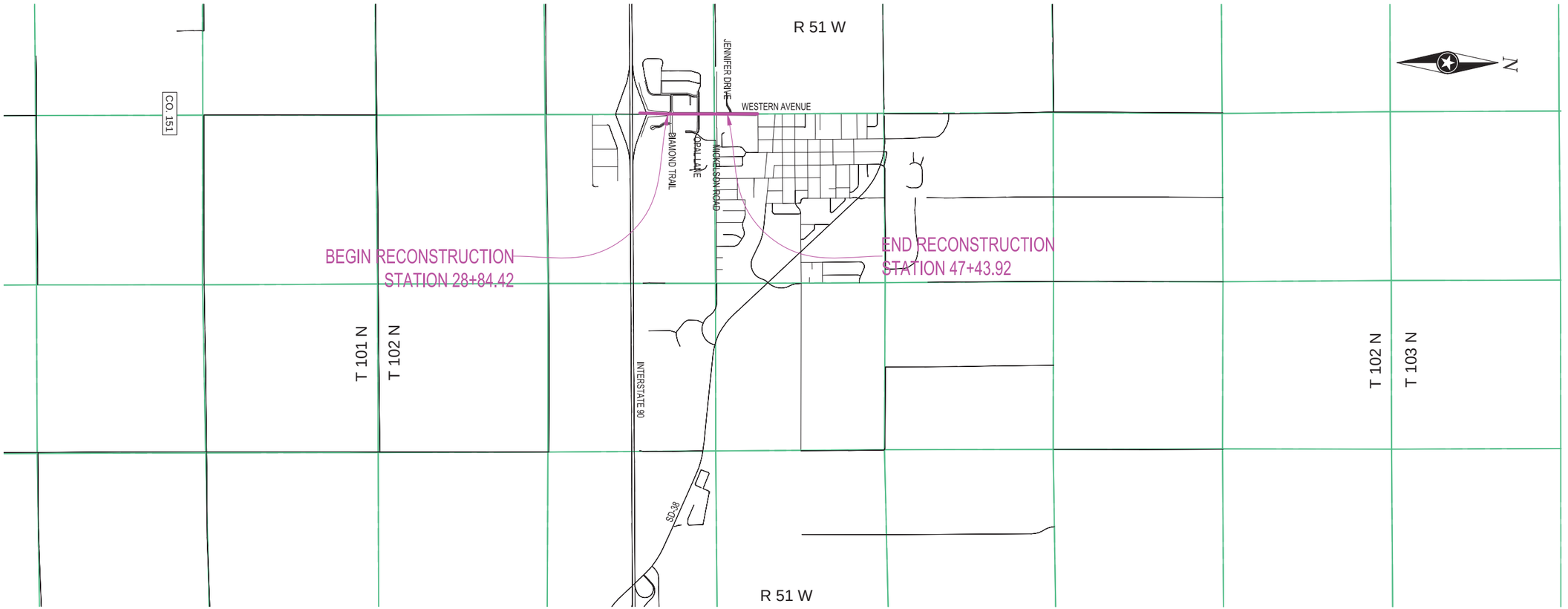
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 6353(00)	D1	D18

Plotting Date: 1/7/2025

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15778
JUSTIN DAVID HEIM
SOUTH DAKOTA
1/13/2025

INDEX OF SHEETS



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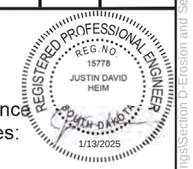

SECTION D ESTIMATE OF QUANTITIES

SBI NBR	SBI DESC	ITEM QTY	UNITS
110E1693	Remove Erosion Control Wattle	4167	Ft
110E1700	Remove Silt Fence	3359	Ft
120E6300	Water for Vegetation	605.0	MGal
230E0100	Remove and Replace Topsoil	Lump Sum	LS
730E0206	Type D Permanent Seed Mixture	707	Lb
731E0100	Fertilizing	232	Lb
734E0103	Type 3 Erosion Control Blanket	10192	SqYd
734E0150	6" Diameter Erosion Control Wattle	3378	Ft
734E0154	12" Diameter Erosion Control Wattle	789	Ft
734E0602	Low Flow Silt Fence	3289	Ft
734E0604	High Flow Silt Fence	70	Ft
734E0610	Mucking Silt Fence	233	CuYd
734E0620	Repair Silt Fence	840	Ft
734E0845	Sediment Control at Inlet with Frame and Grate	45	Each
734E0847	Sediment Control at Type S Reinforced Concrete Drop Inlet	24	Ft
734E5010	Sweeping	10	Hour
900E1320	Construction Entrance	10	Each

REMOVE AND REPLACE TOPSOIL

Topsoil shall be salvaged and stockpiled prior to constructing the following: road shaping, utility excavation and installation, and roadway surfacing. Limits of this work and stockpile location will be directed by the Engineer. Following completion of construction, topsoil will be spread evenly over the disturbed areas.

All costs associated with removing and replacing the topsoil along areas to be resurfaced will be incidental to the contract lump sum price for "Remove and Replace Topsoil".

The topsoil thickness will be approximately 6 inches throughout all seeded areas within the project.

The estimated amount of topsoil to removed and replaced and be spread evenly over the disturbed areas is 1850 CuYd.

If an insufficient quantity of topsoil is salvaged, additional topsoil shall be supplied and installed by the contractor at no additional cost to the City.

Topsoil shall be free from clay lumps, stones, coarse gravel, or similar objects larger than 1/2 inch in diameter. Brush, stumps, roots, wood, objectionable weeds, litter, or any other material which may be harmful to plant growth will not be allowed.

Stripping, salvaging, stockpiling and placement of existing topsoil for replacement shall be measure and paid per Lump Sum per the "Remove and Replace Topsoil" contract item.

MYCORRHIZAL INOCULUM

Mycorrhizal inoculum will 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 will provide certification of the fungal species claimed and the live propagule count. The inoculum will include the following fungal species:

25% *Glomus intraradices*
25% *Glomus aggregatum or deserticola*
25% *Glomus mosseae*
25% *Glomus etunicatum*

All seed will 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 will be incidental to the contract unit price per pound for the corresponding permanent seed mixture.

The mycorrhizal inoculum will be as shown below or an approved equal:

Product	Manufacturer
MycoApply	Mycorrhizal Applications, Inc. Grants Pass, OR Phone: 1-866-476-7800 www.mycorrhizae.com
AM 120 Multi Species Blend	Reforestation Technologies Int. Gilroy, CA Phone: 1-800-784-4769 www.reforest.com

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 will be applied to all areas designated for permanent seeding. The application rate of fertilizer will be 100 pounds per acre.

PERMANENT SEEDING

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

Lawn and turf seed, such as the Type D Permanent Seed Mixture, will be tested within 12 months prior to planting, exclusive of the calendar month in which the test was completed.

Type D Permanent Seed Mixture will consist of the following:

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

WATER FOR VEGETATION

Water for vegetation consists of applying water to seeded areas to enhance germination and/or root growth. When watering, use the following guidelines:

Immediately after seeding:

- Keep the topsoil moist but not excessively wet until the seed has germinated.
- Water a minimum of 3 days a week for 6 weeks preferably watering 2 or 3 times a day in small quantities.
- Use fine spray and low pressure to avoid topsoil wash and to prevent uncovering buried seeds.

After emergence:

- Topsoil will be kept thoroughly moistened by sprinkling, as necessary, for 6 weeks. After the 6-week period, an inspection will be made to determine if grass is established enough to suspend watering. Continue watering until grass has been thoroughly established.
- Never apply water at a rate faster than the topsoil can absorb.
- Water during early morning hours or early evening hours.
- Do not water when rain is forecasted for the area.
- If rainfall occurs, suspend watering according to rainfall amount.

An estimated 60 Gallons of water per square yard of seeding area was used to compute the quantity for the bid item "Water for Vegetation".

All costs for furnishing and applying the water including hauling, materials, equipment, labor, and incidentals necessary will be paid for at the contract unit price per MGal for "Water for Vegetation".

COVER CROP SEEDING

Cover crop seeding may be used on this project as a temporary erosion control measure. The actual limits and use of cover crop seeding will be determined by the Engineer during construction.

EROSION CONTROL WATTLE

Erosion control wattles for restraining the flow of runoff and sediment will 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 will provide certification that the erosion control wattles do not contain noxious weed seeds.

An estimated quantity of erosion control wattles will remain on the project until vegetation has been established and subsequently removed as directed by the Engineer. Unit price includes installation and maintenance of the wattle to ensure its effectiveness.

The erosion control wattle provided will be from the approved product list. The approved product list for erosion control wattle may be viewed at the following internet site:

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

TABLE OF EROSION CONTROL WATTLE

Station	L/R	Diameter (Inch)	Location	Quantity (Ft)
29+17 to 29+60	L	6	Behind Curb	130
30+00 to 34+55	R	6	Behind Curb	490
30+01 to 30+20	L	6	Behind Curb	105
30+27 to 34+02	R	12	Midpoint of Slope	375
31+46 to 32+63	L	6	Behind Curb	128
32+87 to 34+55	L	6	Behind Curb	177
34+55 to 34+86	L	6	Behind Curb	42
34+55 to 34+92	R	6	Behind Curb	42
35+16 to 38+09	L	6	Behind Curb	353
35+18 to 38+11	R	6	Behind Curb	316
38+50 to 38+60	L	6	Behind Curb	55
38+51 to 40+70	R	6	Behind Curb	249
39+10 to 40+60	R	12	Midpoint of Slope	150
39+85 to 40+71	L	6	Behind Curb	89
40+70 to 40+98	L	6	Behind Curb	38
40+70 to 43+45	R	6	Behind Curb	519
41+33 to 41+91	L	6	Behind Curb	79
42+26 to 43+43	L	6	Behind Curb	137
43+85 to 44+60	L	6	Behind Curb	83
43+86 to 46+46	R	6	Behind Curb	346
44+96 to 46+80	L	12	Midpoint of Slope	184
47+32	R	12	Perpendicular to Ditch	40
48+58	R	12	Perpendicular to Ditch	40
			6" Diameter Total:	3378
			12" Diameter Total:	789

LOW FLOW SILT FENCE

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

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

Low flow silt fence will 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

Station	L/R	Location	Quantity (Ft)
30+02 to 34+56	R	Just Inside Project Boundary	462
30+12 to 32+58	L	Just Inside Project Boundary	286
32+92 to 34+56	L	Just Inside Project Boundary	164
34+56 to 34+88	R	Just Inside Project Boundary	32
34+56 to 34+90	L	Just Inside Project Boundary	32
35+18 to 37+99	L	Just Inside Project Boundary	284
35+23 to 38+09	R	Just Inside Project Boundary	292
38+50 to 40+75	L	Just Inside Project Boundary	250
38+50 to 40+73	R	Just Inside Project Boundary	227
40+70 to 43+25	R	Just Inside Project Boundary	282
42+48 to 43+33	L	Just Inside Project Boundary	256
43+96 to 46+46	R	Just Inside Project Boundary	255
44+02 to 46+88	L	Just Inside Project Boundary	467
		Total:	3289

HIGH FLOW SILT FENCE

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

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

High flow silt fence will 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 734.05 for details.

TABLE OF HIGH FLOW SILT FENCE

Station	L/R	Location	Quantity (Ft)
34+56	L	At Pipe Inlet	5
34+56	R	At Pipe Inlet	5
34+65	L	At Pipe Inlet	5
34+78	R	At Pipe Inlet	5
37+93	L	At Pipe Inlet	5
37+97	R	At Pipe Inlet	5
40+85	L	At Pipe Inlet	5
43+13	R	At Pipe Inlet	5
43+42	L	At Pipe Inlet	5
46+27	R	At Pipe Inlet	5
40+91	L	At Pipe Inlet	5
40+91	R	At Pipe Inlet	5
48+83	R	At Pipe Inlet	5
50+39	R	At Pipe Inlet	5
		Total:	70

REPAIR SILT FENCE

Areas of damage including water damage, fabric tears, and failures shall be repaired. When site conditions require that silt fence be cleaned and mucked out, rather than replaced, care must be taken to ensure the existing silt fence is not damaged.

Repair silt fence will only be measured when needed for damage caused by runoff. No measurement will be made for silt fence damaged by the contractor's methods and operations.

Payment shall be full compensation for repair and inspection of the silt fence per foot.

MUCKING SILT FENCE

Mucking silt fence will be measured to the nearest cubic yard of material removed.
Item will be paid for at the contract unit price per cubic yard. Payment will be full compensation for labor, equipment and incidentals required to remove, spread this material evenly over the adjacent area as determined by the Engineer, and seed.

REMOVE SILT FENCE

Remove silt fence shall be measure and paid at the contract unit price per linear foot. Payment includes all labor, equipment, and incidentals required to remove silt fence.

EROSION CONTROL BLANKET

Refer to Detail.

Erosion control blanket will be installed at locations shown on sheets D-11 through D-14 and at locations determined by the Engineer during construction.

The erosion control blanket provided will be from the approved product list. The approved product list for erosion control blanket may be viewed at the following internet site:

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

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 Inlet with Frame and Grate will be installed prior to working in the vicinity of the drop inlets.

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

"Sediment Control at Inlet with Frame and Grate" 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 Inlet with Frame and Grate will be incidental to the contract unit price per each for "Sediment Control at Inlet with Frame and Grate".

SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES, continued

Sediment collection devices will be:

A commercial made sediment collection device from the "Sediment Control at Inlet with Frame and Grate" list or an approved equal. The device will be installed in reinforced concrete drop inlets in accordance with the manufacturer's recommendations.

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 and Dandy Curb Bag for curb inlets. Dandy Bag, Dandy Sack, and Dandy Pop for median drains.	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
Grate FX, Slammer, or VertiPro	Enviroscape ECM, Ltd. Oakwood, OH Phone: 1-419-594-3210 www.strawblanket.com
BX Inlet Sediment Boxes	BX Civil and Construction Dell Rapids, SD Phone: 1-605-428-5483 bx-cc.com
EZ-Flo and EZ-Catch	Flo-Water, LLC West Des Moines, IA Phone: 1-515-577-6763 www.flo-water.net
Basin Bag	Pro Drain Systems, Inc. Highland, MI Phone: 1-248-329-7001 www.prodrainsystems.com

TABLE OF SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES

Station	L/R	Quantity (Each)
29+35	L	1
29+45	R	1
30+42	L	2
31+34	L	3
31+35	R	3
33+07	R	2
33+08	L	3
34+56	R	2
34+56	L	2
37+64	L	2
37+64	R	2
39+58	L	3
39+58	R	2
40+89	L	2
40+91	R	2
43+02	R	2
43+04	L	3
43+44	L	2
43+84	L	2
45+19	L	2
45+19	R	2
	Total:	45

SEDIMENT CONTROL AT TYPE S REINFORCED CONCRETE DROP INLETS

The sediment control device provided will be from the list shown below. Refer to Standard Plate 734.11 for details.

Product	Manufacturer
Dandy Curb	Dandy Products Inc. Dublin, OH Phone: 1-800-591-2284 www.dandyproducts.com
Gutterbuddy	ACF Environmental Richmond, VA Phone: 1-800-448-3636 www.acfenvironmental.com
Curb Inlet Guard	ECTEC Environmental Systems LLC Alameda, CA Phone: 1-866-521-0724 www.ertecsystems.com
EZ-ClipGuard	Flo-Water, LLC West Des Moines, IA Phone: 1-515-577-6763 www.flo-water.net
12" Compost Filter Sock	Dioten Engineering, Inc. Rapid City, SD Phone: 1-605-430-7213
12" Silt Sock	Aspen Ridge Lawn and Landscaping,LLC Rapid City, SD Phone: 1-605-415-0695 www.siltsocksd.com
GeoCurve	GeoSolutions, Inc. Austin, TX Phone: 1-512-445-0796 www.geosolutionsinc.com

TABLE OF SEDIMENT CONTROL AT TYPE S REINFORCED CONCRETE DROP INLETS

Station	L/R	Clear Opening Width (Ft)	Quantity* (Ft)
29+60	L	10	12
30+01	L	10	12
		Total:	24

* Quantity shown is the minimum length required and will be the basis of payment.

STREET SWEEPING

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

The Contractor will use a pickup broom having integral self-contained storage to clean the roadway. The pickup broom used will 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. Following pavement grooving operations and prior to the application of the pavement marking tape.
3. When sawing operations are underway in the inside driving lanes, the outside driving lanes and gutter may need to be swept to control dust.

All costs for cleaning the roadway with a pickup broom will be incidental to the contract unit price per hour for "Sweeping".

CONSTRUCTION ENTRANCE

The Contractor will install a Construction Entrance at locations where there is a potential for mud tracking and sediment flow from the construction site and work area onto a paved public roadway.

It is the Contractor's option to use the SDDOT Construction Entrance (See SDDOT Construction Entrance notes and details), a product from the list provided in these notes, or other products or processes as approved by the Engineer during construction.

CONSTRUCTION ENTRANCE, continued

If the Contractor elects to use one of the products listed in the table, then the Contractor will install the construction entrance product in accordance with the manufacturer's installation instructions or as directed by the Engineer.

The Contractor will maintain the construction entrance such that mud tracking and sediment flow will not enter the roadway or adjacent drainage areas. The construction entrance will be routinely inspected, and the Contractor will repair or replace material as deemed necessary by the Engineer.

All costs for furnishing, installing, maintaining, and removal of the construction entrance including equipment, labor, materials, and incidentals will be included in the contract unit price per each for "Construction Entrance".

The following table is a list of known construction entrance products available for use:

Product	Manufacturer
Grizzly Rumble Grate (10' width and 24' length required)	Trackout Control, LLC Tempe, AZ Phone: 1-800-761-0056 www.trackoutcontrol.com
Rumble Grid (12' width and 24' length including combination of grids and ramps required)	Pro-Tec Equipment, Inc. Charlotte, MI Phone: 1-800-292-1225 www.pro-tecequipment.com
Tracking Pad (12' width and 24' length (2 – 12'x12' pads) and 2 – 4'x4' turning flares)	Tracking Pads LLC Denver, CO Phone: 1-719-371-3791 www.trackingpads.com
FODS Trackout Control Mat (12' width and 10 mats To get a 70' length)	FODS, LLC Denver, CO Phone: 1-844-200-3637 getfods.com
DuraDeck and MegaDeck HD An adequate quantity is needed to prevent tires from becoming muddy (does not remove mud)	Signature Systems Group, LLC Flower Mound, TX Phone: 1-800-709-8151 www.duradeckmats.com

SDDOT CONSTRUCTION ENTRANCE

If the SDDOT Construction Entrance is utilized, then the Contractor will install the SDDOT Construction Entrance in accordance with these notes and the detail drawings.

Pit run material will be obtained from a granular source and will conform to the following gradation:

Sieve Size	Percent Passing
6"	100%
#4	0-60%
#200	0-20%

The pit run material will be compacted to the satisfaction of the Engineer.

The aggregate for the granular material will conform to the following gradation requirements:

Sieve Size	Percent Passing
3"	100%
2 ½"	90-100%
1 ½"	25-60%
¾"	0-10%
½"	0-5%

The granular material will be placed in 6" maximum lifts.

It is anticipated that the granular material will need to be periodically removed and replaced as it becomes inundated with mud and sediment.

The Reinforcement Fabric (MSE) will be in conformance with Section 831 of the Specifications. The Reinforcement Fabric (MSE) will be on the Approved Products List for this material or will be certified by the supplier to meet this specification prior to installation.

The Reinforcement Fabric (MSE) should be kept as taut as possible prior to placing.

Equipment will not be allowed on the Reinforcement Fabric (MSE) until the first lift of granular material is in place.

All seams in the Reinforcement Fabric (MSE) will be overlapped at least 2' and shingled.

REGISTERED PROFESSIONAL ENGINEER
REG. NO 15778
JUSTIN DAVID HEIM
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1/13/2025

STORMWATER POLLUTION PREVENTION PLAN CHECKLIST

*(The numbers left of the title headings are **reference numbers** to the GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES (Stormwater Permit))*

5.3 (2): STAFF TRAINING/SWPPP IMPLEMENTATION

To promote stormwater management awareness specific for this project, the Contractor's Erosion Control Supervisor should provide correspondence of how the SWPPP will be implemented. The Contractor's Erosion Control Supervisor is responsible for providing this information at the preconstruction meeting, and subsequently completing an attendance log, which should identify site-specific implementation of the SWPPP and the names of the personnel who attended the preconstruction meeting. Documentation of the preconstruction meeting will be filed with the SWPPP documents.

5.3 (3): DESCRIPTION OF CONSTRUCTION ACTIVITIES

- **5.3 (3a): Project Limits** See Title Sheet
- **5.3 (3a): Project Description** See Title Sheet
- **5.3 (4): Site Map(s)** See Title Sheet
- **Major Soil Disturbing Activities** (check all that apply)
  - ☐ Clearing and grubbing
  - ☒ Excavation/borrow
  - ☒ Grading and shaping
  - ☒ Filling
  - ☐ Other (describe):
- **5.3 (3b): Total Project Area** 5
- **5.3 (3b): Total Area to be Disturbed** 5
- **5.3 (3c): Maximum Area Disturbed at One Time** 2.5
- **5.3 (3d): Existing Vegetative Cover (%)** 50
- **5.3 (3d): Description of Vegetative Cover**

- **5.3 (3e): Soil Properties:** AASHTO Soil Classification: A6
- **5.3 (3f): Name of Receiving Water Body/Bodies** Turtle Creek

5.3 (3h): ORDER OF CONSTRUCTION ACTIVITIES

The Contractor will enter the Estimated Start Date.

Description	Estimated Start Date
Install stabilized construction entrance(s).	
Install perimeter protection where runoff may exit site.	
Install perimeter protection around stockpiles.	
Install channel and ditch bottom protection.	
Clearing and grubbing.	
Remove and stockpile topsoil.	
Stabilize disturbed areas.	
Install utilities, storm sewers, curb and gutter.	
Install inlet and culvert protection after completing storm drainage and other utility installations.	
Final grading.	
Final paving.	
Removal of protection devices.	
Reseed areas disturbed by removal activities.	

5.3 (5): DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES

All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report. Include the technical reasoning for selecting each control. (check all that apply)

Perimeter Controls (See Detail Plan Sheets)

Description	Estimated Start Date
☐ Natural Buffers (within 50 ft of Waters of State)	
☒ Silt Fence	
☒ Erosion Control Wattles	
☐ Temporary Berm / Windrow	
☐ Floating Silt Curtain	
☒ Stabilized Construction Entrances	
☐ Entrance/Exit Equipment Tire Wash	
☐ Other:	

Structural Erosion and Sediment Controls

Description	Estimated Start Date
☒ Silt Fence	
☐ Temporary Berm/Windrow	
☒ Erosion Control Wattles	
☐ Temporary Sediment Barriers	
☐ Erosion Bales	
☐ Temporary Slope Drain	
☐ Turf Reinforcement Mat	
☒ Riprap	
☐ Gabions	
☐ Rock Check Dams	
☐ Sediment Traps/Basins	
☒ Culvert Inlet Protection	
☐ Transition Mats	
☐ Median/Area Drain Inlet Protection	
☒ Curb Inlet Protection	
☐ Interceptor Ditch	
☒ Concrete Washout Facility	
☐ Work Platform	
☐ Temporary Water Barrier	
☐ Temporary Water Crossing	
☐ Permanent Stormwater Ponds	
☐ Permanent Open Vegetated Swales	
☐ Natural Depressions to allow for Infiltration	
☐ Sequential Systems that combine several practices	
☐ Other:	

Dust Controls

Description	Estimated Start Date
☐ Tarps & Wind impervious fabrics	
☒ Watering	
☐ Stockpile location/orientation	
☐ Dust Control Chlorides	
☐ Other	

Dewatering BMPs

Description	Estimated Start Date
☐ Sediment Basins	
☐ Dewatering bags	
☐ Weir tanks	
☐ Temporary Diversion Channel	
☐ Other:	

Stabilization Practices (See Detail Plan Sheets)

(Stabilization measures shall begin the following work day whenever earth disturbing activity on any portion of the site has temporarily or permanently ceased. Temporary stabilization shall be completed as soon as practicable but no later than 14 days after initiating soil stabilization activities (**3.18**))

Description	Estimated Start Date
☐ Vegetation Buffer Strips	
☐ Temporary Seeding (Cover Crop Seeding)	
☒ Permanent Seeding	
☐ Sodding	
☐ Planting (Woody Vegetation for Soil Stabilization)	
☐ Mulching (Grass Hay or Straw)	
☐ Fiber Mulching (Wood Fiber Mulch)	
☐ Soil Stabilizer	
☐ Bonded Fiber Matrix	
☐ Fiber Reinforced Matrix	
☒ Erosion Control Blankets	
☐ Surface Roughening (e.g. tracking)	
☐ Other:	

Wetland Avoidance

Will construction and/or erosion and sediment controls impinge on regulated wetlands? Yes ☐ No ☒ If yes, the structural and erosion and sediment controls have been included in the total project wetland impacts and have been included in the 404 permit process with the USACE.

5.3 (6): PROCEDURES FOR INSPECTIONS

- Inspections will be conducted at least once every 7 days.
- All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report.
- Silt fence will be inspected for depth of sediment and for tears to ensure the fabric is securely attached to the posts and that the posts are well anchored. Sediment buildup will be removed from the silt fence when it reaches 1/3 of the height of the silt fence.
- Sediment basins and traps will be checked. Sediment will be removed when depth reaches approximately 50 percent of the structure's capacity, and at the conclusion of the construction.
- Check dams will be inspected for stability. Sediment will be removed when depth reaches ½ the height of the dam.
- All seeded areas will be checked for bare spots, washouts, and vigorous growth free of significant weed infestations.
- Inspection and maintenance reports will be prepared on form DOT 298 for each site inspection, this form will also be used to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents.
- The SDDOT Project Engineer and Contractor's Erosion Control Supervisor are responsible for inspections. Maintenance and repair activities are the responsibility of the Contractor. The SDDOT Project Engineer will complete the inspection and maintenance reports and distribute copies per the distribution instructions on DOT 298.

5.3 (7): POST CONSTRUCTION STORMWATER MANAGEMENT

Stormwater management will be handled by temporary controls outlined in "DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES" above, and any permanent controls needed to meet permanent stormwater management needs in the post construction period will be shown in the plans and noted as permanent.

5.3 (8): POLLUTION PREVENTION PROCEDURES

5.3 (8a): Spill Prevention and Response Procedures

➢ **Material Management**

- Housekeeping
  - Only needed products will be stored on-site by the Contractor.
  - Except for bulk materials the contractor will store all materials under cover and/or in appropriate containers.
  - Products must be stored in original containers and labeled.
  - Material mixing will be conducted in accordance with the manufacturer's recommendations.
  - When possible, all products will be completely used before properly disposing of the container off-site.
  - The manufacturer's directions for disposal of materials and containers will be followed.
  - The Contractor's site superintendent will inspect materials storage areas regularly to ensure proper use and disposal.
  - Dust generated will be controlled in an environmentally safe manner.

- Hazardous Materials
  - Products will be kept in original containers unless the container is not resealable and provide secondary containment as applicable.
  - Original labels and material safety data sheets will be retained in a safe place to relay important product information.
  - If surplus product must be disposed of, manufacturer's label directions for disposal will be followed.
  - Maintenance and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, de-greasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants will be conducted on an impervious surface and under cover during wet weather to prevent the release of contaminants onto the ground.
  - Wheel wash water will be collected and allowed to settle out suspended solids prior to discharge. Wheel wash water will not be discharged directly into any stormwater system or stormwater treatment system.
  - Potential pH-modifying materials such as: bulk cement, cement kiln dust, fly ash, new concrete washings, concrete pumping, residuals from concrete saw cutting (either wet or dry), and mixer washout waters will be collected on site and managed to prevent contamination of stormwater runoff.

➢ **Spill Control Practices**

In addition to the previous housekeeping and management practices, the following practices will be followed for spill prevention and cleanup if needed.

- For all hazardous materials stored on site, the manufacturer's recommended methods for spill cleanup will be clearly posted. Site personnel will be made aware of the procedures and the locations of the information and cleanup supplies.
- Appropriate cleanup materials and equipment will be maintained by the Contractor in the materials storage area on-site. As appropriate, equipment and materials may include items such as brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for cleanup purposes.
- All spills will be cleaned immediately after discovery and the materials disposed of properly.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- After a spill a report will be prepared describing the spill, what caused it, and the cleanup measures taken. The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring, as well as clean up instructions in the event of reoccurrences.
- The Contractor's site superintendent, responsible for day-to-day operations, will be the spill prevention and cleanup coordinator.

➢ **Spill Response**

The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize migration into stormwater runoff and conveyance systems. If the release has impacted on-site stormwater, it is critical to contain the released materials on-site and prevent their release into receiving waters. If a spill of pollutants threatens stormwater or surface water at the site, the spill response procedures outlined below must be implemented in a timely manner to prevent the release of pollutants.

- The Contractor's site superintendent will be notified immediately when a spill or the threat of a spill is observed. The superintendent will assess the situation and determine the appropriate response.
- If spills represent an imminent threat of escaping erosion and sediment controls and entering receiving waters, personnel will be directed to respond immediately to contain the release and notify the superintendent after the situation has been stabilized.
- Spill kits containing appropriate materials and equipment for spill response and cleanup will be maintained by the Contractor at the site.
- If oil sheen is observed on surface water (e.g. settling ponds, detention ponds, swales), action will be taken immediately to remove the material causing the sheen. The Contractor will use appropriate materials to contain and absorb the spill. The source of the oil sheen will also be identified and removed or repaired as necessary to prevent further releases.
- If a spill occurs the superintendent or the superintendent's designee will be responsible for completing the spill reporting form and for reporting the spill to SDDENR.
- Personnel with primary responsibility for spill response and cleanup will receive training by the Contractor's site superintendent or designee. The training must include identifying the location of the spill kits and other spill response equipment and the use of spill response materials.
- Spill response equipment will be inspected and maintained as necessary to replace any materials used in spill response activities.

5.3 (8b): WASTE MANAGEMENT PROCEDURES

➢ **Waste Disposal**

- All liquid waste materials will be collected and stored in approved sealed containers. All trash and construction debris from the site will be deposited in the approved containers. Containers will be serviced as necessary, and the trash will be hauled to an approved disposal site or licensed landfill. All onsite personnel will be instructed in the proper procedures for waste disposal and notices stating proper practices will be posted. The Contractor is responsible for ensuring waste disposal procedures are followed.

➢ **Hazardous Waste**

- All hazardous waste materials will be disposed of in a manner specified by local or state regulations or by the manufacturer. Site personnel will be instructed in these practices, and the Contractor will be responsible for seeing that these practices are followed.

➢ **Sanitary Waste**

- Portable sanitary facilities will be provided on all construction sites. Sanitary waste will be collected from the portable units which must be secured to prevent tipping and serviced in a timely manner by a licensed waste management Contractor or as required by any local regulations.

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5.3 (9): CONSTRUCTION SITE POLLUTANTS

The following materials or substances are expected to be present on the site during the construction period. These materials will be handled as noted under the heading "POLLUTION PREVENTION PROCEDURES" (check all that apply).

- ☒ Concrete and Portland Cement
- ☐ Detergents
- ☒ Paints
- ☒ Metals
- ☒ Bituminous Materials
- ☐ Petroleum Based Products
- ☒ Diesel Exhaust Fluid
- ☐ Cleaning Solvents
- ☒ Wood
- ☒ Cure
- ☐ Texture
- ☐ Chemical Fertilizers
- ☐ Other:

Product Specific Practices

- **Petroleum Products**
  All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled.

- **Fertilizers**
  Fertilizers will be applied only in the amounts specified by the SDDOT. Once applied, fertilizers will be worked into the soil to limit the exposure to stormwater. Fertilizers will be stored in an enclosed area. The contents of partially used fertilizer bags will be transferred to sealable containers to avoid spills.

- **Paints**
  All containers will be tightly sealed and stored when not required for use. The excess will be disposed of according to the manufacturer's instructions and any applicable state and local regulations.

- **Concrete Trucks**
  Contractors will provide designated truck washout facilities on the site. These areas must be self-contained and not connected to any stormwater outlet of the site. Upon completion of construction, the area at the washout facility will be properly stabilized.

5.3 (10): NON-STORMWATER DISCHARGES

The following non-stormwater discharges are anticipated during the course of this project (check all that apply).

- ☐ Discharges from water line flushing.
- ☐ Pavement wash-water, where no spills or leaks of toxic or hazardous materials have occurred.
- ☐ Uncontaminated ground water associated with dewatering activities.

5.3 (11): INFEASIBILITY DOCUMENTATION

If it is determined to be infeasible to comply with any of the requirements of the Stormwater Permit, the infeasibility determination must be thoroughly documented in the SWPPP.

7.0: SPILL NOTIFICATION

In the event of a spill, the Contractor's site superintendent will make the appropriate notification(s), consistent with the following procedures:

- A release or spill of a regulated substance (includes petroleum and petroleum products) must be reported to SDDENR immediately **if any one of the following** conditions exists:
  - The release or spill threatens or is able to threaten waters of the state (surface water or ground water)
  - The release or spill causes an immediate danger to human health or safety
  - The release or spill exceeds 25 gallons
  - The release or spill causes a sheen on surface water
  - The release or spill of any substance that exceeds the ground water quality standards of ARSD Chapter 74:54:01
  - The release or spill of any substance that exceeds the surface water quality standards of ARSD Chapter 74:51:01
  - The release or spill of any substance that harms or threatens to harm wildlife or aquatic life
  - The release or spill is required to be reported according to Superfund Amendments and Reauthorization Act (SARA) Title III List of Lists, Consolidated List of Chemicals Subject to Reporting Under the Emergency Planning and Community Right to Know Act, US Environmental Protection Agency.

- To report a release or spill, call SDDENR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central Standard Time). To report the release after hours, on weekends or holidays, call South Dakota Emergency Management at 605-773-3231. Reporting the release to SDDENR does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, you must also contact local authorities to determine the local reporting requirements for releases. A written report of the unauthorized release of any regulated substance, including quantity discharged, and the location of the discharge shall be sent to SDDENR within 14 days of the discharge.

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5.4: SWPPP CERTIFICATIONS

➢ **Certification of Compliance with Federal, State, and Local Regulations**

The Storm Water Pollution Prevention Plan (SWPPP) for this project reflects the requirements of all local municipal jurisdictions for storm water management and sediment and erosion control as established by ordinance, as well as other state and federal requirements for sediment and erosion control plans, permits, notices or documentation as appropriate.

➢ **City of Hartford City Engineer**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Signature (See the General Permit, Section 7.4 (1))

➢ **Prime Contractor**

This section is to be executed by the General Contractor after the award of the contract. This section may be executed any time there is a change in the Prime Contractor of the project.

I certify under penalty of law that this document and all attachments will be revised or maintained under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Signature

CONTACT INFORMATION

The following personnel are duly authorized representatives and have signatory authority for modifications made to the SWPPP:

➢ **Contractor Information**:

- Prime Contractor Name: _____
- Contractor Contact Name: _____
- Address: _____
- _____
- City: _____State: _____Zip: _____
- Office Phone: _____Field: _____
- Cell Phone: _____Fax: _____

➢ **Erosion Control Supervisor**

- Name: _____
- Address: _____
- _____
- City: _____State: _____Zip: _____
- Office Phone: _____Field: _____
- Cell Phone: _____Fax: _____

➢ **City Project Engineer**

- Name: **Justin Heim**
- Business Address: **345 N. Reid Place – Suite 300**
- City: **Sioux Falls** State: **South Dakota** Zip: **57103**
- Office Phone: **605-274-6401** Email: **Justin.Heim@ISGInc.com**
- Cell Phone: **515-380-3348**

➢ **SDDENR Contact Spill Reporting**
- Business Hours Monday-Friday (605) 773-3296
- Nights and Weekends (605) 773-3231

➢ **SDDENR Contact for Hazardous Materials.**
- (605) 773-3153

➢ **National Response Center Hotline**
- (800) 424-8802.

➢ **SDDENR Stormwater Contact Information**
- SDDENR Stormwater (800) 737-8676
- Surface Water Quality Program (605) 773-3351

5.5: REQUIRED SWPPP MODIFICATIONS

➢ **5.5 (1): Conditions Requiring SWPPP Modification**

The SWPPP must be modified, including the site map(s), in response to any of the following conditions:

- When a new operator responsible for implementation of any part the SWPPP begins work on the site.
- When changes to the construction plans, sediment and erosion control measures, or any best management practices on site that are no longer accurately reflected in the SWPPP. This includes changes made in response to corrective actions triggered by inspections.
- To reflect areas on the site map where operational control has been transferred (including the date of the transfer) or has been covered under a new permit since initiating coverage under this general permit.
- If inspections by site staff, local officials, SDDENR, or U.S. EPA determine that SWPPP modifications are necessary for compliance with the Stormwater Permit.
- To reflect any revisions to applicable federal, state, or local requirements that affect the control measures implemented at the site.
- If approved by the Secretary, to reflect any changes in chemical water treatment systems or controls, including the use of a different water treatment chemical, age rates, different areas, or methods of application.

➢ **5.5 (2): Deadlines for SWPPP Modification**

Any required revisions to the SWPPP must be completed within 7 calendar days following any of the items listed above.

➢ **5.5 (3): Documentation of Modifications to the Plan**

All SWPPP modification records are required to be maintained showing the dates of when the modification occurred. The records must include the name of the person authorizing each change and a brief summary of all changes.

➢ **5.5 (4): Certification Requirements**

All modifications made to the SWPPP must be signed and certified as required in Section 7.4.

➢ **5.5 (5): Required Notice to Other Operators**

If there are multiple operators at the site, the Contractor's Erosion Control Supervisor must notify each operator that may be impacted by the change to the SWPPP within 24 hours.

When modifications as described above occur, the SWPPP will be modified to provide appropriate protection to disturbed areas, all storm water structures, and adjacent waters. The SDDOT Project Engineer will modify the SWPPP using the DOT 298 form and drawings on the plan will be modified to reflect the needed changes. Copies of the DOT 298 forms and the SWPPP will be retained on site in a designated place for review throughout the course of the project. A copy of the DOT 298 form will be given to the Contractor Erosion Control Supervisor and a copy will be emailed to the SDDOT Environmental Section in accordance with the DOT 298 Form.

EROSION AND SEDIMENT CONTROL LEGEND

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 6353(00)	D10	D18

Plotting Date: 1/7/2025

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SYMBOLOGY FOR BEST MANAGEMENT PRACTICES

- STORM WATER DISCHARGE POINT
- LOW FLOW SILT FENCE
- HIGH FLOW SILT FENCE
- SILT TRAP
- SEDIMENT CONTROL AT INLET WHEN SURFACING IS IN PLACE
- TEMPORARY SEDIMENT BARRIER
- TEMPORARY WATER BARRIER
- FLOATING SILT CURTAIN
- SEDIMENT FILTER BAGS
- TRIANGULAR SILT BARRIERS
- EROSION CONTROL WATTLES
- EROSION BALES
- SURFACE ROUGHENING
- SOIL STABILIZER / TEMPORARY MULCH / DUST CONTROL
- CUT INTERCEPTOR DITCH
- TEMPORARY SLOPE DRAIN
- SEDIMENT CONTROL AT INLET BEFORE PLACEMENT OF SURFACING
- HYDRAULIC STRAW MULCH / FIBER MULCHING / BONDED FIBER MATRIX / FIBER REINFORCED MATRIX
- ROCK CHECK DAM
- SODDING
- TYPE 1 EROSION CONTROL BLANKET
- TYPE 2 EROSION CONTROL BLANKET
- TYPE 3 EROSION CONTROL BLANKET
- TYPE 4 EROSION CONTROL BLANKET
- TYPE 1 TURF REINFORCEMENT MAT
- TYPE 2 TURF REINFORCEMENT MAT
- TYPE 3 TURF REINFORCEMENT MAT
- SYNTHETIC CHANNEL PROTECTION
- (TS) TOPSOIL STOCKPILES
- (B) BORROW AREAS
- (CE) STABILIZED CONSTRUCTION ENTRANCES
- (CW) CONCRETE WASHOUTS
- (BS) VEGETATED BUFFER STRIPS
- (AP) ASPHALT PLANT SITE
- (CP) CONCRETE PLANT SITE
- (M) ON-SITE CONSTRUCTION MATERIAL STORAGE AREAS
- (SK) SPILL KIT
- (WP) WORK PLATFORM
- (TP) PORTABLE TOILET
- (V) VEHICLE AND EQUIPMENT PARKING, FUELING, AND MAINTENANCE AREAS
- (D) DUMPSTER OR OTHER TRASH AND DEBRIS CONTAINERS

BEST MANAGEMENT PRACTICES

BEST MANAGEMENT PRACTICES (BMP'S) SHOULD BE USED THROUGHOUT CONSTRUCTION. TO REMIND CONTRACTORS AND FIELD PERSONNEL THAT BMP'S FOR WATER QUALITY SHOULD BE UTILIZED THROUGHOUT THE CONSTRUCTION PROCESS, THE SYMBOLOGY IS COLORED AS FOLLOWS:

RED BMPS ARE TO BE INSTALLED BEFORE EARTH MOVING ACTIVITES COMMENCE. RED BMPS ARE USED FOR PERIMETER CONTROL. THEY PREVENT SEDIMENT FROM LEAVING THE SITE OR ENTERING FROM ANOTHER SITE. THEY MAY ALSO DETER WATER AWAY FROM OR AROUND THE SITE. THEY MAY BE LEFT IN PLACE AND MAINTAINED FOR THE REMAINDER OF CONSTRUCTION OR UNTIL VEGETATION HAS REACHED 70% OF THE BACKGROUND LEVEL.

BLUE BMPS ARE TO BE INSTALLED DURING CONSTRUCTION. BLUE BMPS ARE USED FOR TEMPORARY STABILIZATION. THEY PREVENT EROSION DURING CONSTRUCTION. THEY MAY ALSO BE SEDIMENT CONTROLS UTILIZED AFTER DRAIN PIPES AND STORM SEWERS ARE IN PLACE. THEY MAY BE LEFT IN PLACE AND MAINTAINED FOR THE REMAINDER OF CONSTRUCTION OR UNTIL VEGETATIONHAS REACHED 70% OF THE BACKGROUND LEVEL. SOME YELLOW BMPS WILL BE REMOVED OR REPLACED DURING CONSTRUCTION.

GREEN BMPS ARE TO BE INSTALLED WHEN GRADING IS COMPLETE. GREEN BMPS ARE USED FOR FINAL STABILIZATION. THEY ARE PERMANENT EROSION CONTROL MEASURES THAT ARE NOT REMOVED.

IF THE CONTRACTOR OR ENGINEER DECIDE TO USE ADDITIONAL BEST MANAGEMENT PRACTICES OR LABEL THE LOCATIONS OF THEM THEY SHOULD USE THE SYMBOLOGY SHOWN. OTHER BEST MANAGEMENT PRACTICES FOR WHICH THERE IS NO SYMBOLOGY INCLUDE:

PERMANENT SEEDING IS DONE BEFORE THE APPLICATION OF ALL TYPES OF MULCHING AND HYDRAULICALLY APPLIED SOIL MULCHES AND MATRIXS. PERMANENT GRASS HAY/ STRAW MULCH IS NOT SHOWN ON PLAN SHEETS, BUT IT CAN BE ASSUMED THAT ALL AREAS THAT ARE NOT ROADWAYS ON RURAL PROJECTS WILL BE SEEDED THEN MULCHED. AREAS WHERE AN ALTERNATE TO GRASS HAY /STRAW MULCH IS USED WILL BE SHOWN WITH THE APPROPRIATE SYMBOLOGY.

SEDIMENT BASINS UTILIZED DURING CONSTRUCTION WILL BE SHOWN ON PLAN SHEETS AND IN SECTION X.

GEOTEXTILE FABRIC USUALLY SUPPLEMENTS OTHER BMPS, BUT IT MAY BE USED TO TEMPORARILY COVER AREAS FOR EROSION PROTECTION UNTIL IT IS PERMENANTLY INSTALLED.

STREET SWEEPING SHOULD BE DONE AS NEEDED TO KEEP SEDIMENT ON ROADWAYS FROM LEAVING THE SITE.

DEWATERING AND SEDIMENT COLLECTING IS SHOWN ON A DETAIL SHEET WHEN IT IS NEEDED. DEWATERING WITHOUT SEDIMENT COLLECTING DOES NOT HAVE A DETAIL, JUST A DETAILED NOTE. SEDIMENT LADEN WATER SHOULD NEVER BE PUMPED OFF THE SITE.

GABIONS AND RIP RAP AT PIPE AND CULVERT OUTLETS ARE DETAILED IN SECTION B.

PROJECT PHASING

PROJECT PHASING MAY BE ONE OF THE MOST IMPORTANT BMPS. DURING PHASING REMEMBER THE FOLLOWING:

ALWAYS INSTALL PERIMETER CONTROLS BEFORE BEGINNING EARTH MOVING ACTIVITIES.

DO NOT DISTURB MORE AREA THAN WHAT IS NEEDED TO COMPLETE EACH PHASE OF CONSTRUCTION.

IF POSSIBLE CONSTRUCT SEDIMENT BASINS AND STABILIZE THEM BEFORE BEGINNING ROADWAY GRADING.

TEMPORARILY STABILIZE AREAS THAT WILL NOT BE TOUCHED WITHIN 14 DAYS.

PERMANENTLY STABILIZE AREAS WHEN GRADING IN THAT AREA IS COMPLETE. PERMANENT STABILIZATION CAN BE COMPLETED IN PHASES AND DOES NOT HAVE TO WAIT UNTIL THE WHOLE ROADWAY HAS BEEN CONSTRUCTED.

CONTINUALLY MAINTAIN ALL SEDIMENT CONTROLS AND MONITOR AREAS WHERE EROSTION CONTROL HAS BEEN INSTALLED.

FOR BIDDING PURPOSES ONLY

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	P 6353(00)	D11	D18

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PERIMETER CONTROL

INSTALL LOW FLOW SILT FENCE AT THE FOLLOWING LOCATIONS:
30+02 R TO 34+56 R - JUST INSIDE PROJECT BOUNDARY - 462 FT
30+12 L TO 32+58 L - JUST INSIDE PROJECT BOUNDARY - 286 FT
32+92 L TO 34+56 L - JUST INSIDE PROJECT BOUNDARY - 164 FT

INSTALL INLET PROTECTION AT THE FOLLOWING LOCATIONS:
27+17 L - AT INLET WITH FRAME AND GRATE
29+22 R - AT INLET WITH FRAME AND GRATE
29+60 L - AT TYPE S DROP INLET - 12 FT
30+01 L - AT TYPE S DROP INLET - 12 FT

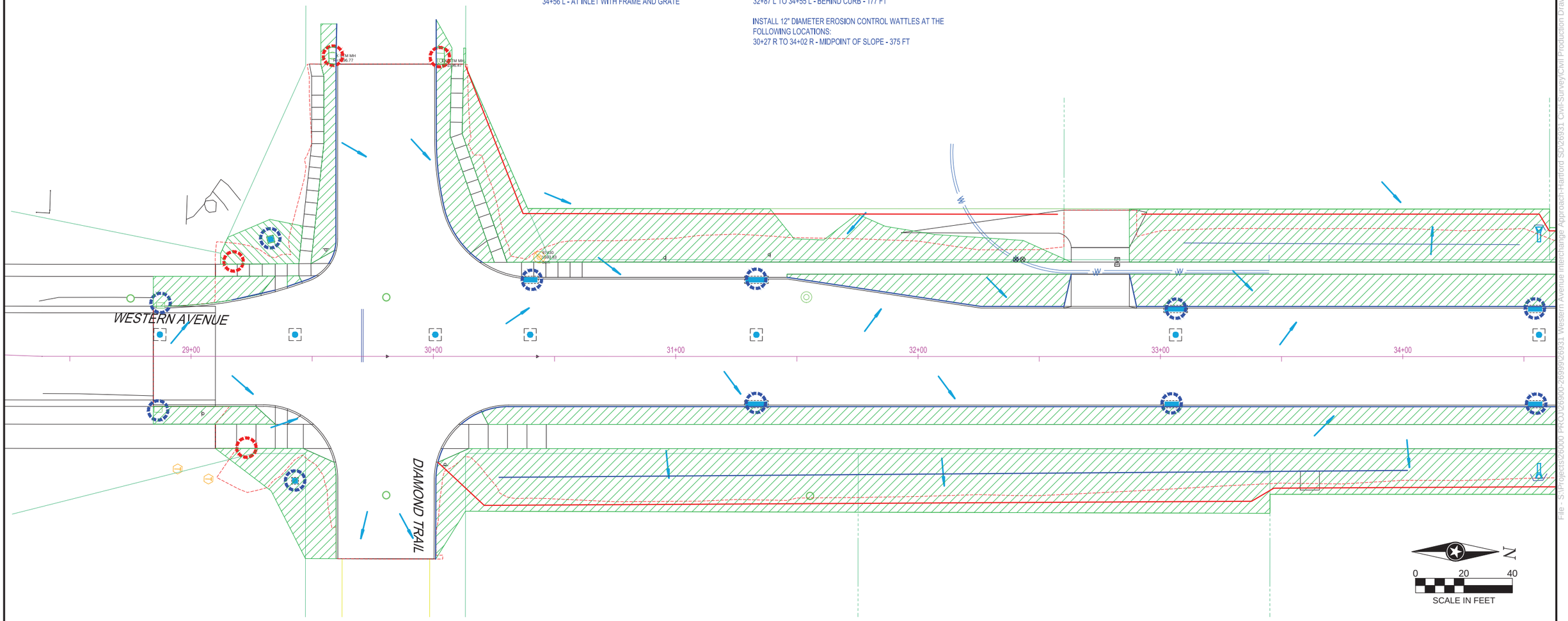
TEMPORARY STABILIZATION

INSTALL INLET PROTECTION AT THE FOLLOWING LOCATIONS:
28+87 R - AT INLET WITH FRAME AND GRATE
28+88 L - AT INLET WITH FRAME AND GRATE
29+35 L - AT INLET WITH FRAME AND GRATE
29+45 R - AT INLET WITH FRAME AND GRATE
30+42 L - AT INLET WITH FRAME AND GRATE
31+34 L - AT INLET WITH FRAME AND GRATE
31+35 R - AT INLET WITH FRAME AND GRATE
33+07 R - AT INLET WITH FRAME AND GRATE
33+08 L - AT INLET WITH FRAME AND GRATE
34+56 R - AT INLET WITH FRAME AND GRATE
34+56 L - AT INLET WITH FRAME AND GRATE

INSTALL HIGH-FLOW SILT FENCE AT THE FOLLOWING LOCATIONS:
34+56 L - AT PIPE INLET - 5 FT
34+56 R - AT PIPE INLET - 5 FT

INSTALL 6" DIAMETER EROSION CONTROL WATTLES AT THE FOLLOWING LOCATIONS:
29+17 L TO 29+60 L - BEHIND CURB - 130 FT
30+00 R TO 34+55 R - BEHIND CURB - 490 FT
30+01 L TO 30+20 L - BEHIND CURB - 105 FT
31+46 L TO 32+63 L - BEHIND CURB - 128 FT
32+87 L TO 34+55 L - BEHIND CURB - 177 FT

INSTALL 12" DIAMETER EROSION CONTROL WATTLES AT THE FOLLOWING LOCATIONS:
30+27 R TO 34+02 R - MIDPOINT OF SLOPE - 375 FT



FINAL STABILIZATION

SEED ALL DISTURBED AREAS WITH SDDOT TYPE D SEED MIX - 707 LB / 2.1 ACRES (ALL SHEETS)

INSTALL TYPE 3 EROSION CONTROL BLANKET IN ALL DISTURBED AREAS - 10,192 SQYD (ALL SHEETS)

PERIMETER CONTROL

INSTALL LOW FLOW SILT FENCE AT THE FOLLOWING LOCATIONS:
34+56 R TO 34+88 R - JUST INSIDE PROJECT BOUNDARY - 32 FT
34+56 L TO 34+90 L - JUST INSIDE PROJECT BOUNDARY - 32 FT
35+18 L TO 37+99 L - JUST INSIDE PROJECT BOUNDARY - 284 FT
35+23 R TO 38+09 R - JUST INSIDE PROJECT BOUNDARY - 292 FT
38+50 L TO 40+75 L - JUST INSIDE PROJECT BOUNDARY - 250 FT
38+52 R TO 40+73 R - JUST INSIDE PROJECT BOUNDARY - 227 FT

INSTALL HIGH FLOW SILT FENCE AT THE FOLLOWING LOCATIONS:
34+65 L - AT PIPE INLET - 5 FT
34+75 R - AT PIPE INLET - 5 FT
37+93 L - AT PIPE INLET - 5 FT
37+97 R - AT PIPE INLET - 5 FT

INSTALL INLET PROTECTION AT THE FOLLOWING LOCATIONS:
37+80R - AT INLET WITH FRAME AND GRATE

TEMPORARY STABILIZATION

INSTALL INLET PROTECTION AT THE FOLLOWING LOCATIONS:
34+55 L - AT INLET WITH FRAME AND GRATE
34+55 R - AT INLET WITH FRAME AND GRATE
37+64 L - AT INLET WITH FRAME AND GRATE
37+64 R - AT INLET WITH FRAME AND GRATE
39+58 L - AT INLET WITH FRAME AND GRATE
39+58 R - AT INLET WITH FRAME AND GRATE

INSTALL 6" DIAMETER EROSION CONTROL WATTLES AT THE FOLLOWING LOCATIONS:
34+55 L TO 34+86 L - BEHIND CURB - 42 FT
34+55 R TO 34+92 R - BEHIND CURB - 42 FT
35+16 L TO 38+09 L - BEHIND CURB - 353 FT
35+18 R TO 38+11 R - BEHIND CURB - 316 FT
38+50 L TO 38+60 L - BEHIND CURB - 55 FT
38+51 R TO 40+70 R - BEHIND CURB - 249 FT
39+85 L TO 40+71 L - BEHIND CURB - 89 FT

INSTALL 12" DIAMETER EROSION CONTROL WATTLES AT THE FOLLOWING LOCATIONS:
39+10 R TO 40+60 R - MIDPOINT OF SLOPE - 150 FT

FOR BIDDING PURPOSES ONLY

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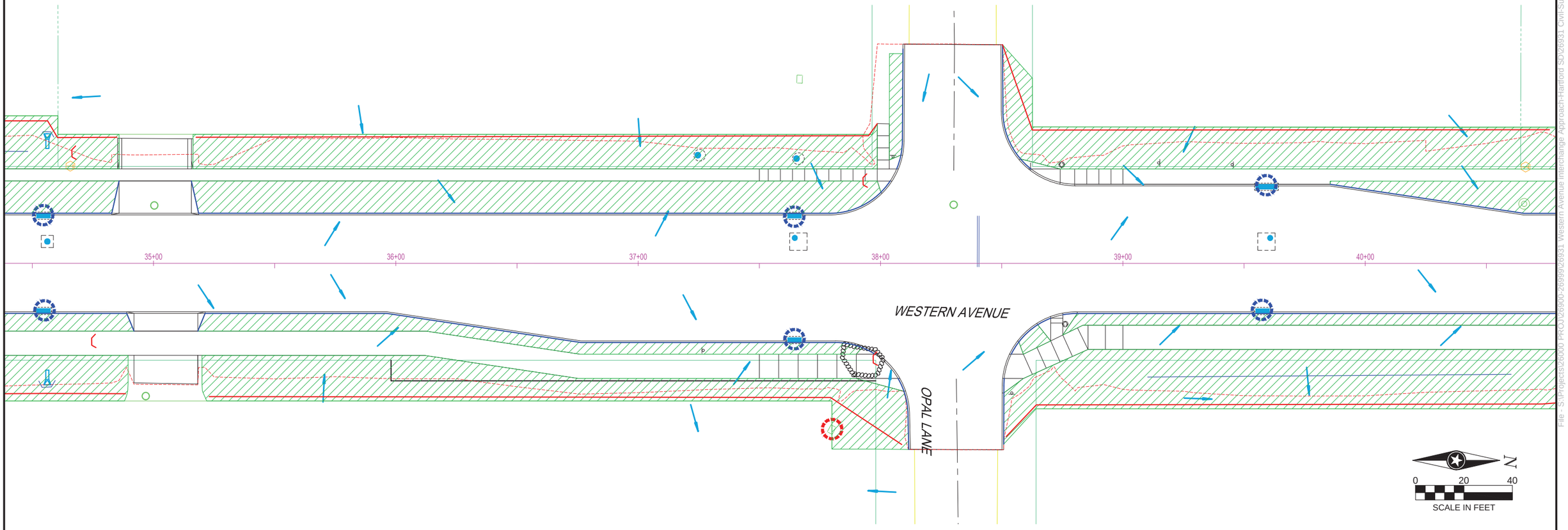
	P 6353(00)	D12	D18

Plotting Date: 1/7/2025

REGISTERED PROFESSIONAL ENGINEER
REG. NO 15778
JUSTIN DAVID HEIM
SOUTH DAKOTA
1/13/2025



FINAL STABILIZATION

SEED ALL DISTURBED AREAS WITH SDDOT TYPE D SEED MIX - 707 LB / 2.1 ACRES (ALL SHEETS)

INSTALL TYPE 3 EROSION CONTROL BLANKET IN ALL DISTURBED AREAS - 10,192 SQYD (ALL SHEETS)

FOR BIDDING PURPOSES ONLY

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REGISTERED PROFESSIONAL ENGINEER
REG.NO 15778
JUSTIN DAVID HEIM
SOUTH DAKOTA
1/13/2025

PERIMETER CONTROL

INSTALL LOW FLOW SILT FENCE AT THE FOLLOWING LOCATIONS:
40+70 R TO 43+25 R - JUST INSIDE PROJECT BOUNDARY - 282 FT
42+48 L TO 43+33 L - JUST INSIDE PROJECT BOUNDARY - 256 FT
43+96 R TO 46+46 R - JUST INSIDE PROJECT BOUNDARY - 255 FT
44+02 L TO 46+88 L - JUST INSIDE PROJECT BOUNDARY - 467 FT

INSTALL HIGH FLOW SILT FENCE AT THE FOLLOWING LOCATIONS:
40+85 L - AT PIPE INLET - 5 FT
43+13 R - AT PIPE INLET - 5 FT
43+42 L - AT PIPE INLET - 5 FT
46+27 R - AT PIPE INLET - 5 FT

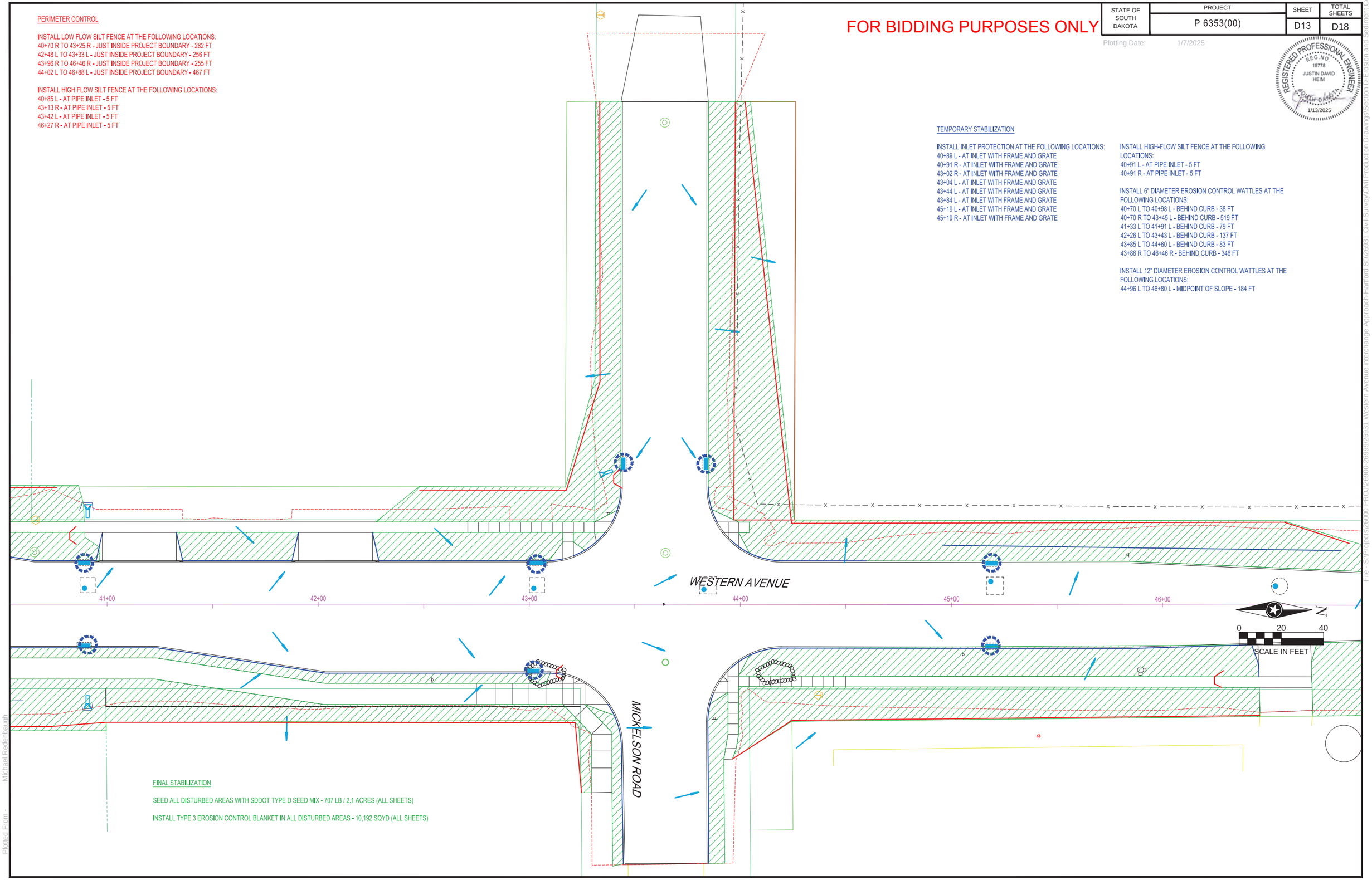
TEMPORARY STABILIZATION

INSTALL INLET PROTECTION AT THE FOLLOWING LOCATIONS:
40+89 L - AT INLET WITH FRAME AND GRATE
40+91 R - AT INLET WITH FRAME AND GRATE
43+02 R - AT INLET WITH FRAME AND GRATE
43+04 L - AT INLET WITH FRAME AND GRATE
43+44 L - AT INLET WITH FRAME AND GRATE
43+84 L - AT INLET WITH FRAME AND GRATE
45+19 L - AT INLET WITH FRAME AND GRATE
45+19 R - AT INLET WITH FRAME AND GRATE

INSTALL HIGH-FLOW SILT FENCE AT THE FOLLOWING LOCATIONS:
40+91 L - AT PIPE INLET - 5 FT
40+91 R - AT PIPE INLET - 5 FT

INSTALL 6" DIAMETER EROSION CONTROL WATTLES AT THE FOLLOWING LOCATIONS:
40+70 L TO 40+98 L - BEHIND CURB - 38 FT
40+70 R TO 43+45 L - BEHIND CURB - 519 FT
41+33 L TO 41+91 L - BEHIND CURB - 79 FT
42+26 L TO 43+43 L - BEHIND CURB - 137 FT
43+85 L TO 44+60 L - BEHIND CURB - 83 FT
43+86 R TO 46+46 R - BEHIND CURB - 346 FT

INSTALL 12" DIAMETER EROSION CONTROL WATTLES AT THE FOLLOWING LOCATIONS:
44+96 L TO 46+80 L - MIDPOINT OF SLOPE - 184 FT



FINAL STABILIZATION

SEED ALL DISTURBED AREAS WITH SDDOT TYPE D SEED MIX - 707 LB / 2.1 ACRES (ALL SHEETS)

INSTALL TYPE 3 EROSION CONTROL BLANKET IN ALL DISTURBED AREAS - 10,192 SQYD (ALL SHEETS)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 6353(00)	D14	D18

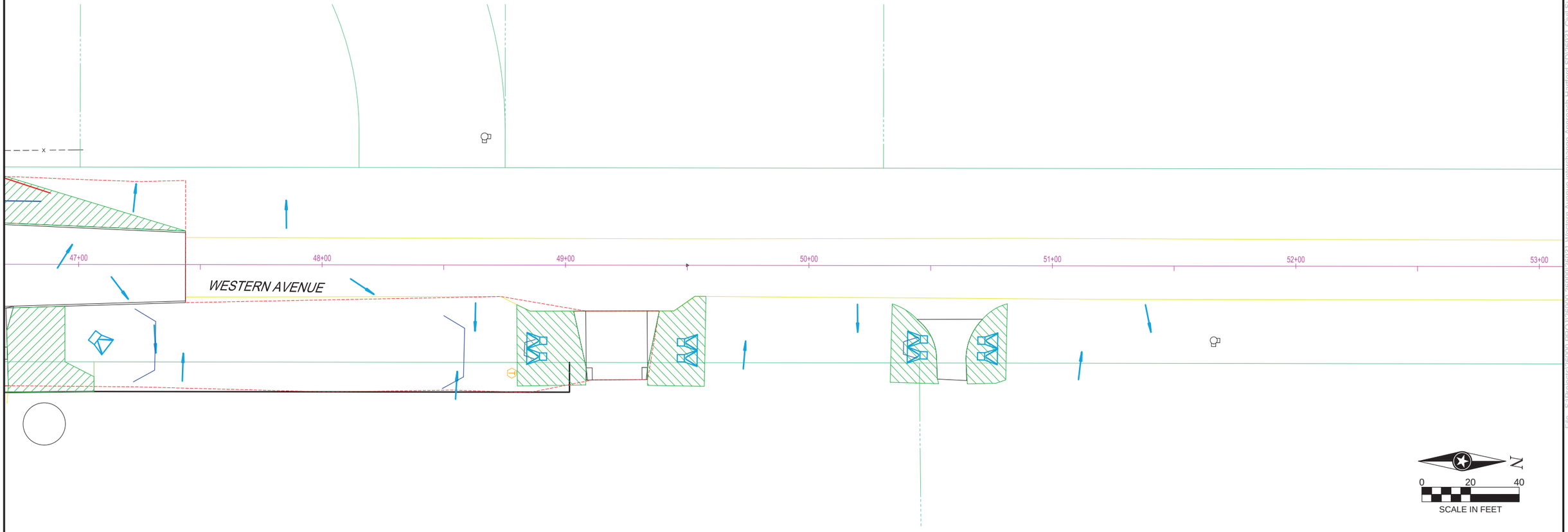
Plotting Date: 1/7/2025

REGISTERED PROFESSIONAL ENGINEER
REG. NO 15778
JUSTIN DAVID HEIM
SOUTH DAKOTA
1/13/2025

TEMPORARY STABILIZATION

INSTALL HIGH-FLOW SILT FENCE AT THE FOLLOWING LOCATIONS:
48+83 R - AT PIPE INLET - 5 FT
50+39 R - AT PIPE INLET - 5 FT

INSTALL 12" DIAMETER EROSION CONTROL WATTLES AT THE FOLLOWING LOCATIONS:
47+32 R - PERPENDICULAR TO DITCH - 40 FT
48+58 R - PERPENDICULAR TO DITCH - 40 FT



N
0 20 40
SCALE IN FEET

FINAL STABILIZATION

SEED ALL DISTURBED AREAS WITH SDDOT TYPE D SEED MIX - 707 LB / 2.1 ACRES (ALL SHEETS)

INSTALL TYPE 3 EROSION CONTROL BLANKET IN ALL DISTURBED AREAS - 10,192 SQYD (ALL SHEETS)

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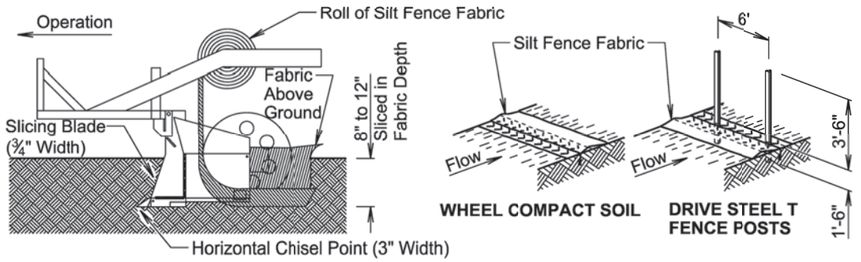
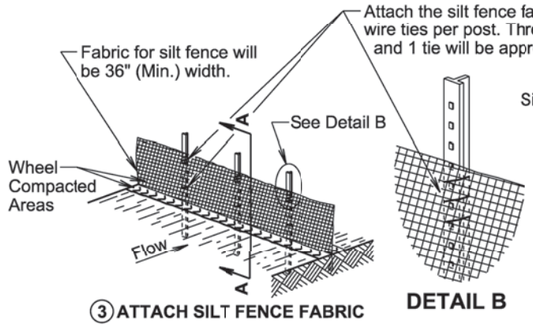
SOUTH DAKOTA
1/13/2025

MACHINE SLICED HIGH FLOW SILT FENCE INSTALLATION



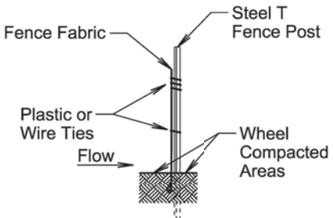
① INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.

② WHEEL COMPACT SOIL ABOVE SLICED IN PORTION OF FABRIC AND THEN DRIVE STEEL T FENCE POSTS.

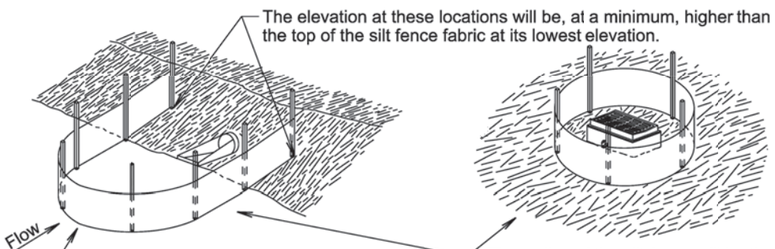


③ ATTACH SILT FENCE FABRIC

DETAIL B



SECTION A-A



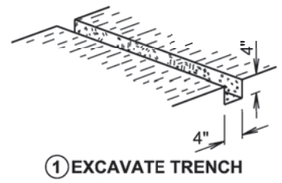
GENERAL NOTE:

If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags butted end to end will be provided on top of the extra length of silt fence fabric to prevent underflow.

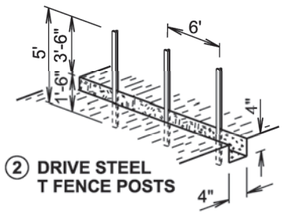
February 14, 2020

Published Date: 2024	SDDOT	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
			Sheet 2 of 2

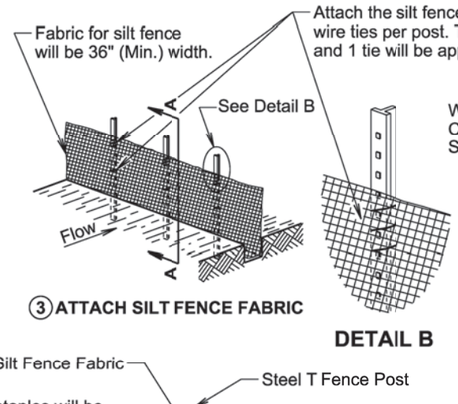
MANUAL HIGH FLOW SILT FENCE INSTALLATION



① EXCAVATE TRENCH

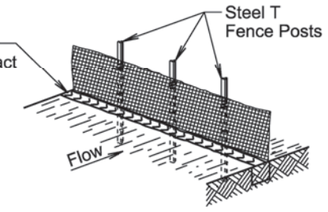


② DRIVE STEEL T FENCE POSTS

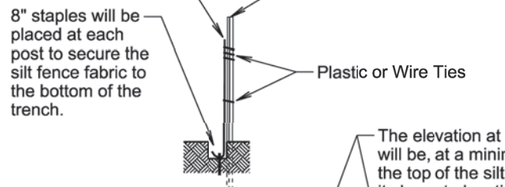


③ ATTACH SILT FENCE FABRIC

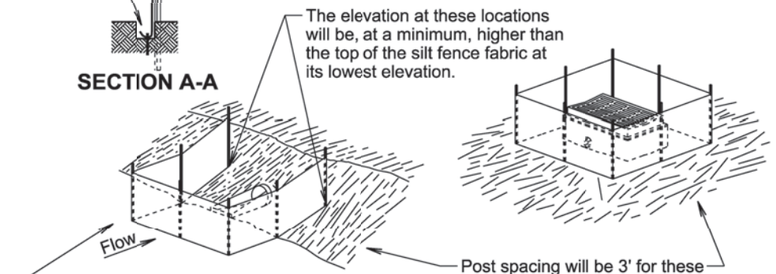
DETAIL B



④ BACKFILL TRENCH AND WHEEL COMPACT SOIL



SECTION A-A



February 14, 2020

Published Date: 2024	SDDOT	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
			Sheet 1 of 2

REGISTERED PROFESSIONAL ENGINEER
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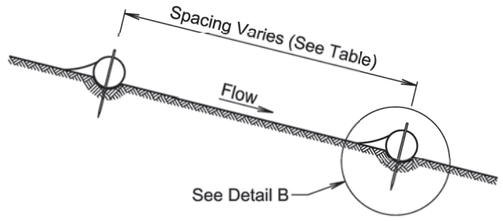
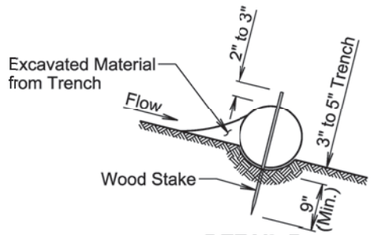
1/13/2025

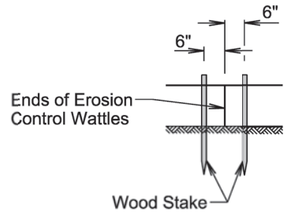


ELEVATION VIEW
(Cut or Fill Slope Installation)

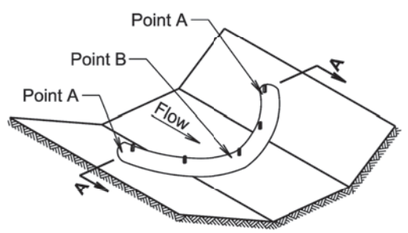
CUT OR FILL SLOPE INSTALLATION	
Slope	Spacing (Ft.)
1:1	10
2:1	20
3:1	30
4:1	40



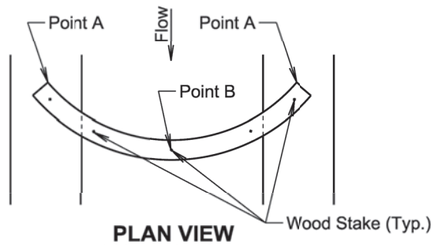
DETAIL B
(Typical of All Installations)



DETAIL C
(See General Notes)

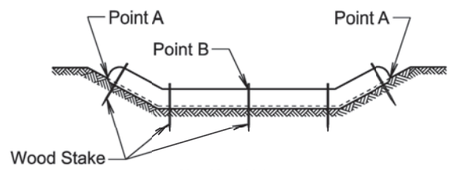


ISOMETRIC VIEW
(Ditch Installation)



PLAN VIEW
(Ditch Installation)

DITCH INSTALLATION	
Grade	Spacing (Ft.)
2%	150
3%	100
4%	75
5%	50



SECTION A-A

February 14, 2020

Published Date: 2024	SDDOT	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 1 of 2

GENERAL NOTES:

At cut or fill slope installations, wattles will 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 will 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 will 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 will be placed 6" from the ends of the wattles and the spacing of the stakes along the wattles will be 3' to 4'.

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

The Contractor and Engineer will inspect the erosion control wattles in accordance with the storm water permit. The Contractor will remove, dispose, or reshape the accumulated sediment when necessary as determined by the Engineer.

Sediment removal, disposal, or necessary shaping will be as directed by the Engineer. All costs for removing accumulated sediment, disposal of sediment, and necessary shaping will 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 will be incidental to the contract unit price per foot for the corresponding erosion control wattle contract item.

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

February 14, 2020

Published Date: 2024	SDDOT	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 2 of 2

REGISTERED PROFESSIONAL ENGINEER
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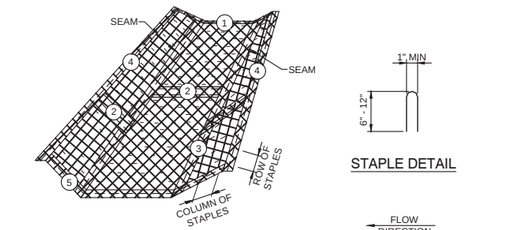
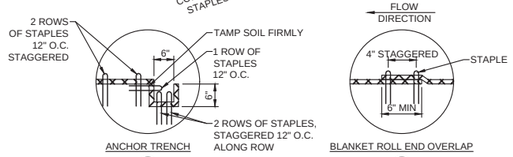
SOUTH DAKOTA
1/13/2025

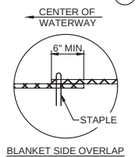


STAPLE DETAIL

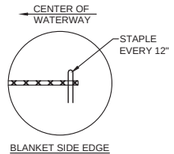


ANCHOR TRENCH
1

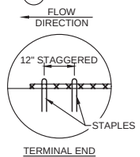
BLANKET ROLL END OVERLAP
2



BLANKET SIDE OVERLAP
3



BLANKET SIDE EDGE
4



TERMINAL END
5

KEY NOTES:

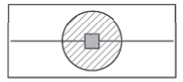
1. BURY UPSTREAM END OF MAT IN A TRENCH 6" WIDE BY 6" DEEP AND STAPLED IN STAGGERED ROWS ACROSS THE WIDTH.
2. FOR JOINING ENDS OF ROLLS, OVERLAP END OF UP SLOPE MAT A MINIMUM OF 6" OVER DOWN SLOPE MAT (SHINGLE STYLE). USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART.
3. MATS ON SIDE SLOPES SHALL OVERLAP A MINIMUM OF 6" OVER THE MAT BELOW (SHINGLE STYLE). STAPLE OVERLAP AT 12" INTERVALS.
4. THE OUTER EDGE ALONG SIDES OF THE MAT SHALL BE STAPLED EVERY 12".
5. DOWNSTREAM (TERMINAL) END OF BLANKET SHALL BE STAPLED WITH A DOUBLE ROW OF STAGGERED STAPLES 12" APART.

NOTES:

1. INSTALL EROSION CONTROL BLANKET (ECB) OVER WATERWAYS AS SHOWN IN THE STORM WATER POLLUTION PREVENTION PLAN.
2. THE ECB SHALL CONFORM TO SD DOT STANDARD SPECIFICATIONS SECTION 734.2.C.
3. PREPARE SOIL PRIOR TO INSTALLING ECB, INCLUDING SEEDING AND FERTILIZING.
4. THE ECB SHALL BE PLACED IN FIRM CONTACT WITH THE SOIL AND NOT BE ALLOWED TO BRIDGE OVER SURFACE IRREGULARITIES. THE MAT SHALL NOT BE STRETCHED.
5. START LAYING THE MATS BY ROLLING CENTER MAT IN THE DIRECTION OF FLOW, CENTERED ON THE CENTERLINE OF WATERWAY. THERE SHALL NOT BE AN OVERLAP OF MATS AT THE CENTER OF THE WATERWAY.
6. THE ECB SHALL BE ANCHORED, OVERLAPPED, AND STAPLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS. IF NO MANUFACTURER'S INSTRUCTIONS ARE AVAILABLE, INSTALL THE MAT PER DETAIL.
7. STAPLES SHALL BE "U" SHAPED, 0.12" DIAMETER WIRE OR GREATER (#11 GAUGE). (SEE STAPLE DETAIL FOR DIMENSIONS)
8. STAPLES ARE TO BE PLACED ALTERNATELY IN COLUMNS (IN THE DIRECTION OF THE WATERWAY) 2' APART AND IN ROWS (ACROSS THE WATERWAY) 3' APART THROUGHOUT THE AREA COVERED BY THE ECB.

EROSION CONTROL BLANKET INSTALLATION

NTS



Inlet Protection

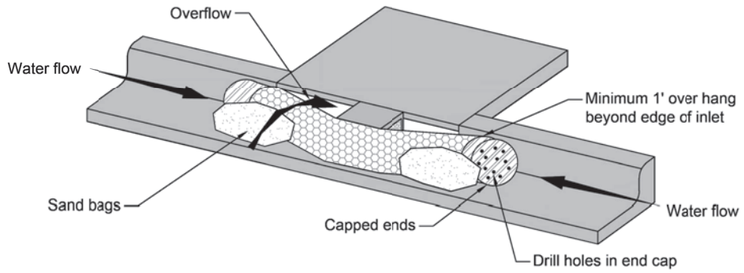
IP

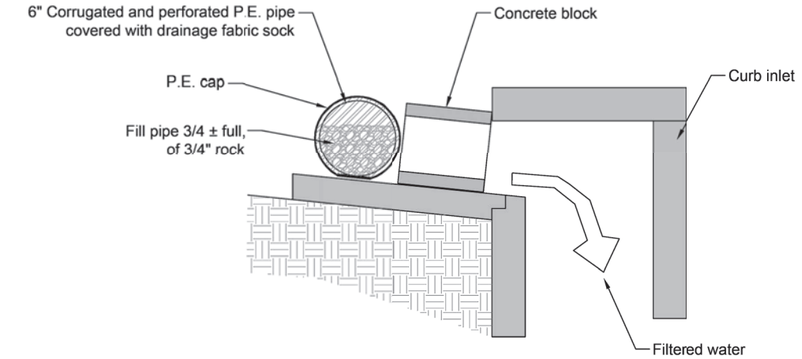
Definition:

A sediment filter or an excavated impounding area around a storm drain drop inlet or curb inlet. To be used at sump conditions.

Purposes:

To reduce sediment from entering storm drainage systems prior to permanent stabilization of disturbed areas.





Specific Application:

This method of inlet protection is applicable at curb inlets where ponding in front of the structure is not likely to cause inconvenience or damage to adjacent structures and unprotected areas. Clean out as necessary to prevent blockage of runoff conveyance.

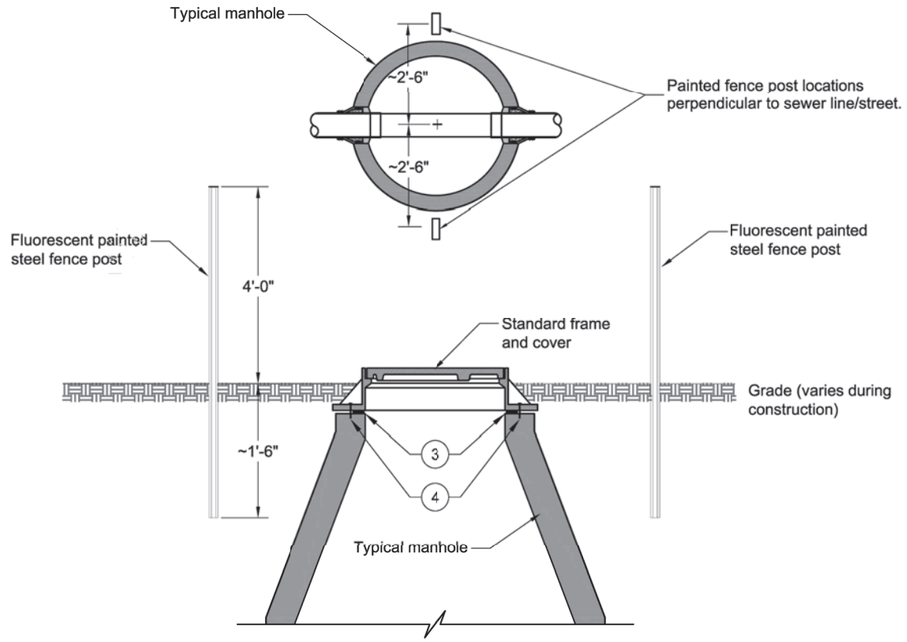
Revised: November 2008

CITY OF SIOUX FALLS PUBLIC WORKS Providing a Better Quality of Life for You!	Corrugated Pipe and Fabric Inlet Protection - Overflow	Specification Reference No. 734	Plate Number 734.16

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 6353(00)	D18	D18

Plotting Date: 1/7/2025

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15778
JUSTIN DAVID HEIM
SOUTH DAKOTA
1/13/2025



Notes:

1. The manhole frame and cover shall be installed immediately after surfacing removals and/or upon installation of the manhole. At no time shall a manhole be left overnight or when workers are not present without a Temporary Manhole Construction Frame and Cover.
2. A water tight seal shall be a continuous gasket of butyl rope or butyl caulk (3/16" to 1/4" thickness). The butyl rubber material shall be placed between the anchor bolts and the inside edge of the manhole cone.
3. Bolt frame to manhole cone using 4 stainless steel or galvanized "redhead" expansion bolts size 1/4" X 2 1/2" min. and 1 1/2" min. washers. Cut bolts flush to cone after removing casting for asphalt paving operations.
4. Manhole access shall be exposed and accessible at all times.
5. The temporary sanitary sewer bolt down manhole frame and cover shall remain in place until immediately before asphalt paving operations and adjustment of the frame and cover for the asscciated paving operation.

Revised: January 2021

CITY OF SIOUX FALLS PUBLIC WORKS Providing a Better Quality of Life for You!	**Temporary Manhole Construction Frame and Cover**	Specification Reference No. 950	Plate Number 950.22