

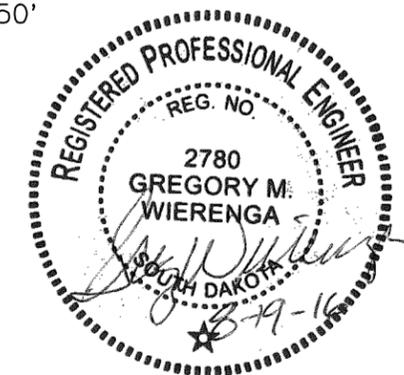
# SECTION D EROSION AND SEDIMENT CONTROL PLANS



PROJECT LOCATION MAP

INDEX OF SHEETS

SHEET NUMBER	DESCRIPTION
D1	TITLE SHEET
D2-D3	ESTIMATE OF QUANTITIES AND GENERAL NOTES
D4-D7	SWPPP NARRATIVE
D8-D9	STANDARD AND PROJECT DETAILS



August 17, 2016 12:50:33 p.m. Drawing: ILLSHEET.TITLE (JOB) (P:\PROJECTS & PROPOSALS\11119.00 MT. RUSHMORE RD. UTILITIES RECONSTRUCTION\DRAWINGS\SHEETS\PHASE 2 - FLORMANN TO SAINT JAMES)

MOUNT RUSHMORE ROAD  
UTILITY RECONSTRUCTION

**SECTION D ESTIMATE OF QUANTITIES**

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
100E0100	Clearing	Lump Sum	LS
110E1690	Remove Sediment	20	CuYd
110E1693	Remove Erosion Control Wattle	600	Ft
110E1695	Remove Sediment Filter Bag	600	Ft
230E0020	Contractor Furnished Topsoil	20	CuYd
731E0100	Fertilizing	3	Lb
733E0100	Sodding	100	SqYd
734E0154	12" Diameter Erosion Control Wattle	600	Ft
734E0165	Remove and Reset Erosion Control Wattle	100	Ft
734E0180	Sediment Filter Bag	600	Ft
734E0185	Remove and Reset Sediment Filter Bag	100	Ft

**COORDINATION**

Work listed in these plans shall be coordinated with the erosion control for Mount Rushmore Road, US Highway 16 (Project NH 0016(84)67 PCN 049F) Section D. Work completed within Section D of Project NH 0016(84)67 shall be completed under separate contract with the Department of Transportation.

All work on this contract is proposed within the temporary easement limits for NH 0016(84)67 PCN 049F. The contractor shall note that various quantities for erosion control items (sediment filter bags, erosion control wattles) and surface restoration items (topsoil, fertilizer & sod) have been included in the estimate of quantities for this project without a formalized plan. The quantities have been included in the event that additional erosion control items will be needed for the water, sewer, and landscaping work contemplated for this project in addition to those quantities provided within project NH 0016(84)67 PCN 049F. When authorized by the Engineer and used, the erosion control devices will be field measured and paid for at the applicable unit prices. Additional quantities of erosion control measures may be needed upon construction to effectively control sediment. All additional quantities shall be authorized by the Engineer and shall be paid for at the contract unit price for the applicable items.

**EROSION CONTROL PLAN**

Erosion control items have been estimated to establish a number of erosion control devices for bidding purposes and to provide information to the Contractor to aid in the process of obtaining associated construction permits listed in the Storm Water Pollution Prevention Plan (SWPPP). The Contractor is responsible for the methods and means required for implementing any and all construction activities to be in compliance with the permits listed in the SWPPP. Additional quantities of erosion control measures may be needed upon construction to effectively control sediment. All additional quantities shall be authorized by the Engineer and shall be paid for at the contract unit price for the applicable item.

**INSTALLATION OF TEMPORARY EROSION CONTROL MEASURES**

The Contractor shall not begin the removal of surfacing or topsoil within any applicable work area until all applicable temporary erosion control measures are placed and he/she is confident that work can continue uninterrupted until completion. Temporary erosion control measures shall be installed as necessary as construction progresses.

**CLEARING & GRUBBING**

Before clearing activities begin, the Contractor shall contact the Engineer to determine the limits of clearing for the project. If items that are supposed to remain within the limits of work are damaged or destroyed by the Contractor, the Contractor shall replace them with the same size and type at the Contractor's expense.

**CONTRACTOR FURNISHED TOPSOIL**

Topsoil for water and sewer utility reconstruction is not anticipated. However, 20 CuYds of Contractor Furnished Topsoil has been included in the event that topsoil is needed to restore turf areas disturbed past the construction limits proposed for project NH 0016(84)67 PCN 049F. Topsoil will be measured by the truck haul method and the quantity of each truck will be agreed upon by the Engineer and the Contractor prior to hauling operations.

**PERIMETER PROTECTION**

Quantities have been included in the estimate of quantities for perimeter protection and shall be installed as directed by the Engineer, to retain sediment from being transported off the project site. Perimeter protection shall be constructed with erosion control wattles and sediment filter bags. Perimeter protection shall be inspected in accordance with the SWPPP and/or erosion sediment control permit.

Payment for Perimeter Protection shall be at the contract unit price per foot for various items used for perimeter protection such as 12" Diameter Erosion Control Wattle and Sediment Filter Bag.

**FERTILIZING**

A commercial fertilizer with a minimum guaranteed analysis of 11-52-0 or an approved alternate fertilizer shall be applied to areas designated for sodding immediately before the sod is placed and incorporated into the soil to a depth of 2". The application rate of fertilizer shall be 3 pounds per 1000 square feet.

**SODDING**

Sod shall be placed behind curb and gutter sections in residential areas at locations determined by the Engineer during construction. Sod shall be used to restore disturbed grass areas that are outside of the SDDOT construction work limits but necessary for the connection of water and sewer services.

A quantity of 100 SY of sodding has been included in the bid quantities for restoration of grassed areas that are outside of the SDDOT construction limits.



**12" DIAMETER EROSION CONTROL WATTLES**

Erosion control wattles can be used for perimeter control, inlet protection, check dams, slope protection, etc. and shall be installed at locations determined by the Engineer during construction. These quantities will only be used when the sediment controls provided within project NH 0016(84)67 PCN 049F are not sufficient or cannot be coordinated with the proposed work for this project. Refer to City of Rapid City Detail 150-3 and the manufacturers installation instructions for details.

The Contractor shall provide certification that the erosion control wattles do not contain noxious weed seeds. Compost filter socks can be used as a substitute for erosion control wattles and the Contractor shall provide certification that the compost used is free from noxious weed seeds. If compost filter socks are used in lieu of wattles, payment for filter sock will be under the contract item for "12" Diameter Erosion Control Wattle".

The Contractor shall remove sediment trapped by the wattle when the surface of the sediment reaches one-half the height of the exposed wattle. Damaged areas should be repaired immediately until the vegetation is established and growing through the material.

The wattles shall be the diameter shown on the drawings and selected from the manufacturers listed below; or approved equal:

Manufacturer	Product Name
American Excelsior Company Arlington, TX Phone: 1-800-777-7645 www.amerexcel.com	Curlex Sediment Log and AEC Premier Straw Wattle
Flaxtech LLC Rocklake, ND Phone: 701-266-5417 www.flaxtech.net	Biolog Flax Straw Wattle
Dioten Engineering, Inc. Rapid City, SD www.dioten.com	Compost Filter Sock
Aspen Ridge Rapid City, SD Phone 605-415-0695 www.siltsock.com	Silt Sock

The Contractor shall install erosion control wattles according to the manufacturer's installation instructions.

Payment for all materials, labor and equipment necessary to install, maintain, and repair the wattles shall be incidental to the contract unit price per foot for 12" Diameter Erosion Control Wattle.

**TABLE OF EROSION CONTROL WATTLE**

Station	L/R	Diameter (Inch)	Quantity (Ft)
Mt Rushmore Road	L/R	12	250
St Anne Street	L/R	12	50
St. Francis Street	L/R	12	50
St. Patrick Street	L/R	12	50
St. Andrew Street	L/R	12	50
St. Charles Street	L/R	12	50
Franklin Street	L/R	12	50
St. Cloud Street	L/R	12	50
Total:			600

**REMOVE AND RESET EROSION CONTROL WATTLE**

Erosion control wattles may be removed and reset as necessary as work progresses. The erosion control wattles removed and reset shall be in useable condition. All costs for removing and resetting the erosion control wattles shall be incidental to the contract unit price per foot for Remove and Reset Erosion Control Wattle.

**REMOVE EROSION CONTROL WATTLE**

Erosion control wattle shall be removed when vegetation is established. Some or all of the Erosion control wattle may be left on the project until vegetation is established. Quantities for all erosion control wattles left in place will be deducted from the quantity for the bid item Remove Erosion Control Wattle.

**SEDIMENT FILTER BAG (GRAVEL FILTER SOCK)**

Refer to the standard details for installation guidance.

Sediment filter bags (gravel filter socks) have been included in the estimate of quantities for water and sewer work on the intersecting streets with locations to be determined by the Engineer in the field. These quantities will only be used when the sediment controls provided within project NH 0016(79)67 are not sufficient or cannot be coordinated with the proposed work for this project.

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

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

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

All costs for removing and disposing of sediment collected by the sediment control device shall be incidental to the contract unit price per cubic yard for Remove Sediment.

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.

The Contractor and Engineer shall inspect and maintain the sediment control device once every week and within 24 hours after every rainfall event greater than 1/2".

**TABLE OF SEDIMENT FILTER BAG (GRAVEL FILTER SOCK)**

Station	L/R	Sediment Filter Bag Quantity (Ft)
Mt Rushmore Road	L/R	250
St Anne Street	L/R	50
St. Francis Street	L/R	50
St. Patrick Street	L/R	50
St. Andrew Street	L/R	50
St. Charles Street	L/R	50
Franklin Street	L/R	50
St. Cloud Street	L/R	50
Total:		600

**REMOVE AND RESET SEDIMENT FILTER BAG**

Sediment filter bags may be removed and reset as necessary as work progresses. The sediment filter bags removed and reset shall be in useable condition. All costs for removing and resetting the sediment filter bags shall be incidental to the contract unit price per foot for Remove and Reset Sediment Filter Bag.

**REMOVE SEDIMENT FILTER BAG**

Sediment control wattle shall be removed when vegetation is established. Some or all of the sediment control wattle may be left on the project until vegetation is established. Quantities for all sediment control wattles left in place will be deducted from the quantity for the bid item Remove Sediment Filter Bag.



**STORM WATER POLLUTION PREVENTION PLAN AND PERMITS**

The Prime Contractor is the responsible party for preparing a Notice of Intent (NOI) for filing for coverage under the South Dakota Department of Environment and Natural Resources (SDDENR) to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities

The City of Rapid City is the project owner. The NOI and the Contractor Certification shall be submitted to the project owner. The project owner will return to the Contractor once signatures have been obtained. The Contractor shall submit the NOI to the SDDENR.

The Prime Contractor is the responsible party for preparing the Notice of Termination (NOT) for the South Dakota Department of Environment and Natural Resources once "final stabilization" has been obtained on the project. The (NOT) shall be submitted to the project owner. The City will submit the (NOT) to the SDDENR. Please refer to the SDDENR General Permit for definitions of final stabilization.

Per city permit requirements, the Contractor shall at all times have a copy of the SDDENR NOI permit letter, SWPPP with associated erosion and sediment control plan drawings, and inspection reports located within or adjacent to the project limits available for review. The Contractor shall ensure that the information is located within a weather tight, secure enclosure and clearly labeled.

The Prime Contractor is the responsible party for obtaining a City of Rapid City Erosion and Sediment Control Permit from the City of Rapid City per City Ordinance.

The Contractor shall provide copies of all permits to the City and Project Engineer at a minimum of 5 working days prior to beginning construction operations.

This storm water pollution prevention plan and associated erosion control quantities are provided to establish a number of erosion control devices for bidding purposes and to provide information to the Contractor to aid in the process of obtaining associated construction permits listed above. The Contractor is responsible for the methods and means required for implementing any and all construction activities to be in compliance with the above referenced permits.

The Contractor is advised that several agencies have the authority to issue a stop work order if the pollution and sediment prevention control is not implemented or is not effective in the prevention of environmental damage from construction activities. No compensation will be forthcoming for contract time lost due a stop work order.

**CONSTRUCTION DEWATERING PERMIT**

If ground water is encountered, the Contractor is required to obtain a general permit to discharge under the South Dakota Surface Water Discharge System for Temporary Discharge Activities in South Dakota. SDDENR Permit No. SDG 070000. The Contractor shall coordinate completion of the application with the Owner and Owner's representative and to follow the requirements set forth by the permit. Contact the DENR Surface Water Program at 605-773-3351 to apply for a permit. Contractor shall complete applicable certification forms and route for signatures as needed.

Even though groundwater was not found during geotechnical investigations, it is recommended that the Contractor obtain the permit prior to construction operations.

The Contractor is responsible for performing self-monitoring activities including sampling, testing and reporting as may be determined to be required under the authorization to discharge. There will be no separate payment for obtaining the necessary authorization to discharge, and for all compliance activities and obligations by the Contractor. All costs for construction/trench dewatering is incidental to the utility being installed per section 11.5.B of the standard specifications.

**SIGNAGE**

Per permit requirements, the Contractor shall at all times have a copy of the SDDENR NOI permit letter, City of Rapid City Erosion and Sediment Control Permit, Storm Water Pollution Prevention Plan with associated Erosion and Sediment Control Plan drawings, and inspection reports located within or adjacent to the project limits available for review. The Contractor shall ensure that this information is located within a weather tight, secure enclosure clearly labeled SWPPP. The Contractor shall also post a sign with appropriate contact information. The sign shall be clearly legible, securely anchored, and appropriately weatherproofed to assure its integrity throughout construction. The contents of the sign shall be as follows:

TO REPORT AN EROSION, SEDIMENT, OR SPILL PROBLEM AT THIS CONSTRUCTION SITE TO THE RESPONSIBLE CONTRACTOR PLEASE CALL: **(Contractor name and phone number)**

TO REGISTER A COMPLAINT ABOUT THIS CONSTRUCTION SITE TO THE CITY OF RAPID CITY, PLEASE CALL 605-394-4154.

**PROJECT DESCRIPTION**

This project includes the construction of 6", 8", 12" and 16" PVC water mains, 8" PVC sewer mains and landscaping improvements within the limits of the SDDOT proposed roadway project NH 0016(84)67 PCN 049F. This work is being coordinated with the Mount Rushmore Road reconstruction project. Please refer to the roadway plans for illustrations of proposed work areas and limits of construction.

**Project Limits:** See Title Sheet and project drawings

**Site Map(s):** See Title Sheet and project drawings

**Existing Site Conditions:**

Mt Rushmore Road consists of a 5 lane urban arterial roadway with commercial development and residential development on each side of the roadway.



**STORM WATER POLLUTION PREVENTION PLAN CHECKLIST**

**Major Soil Disturbing Activities**

- Clearing and grubbing
- Excavation
- Grading and shaping
- Filling
- Trenching
- Other (describe): Water & Sewer Main Installation.

**Total Project Area from Flormann Street to St. James Street:** 9.1 Acres +/- based on SDDOT plans NH 0016(84)67 PCN X02P

**Existing Vegetative Cover:** 10%+/- in Mount Rushmore Road Corridor. Due to the urban nature and mixed commercial development a significant portion of the cover is pavement.

**Soil Properties:** Please refer to the associated Geotechnical Engineering Report for this project titled "Mt. Rushmore Road Utility Reconstruction – Phase II, St. Patrick Street to Kansas City Street, Rapid City, South Dakota, March 12, 2013, Terracon Project No. B4135003, City of Rapid City Project No. 12-2051/CIP No. 50867. AASHTO Soil Classifications CH & CL.

**Name of Receiving Water Body/Bodies:** Drainage along the corridor is contained within previously studied west region of the Downtown Area Drainage Basin Design Plan. Drainage outlets into a storm sewer located within Mount Rushmore Road and Saint Francis Street and continues north and east within said storm sewer to Rapid Creek at Saint Patrick – Meade Hawthorne Drainage Basin.

**ORDER OF CONSTRUCTION ACTIVITIES**

Stabilization measures shall be initiated as soon as possible, but in no case later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Initiation of final or temporary stabilization may exceed the 14-day limit if earth disturbing activities will be resumed within 21 days.

- Special sequencing requirements (see construction documents/plans for construction sequencing).
- Install perimeter protection where runoff sheets from the site.
- Install inlet protections and sediment filter bags.
- Clearing and grubbing.
- Remove and stockpile topsoil.
- Stabilize/protect disturbed areas as necessary.
- Complete water and sewer main installation and backfill trench as soon as practical.
- Replace topsoil and or surfacing as soon as practical.
- Complete permanent stabilization operations including pavement, fertilizing, and sod on disturbed areas as soon as practical
- Remove temporary Erosion and Sediment Control as applicable. It may be necessary to leave the temporary structural items in-place until sufficient vegetation is established per permit.

**EROSION AND SEDIMENT CONTROLS**

**Stabilization Practices**

- Temporary Seeding (Cover Crop Seeding)
- Permanent Seeding
- Sodding
- Planting (Woody Vegetation for Soil Stabilization)
- Mulching (Grass Hay or Straw)
- Hydraulic Mulch (Wood Fiber Mulch)
- Soil Stabilizer
- Bonded Fiber Matrix
- Erosion Control Blankets or Mats
- Vegetation Buffer Strips
- Roughened Surface (e.g. tracking)
- Dust Control
- Other:

**Structural Temporary Erosion and Sediment Controls**

- Silt Fence
- Floating Silt Curtain
- Straw Bale Check
- Temporary Berm
- Temporary Slope Drain
- Straw Wattles or Rolls
- Gravel Filter Socks
- Turf Reinforcement Mat
- Rip Rap
- Gabions
- Rock Check Dams
- Sediment Traps/Basins
- Inlet Protection
- Outlet Protection
- Surface Inlet Protection (Area Drain)
- Curb Inlet Protection
- Stabilized Construction Entrances
- Entrance/Exit Equipment Tire Wash
- Interceptor Ditch
- Concrete Washout Area
- Temporary Diversion Channel
- Work Platform
- Temporary Water Barrier
- Temporary Water Crossing
- Other: Sediment Filter Bags

**Wetland Avoidance**

This project will not impinge on regulated wetlands.

**Storm Water Management**

Storm water management will be handled by temporary controls outlined in "EROSION AND SEDIMENT CONTROLS" above, and any permanent controls needed to meet permanent storm water management needs in the post construction period. Temporary and permanent controls will be shown on the plans.

**Other Storm Water Controls**

▪ **Waste Disposal**

All liquid waste materials will be collected and stored in sealed metal containers approved by the project engineer. 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 in the field office. The general contractor's representative responsible for the conduct of work on the site will be responsible for seeing 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 individual designated as the contractor's on-site representative 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 in a timely manner by a licensed waste management contractor or as required by any local regulations.



**Maintenance and Inspection**

**Maintenance and Inspection Practices**

- Inspections will be conducted at least one time per week and after a storm event of 0.50 inches or greater.
- All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report.
- Compost Filter Socks will be inspected for depth of sediment and for tears in order to ensure the proper operation. Sediment buildup will be removed from the compost filter socks when it reaches ½ of the height of the sock.
- 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 in accordance with Section 3.0 of the General Permit for Storm Water Discharges Associated with Construction Activities. Copies of the inspection reports shall be distributed to the Engineer and the City of Rapid City as well as filed with the SWPPP documents on site.
- The Contractor is responsible for inspections and reports. Maintenance and repair activities are the responsibility of the Contractor.

**Non-Storm Water Discharges**

The following non-storm water discharges are anticipated during the course of this project.

- 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.

**Materials Inventory**

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 headings "EROSION AND SEDIMENT CONTROLS" and "SPILL PREVENTION"

- Concrete and Portland Cement
- Detergents
- Paints
- Metals
- Bituminous Materials
- Petroleum Based Products
- Cleaning Solvents
- Wood
- Cure
- Texture
- Chemical Fertilizers
- Other

**Spill Prevention**

**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 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.
- Vegetation areas not essential to the construction project will be preserved and maintained as noted on the plans.

**Hazardous Materials**

- Products will be kept in original containers unless the container is not resealable.
- 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 storm water system or storm water treatment system.
- Potential pH-modifying materials such as: bulk cement, cement kiln dust, fly ash, new concrete washings, concrete pumping, and mixer washout waters will be collected on site and managed to prevent contamination of storm water runoff.

**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 plans. Once applied, fertilizers will be worked into the soil to limit the exposure to storm water. 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 areas on the site. These areas must be self contained and not connected to any storm water outlet of the site. Upon completion of construction washout areas will be properly stabilized.

**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 clean-up 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 clean up 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. The contractor is responsible for ensuring that the site superintendent has had appropriate training for hazardous materials handling, spill management, and cleanup.



**Spill Response**

The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize migration into storm water runoff and conveyance systems. If the release has impacted on-site storm water, it is critical to contain the released materials on-site and prevent their release into receiving waters. If a spill of pollutants threatens storm water 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 SD DENR.
- Personnel with primary responsibility for spill response and clean up 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.

**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 DENR immediately **if any one of the following** conditions exists:

- The discharge threatens or is in a position to threaten the waters of the state (surface water or ground water).
- The discharge causes an immediate danger to human health or safety.
- The discharge exceeds 25 gallons.
- The discharge causes a sheen on surface water.
- The discharge of any substance that exceeds the ground water quality standards of ARSD (Administrative Rules of South Dakota) chapter 74:54:01.
- The discharge of any substance that exceeds the surface water quality standards of ARSD chapter 74:54:01.
- The discharge of any substance that harms or threatens to harm wildlife or aquatic life.
- The discharge of crude oil in field activities under SDCL (South Dakota Codified Laws) chapter 45-9 is greater than 1 barrel (42 gallons).

To report a release or spill, call DENR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central time). To report the release after hours, on weekends or holidays, call State Radio Communications at 605-773-3231. Reporting the release to DENR does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, the responsible person must also contact local authorities to determine the local reporting requirements for releases. DENR recommends that spills also be reported to the National Response Center at (800) 424-8802.

**CONSTRUCTION CHANGES**

When changes are made to the construction project that will require alterations in the temporary erosion controls of the site, the storm water pollution prevention plan (SWPPP) will be amended to provide appropriate protection to disturbed areas, all storm water structures, and adjacent waters. The Contractor will modify the SWPPP plan and drawings to reflect the needed changes. All changes shall be initialed and dated by the responsible party. Copies of forms and the SWPPP shall be retained in a designated place for review over the course of the project. Copies of the changes shall also be provided to the Engineer and the City.

**CERTIFICATIONS**

"This erosion control plan appears to fulfill the technical criteria for erosion and sediment control requirements of the City of Rapid City and the South Dakota Department of Environment and Natural Resources. I understand that additional erosion control measures may be needed if unforeseen erosion problems occur or if the submitted plan does not function as intended."

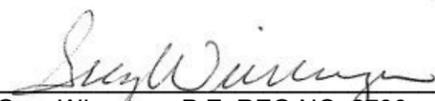
\_\_\_\_\_  
 Dale Tech, Public Works Director, City of Rapid City (Date)

Project Owner/Engineer  
 City of Rapid City  
 300 Sixth Street  
 Rapid City, SD 57701  
 Owner Representative: Klare Schroeder, P.E.  
 Email Address: [Klare.schroeder@rcgov.org](mailto:Klare.schroeder@rcgov.org)  
 Phone Number: (605) 394-4154

Prime Contractor  
 Company Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City, State, Zip: \_\_\_\_\_  
 Project Manager: \_\_\_\_\_  
 Email Address: \_\_\_\_\_  
 Phone Number: \_\_\_\_\_

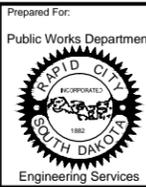
Engineer Certification

"I certify that this document and associated attachments were prepared under my direction or supervision and that I am a registered professional engineer in the State of South Dakota."

  
 \_\_\_\_\_  
 Greg Wierenga, P.E. REG NO. 2780 (Date) 8/19/16

Advanced Engineering and Environmental Services, Inc.  
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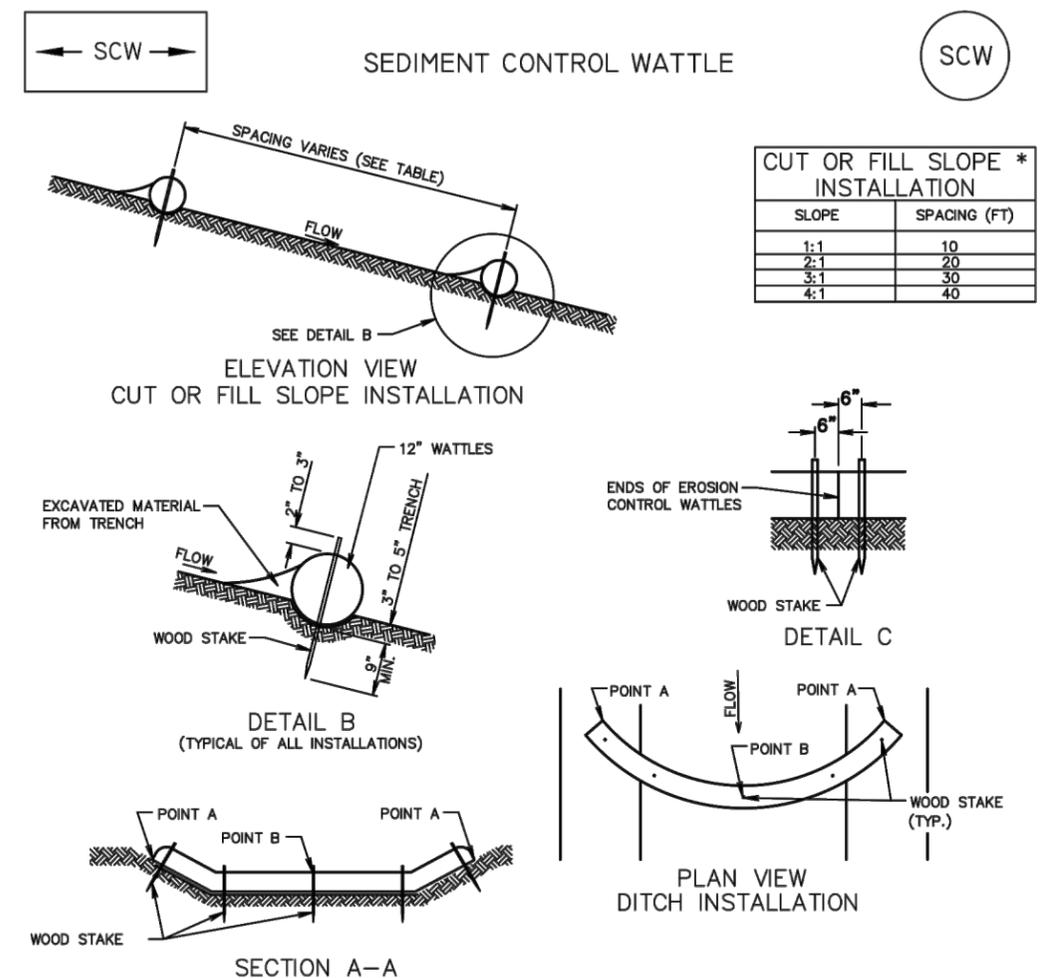


Scale:	AS NOTED	
Designed By:	GW	Drawn By: MS
Design Date:	02.2016 - 04.2016	Print Date: 08.19.2016
Internal Job No:	11119.04	
Surveyed By:	SDDOT	Survey Date: 2012
Project Number:	12-2051, CIP NO.50867, PCN X02P	

FOR BIDDING PURPOSES ONLY

MOUNT RUSHMORE ROAD  
UTILITY RECONSTRUCTION

Sheet Title:	STANDARD DETAILS
Sheet No.:	D8 of D9



**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, 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

GRADE	SPACING (FT)
2%	150
3%	100
4%	75
5%	50

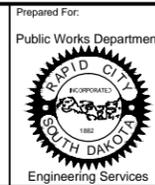


No. 15, 2016, 4-26-2016, 11119.04, MT, RUSHMORE RD, UTILITIES RECONSTRUCTION, DRAWINGS, SHEETS, PHASE 2 - FLOWMANN TO SAINT JAMES, DRAWING DETAILS, SCHILLER, (P:\PROJECTS & PROPOSALS\11119.04, MT, RUSHMORE RD, UTILITIES RECONSTRUCTION, DRAWINGS, SHEETS, PHASE 2 - FLOWMANN TO SAINT JAMES)

CITY OF RAPID CITY PUBLIC WORKS DEPARTMENT

SEDIMENT CONTROL WATTLE

DATE: 2-16-12  
SEC. - SHT.  
150-3

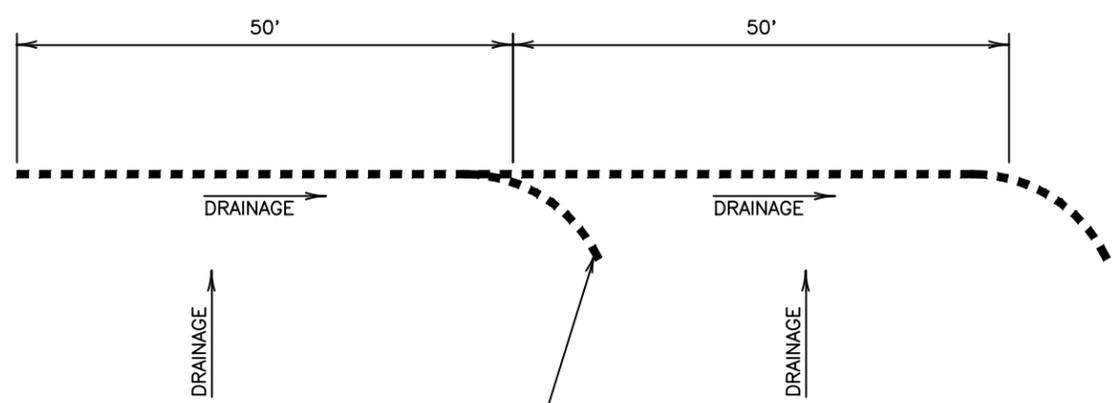


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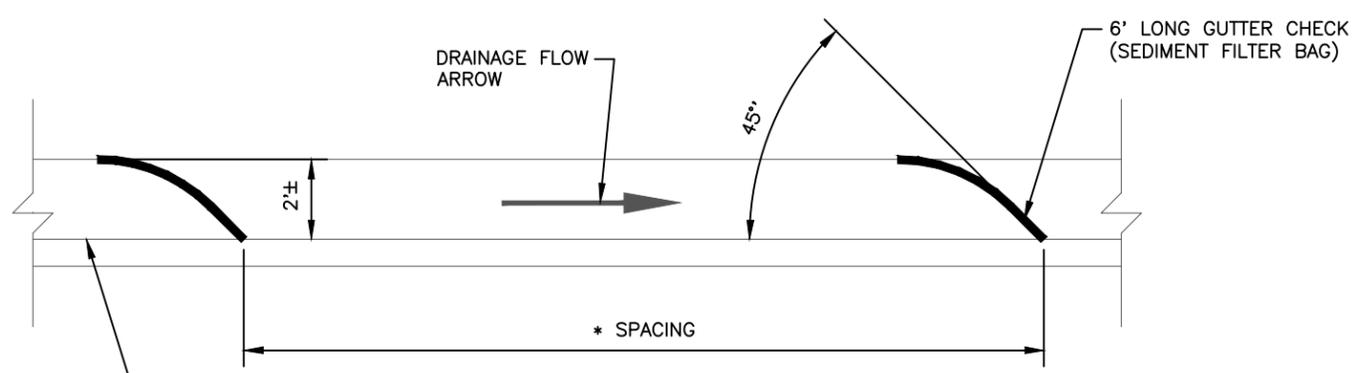
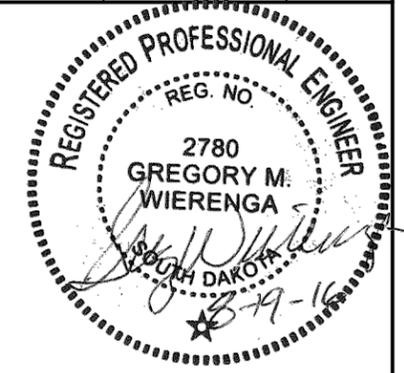
MOUNT RUSHMORE ROAD  
UTILITY RECONSTRUCTION

Sheet Title:	Sheet No:
STANDARD DETAILS	D9
	of
	D9



WRAP WATTLE UPGRADE A VERTICAL DISTANCE  
EQUAL TO THE DIAMETER OF THE WATTLE TO  
SPLIT & COMPARTMENTALIZE CONTRIBUTING AREAS

EROSION CONTROL WATTLE INSTALLATION  
NOT TO SCALE



CURB & GUTTER FACE  
OR EXCAVATION CUT  
EDGE FOR GUTTER  
PLACEMENT

PLAN  
NOT TO SCALE

LONGITUDINAL SLOPE	SPACING
1%	75'
2%	38'
3%	25'
4%	19'
5%	15'

NOTES:

1. FILTER SOCK SHALL BE FILLED WITH CLEAN OR WASHED AGGREGATE 2" MINUS OR SMALLER.
2. GRAVEL FILTER SOCK SHALL BE 9" IN DIAMETER AND SHALL BE THE "SNAKE BAG" FROM SACRAMENTO BAG MANUFACTURING COMPANY OR APPROVED EQUAL.

GUTTER CHECK, SEDIMENT FILTER BAG  
NOT TO SCALE

10/15/2016 4:46:29 PM  
 Drawing Details: DWG (SCHILLE) (P:\PROJECTS & PROPOSALS\11119.00 MT. RUSHMORE RD. UTILITIES RECONSTRUCTION\DRAWINGS\SHEETS\PHASE 2 - FLORIMANN TO SAINT JAMES)