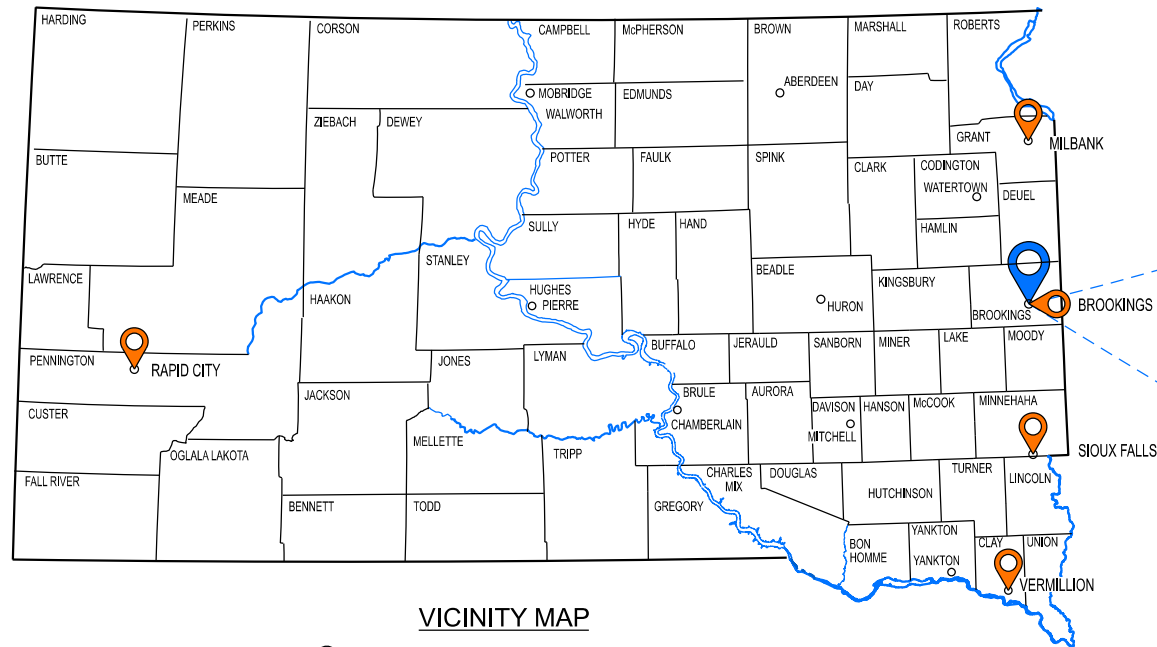


# PLANS FOR 2024 BROOKINGS TRAILS PROJECT

SEPTEMBER 2024

**CITY OF BROOKINGS**  
BROOKINGS COUNTY, SOUTH DAKOTA



**VICINITY MAP**

PROJECT LOCATION BANNER OFFICE LOCATIONS

**SHEET INDEX**

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**LOCATION MAP**



PRIME PROFESSIONAL IN RESPONSIBLE CHARGE

I, MATTHEW BRUA, HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME, OR UNDER MY DIRECT SUPERVISION AND THAT I AM DULY REGISTERED UNDER THE LAWS OF THE STATE OF SOUTH DAKOTA.

DIGITAL SIGNATURE AUTHENTICATION



JOB No. 24303.00

**ESTIMATE OF QUANTITIES**

**Bid Schedule 1 – Sexauer Park**

BID ITEM NUMBER	ITEM	QTY	UNIT
009E0010	Mobilization	1	Lump Sum
100E0100	Clearing	1	Lump Sum
120E0010	Unclassified Excavation	329	CuYd
120E0100	Unclassified Excavation, Digouts	20	CuYd
230E0010	Placing Topsoil	304	CuYd
450E0102	12" RCP Class 2, Furnish	18	Ft
450E0110	12" RCP, Install	18	Ft
450E2000	12" RCP Flared End, Furnish	2	Each
450E2001	12" RCP Flared End, Install	2	Each
651E0050	5" Concrete Sidewalk	7478	SqFt
651E7000	Type 1 Detectable Warnings	32	SqFt
734E0010	Erosion Control	1	Lump Sum
734E0154	12" Diameter Erosion Control Wattle	498	Ft
734E0604	High Flow Silt Fence	20	Ft
734E5010	Sweeping	4	Hour
900E1310	Concrete Washout Facility	1	Each
900E1320	Construction Entrance	1	Each

**Bid Schedule 2 – Pioneer Park**

BID ITEM NUMBER	ITEM	QTY	UNIT
009E0010	Mobilization	1	Lump Sum
100E0100	Clearing	1	Lump Sum
120E0010	Unclassified Excavation	40	CuYd
120E0100	Unclassified Excavation, Digouts	20	CuYd
230E0010	Placing Topsoil	13	CuYd
651E0050	5" Concrete Sidewalk	1092	SqFt
734E0010	Erosion Control	1	Lump Sum
734E0154	12" Diameter Erosion Control Wattle	53	Ft
734E5010	Sweeping	1	Hour
900E1310	Concrete Washout Facility	1	Each
900E1320	Construction Entrance	1	Each

**Bid Schedule 3 – Dakota Nature Park**

BID ITEM NUMBER	ITEM	QTY	UNIT
009E0010	Mobilization	1	Lump Sum
100E0100	Clearing	1	Lump Sum
120E0010	Unclassified Excavation	46	CuYd
120E0100	Unclassified Excavation, Digouts	20	CuYd
230E0010	Placing Topsoil	60	CuYd
634E0120	Traffic Control, Miscellaneous	1	Lump Sum
651E0050	5" Concrete Sidewalk	4029	SqFt
734E0010	Erosion Control	1	Lump Sum
734E0154	12" Diameter Erosion Control Wattle	659	Ft
734E5010	Sweeping	3	Hour
900E1310	Concrete Washout Facility	1	Each
900E1320	Construction Entrance	1	Each

**SPECIFICATIONS**

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications, and Conditions as included in the Project Manual.

If conflicting specifications are presented in the Construction Plans and the Standard Specifications, the notes or details in the Construction Plans shall take precedence over the Standard Specifications.

**SEQUENCE OF OPERATIONS**

1. Install sediment control.
2. Complete grading and subgrade preparation for sidewalk.
3. Install gravel cushion and 5" concrete sidewalk.
4. Complete erosion control/seeding.
5. Complete remaining project items.

Any changes to the Sequence of Operations require approval from the Engineer and the Owner.

**PROJECT CONTACTS**

**OWNER**  
City of Brookings  
Point of Contact: Joshua Bauman  
Phone Number: 605-691-4353

**ENGINEER**  
Banner Associates, Inc.  
Point of Contact: Matthew Brua  
Phone Number: 605-696-9213  
Engineer of Record: Matthew Brua  
Phone Number: 605-696-9213

**COMPLETION TIMELINES**

**For all bid schedules:**  
*Substantial Completion:* November 15<sup>th</sup>, 2024  
*Final Completion:* June 6<sup>th</sup>, 2025

Substantial Completion will include backfilling and shaping around newly constructed sidewalks.

**CONSTRUCTION LIMITS**

The construction limits shall be within the right-of-way. Material storage and vehicle and equipment traffic shall be limited to the construction limits. No construction vehicles or material storage will be allowed outside of right-of-way. All paved streets adjacent to the project are to be cleaned at the end of each working day.

Property lines shown on the plans are approximate and are based on the best available information from the Owner. No property survey has been completed for this project.

It shall be the responsibility of the Contractor to coordinate with the property owners relating to access to their property and any subsequent damages. Restoration of routes used for site access and construction may include, but is not limited to, repairing ruts or grass

areas that have been disturbed. This may include tilling and reseeding areas, as determined by the Engineer, at no additional cost to the private landowner or project Owner.

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

**GRADE STAKES, BENCHMARKS AND MONUMENTS**

All stakes, stones, and monuments now in place and marking lines and corners of boundaries which are likely to be affected by the work herein provided for shall be carefully preserved by the Contractor. In no case shall any excavation be made within five feet (5') of any such stake, stone or monument until they have been properly reset, witnessed, or otherwise cared for by the Engineer and permission is given to proceed with the work.

All lines, grade stakes, and benchmarks set by the Engineer in connection with the work herein provided for shall be carefully preserved by the Contractor and shall not be disturbed nor moved from the exact position and elevation as set by the Engineer. No excavated material shall be thrown over or against said stakes and, except where necessary to remove the stakes as the work progresses, all stakes shall be carefully preserved in the original position and elevation until the work has passed final inspection and been accepted.

Stakes, which must be removed as the work progresses shall be so removed only upon the order of the Engineer.

All stakes, stones, monuments, and benchmarks disturbed or removed through carelessness or without proper authority will be reset at the expense of the Contractor.

**CONSTRUCTION SCHEDULE**

The Contractor shall prepare a construction schedule for approval to the Engineer and Owner that will ensure the completion of the project within the time frame specified. This schedule must be provided to the Engineer for review a minimum of 3 days prior to the preconstruction meeting. The notice to proceed will not be issued until the schedule has been approved by the Owner.

The construction schedule shall be in bar or network diagram form and show the start and completion dates for significant items of work in their respective phases. Significant items of work include, but are not limited to, erosion control, clearing, concrete sidewalk work and seeding.

When applicable the schedule shall include submission dates for shop drawings, manufacturing and installation of materials, supplies, equipment, and testing for various parts of the work.

**PRECONSTRUCTION AND PROGRESS MEETINGS**

The Contractor shall conduct a preconstruction meeting with the subcontractors, the Engineer, the Owner, and utility companies.

The Contractor shall also conduct progress meetings with the subcontractors, the Engineer, and the Owner. These meetings shall be held as needed at a location on or near the project. The Contractor



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GENERAL NOTES	
BROOKINGS, SD	DESCRIPTION
REV.	DATE



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ENG / ARCH:	MJB
DESIGNER:	
TECHNICIAN:	
SCALE REDUCTION BAR	
SHEET No. : 2	

shall determine the time and location and they shall be approved by the Engineer. Landowners and the general public impacted by the project shall be allowed to attend the meetings. All costs to conduct the progress meetings shall be incidental to the project.

**CONSTRUCTION STAKING**

All construction staking required for the project shall be completed by the Engineer as requested by the Contractor. A minimum of 48 hrs notice is required.

Any re-staking due to carelessness of the Contractor shall be paid for by the Contractor and not the Owner.

**DRAINAGE**

Drainage is the Contractor's responsibility. Contractor shall be aware of existing drainage conditions and facilities and shall provide for drainage during all phases of construction. Damage caused by improper temporary drainage facilities shall be repaired at the Contractor's expense and to the satisfaction of the Engineer.

**SUBMITTALS**

The following documents shall be submitted by the Contractor:

- Construction schedule
- Concrete mix formula
- Concrete cure
- Concrete reinforcement
- Materials certifications
- Shop drawings
  - Gravel Cushion Gradation
  - Detectable Warning Certification
  - Seed Mixture

**UTILITIES**

The Contractor shall be aware that the existing utilities have not been surveyed prior to the design of this project and might require adjustment. The Contractor will contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It will be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

Anytime existing utilities impede the progress of work, the Contractor shall immediately notify the Engineer. The Contractor shall cooperate with and coordinate his efforts to work with the utility companies and their contractors. Each bidder shall be responsible, prior to bid letting, for determining the effects of utility work on the project work scope and schedule, and shall account for all effects in his bid. No consideration will be given to the Contractor after the bid letting on account of utility work done by others.

**CONCRETE SIDEWALK**

Sidewalk shall meet the requirements of Section 651 of the Standard Specifications except for a longitudinal joint along the sidewalk centerline will not be required.

Transverse joints will be sawed and sealed in accordance with Section 380.3 P. Transverse joints will be sealed with Hot Poured Elastic Joint Sealer.

Joints at bridges will be double thickness of ½" Preformed Expansion Joint Filler. Joints will be sealed with Hot Poured Elastic Joint Sealer.

**GENERAL MAINTENANCE OF TRAFFIC**

Requests to deviate from the sequence of operations shall be submitted in writing to the Engineer for review. Approval of an alternate sequence of operations will only be allowed when the proposed changes meet the intent for traffic control and sequencing of the work. An alternate sequence shall be submitted for review a minimum of one week prior to potential implementation.

Traffic shall be maintained in accordance with Section 634 of the SDDOT Specifications. Traffic control shall be installed in accordance with the Federal Manual on Uniform Traffic Control Devices (MUTCD) and standard plates located herein.

Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. The Contractor will coordinate with the City to determine which signs will be reset and to verify reset locations. Cost of this work will be incidental to the contract unit prices for various items unless otherwise specified in the plans. Any signs damaged or lost will be replaced by the Contractor at no cost to the City.

**TRAFFIC CONTROL, MISCELLANEOUS**

Traffic control items shown in the plans shall be paid for under the contract lump sum price for "Traffic Control, Miscellaneous". Payment shall be full compensation for furnishing, installing, maintaining, moving, resetting, and removing all traffic control signs. Signs shall be in accordance with the current edition of the MUTCD.

**PEDESTRIAN TRAFFIC CONTROL**

The existing sidewalks along the East Segment east of Sweetgrass Drive will be closed without supplying an alternate route.

The Contractor shall adhere to the requirements of the Americans with Disabilities Act (ADA) during construction. Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG), and should not be used as a control for pedestrian movements.

The Contractor shall adequately sign and barricade the sidewalk for pedestrian traffic. The Contractor must not leave un-barricaded holes open either overnight or over the weekend.

**SOIL BORINGS**

Soil borings were not completed for this project. The Contractor may take soil borings for their information upon approval from the Engineer.

**UNCLASSIFIED EXCAVATION**

The unclassified excavation quantity includes all topsoil salvage and stockpiling, subgrade, and gravel excavation. No field measurements will be made for payments except when changes from the plan shown construction limits are ordered by the Engineer.

The excess soil resulting from earthwork activities, if any, shall be stockpiled on site for City crews to remove. Coordinate stockpiling at each site with the City for removal.

**GRADING OPERATIONS**

Shrinkage factor: Embankment plus 30%.

Compaction of bike trail embankment will be governed by the Specified Density Method. Backfill shall be compacted to 97% or greater of the maximum dry density in horizontal layers not to exceed 6" loose depth.

Water for Embankment and Backfill is estimated at the rate of 10 gallons of water per cubic yard of Embankment. The estimated quantity of Water is **0.5 MGal**. No separate payment will be made for the Water and all costs associated will be incidental to the contract unit price per cubic yard for "Unclassified Excavation" and "Contractor Furnished Borrow Excavation".

**PREPARATION OF SUBGRADE**

The existing subgrade shall be prepared after topsoil salvage operations have been completed. On newly constructed earth subgrades, the upper 6" of the subgrade shall be scarified and recompacted to the specified density required prior to placing granular materials. All costs associated with preparation of subgrade shall be incidental to the contract unit price bid per SqFt for "5" Concrete Sidewalk".

**PIPE COVER**

The earthen subgrade cover for some pipe installations is less than one foot. The Contractor will take the necessary precautions to ensure the structural properties of the pipes are not damaged after installation and prior to the placement of final surfacing. Any additional costs for preventing damage to these pipes will be incidental to the contract unit price per foot for the corresponding pipe installation contract item.

**WATER FOR GRANULAR MATERIAL**

All costs associated with watering the gravel cushion during on-site construction activities shall be incidental to the contract unit price bid per SqFt for "5" Concrete Sidewalk".

**SAWING EXISTING SURFACING**

Where new concrete sidewalk is placed adjacent to existing asphalt concrete or concrete, the existing concrete shall be sawed full depth to a true line with a vertical face. Sawing existing surfacing will be incidental to the contract unit price of the proposed adjacent sidewalk.



PROJECT / SHEET TITLE : 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS

GENERAL NOTES

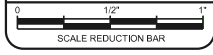
BROOKINGS, SD

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**UNCLASSIFIED EXCAVATION, DIGOUTS**

The locations and extent of digout areas will be determined in the field by the Engineer. The backfilling material for the digouts will be Gravel Cushion.

Included in the Estimate of Quantities are 20 cubic yards of Unclassified Excavation, Digouts for all bid schedules.

The digouts will be extended through the shoulder and backfilled with gravel cushion that will daylight to the inslope to allow water to escape the subsurface.

Payment for this work will be full compensation for the excavation and disposal of the unstable subgrade and placement and compaction of the gravel cushion.

**PLACING TOPSOIL**

Existing vegetation will be salvaged, incorporated, and placed with the topsoil as far as practical. 6" of topsoil will be salvaged in all areas within the construction limits.

The areas to receive topsoil comprise of all newly graded areas, within the project limits, exclusive of top of sidewalk.

The plans quantity for "Placing Topsoil" as shown in the Estimate of Quantities will be the basis for payment for this item unless the Engineer orders a change. Salvage and stockpiling of the topsoil will be incidental to the contract unit price per cubic yard for "Unclassified Excavation".

Topsoil quantities at Dakota Nature Park will need to be supplemented from excess soil from other sites. Hauling material from site to site will be incidental to "Placing Topsoil".

The amount of topsoil shown in the Estimate of Quantities is based on a 6" depth.

**EROSION CONTROL**

All areas of soil disturbed by construction will require erosion control and seeding. Any additional areas disturbed due to trucks hauling construction materials or concrete shall be restored to preconstruction conditions, at a minimum. For informational purposes only, the estimated area requiring erosion control is **0.6 acres for Bid Schedule 1, 0.1 acres for Bid Schedule 2, and 0.5 acres for Bid Schedule 3**. All costs for the erosion control work for furnishing, placing, and maintaining erosion control including equipment, labor, seeding and mulching will be incidental to the contract lump sum price for "Erosion Control".

Type D Permanent Seed Mixture will be used and 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

Seeding will be installed by drilling in accordance with Section 730.

Fiber mulch will be applied in a separate operation following permanent seeding.

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

Fiber mulch will be applied at the rate of 3,000 pounds per acre. In disturbed areas outside of the planting season, those areas shall be fiber mulched

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

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

<https://apps.sd.gov/HC60ApprovedProducts/main.aspx>

**EROSION CONTROL WATTLE**

Erosion control wattles for restraining the flow of runoff and sediment will be installed at locations shown in the plans 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.

Erosion control wattles will remain on the project until vegetation has been established and then they will be removed in accordance with the Engineer.

An additional quantity of 12" Diameter Erosion Control Wattles has been added to the Estimate of Quantities for all bid schedules for temporary erosion and sediment control in ditch channels.

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://apps.sd.gov/HC60ApprovedProducts/main.aspx>

**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://apps.sd.gov/HC60ApprovedProducts/main.aspx>

High flow silt fence will be placed at the locations shown in the plans 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.

An additional quantity of high flow silt fence has been added to the Estimate of Quantities for temporary sediment control.



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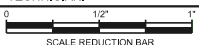
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**STREET SWEEPING**

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

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

At a minimum, sweeping will be required:

1. Prior to opening any segment of sidewalk.
2. During hauling operations when construction vehicles track debris onto the adjacent roadways.
3. At any point in time when the Owner or Engineer requests sweeping.

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

**CONSTRUCTION ENTRANCE**

The Contractor shall 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.

The Contractor shall maintain the construction entrance such that mud tracking and sediment flow will not enter the roadway or adjacent drainage areas. The construction entrance shall be routinely inspected and the Contractor shall 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 shall be included in the contract unit price per each for "Construction Entrance".

**CONCRETE WASHOUT AREA**

A concrete washout area will be installed on the project site at a location approved by the Engineer if concrete trucks deliver concrete to the site. No washout area is necessary if all concrete trucks will wash out at approved site constructed by the concrete supplier.

**SIDEWALK ADJACENT TO BUILDINGS**

When placing sidewalk adjacent to buildings, the elevation of the new sidewalk may be either higher or lower than the existing sidewalk. This may require that modification be made to building exteriors such as: removal of siding, installation of flashing, installation of siding, or other necessary modifications. Building modifications will be approved by the Engineer. All costs associated with modifying the buildings for sidewalk placement will be incidental to the contract unit price per square foot for the corresponding concrete sidewalk contract item.

Sidewalk placed adjacent to building doorways should nearly match the doorway threshold and will have a maximum 1/4-inch vertical rise at the doorway threshold. A sidewalk turning space will be provided at

building doorways in accordance with the plans. Sidewalk should ramp or slope down from the turning space to the typical sidewalk as specified in the plans. Additional sidewalk ramp or slope locations may be required. In the plans, the locations without ramps were assumed by the design Engineer as sites that slopes of less than 5 percent could be used from the turning space to the typical sidewalk. The limits of the ramp and steepened sidewalk shown in the plans may need to be adjusted to the actual doorway location and to meet sidewalk slope requirements as specified in the plans.

**TYPE 1 DETECTABLE WARNINGS**

Detectable warnings will be in compliance with the Americans with Disabilities Act regulations.

The detectable warnings will be installed according to the manufacturer's installation instructions.

A concrete thickness equal to the adjacent concrete sidewalk thickness and 2 inches of granular cushion material will be placed below the Type 1 Detectable Warnings. When concrete is placed below the detectable warnings then the concrete thickness will be transitioned at the rate of 1" per foot to match the adjacent concrete sidewalk thickness.

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

Type 1 Detectable Warning Panels will be one of the following products:

Type 1 Detectable Warnings

Product	Manufacturer
Detectable Warning Plate Cast Iron Plate	Neenah Foundry Company Neenah, WI 800-558-5075 <a href="http://www.neenahfoundry.com/">http://www.neenahfoundry.com/</a>
Detectable Warning Plate Cast Iron Plate	Deeter Foundry Lincoln, NE 800-234-7466 <a href="http://www.deeter.com/">http://www.deeter.com/</a>
Detectable Warning Plate Cast Iron Plate(No Coating)	East Jordan Iron Works, Inc. 301 Spring Street East Jordan, MI 49727 800-626-4653 <a href="http://www.ejiw.com">http://www.ejiw.com</a>
Iron Dome Cast Iron Detectable Warning Tile	ADA Solutions, Inc. 323 Andover Street Suite 3 Wilmington, MA 01887 800-372-0519 <a href="https://adatile.com">https://adatile.com</a>
TufTile (wet-set) Cast Iron Replaceable Tile	TufTile 1200 Flex Court Lake Zurich, IL 60047 888-960-8897

Advantage Tactile Detectable Warning Cast Iron Plate	Advantage Tactile Systems, Inc. 241 Main Street, Suite 100 Buffalo, NY 14203 800-679-4022 <a href="https://advantagetactile.com/">https://advantagetactile.com/</a>
ADA Arcis Tactile Detectable Warning Tile Concrete Panel Reinforced with Stainless Steel Prestress Strands	Arcis Corporation 10680 NW 289 <sup>th</sup> Place PO Box 1250 North Plains, Oregon 97133 503-647-5042 <a href="http://www.arcis-corp.com/#/tactile/">http://www.arcis-corp.com/#/tactile/</a>
CASTinTACT Concrete Panel Reinforced with Stainless Steel Prestress Strands	MASCO Mason Supply 6018 234 <sup>th</sup> St SE Woodinville, Washington 98072 425-487-6161 <a href="http://www.castintact.com">http://www.castintact.com</a>
CASTinTACT 3 Concrete Panel Enhanced with Microsilica and Fiber Reinforced	MASCO Mason Supply 6018 234 <sup>th</sup> St SE Woodinville, Washington 98072 425-487-6161 <a href="http://www.castintact.com">http://www.castintact.com</a>
TufTile (wet-set) Polymer Replaceable Tile	TufTile 1200 Flex Court Lake Zurich, IL 60047 888-960-8897 <a href="http://www.tuftile.com/">http://www.tuftile.com/</a>
Alertcast Composite Replaceable Cast in Place	Cape Fear Systems, III, LLC 215 South Water Street, Suite 103 Wilmington, NC 28401 877-232-6287 <a href="http://www.alerttile.com/">http://www.alerttile.com/</a>
Detectable Warning Tile Composite Replaceable Wet-Set	ADA Solutions, Inc. North Billerica, MA 01862 800-372-0519 <a href="http://www.adatile.com">http://www.adatile.com</a>
Access Tile Composite Replaceable Cast in Place	Access Products Inc. 241 Main Street, Suite 100 Buffalo, NY 14203 888-679-4022 <a href="http://www.accessstile.com/">http://www.accessstile.com/</a>
Armorcast Detectable Warning Tile Composite Replaceable Wet-Set	Armorcast Products Company 13230 Saticoy Street North Hollywood, CA 91605 818-982-3600 <a href="http://www.armorcastprod.com/">http://www.armorcastprod.com/</a>
TufTile (10 Gauge) Galvanized – Powder Coated Steel Replaceable Tile	TufTile 1200 Flex Court Lake Zurich, IL 60047 888-960-8897 <a href="http://www.tuftile.com/">http://www.tuftile.com/</a>

<http://www.tuftile.com/>

Advantage Tactile Systems, Inc.  
241 Main Street, Suite 100  
Buffalo, NY 14203  
800-679-4022  
<https://advantagetactile.com/>

Arcis Corporation  
10680 NW 289<sup>th</sup> Place  
PO Box 1250  
North Plains, Oregon 97133  
503-647-5042  
<http://www.arcis-corp.com/#/tactile/>

MASCO Mason Supply  
6018 234<sup>th</sup> St SE  
Woodinville, Washington 98072  
425-487-6161  
<http://www.castintact.com>

MASCO Mason Supply  
6018 234<sup>th</sup> St SE  
Woodinville, Washington 98072  
425-487-6161  
<http://www.castintact.com>

TufTile  
1200 Flex Court  
Lake Zurich, IL 60047  
888-960-8897  
<http://www.tuftile.com/>

Cape Fear Systems, III, LLC  
215 South Water Street, Suite 103  
Wilmington, NC 28401  
877-232-6287  
<http://www.alerttile.com/>

ADA Solutions, Inc.  
North Billerica, MA 01862  
800-372-0519  
<http://www.adatile.com>

Access Products Inc.  
241 Main Street, Suite 100  
Buffalo, NY 14203  
888-679-4022  
<http://www.accessstile.com/>

Armorcast Products Company  
13230 Saticoy Street  
North Hollywood, CA 91605  
818-982-3600  
<http://www.armorcastprod.com/>

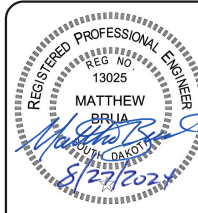
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<http://www.tuftile.com/>



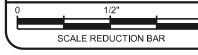
PROJECT / SHEET TITLE: 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS

GENERAL NOTES

BROOKINGS, SD



JOB No.:	24303.00
DATE:	SEPTEMBER 2024
ENG / ARCH:	MJB
DESIGNER:	
TECHNICIAN:	



SHEET No. : 5

## STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

ALL PROJECTS REQUIRED TO HOLD A SURFACE WATER DISCHARGE GENERAL PERMIT SHALL DEVELOP AND COMPLY WITH A SWPPP. THE SWPPP IS DEVELOPED TO ENSURE COMPLIANCE WITH THE EFFLUENT LIMITS IN SECTION 3.0 OF THE GENERAL PERMIT. THE GENERAL PERMIT CAN BE FOUND AT [HTTPS://DANR.SD.GOV/OFFICEOFWATER/SURFACEWATERQUALITY/DOCS/DANR\\_CONST RUTIONGENERALPERMIT2023.PDF](https://danr.sd.gov/officeofwater/surfacewaterquality/docs/danr_const_ructiongeneralpermit2023.pdf)

A SIGN OR OTHER NOTICE OF PERMIT COVERAGE MUST BE POSTED AT A SAFE, PUBLICLY ACCESSIBLE LOCATION IN CLOSE PROXIMITY TO THE CONSTRUCTION SITE. THE NOTICE MUST BE LOCATED SO IT IS VISIBLE FROM THE PUBLIC ROAD THAT IS NEAREST TO THE ACTIVE PART OF THE CONSTRUCTION SITE, AND IT MUST USE A FONT LARGE ENOUGH TO BE READILY VIEWED FROM A PUBLIC RIGHT-OF-WAY. AT A MINIMUM, THE NOTICE MUST INCLUDE:

1. THE GENERAL PERMIT NUMBER PROVIDED FOR THE PROJECT.
2. THE CONTACT NAME AND PHONE NUMBER FOR OBTAINING ADDITIONAL PROJECT INFORMATION.

### NOTICE OF INTENT

A NOTICE OF INTENT (NOI) FOR COVERAGE UNDER THE GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES HAS BEEN SUBMITTED TO THE SDDANR. PERMIT NUMBER IS SD# \_\_\_\_\_

### OWNER

CITY OF BROOKINGS SD PARKS AND RECREATION  
520 3<sup>RD</sup> STREET, SUITE 130  
BROOKINGS, SD 57006  
PROJECT MANAGER: JOSHUA BAUMAN  
EMAIL ADDRESS: JBAUMAN@CITYOFBROOKINGS-SD.GOV  
PHONE NUMBER: 605-691-57006

### PRIME CONTRACTOR

COMPANY: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CONTACT PERSON: \_\_\_\_\_  
EMAIL ADDRESS: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_  
24-HOUR EMERGENCY CONTACT: \_\_\_\_\_  
24-HOUR EMERGENCY CONTACT NUMBER: \_\_\_\_\_

### DESIGN ENGINEER

BANNER ASSOCIATES, INC.  
409 22ND AVE. S.  
BROOKINGS, SD 57006  
REGISTERED ENGINEER: MATTHEW BRUA  
EMAIL ADDRESS: MATTHEWBRTUA@BANNERASSOCIATES.COM  
PHONE NUMBER: 605-696-9213

### SDDANR CONTACT FOR SPILL REPORTING

- BUSINESS HOURS MONDAY-FRIDAY (605) 773-3296
- NIGHTS AND WEEKENDS (605) 773-3231

### SDDANR CONTACT FOR HAZARDOUS MATERIALS

- (605) 773-3153

### SDDANR CONTACT FOR NONCOMPLIANCE REPORTING

- BUSINESS HOURS MONDAY-FRIDAY (800) 737-8676
- NIGHTS AND WEEKENDS (605) 773-3231

### NATIONAL RESPONSE CENTER HOTLINE

- (800) 424-8802

### PROJECT DESCRIPTION

PROJECT CONSISTS OF CONSTRUCTION NEW CONCRETE TRAIL AT CITY PARKS AS WELL AS RECONSTRUCTION OF PORTIONS OF EXISTING TRAILS.

### MAJOR SOIL DISTURBING ACTIVITIES (CHECK ALL THAT APPLY)

- CLEARING AND GRUBBING
- EXCAVATION/BORROW
- GRADING AND SHAPING
- FILLING
- CUTTING AND FILLING
- OTHER (DESCRIBE): CONCRETE PAVING

### EXISTING SITE CONDITIONS AND DESCRIPTION OF RECEIVING WATERS

EXISTING SITES ARE CITY PARKS. SEXAUER PARK HAS SIXMILE CREEK RUNNING ADJACENT AND RECEIVES FLOODWATER DURING HIGH WATER. STORMWATER AT THIS

SITE DIRECTLY IMPACTS SIXMILE CREEK. THE OTHER LOCATIONS OVERLAND FLOW AND ULTIMATELY FLOW INTO SIXMILE CREEK AND BIG SIOUX RIVER.

### ADJACENT AREAS

THE PROJECT IS WITHIN THE CITY PARK PROPERTY.

### SOILS, SLOPE, AND VEGETATION

THE SOILS THROUGHOUT THE PROJECT AREA GENERALLY CONSIST OF SILT LOAMS WITH SOME CLAY. THE SITES HAVE AN AVERAGE SLOPE UNDER 3%.

### AREA AND VOLUME DISTURBED

APPROXIMATELY 1.2 ACRES WILL BE DISTURBED. THE CONTRACTOR SHALL WORK TO LIMIT THE AMOUNT OF DISTURBED EARTH TO LESS THAN 1 ACRE OR 1000 FEET OF LINEAR UTILITY AT ONE TIME WHENEVER POSSIBLE. CONTRACTOR SHALL CONTROL DUST USING WATER OR VEGETATION. ALL TRENCHES SHALL BE FILLED IN PRIOR TO LEAVING FOR THE DAY.

### AGENCY COORDINATION

- ARE WETLANDS OR WOTUS PRESENT IN THE PROJECT AREA? NO WETLANDS
- IS THE PROJECT IN THE 100-YEAR OR 500-YEAR FLOODPLAIN? YES. THE PLANS SHOULD BE SUBMITTED TO THE LOCAL FLOODPLAIN ADMINISTRATOR FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. IT SHOULD BE ENSURED THAT THE PROPOSED PROJECT IS IN COMPLIANCE WITH THE FLOODPLAIN MANAGEMENT CRITERIA OF CITY OF BROOKINGS AND THE STATE OF SOUTH DAKOTA.
- DOES THE STATE HISTORICAL PRESERVATION OFFICE (SHPO) NEED TO REVIEW THESE PLANS? NO.
- DOES THE SD GAME FISH AND PARKS NEED TO REVIEW THESE PLANS? NO
- DOES THE US FISH AND WILDLIFE SERVICE NEED TO REVIEW THESE PLANS? NO

### METHODS OF ENSURING SURFACE WATER QUALITY

THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE NO SEDIMENT-LADEN WATERS LEAVE THE PROJECT WITHOUT EXPOSURE TO AN EROSION OR SEDIMENT CONTROL DEVICE. CONTRACTOR SHALL MINIMIZE SITE RUN-ON BY UTILIZING BERMS, DITCHES, DIKES, SWALES, OR ANY OTHER APPROPRIATE EROSION AND SEDIMENT CONTROL WITHOUT IMPEDING UPSTREAM DRAINAGE.

THE DISCHARGE OF UNCONTAMINATED GROUND WATER IS ALLOWED BY THE GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES, PROVIDED THE DISCHARGE COMPLIES WITH THE CONDITIONS OF SECTION 3.21 OF THE GENERAL PERMIT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH THE GENERAL PERMIT. ALL MONITORING, TESTING, REPORTING, AND OTHER REQUIREMENTS OF THE GENERAL PERMIT ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR MUST OBTAIN COVERAGE UNDER THE SOUTH DAKOTA SURFACE WATER DISCHARGE PERMIT FOR TEMPORARY DISCHARGE ACTIVITIES IN SOUTH DAKOTA (DEWATERING PERMIT) FOR ALL OTHER NON-STORMWATER DISCHARGES.

PUMPING (MECHANICALLY DISCHARGING) PONDED STORMWATER OR TRENCH DEWATERING INTO THE STORM SEWER OR OFF THE PROJECT SITE IS COVERED UNDER THE GENERAL PERMIT, PROVIDED THE CONTRACTOR IMPLEMENTS APPROPRIATE CONTROLS AND BMPS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH THE DEWATERING CONDITIONS OF THE CONSTRUCTION GENERAL PERMIT FOR THESE ACTIVITIES. CONTRACTOR MUST OBTAIN A TEMPORARY WATER USE PERMIT; CONTACT SDDANR WATER RIGHTS PROGRAM AT 605-773-3352 FOR MORE INFORMATION. THE ENGINEER MAY NOTIFY THE SDDANR IF THE CONTRACTOR IS OBSERVED PUMPING SEDIMENT-LADEN WATER INTO THE STORM SEWER OR OFF SITE WITHOUT APPROPRIATE CONTROLS. PUMPING SEDIMENT LADEN WATER THROUGH INLET PROTECTION IS NOT ALLOWED AS A BMP.

IN LIEU OF PUMPING SEDIMENT LADEN WATER, THE FOLLOWING ARE SOME METHODS THE CONTRACTOR MAY USE TO CONTROL SEDIMENT LADEN WATER.

- THE BEST METHOD IS FOR THE CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE DURING ALL PHASES OF THE PROJECT TO PREVENT WATER FROM PONDING ON THE PROJECT.
- TREAT THE SEDIMENT LADEN WATER ONSITE THROUGH THE USE OF FILTER BAGS, DEFLOCCULATING CHEMICALS, SEDIMENT BASINS, OR A PORTABLE CONTAINMENT SYSTEM. NOTE: CHEMICALS CANNOT BE ADDED TO THE DISCHARGE WITHOUT PRIOR APPROVAL FROM SDDANR.
- PUMP OR DISCHARGE THE WATER TO OTHER PORTIONS OF THE SITE. THIS IS ALLOWED IF THE WATERS DO NOT LEAVE THE PROJECT LIMITS.
- USE BMPS TO MINIMIZE OR PREVENT CHANNEL SCOURING OR EROSION CAUSED BY DEWATERING DISCHARGES.

### EROSION/SEDIMENT CONTROL SEQUENCE AND TIME SCHEDULE

THE FOLLOWING INFORMATION IS INTENDED TO PROVIDE A GUIDELINE TO THE CONTRACTOR FOR THE INSTALLATION OF INITIAL EROSION AND SEDIMENT CONTROL MEASURES AND IMPLEMENTATION OF THE STORMWATER POLLUTION PREVENTION PLAN DURING CONSTRUCTION. THE TIMELINE AND SEQUENCE ARE FOR REFERENCE ONLY AND

MAY CHANGE DEPENDING ON THE CONTRACTOR'S SEQUENCE OF OPERATIONS AND MUST BE APPROVED BY THE ENGINEER PRIOR TO MAKING CHANGES.

### TIME SCHEDULE:

ANTICIPATED START DATE OF CONSTRUCTION IS FALL 2024.

- INSTALL PRELIMINARY SEDIMENT CONTROL MEASURES AS INDICATED IN EACH PHASE PRIOR TO BEGINNING GRADING ACTIVITIES.
- PRELIMINARY SEDIMENT CONTROL MEASURES MAY INCLUDE SILT FENCES, INLET SEDIMENT PROTECTION, OR EROSION CONTROL BLANKETS AS NEEDED.
- INITIAL SEDIMENT CONTROL MEASURES INCLUDE THE INSTALLATION OF TEMPORARY SILT FENCE ON THE SOUTH AND EAST SIDE OF THE PROJECT SITE. THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED IMMEDIATELY FOLLOWING TOPSOIL REMOVALS. THE CONCRETE WASH OUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE WORK.

ANTICIPATED COMPLETION DATE IS SUMMER, 2025.

- UPON COMPLETION OF CONSTRUCTION, INSTALL PERMANENT EROSION CONTROL AND RE-VEGETATION MEASURES.
- COMPLETE SEED MIX AND SOD NO MORE THAN 14 DAYS AFTER FINAL GRADING WORK IS COMPLETE.
- REMOVE AND PROPERLY DISPOSE OF TEMPORARY CONTROL MEASURES ONCE ALL EARTH-DISTURBING ACTIVITIES ARE COMPLETE AND THE SITE HAS REACHED FINAL STABILIZATION.

### EROSION CONTROL REMOVALS

CONSTRUCTION ENTRANCES SHALL BE REMOVED WHEN ALL ROADWAY GRAVEL BASE HAS BEEN PLACED. INLET PROTECTION, SILT TRAPS, SILT DITCH, AND TEMPORARY SILT FENCE SHALL BE REMOVED AFTER ALL HARD SURFACING IS COMPLETE AND FINAL STABILIZATION HAS BEEN ACHIEVED ON SITE. PAVED STREETS SHALL BE CLEANED AT THE END OF EACH WORKDAY.

IN THE EVENT THAT MORE THAN ONE-HALF INCH OF RAIN FALLS ON THE SITE, THE CONSTRUCTION SITE WILL BE INSPECTED FOR EROSION AND SEDIMENTATION, BUILD-UP OF SEDIMENT IN THE STORMWATER MANAGEMENT SYSTEM, OR ANY POSSIBLE LEAK FROM THE SITE WITHIN 24 HOURS. IF ANY OF THESE PROBLEMS ARE DETECTED, THE PROPER PERSONNEL, AS DEFINED IN THE "PRIME CONTRACTOR" CONTACTS AT THE BEGINNING OF THIS SWPPP, SHALL BE CONTACTED, EVENT RECORDED, AND PROPER MEASURES TAKEN. INSPECTION AND MAINTENANCE FORMS ARE ATTACHED THAT PROVIDE A SCHEDULE TO BE FOLLOWED TO SATISFY THIS POLLUTION PREVENTION PLAN, WHICH CAN BE MODIFIED AS TIME GOES ON.

### SOIL SURFACE STABILIZATION PRACTICES

AFTER CONSTRUCTION BEGINS, TEMPORARY SOIL SURFACE STABILIZATION SHALL BE COMPLETED WITHIN 14 DAYS TO ALL DISTURBED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR PERIODS LONGER THAN 14 CALENDAR DAYS. AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE, PERMANENT OR TEMPORARY SOIL SURFACE STABILIZATION ON DISTURBED AREAS SHALL BEGIN BY THE FOLLOWING DAY.

### STABILIZATION AND EROSION CONTROL 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
- VEGETATIVE BUFFER STRIPS
- ROUGHENED SURFACE
- DUST CONTROL
- OTHER (DESCRIBE):

### STRUCTURAL EROSION AND SEDIMENT CONTROLS

- SILT FENCE
- FLOATING SILT CURTAIN
- STRAW BALE CHECK
- TEMPORARY BERM
- TEMPORARY SLOPE DRAIN
- STRAW WATTLES OR ROLLS
- TURF REINFORCEMENT MAT
- RIP RAP
- GABIONS
- ROCK CHECK DAMS
- SEDIMENT TRAPS/BASINS
- INLET PROTECTION
- OUTLET PROTECTION
- SURFACE INLET PROTECTION (AREA DRAIN)



- CURB INLET PROTECTION
- CONSTRUCTION ENTRANCE
- ENTRANCE/EXIT EQUIPMENT TIRE WASH
- INTERCEPTOR DITCH
- CONCRETE WASHOUT AREA
- TEMPORARY DIVERSION CHANNEL
- WORK PLATFORM
- TEMPORARY WATER BARRIER
- TEMPORARY WATER CROSSING
- OTHER (DESCRIBE): STREET SWEEPING

**TEMPORARY STABILIZATION MEASURES**

STABILIZATION MEASURES SHALL BEGIN THE FOLLOWING WORKDAY 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.

**PERMANENT STABILIZATION MEASURES**

SEED WILL BE USED FOR PERMANENT STABILIZATION OF ALL DISTURBED AREAS NOT PAVED OR FARMED THROUGHOUT THE PROJECT LIMITS. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE STABILIZED WITH BEST MANAGEMENT PRACTICES NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY. MINIMIZE SOIL COMPACTION IN AREAS THAT WILL BE SEEDED FOR FINAL STABILIZATION.

AFTER THE ENTIRE SITE IS STABILIZED AS DEFINED IN THE "NOTICE OF TERMINATION" SECTION OF THIS SWPPP, THE SILT FENCE AND ANY REMAINING ACCUMULATED SEDIMENT WILL BE REMOVED. CONTRACTOR SHALL FILL OUT "WORKSHEET #1-SCHEDULE OF GRADING AND CONSTRUCTION ACTIVITIES" TO RECORD WHEN TEMPORARY AND PERMANENT GRADING ACTIVITIES STARTED AND ENDED AND WHEN STABILIZATION BMPs FOLLOWED.

**STORMWATER MANAGEMENT CONSIDERATIONS**

WATER FROM THIS PROJECT SHALL BE DIRECTED TO SEDIMENT FILTRATION DEVICES PRIOR TO LEAVING THE SITE. ALL CULVERTS, PIPES, DROP INLETS, MANHOLES, AND JUNCTION BOXES (NEW AND EXISTING) SHALL HAVE SEDIMENT CONTROL DEVICES PLACED AROUND THEIR PERIMETER DURING ALL STAGES OF CONSTRUCTION, EXCEPT DURING THE PLACEMENT OF FINAL SURFACING. THIS MAY NECESSITATE MULTIPLE INSTALLATIONS OF SEDIMENT CONTROL DEVICES AT THE SAME LOCATION.

CONSTRUCTION ENTRANCE SHALL BE USED TO PREVENT TRACKING OF SEDIMENT OFF-SITE.

ALL STORMWATER CONTROLS MUST BE INSTALLED AND MAINTAINED TO FUNCTION PROPERLY AND WITHSTAND A 2-YEAR, 24-HOUR PRECIPITATION EVENT, WHICH IS APPROXIMATELY 2.54 INCHES IN THIS AREA [INFO AVAILABLE AT [https://hdsc.nws.noaa.gov/pfds/pfds\\_map\\_cont.html?bkmrk=sdj](https://hdsc.nws.noaa.gov/pfds/pfds_map_cont.html?bkmrk=sdj)].

**MODIFICATIONS OF EROSION AND SEDIMENT CONTROL DEVICES TO PREVENT PROPERTY DAMAGE**

THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN DRAINAGE. IN THE EVENT THAT AN EROSION OR SEDIMENT CONTROL DEVICE IS OBSTRUCTING DRAINAGE AND DAMAGE TO PROPERTY IS POSSIBLE, THE CONTRACTOR MAY TEMPORARILY MODIFY OR REMOVE THE DEVICE TO FACILITATE DRAINAGE. AN EXAMPLE IS INLET PROTECTION IN A SUMP LOCATION SURROUNDED BY BUILDINGS. IF A DEVICE IS REMOVED FOR THIS PURPOSE, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER TO DISCUSS AND IMPLEMENT ALTERNATIVES TO COMPLY WITH THE SWPPP AND GENERAL PERMIT.

**REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES**

THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TEMPORARY EROSION CONTROL AND SEDIMENT CONTROL DEVICES WHEN THE SITE REACHES FINAL STABILIZATION. THE ENGINEER MAY ORDER SPECIFIC TEMPORARY EROSION CONTROL AND SEDIMENT CONTROL DEVICES TO REMAIN IN PLACE PAST FINAL STABILIZATION. THE CONTRACTOR WILL NOT BE RESPONSIBLE FOR REMOVING THESE ITEMS.

ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES WILL BE REMOVED AT THE 1-YEAR INSPECTION IF NOT DONE SO EARLIER, PROVIDED FINAL STABILIZATION HAS BEEN REACHED.

**MATERIAL INVENTORY PRACTICES**

KEEPING AN UP-TO-DATE INVENTORY ON ALL MATERIALS (BOTH HAZARDOUS AND NONHAZARDOUS) PRESENT ON SITE WILL HELP TRACK HOW MATERIALS ARE STORED AND HANDLED ONSITE, AND IDENTIFY WHICH MATERIALS AND ACTIVITIES POSE THE MOST RISK TO THE ENVIRONMENT. THE FOLLOWING DESCRIPTION PROVIDES THE BASIC STEPS IN COMPLETING A MATERIAL INVENTORY:

1. IDENTIFY ALL CHEMICAL SUBSTANCES PRESENT AT WORK SITE. PERFORM A WALK-THROUGH OF THE SITE, REVIEW PURCHASE ORDERS, LIST ALL CHEMICAL SUBSTANCES USED, AND OBTAIN SAFETY DATA SHEETS (SDS) FOR ALL CHEMICALS.

2. LABEL ALL CONTAINERS. LABELS SHALL PROVIDE NAME AND TYPE OF SUBSTANCE, STOCK NUMBER, EXPIRATION DATE, HEALTH HAZARDS, HANDLING SUGGESTIONS, AND FIRST AID INFORMATION. THIS INFORMATION CAN ALSO BE FOUND ON AN SDS.
3. CLEARLY MARK ON THE HAZARDOUS MATERIALS INVENTORY WHICH CHEMICALS REQUIRE SPECIAL HANDLING, STORAGE, USE, AND DISPOSAL CONSIDERATIONS. DECISIONS ON THE AMOUNTS OF HAZARDOUS MATERIALS THAT ARE STORED ON SITE SHALL INCLUDE AN EVALUATION OF ANY EMERGENCY CONTROL SYSTEMS THAT ARE IN PLACE. ALL STORAGE AREAS SHALL BE DESIGNED TO CONTAIN ANY SPILLS.

THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION:

CONCRETE	BITUMINOUS MATERIALS
PETROLEUM BASED PRODUCTS (FUEL, HYDRAULIC OIL)	DETERGENTS
PAINTS (ENAMEL AND LATEX)	CURE
RAW MATERIALS	TEXTURE
WOOD (FOR TEMPORARY CONSTRUCTION)	HAZARDOUS MATERIALS
PLASTIC PELLETS	FERTILIZERS
FINISHED MATERIALS	PESTICIDES
METALS	METAL REBAR
CHEMICALS (CHLORINE, AMMONIA, ETC.)	SOLVENTS

**SPILL PREVENTION**

NONSTRUCTURAL BMPs SUCH AS GOOD HOUSEKEEPING MEASURES CAN, TO SOME DEGREE, PREVENT THE DEPOSITION OF POLLUTANTS ON THE URBAN LANDSCAPE OR REMOVE POLLUTANTS AT THEIR SOURCE. THE SOURCE OF POLLUTANTS FOR ASSIMILATION INTO STORMWATER IS THE LAND SURFACE ITSELF, ESPECIALLY THE IMPERVIOUS SURFACES IN THE URBAN AREA. THUS, IT IS EXPECTED THAT WHEN NONSTRUCTURAL MEASURES ARE EFFECTIVELY IMPLEMENTED, THEY WILL REDUCE THE NUMBER OF POLLUTANTS BEING DEPOSITED ON LAND SURFACES FOR EVENTUAL CONTACT WITH STORMWATER AND TRANSPORTED TO THE RECEIVING WATER SYSTEM. THEREFORE, THE CONTRACTOR SHOULD EVALUATE AND DETERMINE WHICH APPROPRIATE GOOD HOUSEKEEPING MEASURES LISTED BELOW COULD BE USED.

**GOOD HOUSEKEEPING:** TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIAL AND SUBSTANCES TO STORMWATER RUNOFF, THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.

1. AN EFFORT WILL BE MADE TO ONLY STORE ENOUGH PRODUCT REQUIRED TO DO THE JOB.
2. ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS, AND IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
3. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
4. SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
5. WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED BEFORE DISPOSING OF THE CONTAINER.
6. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL.
7. MAINTAIN DRY AND CLEAN FLOORS AND GROUND SURFACES BY USING BROOMS, SHOVELS, VACUUM CLEANERS, OR CLEANING MACHINES RATHER THAN WET CLEANUP METHODS.
8. THE SITE SUPERINTENDENT WILL INSPECT THE SITE, AT A MINIMUM, ONCE EVERY 7 CALENDAR DAYS, OR ONCE EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF PRECIPITATION THAT EXCEEDS 0.25 INCHES OR SNOW MELT THAT GENERATES RUNOFF, THE CONTRACTOR SHALL KEEP A PROPERLY MAINTAINED RAIN GAUGE ON SITE FOR THIS PURPOSE. THE INSPECTIONS ARE CONDUCTED TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ONSITE.

**MATERIAL STORAGE PRACTICES:** IMPROPERLY STORING MATERIAL ON SITE CAN LEAD TO THE RELEASE OF MATERIALS AND CHEMICALS THAT CAN CAUSE STORMWATER RUNOFF POLLUTION. PROPER STORAGE TECHNIQUES INCLUDE THE FOLLOWING:

1. PROVIDE ADEQUATE AISLE SPACE TO FACILITATE MATERIAL TRANSFER AND EASE OF ACCESS FOR INSPECTION.
2. STORE CONTAINERS, DRUMS, AND BAGS AWAY FROM DIRECT TRAFFIC ROUTES TO PREVENT ACCIDENTAL SPILLS.
3. STACK CONTAINERS ACCORDING TO MANUFACTURER'S INSTRUCTIONS TO AVOID DAMAGING THE CONTAINERS FROM IMPROPER WEIGHT DISTRIBUTION.
4. STORE CONTAINERS ON PALLETS OR SIMILAR DEVICES TO PREVENT CORROSION OF CONTAINERS THAT RESULTS FROM CONTAINERS COMING IN CONTACT WITH MOISTURE ON THE GROUND.

**HAZARDOUS PRODUCT STORAGE:** THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.

1. PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
2. STORE TOXIC OR HAZARDOUS LIQUIDS WITHIN CURBED AREAS OR SECONDARY CONTAINERS.
3. ORIGINAL LABELS AND SAFETY DATA SHEETS WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION.
4. IF SURPLUS PRODUCTS MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

5. ASSIGN RESPONSIBILITY OF HAZARDOUS MATERIAL INVENTORY TO A LIMITED NUMBER OF PEOPLE WHO ARE TRAINED TO HANDLE SUCH MATERIALS.
6. 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 TO PREVENT THE RELEASE OF CONTAMINANTS ONTO THE GROUND.
7. WHEEL AND VEHICLE 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.
8. 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.

**WASTE DISPOSAL:** TO ASSURE THAT EQUIPMENT AND WORK-RELATED PROCESSES ARE WORKING WELL; THE FOLLOWING PRACTICES CAN BE IMPLEMENTED:

1. ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. TRASH CONTAINERS WILL BE SERVICED AS NECESSARY.
2. REGULARLY PICK UP AND DISPOSE OF ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE IN THE DUMPSTER. THE TRASH WILL BE HAULED TO AN APPROVED DISPOSAL SITE OR LICENSED LANDFILL.
3. THE DUMPSTER WILL BE EMPTIED AT A FREQUENCY DEEMED NECESSARY.
4. ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AT A FREQUENCY DEEMED NECESSARY BY THE CONTRACTED SANITARY WASTE DISPOSAL COMPANY, A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR, AS REQUIRED BY LOCAL REGULATION. IT WILL BE DISPOSED OF AT A MUNICIPAL WASTEWATER TREATMENT FACILITY WITH APPROVAL FROM THE MUNICIPALITY.
5. CONTRACTOR IS RESPONSIBLE THAT 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.
6. CONTRACTOR SHALL MAKE EVERY EFFORT TO RECYCLE MATERIALS WHENEVER POSSIBLE.

**OPERATION AND MAINTENANCE:** TO ASSURE THAT EQUIPMENT AND WORK-RELATED PROCESSES ARE WORKING WELL; THE FOLLOWING PRACTICES CAN BE IMPLEMENTED:

1. ROUTINELY INSPECT EQUIPMENT AND PROCESSES FOR LEAKS OR CONDITIONS THAT COULD LEAD TO DISCHARGES OF CHEMICALS OR CONTACT OF STORMWATER WITH RAW MATERIALS, INTERMEDIATE MATERIALS, WASTE MATERIALS, OR PRODUCTS USED ON SITE.
2. CONTRACTOR SHALL ALLOW A DESIGNATED, CONTAINED PARKING AREA FOR EMPLOYEES AND EQUIPMENT.
3. MAKE SURE ALL EQUIPMENT AND RELATED PROCESSES ARE WORKING PROPERLY AND PREVENTATIVE MAINTENANCE IS KEPT UP WITH ON BOTH.
4. EQUIPMENT SHALL BE WELL-MAINTAINED AND SHALL BE REFUELED AND SERVICED ONLY IN CONTAINED AREAS OF THE SITE. IF POSSIBLE, MAINTENANCE AND REFUELING SHOULD BE DONE OFFSITE.
5. ANY SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY AND WASTE PROPERLY DISPOSED OF. ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN A MANNER SPECIFIED BY LOCAL, STATE, OR FEDERAL 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.
6. ALL ONSITE VEHICLES MUST BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE.
7. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
8. CONTRACTOR SHALL USE DRIP PANS, CURBING, SAND FILTERS, OIL/WATER SEPARATORS, OR OTHER CONTROLS TO PREVENT CONTAMINATED WATER RUNOFF.
9. TEMPORARY VEHICLE TRACKING CONTROL SHALL BE CREATED TO REDUCE VEHICLE TRACKING OF SEDIMENTS OFF SITES. THE ENTRANCES WILL BE CLEANED AND MAINTAINED AS NECESSARY. ANY SEDIMENT TRACKED OFF SITE OR ON PUBLIC ROADS SHALL BE CLEANED AT THE END OF EACH DAY.
10. EXTERIOR DUST IS TO BE CONTROLLED BY VEGETATION AND WATER IF NECESSARY. PROPER RESPIRATORY EQUIPMENT SHOULD BE USED.
11. VEGETATED AREAS NOT ESSENTIAL TO THE CONSTRUCTION PROJECT WILL BE PRESERVED AND MAINTAINED AS NOTED ON THE PLANS.
12. FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER. AVOID APPLYING BEFORE HEAVY RAINS AND NEVER APPLY TO FROZEN GROUND. STORAGE WILL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
13. ALL PAINT CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR FEDERAL, STATE, AND LOCAL REGULATIONS.



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- CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONLY ON CONTAINED PORTIONS OF THE SITE. THESE AREAS MUST BE APPROPRIATELY IDENTIFIED WITH SIGNAGE AND SHALL NOT CONNECT TO ANY STORMWATER OUTLET OF THE SITE. UPON COMPLETION OF CONSTRUCTION, WASHOUT AREAS WILL BE PROPERLY STABILIZED.

**TRAINING AND PARTICIPATION:** FREQUENT AND PROPER TRAINING IN GOOD HOUSEKEEPING TECHNIQUES REDUCES THE POSSIBILITY THAT CHEMICALS OR EQUIPMENT WILL BE MISHANDLED. REDUCING WASTE GENERATION IS ANOTHER IMPORTANT POLLUTION PREVENTION TECHNIQUE. THE FOLLOWING ARE WAYS TO GET PEOPLE INVOLVED IN GOOD HOUSEKEEPING PRACTICES:

- PROVIDE INFORMATION SESSIONS ON GOOD HOUSEKEEPING PRACTICES IN TRAINING PROGRAMS.
- DISCUSS GOOD HOUSEKEEPING AT MEETINGS.
- PUBLICIZE POLLUTION PREVENTION CONCEPTS THROUGH POSTERS OR SIGNS.

**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 FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

- MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE TRAINED BY THE CONTRACTOR ON THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
- MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE. SPILL RESPONSE EQUIPMENT WILL BE INSPECTED AND MAINTAINED AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.
- ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
- THE SPILL AREA WILL BE KEPT WELL-VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
- SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE FEDERAL, STATE, OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE. CONTRACTOR SHALL USE "WORKSHEET #3-RECORD OF SPILLS AND LEAKS" TO RECORD DATE, MATERIAL, AND QUANTITY OF MATERIAL SPILLED AS WELL AS EFFORTS TO CLEAN UP AND REMOVE WASTE AND PREVENT FUTURE SPILLS. THE APPROPRIATE AGENCY PHONE NUMBERS SHALL BE POSTED ONSITE.
- THE SPILL PREVENTION PLAN AND/OR STORMWATER POLLUTION PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.
- THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THIS PERSON WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL BY NAME OR TITLE WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THE TRAINING MUST INCLUDE IDENTIFYING THE LOCATION OF THE SPILL KITS AND OTHER SPILL RESPONSE EQUIPMENT AND THE USE OF SPILL RESPONSE MATERIALS. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IN THE OFFICE TRAILER ONSITE.
- 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. CONTACT SDDANR AT THE PHONE NUMBER ABOVE TO REPORT THE NONCOMPLIANCE.
- 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 SDDANR.

**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 SDDANR 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 74:51:01.
- 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).
- 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, U.S. EPA.

TO REPORT A RELEASE OR SPILL, CALL SDDANR 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 SDDANR DOES NOT MEET ANY OBLIGATION FOR REPORTING TO OTHER STATE, LOCAL, OR FEDERAL AGENCIES. THEREFORE, THE RESPONSIBLE PERSON MUST CONTACT LOCAL EMERGENCY RESPONSE AUTHORITIES TO DETERMINE THE LOCAL REPORTING REQUIREMENTS FOR RELEASES. SPILLS SHALL ALSO BE REPORTED TO THE NATIONAL RESPONSE CENTER AT (800) 424-8802.

**REPORTING NONCOMPLIANCE**

THE CONTRACTOR MUST REPORT ANY NONCOMPLIANCE THAT MAY ENDANGER THE PUBLIC HEALTH OR THE ENVIRONMENT. PROVIDE THE FOLLOWING INFORMATION VERBALLY TO SDDANR WITHIN 24 HOURS OF THE TIME OF BECOMING AWARE OF THE CIRCUMSTANCES:

- AN UNANTICIPATED BYPASS THAT EXCEEDS AN EFFLUENT LIMIT IN THE GENERAL PERMIT;
- AN UPSET WHICH EXCEEDS AN EFFLUENT LIMIT IN THE GENERAL PERMIT; OR
- A VIOLATION OF A MAXIMUM DAILY DISCHARGE LIMIT FOR ANY OF THE POLLUTANTS LISTED BY THE SECRETARY IN THE GENERAL PERMIT.

PROVIDE A WRITTEN REPORT TO SDDANR WITHIN FIVE DAYS AFTER BECOMING AWARE OF THE CIRCUMSTANCES. THE WRITTEN REPORT MUST CONTAIN A DESCRIPTION OF THE NONCOMPLIANCE AND ITS CAUSE; THE PERIOD OF NONCOMPLIANCE, INCLUDING EXACT DATES AND TIME AND, IF THE NONCOMPLIANCE HAS NOT BEEN CORRECTED, THE ANTICIPATED TIME IT IS EXPECTED TO CONTINUE; AND STEPS TAKEN OR PLANNED TO REDUCE, ELIMINATE, AND PREVENT REOCCURRENCE OF THE NONCOMPLIANCE.

**MAINTENANCE**

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND REPAIRING ALL TEMPORARY EROSION CONTROL, SEDIMENT CONTROL, AND PERMANENT EROSION CONTROL MEASURES UNTIL PERMIT COVERAGE IS TERMINATED BY SDDANR. GENERAL MAINTENANCE REQUIREMENTS ARE LISTED BUT ARE NOT ALL INCLUSIVE AND ADDITIONAL MEASURES MAY NEED TO BE TAKEN TO COMPLY WITH THE GENERAL PERMIT AND SWPPP. THESE ARE THE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS.

- NO MORE THAN ONE ACRE OR 1,000 LINEAR FEET OF THE SITE SHOULD BE DENUDED AT ONE TIME. IF THIS IS NOT PRACTICABLE, THE CONTRACTOR MUST DOCUMENT THE NEED FOR ADDITIONAL AREA TO BE DENUDED AND INSTALL CONTROLS TO MINIMIZE EROSION AND SEDIMENTATION.
- BUILT UP SEDIMENT WILL BE REMOVED FROM THE SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.
- SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND, AND TO ENSURE THE SILT FENCE IS PROPERLY TRENCHED IN.
- SEDIMENT BASINS AND TRAPS WILL BE CHECKED DURING SITE INSPECTIONS AND SEDIMENT REMOVED WHEN DEPTH REACHES NO MORE THAN 50 PERCENT OF THE STRUCTURE'S CAPACITY AND AT THE CONCLUSION OF CONSTRUCTION.
- CHECK DAMS WILL BE INSPECTED FOR STABILITY AND SEDIMENT WILL BE REMOVED WHEN DEPTH REACHES NO MORE THAN HALF THE HEIGHT OF THE DAM.
- DRAINAGE CHANNELS/STRUCTURES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED.
- TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH. THESE AREAS MUST BE RE-SEEDED AND STABILIZED AS NEEDED.
- REPAIR VEGETATIVE BUFFERS IF THEY BECOME SILT-COVERED, CONTAIN

RILLS, OR ARE OTHERWISE RENDERED INEFFECTIVE.

- A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. A COPY OF THE REPORT FORM TO BE COMPLETED BY THE INSPECTOR IS ATTACHED. CONTRACTOR SHALL MAKE COPIES FOR REUSE.
- ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER BY CONTRACTOR; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED BY CONTRACTOR ON THE SAME DAY OF REPORT. IF THE PROBLEM IS IDENTIFIED AT A TIME IN THE WORKDAY WHEN IT IS TOO LATE TO COMPLETE THE CORRECTIVE ACTIONS, CONTRACTOR MUST INITIATE WORK ON THE FOLLOWING WORKDAY OR BEFORE THE NEXT ANTICIPATED RUNOFF EVENT, WHICHEVER COMES FIRST. CORRECTIVE ACTION LOGS (WORKSHEET #2) SHALL BE MAINTAINED TO DESCRIBE REPAIR, REPLACEMENT, AND MAINTENANCE OF BMPS AS NOTED IN THE MAINTENANCE INSPECTION REPORTS.
- THE SITE SUPERINTENDENT WILL SELECT INDIVIDUALS WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.

**INSPECTIONS**

THE CONTRACTOR WILL BE REQUIRED TO PERFORM INSPECTIONS ON THE PROJECT AT THE FOLLOWING MINIMUM FREQUENCY UNTIL THE SITE HAS REACHED FINAL STABILIZATION AND PERMIT COVERAGE HAS BEEN TERMINATED BY SDDANR:

- PRIOR TO THE REMOVAL OF ANY SURFACING OR TOPSOIL.
- ONCE EVERY SEVEN CALENDAR DAYS (MINIMUM), WHEN RUNOFF IS UNLIKELY DUE TO FROZEN CONDITIONS AND ALL DISTURBED AREAS OF THE SITE HAVE BEEN TEMPORARILY OR PERMANENTLY STABILIZED, THE INSPECTIONS MAY BE REDUCED TO ONCE A MONTH.
- WITHIN 24 HOURS AFTER EVERY RAINFALL OF ½ INCH OR GREATER, WHEN POSSIBLE.
- AFTER A SNOW MELT THAT CAUSES RUNOFF.
- WITHIN 24 HOURS OF A COMPLAINT BEING MADE TO THE CONTRACTOR OR ENGINEER.

INSPECTIONS MUST INCLUDE THE FOLLOWING AREAS, AT A MINIMUM:

- VERIFY THAT THE REQUIRED GENERAL PERMIT INFORMATION IS POSTED IN ACCORDANCE WITH SECTION 2.10 OF THE GENERAL PERMIT;
- ALL AREAS THAT HAVE BEEN CLEARED, GRADED, OR EXCAVATED, AND HAVE NOT YET REACHED FINAL STABILIZATION;
- ALL SEDIMENT AND EROSION CONTROL MEASURES AND BMPS, INCLUDING INLET PROTECTION;
- VEGETATED BUFFERS;
- STOCKPILES, CHEMICAL AND FUEL STORAGE, FERTILIZER AND PESTICIDE STORAGE, AND OTHER MATERIAL, WASTE, BORROW, AND/OR EQUIPMENT STORAGE AND MAINTENANCE AREAS;
- ALL AREAS WHERE STORMWATER TYPICALLY FLOWS WITHIN THE SITE, INCLUDING DRAINAGE WAYS DESIGNED TO DIVERT, CONVEY, AND/OR TREAT STORMWATER;
- ALL POINTS OF DISCHARGE FROM THE SITE INCLUDING SURFACE WATERS, DRAINAGE DITCHES, AND CONVEYANCE SYSTEMS; AND,
- ALL DEWATERING ACTIVITIES AT THE SITE.
- EXCEPTION: INSPECTIONS ARE NOT REQUIRED IN AREAS THAT, AT THE TIME OF THE INSPECTION, ARE UNSAFE FOR INSPECTION PERSONNEL. A DETAILED DESCRIPTION OF THE SITUATION MUST BE DOCUMENTED IN THE INSPECTION RECORDS EXPLAINING THE REASON THE SITE CONDITIONS PREVENTED THE INSPECTION.

THE INSPECTOR MUST, AT A MINIMUM:

- CHECK WHETHER ALL EROSION AND SEDIMENT CONTROLS AND BMPS ARE IMPLEMENTED AND FUNCTIONING TO MINIMIZE POLLUTANT DISCHARGES. DETERMINE IF THERE IS A NEED TO REPLACE, REPAIR, OR MAINTAIN ANY CONTROLS.
- CHECK FOR SPILLS, LEAKS, OR OTHER ACCUMULATION OF POLLUTANTS ON THE SITE, OR FOR THE PRESENCE OF CONDITIONS THAT COULD LEAD TO SPILLS, LEAKS, OR OTHER ACCUMULATIONS OF POLLUTANTS ON SITE. DETERMINE IF ADDITIONAL CONTROLS OR TAKE CORRECTIVE ACTIONS ARE NEEDED TO PREVENT THE DISCHARGE OF THESE POLLUTANTS.
- DETERMINE IF SITE CONDITIONS HAVE CHANGED AND IF CURRENT CONTROLS ARE STILL EFFECTIVE IN CONTROLLING POLLUTANTS FROM LEAVING THE SITE. IDENTIFY ANY LOCATIONS WHERE NEW OR MODIFIED CONTROL MEASURES ARE NECESSARY.
- CHECK FOR SIGNS OF EROSION, SCOUR, AND SEDIMENT DEPOSITS THAT HAVE OCCURRED ON OR OFF THE CONSTRUCTION SITE:
  - INSPECT THE DISCHARGE POINTS AND, WHERE APPLICABLE, THE BANKS OF ANY SURFACE WATERS FLOWING WITHIN PROPERTY BOUNDARIES OR IMMEDIATELY ADJACENT TO THE PROPERTY.
  - IDENTIFY AREAS WHERE EROSION NEEDS TO BE CORRECTED AND WHERE SEDIMENT NEEDS TO BE REMOVED.
  - DETERMINE IF CONTROLS ARE NEEDED TO REDUCE THE VELOCITY OF THE DISCHARGE OR PREVENT FURTHER EROSION AND SEDIMENTATION.
- IF A DISCHARGE IS OCCURRING DURING THE INSPECTION:
  - IDENTIFY ALL POINTS OF THE PROPERTY WHERE THERE IS A DISCHARGE; OBSERVE AND DOCUMENT THE VISUAL QUALITY OF THE STORMWATER DISCHARGE AND NOTE THE CHARACTERISTICS OF THE DISCHARGE, INCLUDING COLOR, ODOR, FLOATING, SETTLED, OR SUSPENDED SOLIDS, FOAM, OIL SHEEN, AND OTHER OBVIOUS INDICATORS OF STORMWATER POLLUTANTS; AND
  - DOCUMENT WHETHER CONTROL MEASURES ARE OPERATING EFFECTIVELY. DESCRIBE ANY CONTROLS THAT ARE NOT CLEARLY



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STORM WATER POLLUTION PREVENTION PLAN NOTES

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- OPERATING AS INTENDED OR ARE IN NEED OF MAINTENANCE.
6. IDENTIFY ALL INCIDENTS OF NONCOMPLIANCE
  7. BASED ON THE RESULTS OF THE INSPECTION, INITIATE CORRECTIVE ACTION(S) WHERE NEEDED.
  8. FOR DEWATERING INSPECTIONS, RECORD:
    - a. APPROXIMATE TIMES THAT THE DEWATERING DISCHARGE BEGAN AND ENDED ON THE DAY OF INSPECTION;
    - b. ESTIMATES OF THE RATE (IN GALLONS PER DAY) OF DISCHARGE ON THE DAY OF INSPECTION;
    - c. WHETHER OR NOT ANY OF THE FOLLOWING INDICATIONS OF POLLUTANT DISCHARGE WERE OBSERVED AT THE POINT OF DISCHARGE TO ANY RECEIVING WATERS FLOWING THROUGH OR IMMEDIATELY ADJACENT TO THE SITE AND/OR TO CONSTRUCTED OR NATURAL SITE DRAINAGE FEATURES OR STORM DRAIN INLETS:
      - i. A SEDIMENT PLUME, SUSPENDED SOLIDS, UNUSUAL COLOR, PRESENCE OF ODOR, DECREASED CLARITY, OR PRESENCE OF FOAM; AND/OR
      - ii. A VISIBLE SHEEN ON THE WATER SURFACE OR VISIBLE OILY DEPOSITS ON THE BOTTOM OR SHORELINE OF THE RECEIVING WATER.

AN INSPECTION REPORT MUST BE COMPLETED WITHIN 24 HOURS OF COMPLETING THE INSPECTION.

THE ENGINEER RESERVES RIGHT TO PERFORM INSPECTIONS MORE FREQUENTLY THAN IDENTIFIED AND ADDITIONAL INSPECTIONS WILL BE MADE IF OBVIOUS ITEMS OF NON-COMPLIANCE EXIST. IF THE CONTRACTOR FAILS TO ATTEND ANY INSPECTION, IT DOES NOT RELIEVE THEM OF THEIR RESPONSIBILITY TO COMPLY WITH ANY CORRECTIVE OR MAINTENANCE ACTIONS NEEDED.

ITEMS NOTED AS BEING NON-COMPLIANT OR NEEDING MAINTENANCE AS A RESULT OF THE INSPECTIONS MUST BE CORRECTED BEFORE THE NEXT RUNOFF EVENT OR NO LATER THAN SEVEN (7) CALENDAR DAYS AFTER NOTIFICATION, WHICHEVER COMES FIRST. THE SITE SHALL CONTINUE TO BE CONSIDERED IN NON-COMPLIANCE UNTIL THE ISSUE HAS BEEN CORRECTED TO THE SATISFACTION OF THE ENGINEER. FAILURE TO CORRECT ITEMS OF NON-COMPLIANCE OR THOSE NEEDING MAINTENANCE PRIOR TO THE NEXT INSPECTION WILL RESULT IN PRICE ADJUSTMENT TO THE CONTRACT.

**NON-STORM WATER DISCHARGES**

IT IS EXPECTED THAT THE FOLLOWING NON-STORM WATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:

1. PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED)
2. WATER USED TO CONTROL DUST

**NOTICE OF TERMINATION**

THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE SWPPP UNTIL SDDANR TERMINATES COVERAGE UNDER THE GENERAL PERMIT. THE NOTICE OF TERMINATION (NOT) WILL BE PREPARED BY THE OWNER FOR SUBMITTAL TO THE SDDANR WHEN THE CONTRACTOR NOTIFIES THE OWNER THAT ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED, ALL STORMWATER DISCHARGES COVERED BY THE PERMIT ARE ELIMINATED, AND FINAL STABILIZATION HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITTEE IS RESPONSIBLE. FINAL STABILIZATION MEANS EITHER:

1. VEGETATION HAS BEEN ESTABLISHED THAT PROVIDES A UNIFORM (E.G. EVENLY DISTRIBUTED, WITHOUT LARGE BARE AREAS) PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE NATURAL BACKGROUND VEGETATIVE COVER;
2. PERMANENT NON-VEGETATIVE STABILIZATION METHODS HAVE BEEN IMPLEMENTED TO PROVIDE EFFECTIVE COVER FOR EXPOSED PORTIONS OF THE SITE; OR
3. DISTURBED PORTIONS OF A CONSTRUCTION SITE ON LAND USED FOR AGRICULTURAL PURPOSES MUST BE RETURNED TO PRE-CONSTRUCTION AGRICULTURAL USE.

AREAS DISTURBED THAT WERE NOT PREVIOUSLY USED FOR AGRICULTURAL ACTIVITIES, SUCH AS BUFFER STRIPS IMMEDIATELY ADJACENT TO "WATERS OF THE STATE," AND AREAS WHICH ARE NOT BEING RETURNED TO THEIR PRE-CONSTRUCTION AGRICULTURAL USE MUST MEET THE FINAL STABILIZATION CRITERIA ABOVE.

ALL TEMPORARY CONSTRUCTION MATERIALS AND WASTE AND WASTE HANDLING DEVICES MUST BE REMOVED AND PROPERLY DISPOSED. ALL EQUIPMENT AND VEHICLES USED DURING CONSTRUCTION MUST BE REMOVED UNLESS INTENDED FOR LONG-TERM USE ON THE SITE.

ALL TEMPORARY CONTROL MEASURES THAT WERE INSTALLED DURING CONSTRUCTION MUST BE REMOVED AND PROPERLY DISPOSED. ALL POTENTIAL POLLUTANT AND POLLUTANT-GENERATING ACTIVITIES ASSOCIATED WITH CONSTRUCTION MUST BE REMOVED.

**RECORD KEEPING**

THE CONTRACTOR MUST MAINTAIN ONSITE THE FOLLOWING DOCUMENTS. ALTERNATE FORMS MAY BE USED BY THE CONTRACTOR IF APPROVED BY THE OWNER OR ENGINEER:

1. THE SWPPP, INCLUDING ALL CERTIFICATES, REPORTS, RECORDS, OR OTHER INFORMATION REQUIRED BY THE GENERAL PERMIT.
2. A COPY OF THE NOI SUBMITTED TO SDDANR, INCLUDING A COPY OF THE

- AUTHORIZATION LETTER FROM SDDANR AND ANY OTHER CORRESPONDENCE RELATED TO COVERAGE UNDER THE GENERAL PERMIT.
3. A COPY OF THE GENERAL PERMIT.
  4. COPIES OF ALL INSPECTION REPORTS.
  5. THE CONTRACTOR SHALL FILL OUT "WORKSHEET #1- SCHEDULE OF GRADING AND CONSTRUCTION ACTIVITIES" TO RECORD WHEN TEMPORARY AND PERMANENT GRADING ACTIVITIES STARTED AND ENDED AND WHEN STABILIZATION BMPs FOLLOWED. THIS COMPLETED WORKSHEET SHALL BE MAINTAINED ONSITE WITH THE SWPPP.
  6. CORRECTIVE ACTION LOGS (WORKSHEET #2) SHALL BE MAINTAINED TO DESCRIBE REPAIR, REPLACEMENT, AND MAINTENANCE OF BMPs AS NOTED IN THE MAINTENANCE INSPECTION REPORTS.
  7. CONTRACTOR SHALL USE "WORKSHEET #3- RECORD OF SPILLS AND LEAKS" TO RECORD DATE, MATERIAL, AND QUANTITY OF MATERIAL SPILLED AS WELL AS EFFORTS TO CLEAN UP AND REMOVE WASTE AND PREVENT FUTURE SPILLS.
  8. THE CONTRACTOR SHALL USE "WORKSHEET #4- SWPPP AMENDMENT LOG" TO RECORD ALL CHANGES MADE TO THE SWPPP DUE TO WEATHER CONDITIONS, CHANGING SITE CONDITIONS, AND AS DIRECTED BY THE SDDANR, ENGINEER, OR OWNER IN THE BEST INTERESTS OF STORMWATER AND POLLUTION MANAGEMENT. CONTRACTOR SHALL LOG UPDATES TO THE SWPPP, INCLUDING ADDITIONS OF NEW BMPs, REPLACEMENT OF FAILED BMPs, SIGNIFICANT CHANGES IN THE ACTIVITIES OR THEIR TIMING ON THE PROJECT, CHANGES IN PERSONNEL, CHANGES IN INSPECTION AND MAINTENANCE PROCEDURES, UPDATES TO SITE MAPS, ETC.

**MODIFICATIONS TO THE SWPPP**

THE ENGINEER MAY ORDER CHANGES TO THE SWPPP AND/OR THE CONTRACTOR IS RESPONSIBLE TO REQUEST CHANGES TO THE SWPPP IF UNFORESEEN CHANGES OCCUR, OR THE SWPPP DOES NOT PERFORM AS INTENDED, OR TO IMPROVE THE EFFECTIVENESS OF THE SWPPP, OR TO COMPLY WITH THE SDDANR PERMIT. THE ENGINEER WILL EVALUATE AND DETERMINE IF ANY CONTRACTOR REQUESTED CHANGES TO THE SWPPP SHOULD BE MADE. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THESE CHANGES AS SOON AS PRACTICAL, BEFORE THE NEXT RUNOFF EVENT OR NO LATER THAN SEVEN (7) CALENDAR DAYS AFTER NOTIFICATION. ALL APPROVED CHANGES TO THE SWPPP MUST BE DOCUMENTED BY THE CONTRACTOR.

**KEEPING THE SWPPP CURRENT**

THE CONTRACTOR WILL BE RESPONSIBLE TO MAINTAIN AN ORIGINAL COPY OF THE SWPPP. ANY MODIFICATIONS TO THE SWPPP MUST BE DOCUMENTED AND MADE PART OF THE SWPPP. ANY MODIFICATIONS MUST BE RECORDED ON WORKSHEET #4.

**RETENTION OF RECORDS**

THE OWNER OR CONTRACTOR SHALL MAKE SWPPP AVAILABLE TO SDDANR, U.S. EPA, OR THE LOCAL STORM SEWER OPERATOR UPON REQUEST.

OWNER SHALL RETAIN COPIES OF THE SWPPP ALONG WITH OTHER GENERAL PERMIT DOCUMENTATION AS DEFINED IN SECTION 7.3 OF THE GENERAL PERMIT FOR A PERIOD OF AT LEAST THREE (3) YEARS FROM THE DATE COVERAGE UNDER THE GENERAL PERMIT IS TERMINATED. SDDANR MAY EXTEND THE TIME PERIOD FOR RETAINING RECORDS WITH A WRITTEN NOTIFICATION.

ALL DOCUMENTS REQUIRED TO BE SUBMITTED BY THE GENERAL PERMIT SHALL BE SUBMITTED TO THE SDDANR BY EMAIL (STORMWATER@STATE.SD.US), OR TO THE ADDRESS BELOW:

SD DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES  
 WATER QUALITY PROGRAM  
 523 EAST CAPITOL  
 PIERRE, SD 57501

**TRAINING**

TRAINING SHALL BE PROVIDED BY THE CONTRACTOR FOR THEIR EMPLOYEES AS NECESSARY TO ENSURE COMPLIANCE WITH THE SWPPP.

TRAINING BY THE CONTRACTOR FOR EMPLOYEES AND RESPONSIBLE PARTIES MUST BE PROVIDED AT LEAST ANNUALLY, AS NEW EMPLOYEES OR RESPONSIBLE PARTIES ARE HIRED, OR AS NECESSARY TO ENSURE COMPLIANCE WITH THE SWPPP.

**OWNER SIGNATURE**

THIS SWPPP APPEARS TO FULFILL THE TECHNICAL CRITERIA FOR EROSION CONTROL AND THE REQUIREMENTS OF THE OWNER. I UNDERSTAND THAT ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE NEEDED IF UNFORESEEN EROSION PROBLEMS OCCUR OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS PLAN SHALL RUN WITH THE LAND AND BE THE OBLIGATION OF THE PRIMARY RESPONSIBLE PARTY UNTIL SUCH TIME AS THE PLAN IS PROPERLY COMPLETED, MODIFIED OR VOIDED.

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.

NAME: \_\_\_\_\_  
 PRINTED NAME

SIGNED: \_\_\_\_\_  
 OWNER DATE

**PRIME CONTRACTOR SIGNATURE**

THE "DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES - CONTRACTOR CERTIFICATION FORM" IS TO BE EXECUTED BY THE PRIME CONTRACTOR OR THE CONTRACTOR'S DESIGNATED REPRESENTATIVE. WORK MAY NOT BEGIN ON THE PROJECT UNTIL THIS SECTION IS SIGNED.

[HTTPS://DANR.SD.GOV/OFFICEOFWATER/SURFACEWATERQUALITY/DOCS/DANR\\_CGPA P PENDIXCCA2018FILLABLE.PDF](https://danr.sd.gov/officeofwater/surfacewaterquality/docs/danr_cgpaPendixCCA2018fillable.pdf)

THE FORM CERTIFIES UNDER PENALTY OF LAW THAT THE CONTRACTOR UNDERSTANDS AND WILL COMPLY WITH THE TERMS AND CONDITIONS OF THE SURFACE WATER DISCHARGE GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES FOR THE PROJECT.

I AM ACKNOWLEDGING THE REVIEW AND ACCEPTANCE OF RESPONSIBILITY AS THE PRIMARY RESPONSIBLE PARTY FOR THE INSTALLATION, MAINTENANCE, AND PROPER FUNCTION OF THIS SWPPP.

NAME: \_\_\_\_\_  
 PRINTED NAME

SIGNED: \_\_\_\_\_  
 CONTRACTOR DATE

**DESIGN ENGINEER SIGNATURE**

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF SOUTH DAKOTA.

NAME: Matthew Brua  
 PRINTED NAME

SIGNED: *Matthew Brua* 8/27/2024  
 ENGINEER DATE

**TEMPORARY EROSION CONTROL MEASURES**

**INSTALLATION OF TEMPORARY EROSION CONTROL MEASURES**

THE CONTRACTOR SHALL NOT BEGIN THE REMOVAL OF SURFACING OR TOPSOIL WITHIN THE APPLICABLE WORK AREA UNTIL THE APPLICABLE DOWNGRADIENT EROSION AND SEDIMENT CONTROL MEASURES ARE PLACED. TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED AS NECESSARY AS CONSTRUCTION PROGRESSES AND THESE TEMPORARY EROSION CONTROL DEVICES SHALL BE INSTALLED WITHIN 24 HOURS AT LOCATIONS IDENTIFIED ON THE SWPPP.

**SEDIMENT CONTROL MEASURES**

**INSTALLATION OF SEDIMENT CONTROL MEASURES**

THE CONTRACTOR SHALL NOT BEGIN THE REMOVAL OF SURFACING OR TOPSOIL WITHIN THE APPLICABLE WORK AREA UNTIL ALL APPLICABLE SEDIMENT CONTROL MEASURES ARE PLACED. SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AS NECESSARY AS CONSTRUCTION PROGRESSES AND THESE SEDIMENT CONTROL DEVICES SHALL BE INSTALLED WITHIN 24 HOURS AT LOCATIONS IDENTIFIED ON THE SWPPP.

EFFECTIVE SEDIMENT CONTROLS MUST BE INSTALLED FOR ANY SIDESLOPE BOUNDARIES AND DOWN GRADIENT OF THE CONSTRUCTION SITE.

**CONSTRUCTION ENTRANCE**

**MAINTENANCE REQUIREMENTS:** CONSTRUCTION ENTRANCE SHOULD BE INSPECTED FREQUENTLY FOR EXCESSIVE SEDIMENT BUILD-UP TO ENSURE THAT MUD AND SEDIMENT ARE NOT BEING TRACKED ONTO THE ROADWAY OR OFFSITE. CONSTRUCTION ENTRANCE MATERIAL MUST BE CLEANED OR REPLACED WHEN THE EFFECTIVENESS OF DIRT REMOVAL IS REDUCED. ADDITIONAL STREET CLEANING MAY BE REQUIRED IF UNABLE TO RETAIN SEDIMENT ON SITE.



PROJECT / SHEET TITLE: 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS	
STORM WATER POLLUTION PREVENTION PLAN NOTES	
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REV.	DATE



JOB No.:	24303.00
DATE:	SEPTEMBER 2024
ENG / ARCH:	MJB
DESIGNER:	
TECHNICIAN:	

SHEET No.: 9

**STREET SWEEPING**

**CONSTRUCTION REQUIREMENTS:** STREET SWEEPING IS REQUIRED DURING CONSTRUCTION AND BEFORE FINAL COMPLETION OF WORK TO KEEP STREETS ADJACENT TO AND WITHIN THE PROJECT AREA CLEAN. THE MINIMUM EQUIPMENT TO BE USED FOR STREET SWEEPING SHALL BE A SKID LOADER WITH A PICKUP BROOM ATTACHMENT OR APPROVED EQUAL. MUD AND SEDIMENT TRACKED ONTO ANY OF THE ADJACENT ROADS SHALL BE REMOVED BY THE END OF THE WORKDAY.

**MAINTENANCE:** SWEEPING SHALL BE PERFORMED AS NEEDED TO REMOVE TRACKED MUD AND SEDIMENT FROM THE ROADWAY. DAILY SWEEPING MAY BE NECESSARY IF PROJECT CONDITIONS WARRANT. DO NOT SWEEP OR HOSE OUT MUD OR SEDIMENT INTO STORM DRAIN INLETS, CULVERTS, SURFACE WATERS, OR ANY OTHER STORMWATER CONVEYANCE.

**CONCRETE WASHOUT AREA**

**CONSTRUCTION REQUIREMENTS:** ANY TIME CONCRETE IS USED, BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE UTILIZED. CONCRETE WASHOUT AREAS SHALL BE INSTALLED ON THE PROJECT SITE AT LOCATIONS APPROVED BY THE ENGINEER IF CONCRETE TRUCKS DELIVER CONCRETE TO THE SITE. NO WASHOUT AREA IS NECESSARY IF ALL CONCRETE TRUCKS ARE GOING TO WASH OUT OFF-SITE AT AN AREA PROVIDED BY THE CONCRETE SUPPLIER. BMP'S FOR HANDLING CONCRETE AREA(S) ARE AS FOLLOWS:

1. CONCRETE TRUCK CHUTES, PUMPS, AND INTERNALS SHALL BE WASHED OUT ONLY INTO FORMED AREAS AWAITING INSTALLATION OF CONCRETE OR ASPHALT;
2. UNUSED CONCRETE REMAINING IN THE TRUCK AND PUMP SHALL BE RETURNED TO THE ORIGINAL BATCH PLANT FOR RECYCLING;
3. HAND TOOLS INCLUDING, BUT NOT LIMITED TO, SCREEDS, SHOVELS, RAKES, FLOATS, AND TROWELS SHALL BE WASHED OFF ONLY INTO FORMED AREAS AWAITING INSTALLATION OF CONCRETE OR ASPHALT;
4. EQUIPMENT THAT CANNOT BE EASILY MOVED, SUCH AS CONCRETE PAVERS, SHALL ONLY BE WASHED OUT IN AREAS THAT DO NOT DIRECTLY DRAIN TO NATURAL OR CONSTRUCTED STORMWATER CONVEYANCES;
5. WASHDOWN FROM AREAS SUCH AS CONCRETE AGGREGATE DRIVEWAYS SHALL NOT DRAIN DIRECTLY TO A NATURAL OR CONSTRUCTED STORMWATER CONVEYANCES;
6. WHEN NO FORMED AREAS ARE AVAILABLE, WASH WATER AND LEFTOVER PRODUCT SHALL BE CONTAINED IN A LINED CONTAINER. CONTAINED CONCRETE SHALL BE DISPOSED OF IN A MANNER THAT DOES NOT VIOLATE GROUND WATER OR SURFACE WATER QUALITY STANDARDS.

**MAINTENANCE REQUIREMENTS:** THE CONCRETE WASHOUT AREA MUST BE KEPT IN A CONDITION TO MAINTAIN THE CAPACITY FOR ALL WASTED CONCRETE AND WASHOUT WATER ON THE PROJECT. THERE SHALL BE NO DISCHARGE FROM THE CONCRETE WASHOUT AREA.

**SEDIMENT CONTROL WATTLE**

**CONSTRUCTION REQUIREMENTS:** THE CONTRACTOR SHALL PROVIDE CERTIFICATION THAT THE SEDIMENT CONTROL WATTLES DO NOT CONTAIN NOXIOUS WEED SEEDS.

**MAINTENANCE:** SEDIMENT MUST BE REMOVED ON A ROUTINE BASIS WHEN THE LEVEL OF SEDIMENTATION REACHES ONE-HALF THE HEIGHT OF THE EXPOSED WATTLE. DAMAGED AREAS SHOULD BE REPAIRED BY THE END OF THE WORKDAY UNTIL THE VEGETATION IS ESTABLISHED AND GROWING THROUGH THE MATERIAL.

**MATERIALS:** THE EROSION CONTROL WATTLE SHALL BE 12" DIAMETER WITH BIODEGRADABLE NETTING AND SELECTED FROM THE MANUFACTURERS LISTED BELOW, OR APPROVED EQUAL:

<u>MANUFACTURER</u>	<u>PRODUCT NAME</u>
AMERICAN EXCELSIOR COMPANY	CURLEX SEDIMENT LOG
ARLINGTON, TX	
PHONE: 1-800-777-7645	
<a href="http://WWW.AMERICANEXCELSIOR.COM">WWW.AMERICANEXCELSIOR.COM</a>	

WESTERN EXCELSIOR CORPORATION	ASPEN FIBER LOGS AND STRAW LOGS
MANCOS, CO	
PHONE: 1-800-833-8573	
<a href="http://WWW.WESTERNEXCELSIOR.COM">WWW.WESTERNEXCELSIOR.COM</a>	

R.H. DYCK INC.	EARTH-SAVER RICE STRAW WATTLES
WINTERS, CA	
PHONE: 1-530-662-7700	
<a href="http://WWW.EARTH-SAVERS.COM">WWW.EARTH-SAVERS.COM</a>	

**PERMANENT EROSION CONTROL MEASURES**

**INSTALLATION OF PERMANENT EROSION CONTROL MEASURES**

THIS WORK SHALL BE DONE AS SOON AS POSSIBLE AFTER FINISH GRADING AND TOPSOIL PLACEMENT IS COMPLETED, AND IF PRACTICAL, PRIOR TO SEEDING, FERTILIZING, AND MULCHING OF ADJACENT AREAS. AT A MINIMUM, THE WORK MUST BE COMPLETED WITHIN THE TIMEFRAMES LISTED WITHIN THE SOIL SURFACE STABILIZATION PRACTICES NOTES.

**TOPSOIL**

THE FOLLOWING INFORMATION IS TO PROVIDE AN INFORMATIONAL GUIDELINE TO THE CONTRACTOR REGARDING TOPSOIL PLACEMENT AND THE SWPPP. WHERE FEASIBLE, PRESERVE THE NATIVE TOPSOIL. TOPSOIL PLACEMENT LOCATIONS MUST BE DETAILED ON THE SITE MAP. GENERALLY, TOPSOIL WILL BE PLACED OVER ALL DISTURBED AREAS TO A DEPTH OF 6 INCHES. THE PLACEMENT OF THE TOPSOIL SHALL BE AS SOON AS POSSIBLE UPON COMPLETION OF THE GRADING OPERATIONS.

**SEEDING AND FERTILIZING**

THE CONTRACTOR SHALL PROVIDE CERTIFICATION THAT THE SEED MIX FOR FINAL STABILIZATION DOES NOT CONTAIN NOXIOUS WEED SEEDS.

**CONSTRUCTION REQUIREMENTS:** SEE PROJECT MANUAL AND GENERAL NOTES FOR SPECIFICATIONS.

**HYDROMULCHING**

FIBER MULCHING SHALL BE USED IN INSTANCES WHEN SEEDING WILL BE WELL ESTABLISHED WITHIN THE 45-DAY MAINTENANCE PERIOD. IF THE SEED WILL NOT BE ESTABLISHED WITHIN THE 45-DAY MAINTENANCE PERIOD, THE AREA WILL BE DORMANT SEED, OR IF IT IS IN A CHALLENGING AREA (I.E. STEEP SLOPES, SWALES, ETC.), USE BONDED FIBER MATRIX INSTEAD.

**CONSTRUCTION REQUIREMENTS:** SEE PROJECT MANUAL FOR SPECIFICATIONS.

**MATERIALS:** THE FIBER MULCHING PROVIDED SHALL BE FROM THE APPROVED PRODUCT LIST. THE APPROVED PRODUCT LIST FOR FIBER MULCH MAY BE VIEWED AT THE FOLLOWING INTERNET SITE:

[HTTPS://APPS.SD.GOV/HC60APPROVEDPRODUCTS/MAIN.ASPX](https://apps.sd.gov/hc60approvedproducts/main.aspx)

APPROPRIATE DOCUMENTATION SHALL BE GIVEN TO THE ENGINEER FOR PRIOR APPROVAL BEFORE APPLICATION.

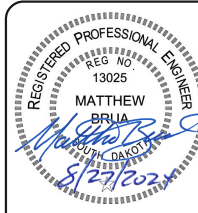
**MAINTENANCE:** BARE SPOTS OR LOCATIONS OF EROSION SHOULD BE REPAIRED AND RE-SEEDED AT NO ADDITIONAL COST TO THE OWNER.



PROJECT / SHEET TITLE : 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS  
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BROOKINGS, SD

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DESIGNER:	
TECHNICIAN:	



SHEET No. : 10





**WORKSHEET #3- RECORD OF SPILLS AND LEAKS**

INSTRUCTIONS: RECORD BELOW ALL SPILLS AND SIGNIFICANT LEAKS OF TOXIC OR HAZARDOUS POLLUTANTS THAT HAVE OCCURRED ON SITE; SIGNIFICANT SPILLS INCLUDE, BUT ARE NOT LIMITED TO, RELEASES OF OIL OR HAZARDOUS SUBSTANCES IN EXCESS OF REPORTABLE QUANTITIES

DATE	LEAK/SPILL	LOCATION	TYPE OF LIQUID	AMOUNT	SOURCE AND CAUSE	RESPONSE PROCEDURE	PREVENTATIVE MEASURES TAKEN

TO REPORT A RELEASE OR SPILL, CALL SDDANR 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 SDDANR 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 SDDANR WITHIN 14 DAYS OF THE DISCHARGE.

SPILLS ARE SUBJECT TO THE FEDERAL REPORTING REQUIREMENTS OF 40 CFR PART 110, PART 117, AND PART 302 RELATING TO SPILLS OR OTHER RELEASES OF OILS OR HAZARDOUS SUBSTANCES. YOU MUST REPORT SPILLS IN EXCESS OF THE REPORTABLE QUANTITIES AS REQUIRED IN SECTION 7.1 OF THE STORMWATER GENERAL PERMIT.

**WORKSHEET #4 - SWPPP AMENDMENT LOG**

INSTRUCTIONS: DESCRIBE CHANGES TO THE SWPPP

AMENDMENT NUMBER	DESCRIPTION	REASON	DATE	AUTHORIZED BY

NOTE: CONTRACTOR SHALL MAKE ADDITIONAL COPIES OF THIS SHEET AS NEEDED FOR RECORD KEEPING; OR MAINTAIN INDIVIDUAL RECORDS TO MEET THE REQUIREMENTS OF THE GENERAL PERMIT.



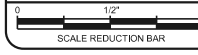
PROJECT / SHEET TITLE : 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS  
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TECHNICIAN:



SHEET No. : 13

**ROUTINE ON-SITE STORMWATER INSPECTION CHECKLIST**

General Information			
Project Name		Stormwater Permit Number	
Inspector / Title		Location	
Date and Time		Weather at the time of inspection?	Choose an item.
Weather Information			
Date of last precipitation		Type of inspection?	<input type="checkbox"/> 7 calendar day <input type="checkbox"/> Storm event greater than 1/2"
Amount of last precipitation			<input type="checkbox"/> Complaint
Sediment discharging offsite?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Was stormwater flowing during the inspection?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Dewatering activities occurring?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Choose an item.	If Yes to above question, where was it flowing? <input type="checkbox"/> Onsite <input type="checkbox"/> offsite
Best Management Practices (BMPs)			
Type of BMP installed	Maintenance needed?	Required corrective actions and notes	
<input type="checkbox"/> Silt fence	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Erosion wattles	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Erosion blankets	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Rock check dams	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Sediment basin	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Inlet protection	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Outlet protection	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Stabilized construction entrance	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Surface roughening	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Seeding	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Mulching	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Vegetated buffer	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Other – describe:	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Additional controls needed?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Site Observation			
Observations	Corrective action needed and SWPPP update notes		
Is general permit posted as required by section 2.10	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Are all disturbed areas not actively being worked properly stabilized?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Are locations where vehicles enter and exit the site properly maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Is there vehicle track-out?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Has sediment been discharged off site?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Are discharge points and receiving waters free of sediment deposits?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Is debris from work area collected and placed in covered dumpsters?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other pollutants?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Is there evidence of any other spills, leaks, or accumulation of pollutants on the site?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
if yes, are additional controls needed to prevent a discharge?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Do materials that are potential stormwater contaminants have BMPs?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Stockpiles <input type="checkbox"/> Fertilizer Storage			
<input type="checkbox"/> Chemical Storage <input type="checkbox"/> Pesticide Storage			
<input type="checkbox"/> Fuel Storage <input type="checkbox"/> Equipment Storage			
<input type="checkbox"/> Maintenance Areas			
Does upstream drainage or stormwater need to be diverted around or away from the site?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Is there evidence of scour, erosion, or sediment deposits?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
SWPPP need updating?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Other observations?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Compliance certification (check only one)			
<input type="checkbox"/> With the maintenance and improvement actions noted, the site is in compliance with the SWPPP and SD general permit for construction activities			
<input type="checkbox"/> The site is in potential noncompliance with the SWPPP or the general permit for construction activities.			
Describe the potential noncompliance issue(s) e.g. repeated failure of a BMP, failure to install a required BMP, a visible off-site discharge of material (silt, sand, concrete washout, oily water, etc.), potential off-site discharges, or potential BMP failures (attach additional pages if needed):			

*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 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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

SIGNATURE	DATE
PRINTED NAME	PRINTED TITLE



PROJECT / SHEET TITLE : 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS  
 STORM WATER POLLUTION PREVENTION PLAN NOTES  
 BROOKINGS, SD  
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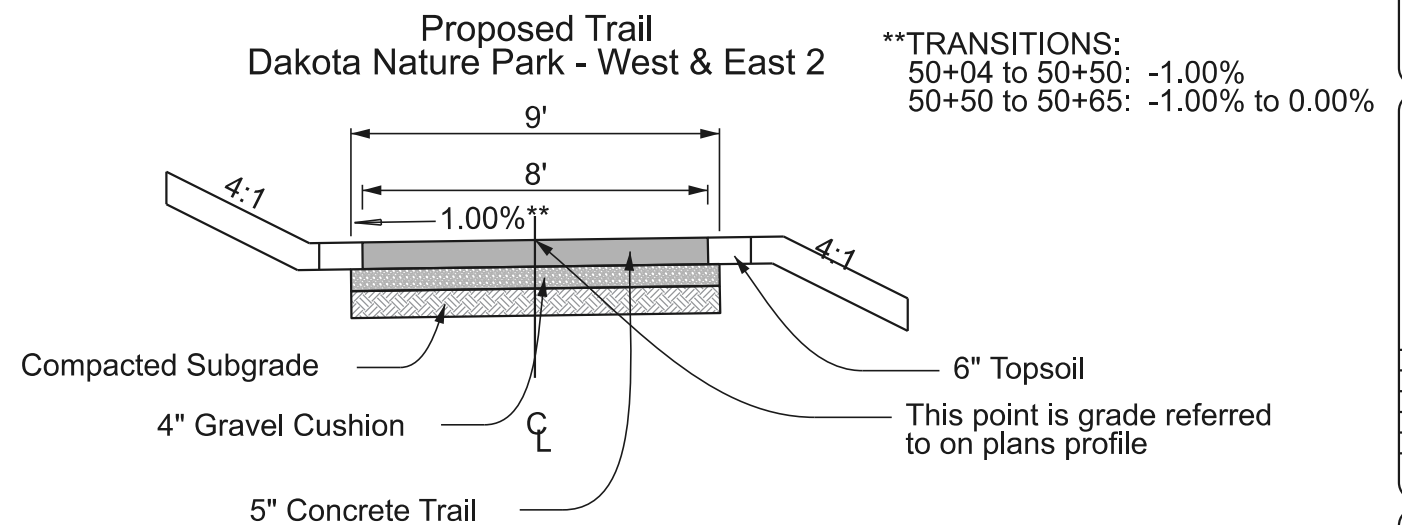
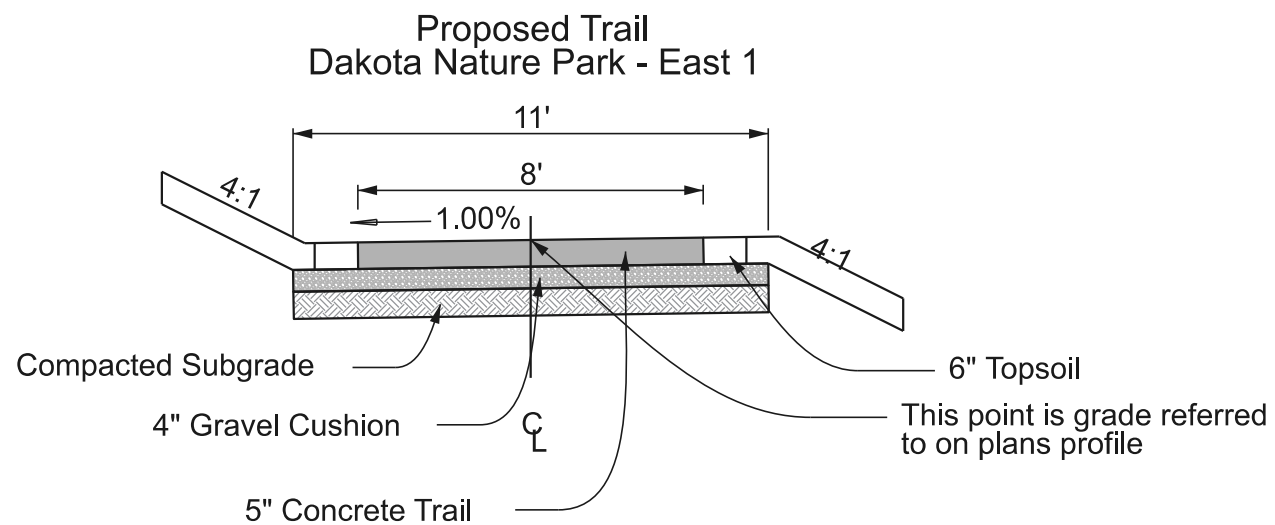
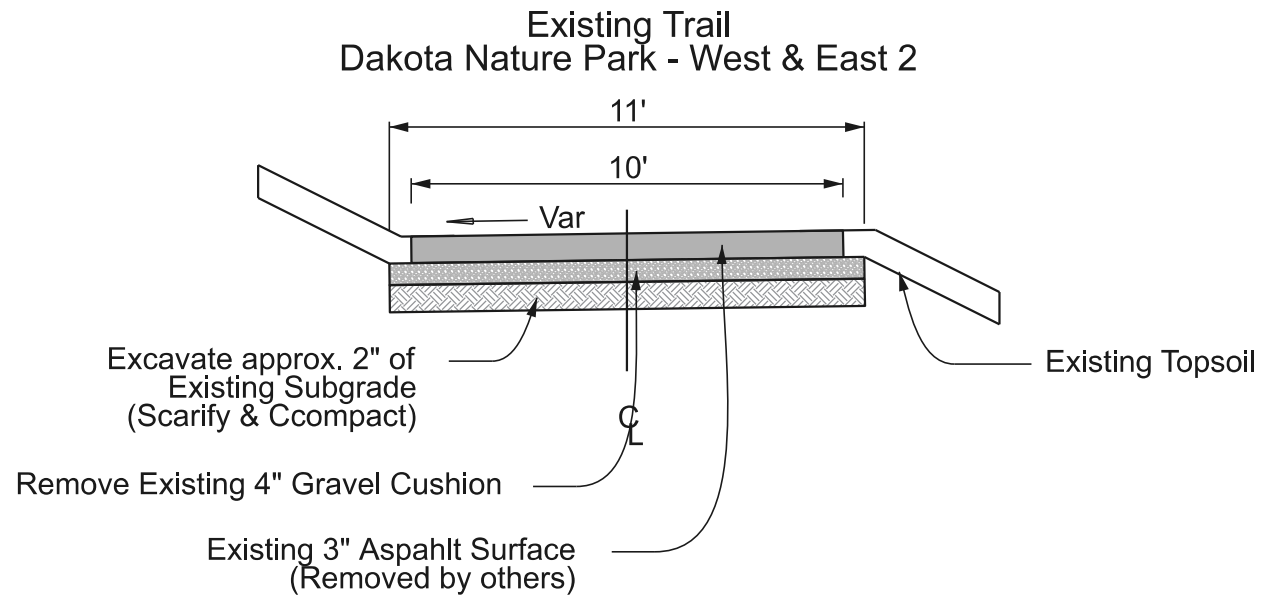
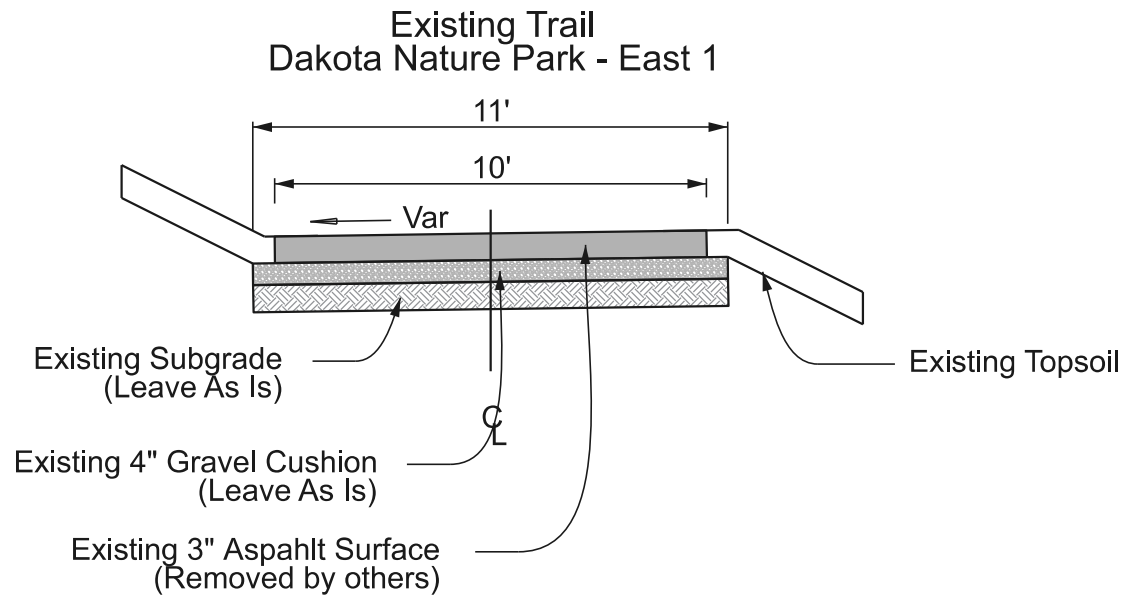
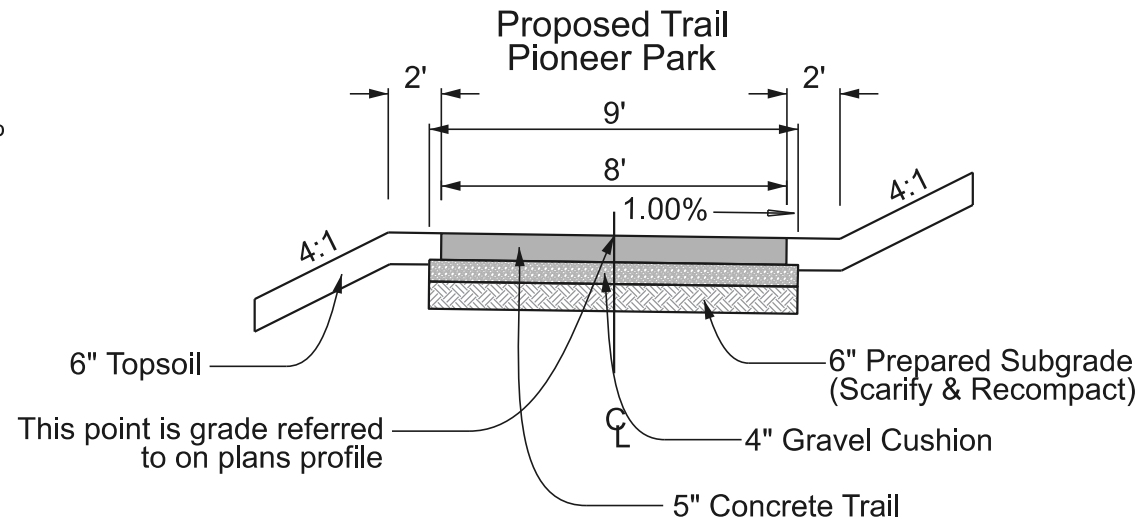
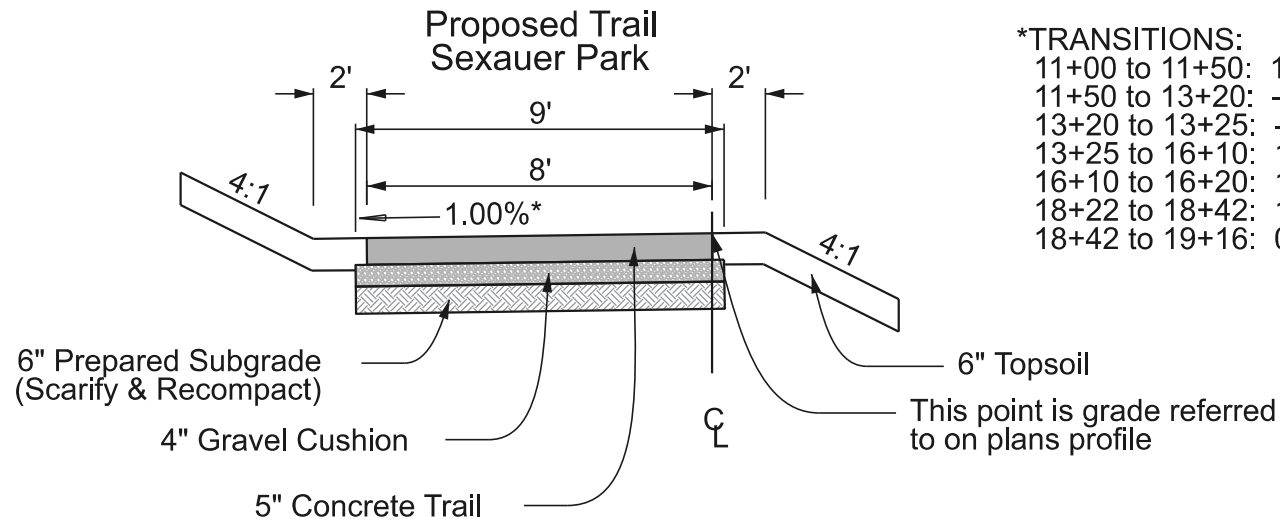
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ENG / ARCH:	MJB
DESIGNER:	
TECHNICIAN:	

0      1/2"      1"  
SCALE REDUCTION BAR

SHEET No. : **14**

# TYPICAL SECTIONS

- \*TRANSITIONS:**  
 11+00 to 11+50: 1.00% to -1.00%  
 11+50 to 13+20: -1.00%  
 13+20 to 13+25: -1.00% to 1.50%  
 13+25 to 16+10: 1.50%  
 16+10 to 16+20: 1.50% to 1.00%  
 18+22 to 18+42: 1.00% to 0.00%  
 18+42 to 19+16: 0.00%



- \*\*TRANSITIONS:**  
 50+04 to 50+50: -1.00%  
 50+50 to 50+65: -1.00% to 0.00%

PROJECT / SHEET TITLE: 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS

TYPICAL SECTIONS

BROOKINGS, SD

REV.	DATE	DESCRIPTION



JOB No.: 24303.00  
 DATE: SEPTEMBER 2024  
 ENG / ARCH: MJB  
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 TECHNICIAN:

SCALE REDUCTION BAR  
 0 12" 1"

# HORIZONTAL ALIGNMENT & CONTROL DATA



## Sexauer

Type	Station		Northing	Easting
POB	10+00.00		193099.120	2804808.945
		TL= 4.95 S 54°39'03" E		
PC	10+04.95		193096.256	2804812.981
PI	10+41.56	R= 30.00 Delta = 95°55'54" L	193075.077	2804842.839
PT	10+60.20		193106.964	2804860.819
		TL= 46.11 N 29°25'03" E		
PC	11+06.31		193147.127	2804883.466
PI	11+12.27	R= 50.00 Delta = 13°35'17" R	193152.315	2804886.392
PT	11+18.17		193156.672	2804890.455
		TL= 154.05 N 42°23'23" E		
PC	12+72.21		193270.446	2804994.308
PI	12+81.84	R= 50.00 Delta = 21°47'17" R	193277.553	2805000.795
PT	12+91.23		193281.745	2805009.457
		TL= 124.22 N 66°59'43" E		
PC	14+15.45		193330.292	2805123.802
PI	14+31.00	R= 50.00 Delta = 34°32'35" L	193336.418	2805138.091
PT	14+45.60		193349.566	2805146.386
		TL= 183.68 N 32°15'00" E		
PC	16+29.27		193504.908	2805244.399
PI	16+55.55	R= 50.00 Delta = 55°27'09" R	193527.134	2805258.422
PT	16+77.67		193528.187	2805284.681
		TL= 238.78 N 87°42'09" E		
POE	19+16.44		193537.760	2805523.267

## Pioneer

Type	Station		Northing	Easting
POB	20+00.00		190263.277	2804612.405
		TL= 28.11 N 44°52'59" E		
PC	20+28.11		190291.365	2804611.419
PI	20+48.67	R= 100.00 Delta = 23°14'17" R	190311.914	2804610.698
PT	20+68.66		190331.081	2804618.143
		TL= 59.40 N 21°13'40" E		
POE	21+28.06		190386.447	2804639.649

## Dakota Nature West

Type	Station		Northing	Easting
POB	30+00.00		176211.855	2812777.049
		TL= 41.39 N 02°00'38" W		
PI	30+41.39		176241.178	2812806.253
		TL= 48.96 N 49°23'38" E		
PC	30+90.34		176273.041	2812843.420
PI	31+12.78	R= 40.00 Delta = 23°14'17" R	176287.646	2812860.456
PCC	31+16.00	R= 155.79 Delta =	176294.658	2812856.417
POE	31+51.36		176329.734	2812860.188

## Dakota Nature East - 1

Type	Station		Northing	Easting
PC	40+00.00		176107.376	2814262.847
CC		R= 210.21 Delta = 47°52'46" L	176270.817	2814130.658
PCC	40+27.86		176126.280	2814283.289
CC	20+68.66	R= 102.02 Delta =	176196.427	2814209.214
PCC	20+48.67		176158.194	2814303.797
CC	20+68.66	R= 205.57 Delta =	176235.235	2814113.209
PT	20+68.66		176223.921	2814318.467
		TL= 78.30 N 03°09'18" E		
PC	42+11.97		176302.104	2814322.777
PI	42+55.13	R= 64.95 Delta = 67°12'05" R	176345.193	2814325.152
PT	42+88.15		176359.701	2814365.796
		TL= 15.53 N 70°21'23" E		
POE	43+03.68		176364.922	2814380.424

## Dakota Nature East - 2

Type	Station		Northing	Easting
POB	50+00.00		176135.755	2814291.23
		TL= 17.14 S 53°30'27" E		
PC	50+17.14		176125.560	2814305.011
PI	50+28.40	R= 200.00 Delta = 06°26'39" R	176118.865	2814314.062
PT	50+39.64		176111.195	2814322.305
		TL= 17.76 S 47°03'48" E		
PC	50+57.39		176099.100	2814335.304
PI	50+65.16	R= 30.60 Delta = 28°29'54" R	176093.806	2814340.994
PT	50+72.61		176086.439	2814343.469
		TL= 16.00 S 18°33'54" E		
PI	50+88.21		176071.652	2814348.435
		S 16°38'09" E		
POE	50+96.55		176063.667	2814350.821

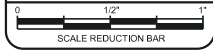
Point	Northing	Easting	Elevation	Description
500	193214.706	2805302.087	1604.39	18" Rebar w /cap
501	193597.810	2805800.998	1607.92	18" Rebar w /cap
502	193519.952	2805559.745	1608.05	18" Rebar w /cap
900	190421.229	2804057.315	1604.84	18" Rebar w /cap
901	190199.067	2804400.767	1608.83	18" Rebar w /cap
902	176444.026	2814631.124	1604.08	18" Rebar w /cap
9900	175341.699	2813481.076	1600.52	18" Rebar w /cap

PROJECT / SHEET TITLE :  
 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS  
 HORIZONTAL ALIGNMENT & CONTROL DATA

BROOKINGS, SD  
 DESCRIPTION



JOB No.: 24303.00  
 DATE: SEPTEMBER 2024  
 ENG / ARCH: MJB  
 DESIGNER:  
 TECHNICIAN:

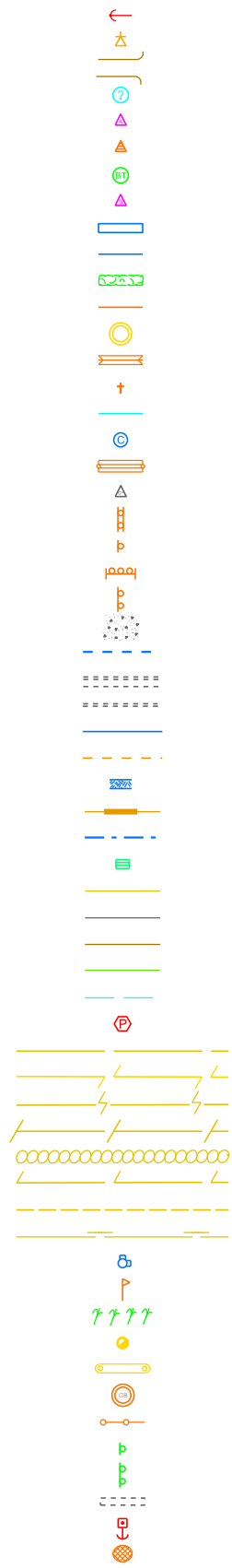


SHEET No. :  
 16

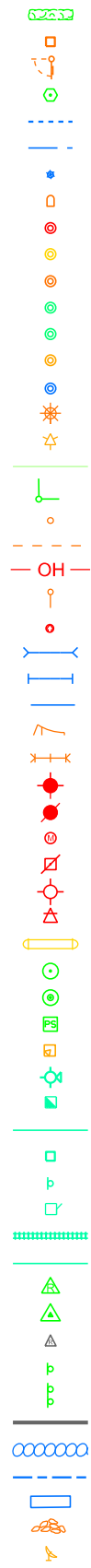


# LEGEND

Anchor  
 Antenna  
 Approach  
 Assumed Corner  
 Azimuth Marker  
 BBQ Grill/ Fireplace  
 Bearing Tree  
 Bench Mark  
 Box Culvert  
 Bridge  
 Brush  
 Buildings  
 Bulk Tank  
 Cattle Guard  
 Cemetery  
 Centerline  
 Cistern  
 Clothes Line  
 Control Point  
 Commercial Sign Double Face  
 Commercial Sign One Post  
 Commercial Sign Overhead  
 Commercial Sign Two Post  
 Concrete Symbol  
 Creek Edge  
 Curb/Gutter  
 Curb  
 Dam Grade/Dike/Levee  
 Deck Edge  
 Ditch Block  
 Doorway Threshold  
 Drainage Profile  
 Drop Inlet  
 Edge Of Asphalt  
 Edge Of Concrete  
 Edge Of Gravel  
 Edge Of Other  
 Edge Of Shoulder  
 Elec. Trans./Power Jct. Box  
 Fence Barbwire  
 Fence Chainlink  
 Fence Electric  
 Fence Misc.  
 Fence Rock  
 Fence Snow  
 Fence Wood  
 Fence Woven  
 Fire Hydrant  
 Flag Pole  
 Flower Bed  
 Gas Valve Or Meter  
 Gas Pump Island  
 Grain Bin  
 Guardrail  
 Guide Sign One Post  
 Guide Sign Two Post  
 Gutter  
 Guy Pole  
 Haystack



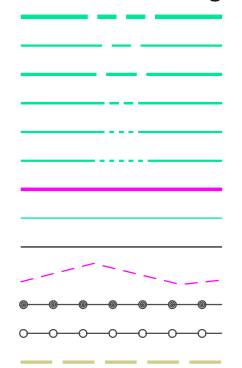
Hedge  
 Highway ROW Marker  
 Interstate Close Gate  
 Iron Pin  
 Irrigation Ditch  
 Lake Edge  
 Lawn Sprinkler  
 Mailbox  
 Manhole Electric  
 Manhole Gas  
 Manhole Misc  
 Manhole Sanitary Sewer  
 Manhole Storm Sewer  
 Manhole Telephone  
 Manhole Water  
 Merry-Go-Round  
 Microwave Radio Tower  
 Misc. Line  
 Misc. Property Corner  
 Misc. Post  
 Overhang Or Encroachment  
 Overhead Utility Line  
 Parking Meter  
 Pedestrian Push Button Pole  
 Pipe With End Section  
 Pipe With Headwall  
 Pipe Without End Section  
 Playground Slide  
 Playground Swing  
 Power And Light Pole  
 Power And Telephone Pole  
 Power Meter  
 Power Pole  
 Power Pole And Transformer  
 Power Tower Structure  
 Propane Tank  
 Property Pipe  
 Property Pipe With Cap  
 Property Stone  
 Public Telephone  
 Railroad Crossing Signal  
 Railroad Milepost Marker  
 Railroad Profile  
 Railroad R.O.W. Marker  
 Railroad Signs  
 Railroad Switch  
 Railroad Track  
 Railroad Trestle  
 Rebar  
 Rebar With Cap  
 Reference Mark  
 Regulatory Sign One Post  
 Regulatory Sign Two Post  
 Retaining Wall  
 Riprap  
 River Edge  
 Rock And Wire Baskets  
 Rockpiles  
 Satellite Dish



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



State and National Line  
 County Line  
 Section Line  
 Quarter Line  
 Sixteenth Line  
 Property Line  
 Construction Line  
 ROW Line  
 New ROW Line  
 Cut and Fill Limits  
 Control of Access  
 New Control of Access  
 Proposed ROW  
 (After Property Disposal)



Drainage Arrow



Remove Concrete Pavement



Remove Concrete Driveway Pavement



Remove Asphalt Concrete Pavement



Remove Concrete Sidewalk



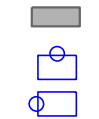
Remove Concrete Median Pavement



Remove Concrete Curb and/or Gutter



Detectable Warning  
 Pedestrian Push Button Pole  
 and 30" x 48" Clear Space  
 with 1.5% slope



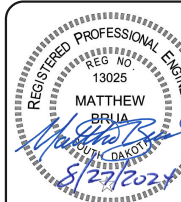
PROJECT / SHEET TITLE : 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS

## LEGEND

BROOKINGS, SD

DESCRIPTION

REV.	DATE	DESCRIPTION



JOB No.:	24303.00
DATE:	SEPTEMBER 2024
ENG / ARCH:	MJB
DESIGNER:	
TECHNICIAN:	



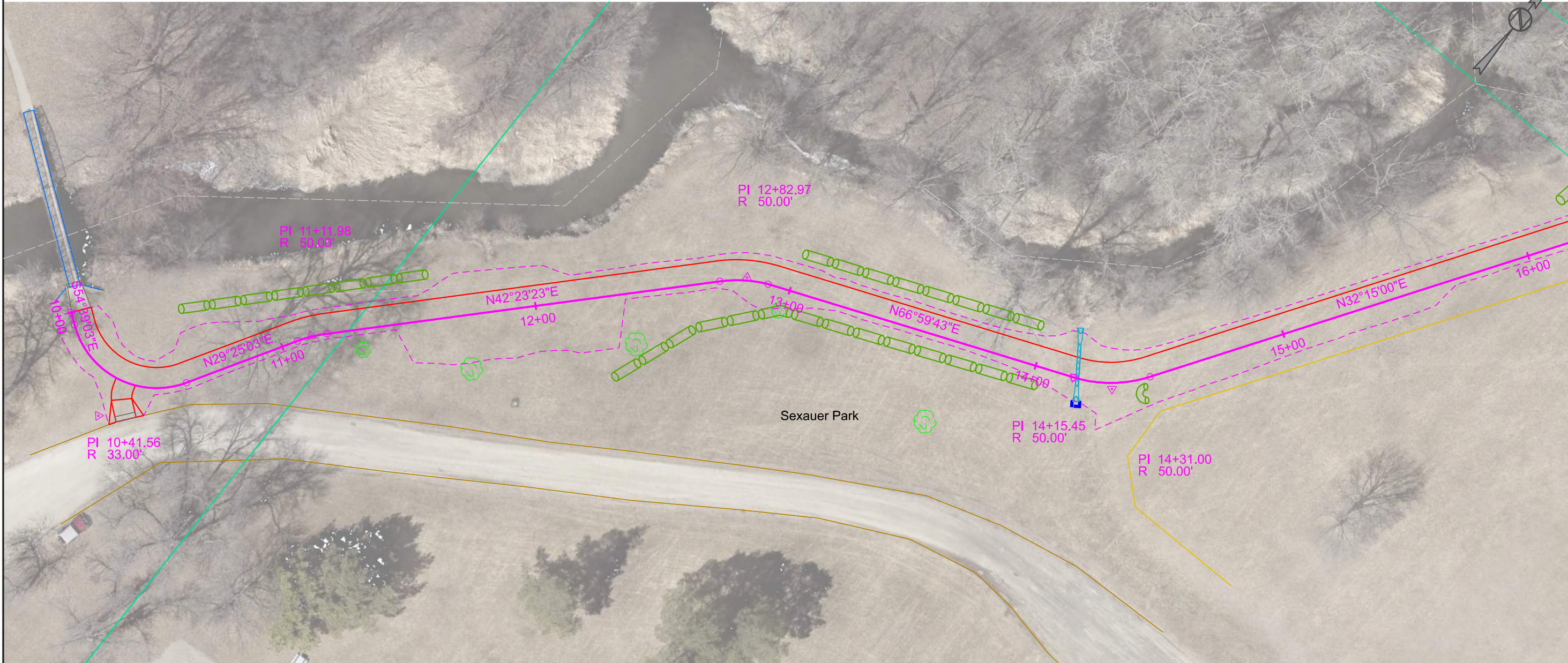
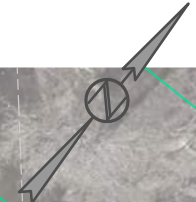
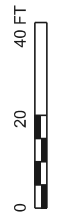
SHEET No. : 17

Install 12" Diameter Erosion Control Wattles  
at the following locations:  
10+68-28' L to 11+59-18' L 95 Ft  
12+27-32' R to 14+02-8' R 173 Ft  
13+02-15' L to 13+98-16' L 95 Ft  
14+41-6' R 10 Ft

Install 5" Concrete Trail  
10+00 to 19+16 - 7478 SF  
  
10+39-12' R  
Install Type 1 Detectable Warning Panel - 16 SF

Install High Flow Silt Fence  
at the following locations:  
14+17 R Inlet end of pipe 18 Ft

14+17  
Install 12" - 18' RCP  
Skew 11.1° RHF  
& 2 Flared Ends



PROJECT / SHEET TITLE : 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS

PLAN - SEXAUER PARK

BROOKINGS, SD

DESCRIPTION

REV. DATE

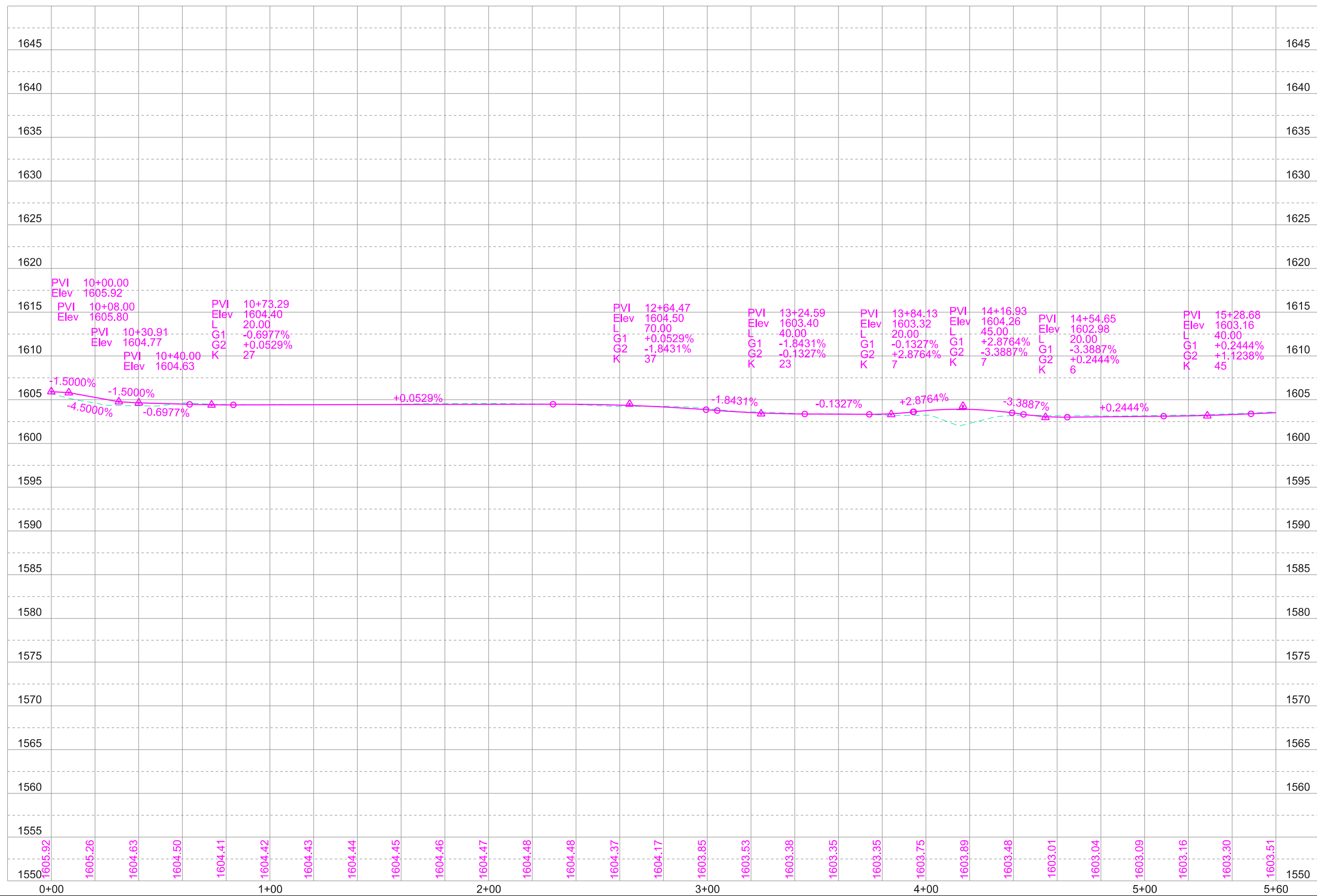
PROJECT / SHEET TITLE :



JOB No.: 24303.00  
DATE: SEPTEMBER 2024  
ENG / ARCH: MJB  
DESIGNER:  
TECHNICIAN:



SHEET No. : 18



PROJECT / SHEET TITLE: 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS

PROFILE - SEXAUER PARK

BROOKINGS, SD

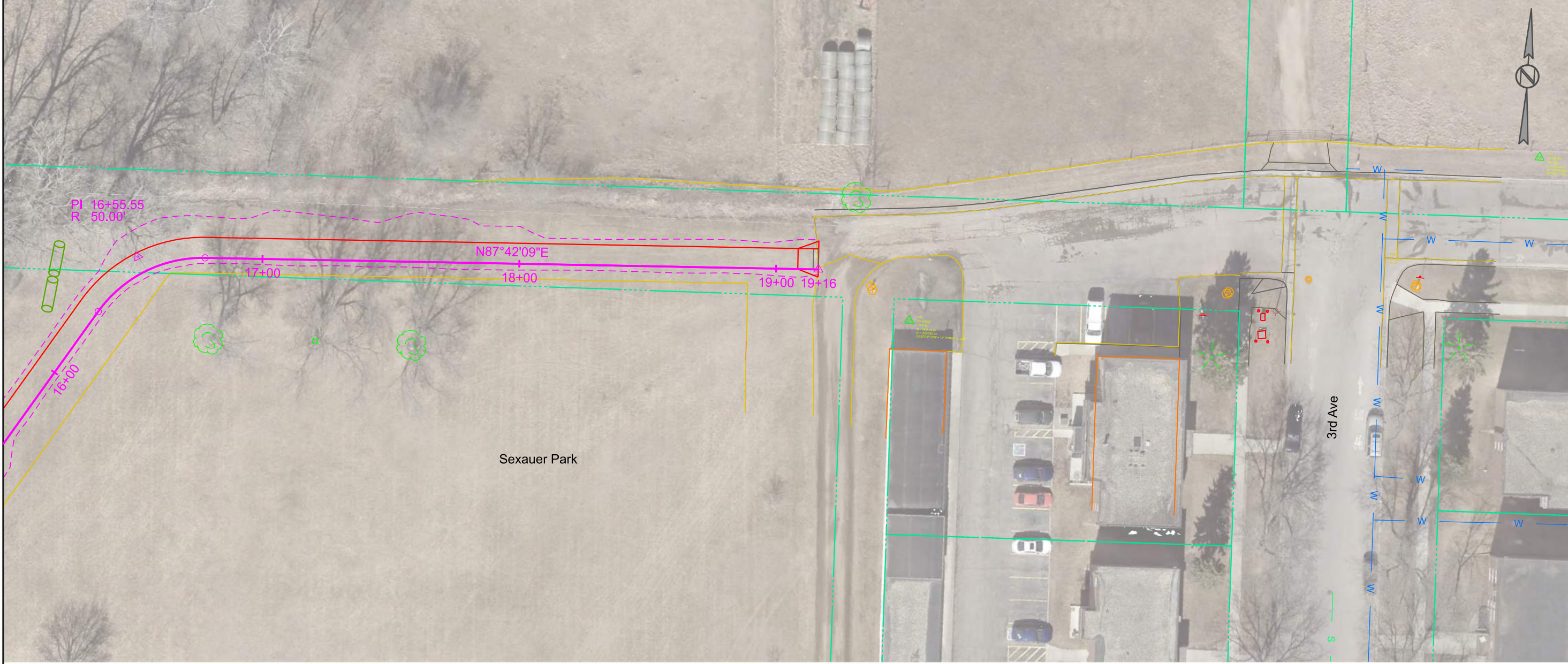
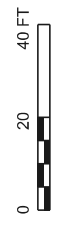


REV.	DATE	DESCRIPTION

JOB No.: 24303.00  
 DATE: SEPTEMBER 2024  
 ENG / ARCH: MJB  
 DESIGNER:  
 TECHNICIAN:  
 SCALE REDUCTION BAR  
 SHEET No.: 19

Install 12" Diameter Erosion Control Wattles  
at the following locations:  
16+19-17' L to 16+37-28' L 25 Ft

19+14-4' L  
Install Type 1 Detectable Warning Panel - 16 SF



PROJECT / SHEET TITLE : 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS  
PLAN - SEXAUER PARK

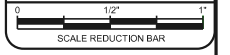
BROOKINGS, SD

DESCRIPTION

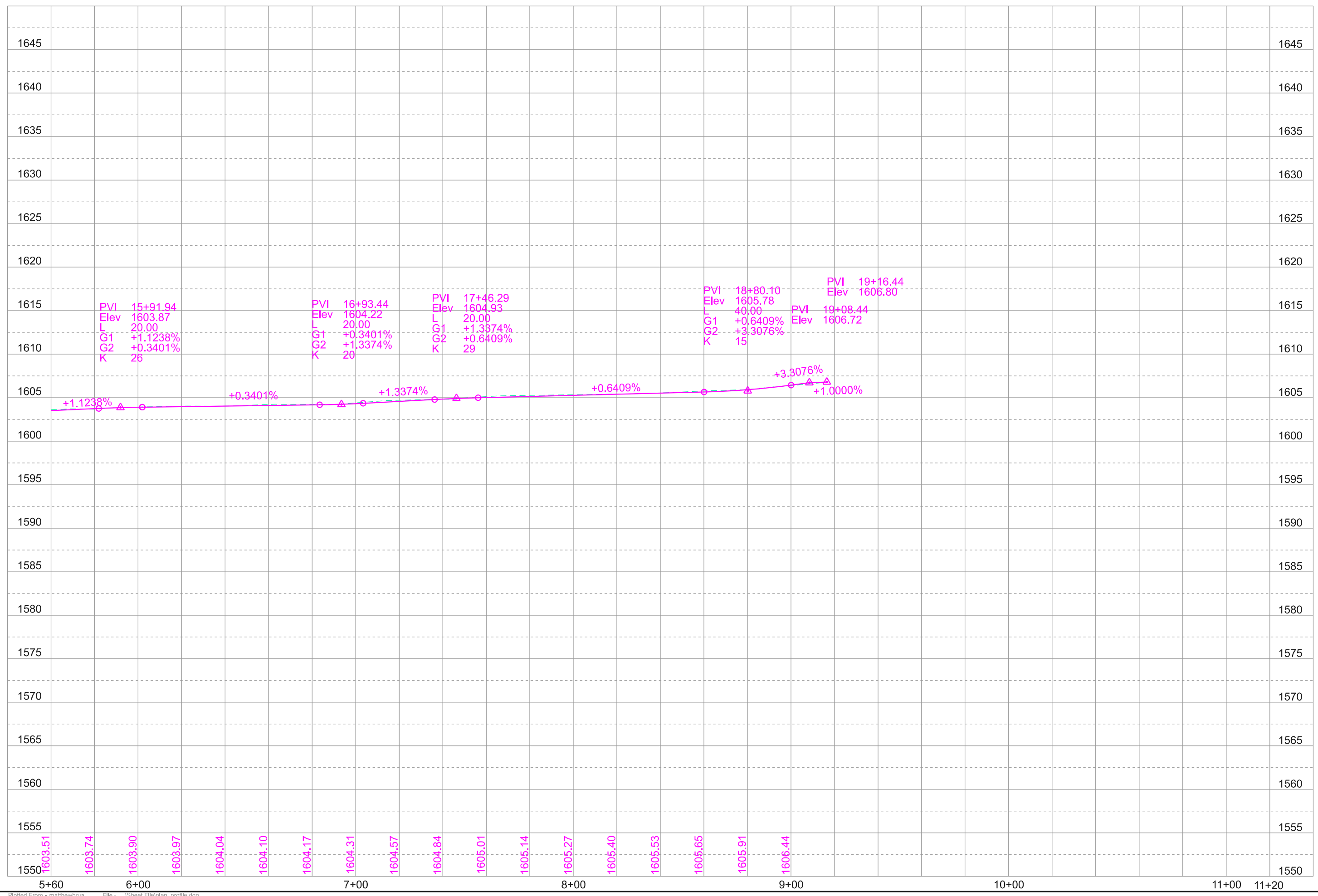
REV.	DATE	DESCRIPTION



JOB No.:	24303.00
DATE:	SEPTEMBER 2024
ENG / ARCH:	MJB
DESIGNER:	
TECHNICIAN:	



SHEET No. : 20



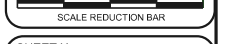
PROJECT / SHEET TITLE : 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS

PROFILE - SEXAUER PARK

BROOKINGS, SD



JOB No.: 24303.00  
 DATE: SEPTEMBER 2024  
 ENG / ARCH: MJB  
 DESIGNER:  
 TECHNICIAN:

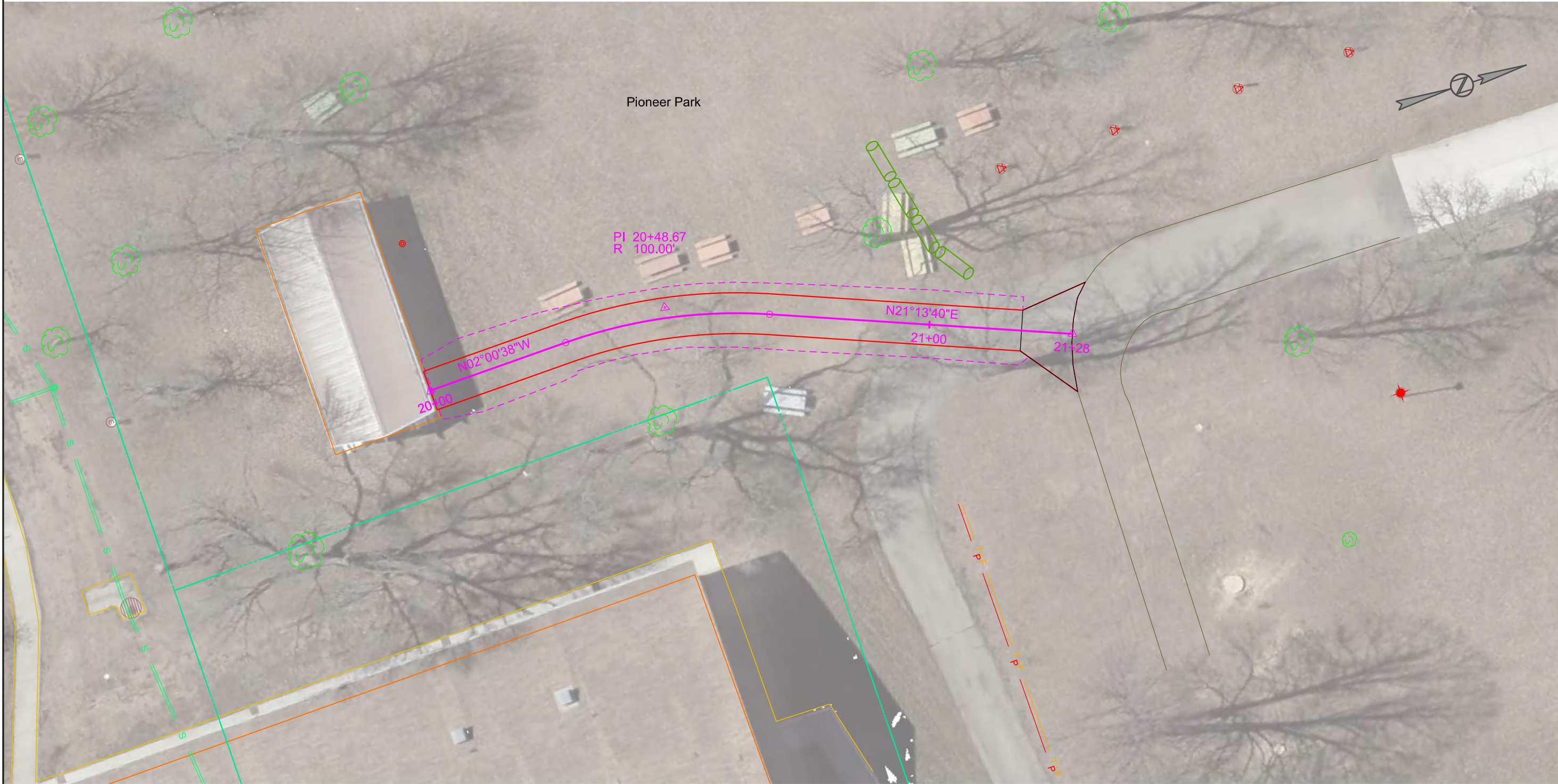


SHEET No.: 21

Install 12" Diameter Erosion Control Wattles  
at the following locations:  
20+86-34' L to 21+07-10' L 33 Ft

Connect to the existing trail  
at the following locations:  
21+28

Install 5" Concrete Trail  
20+00 to 21+28 - 1092 SF



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PROJECT / SHEET TITLE :  
2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS  
PLAN - PIONEER PARK

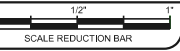
BROOKINGS, SD

DESCRIPTION

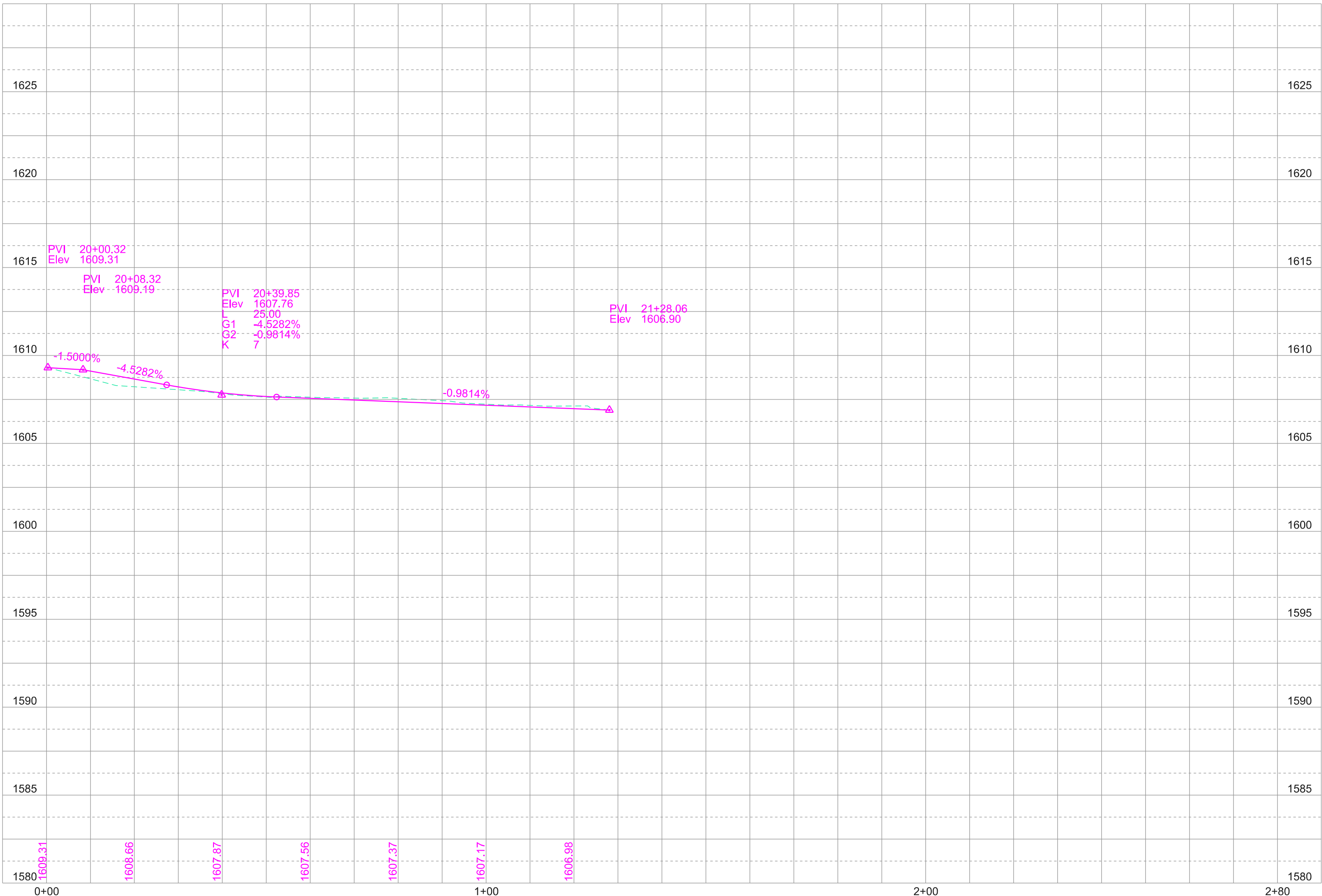
REV. DATE



JOB No.: 24303.00  
DATE: SEPTEMBER 2024  
ENG / ARCH: MJB  
DESIGNER:  
TECHNICIAN:



SHEET No. :  
**22**



PROJECT / SHEET TITLE : 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS

PROFILE - PIONEER PARK

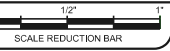
BROOKINGS, SD

DESCRIPTION

REV. DATE



JOB No.: 24303.00  
 DATE: SEPTEMBER 2024  
 ENG / ARCH: MJB  
 DESIGNER:  
 TECHNICIAN:



SHEET No.: 23

Install 12" Diameter Erosion Control Wattles  
 at construction limits at the following locations:  
 30+42 L to 31+72 L 95 Ft  
 30+42 R to 31+20 R 89 Ft

Removal of existing trail completed by others

Connect to the existing trail  
 at the following locations:  
 31+41

Install 5" Concrete Trail  
 30+41 to 31+41 - 839 SF



Dakota Nature Park

PROJECT / SHEET TITLE :  
 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS  
 PLAN - DAKOTA NATURE PARK WEST

BROOKINGS, SD  
 DESCRIPTION

REV.	DATE

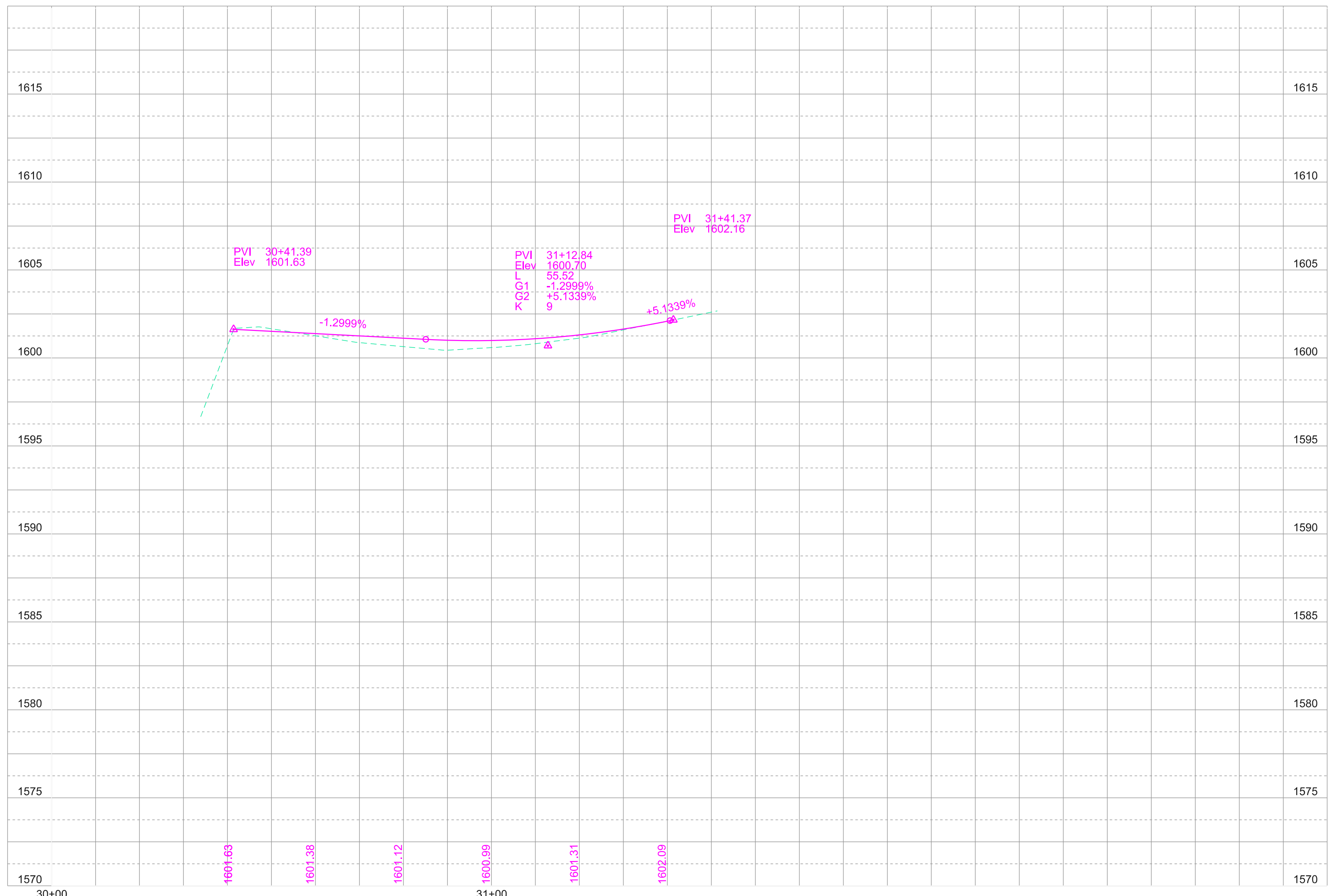


JOB No.:	24303.00
DATE:	SEPTEMBER 2024
ENG / ARCH:	MJB
DESIGNER:	
TECHNICIAN:	



SHEET No. :  
**24**





PROJECT / SHEET TITLE : 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS

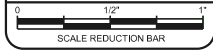
PROFILE - DAKOTA NATURE PARK WEST

BROOKINGS, SD

REV.	DATE	DESCRIPTION



JOB No.: 24303.00  
 DATE: SEPTEMBER 2024  
 ENG / ARCH: MJB  
 DESIGNER:  
 TECHNICIAN:



SHEET No. : 25

Install 12" Diameter Erosion Control Wattles  
at construction limits at the following locations:  
40+00 L to 42+09 L 205 Ft  
41+09 R to 42+28 R 120 Ft

Install 12" Diameter Erosion Control Wattles  
at the following locations:  
40+86-11' R 10 Ft  
42+13-11' L 10 Ft  
42+30-12' R 10 Ft  
50+34-12' R 10 Ft  
50+47-12' L 10 Ft  
50+70-12' L 10 Ft  
50+73-14' R 10 Ft

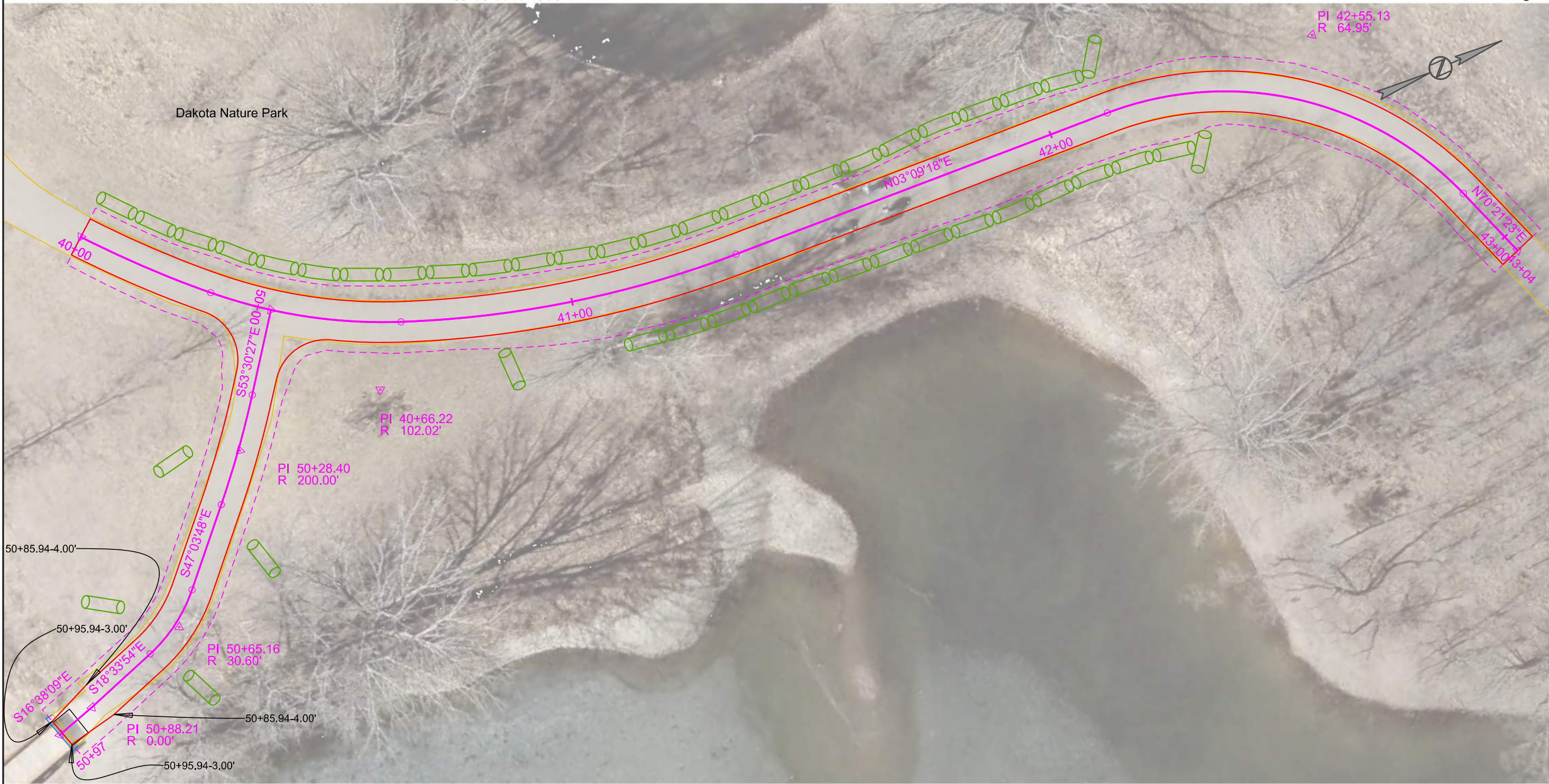
Removal of existing trail completed by others

Connect to the existing trail  
at the following locations:  
40+00  
43+04

Install 5" Concrete Trail  
40+00 to 43+04 - 2429 SF  
50+04 to 50+97 - 761 SF



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PROJECT / SHEET TITLE : 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS  
PLAN - DAKOTA NATURE PARK EAST

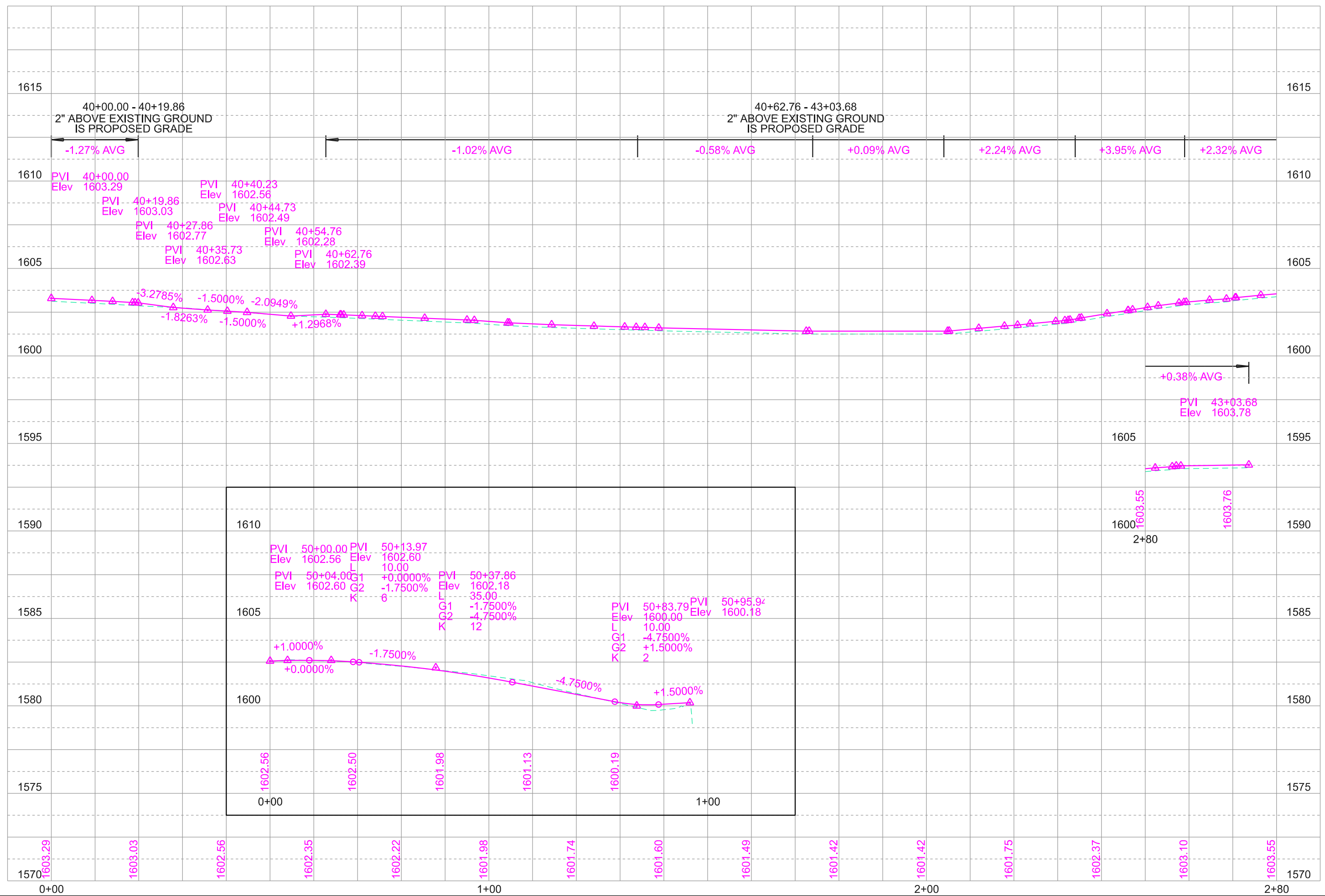
REV.	DATE	DESCRIPTION

BROOKINGS, SD

REGISTERED PROFESSIONAL ENGINEER  
REG. NO. 13025  
MATTHEW BRUNA  
8/27/2024

JOB No.: 24303.00  
DATE: SEPTEMBER 2024  
ENG / ARCH: MJB  
DESIGNER:  
TECHNICIAN:  
SCALE REDUCTION BAR  
0 1/2" 1"

SHEET No.: 26



PROJECT / SHEET TITLE : 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS

PROFILE - DAKOTA NATURE PARK EAST

BROOKINGS, SD



REV.	DATE	DESCRIPTION

JOB No.: 24303.00  
 DATE: SEPTEMBER 2024  
 ENG / ARCH: MJB  
 DESIGNER:  
 TECHNICIAN:  
 SHEET No.: 27



Dakota Nature Park



PROJECT / SHEET TITLE :  
 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS  
 TRAFFIC CONTROL

BROOKINGS, SD  
 DESCRIPTION

REV.	DATE	DESCRIPTION



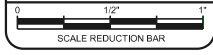
JOB No.:	24303.00
DATE:	SEPTEMBER 2024
ENG / ARCH:	MJB
DESIGNER:	
TECHNICIAN:	

SHEET No. :  
**28**

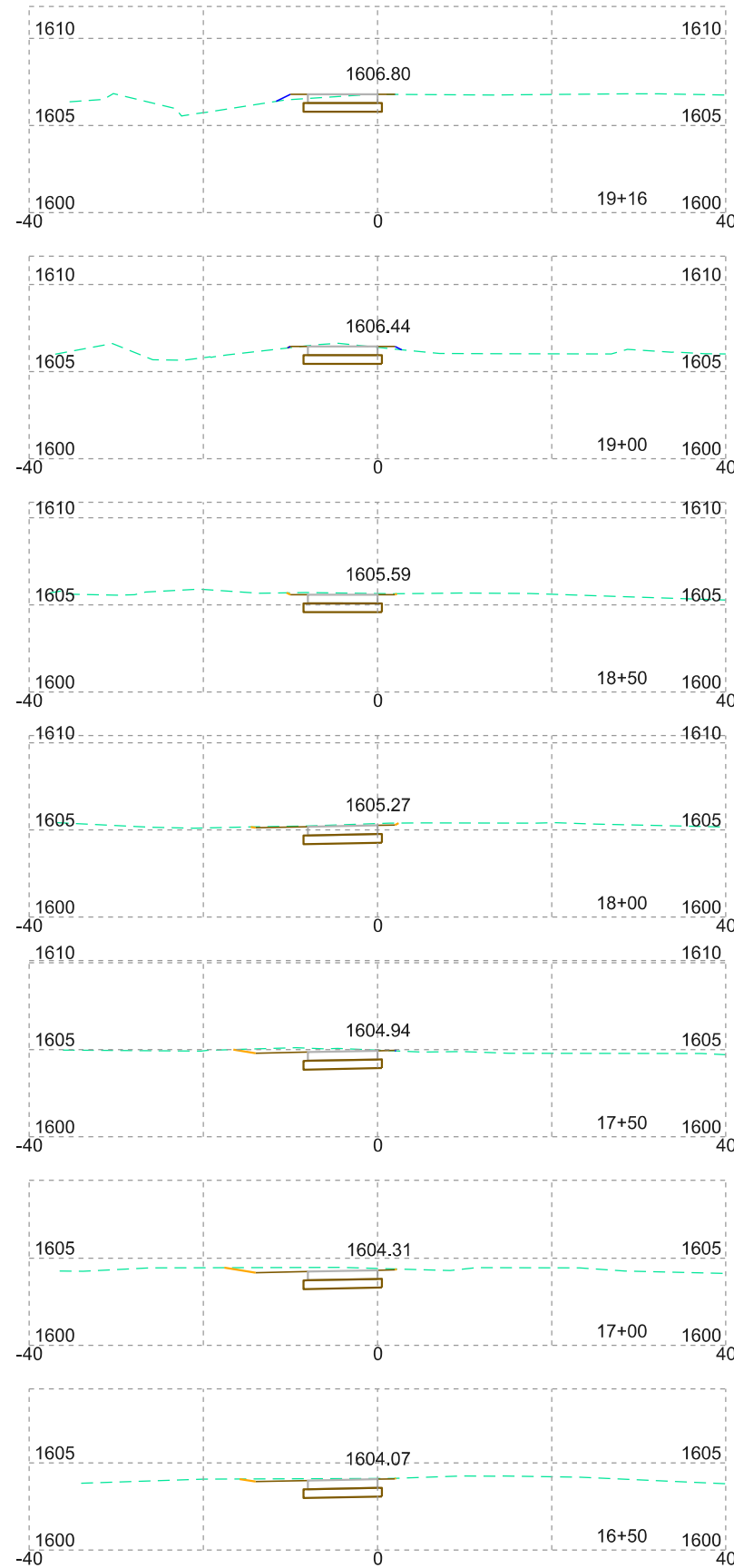
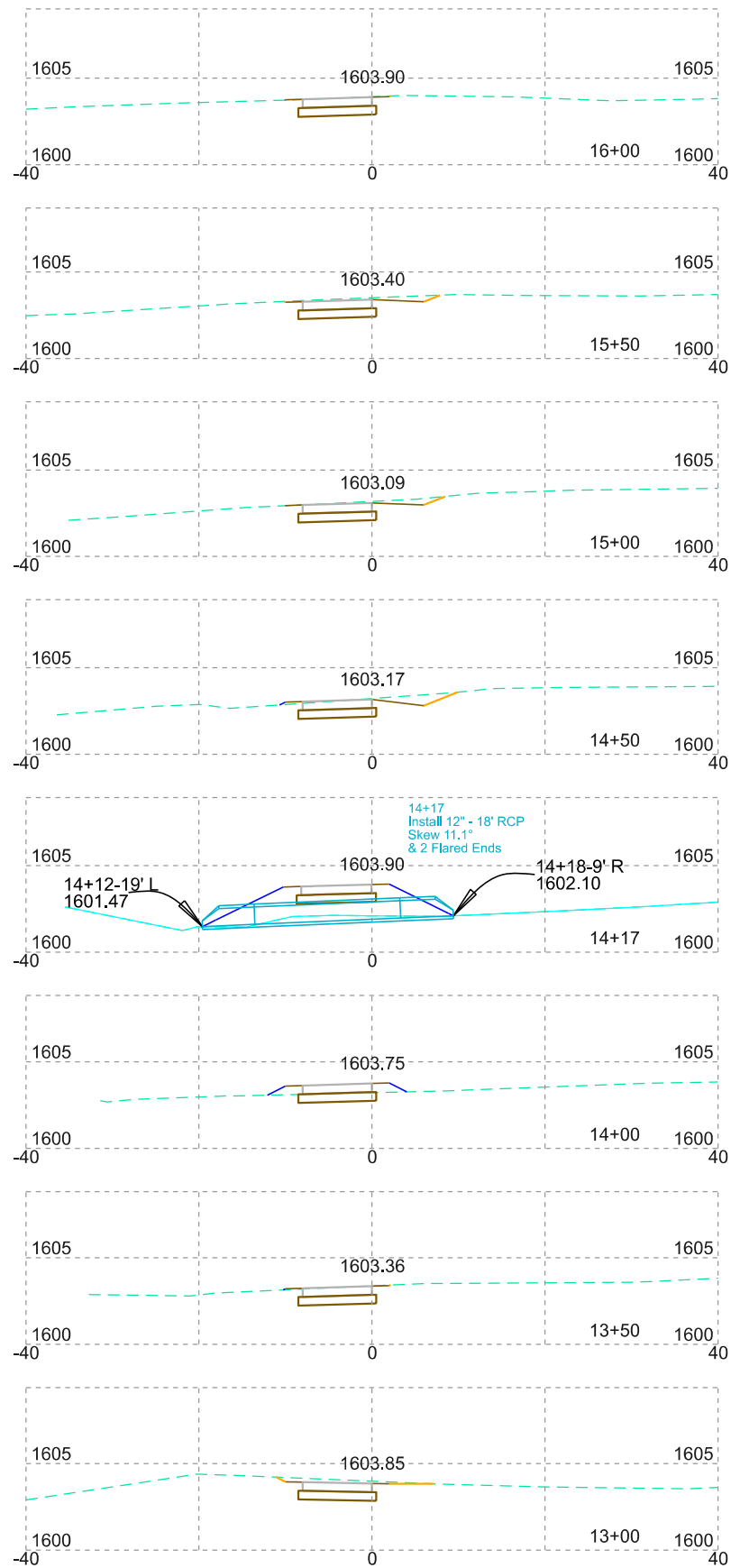
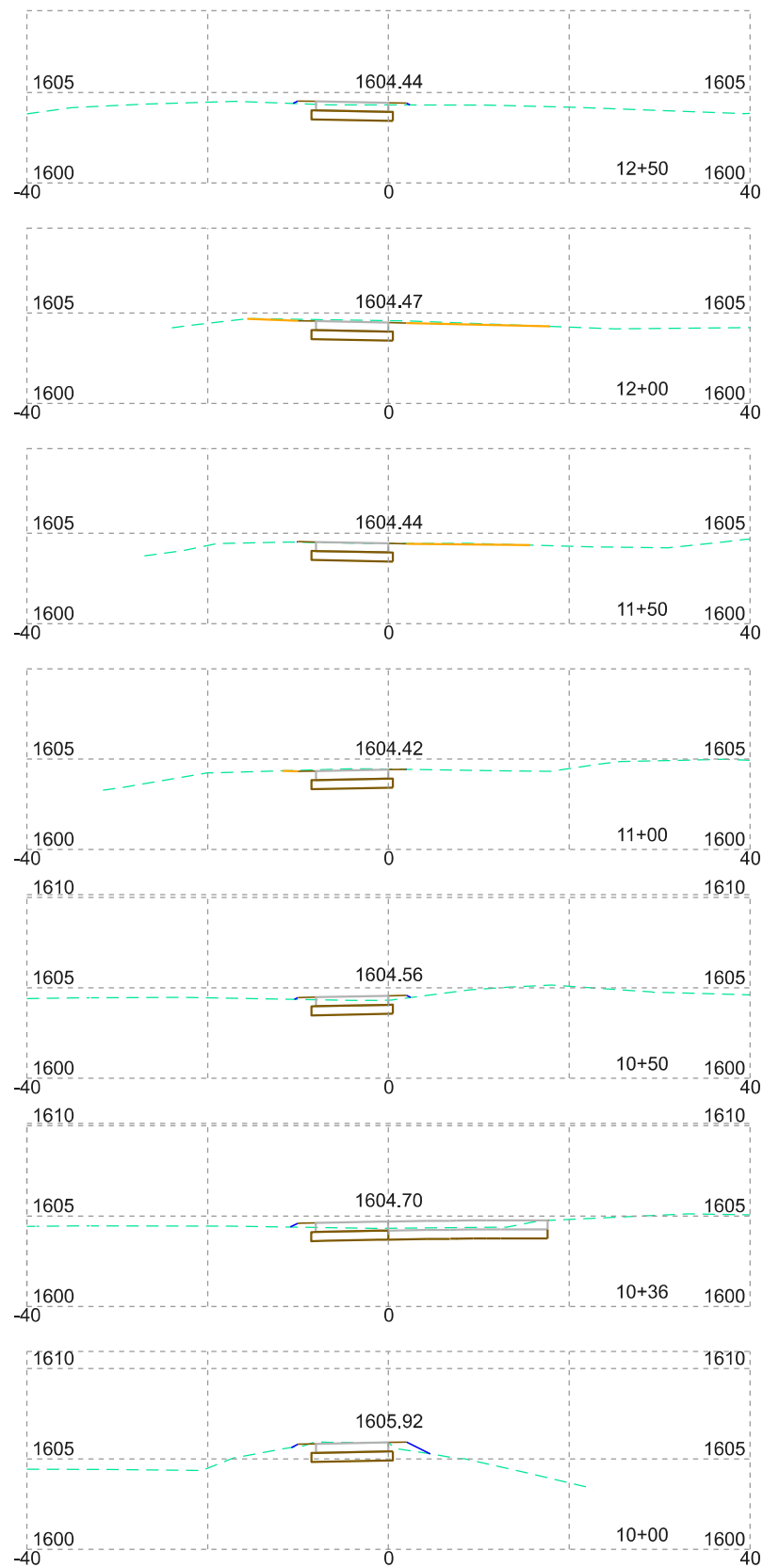


R9-9  
 24"x12"  
 A

NOTE:  
 The exact location and spacing of signs shown will be determined in the field by the Engineer.



# SEXAUER

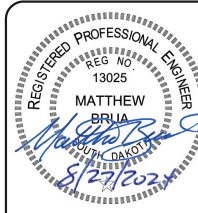


PROJECT / SHEET TITLE: 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS

CROSS SECTIONS

BROOKINGS, SD

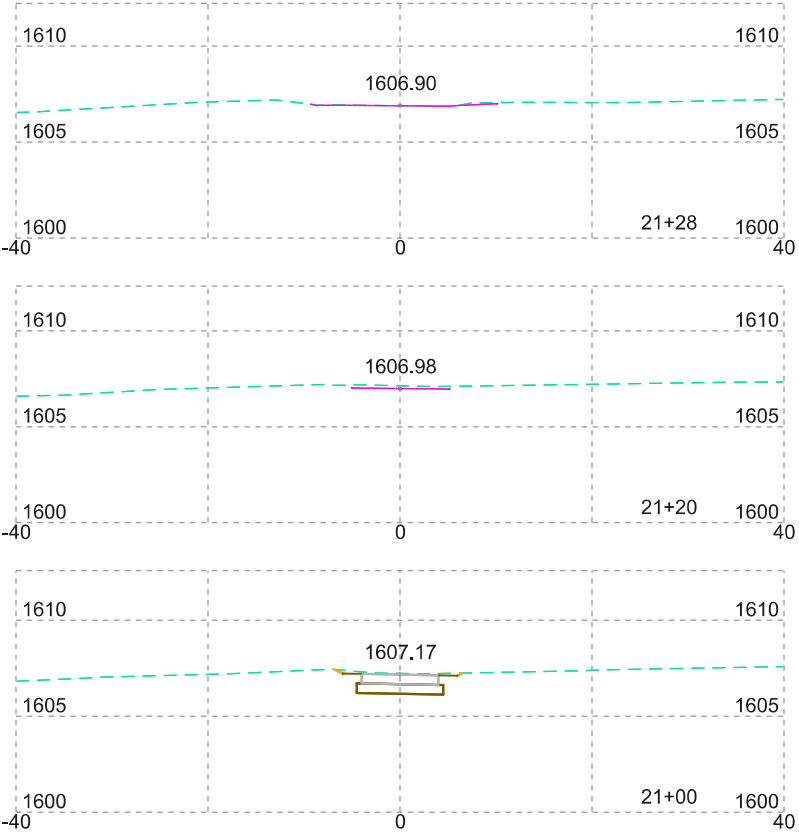
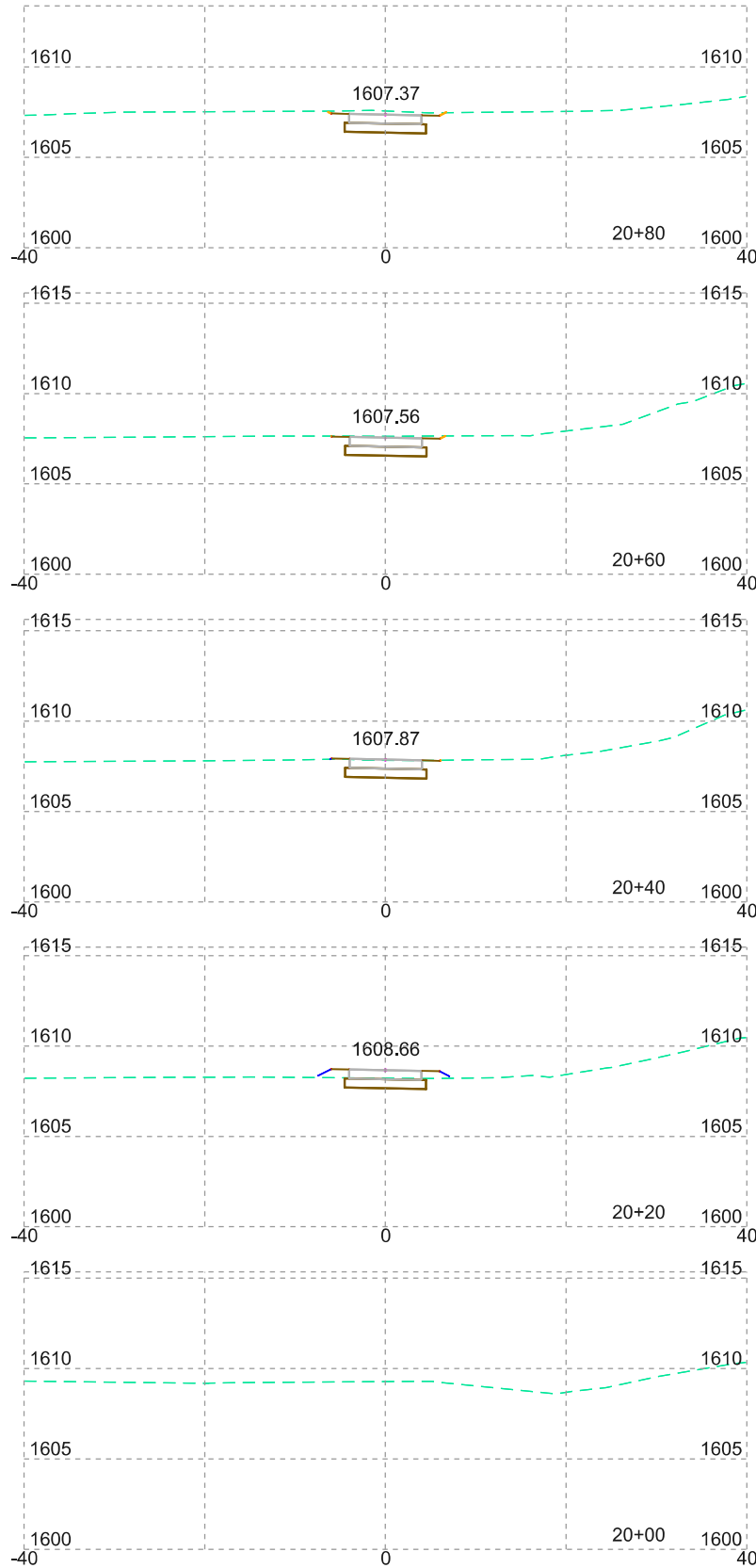
REV.	DATE	DESCRIPTION



JOB No.:	24303.00
DATE:	SEPTEMBER 2024
ENG / ARCH:	MJB
DESIGNER:	
TECHNICIAN:	

SHEET No.: 29

# PIONEER



PROJECT / SHEET TITLE : 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS

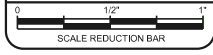
CROSS SECTIONS

BROOKINGS, SD

REV.	DATE	DESCRIPTION

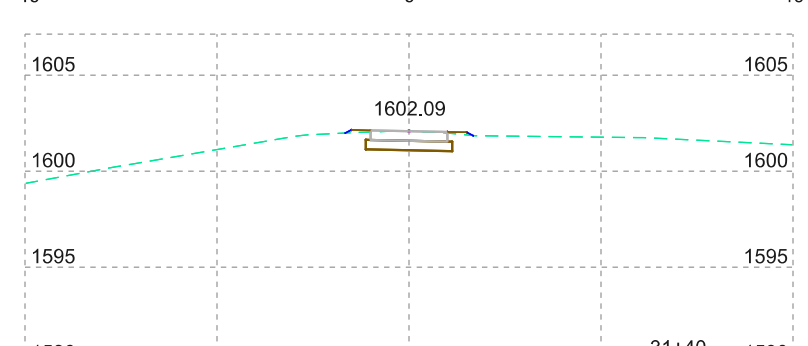
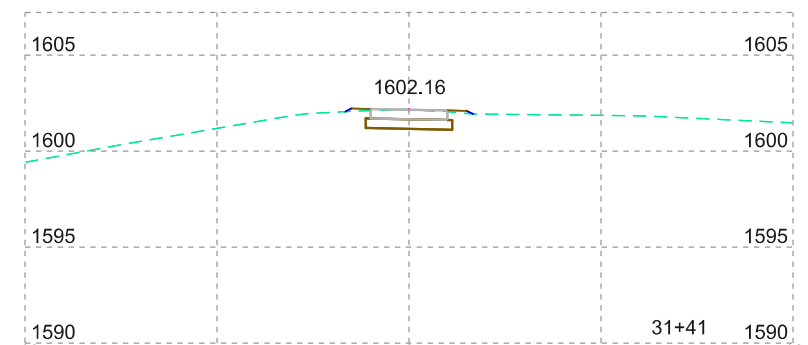
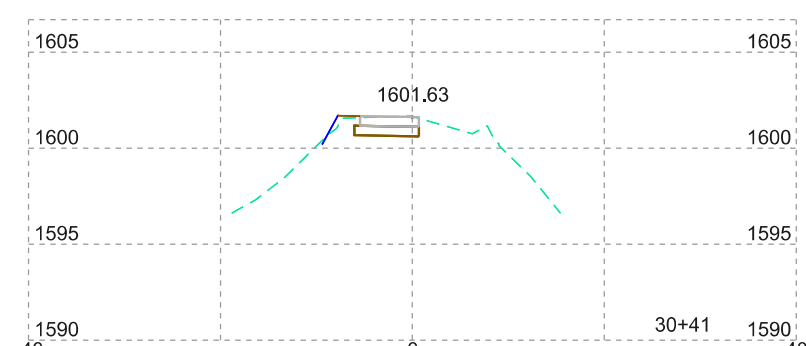
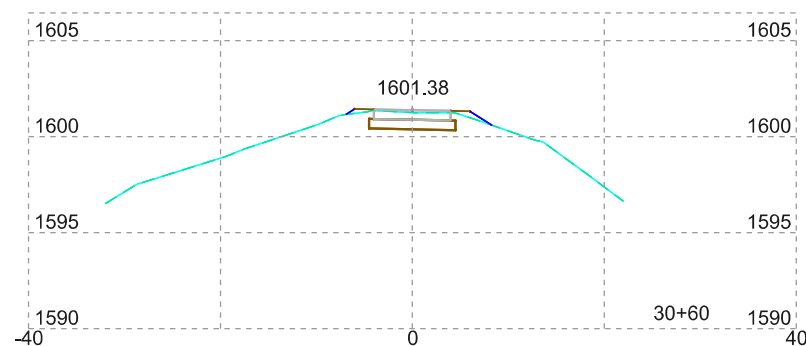
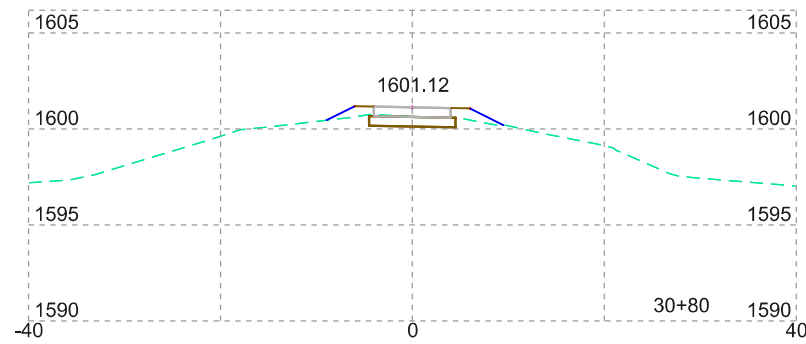
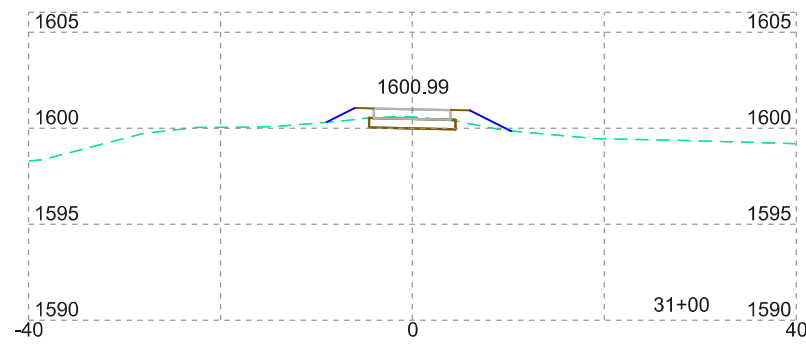
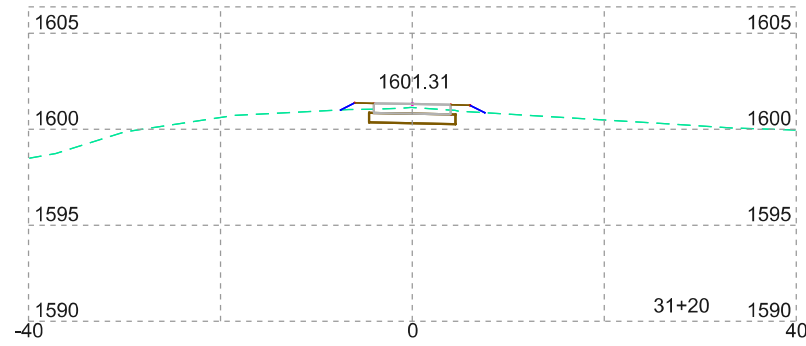


JOB No.:	24303.00
DATE:	SEPTEMBER 2024
ENG / ARCH:	MJB
DESIGNER:	
TECHNICIAN:	



SHEET No. : 30

# DAKOTA NATURE WEST



PROJECT / SHEET TITLE : 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS

CROSS SECTIONS

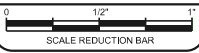
BROOKINGS, SD

DESCRIPTION

REV. DATE

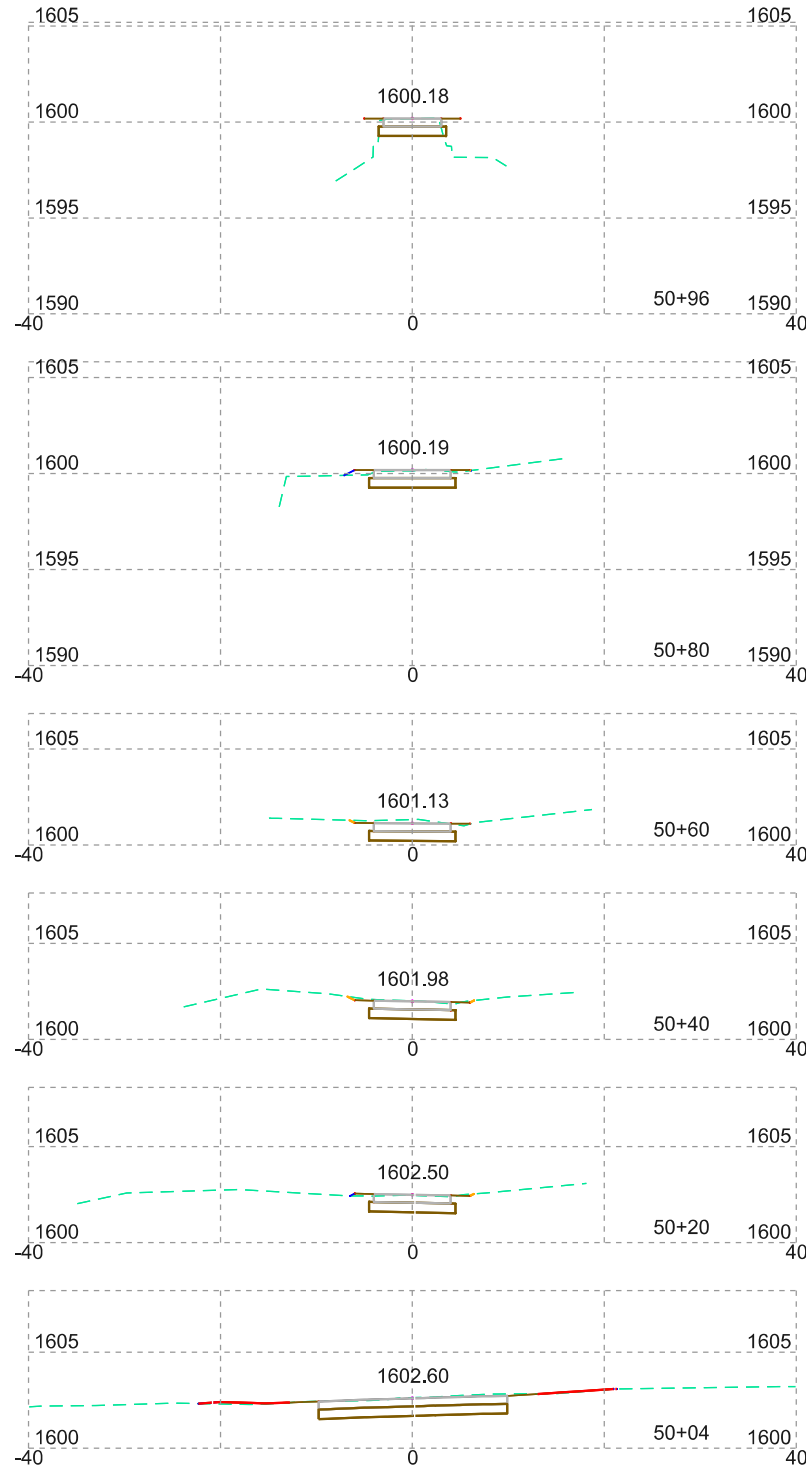


JOB No.: 24303.00  
DATE: SEPTEMBER 2024  
ENG / ARCH: MJB  
DESIGNER:  
TECHNICIAN:



SHEET No.: 31

# DAKOTA NATURE EAST - 2



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PROJECT / SHEET TITLE : 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS

CROSS SECTIONS

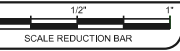
BROOKINGS, SD

DESCRIPTION

REV. DATE



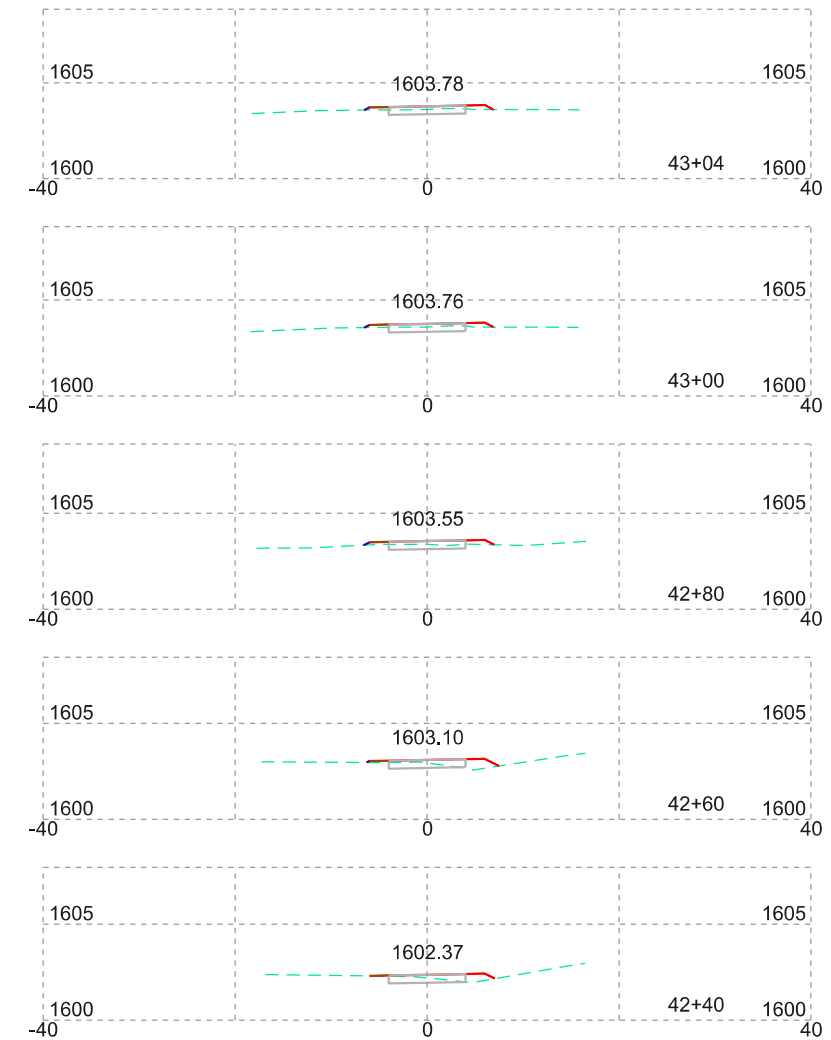
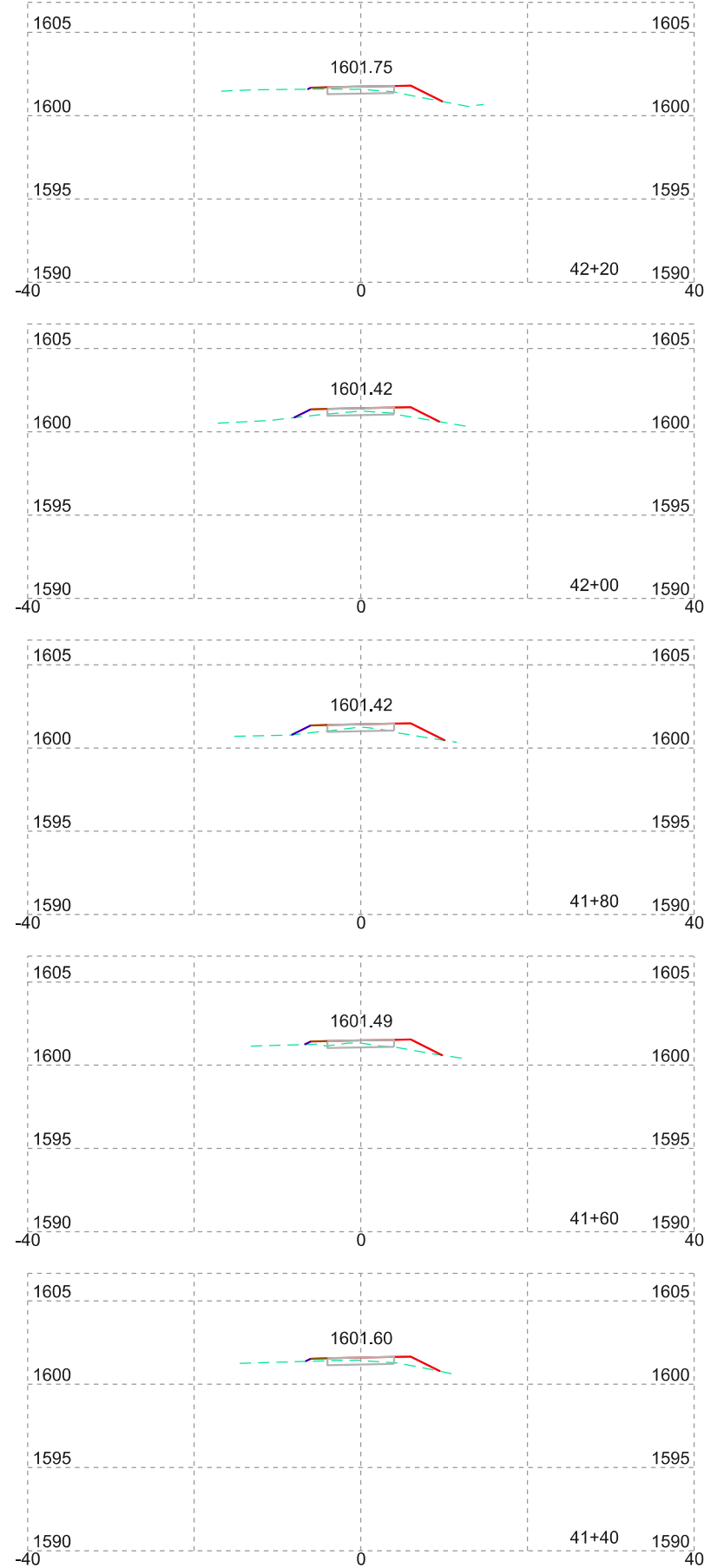
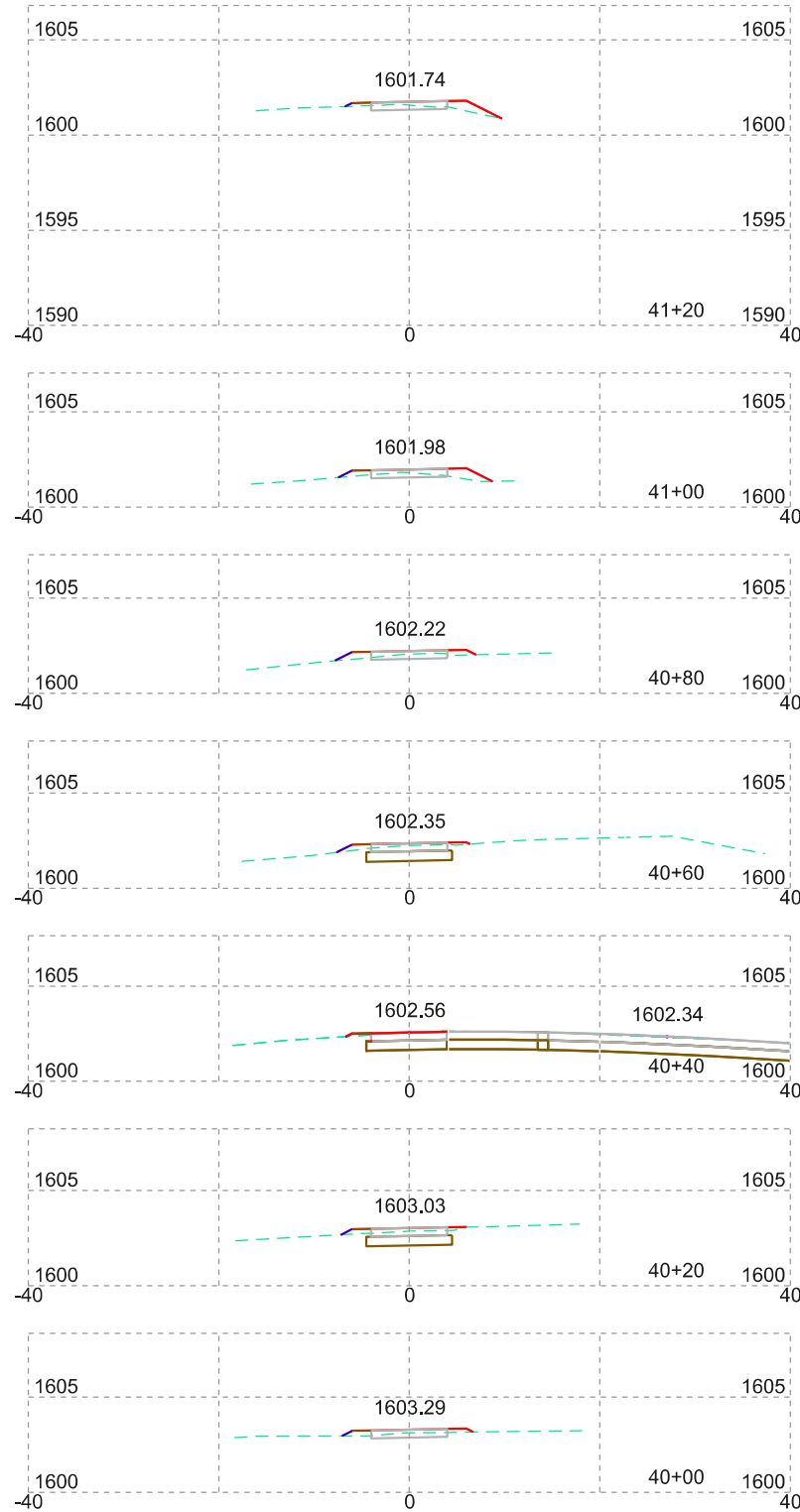
JOB No.: 24303.00  
 DATE: SEPTEMBER 2024  
 ENG / ARCH: MJB  
 DESIGNER:  
 TECHNICIAN:



SHEET No. : 32



# DAKOTA NATURE EAST - 1



PROJECT / SHEET TITLE: 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS  
CROSS SECTIONS

BROOKINGS, SD

REV.	DATE	DESCRIPTION



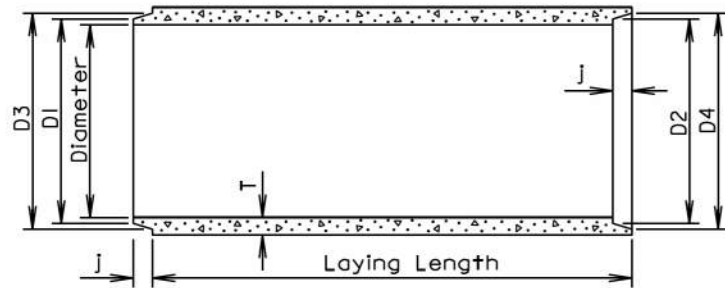
JOB No.:	24303.00
DATE:	SEPTEMBER 2024
ENG / ARCH:	MJB
DESIGNER:	
TECHNICIAN:	



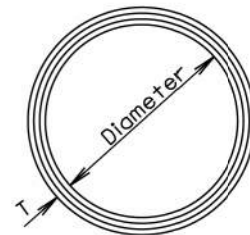
SHEET No.: 33

**TOLERANCES IN DIMENSIONS**

Diameter:  $\pm 1.5\%$  for 24" Dia. or less and  $\pm 1\%$  or  $\frac{3}{8}"$  whichever is more for 27" Dia. or greater.  
 Diameters at joints:  $\pm \frac{3}{16}"$  for 30" Dia. or less and  $\pm \frac{1}{4}"$  for 36" or greater.  
 Length of joint (J):  $\pm \frac{1}{4}"$ .  
 Wall thickness (T): not less than design T by more than 5% or  $\frac{3}{16}"$ , whichever is greater.  
 Laying length: shall not underrun by more than  $\frac{1}{2}"$ .



**LONGITUDINAL SECTION**



**END VIEW**

**GENERAL NOTES:**

Construction of R. C. P. shall conform to the requirements of Section 990 of the Specifications.

Not more than 2 four-foot sections shall be permitted near the ends of any culvert. Four-foot lengths shall be used only to secure the required length of culvert.

Diam. (in.)	Approx. Wt. /Ft. (lb.)	T (in.)	J (in.)	D1 (in.)	D2 (in.)	D3 (in.)	D4 (in.)
12	92	2	1 3/4	13 1/4	13 5/8	13 7/8	14 1/4
15	127	2 1/4	2	16 1/2	16 7/8	17 1/4	17 5/8
18	168	2 1/2	2 1/4	19 5/8	20	20 3/8	20 3/4
21	214	2 3/4	2 1/2	22 7/8	23 1/4	23 3/4	24 1/8
24	265	3	2 3/4	26	26 3/8	27	27 3/8
27	322	3 1/4	3	29 1/4	29 5/8	30 1/4	30 5/8
30	384	3 1/2	3 1/4	32 3/8	32 3/4	33 1/2	33 5/8
36	524	4	3 3/4	38 3/4	39 1/4	40	40 1/2
42	685	4 1/2	4	45 1/8	45 5/8	46 1/2	47
48	867	5	4 1/2	51 1/2	52	53	53 1/2
54	1070	5 1/2	4 1/2	57 3/8	58 3/8	59 3/8	59 3/8
60	1296	6	5	64 1/4	64 3/4	66	66 1/2
66	1542	6 1/2	5 1/2	70 5/8	71 1/8	72 1/2	73
72	1810	7	6	77	77 1/2	79	79 1/2
78	2098	7 1/2	6 1/2	83 3/8	83 7/8	85 5/8	86 1/8
84	2410	8	7	89 3/4	90 1/4	92 1/8	92 5/8
90	2740	8 1/2	7	95 3/4	96 1/4	98 1/8	98 5/8
96	2950	9	7	102 1/8	102 5/8	104 1/2	105
102	3075	9 1/2	7 1/2	109	109 1/2	111 1/2	112
108	3870	10	7 1/2	115 1/2	116	118	118 1/2

June 26, 2015

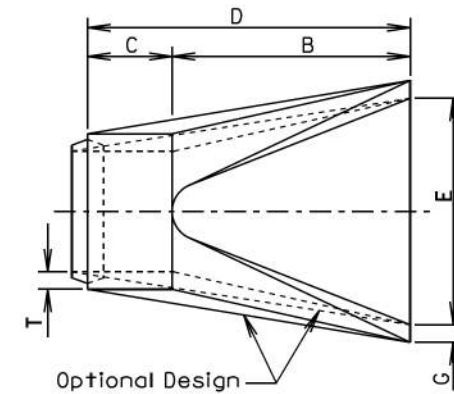
Published Date: 2025

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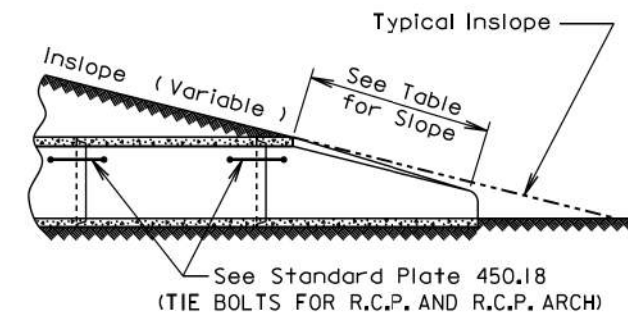
**REINFORCED CONCRETE PIPE**

PLATE NUMBER  
**450.01**

Sheet 1 of 1



**TOP VIEW**

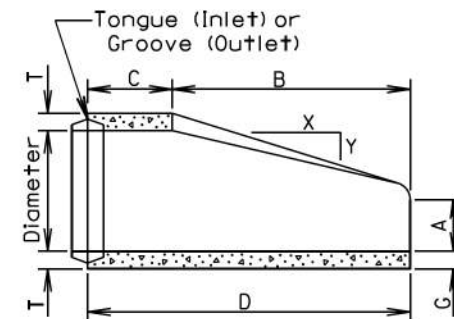


**SLOPE DETAIL**

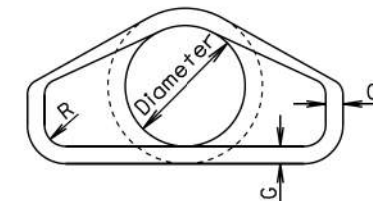
**GENERAL NOTES:**

Lengths of concrete pipe shown on plan sheets are between flared ends only.

Construction of R.C.P. Flared End shall conform to the requirements of Section 990 of the Specifications.



**LONGITUDINAL SECTION**



**END VIEW**

Dia. (in.)	Approx. Wt. of Section (lbs.)	Approx. Slope (X to Y)	T (in.)	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	G (in.)	R (in.)
12	530	2.4:1	2	4	24	48 7/8	72 7/8	24	2	1 1/2
15	740	2.4:1	2 1/4	6	27	46	73	30	2 1/4	1 1/2
18	990	2.3:1	2 1/2	9	27	46	73	36	2 1/2	1 1/2
21	1280	2.4:1	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	1 1/2
24	1520	2.5:1	3	9 1/2	43 1/2	30	73 1/2	48	3	1 1/2
27	1930	2.5:1	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	1 1/2
30	2190	2.5:1	3 1/2	12	54	19 3/4	73 3/4	60	3 1/2	1 1/2
36	4100	2.5:1	4	15	63	34 3/4	97 3/4	72	4	1 1/2
42	5380	2.5:1	4 1/2	21	63	35	98	78	4 1/2	1 1/2
48	6550	2.5:1	5	24	72	26	98	84	5	1 1/2
54	8240	2:1	5 1/2	27	65	33 1/4	98 1/4	90	5 1/2	1 1/2
60	8730	1.9:1	6	35	60	39	99	96	5	1 1/2
66	10710	1.7:1	6 1/2	30	72	27	99	102	5 1/2	1 1/2
72	12520	1.8:1	7	36	78	21	99	108	6	1 1/2
78	14770	1.8:1	7 1/2	36	90	21	111	114	6 1/2	1 1/2
84	18160	1.6:1	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2
90	20900	1.5:1	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	6

June 26, 2015

Published Date: 2025

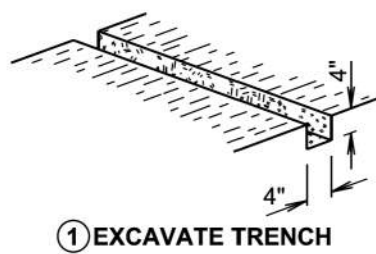
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**R. C. P. FLARED ENDS**

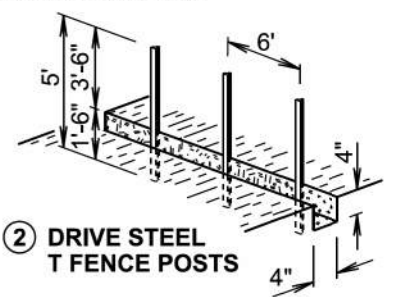
PLATE NUMBER  
**450.10**

Sheet 1 of 1

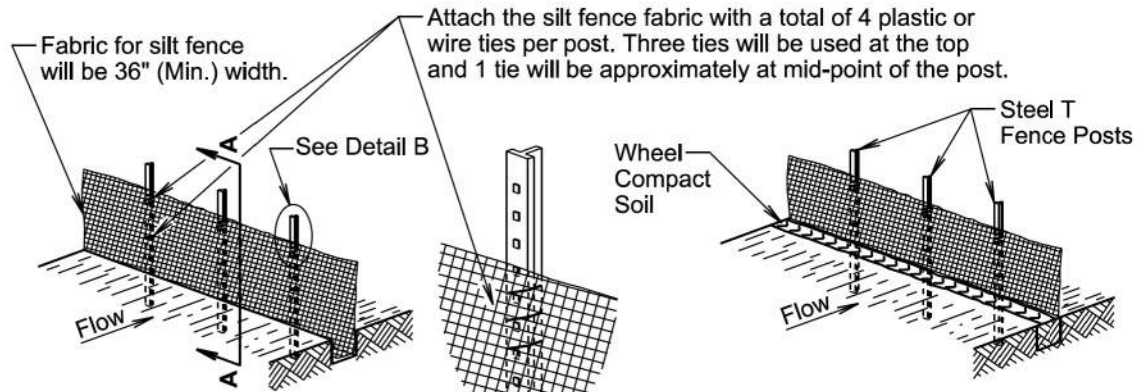
**MANUAL HIGH FLOW SILT FENCE INSTALLATION**



① EXCAVATE TRENCH



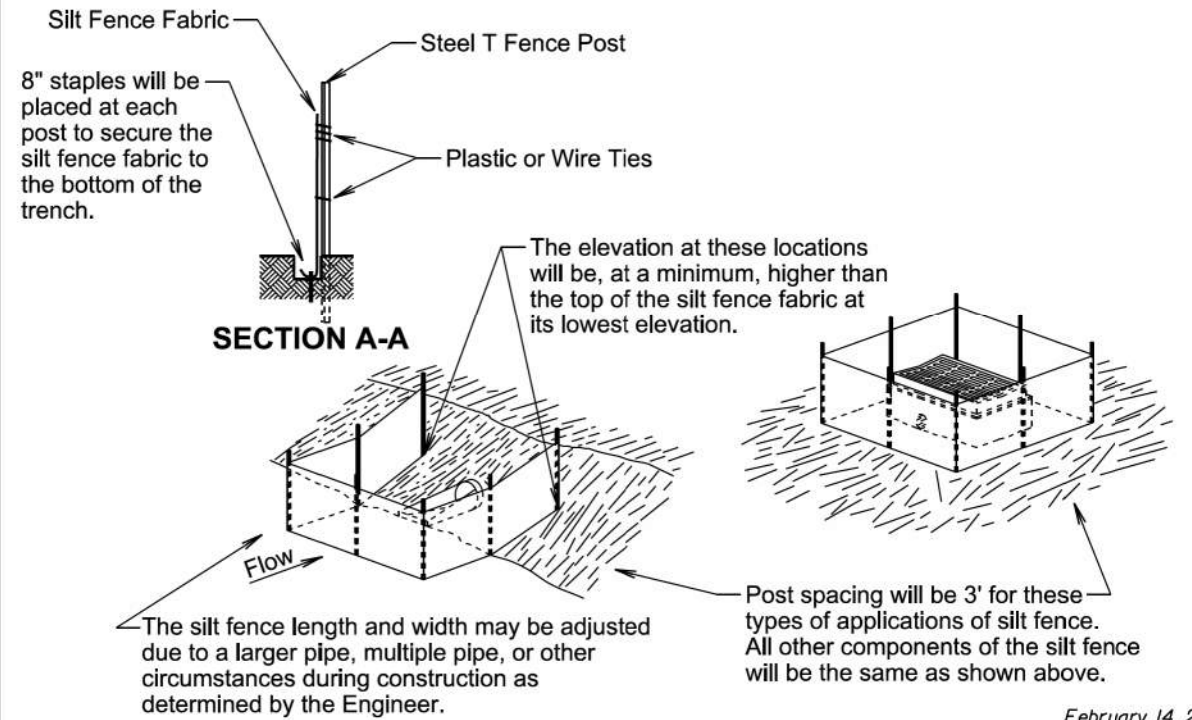
② DRIVE STEEL T FENCE POSTS



③ ATTACH SILT FENCE FABRIC

**DETAIL B**

④ BACKFILL TRENCH AND WHEEL COMPACT SOIL



**SECTION A-A**

February 14, 2020

Published Date: 2025

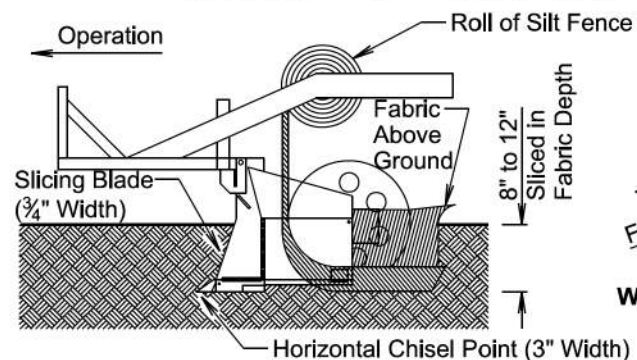
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**HIGH FLOW SILT FENCE**

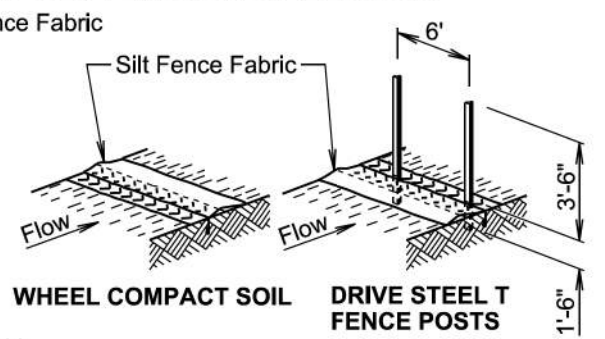
PLATE NUMBER  
**734.05**

Sheet 1 of 2

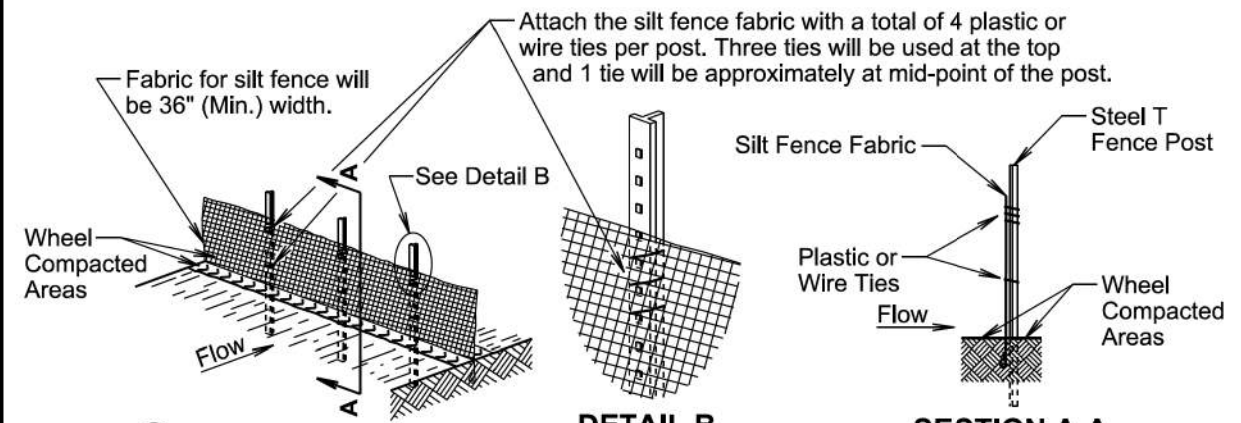
**MACHINE SLICED HIGH FLOW SILT FENCE INSTALLATION**



① INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.



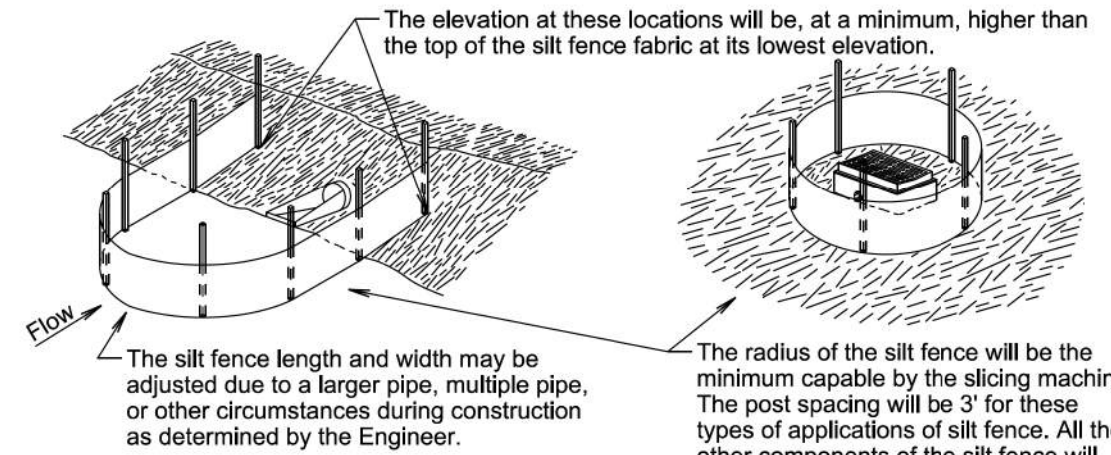
② WHEEL COMPACT SOIL ABOVE SLICED IN PORTION OF FABRIC AND THEN DRIVE STEEL T FENCE POSTS.



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

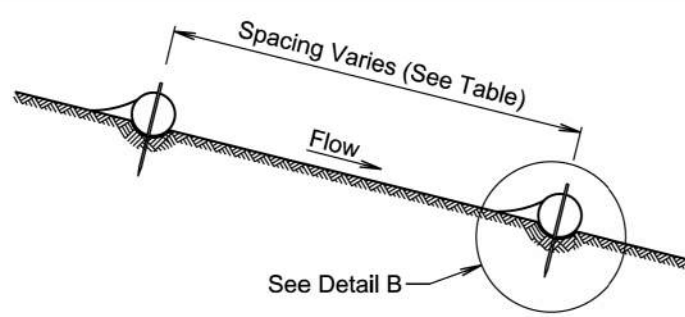
Published Date: 2025

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**HIGH FLOW SILT FENCE**

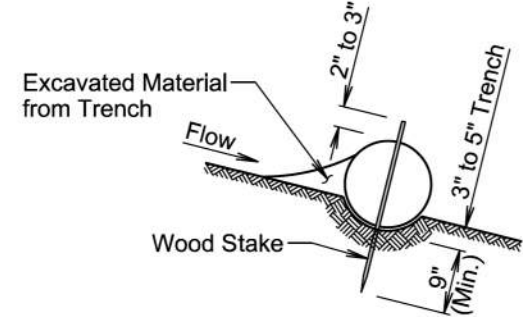
PLATE NUMBER  
**734.05**

Sheet 2 of 2

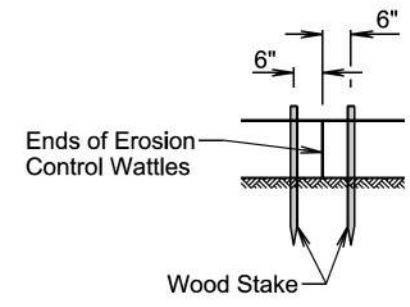


**ELEVATION VIEW**  
 (Cut or Fill Slope Installation)

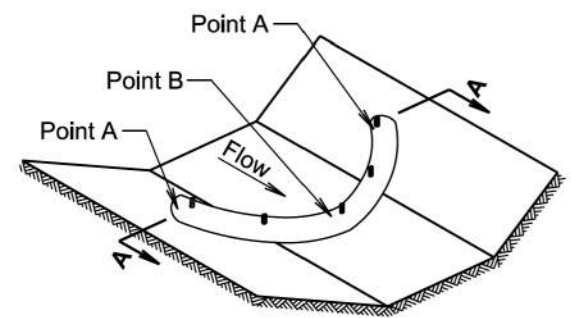
CUT OR FILL SLOPE INSTALLATION	
Slope	Spacing (Ft.)
1:1	10
2:1	20
3:1	30
4:1	40



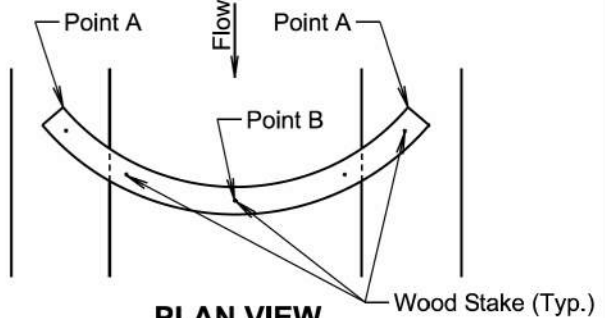
**DETAIL B**  
 (Typical of All Installations)



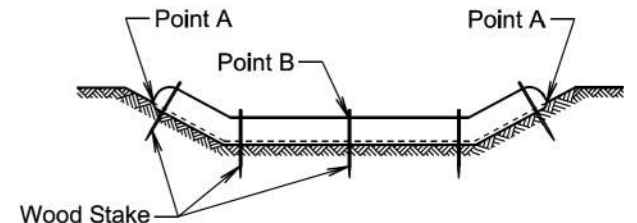
**DETAIL C**  
 (See General Notes)



**ISOMETRIC VIEW**  
 (Ditch Installation)



**PLAN VIEW**  
 (Ditch Installation)



**SECTION A-A**

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

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<b>S D D O T</b>	<b>EROSION CONTROL WATTLE</b>	PLATE NUMBER <b>734.06</b>
		Sheet 1 of 2

Published Date: 2025

**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".

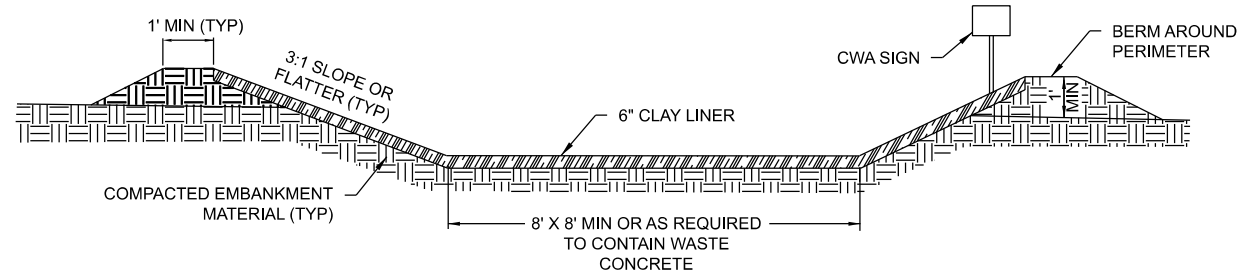
All costs for furnishing and installing the erosion control wattles including labor, equipment, and materials will be incidental to the contract unit price per foot for the corresponding erosion control wattle contract item.

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".

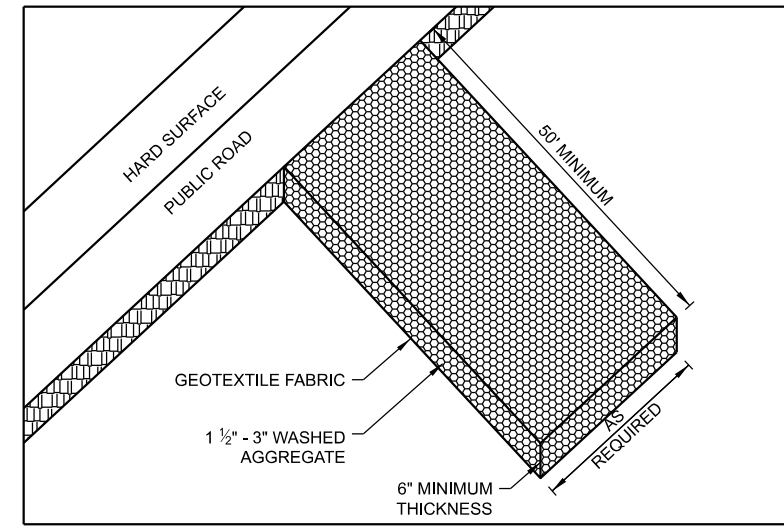
February 14, 2020

<b>S D D O T</b>	<b>EROSION CONTROL WATTLE</b>	PLATE NUMBER <b>734.06</b>
		Sheet 2 of 2

Published Date: 2025



**CONCRETE WASHOUT AREA**  
 SCALE: NONE

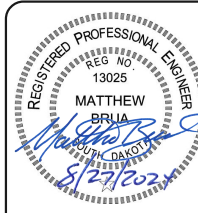


**CONSTRUCTION ENTRANCE**  
 SCALE: NONE

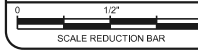
PROJECT / SHEET TITLE :  
 2024 BROOKINGS RECREATIONAL TRAILS IMPROVEMENTS  
 STANDARD PLATES & PROJECT DETAILS

BROOKINGS, SD  
 DESCRIPTION

REV.	DATE	DESCRIPTION



JOB No.: 24303.00  
 DATE: SEPTEMBER 2024  
 ENG / ARCH: MJB  
 DESIGNER:  
 TECHNICIAN:



SHEET No. :  
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