

CONTACT INFORMATION:

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Qualified Stormwater
Manager: _____

Contractor: _____

SWMP Preparation Date:
February 2023

Estimated Project Dates
Start of Construction:
September 2023

End of Construction:
September 2024



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1.0 SITE DESCRIPTION

The site is located in Section 22, Township 13 South, Range 68 West of the Sixth Principal Meridian in El Paso County, State of Colorado. The subject site is approximately 35.16 acres in size and is zoned R-T Rural Topographic. The site is bordered by Pikes Peak Highway to the south and east, Nampa Road and unplatted residential properties to the north and northwest, and Pike National Forest to the west. The surrounding residential properties are zoned R-T Rural Topographic. The site is to be subdivided into 4 single-family residential lots that will all be served by a private driveway.

The subject property lies within the Upper Fountain Drainage Basin. This is an unstudied basin within El Paso County. This site is heavily forested with slopes ranging from approximately 20% to 50%. Existing runoff from the site generally flows from west to east, via two natural drainage corridors that run through the property, and enters Fountain Creek to the east of the site. Fountain Creek then flows southeast out of Cascade and eventually makes its way east to the Arkansas River near Pueblo, Colorado. Multiple offsite basins, located west of the property, flow onto the site and into the natural drainage corridors. These pre-developed flows will remain unchanged and will continue to flow in their existing pattern. The primary soils on the site include Legault Rock Outcrop Complex classified as Hydrologic Soil Group D and Tecolote very gravely sandy loam classified as Hydrologic Soil Group B.

2.0 CONSTRUCTION ACTIVITIES

Construction activities for the proposed project include installation of BMPs and construction of the private driveway.

3.0 PHASING PLAN

The project is not planned to be constructed in phases, therefore, no phasing plan has been provided.

4.0 CONSTRUCTION SEQUENCING

Construction activities for this project include construction of the private driveway to serve the 4 single-family residential lots. Ultimately, construction sequencing will be dependent on the contractor selected and their schedule. The selected contractor shall provide their construction sequencing schedule and attach it to the appendix of this report. Typical construction sequencing for a project similar to this is described below.

- 1) Install initial/perimeter BMPs (fall 2023) – Initial Phase
- 2) Clearing and grubbing for private driveway construction (fall 2023) – Initial Phase
- 3) Private driveway construction (fall 2023) – Interim Phase
- 4) Installation of temporary erosion control BMPs (i.e. temporary seeding, erosion control blankets, etc.) (fall 2023) – Interim Phase
- 5) Final Stabilization (Spring 2024) – Final Phase

The anticipated start of construction is Fall 2023, with final stabilization by Fall 2024. This schedule could vary depending on weather and contractor availability.

5.0 DISTURBED AREA

ESQCP states 0.93 ac.
Verify and update so
both match.

The existing site is approximately 35.16 acres in size. Total site disturbance is anticipated to be 0.85 acres. The total volume of earthwork cut/fill operations is more than 500 CY. The selected contractor is responsible for updating this SWMP, during construction, with disturbed area changes.

SWMP
Checklist
Item 8.
Include soil
erosion
potential and
impacts on
discharge.

6.0 SOIL PROPERTIES

Based on information obtained from the Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS) website, the site is made up of Legault-Rock outcrop complex and Tecolote very gravely sandy loam soils. Legault-Rock soils are classified as Hydrologic Soil Group D and range in slope from 15%-65%. Group D soils include soils that have a very slow infiltration rate (high runoff potential) when thoroughly wet, consist of mainly clays that have a high shrink-swell potential and have a slow rate of water transmission. Tecolote soils are classified as Hydrologic Soils Group B and range in slope from 15%-40%. Group B soils include soils that have a moderate infiltration rate (medium to low runoff potential) when thoroughly wet, consist mainly of moderately deep or deep, moderately well drained or well drained soils and have a moderate rate of water transmission.

7.0 EXISTING COVER

The existing site is currently 100% heavily forested based on visual inspection during a site visit. Existing slopes range from 20% to 50%.

8.0 POTENTIAL POLLUTION SOURCES

The following list of potential pollutants, which may reasonably be expected to affect the quality of stormwater discharges associated with construction activity, may be present onsite during construction:

- Disturbed and stored soils;
- Vehicle tracking of sediments;
- Management of contaminated soils, if known to be present, or if contaminated soils are found during construction;
- Loading and unloading operations;
- Outdoor storage activities (erodible building materials, fertilizers, chemical, etc.);
- Vehicle and equipment maintenance and fueling;
- Significant dust or particulate generating processes (e.g., saw cutting material, including dust);
- Routine maintenance activities involving fertilizers, pesticides, herbicides, detergents, fuels, solvents, oils, etc.;
- Onsite waste management practices (waste piles, liquid wastes, dumpsters);

- Concrete truck/equipment washing, including washing of the concrete truck chute and associated fixtures and equipment;
- Dedicated asphalt, concrete batch plants and masonry mixing stations; See comment on page 4.
- Non-industrial waste sources such as worker trash and portable toilets;

Refer to the GEC Plan/SWMP Map located in the appendix of this report for locations and descriptions.

9.0 MATERIAL HANDLING AND SPILL PREVENTION AND RESPONSE PLAN

The following handling procedures may be implemented as control measures at the site to minimize impacts from handling significant materials that could contribute pollutants to runoff. These handling procedures can include control measures for pollutants and activities such as, exposed storage of building materials, paints and solvents, landscape materials, fertilizers or chemicals, sanitary waste material, trash and equipment maintenance or fueling procedures, and etc.

- **Waste Disposal:** All waste materials will be collected and stored in a securely lidded metal dumpster rented from a local waste hauler. The dumpster will meet all local and state solid waste management regulations. All waste and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied on a periodical basis. No construction waste materials will be buried onsite.
- **Sanitary Waste:** Portable toilets shall be located on site in a location determined by the contractor. All sanitary waste will be collected from portable units on a frequent, periodical basis by a licensed sanitary waste management contractor.
- **Concrete Waste from Concrete Trucks:** Excess concrete and concrete wash water shall be returned to the concrete plant or deposited at a designated containment area onsite. The containment area shall be constructed in a manner that prevents runoff from entering the street, storm water drainage systems, or waterways. Wash water may not be deposited in streets, curbs, gutters, storm drains, or waterways.
- **Hazardous Substances and Hazardous Waste:** All hazardous waste materials will be disposed of in the manner specified by local and state regulation or by the manufacturer. The contractor's site personnel will be instructed in these practices and the contractor's site manager will be responsible for seeing that these practices are followed. All equipment will be kept in good/clean working order to minimize discharge of pollutants. This includes all vehicles and storage containers.
- **Good Housekeeping:**
 - An effort will be made to store only enough products required to do the job.
 - All materials stored onsite will be stored in a neat, orderly manner and, if possible, under a roof or other enclosure.
 - Products will be kept in their original containers with the original manufacturer's label in legible condition.
 - Substances will not be mixed with one another unless recommended by the manufacturer.
 - Whenever possible, all of a product will be used up before disposing of the container.

- Manufacturer's recommendations for proper use and disposal will be followed.
- The contractor will be responsible for daily inspections to ensure proper use and disposal of materials.
- If surplus product must be disposed of, manufacturer's or local/state/federal recommended methods for proper disposal will be followed.

All of the product in a container will be used before the container is disposed of. All such containers will be triple-rinsed with water prior to disposal. The rinse water used in these containers will be disposed of in a manner in compliance with state and federal regulations and will not be allowed to mix with storm water discharge.

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff.

1. Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be trained regarding these procedures and the location of the information and cleanup supplies.
2. Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite in a spill control and containment kit (containing, for example, absorbent such as kitty litter or sawdust, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.)
3. All spills will be cleaned up immediately after discovery.
4. The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with hazardous substances.

No batch plants are proposed for this project, so no batch plant spill prevention and pollution control plan has been provided.

10.0 ALLOWABLE NON-STORMWATER DISCHARGES

The following are a list of allowable non-stormwater discharges that may be present onsite during, or after, construction.

- Irrigation
- Ground Water
- Springs

11.0 RECEIVING WATERS

The subject site is located entirely within the Upper Fountain Drainage Basin. The site generally flows west to east, via natural drainage corridors, into Fountain Creek located east of the site along Highway 24. Fountain Creek flows southeast, eventually making its way to Pueblo, CO at which point Fountain Creek enters the Arkansas River. Onsite erosion control BMPs will be utilized to control erosion leaving the site and to maintain the existing natural drainage corridors, prior to runoff from the site entering Fountain Creek.

On page 3 it is stated batch plants will be a source of pollution. Verify if batch plants will be used on site and update so both match.

12.0 STREAM CROSSINGS

There are no planned stream crossings as part of this project.

13.0 STORMWATER MANAGEMENT PLAN MAP

The Grading and Erosion Control Plan (GEC Plan) has been included in the appendix of this report to act as the stormwater management plan (SWMP) map. The GEC Plan indicates all erosion control BMPs to be used on the site during construction of the private driveway. An erosion control cost estimate and construction details have also been included with the GEC Plan and in the appendix of this report.

14.0 STRUCTURAL CONTROL MEASURES

Structural control measures for the site can include, but are not limited to, silt fence, vehicle tracking control, stabilized staging area, stockpile management, erosion control blanket, inlet protection, straw bale barrier, concrete washout area, portable toilet, sediment control logs, etc. The attached GEC plan indicates locations for the aforementioned structural control measures, as well as, providing details for installation and maintenance.

15.0 NON-STRUCTURAL CONTROL MEASURES

Non-structural control measures for the site can include, but are not limited to, seeding and mulching, slope tracking, chemical storage following the manufacturer's recommendations, wind erosion control by watering down disturbed areas, sweeping operations as vehicles leave the site, minimizing disturbed areas, protecting natural flow pathways, protecting existing vegetation, etc.

16.0 SWMP REVISION PROCEDURES

The selected contractor, and their Qualified Stormwater Manager, are responsible for inspecting and maintaining erosion control BMPs throughout the duration of the project. This includes notation of any additional BMPs or removal of BMPs. These changes shall be reflected on the SWMP map and shall be shown on the map prior to any changes in the field.

17.0 FINAL STABILIZATION & LONG-TERM STORMWATER QUALITY

Final stabilization of the site, after completion of construction, shall be achieved via permanent seeding and mulching. Depending on weather, and season, permanent seeding may be delayed until the following growing season for the specified seed. In this case, temporary seeding may be used until the next growing season. Any disturbed areas shall be seeded and mulched within 14 days. Final stabilization is achieved when construction is complete and the disturbed areas have achieved a vegetative cover density of 70% of pre-disturbance levels.

SWMP Checklist Item 21. Add text stating that the SWMP should be viewed as a "living document" that is continuously being reviewed and modified as a part of the overall process of evaluating and managing SW quality issues at the site. The QSM shall amend the SWMP when there is a change in design, construction, O&M of the site which would require the implementation of new or revised BMPs or if the SWMP proves to be ineffective in achieving the general objectives of controlling pollutants in SW discharges associated with construction activity or when BMPs are no longer necessary and are removed.

Per Section I.7.1.B.5 of the Engineering Criteria Manual, providing water quality treatment is not required for this site as it is being developed into large single-family lots (greater than 2.5 acres) and construction of the private driveway will not disturb more than 1 acre.

18.0 INSPECTION PROCEDURES

The Qualified Stormwater Manager, shall, at a minimum, make thorough inspection at least once every 14 calendar days. Also, post-storm event inspections must be conducted within 24 hours following the end of any precipitation or snowmelt event that causes surface erosion. Provided the timing is appropriate, the post-storm inspection may be used to fulfill the 14-day routine inspection requirement. Alternatively, the Qualified Stormwater Manager, may choose to perform self-inspections every 7 calendar days and forego post-storm event inspections. The self-inspection schedule must be identified in the Qualified Stormwater Manager's most recent self-inspection. A more frequent inspection schedule than the minimum described may be necessary to ensure that Control Measures continue to operate as needed to comply with this SWMP and GEC Plan. Site conditions such as steep grades and close proximity to a state water are reasons for increasing the frequency of self-inspections.

The Qualified Stormwater Manager shall submit documentation of the self-inspections by uploading the document to the County's Electronic Permitting Management System. Completed self-inspection forms must be submitted electronically within 5 business days of the self-inspection. The self-inspections must also be available either physically or electronically at the construction site at all times throughout the duration of the project. Qualified Stormwater Managers will review self-inspections during County compliance inspections. The use of third-party inspection programs does not remove this requirement. Additionally, the use of third-party inspection programs does not relieve the Permittee of the requirement to comply with all compliance inspections.

For sites or portions of sites where construction activities have been completed and final stabilization measures installed but final stabilization has not yet been achieved, the Qualified Stormwater Manager shall make a thorough inspection of their Control Measures at least once every month. Post-storm event inspections must be conducted within 72 hours following the end of any precipitation or snowmelt event that causes surface erosion. The SWMP and SWMP Map must be amended to indicate those areas where construction activities have been completed but final stabilization has not yet been achieved that will be inspected once a month.

When site conditions make the schedule required in this section impractical, the Permittee may petition the County to grant an alternate inspection schedule. The alternative inspection schedule may not be implemented prior to written approval by the County and incorporation into the SWMP.

The permittee is responsible to confirm that the frequency of inspections is sufficient to ensure that Control Measures remain in good working condition at all times.

19.0 RECORD KEEPING PROCEDURES

The Qualified Stormwater Manager is responsible for documenting the following items during inspections. This documentation shall be kept onsite at all times with the SWMP, SWMP Map, and GEC Plan.

- Inspection Date
- Name, title, and signature of personnel performing inspections
- Locations of discharges of sediment and/or pollutants from the site
- Location of BMPs that require maintenance
- Location of BMPs not working properly or inadequate for the location
- Location where additional BMPs are needed
- Alteration from minimum inspection schedule
- Description of corrective actions and date completed
- Signed statement of compliance after corrective actions completed

SWMP Checklist Item 26. Add a note stating that this project does not rely on control measures owned or operated by another entity.

Appendix

APPENDIX

EROSION CONTROL COST ESTIMATE

permanent and temporary seeding/mulching should be separate.

EROSION CONTROL COST ESTIMATE				
ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
PERMANENT/TEMPORARY SEEDING	0.63	AC	\$600.00	\$378.00
PERMANENT/TEMPORARY MULCHING	0.63	AC	\$500.00	\$315.00
PERMANENT/TEMPORARY EROSION CONTROL BLANKET	3058	SY	\$6.00	\$18,348.00
VEHICLE TRACKING CONTROL	1	EA	\$2,250.00	\$2,250.00
SILT FENCE	1639	LF	\$2.50	\$4,097.50
ROCK CHECK DAM	1	EA	\$500.00	\$500.00
CULVERT INLET PROTECTION	1	EA	\$150.00	\$150.00
CONCRETE WASHOUT	1	EA	\$760.00	\$760.00
STABILIZED STAGING AREA	1	EA	\$5,900.00	\$5,900.00
SUB-TOTAL				\$32,698.50
MAINTENANCE (35% OF CONSTRUCTION)				\$11,444.48
TOTAL				\$44,142.98

SMH COSULTANTS DOES NOT GUARANTEE THAT THE CONSTRUCTION COSTS WILL NOT VARY FROM THIS CONSTRUCTION COST OPINION

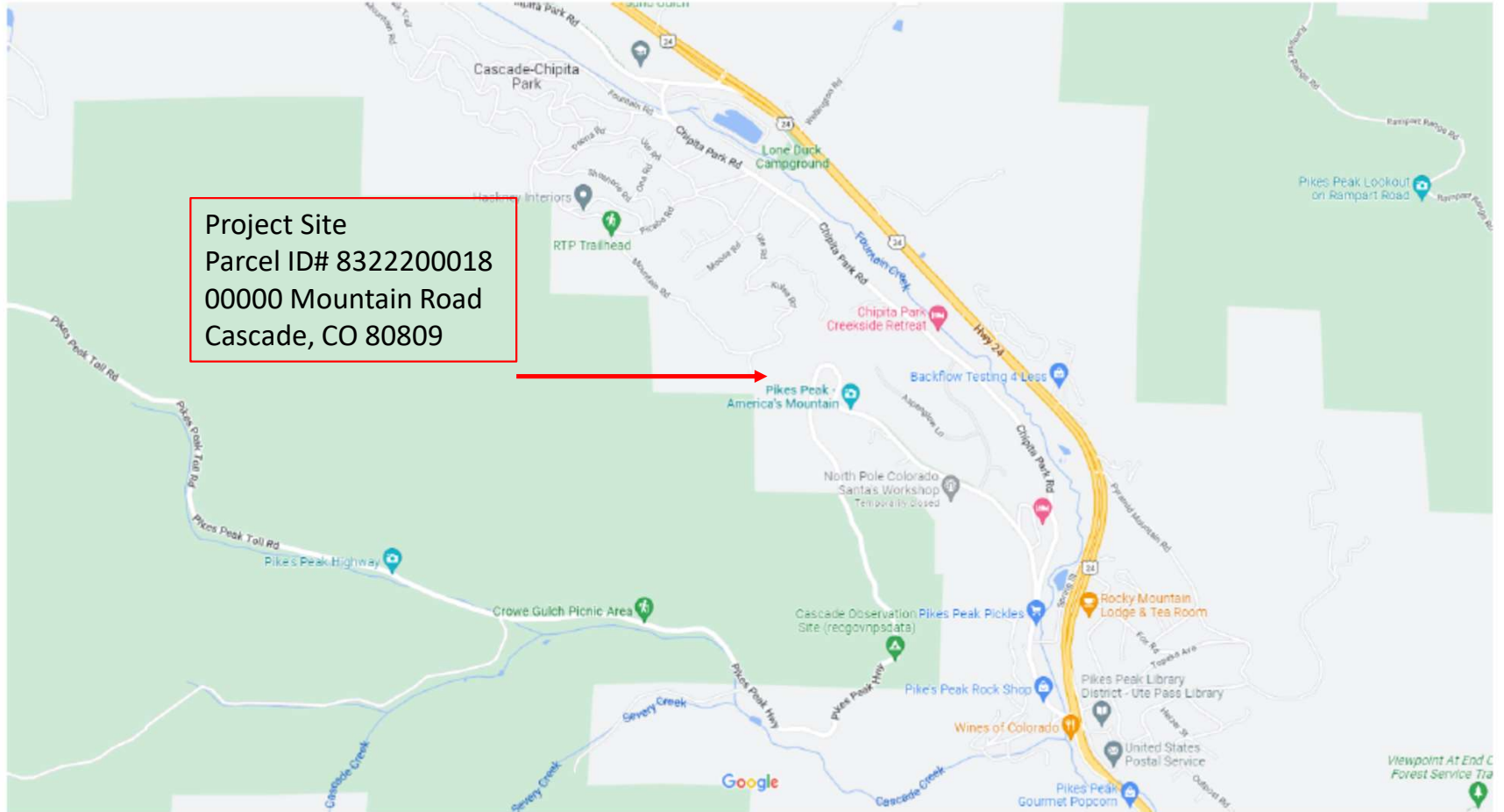
VICINITY MAP

Vicinity Map

Not to Scale



Project Site
Parcel ID# 8322200018
00000 Mountain Road
Cascade, CO 80809



PERMIT APPLICATION

CONTRACTOR SEQUENCING

Table CP-1. Typical Phased BMP Installation for Construction Projects

Project Phase	BMPs
Pre-disturbance, Site Access	<ul style="list-style-type: none"> ▪ Install sediment controls downgradient of access point (on paved streets this may consist of inlet protection). ▪ Establish vehicle tracking control at entrances to paved streets. Fence as needed. ▪ Use construction fencing to define the boundaries of the project and limit access to areas of the site that are not to be disturbed. <p>Note: it may be necessary to protect inlets in the general vicinity of the site, even if not downgradient, if there is a possibility that sediment tracked from the site could contribute to the inlets.</p>
Site Clearing and Grubbing	<ul style="list-style-type: none"> ▪ Install perimeter controls as needed on downgradient perimeter of site (silt fence, wattles, etc). ▪ Limit disturbance to those areas planned for disturbance and protect undisturbed areas within the site (construction fence, flagging, etc). ▪ Preserve vegetative buffer at site perimeter. ▪ Create stabilized staging area. ▪ Locate portable toilets on flat surfaces away from drainage paths. Stake in areas susceptible to high winds. ▪ Construct concrete washout area and provide signage. ▪ Establish waste disposal areas. ▪ Install sediment basins. ▪ Create dirt perimeter berms and/or brush barriers during grubbing and clearing. ▪ Separate and stockpile topsoil, leave roughened and/or cover. ▪ Protect stockpiles with perimeter control BMPs. Stockpiles should be located away from drainage paths and should be accessed from the upgradient side so that perimeter controls can remain in place on the downgradient side. Use erosion control blankets, temporary seeding, and/or mulch for stockpiles that will be inactive for an extended period. ▪ Leave disturbed area of site in a roughened condition to limit erosion. Consider temporary revegetation for areas of the site that have been disturbed but that will be inactive for an extended period. ▪ Water to minimize dust but not to the point that watering creates runoff.

Project Phase	BMPs
Utility And Infrastructure Installation	<p>In Addition to the Above BMPs:</p> <ul style="list-style-type: none"> ▪ Close trench as soon as possible (generally at the end of the day). ▪ Use rough-cut street control or apply road base for streets that will not be promptly paved. ▪ Provide inlet protection as streets are paved and inlets are constructed. ▪ Protect and repair BMPs, as necessary. ▪ Perform street sweeping as needed.
Building Construction	<p>In Addition to the Above BMPs:</p> <ul style="list-style-type: none"> ▪ Implement materials management and good housekeeping practices for home building activities. ▪ Use perimeter controls for temporary stockpiles from foundation excavations. ▪ For lots adjacent to streets, lot-line perimeter controls may be necessary at the back of curb.
Final Grading	<p>In Addition to the Above BMPs:</p> <ul style="list-style-type: none"> ▪ Remove excess or waste materials. ▪ Remove stored materials.
Final Stabilization	<p>In Addition to the Above BMPs:</p> <ul style="list-style-type: none"> ▪ Seed and mulch/tackify. ▪ Seed and install blankets on steep slopes. ▪ Remove all temporary BMPs when site has reached final stabilization.

MAINTENANCE & INSPECTION

CONSTRUCTION STORMWATER SITE INSPECTION REPORT

Facility Name		Permittee					
Date of Inspection		Weather Conditions					
Permit Certification #		Disturbed Acreage					
Phase of Construction		Inspector Title					
Inspector Name							
Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	YES	NO	<input type="checkbox"/>	<input type="checkbox"/>
YES	NO						
<input type="checkbox"/>	<input type="checkbox"/>						

INSPECTION FREQUENCY					
Check the box that describes the minimum inspection frequency utilized when conducting each inspection					
At least one inspection every 7 calendar days	<input type="checkbox"/>				
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	<input type="checkbox"/>				
<ul style="list-style-type: none"> • This is this a post-storm event inspection. Event Date: _____ 	<input type="checkbox"/>				
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	<input type="checkbox"/>				
<ul style="list-style-type: none"> • Post-storm inspections at temporarily idle sites 	<input type="checkbox"/>				
<ul style="list-style-type: none"> • Inspections at completed sites/area 	<input type="checkbox"/>				
<ul style="list-style-type: none"> • Winter conditions exclusion 	<input type="checkbox"/>				
Have there been any deviations from the minimum inspection schedule? If yes, describe below.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	YES	NO	<input type="checkbox"/>	<input type="checkbox"/>
YES	NO				
<input type="checkbox"/>	<input type="checkbox"/>				

INSPECTION REQUIREMENTS*
i. Visually verify all implemented control measures are in effective operational condition and are working as designed in the specifications
ii. Determine if there are new potential sources of pollutants
iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges
iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action
*Use the attached Control Measures Requiring Routine Maintenance and Inadequate Control Measures Requiring Corrective Action forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED			
Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?			
	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions Inadequate Control Measures Requiring Corrective Action form
Construction site perimeter	<input type="checkbox"/>	<input type="checkbox"/>	
All disturbed areas	<input type="checkbox"/>	<input type="checkbox"/>	
Designated haul routes	<input type="checkbox"/>	<input type="checkbox"/>	
Material and waste storage areas exposed to precipitation	<input type="checkbox"/>	<input type="checkbox"/>	
Locations where stormwater has the potential to discharge offsite	<input type="checkbox"/>	<input type="checkbox"/>	
Locations where vehicles exit the site	<input type="checkbox"/>	<input type="checkbox"/>	
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	

REPORTING REQUIREMENTS

The permittee shall report the following circumstances orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall mail to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances. The division may waive the written report required if the oral report has been received within 24 hours.

All Noncompliance Requiring 24-Hour Notification per Part II.L.6 of the Permit		
a. Endangerment to Health or the Environment Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.6.a of the Permit) <i>This category would primarily result from the discharge of pollutants in violation of the permit</i>		
b. Numeric Effluent Limit Violations <ul style="list-style-type: none"> o Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.b of the Permit) o Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.c of the Permit) o Daily maximum violations (See Part II.L.6.d of the Permit) <i>Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.</i>		

Has there been an incident of noncompliance requiring 24-hour notification?	NO	YES	
	<input type="checkbox"/>	<input type="checkbox"/>	If "YES" document below

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Oral Notification	Date of 5 Day Written Notification *

*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

After adequate corrective action(s) and maintenance have been taken, or where a report does not identify any incidents requiring corrective action or maintenance, the individual(s) designated as the Qualified Stormwater Manager, shall sign and certify the below statement:

"I verify that, to the best of my knowledge and belief, all corrective action and maintenance items identified during the inspection are complete, and the site is currently in compliance with the permit."

Name of Qualified Stormwater Manager

Title of Qualified Stormwater Manager

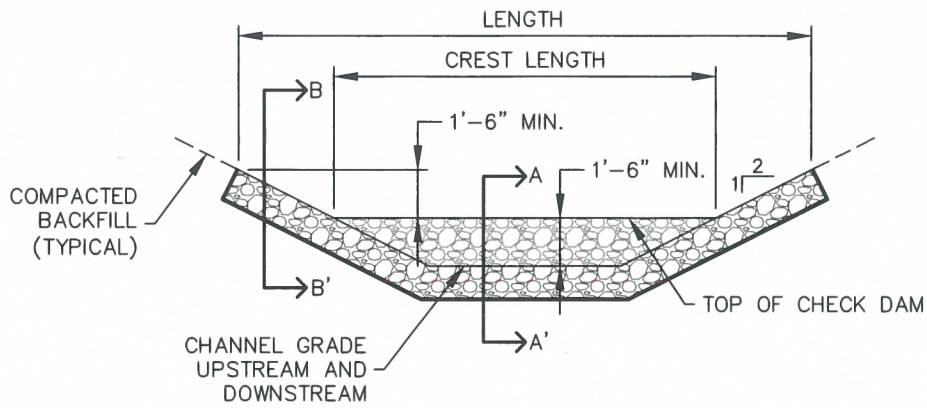
Signature of Qualified Stormwater Manager

Date

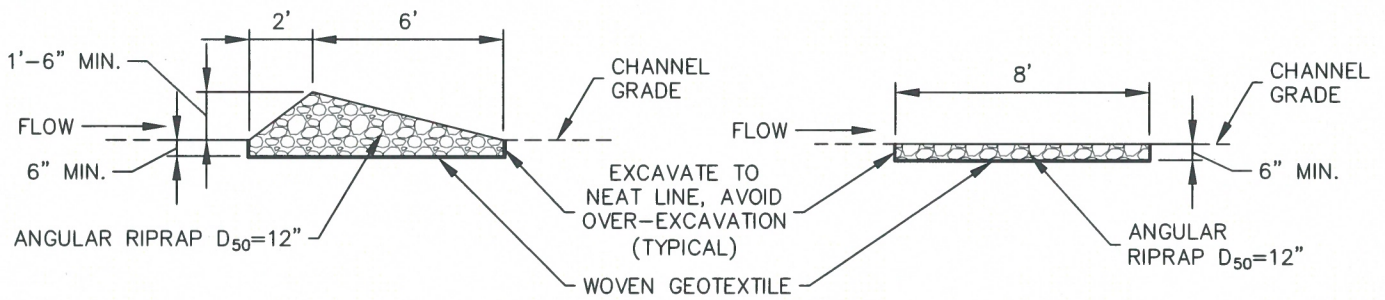
Notes/Comments

COMPLETED INSPECTION & MAINTENANCE RECORDS

BMP DETAILS

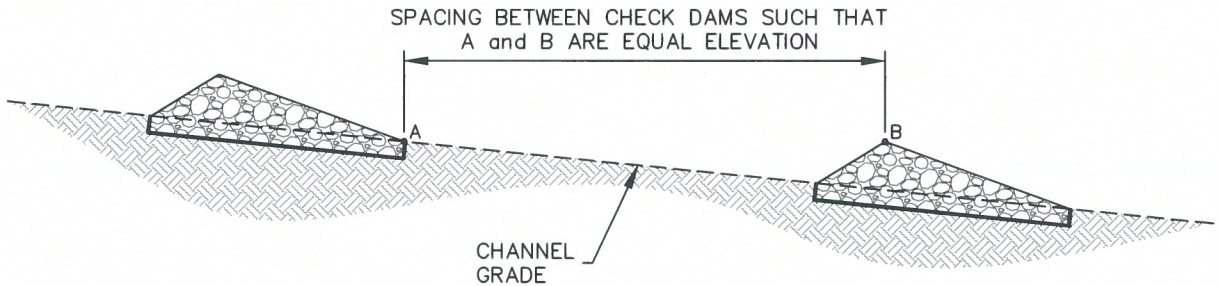


CHECK DAM ELEVATION VIEW



SECTION A-A'

SECTION B-B'



PROFILE

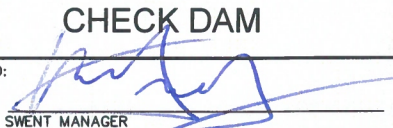
INSTALLATION NOTES

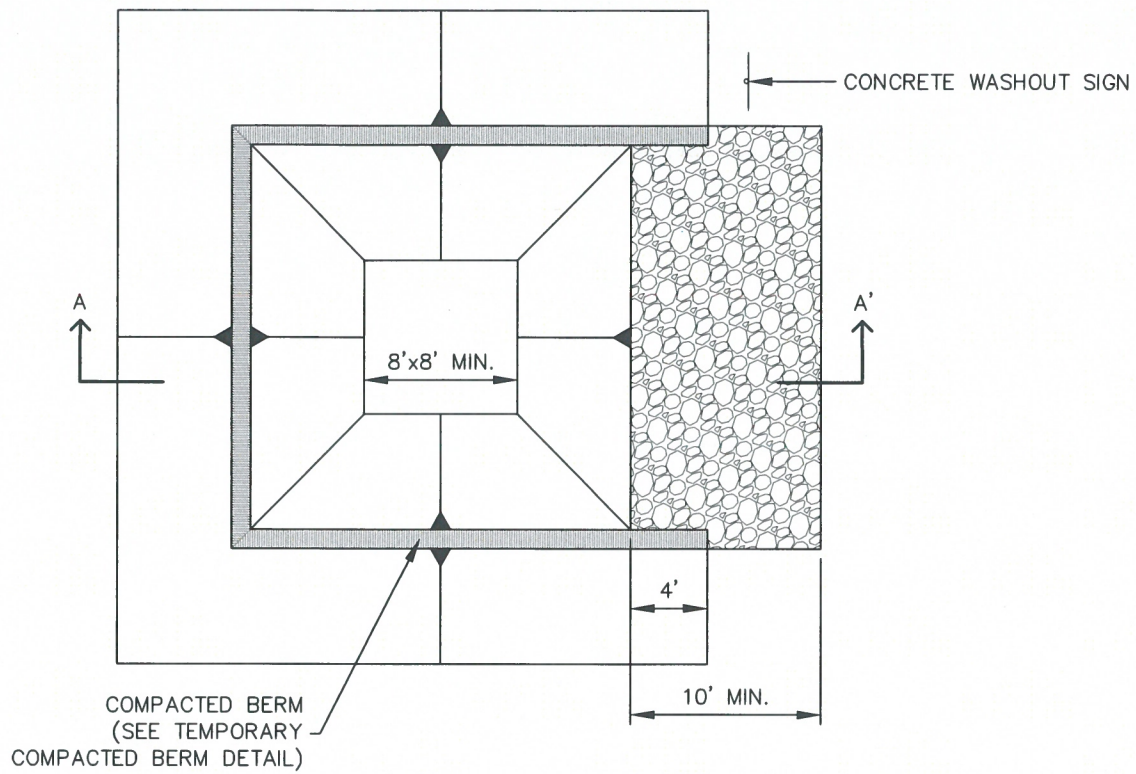
1. CHECK DAMS SHOULD BE INSTALLED BEFORE UPSTREAM LAND DISTURBING ACTIVITIES.
2. RIPRAP PAD SHOULD BE TRENCHED INTO GROUND BY A MINIMUM OF 6".

MAINTENANCE NOTES

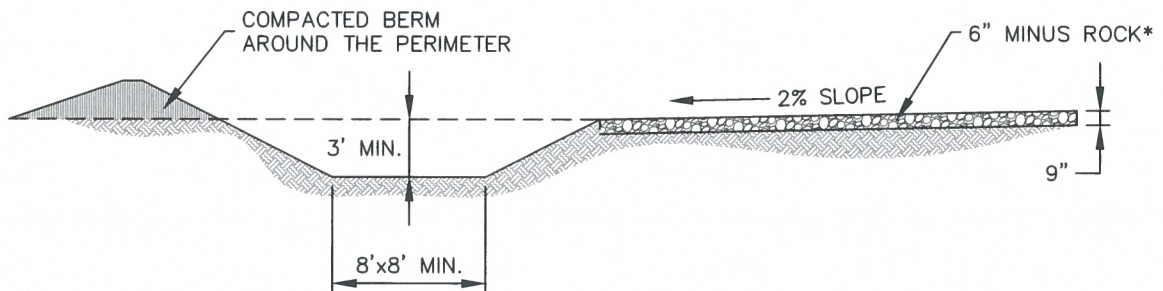
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES 1/2 THE HEIGHT OF THE CHECK DAM CREST.
3. CHECK DAMS MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA AFTER CHECK DAMS ARE REMOVED IF REMOVAL IS REQUIRED.



CHECK DAM		
APPROVED: 		
SWENT MANAGER		
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-CD



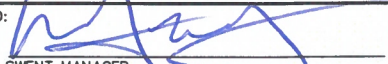
CONCRETE WASHOUT AREA PLAN



SECTION A-A'

*ROCK REQUIRED BASED ON
SITE CONDITIONS AT THE
DISCRETION OF THE GEC
INSPECTOR



CONCRETE WASHOUT AREA		
APPROVED: 		
SWENT MANAGER		
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-CWA-1

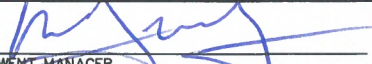
INSTALLATION NOTES

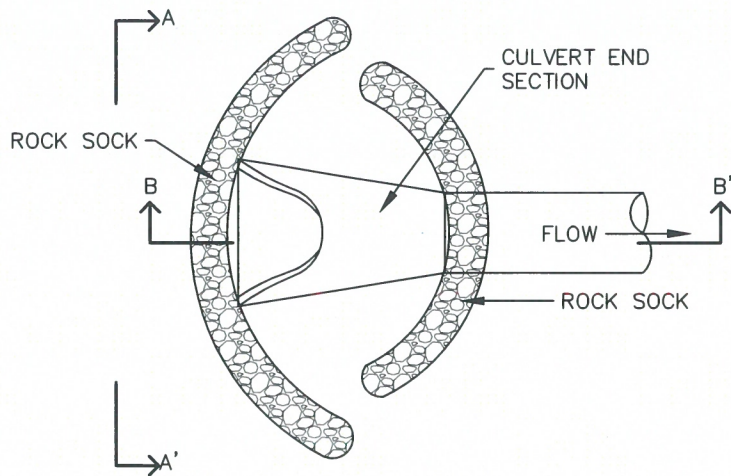
1. SEE PLAN VIEW FOR:
-LOCATION OF CONCRETE WASHOUT AREA
2. LOCATE AT LEAST 50' AWAY FROM STATE WATERS MEASURED HORIZONTALLY.
3. AN IMPERMEABLE LINER (16 MIL. MINIMUM THICKNESS) IS REQUIRED IF CONCRETE WASH AREA IS LOCATED WITHIN 400' OF STATE WATERS OR 1000' OF WELLS OR DRINKING WATER SOURCES.
4. DO NOT LOCATE IN AREAS WHERE SHALLOW GROUNDWATER MAY BE PRESENT.
5. THE CONCRETE WASH AREA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
6. CONCRETE WASH AREA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8'.
7. BERM SURROUNDING SIDES AND BACK OF CONCRETE WASH AREA SHALL HAVE A MINIMUM HEIGHT OF 2 FEET.
8. CONCRETE WASH AREA ENTRANCE SHALL BE SLOPED 2% TOWARDS THE CONCRETE WASH AREA.
9. SIGNS SHALL BE PLACED AT THE CONCRETE WASH AREA.
10. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

MAINTENANCE NOTES

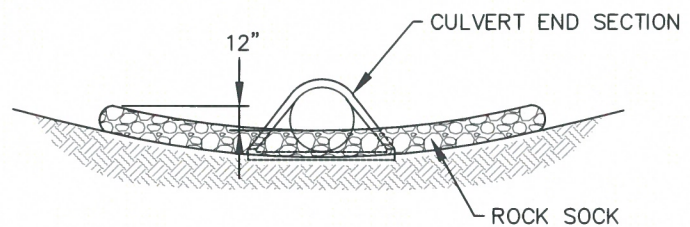
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. THE CONCRETE WASH AREA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN THE PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF $\frac{2}{3}$ THE HEIGHT OF THE CONCRETE WASH AREA.
3. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE, AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
4. THE CONCRETE WASH AREA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
5. PERMANENTLY STABILIZE AREA AFTER CONCRETE WASH AREA IS REMOVED.



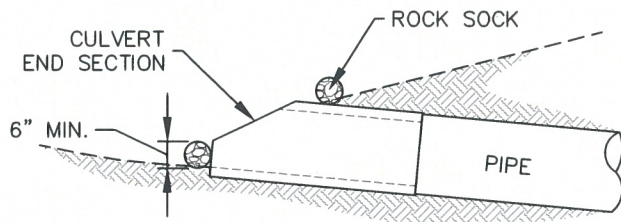
CONCRETE WASHOUT AREA		
APPROVED: 		
SWENT MANAGER		
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-CWA-2



CULVERT INLET PROTECTION PLAN



SECTION A-A'



SECTION B-B'


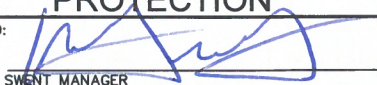
INSTALLATION NOTES

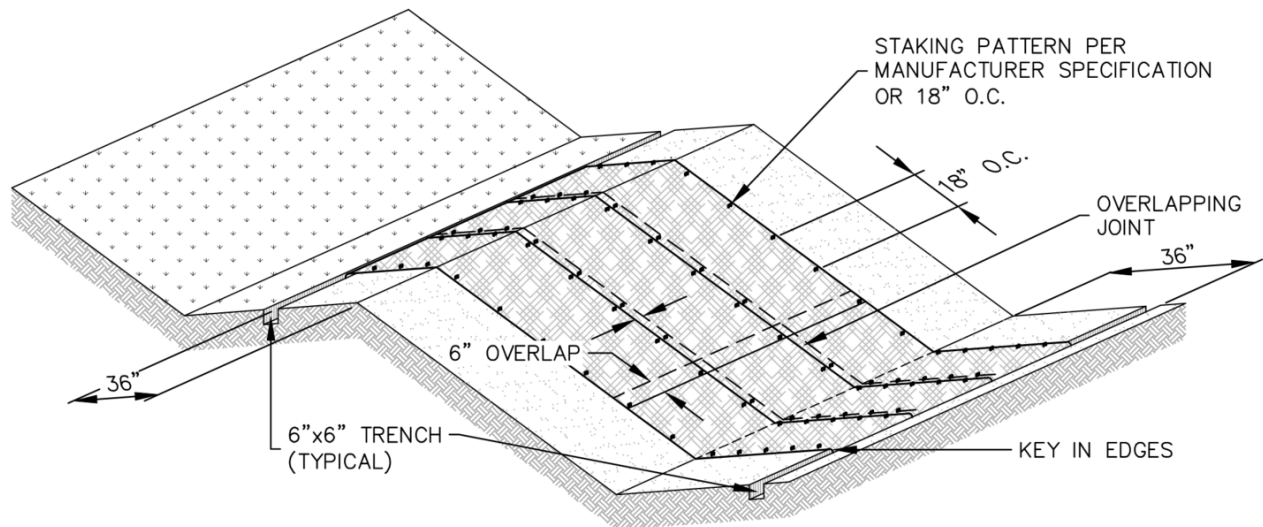
1. SEE ROCK SOCK DETAIL.

MAINTENANCE NOTES

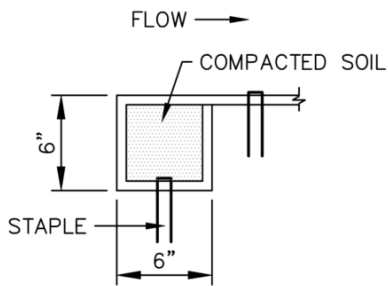
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS $\frac{1}{2}$ HEIGHT OF THE ROCK SOCK.
3. CULVERT INLET PROTECTION SHALL REMAIN UNTIL THE UPSTREAM AREA IS PERMANENTLY STABILIZED.



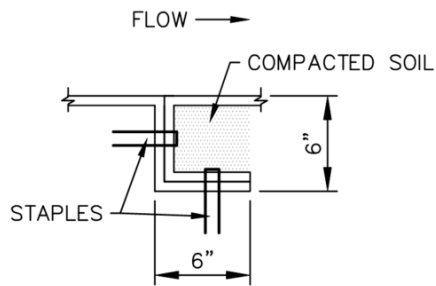
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	APPROVED:  SWENT MANAGER	
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-CIP



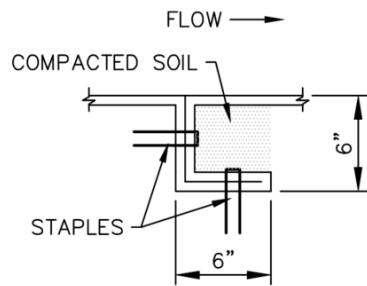
EROSION CONTROL BLANKET



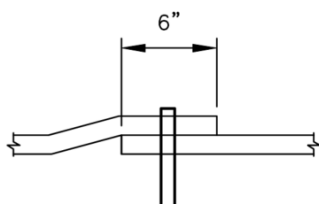
PERIMETER
ANCHOR TRENCH



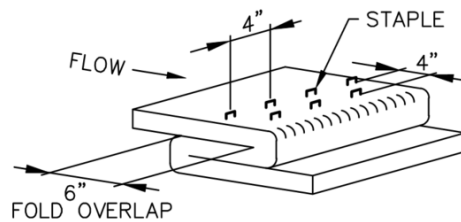
JOINT
ANCHOR TRENCH



INTERMEDIATE
CHECK SLOT



OVERLAPPING
JOINT



STAPLE CHECK
TO BE USED ON SLOPE EVERY 15 FEET



EROSION CONTROL BLANKET

APPROVED:
SWENT MANAGER

ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-ECB-1
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INSTALLATION NOTES

1. 100% NATURAL AND BIODEGRADABLE MATERIALS ARE REQUIRED FOR EROSION CONTROL BLANKETS. TRM PRODUCTS MAY BE USED WHERE APPROPRIATE AS DESIGNATED BY THE ENGINEER.
2. IN AREAS WHERE EROSION CONTROL BLANKETS ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO EROSION CONTROL BLANKET INSTALLATION, AND THE EROSION CONTROL BLANKET SHALL BE IN FULL CONTACT WITH THE SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
3. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
4. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL EROSION CONTROL BLANKETS.
5. INTERMEDIATE CHECK SLOT OR STAPLE CHECK SHALL BE INSTALLED EVERY 15' DOWN SLOPES. IN DRAINAGEWAYS, INSTALL CHECK SLOTS EVERY 25' PERPENDICULAR TO FLOW DIRECTION.
6. OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER FOR EROSION CONTROL BLANKETS ON SLOPES.
7. MATERIAL SPECIFICATIONS OF EROSION CONTROL BLANKETS SHALL CONFORM TO TABLE ECB-1.
8. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKETS SHALL BE RESEEDED AND MULCHED.
9. STRAW EROSION CONTROL BLANKETS SHALL NOT BE USED WITHIN STREAMS AND DRAINAGE CHANNELS.
10. COMPACT ALL TRENCHES.

MAINTENANCE NOTES

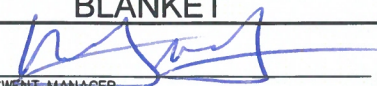
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. EROSION CONTROL BLANKETS SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE. TRM MUST BE REMOVED AT THE DISCRETION OF THE GEC INSPECTOR.
3. ANY EROSION CONTROL BLANKET PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW GEOTEXTILE THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE EROSION CONTROL BLANKET REINSTALLED.

TABLE ECB-1, EROSION CONTROL BLANKET MATERIAL SPECIFICATIONS

TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING
STRAW	-	100%	-	DOUBLE/NATURAL
STRAW-COCONUT	30% MIN.	70% MAX.	-	DOUBLE/NATURAL
COCONUT	100%	-	-	DOUBLE/NATURAL
EXCELSIOR	-	-	100%	DOUBLE/NATURAL



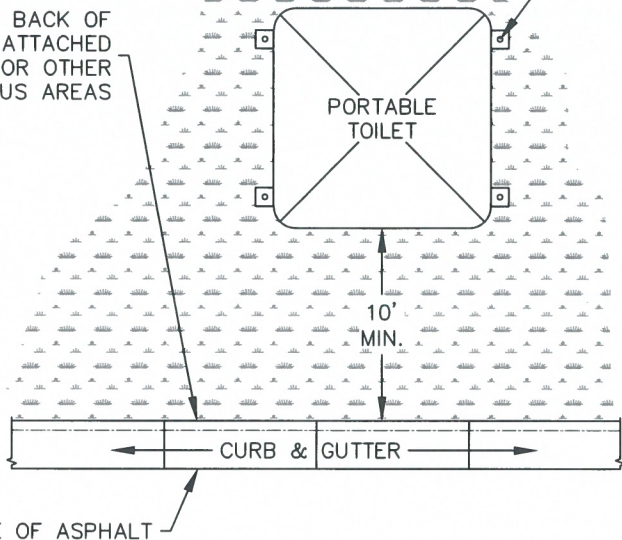
EROSION CONTROL BLANKET

APPROVED: 
SWENT MANAGER

ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-ECB-2
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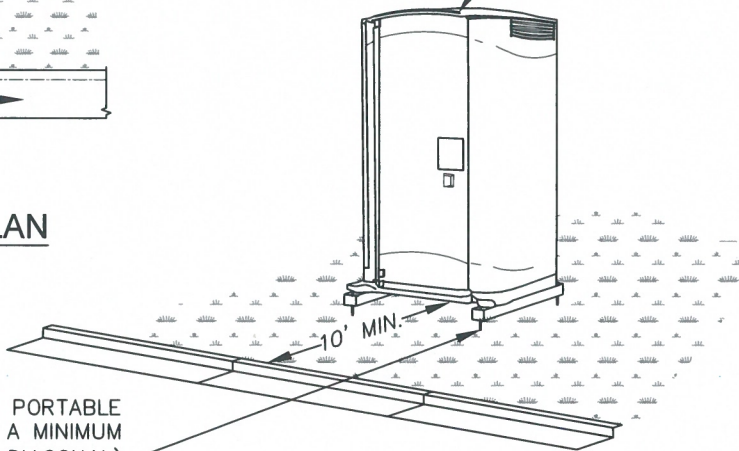
CONTRACTOR SHALL ANCHOR PORTABLE TOILET TO THE GROUND, AT A MINIMUM OF TWO OPPOSING CORNERS (ON A DIAGONAL) USING U-SHAPED REBAR STAKES

TOP BACK OF CURB, ATTACHED SIDEWALK, OR OTHER IMPERVIOUS AREAS



PORTABLE TOILET PLAN

PORTABLE TOILET (TYPICAL)



ISOMETRIC

CONTRACTOR SHALL ANCHOR PORTABLE TOILET TO THE GROUND, AT A MINIMUM OF TWO OPPOSING CORNERS (ON A DIAGONAL) USING U-SHAPED REBAR STAKES OR OTHER EFFECTIVE ANCHORING

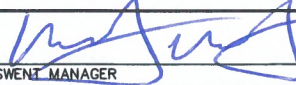
INSTALLATION NOTES

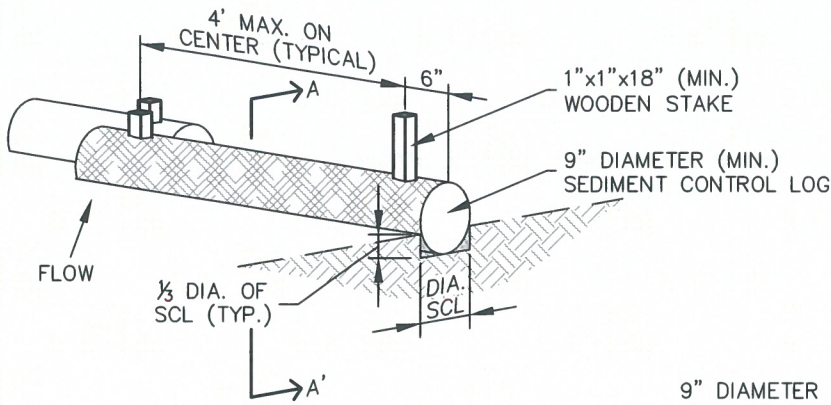
1. PORTABLE TOILETS SHALL BE PLACED A MINIMUM OF 10 FEET BEHIND ALL CURBS, SIDEWALKS, AND OTHER IMPERVIOUS AREAS; 50 FEET FROM STORM INLETS, AND 100 FEET FROM WATERWAYS.
2. PORTABLE TOILETS IN THE RIGHT-OF-WAY ARE REQUIRED TO BE PLACED ON MOBILE TRAILERS AND MUST BE ANCHORED OR WEIGHTED DOWN. PORTABLE TOILETS MAY BE INSTALLED IN ACCORDANCE WITH NOTE #1 IN STAGING AREAS/YARDS.
3. PORTABLE TOILETS SHALL BE SECURELY ANCHORED TO THE GROUND USING U-SHAPED REBAR STAKES, OR OTHER EFFECTIVE ANCHORING.
4. ANCHORING SHALL BE POSITIONED ON AT LEAST TWO OPPOSING (DIAGONAL) CORNERS.
5. TOILET CONTAINMENT PANS MAY BE USED IN PLACE OF A TRAILER AT THE GEC INSPECTOR'S DISCRETION. TOILET CONTAINMENT PANS MUST BE ANCHORED IN PLACE AND MUST NOT BE USED WITHIN THE CITY R.O.W.

MAINTENANCE NOTES

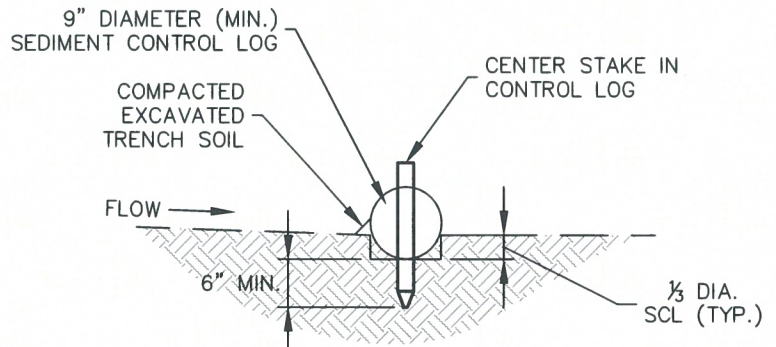
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. PORTABLE TOILETS SHALL BE SERVICED AT THE NECESSARY INTERVALS TO ELIMINATE THE POSSIBILITY OF OVERFLOW.
3. WHEN THE PORTABLE TOILETS ARE REMOVED, ANY DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE TOILETS MUST BE PERMANENTLY STABILIZED.



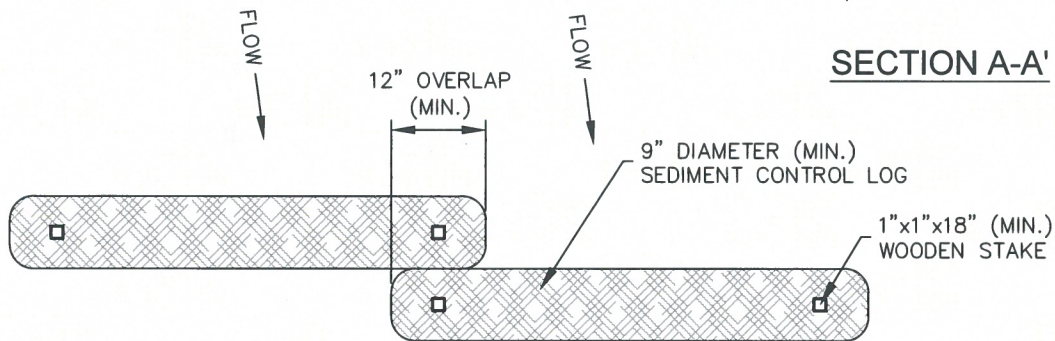
PORTABLE TOILET		
APPROVED: 		
SWENT MANAGER		
ISSUED: 2/19/19	REVISED: 8/19/2020	DRAWING NO. 900-PTM



SEDIMENT CONTROL LOG



SECTION A-A'



SEDIMENT CONTROL LOG JOINTS

INSTALLATION NOTES

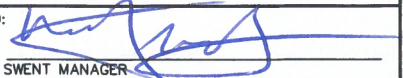
1. ALL SEDIMENT CONTROL LOGS MUST BE EMBEDDED TO $\frac{1}{3}$ OF THE HEIGHT OF THE LOG
2. LARGER DIAMETER SEDIMENT CONTROL LOGS NEED TO BE EMBEDDED DEEPER.
3. PLACE SEDIMENT CONTROL LOG AGAINST SIDEWALK OR BACK OF CURB WHEN ADJACENT TO THESE FEATURES.
4. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE FROM ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.
5. IF USING AS SLOPE PROTECTION, INSTALL SEDIMENT CONTROL LOGS ALONG THE CONTOUR.

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES $\frac{1}{2}$ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
3. PERMANENTLY STABILIZE AREA AFTER SEDIMENT CONTROL LOGS HAVE BEEN REMOVED.



SEDIMENT CONTROL LOGS

APPROVED: 
SWENT MANAGER

ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-SCL
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SEEDING & MULCHING

ALL SOIL TESTING, SOILS AMENDMENT AND FERTILIZER DOCUMENTATION, AND SEED LOAD AND BAG TICKETS MUST BE ADDED TO THE CSWMP.

SOIL PREPARATION

1. IN AREAS TO BE SEEDED, THE UPPER 6 INCHES OF THE SOIL MUST NOT BE HEAVILY COMPACTED, AND SHOULD BE IN FRIABLE CONDITION. LESS THAN 85% STANDARD PROCTOR DENSITY IS ACCEPTABLE. AREAS OF COMPACTION OR GENERAL CONSTRUCTION ACTIVITY MUST BE SCARIFIED TO A DEPTH OF 6 TO 12 INCHES PRIOR TO SPREADING TOPSOIL TO BREAK UP COMPACTED LAYERS AND PROVIDE A BLENDING ZONE BETWEEN DIFFERENT SOIL LAYERS.
2. AREAS TO BE PLANTED SHALL HAVE AT LEAST 4 INCHES OF TOPSOIL SUITABLE TO SUPPORT PLANT GROWTH.
3. THE CITY RECOMMENDS THAT EXISTING AND/OR IMPORTED TOPSOIL BE TESTED TO IDENTIFY SOIL DEFICIENCIES AND ANY SOIL AMENDMENTS NECESSARY TO ADDRESS THESE DEFICIENCIES. SOIL AMENDMENTS AND/OR FERTILIZERS SHOULD BE ADDED TO CORRECT TOPSOIL DEFICIENCIES BASED ON SOIL TESTING RESULTS.
4. TOPSOIL SHALL BE PROTECTED DURING THE CONSTRUCTION PERIOD TO RETAIN ITS STRUCTURE AVOID COMPACTION, AND TO PREVENT EROSION AND CONTAMINATION. STRIPPED TOPSOIL MUST BE STORED IN AN AREA AWAY FROM MACHINERY AND CONSTRUCTION OPERATIONS, AND CARE MUST BE TAKEN TO PROTECT THE TOPSOIL AS A VALUABLE COMMODITY. TOPSOIL MUST NOT BE STRIPPED DURING UNDESIRABLE WORKING CONDITIONS (E.G. DURING WET WEATHER OR WHEN SOILS ARE SATURATED). TOPSOIL SHALL NOT BE STORED IN SWALES OR IN AREAS WITH POOR DRAINAGE.

SEEDING

1. ALLOWABLE SEED MIXES ARE INCLUDED IN THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. ALTERNATIVE SEED MIXES ARE ACCEPTABLE IF INCLUDED IN AN APPROVED LANDSCAPING PLAN.
2. SEED SHOULD BE DRILL-SEEDED WHENEVER POSSIBLE
 - SEED DEPTH MUST BE $\frac{1}{3}$ TO $\frac{1}{2}$ INCHES WHEN DRILL-SEEDED IS USED
3. BROADCAST SEEDING OR HYDRO-SEEDED WITH TACKIFIER MAY BE SUBSTITUTED ON SLOPES STEEPER THAN 3:1 OR ON OTHER AREAS NOT PRACTICAL TO DRILL SEED.
 - SEEDING RATES MUST BE DOUBLED FOR BROADCAST SEEDING OR INCREASED BY 50% IF USING A BRILLION DRILL OR HYDRO-SEEDED
 - BROADCAST SEEDING MUST BE LIGHTLY HAND-RAKED INTO THE SOIL

MULCHING

1. MULCHING SHOULD BE COMPLETED AS SOON AS PRACTICABLE AFTER SEEDING, HOWEVER PLANTED AREAS MUST BE MULCHED NO LATER THAN 14 DAYS AFTER PLANTING.
2. MULCHING REQUIREMENTS INCLUDE:
 - HAY OR STRAW MULCH
 - ONLY CERTIFIED WEED-FREE AND CERTIFIED SEED-FREE MULCH MAY BE USED. MULCH MUST BE APPLIED AT 2 TONS/ACRE AND ADEQUATELY SECURED BY CRIMPING AND/OR TACKIFIER.
 - CRIMPING MUST NOT BE USED ON SLOPES GREATER THAN 3:1 AND MULCH FIBERS MUST BE TUCKED INTO THE SOIL TO A DEPTH OF 3 TO 4 INCHES.
 - TACKIFIER MUST BE USED IN PLACE OF CRIMPING ON SLOPES STEEPER THAN 3:1.
 - HYDRAULIC MULCHING
 - HYDRAULIC MULCHING IS AN OPTION ON STEEP SLOPES OR WHERE ACCESS IS LIMITED.
 - IF HYDRO-SEEDED IS USED, MULCHING MUST BE APPLIED AS A SEPARATE, SECOND OPERATION.
 - WOOD CELLULOSE FIBERS MIXED WITH WATER MUST BE APPLIED AT A RATE OF 2,000 TO 2,500 POUNDS/ACRE, AND TACKIFIER MUST BE APPLIED AT A RATE OF 100 POUNDS/ACRE.
 - EROSION CONTROL BLANKET
 - EROSION CONTROL BLANKET MAY BE USED IN PLACE OF TRADITIONAL MULCHING METHODS.



SEEDING & MULCHING

APPROVED:

SWENT MANAGER

ISSUED:

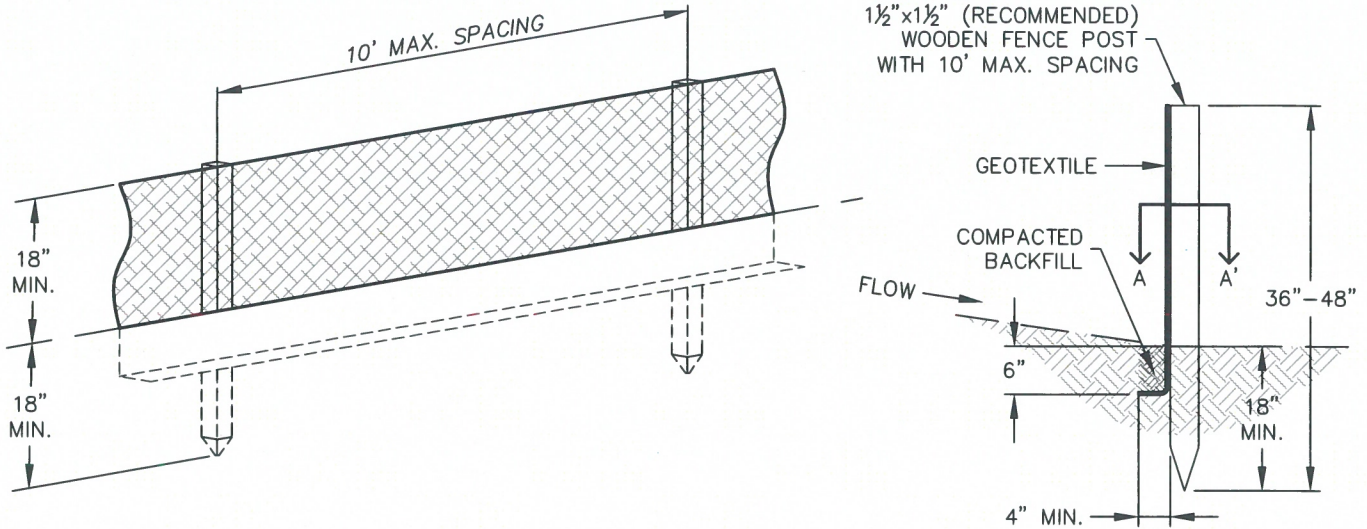
10/7/19

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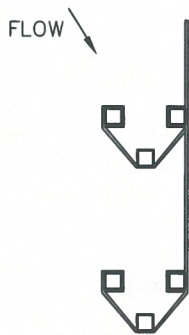
8/19/2020

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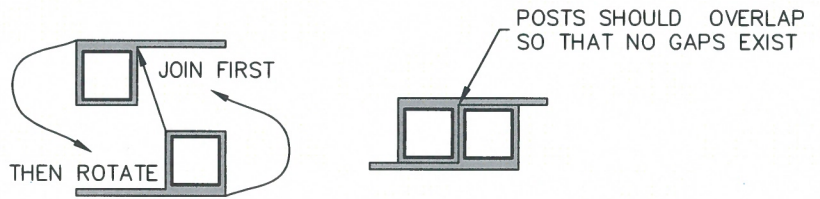
900-SM



SILT FENCE



J-HOOK INSTALLATION



SECTION A-A'

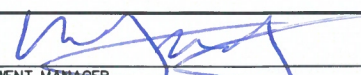
INSTALLATION NOTES

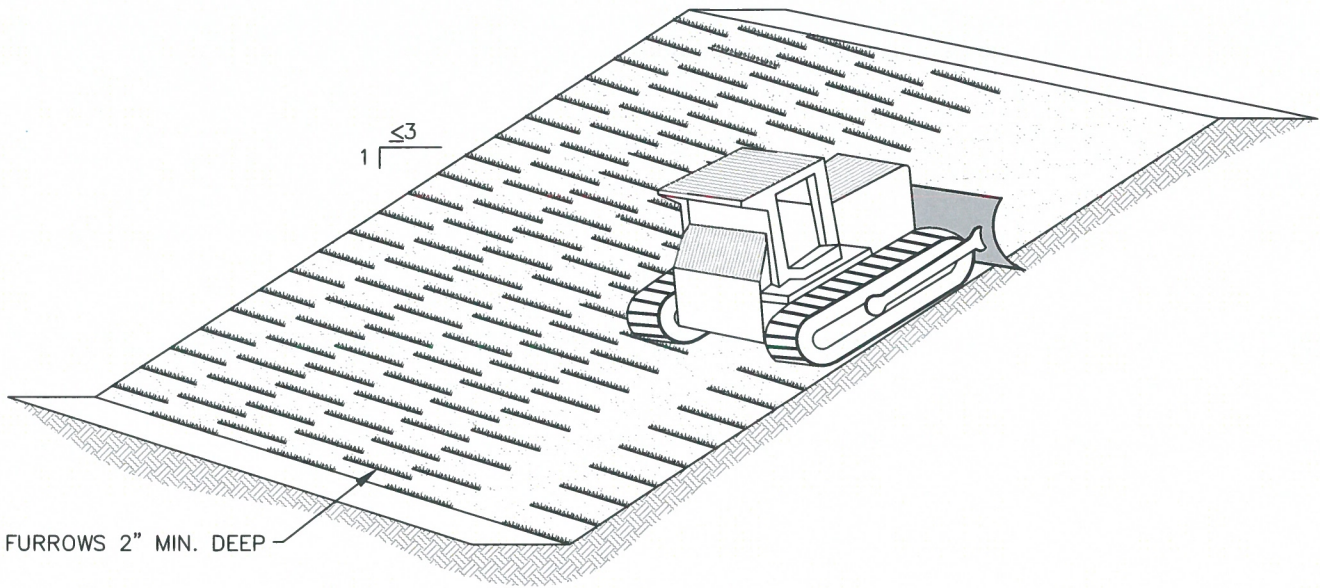
1. SILT FENCE MUST BE PLACED ON A FLAT SURFACE 2'-5' AWAY FROM TOE OF THE SLOPE TO ALLOW FOR PONDING AND DEPOSITION.
2. COMPACT THE TRENCH USING A JUMPING JACK OR WHEEL ROLLING TO THE POINT THAT THE FENCE RESISTS BEING PULLED OUT OF THE GROUND BY HAND.
3. SILT FENCE SHALL BE TAUT WITH NO SAGS AFTER IT HAS BEEN ANCHORED.
4. FABRIC SHALL BE ATTACHED TO POSTS WITH 1" HEAVY DUTY STAPLES OR 1" NAILS. THESE SHOULD BE PLACED VERTICALLY DOWN THE POST, 3" APART.
5. THE PREFERRED INSTALLATION METHOD USES A TRENCHER OR SILT FENCE INSTALLATION DEVICE.
6. INSTALL SILT FENCE ALONG THE CONTOUR OF THE SLOPES OR IN A MANNER TO AVOID CREATING CONCENTRATED FLOW (SUCH AS A "J-HOOK" INSTALLATION).

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES 1/2 OF THE DESIGN HEIGHT OF THE SILT FENCE.
3. SILT FENCE MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA AFTER SILT FENCE IS REMOVED.



SILT FENCE		
APPROVED: 		
SWENT MANAGER		
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-SF



SLOPE TRACKING



INSTALLATION NOTES

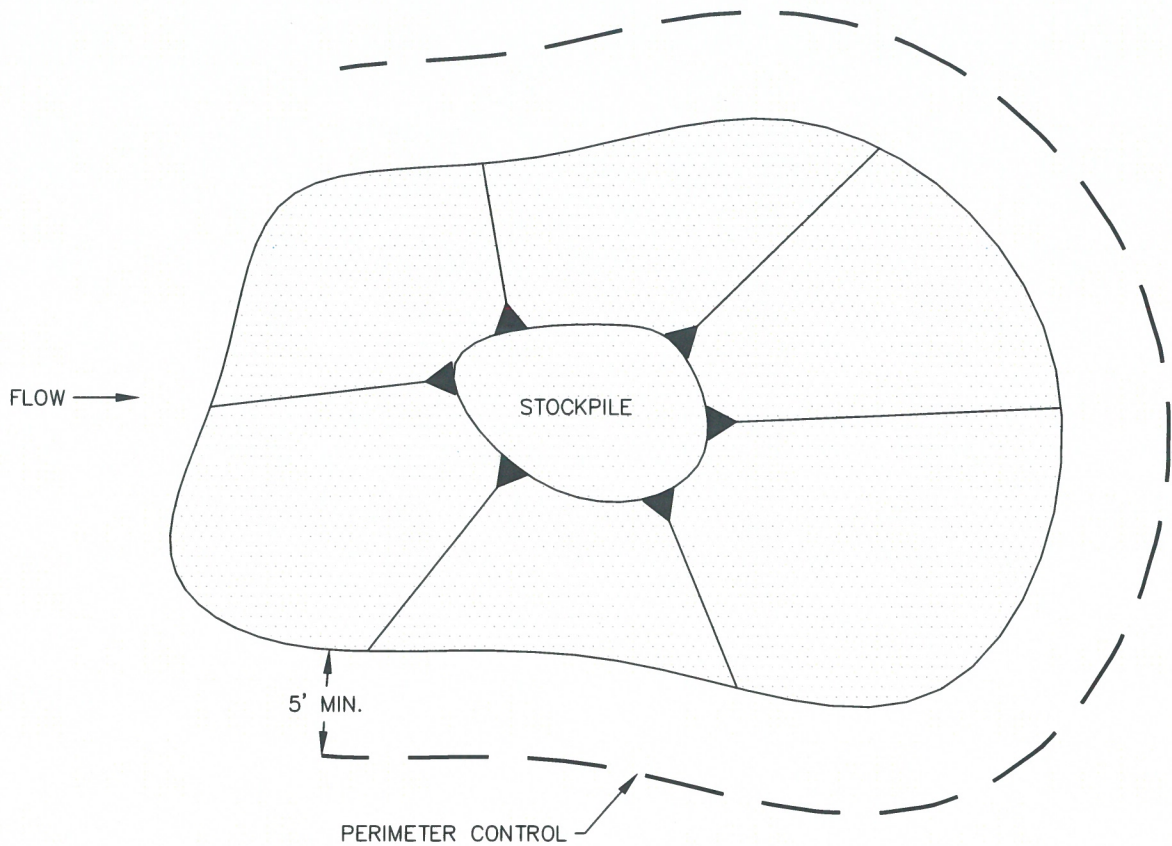
1. SLOPE TRACKING MAY BE USED ON SLOPES 3:1 OR STEEPER.
2. TRACKING GROOVES SHALL BE PERPENDICULAR TO THE SLOPE.
3. SLOPE TRACKING SHALL NOT BE USED ON EXTREMELY SANDY OR ROCKY SOILS.

MAINTENANCE NOTES

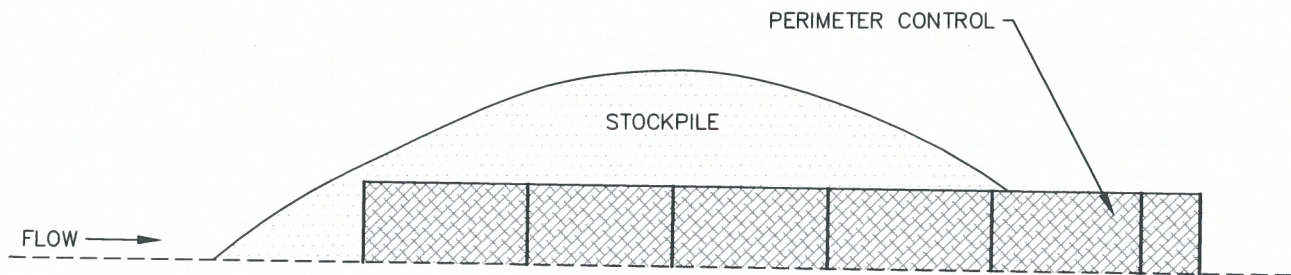
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. VEHICLES AND EQUIPMENT SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SLOPE TRACKED.



 <p>STORMWATER ENTERPRISE</p>	SLOPE TRACKING	
	APPROVED: 	
	<small>SWENT MANAGER</small>	
<small>ISSUED:</small> 10/7/19	<small>REVISED:</small> 8/19/2020	<small>DRAWING NO.</small> 900-ST



STOCKPILE PROTECTION PLAN



STOCKPILE PROTECTION ELEVATION

INSTALLATION NOTES

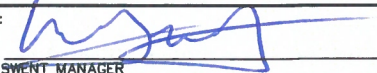
1. INSTALL PERIMETER CONTROL AROUND STOCKPILE ON DOWNGRAIDENT SIDE. PERIMETER CONTROL MUST BE SUITABLE TO SITE CONDITIONS AND INSTALLED ACCORDING TO THE RELEVANT DETAIL.
2. FOR STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRAIDENT CONTROLS INCLUDING PERIMETER CONTROL ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

MAINTENANCE NOTES

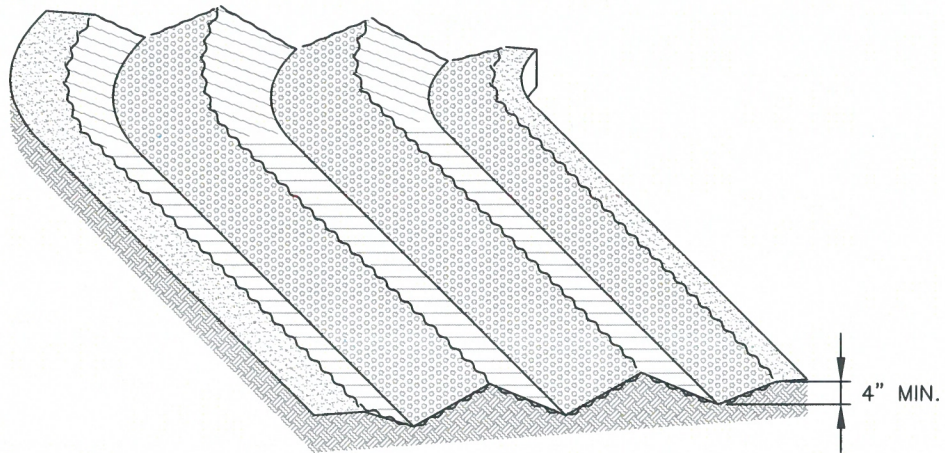
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. IF PERIMETER CONTROLS MUST BE MOVED TO ACCESS STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORK DAY.
3. ACCUMULATED SEDIMENT MUST BE REMOVED ACCORDING TO PERIMETER CONTROL DETAIL.



STOCKPILE PROTECTION

APPROVED: 
SWENT MANAGER

ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-SP
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SURFACE ROUGHENING


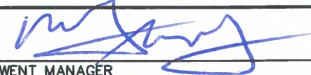
INSTALLATION NOTES

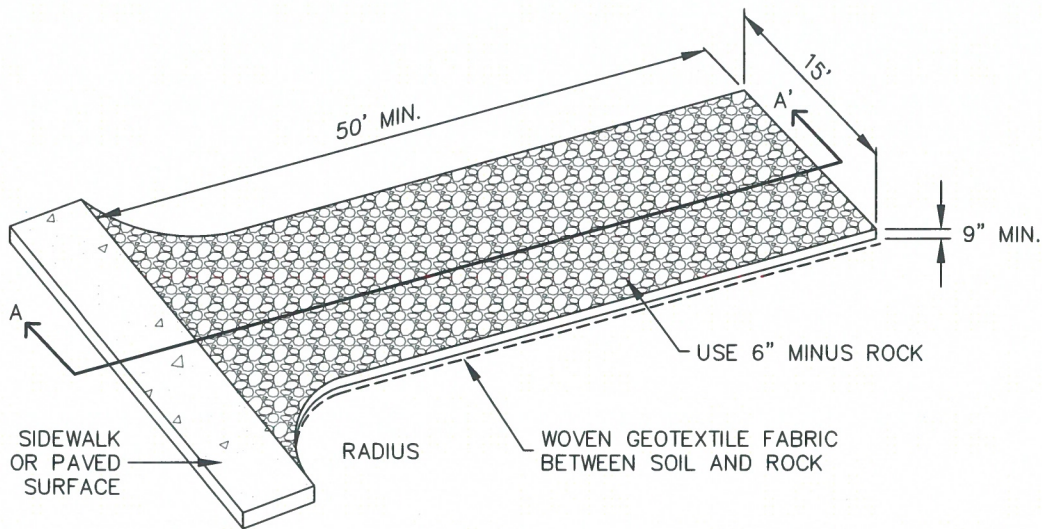
1. SURFACE ROUGHENING MAY BE USED IN AREAS FLATTER THAN 3:1. INSTALL FURROWS ALONG CONTOUR TO INTERCEPT SHEET FLOW.
2. SURFACE ROUGHENING MAY BE ACCOMPLISHED BY FURROWING, SCARIFYING, RIPPING OR DISKING THE SOIL.
3. FURROWS MUST BE A MINIMUM OF 4" IN DEPTH.
4. SURFACE ROUGHENING SHALL NOT BE USED ON EXTREMELY SANDY OR ROCKY SOILS.

MAINTENANCE NOTES

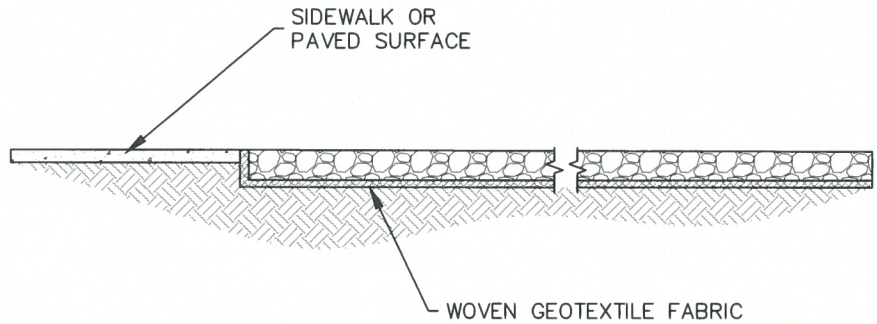
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. VEHICLES AND EQUIPMENT SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SURFACE ROUGHENED.



 <p>STORMWATER ENTERPRISE</p>	SURFACE ROUGHENING		
	APPROVED:  SWENT MANAGER		
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-SR	



AGGREGATE VEHICLE TRACKING CONTROL



SECTION A-A'

INSTALLATION NOTES

1. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHOULD BE LOCATED AT ALL POINTS WHERE VEHICLES EXIT THE CONSTRUCTION SITE TO ADJACENT ROADWAY.
2. STABILIZED CONSTRUCTION ENTRANCE/EXITS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. RADIUS MUST BE ADEQUATE FOR INTENDED CONSTRUCTION VEHICLE TURNING.
4. ROCK SHOULD CONSIST OF 6" MINUS ROCK.
5. INSTALL CONSTRUCTION FENCE ON BOTH SIDES OF VEHICLE TRACKING CONTROL PAD WHEN NEEDED OR REQUIRED BY INSPECTOR.

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. SEDIMENT TRACKED ONTO THE ADJACENT ROAD SHALL BE REMOVED DAILY, BY SWEEPING OR SHOVELING, AND NEVER WASHED DOWN STORM DRAINS.
3. ROUGHEN, REPLACE AND/OR ADD ROCK AS NEEDED TO MAINTAIN CONSISTENT DEPTH AND TO PREVENT SEDIMENT TRACKING ONTO ADJACENT STREET.
4. PERMANENTLY STABILIZE AREA AFTER VEHICLE TRACKING CONTROL IS REMOVED.



VEHICLE TRACKING CONTROL

APPROVED: 
SWENT MANAGER

ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-VTC
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SWMP MAP/GEC PLAN

GUNTZELMAN PORCELAIN PINES SUBDIVISION

GRADING AND EROSION CONTROL PLAN

COUNTY OF EL PASO, STATE OF COLORADO

FEBRUARY 2023

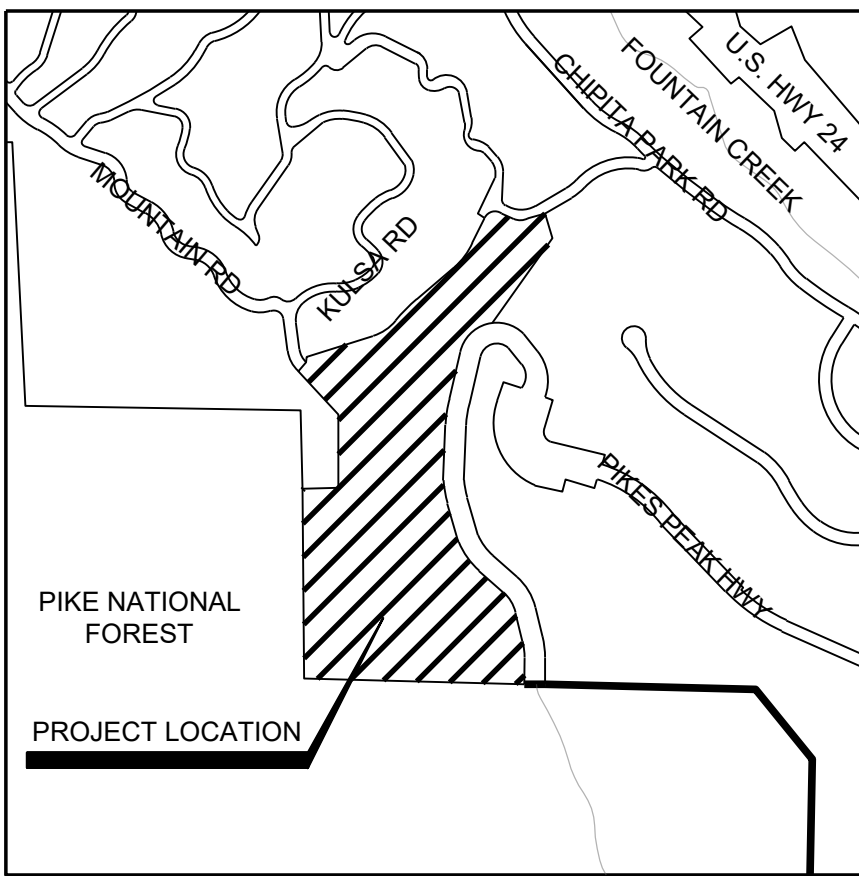


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GUNTZELMAN PORCELAIN PINES

PRELIMINARY DOCUMENTS NOT FOR CONSTRUCTION

EL PASO COUNTY, COLORADO



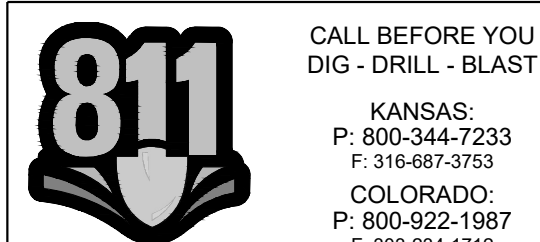
VICINITY MAP
(NOT TO SCALE)

GENERAL NOTES:

- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ADJACENT TO THE SITE. THE OMISSION FROM, OR INCLUSION OF, UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NON-EXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES, BUILDINGS, FENCES, AND ROADWAYS FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE ABOVE WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR. GRADINGS SHALL BE COMPLETED TO A SUBGRADE TOLERANCE OF PLUS OR MINUS 0.2'.
- CONTRACTOR SHALL OBTAIN COPIES OF THE SOILS REPORT FROM THE GEOTECHNICAL ENGINEER AND THEY SHALL BE KEPT ONSITE DURING ALL EARTHWORK.
- THE SITE SHALL BE STRIPPED A MINIMUM OF 0.5' BELOW EXISTING GRADE, OR AS RECOMMENDED BY THE GEOTECHNICAL REPORT. ONLY APPLICABLE IN PREVIOUSLY UNDISTURBED AREAS. AREA OF PROPOSED DETAILED GRADING HAS ALREADY BEEN DISTURBED.
- MAXIMUM CUT/FILL SLOPES SHALL NOT EXCEED 2:1.
- DUST CONTROL SHALL BE SUPPLIED BY THE GRADING CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT PER THE COUNTY HEALTH DEPARTMENT SPECIFICATIONS.

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS:

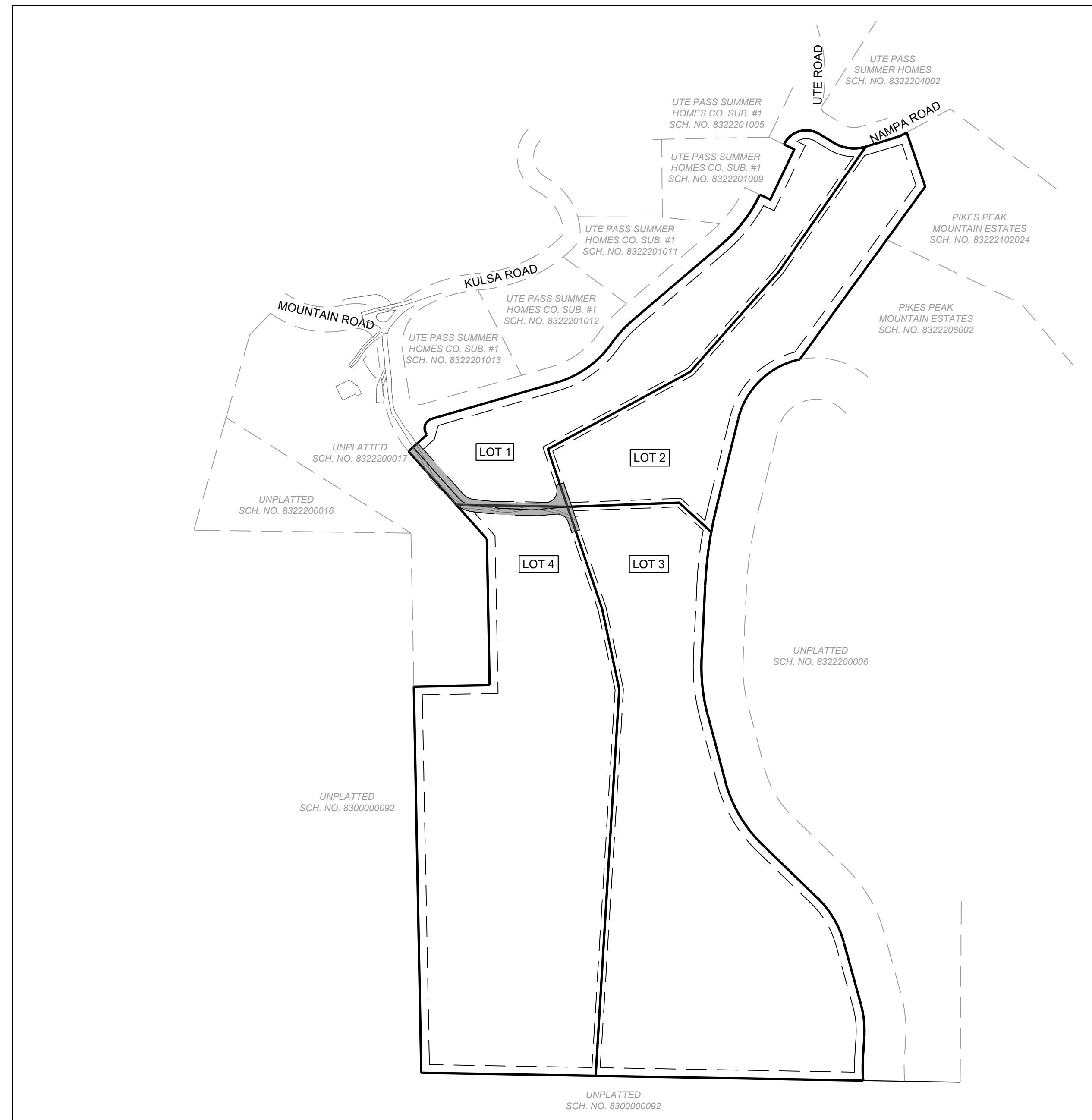
- ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
- CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
 - EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
 - CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
 - COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
 - CDOT M & S STANDARDS
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
- IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
- CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT - INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
- CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
- ALL STORM DRAIN PIPES SHALL BE CLASS B OR CLASS III UNLESS OTHERWISE NOTED AND APPROVED BY PCD.
- CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SITE TRIANGLES.
- SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS, INCLUDING WORK WITH THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
- THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING OR CONSTRUCTION.



The utilities as shown on this drawing were developed from the information available. This is not implied nor intended to be the complete inventory of utilities in this area. It is the client/contractor's responsibility to verify the location of all utilities (whether shown or not) and protect said utilities from any damage.

CAUTION - NOTICE TO CONTRACTORS:

- ALL UTILITY LOCATIONS SHOWN ARE BASED ON MAPS PROVIDED BY THE APPROPRIATE UTILITY COMPANY AND FIELD SURFACE EVIDENCE AT THE TIME OF SURVEY AND IS TO BE CONSIDERED AN APPROXIMATE LOCATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, WHETHER SHOWN ON THE PLANS OR NOT PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
- WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POT-HOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.



SITE MAP
SCALE: 1" = 200'

EROSION CONTROL COST ESTIMATE				
ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
PERMANENT/TEMPORARY SEEDING	0.63	AC	\$600.00	\$378.00
PERMANENT/TEMPORARY MULCHING	0.63	AC	\$500.00	\$315.00
PERMANENT/TEMPORARY EROSION CONTROL BLANKET	3058	SY	\$6.00	\$18,348.00
VEHICLE TRACKING CONTROL	1	EA	\$2,250.00	\$2,250.00
SILT FENCE	1639	LF	\$2.50	\$4,097.50
ROCK CHECK DAM	1	EA	\$500.00	\$500.00
CULVERT INLET PROTECTION	1	EA	\$150.00	\$150.00
CONCRETE WASHOUT	1	EA	\$760.00	\$760.00
STABILIZED STAGING AREA	1	EA	\$5,900.00	\$5,900.00
SUB-TOTAL				\$32,698.50
MAINTENANCE (35% OF CONSTRUCTION)				\$11,444.48
TOTAL				\$44,142.98

SMH CONSULTANTS DOES NOT GUARANTEE THAT THE CONSTRUCTION COSTS WILL NOT VARY FROM THIS CONSTRUCTION COST OPINION.

AGENCIES

OWNER/DEVELOPER:
 KRISTIAN & CHRISTA GUNTZELMAN
 5381 SUGAR CAMP ROAD
 MILFORD, OH 45150
 (513) 722-4343

CIVIL ENGINEER:
 BRETT LOUK
 SMH CONSULTANTS, P.A.
 411 SOUTH TEJON STREET, SUITE 1
 COLORADO SPRINGS, CO 80903
 (719) 465-2145

SURVEYOR:
 TIM SLOAN
 SMH CONSULTANTS, P.A.
 411 S TEJON STREET, SUITE 1
 COLORADO SPRINGS, CO 80903
 465-2145

GAS:
 BOB SWATEK
 BLACK HILLS ENERGY
 198 COUNTY LINE ROAD
 PALMER LAKE, CO 80133
 (719) 332-5856

ELECTRIC:
 COLORADO SPRINGS UTILITIES
 1521 HANCOCK EXPRESSWAY
 COLORADO SPRINGS, CO 80903
 (719) 668-8262

FIRE DISTRICT:
 KAREN BODINE
 CASCADE FIRE PROTECTION DISTRICT
 8015 SEVERY AVE, PO BOX 366
 CASCADE, CO 80809
 (719) 684-9549

COUNTY ENGINEERING:
 LUPE PACKMAN
 EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT
 2880 INTERNATIONAL CIRCLE, SUITE 110
 COLORADO SPRINGS, CO 80910
 (719) 520-7550

INDEX OF SHEETS

1	GEC COVER
2	GEC PLAN
3	GEC NOTES AND GEC DETAILS
4 - 5	GEC DETAILS

ENGINEER'S STATEMENT

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

BRETT LOUK, COLORADO P.E. # _____ DATE: _____

OWNER'S/DEVELOPER'S STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

KRISTIAN GUNTZELMAN _____ DATE: _____

CHRISTA GUNTZELMAN _____ DATE: _____

EL PASO COUNTY:

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL, AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTOR'S DISCRETION.

JOSHUA PALMER, COUNTY ENGINEER _____ DATE: _____

BASIS OF BEARINGS:

BASIS OF BEARINGS IS THE SOUTH LINE OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 22, TOWNSHIP 13 SOUTH, RANGE 68 WEST MONUMENTED AT THE CENTER 1/4 CORNER BY A 1" IRON PIPE WITH A 2-1/2" BRASS CAP STAMPED "1938 U.S. GENERAL LAND OFFICE SURVEY", 0.5' ABOVE GRADE AND AT THE WEST 1/16 CENTER CORNER BY A 1" IRON PIPE WITH A 2-1/2" BRASS CAP STAMPED "1938 U.S. GENERAL LAND OFFICE SURVEY AND ASSUMED TO BEAR NORTH 88 DEGREES 58 MINUTES 46 SECONDS WEST, 1301.48 FEET.

REVISION DESCRIPTION (DESCRIPTION)

REVISION DATE

00/00/00

NORTH



200' 100' 0' 200'

SCALE: 1" = 200'

PROJECT #: 2107-0307

CHECKED BY: BML

DRAWN BY: JAM

DATE: 02/15/2023

SHEET #

GRADING & EROSION CONTROL COVER SHEET

1

TOTAL SHEETS 5




















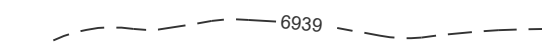
GUNTZELMAN PORCELAIN PINES

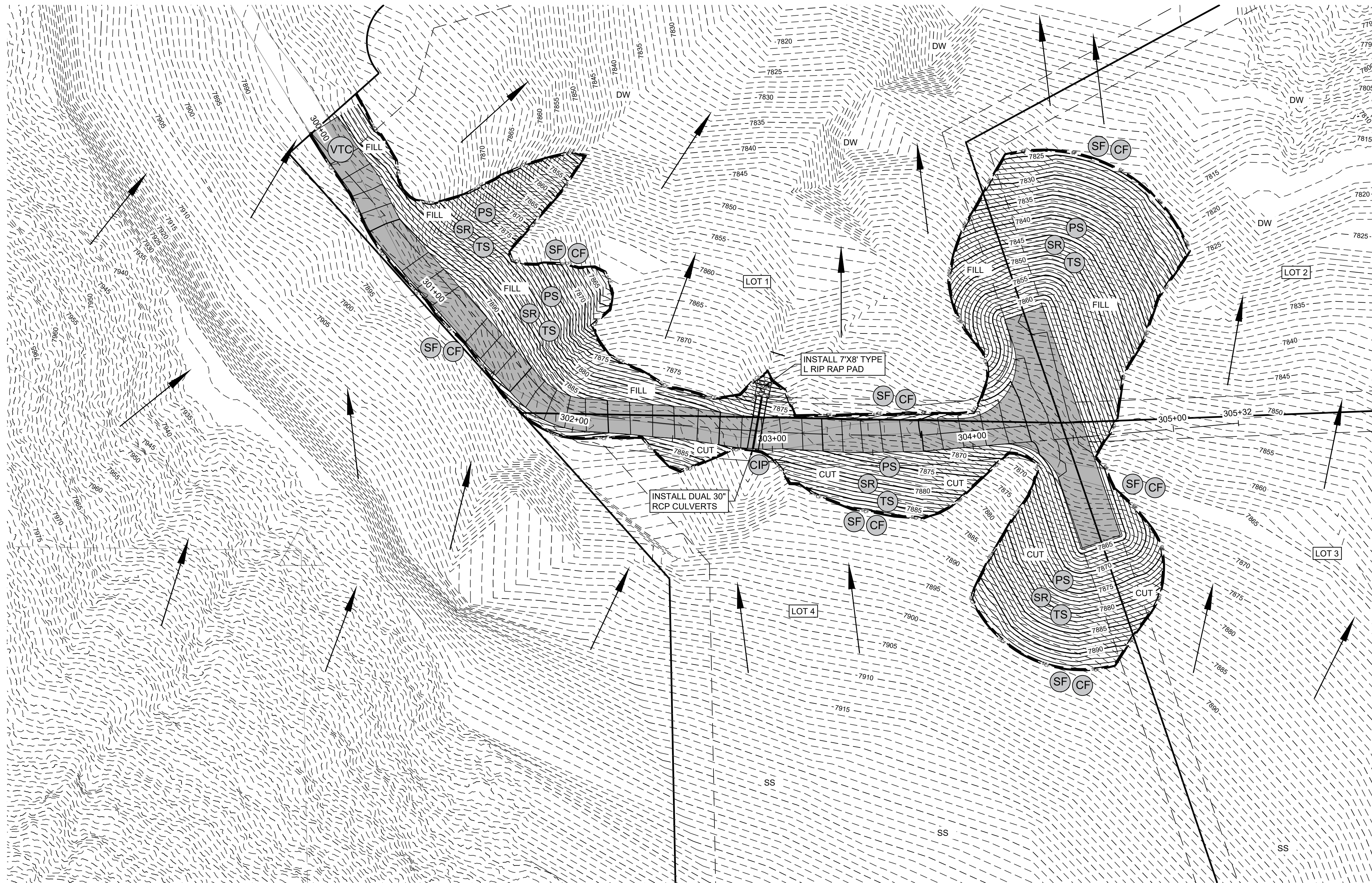
PRELIMINARY DOCUMENTS NOT FOR CONSTRUCTION

EL PASO COUNTY, COLORADO

GRADING & EROSION CONTROL PLAN

LEGEND

-  PROPOSED PRIVATE DRIVE/DRIVEWAY
-  VTC VEHICLE TRACKING CONTROL
-  PS PERMANENT SEEDING
-  TS TEMPORARY SEEDING
-  SF SILT FENCE
-  SP STOCKPILE PROTECTION
-  SSA STABILIZED STAGING AREA
-  CWA CONCRETE WASHOUT AREA
-  CIP CULVERT INLET PROTECTION
-  SR SURFACE ROUGHENING
-  CF CONSTRUCTION FENCE
-  POST SITE (CONTACTS AND PERMITS) AND WASHOUT POSTING
-  DW DRAINAGE WAY
-  SS STEEP SLOPES
-  PROPOSED STORM SEWER
-  LOT LINE
-  LIMITS OF CONSTRUCTION/DISTURBANCE
-  FLOW DIRECTION ARROW
-  EXISTING CONTOUR
-  PROPOSED CONTOUR



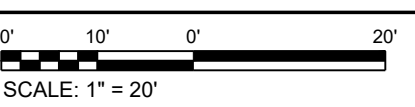
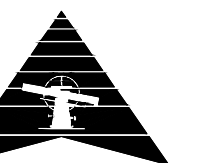
NOTES:

1. FUTURE LOT OWNERS SHALL PROVIDE AN ENGINEERED SITE PLAN AT TIME OF BUILDING PERMIT. ENGINEERED SITE PLAN SHALL INDICATE ANY REQUIRED CULVERTS FOR EACH INDIVIDUAL LOT. LOT OWNERS WILL BE RESPONSIBLE FOR INSTALLATION OF CULVERTS REQUIRED FOR THEIR DRIVEWAY AND SITE LAYOUT.
2. THE SITE IS CURRENTLY UNDEVELOPED AND HEAVILY FORESTED. SOIL DATA FOR THE PROPERTY WAS OBTAINED FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE (NRCS) WEB SOIL SURVEY. SOILS WITHIN THE SITE ARE LEGAULT-ROCK OUTCROP, HYDROLOGIC SOIL GROUP D, AND TECOLOTE, HYDROLOGIC SOIL GROUP B.
3. PRIVATE DRIVE/DRIVEWAY CONSTRUCTION PER GEOTECH REPORT AND CASCADE FIRE DEPARTMENT SPECIFICATIONS.
4. STOCKPILE LOCATION FOR THIS PROJECT TO BE LOCATED BY CONTRACTOR AND ADDED TO THE SWMP/IGEC UPON DETERMINATION.
5. LOCATION OF STORAGE FOR MAINTENANCE EQUIPMENT, CONCRETE WASHOUT, AND TEMPORARY DISPOSAL AREAS WILL BE ADDED TO THE GEC/SWMP BY CONTRACTOR.
6. ALL NON-STRUCTURAL CONTROL MEASURES SUCH AS STREET SWEEPING, GOOD HOUSEKEEPING, AND ETC. SHALL BE EMPLOYED BY THE CONTRACTOR AS NECESSARY AND AS OUTLINED IN THE SWMP.
7. MAXIMUM CUT FILL SLOPES SHALL NOT EXCEED 2:1.
8. ALL FILL MATERIAL SHALL BE APPROVED BY A LICENSED ENGINEER.
9. ALL STRIPPED TOPSOIL SHALL BE STOCKPILED FOR RE-USE, IF POSSIBLE.
10. LOCATION OF PORTABLE TOILET, STABILIZED STAGING AREA, AND SITE (CONTACTS AND PERMITS) AND WASHOUT POSTING TO BE ADDED TO THIS PLAN AND SWMP BY CONTRACTOR.
11. CONSTRUCTION FENCE AND SILT FENCE OFFSET FOR CLARITY. CONTRACTOR TO ENSURE COM'S ARE PLACED DOWNSTREAM OF DISTURBED AREAS TO PREVENT SEDIMENT FROM LEAVING SITE.

REVISION	DATE	DESCRIPTION

REVISION DATE	00/00/00
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NORTH



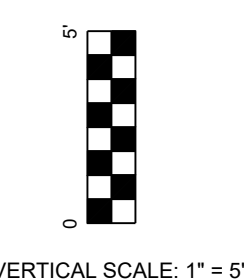
SCALE: 1" = 20'

PROJECT #: 2107-0307
CHECKED BY: BML
DRAWN BY: JAM

DATE: 02/15/2023

SHEET # **2**

TOTAL SHEETS 5



VERTICAL SCALE: 1" = 5'

STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS:

- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
- ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
- CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
- ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED IN THE STORMWATER MANAGEMENT PLAN.
- TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
- FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
- ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
- EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
- COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENEED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
- ANY TEMPORARY OR PERMANENT FACILITY DESIGNATED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
- CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
- DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
- EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
- TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
- NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ON-SITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAMINATION PROTECTION TO CONTAIN ALL SPILLS ON-SITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, AND SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
- OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS) AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES OR REGULATIONS SHALL APPLY.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY RMG - ROCKY MOUNTAIN GROUP AND SHALL BE CONSIDERED PART OF THESE PLANS.
- AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF ANY UTILITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR MORE INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL DIVISION
WQCD - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT

811
CALL BEFORE YOU DIG - DRILL - BLAST
KANSAS:
P: 800-344-7233
F: 316-687-3753
COLORADO:
P: 800-922-1987
F: 303-234-1712

The utilities as shown on this drawing were surveyed from the information available. This is not implied nor intended to be the complete inventory of utilities in this area. It is the client's responsibility to verify the location of all utilities (whether shown or not) and protect said utilities from any damage.

CAUTION - NOTICE TO CONTRACTORS:

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- WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POT-HOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.

CHECK DAM ELEVATION VIEW

SECTION A-A'

SECTION B-B'

PROFILE

INSTALLATION NOTES

- CHECK DAMS SHOULD BE INSTALLED BEFORE UPSTREAM LAND DISTURBING ACTIVITIES.
- RIPRAP PAD SHOULD BE TRENCHED INTO GROUND BY A MINIMUM OF 6".

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES 1/2 THE HEIGHT OF THE CHECK DAM CREST.
- CHECK DAMS MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
- PERMANENTLY STABILIZE AREA AFTER CHECK DAMS ARE REMOVED IF REMOVAL IS REQUIRED.

CD

STORMWATER ENTERPRISE
APPROVED: [Signature]
DATE: 10/7/19
REVISED: 8/19/2020
DRAWING NO. 900-CD

CONCRETE WASHOUT AREA PLAN

SECTION A-A'

INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION OF CONCRETE WASHOUT AREA.
- LOCATE AT LEAST 50' AWAY FROM STATE WATERS MEASURED HORIZONTALLY.
- AN IMPERMEABLE LINER (16 MIL. MINIMUM THICKNESS) IS REQUIRED IF CONCRETE WASH AREA IS LOCATED WITHIN 400' OF STATE WATERS OR 1000' OF WELLS OR DRINKING WATER SOURCES.
- DO NOT LOCATE IN AREAS WHERE SHALLOW GROUNDWATER MAY BE PRESENT.
- THE CONCRETE WASH AREA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
- CONCRETE WASH AREA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8" BY 8".
- BERM SURROUNDING SIDES AND BACK OF CONCRETE WASH AREA SHALL HAVE A MINIMUM HEIGHT OF 2 FEET.
- CONCRETE WASH AREA ENTRANCE SHALL BE SLOPED 2% TOWARDS THE CONCRETE WASH AREA.
- SIGNS SHALL BE PLACED AT THE CONCRETE WASH AREA.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- THE CONCRETE WASH AREA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN THE PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 1/2 THE HEIGHT OF THE CONCRETE WASH AREA.
- CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE, AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
- THE CONCRETE WASH AREA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
- PERMANENTLY STABILIZE AREA AFTER CONCRETE WASH AREA IS REMOVED.

CWA

STORMWATER ENTERPRISE
APPROVED: [Signature]
DATE: 10/7/19
REVISED: 8/19/2020
DRAWING NO. 900-CWA-1

CULVERT INLET PROTECTION PLAN

SECTION A-A'

SECTION B-B'

INSTALLATION NOTES

- SEE ROCK SOCK DETAIL.

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- ACCUMULATED SEDIMENT UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS 1/2 HEIGHT OF THE ROCK SOCK.
- CULVERT INLET PROTECTION SHALL REMAIN UNTIL THE UPSTREAM AREA IS PERMANENTLY STABILIZED.

CIP

STORMWATER ENTERPRISE
APPROVED: [Signature]
DATE: 10/7/19
REVISED: 8/19/2020
DRAWING NO. 900-CIP

CONCRETE WASHOUT AREA PLAN

SECTION A-A'

INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION OF CONCRETE WASHOUT AREA.
- LOCATE AT LEAST 50' AWAY FROM STATE WATERS MEASURED HORIZONTALLY.
- AN IMPERMEABLE LINER (16 MIL. MINIMUM THICKNESS) IS REQUIRED IF CONCRETE WASH AREA IS LOCATED WITHIN 400' OF STATE WATERS OR 1000' OF WELLS OR DRINKING WATER SOURCES.
- DO NOT LOCATE IN AREAS WHERE SHALLOW GROUNDWATER MAY BE PRESENT.
- THE CONCRETE WASH AREA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
- CONCRETE WASH AREA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8" BY 8".
- BERM SURROUNDING SIDES AND BACK OF CONCRETE WASH AREA SHALL HAVE A MINIMUM HEIGHT OF 2 FEET.
- CONCRETE WASH AREA ENTRANCE SHALL BE SLOPED 2% TOWARDS THE CONCRETE WASH AREA.
- SIGNS SHALL BE PLACED AT THE CONCRETE WASH AREA.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- THE CONCRETE WASH AREA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN THE PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 1/2 THE HEIGHT OF THE CONCRETE WASH AREA.
- CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE, AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
- THE CONCRETE WASH AREA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
- PERMANENTLY STABILIZE AREA AFTER CONCRETE WASH AREA IS REMOVED.

CWA

STORMWATER ENTERPRISE
APPROVED: [Signature]
DATE: 10/7/19
REVISED: 8/19/2020
DRAWING NO. 900-CWA-2

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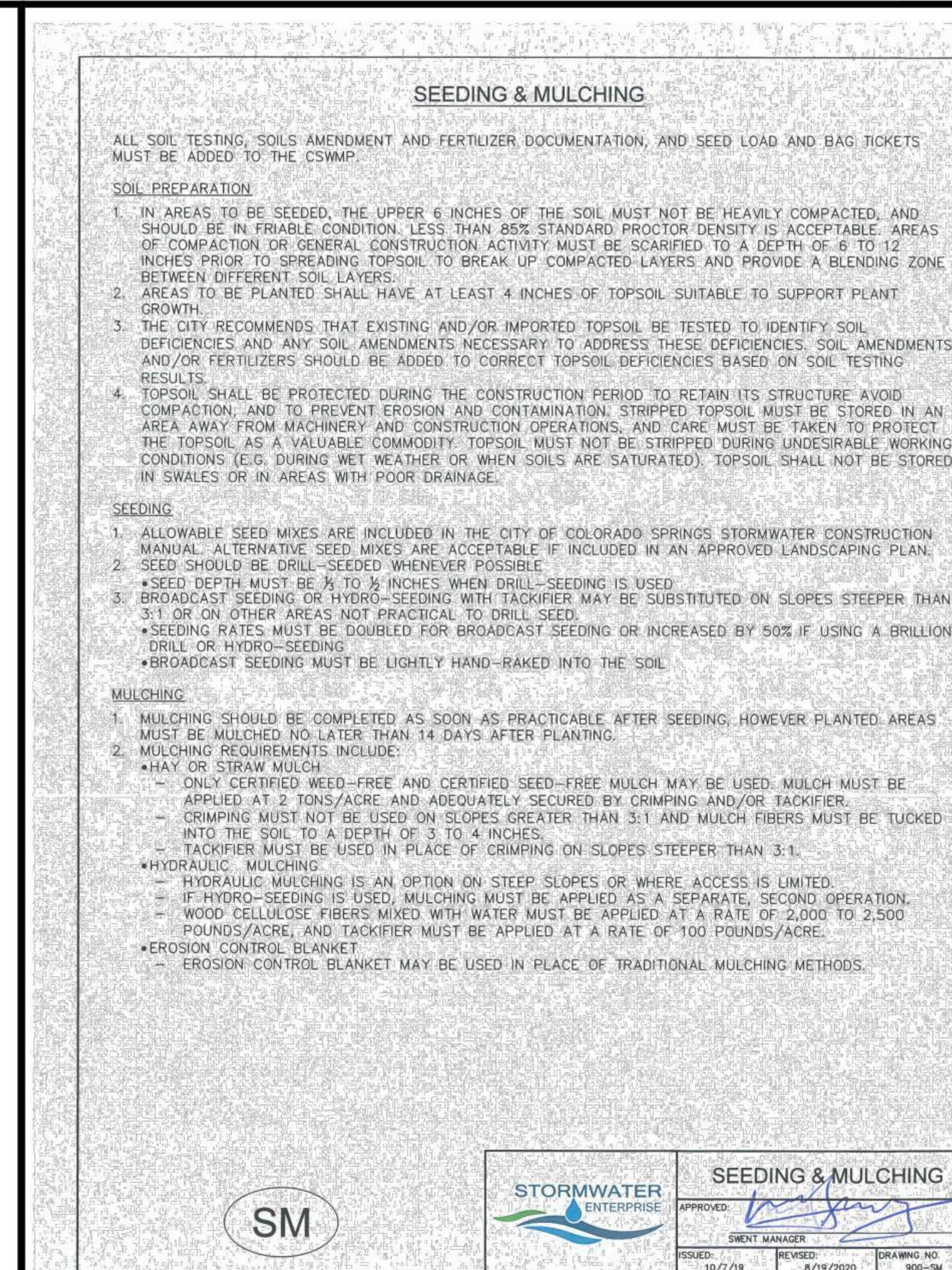
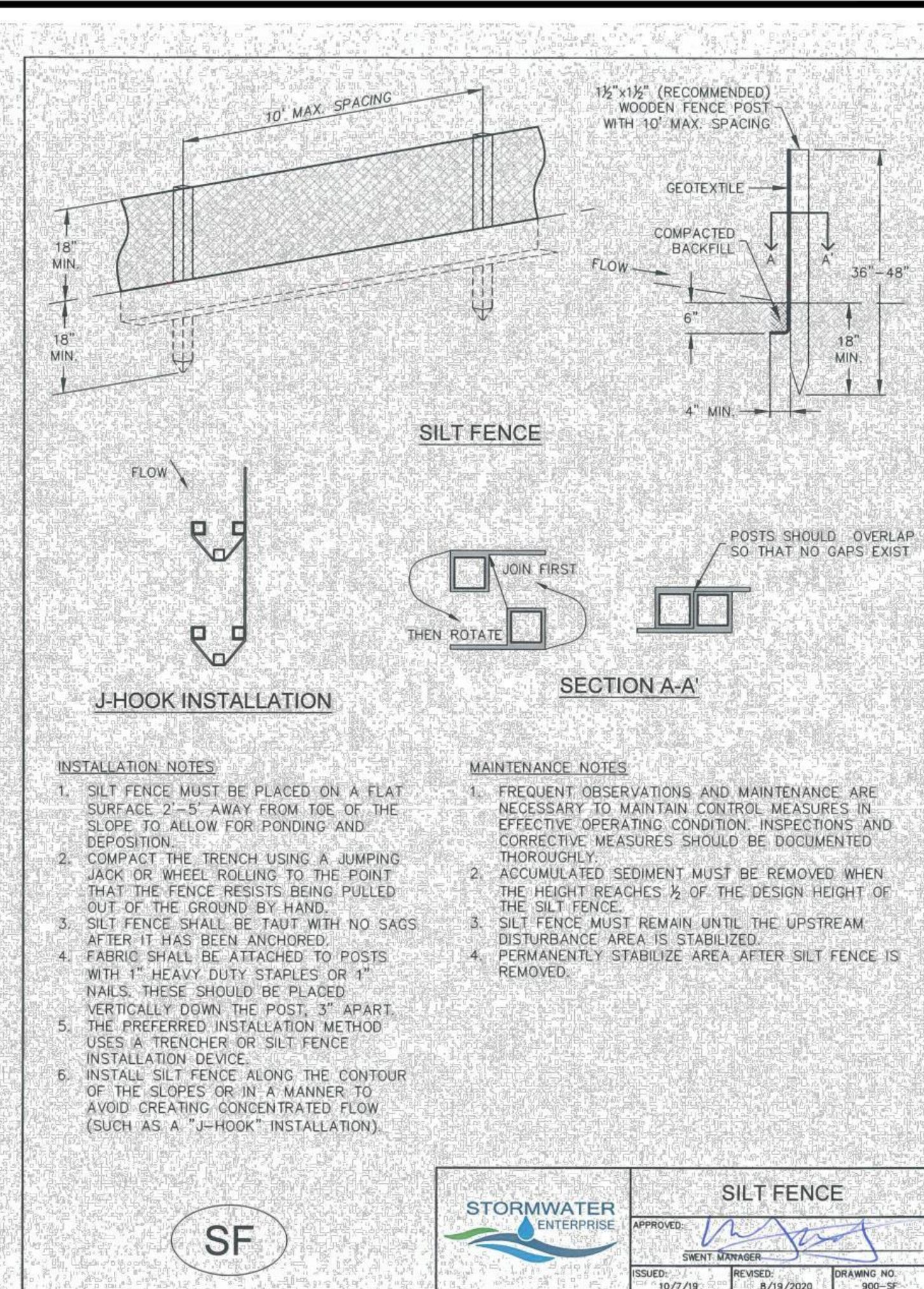
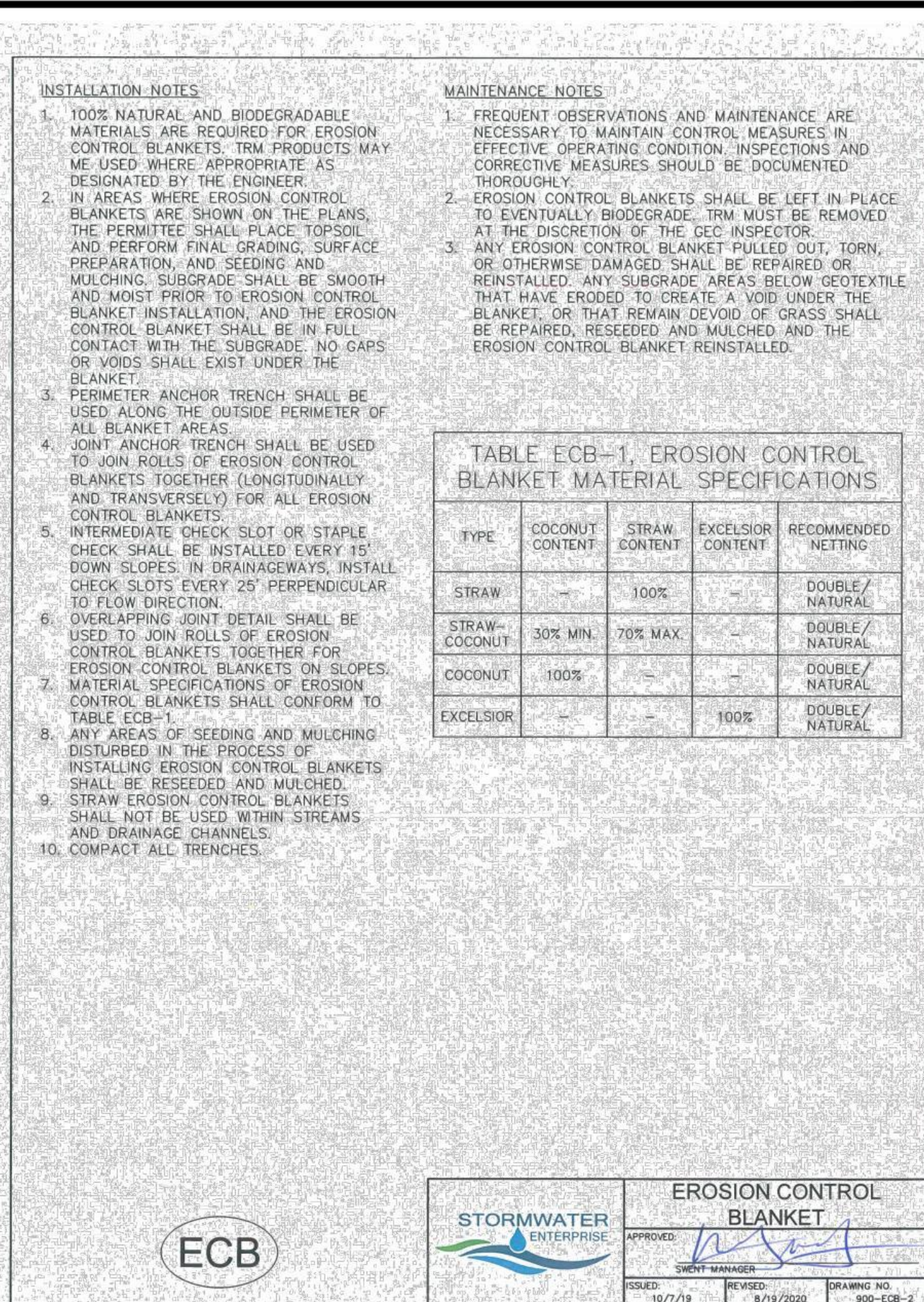
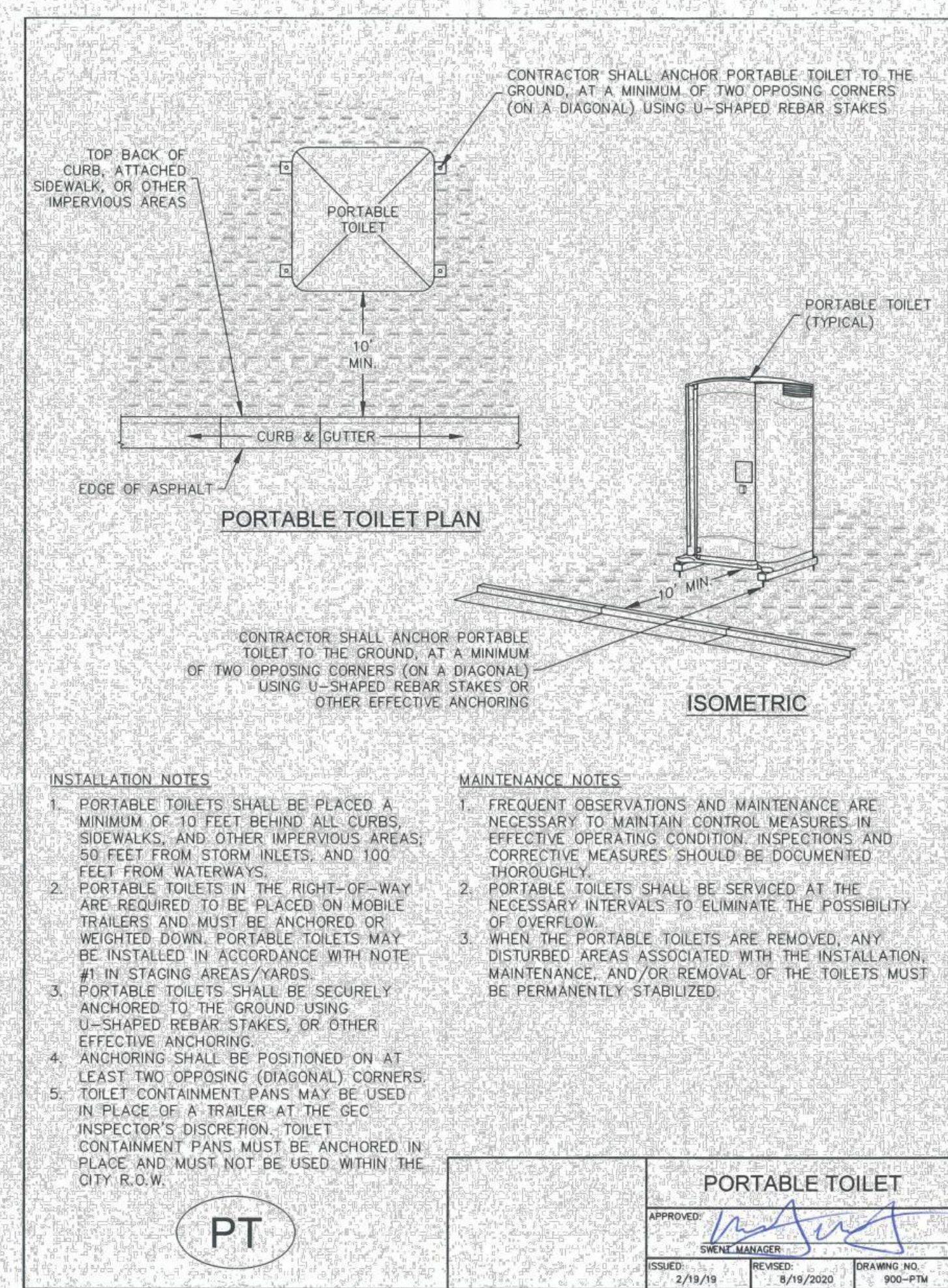
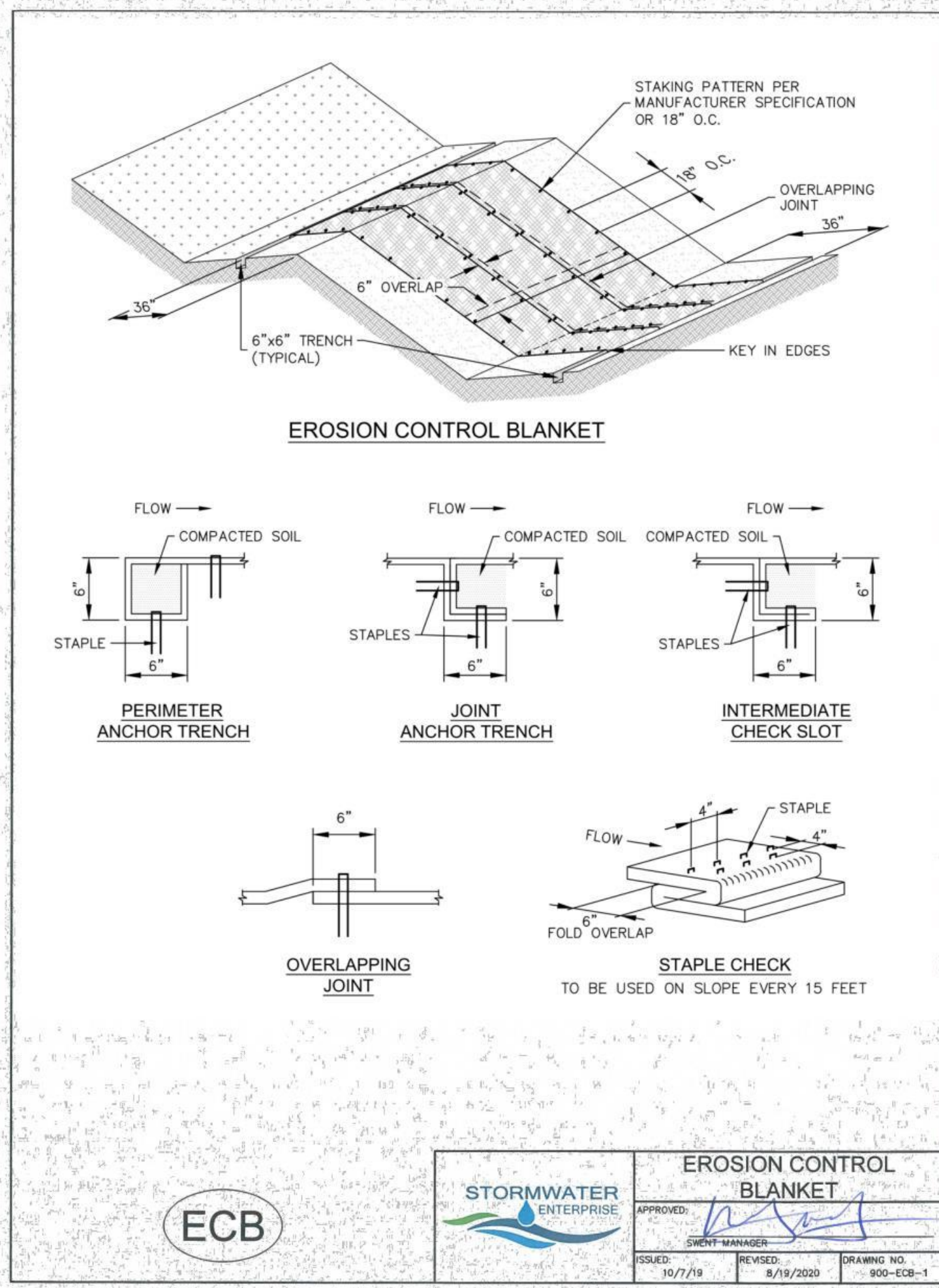
GUNTZELMAN PORCELAIN PINES

PRELIMINARY DOCUMENTS NOT FOR CONSTRUCTION

EL PASO COUNTY, COLORADO

REVISION DESCRIPTION	(DESCRIPTION)
REVISION DATE	
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NORTH	
SCALE: NOT TO SCALE	
PROJECT #: 2107-0307 CHECKED BY: BML DRAWN BY: JAM	
DATE:	02/15/2023
SHEET #	3
TOTAL SHEETS	5

GRADING & EROSION CONTROL DETAILS



CAUTION - NOTICE TO CONTRACTORS:

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811 CALL BEFORE YOU DIG - DRILL - BLAST

KANSAS:
P: 800-344-7233
F: 316-687-3753

COLORADO:
P: 800-922-1987
F: 303-234-1712

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STORMWATER ENTERPRISE
EROSION CONTROL BLANKET
APPROVED: [Signature]
ISSUED: 10/7/19 REVISED: 8/18/2020 DRAWING NO. 900-ECB-2

REVISION	DATE	DESCRIPTION
1	08/08/20	
2		
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SCALE: NOT TO SCALE

PROJECT #: 2107-0307
CHECKED BY: BML
DRAWN BY: JAM

DATE: 02/15/2023

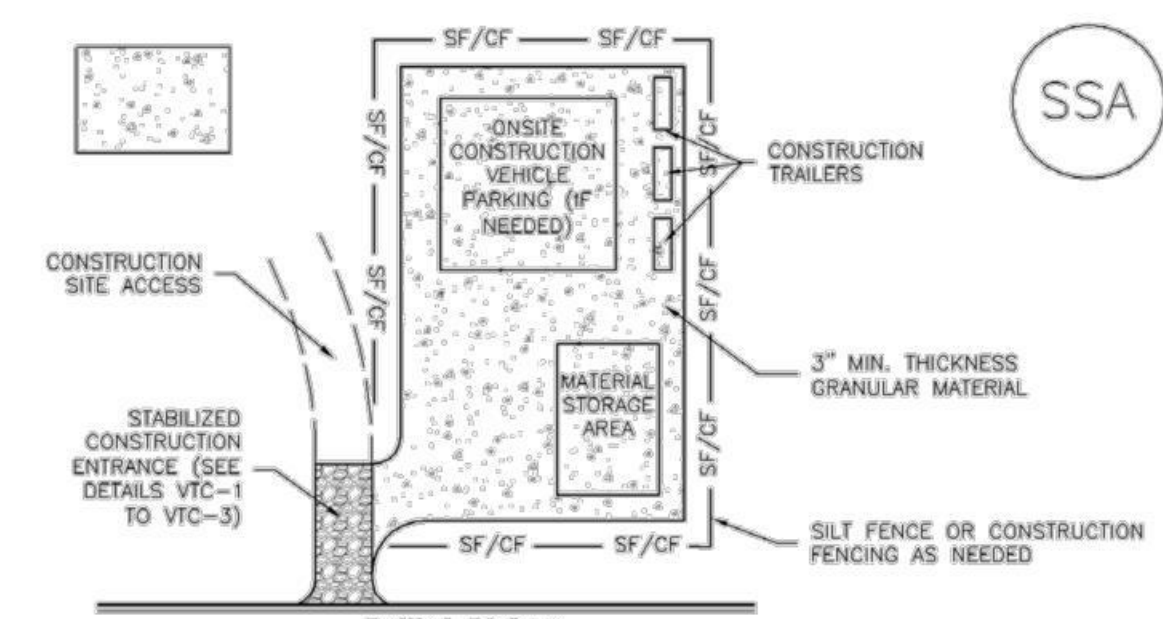
SHEET # **4**

TOTAL SHEETS 5

GRADING & EROSION CONTROL DETAILS

Stabilized Staging Area (SSA)

SM-6



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

- SEE PLAN VIEW FOR
-LOCATION OF STAGING AREA(S).
-CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
- STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
- STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
- THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
- ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

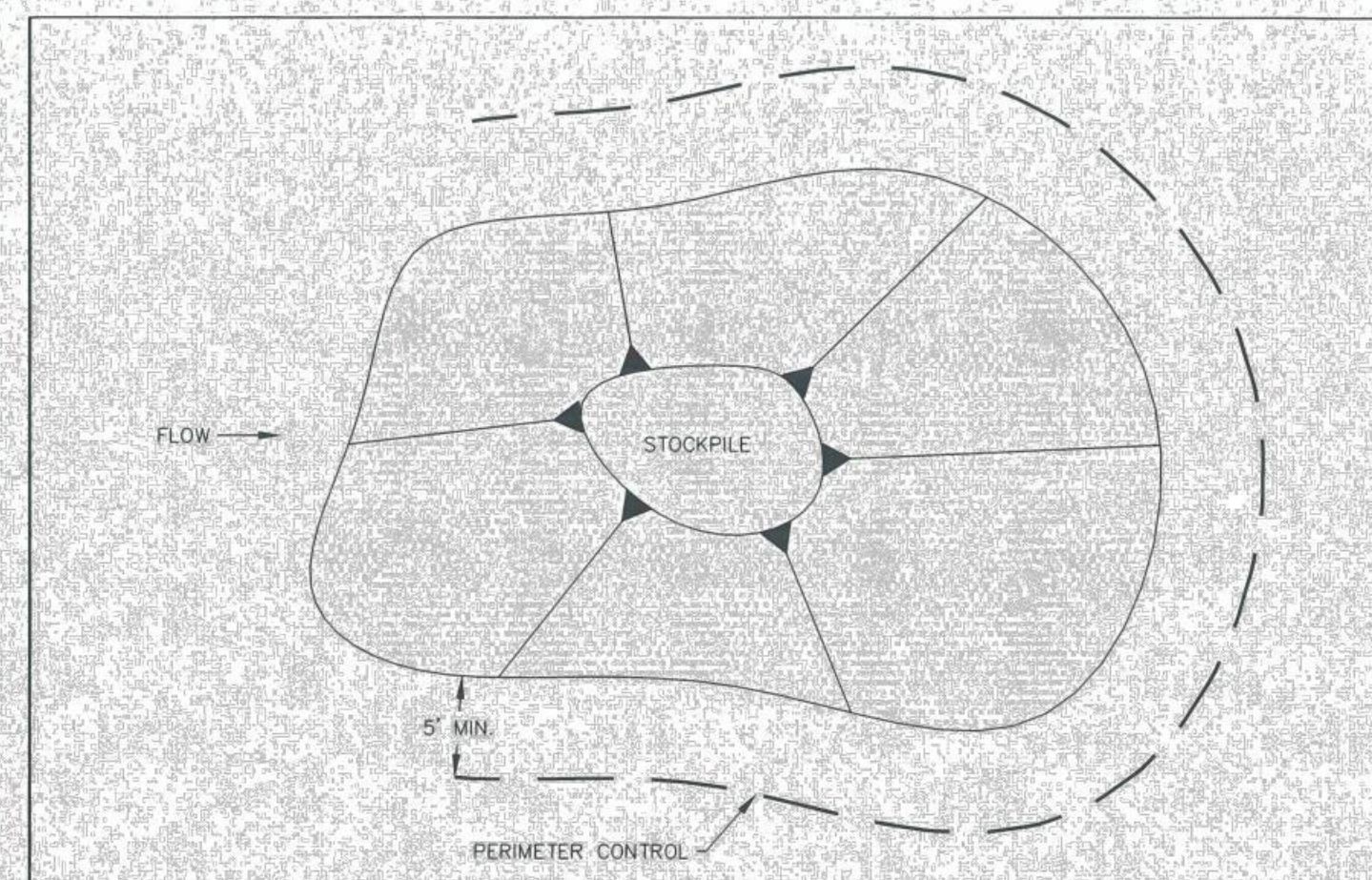
STABILIZED STAGING AREA MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CHUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

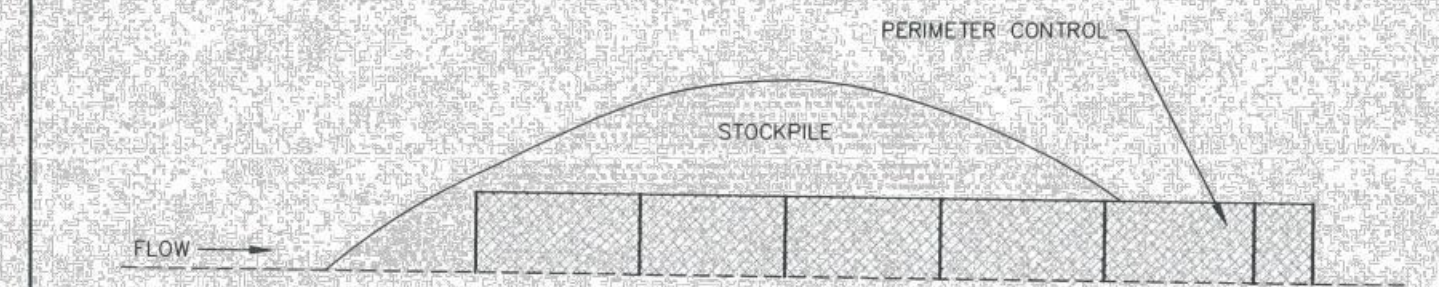
November 2010

Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

SSA-3



STOCKPILE PROTECTION PLAN



STOCKPILE PROTECTION ELEVATION

INSTALLATION NOTES

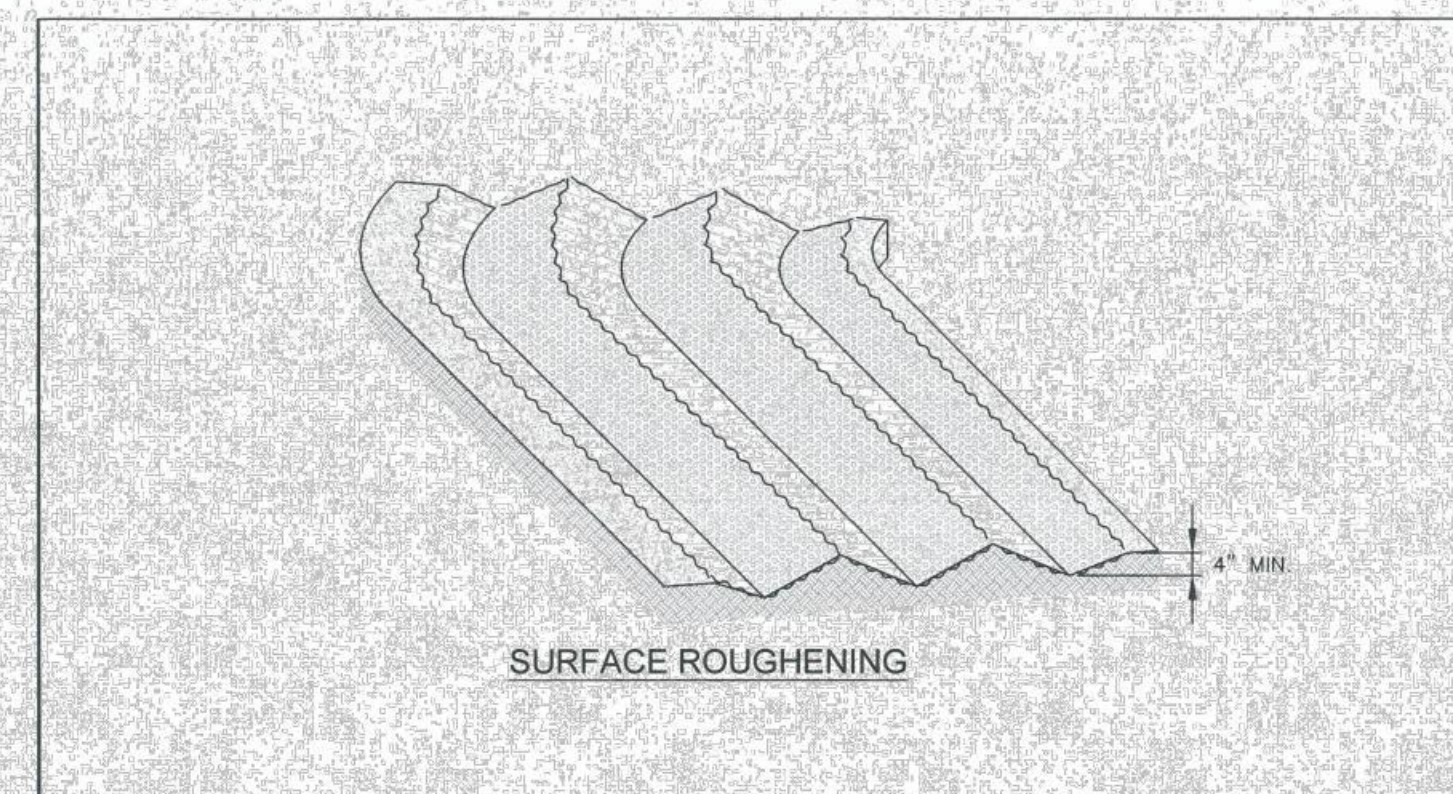
- INSTALL PERIMETER CONTROL AROUND STOCKPILE ON DOWNGRADIENT SIDE. PERIMETER CONTROL MUST BE SUITABLE TO SITE CONDITIONS AND INSTALLED ACCORDING TO THE RELEVANT DETAIL.
- FOR STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS INCLUDING PERIMETER CONTROL ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- IF PERIMETER CONTROLS MUST BE MOVED TO ACCESS STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORK DAY.
- ACCUMULATED SEDIMENT MUST BE REMOVED ACCORDING TO PERIMETER CONTROL DETAIL.

SP

STORMWATER ENTERPRISE
STOCKPILE PROTECTION
APPROVED: [Signature]
ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-SP



SURFACE ROUGHENING

INSTALLATION NOTES

- SURFACE ROUGHENING MAY BE USED IN AREAS FLATTER THAN 3:1. INSTALL FURROWS ALONG CONTOUR TO INTERCEPT SHEET FLOW.
- SURFACE ROUGHENING MAY BE ACCOMPLISHED BY FURROWING, SCARIFYING, RIPPING OR DISKING THE SOIL.
- FURROWS MUST BE A MINIMUM OF 4" IN DEPTH.
- SURFACE ROUGHENING SHALL NOT BE USED ON EXTREMELY SANDY OR ROCKY SOILS.

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- VEHICLES AND EQUIPMENT SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SURFACE ROUGHENED.

SR

STORMWATER ENTERPRISE
SURFACE ROUGHENING
APPROVED: [Signature]
ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-SR

CAUTION - NOTICE TO CONTRACTORS:

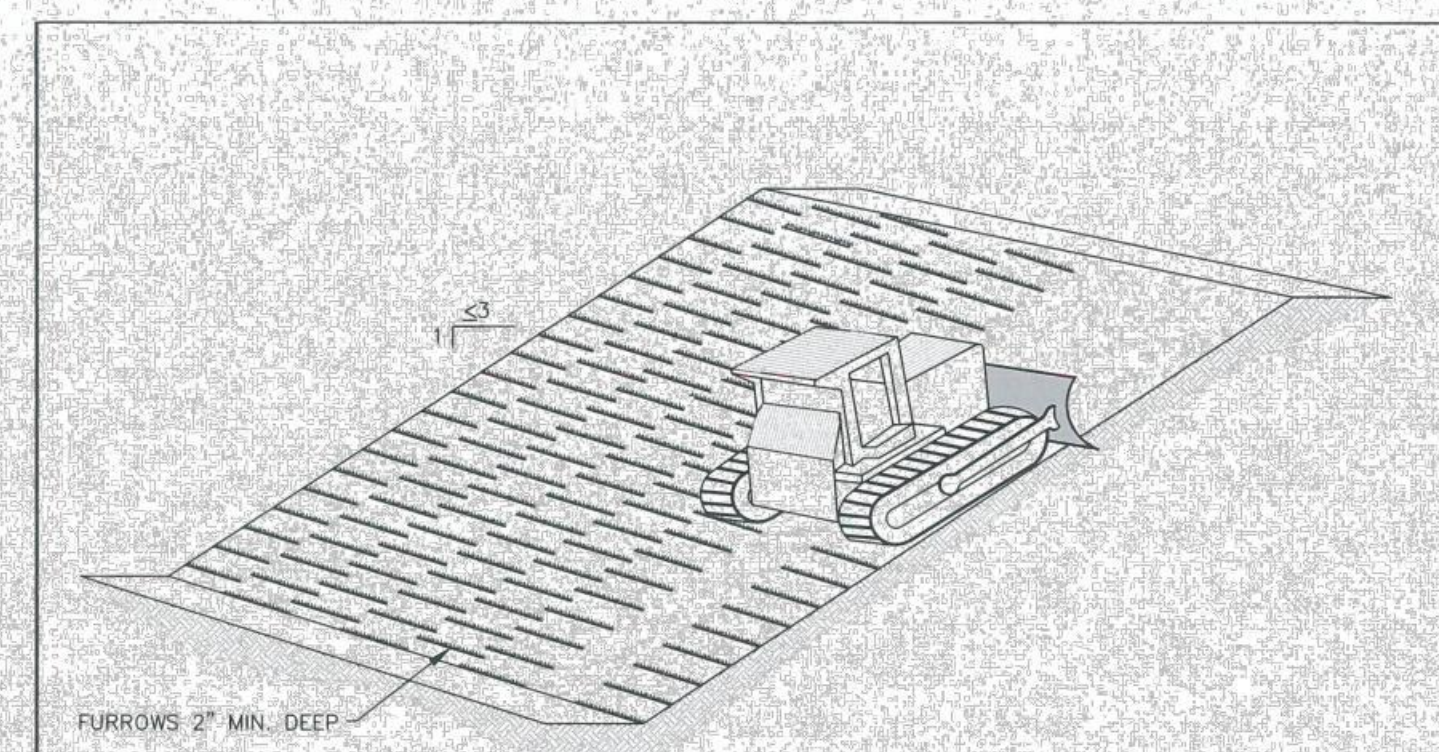
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ST

STORMWATER ENTERPRISE
SLOPE TRACKING
APPROVED: [Signature]
ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-ST



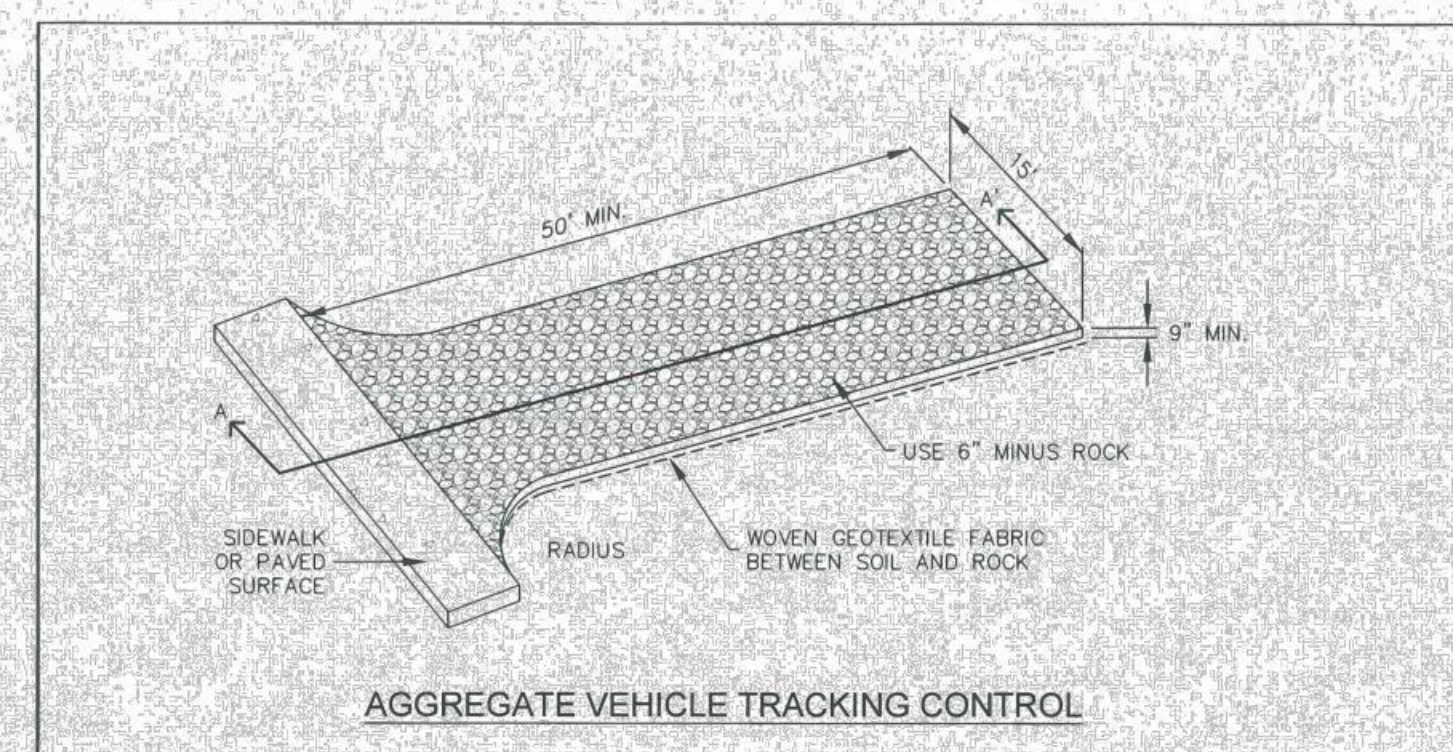
SLOPE TRACKING

INSTALLATION NOTES

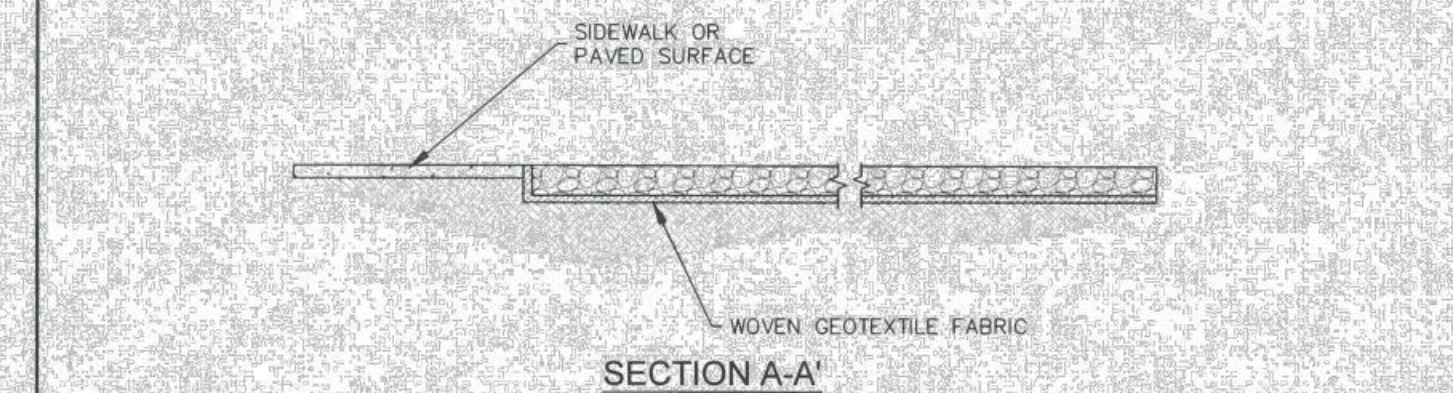
- SLOPE TRACKING MAY BE USED ON SLOPES 3:1 OR STEEPER.
- TRACKING GROOVES SHALL BE PERPENDICULAR TO THE SLOPE.
- SLOPE TRACKING SHALL NOT BE USED ON EXTREMELY SANDY OR ROCKY SOILS.

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- VEHICLES AND EQUIPMENT SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SLOPE TRACKED.



AGGREGATE VEHICLE TRACKING CONTROL



INSTALLATION NOTES

- A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHOULD BE LOCATED AT ALL POINTS WHERE VEHICLES EXIT THE CONSTRUCTION SITE TO ADJACENT ROADWAY.
- STABILIZED CONSTRUCTION ENTRANCE/EXITS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- RADIUS MUST BE ADEQUATE FOR INTENDED CONSTRUCTION VEHICLE TURNING.
- ROCK SHOULD CONSIST OF 6" MINUS ROCK.
- INSTALL CONSTRUCTION FENCE ON BOTH SIDES OF VEHICLE TRACKING CONTROL PAD WHEN NEEDED OR REQUIRED BY INSPECTOR.

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- SEDIMENT TRACKED ONTO THE ADJACENT ROAD SHALL BE REMOVED DAILY BY SWEEPING OR SHOVELING, AND NEVER WASHED DOWN STORM DRAINS.
- ROUGHEN, REPLACE AND/OR ADD ROCK AS NEEDED TO MAINTAIN CONSISTENT DEPTH AND TO PREVENT SEDIMENT TRACKING ONTO ADJACENT STREET.
- PERMANENTLY STABILIZE AREA AFTER VEHICLE TRACKING CONTROL IS REMOVED.

VTC

STORMWATER ENTERPRISE
VEHICLE TRACKING CONTROL
APPROVED: [Signature]
ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-VTC

SM-6

Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
- THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDS AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

SSA-4

Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

November 2010

REVISION DATE	REVISION DESCRIPTION
000000	(DESCRIPTION)

NORTH

SCALE: NOT TO SCALE
PROJECT #: 2107-0307
CHECKED BY: BML
DRAWN BY: JAM

DATE: 02/15/2023

SHEET #

5

TOTAL SHEETS 5