

**STORM WATER MANAGEMENT PLAN
FOR
MEISMAN PROPERTY
21255 CALLE PACIFICO POINT, PUEBLO, COLORADO**

MARCH 2022

Prepared For:

GARY MEISMAN
612 Harvard Street
Colorado Springs, CO 80911
719.492.0612

CONTRACTOR:

TBD

520 West 21st Street, G-2 #710
Norfolk, VA 23517
(757) 333-3144

QUALIFIED STORMWATER MANAGER:

TBD

520 West 21st Street, G-2 #710
Norfolk, VA 23517
(757) 333-3144

Prepared By:

TERRA NOVA ENGINEERING, INC.
721 S. 23rd ST.
Colorado Springs, CO 80904
719.635.6422

TNE Job No. 2071.00
County Job No. PPR-21-073

CONTACT INFORMATION

SWMP APPLICANT:

GARY MEISMAN
612 Harvard Street
Colorado Springs, CO 80911
719.492.0612

ENGINEER:

Terra Nova Engineering, Inc.
Dane Frank, P.E.
721 S. 23rd St.
Colorado Springs, CO 80904
719.635.6422 Office
dane@tnesinc.com

SWMP is to be maintained on site in the construction trailer whenever work is occurring. If construction trailer is not available, another alternative must be provided.

COLORADO DISCHARGE PERMIT SYSTEM (CDPS)

TO: Site Inspector Responsible For All CDPS Requirements

The following storm water pollution management plan (SWMP) is a detailed account of the requirements for the CDPS permit. The main objective of this plan is to prevent any contamination of the storm water while construction activity is taking place.

This document must be kept at the construction site at all times and be made available to the public and any representative of the Colorado Department of Health – Water Quality Control Division, if requested.

Enclosed are temporary erosion control details for the construction site and storm sewer outfall points (Detail A). The operation and maintenance inspection record should be used as a guideline for the inspection of permanent and temporary control devices. Items to be inspected are not limited to those listed. The inspections should be made at regular intervals and before and after storm events. The inspection records must be signed and kept in this binder for no less than three (3) years.

STORM WATER MANAGEMENT PLAN FOR Meisman Property – 21255 Calle Pacifico Point

TABLE OF CONTENTS

Site Description and Existing Conditions	Page 5
Construction Activities	Page 6
Construction Schedule and Sequence	Page 7
Potential Sources of Pollution	Page 7
Implementation of Control Measures	Page 8
Materials Handling	Page 8
Waste Management and Disposal	Page 8
Spill Prevention and Control Plan	Page 8
Maintenance, Inspection, and Repair	Page 12
Final Stabilization and Long Term Stormwater Management	Page 13
State Requirements That Are Not Applicable	Page 13

APPENDIX

**GENERAL LOCATION MAP
EROSION CONTROL PLAN & DETAILS
SELECT UDFCD BMP DESCRIPTION SHEETS
GENERAL PERMIT APPLICATION
OPERATION AND MAINTENANCE INSPECTION FORM
OPERATION AND MAINTENANCE INSPECTION RECORD**

STORM WATER MANAGEMENT PLAN FOR

Meisman Property – 21255 Calle Pacifico Point

SITE DESCRIPTION & EXISTING CONDITIONS

This site is approximately 40.2 acres of undeveloped land located at 21255 Calle Pacifico Point. This site is being developed as a residential property with a house and a detached shop area to be used by the owners trucking business. The site is in the southeast quarter of Section 35, Township 17 South, Range 65 West of the 6th Principal Meridian within El Paso County. The parcels are bounded to the north by Calle Bernardo, Calle Pacifico Point, and Lot 52 Villa Casitas Filing No 3; to the east by Interstate 25; to the south by unplatted land (in Pueblo County); and to the west by lot 14 Villa Casitas Filing No 1 and Calle Bernardo (see vicinity map in appendix).

The site lies within the Young Hollow Drainage Basin, with storm runoff surface draining west to east across the site, then crossing under I-25 and railroad tracks in culverts, before continuing to surface flow east toward Fountain Creek.

Soils for this project are delineated by the map in the appendix as 16% Kim loam (43), 17% Schamber-Razor complex (82), and 22% Manzanola silty clay loam (MzC). Soils in the study area are shown as mapped by S.C.S. in the “Soils Survey of El Paso County Area” and contains soils of Hydrologic Group A, B, and C, with Hydrologic Group B being used for this project. Therefore, the site has low to high runoff and soil erosion potential, depending on the location, with the area being disturbed having a moderate potential.

The site is undeveloped with mostly grass and dirt surfaces, some scrub brush, and a small number of trees near I-25. The site drains to the east, with an average slope of 5%-6%. Existing vegetative ground cover is 50% (depending on location) based on aerial photos and a site visit.

No known toxic materials have been treated, stored, disposed, spilled or leaked onto the site.

No stream crossings are located on the site.

No dewatering is anticipated.

This project does not rely on control measures owned or operated by another entity.

CONSTRUCTION ACTIVITY AND STORAGE

The proposed development is a house and separate shop building. Proposed construction activities include regrading the site, installation of utilities, constructing the buildings, installation of landscaping, and onsite paving. Potential pollutants at the site include suspended solids, fuels, and lubricants.

Practices to minimize contact of construction materials, equipment and vehicles with the storm water include installation of silt fencing and/or sediment control logs and sub-contractor cleaning and hauling of excess debris and material upon completion of work. Construction material loading and unloading, and access to such areas occur from gravel staging areas shown on the map. The concrete washout area will be removed and disposed of as required by this permit as well as the SWMP permit. Potential pollutants such as paints, adhesives, porta potty runoff, and oil spills will also be dealt with as required. All paints, adhesives, et. will be properly stored or disposed of as applicable. There will always be a spill kit onsite to deal with spill incidents and prevent damage to surrounding environment. The porta potty will be placed at least 10 feet from any vehicle right-of-way, storm drain inlet, or waterway, and a minimum of 50 feet from state waters. The porta potty will be staked to the ground or fastened in a way that will prevent a spill from tipping. The porta potty will be cleaned on a weekly basis and inspected daily for spills. Soils are not to be tracked offsite, and any soils tracked offsite should be swept up.

There will be no on-site mobile fueling. Contractor shall have the Hazardous Material emergency response number posted on the site. No concrete or asphalt batch plants are planned for the construction site. The site will be considered stabilized when site vegetation is 70% of pre-disturbed levels and grading and building construction has been completed. There will be 7+/- acres of disturbed soil area. The estimate for cut on this site is 1,467 cy and for fill it is 5,316 cy for a net cut of 3,849 cy.

No non-stormwater discharges are anticipated at the site.

CONSTRUCTION SCHEDULE AND SEQUENCE

Erosion control measures shall be implemented in a manner that will protect properties and public facilities from the adverse effects of erosion and sedimentation as a result of construction and earthwork activities.

Grading will begin in Spring 2022 and the site will be considered stabilized in the Spring 2023.

Grading will begin in Spring 2022 with completion of construction activities anticipated to be in the Fall of 2022. The construction sequence will be: clear and grub, utility construction, rough grading, building construction, final grading, landscaping/paving, and cleanup.

Before clearing and grubbing may begin the first level of BMP'S are to be installed. These measures include silt fence (SF), vehicle tracking control (VTC) at all construction exit points onto a paved road, stockpile management (SP), concrete washout area (CWA), and a sediment basin (SB). The Staging Area (SSA) also is setup with appropriate measures to protect downstream (i.e. silt fence).

The second level of BMP's shall be installed once the previous BMP's and construction are completed. These measures include mulching (MU) and permanent seeding (PS). All temporary soil erosion control measures and BMP's shall be maintained until permanent soil erosion control measures are implemented (seeding and mulching) and vegetation has been established to 70% of pre-disturbed levels on areas not to be covered with pavement or other finished products.

Erosion control measures shall be implemented in a manner that will protect properties and public facilities from the adverse effects of erosion and sedimentation as a result of construction and earthwork activities.

POTENTIAL SOURCES OF POLLUTION

The potential sources of pollution associated with this development are:

- Disturbed and stored soils
- Vehicle tracking of sediments
- Management of contaminated soils (if exist)
- Loading and unloading operations
- Outdoor storage activities (erodible building materials, fertilizers, chemicals, etc.)

- Vehicle and equipment maintenance and fueling
- Significant dust or particulate generating processes
- Routine maintenance activities involving fertilizers, pesticides, herbicides, fuels, solvents, etc.)
- Onsite waste management practices (waste piles, liquid wastes, dumpsters)
- Concrete truck / equipment washing
- Non-industrial waste sources such as worker trash and portable toilets

IMPLEMENTATION OF CONTROL MEASURES

BMP design specifications and implementation information can be found in the UDFCD BMP Description Sheets included in the Appendix. This project does not rely on control measures owned or operated by another entity.

MATERIALS HANDLING

All construction materials shall be handled in a manner to minimize the chance of stormwater contamination. Stockpile and material staging areas are shown on the Erosion Control Plan. Additional materials handling info is included in the Spill Prevention and Control Plan section.

WASTE MANAGEMENT AND DISPOSAL

All waste and debris created by construction activities at the site shall be disposed of in compliance with all laws, regulations, and ordinances of the federal, state and local agencies. Waste bins will be checked for leaks and remaining capacity each time they are used. Waste bins will be emptied when they are full (at a minimum).

SPILL PREVENTION AND CONTROL PLAN

The Site Superintendent will act as the point of contact for any spill that occurs at this jobsite. The Construction Manager will be responsible for implementation of prevention practices, spill containment / cleanup, worker training, reporting and complete documentation in the event of a spill. The Site

Superintendent shall immediately notify the Owner, /Construction Manager, State and the Local Fire Department in addition to the legally required Federal, State, and Local reporting channels (including the National Response Center, 800.424.8802) if a reportable quantity is released to the environment.

SPILL PREVENTION BEST MANAGEMENT PRACTICES

This section describes spill prevention methods Best Management Practices (BMP) that will be practiced to eliminate spills before they happen.

Equipment Staging and Maintenance

- Store and maintain equipment in a designated area.
- Reduce the amount of hazardous materials and waste by substituting non-hazardous or less hazardous materials.
- Use secondary containment (drain pan) to catch spills when removing or changing fluids.
- Use proper equipment (pumps, funnels) to transfer fluids.
- Keep spill kits readily accessible.
- Check incoming vehicles for leaking oil and fluids.
- Transfer used fluids and oil filters to waste or recycling drums immediately following generation.
- Inspect equipment routinely for leaks and spills.
- Repair equipment immediately, if necessary implement a preventative maintenance schedule for equipment and vehicles.

Fueling Area

- Perform fueling in designated fueling area minimum 50' away from federal waters.
- Use secondary containment (drain pan) to catch spills.
- Use proper equipment (pumps, funnels) to transfer fluids.
- Keep spill kits readily accessible.

- Inspect fueling areas routinely for leaks and spills.
- Hazardous Material Storage Areas: Reduce the amount of hazardous materials by substituting non-hazardous or less hazardous materials.

Hazardous Material Storage Areas

- Minimize the quantity of hazardous materials brought onsite.
- Store hazardous materials in a designated area away from drainage points.

Unexpected Contaminated Soil and Water

- Investigate historical site use.
- Perform all excavation activities carefully and only after the Owner/Construction.
- Manager directs any activities.

SPILL CONTAINMENT METHODS

The following discussion identifies the types of secondary containment that will be used in the event of a spill. Table 1 summarizes the containment methods for each potential source.

- Equipment Staging and Maintenance Area: An equipment leak from a fuel tank, equipment seal, or hydraulic line will be contained within a spill containment cell placed beneath all stationary potential leak sources. An undetected leak from parked equipment will be cleaned up using hand shovels and containerized in a 55-gallon steel drum for offsite disposal.
- Fueling Area: A small spill during fueling operations will be contained using fuel absorbent pads at the nozzle. The transfer of fuel into portable equipment will be performed using a funnel and/or hand pump and a spill pad used to absorb any incidental spills/drips. Any leaking tanks or drums will have fluids removed and transferred to another tank, drum, or container for the fluids. A spill response kit will be located near the fueling area or on the fuel truck for easy access. The spill response kit will include plastic sheeting, tarps, over pack drums, absorbent litter, and shovels.
- Hazardous Material Storage Area: A spill from containers or cans in a hazardous material storage

area will be contained within the storage cabinet these materials are kept in.

- **Unexpected Contaminated Soil:** If contaminated soil is encountered during the project, the Owner/Construction Manager will be notified immediately. Small quantities of suspected contaminated soil will be placed on a 6-mil plastic liner and covered with 6-mil plastic. A soil berm or silt fence will be used to contain the stockpile and prevent migration of contaminated liquids in the soil.

Table 1: Spill Prevention and Containment Methods

Potential Spill Source	Containment Method(s)
Equipment staging and maintenance area	Spill containment pad, spill kit, pumps, funnels
Fueling area (site equipment only)	Spill containment pad, spill kit, pumps, funnels
Hazardous material staging area	Spill containment pad, spill kit, pumps, funnels
Unexpected contaminated soil	Plastic liner, plastic cover, soil berm, hay bales, lined super sacks

SPILL COUNTERMEASURES

Every preventative measure shall be taken to keep contaminated or hazardous materials contained. If a release occurs, the following actions shall be taken:

1. **Stop the Spill:** The severity of a spill at the site is anticipated to be minimal as large containers/quantities of Hazardous Materials are not anticipated. The type of spill would occur while dispensing material at the hazardous materials storage facility and would likely be contained in secondary containment. Thus, the use spill kits or other available absorbent materials should stop the spill.

2. **Warn Others:** Notify co-workers and supervisory personnel of the release. Notify emergency responders if appropriate. For site personnel, an alarm system will consist of three one second blasts on an air horn sounded by the person discovering a spill or fire. In the event of any spill, the Superintendent and Project

Manager shall be notified if the spill is 5 gallons or more the STATE will be contacted along with the Fire Department.

3. Isolate the Area: Prevent public access to the area and continue to minimize the spread of the material. Minimize personal exposure throughout emergency response actions.

4. Containment: A spill shall only be contained by trained personnel and if it is safe to do so. DO NOT PLACE YOURSELF IN DANGER. Attempt to extinguish a fire only if it is in the incipient stage; trash can size or smaller. For larger spills, wait for the arrival of emergency response personnel and provide directions to the location of the emergency.

5. Complete a Spill and Incident Report: For each spill of a Hazardous Material a spill and incident report shall be completed and submitted to the Owner/Construction Manager and if applicable to the Engineer and the State of Colorado Department of Public Health and Environment.

MAINTENANCE, INSPECTION, AND REPAIR

The owner or his representative shall inspect and monitor all drainage facilities using the enclosed Inspection Forms in the appendix. In order to ensure that all graded surfaces, structures, vegetation, erosion and sediment control measures and other protective devices identified in the erosion control plan are maintained in good and effective condition, an Operation and Maintenance Inspection Monitoring Program will be implemented by the permit holder during the construction phase. A systematic inspection of all the above mentioned protective devices will be performed by trained personnel using the operation and maintenance inspection record form in the appendix at least once every 14 days. Also, post-storm event inspections must be conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion. Provided the timing is appropriate, the post-storm inspections may be used to fulfill the 14-day routine inspection requirement. A more frequent inspection schedule than the minimum inspections described may be necessary to ensure that BMPs continue to operate as needed to comply with

the plan. All monitoring records are to include the signature of the inspector and are to be kept with the SWMP for a period of no less than three (3) years. All maintenance of temporary and permanent erosion and sediment control facilities shall be per the details included in this report.

This lot will be considered stabilized when all construction activities have been completed and vegetation has been re-established. Erosion control measures, including silt fence, must be removed after final stabilization.

Any major revisions or modification to this Storm Water Management Plan will require a report addendum and erosion control map revision. Minor revisions may be made by the Stormwater Manager by redlining the Storm Water Management Plan or inserting additional pages. 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 stormwater quality issues at the site. The Qualified Stormwater Manager shall amend the SWMP when there is a change in design, construction, operation or maintenance 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 stormwater discharges associated with construction activity or when BMPs are no longer necessary and are removed.

The onsite SWMP will be located at: _____

FINAL STABILIZATION AND LONG TERM STORMWATER MANAGEMENT

Permanent stabilization measures include landscaping per the approved landscaping plan, seeding, and mulching. These temporary BMPS's are to be removed once the 70% of pre-disturbed levels vegetation or permanent landscaping has been established and approved by EPC. At this point in the construction process, all landscaping should be in place and maintained for a period of time that allows for its establishment on the site.

Long term stormwater management is provided by existing areas used for runoff reduction as shown in the drainage report.

STATE REQUIREMENTS THAT ARE NOT APPLICABLE

The requirement for a phasing plan is not applicable as only one construction phase is proposed.

The requirement for spill prevention and pollution controls for dedicated batch plants is not applicable as no batch plants are proposed.

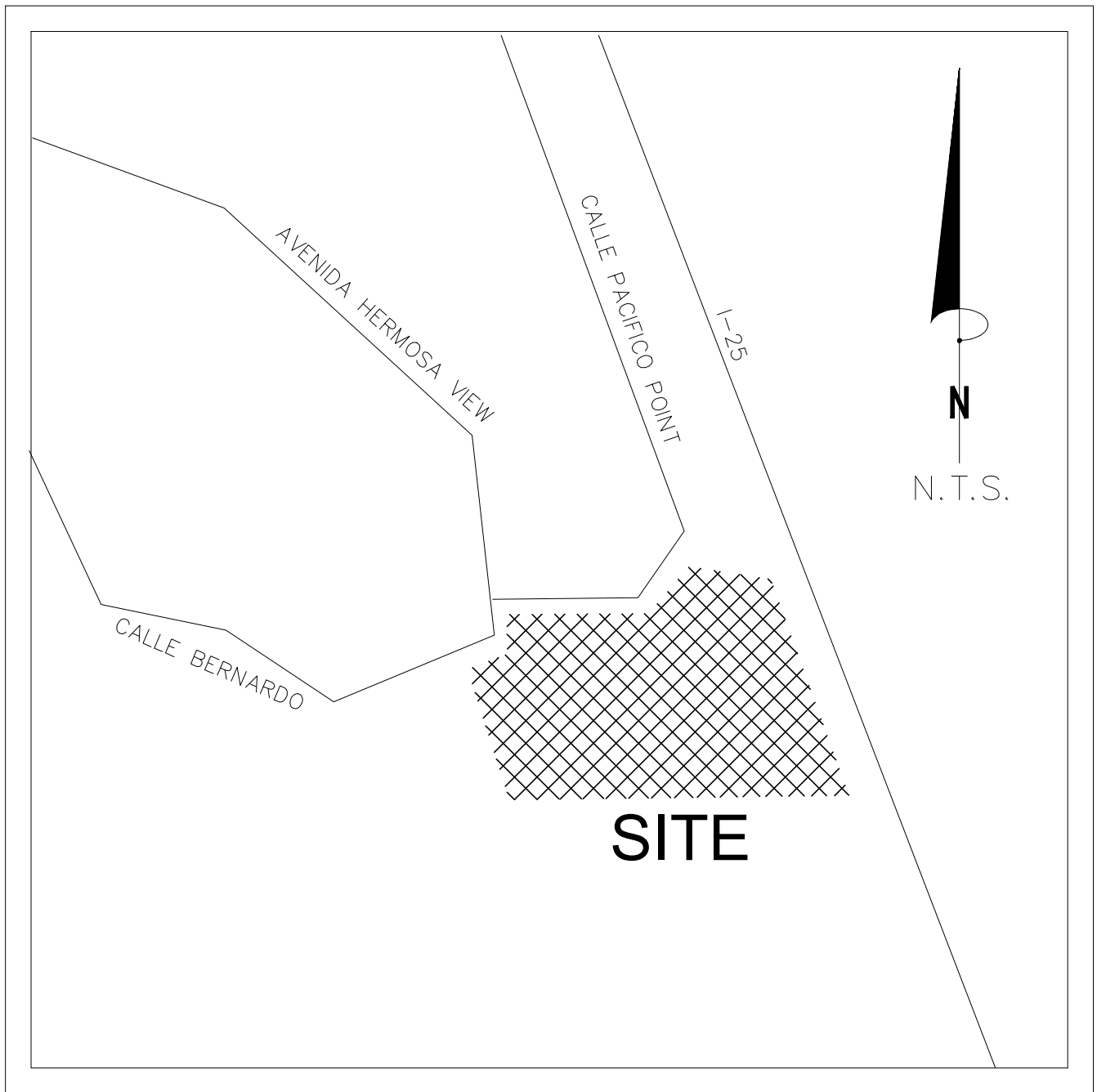
The requirement to show the location of any dedicated asphalt / concrete batch plants is no applicable as no batch plants are proposed.

PREPARED BY:

Terra Nova Engineering, Inc.
Dane Frank, P.E.
Project Engineer

Jobs/207100/Word/207100 SWMP-RPT.doc

GENERAL LOCATION MAP



VICINITY MAP

N.T.S.

EROSION CONTROL PLAN & DETAILS
(see back pocket)

GENERAL PERMIT APPLICATION

OPERATION AND MAINTENANCE INSPECTION RECORD

The following inspection records are to be used at each bi-monthly stormwater management system inspection and after any precipitation or snowmelt event that causes surface runoff. As a result of these inspections, the SWMP may need to be revised. The inspection records and revised SWMP shall be made available to the division upon request. If the construction activity lasts more than 12 months, a copy of the inspection records and revised SWMP shall be sent to the division by May 1 of each year covering April 1 to March 31.

OPERATION AND MAINTENANCE INSPECTION RECORD

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"/>	

CONTROL MEASURES REQUIRING ROUTINE MAINTENANCE

Definition: Any control measure that is still operating in accordance with its design and the requirements of the permit, but requires maintenance to prevent a breach of the control measure. These items are not subject to the corrective action requirements as specified in Part I.B.1.c of the permit.

Are there control measures requiring maintenance?	NO	YES	
	<input type="checkbox"/>	<input type="checkbox"/>	If "YES" document below

[illegible]

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

Are there inadequate control measures requiring corrective action?	NO	YES	
	<input type="checkbox"/>	<input type="checkbox"/>	If "YES" document below

Are there additional control measures needed that were not in place at the time of inspection?	NO	YES	
	<input type="checkbox"/>	<input type="checkbox"/>	If "YES" document below

[illegible]

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">○ Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.b of the Permit)○ Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.c of the Permit)○ 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

N:\Jobs\2071.00\Drawings\207100 SDP-GEC-FDM.dwg, 3/17/2022 2:16:28 PM, DWG To PDF.pc3

NOTE: ALL EXISTING UNDERGROUND AND ABOVE GROUND UTILITY LOCATIONS, INVERTS AND SIZES ARE APPROXIMATE ONLY AND MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION. TIE IN POINTS SHALL BE PHOTOLOGED AND LOCATIONS, INVERTS AND SIZES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS

1. 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.
2. 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 TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
3. A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) 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.
4. 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.
5. 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.
6. 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 INTO THE STORMWATER MANAGEMENT PLAN.
7. 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.
8. 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.
9. 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.
10. 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 A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
11. 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).
12. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED 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.
13. 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.
14. 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.
15. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
16. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, AND SAND THAT MAY ACCUMULATE IN THE STORM SEWER OR OTHER DRAINAGE CONVEYANCE SYSTEM AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
17. 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.
18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
19. 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.
20. 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.
21. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE 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.
22. BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
24. 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.
25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
26. PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
27. 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.
28. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY "ALLISON ENGINEERING & KENDALL ENGINEERING SERVICES, LLC" AND SHALL BE CONSIDERED A PART OF THESE PLANS.
29. 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 CONSTRUCTION ACTIVITY 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 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

MEISMAN PROPERTY

GRADING AND EROSION CONTROL PLAN

COVER SHEET

MARCH 2022



GENERAL NOTES

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE SITE. THE OMISSION FROM OR THE 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.
2. THE CONTRACTOR WILL 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.
3. BULK GRADING SHALL BE COMPLETED TO A SUBGRADE TOLERANCE OF PLUS OR MINUS 0.2'.
4. CONTRACTOR TO OBTAIN COPIES OF THE SOILS REPORT FROM THE GEOTECHNICAL ENGINEER AND TO BE KEPT ONSITE DURING ALL EARTHWORK OPERATIONS.
5. MAXIMUM CUT/FILL SLOPES SHALL NOT EXCEED 3:1, UNLESS OTHERWISE NOTED.
6. ALL BOTOM OF WALL (BW) CALLOUTS ARE FOR THE BOTTOM OF WALL AT GRADE. THEY DO NOT REPRESENT THE BOTTOM OF THE CONSTRUCTED WALL OR FOOTING, WHICH IS NOT SPECIFIED ON THESE PLANS.
7. EXCEPTION NO. 17, THE EASEMENT RECORDED AT RECEPTION NO. 213073009, DOES NOT EFFECT THIS PROPERTY. THE EASEMENT DESCRIBED IS ALONG THE RAILROAD TRACKS ON THE EAST SIDE OF I-25.

SOIL TYPES

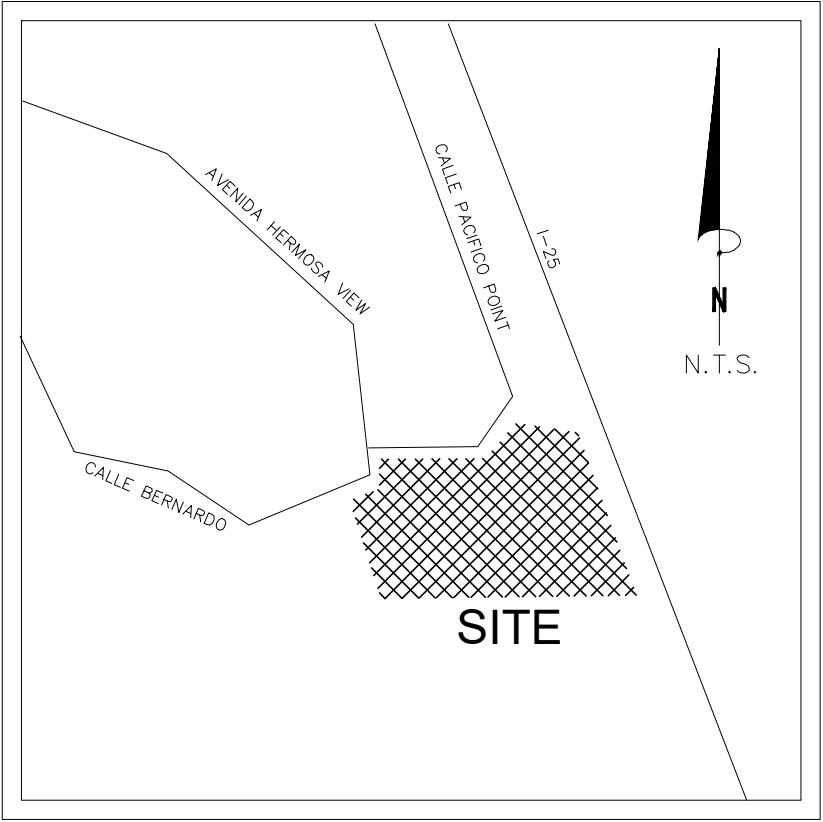
ONSITE SOILS ARE 61% KIM LOAM (43) WITH HYDRAULIC SOIL GROUP B, 17% SCHAMBER-RAZOR COMPLEX (82) WITH HYDRAULIC SOIL GROUP A, AND 22% MANZANOLA SILTY CLAY LOAM WITH HYDRAULIC SOIL GROUP C

BENCHMARKS

- NGS POINT Y 391: ELEVATION 5232.42 NAVD '88 (EAST SIDE I-25, SOUTH OF WIGWAM ROAD)
- SITE BENCHMARK: NORTHWEST CORNER OF THE PROPERTY, TOP OF 1/2" DIA REBAR, ELEVATION 5252.22 NAVD '88 (SOUTH SIDE OF CALLE PACIFICO AT AVENIDA HERMOSA)

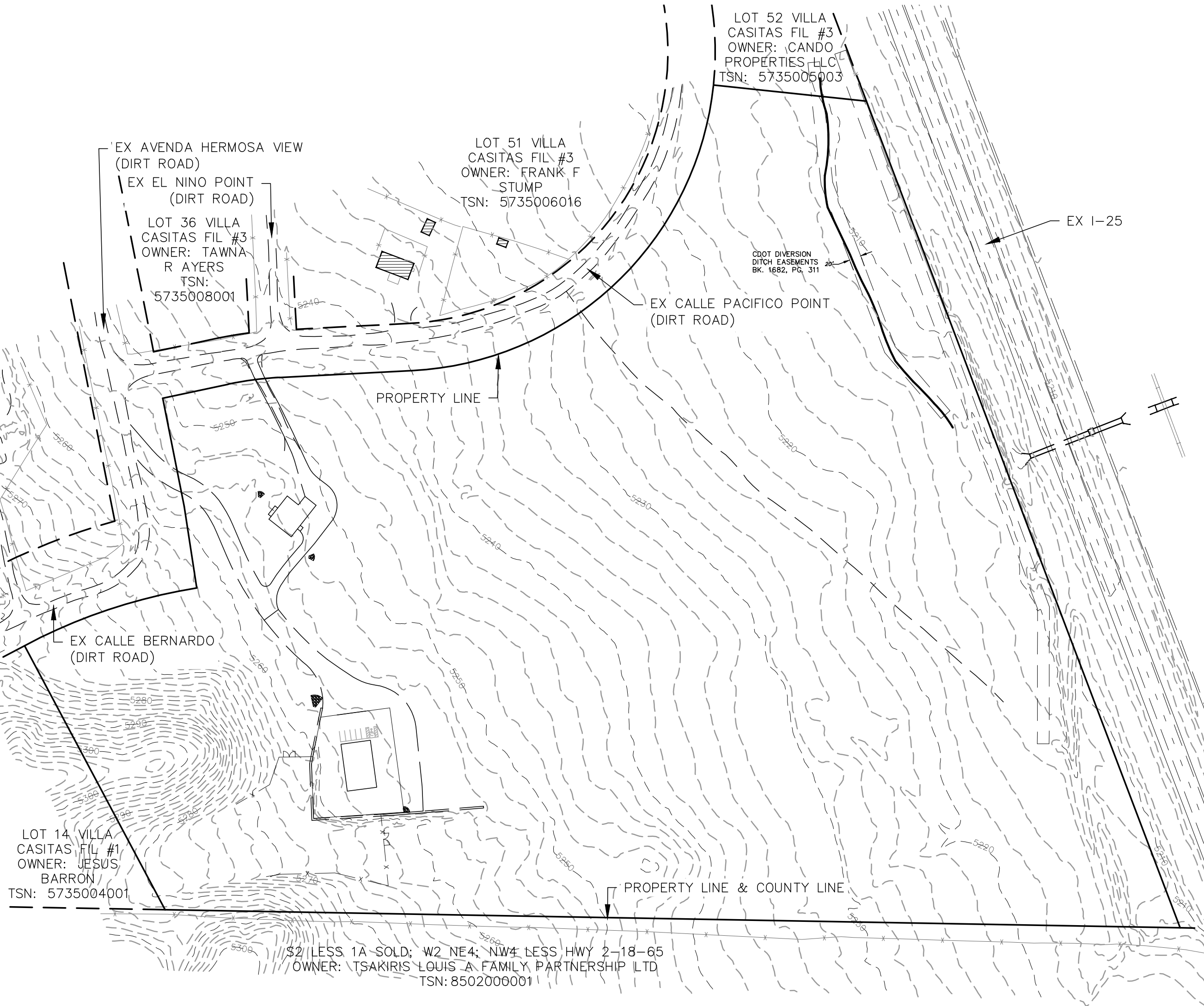
EARTHWORK VOLUMES

ESTIMATED CUT = 1,467 CY, ESTIMATED FILL = 5,316 CY, NET = 3,849 CY <CUT>



VICINITY MAP

N.T.S.



SHEET INDEX

COVER SHEET	1
GRADING PLAN	2
EROSION CONTROL PLAN	3
EROSION CONTROL DETAILS	4
EROSION CONTROL DETAILS	5
EROSION CONTROL DETAILS	6

SITE ADDRESS

21255 CALLE PACIFICO POINT

TAX ID

5735000001

LEGAL DESCRIPTION

THAT PART OF S2 LY WLY OF HWY 85 AND SELY OF PLATTED AREA SEC. 35-17-65

CONSTRUCTION SCHEDULE

BEGIN GRADING: SPRING 2022, END GRADING: FALL 2022

CONTACT INFORMATION

OWNER:	GARY MEISMAN 612 HARVARD ST COLORADO SPRINGS, CO 80911 (757) 492-0612
CIVIL ENGINEER:	TERRA NOVA ENGINEERING, INC. 721 S. 23RD STREET COLORADO SPRINGS, COLORADO 80904 DANE FRANK, P.E., (719) 635-6422
EL PASO COUNTY	PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE COLORADO SPRINGS, COLORADO 80910 (719) 520-6300

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 REPORT.

DANE FRANK, P.E. #50207 DATE
FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

OWNER/DEVELOPER'S STATEMENT

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

OWNER NAME, TITLE DATE

BUSINESS NAME

EL PASO COUNTY APPROVAL

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.

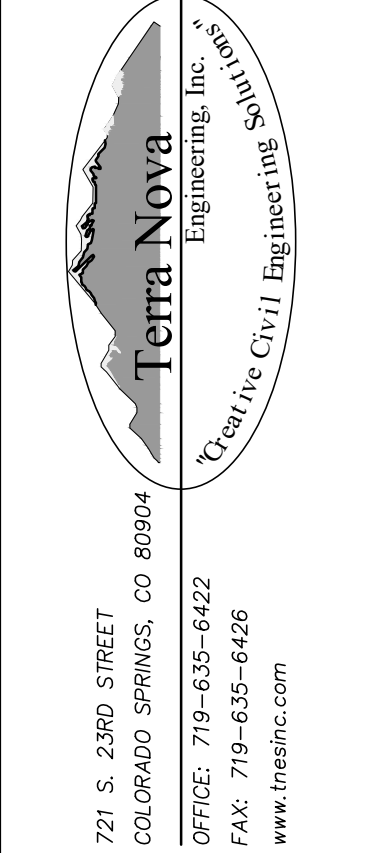
IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF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

JENNIFER IRVINE, P.E.
COUNTY ENGINEER / ECM ADMINISTRATOR

DATE

REVISIONS	NO.	DESCRIPTION	DATE
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPLICANT, REVIEWING AGENCIES, INC. APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.			

PREPARED FOR:
GARY MEISMAN
ATTN:
612 HARVARD ST
COLORADO SPRINGS, CO 80911
719.492.0612



MEISMAN PROPERTY	GRADING AND EROSION CONTROL PLAN COVER SHEET
------------------	---

DESIGNED BY DLF
DRAWN BY DLF
CHECKED BY LD
H-SCALE AS SHOWN
V-SCALE N/A
JOB NO. 2071.00
DATE ISSUED 3/12/22
SHEET NO. 1 OF 6

PPR-21-073

N:\Jobs\2071.00\Drawings\207100 SDP-GEC-FDM.dwg, 3/17/2022 2:16:52 PM, DWG To PDF.pc3

MEISMAN PROPERTY
GRADING AND EROSION CONTROL PLAN
GRADING PLAN
MARCH 2022

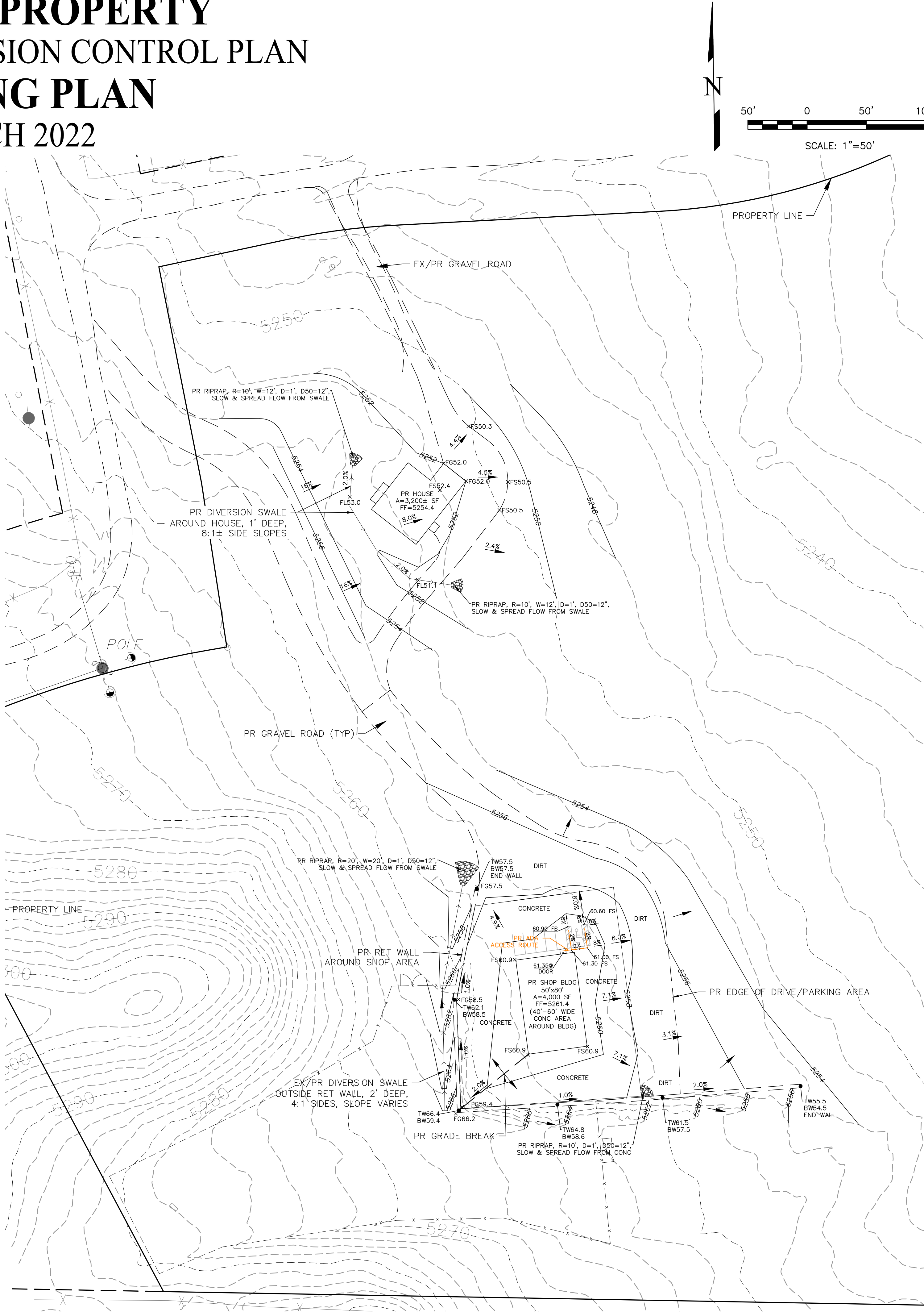
BENCHMARKS
- NGS POINT Y 391: ELEVATION 5232.42 NAVD '88 (EAST SIDE I-25, SOUTH OF WIGWAM ROAD)
- SITE BENCHMARK: NORTHWEST CORNER OF THE PROPERTY, TOP OF 1/2" DIA REBAR, ELEVATION 5252.22 NAVD '88 (SOUTH SIDE OF CALLE PACIFICO AT AVENIDA HERMOSA)

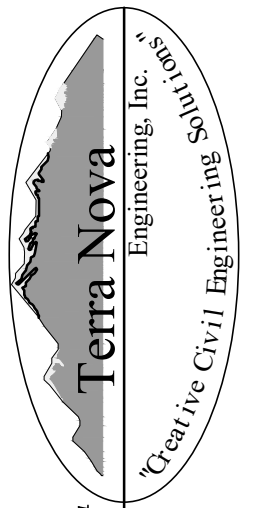
LEGEND

PROPERTY LINE	
EXISTING CONTOURS - MINOR	6132
EXISTING CONTOURS - MAJOR	6130
GRADE & DIRECTION	2.2%
PROPOSED CONTOUR	62
PROPOSED	PR
EXISTING	EX
WATER LINE	W W
SEWER LINE	SS SS
STORM LINE	ST ST
OVERHEAD ELECTRICAL LINE	OE OE
CHAIN LINK FENCE	
FIRE HYDRANT	
CONCRETE EDGE	CE
FINISHED GROUND	FG
FINISHED SURFACE	FS
FLOWLINE	FL
SPOT ELEVATION	SE
ASPHALT EDGE	AE
LOW POINT	LP
HIGH POINT	HP
EXISTING ELEVATION	12.00*
EXISTING SPOT GRADE	X EX 7314.00
PROPOSED SPOT GRADE	X 7314.00
FINISH GROUND AT TOP OF WALL	TW
FINISH GROUND AT BOTTOM OF WALL	BW

NOTES

1. ALL BOTTOM OF WALL (BW) CALLOUTS ARE FOR THE BOTTOM OF WALL AT GRADE. THEY DO NOT REPRESENT THE BOTTOM OF THE CONSTRUCTED WALL OR FOOTING, WHICH IS NOT SPECIFIED ON THESE PLANS.
2. EXISTING VEGETATION ONSITE ARE GRASSES, SCRUB BRUSH, CACTUS, AND A COUPLE ISOLATED TREES NEAR THE EAST PROPERTY LINE.
3. NO BATCH PLANTS WILL BE UTILIZED ONSITE.
4. NO STREAMS, WETLANDS, OR OTHER SURFACE WATERS ARE WITHIN 50' OF THE SITE.



REVISIONS	NO.	DESCRIPTION	DATE
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, INC. APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.			
PREPARED FOR: GARY MEISMAN ATTN: 612 HARVARD ST COLORADO SPRINGS, CO 80911 719.492.0612			
 721 S. 23RD STREET COLORADO SPRINGS, CO 80904 OFFICE: 719-635-6422 FAX: 719-635-6426 www.tnec.com			
MEISMAN PROPERTY GRADING AND EROSION CONTROL PLAN GRADING PLAN			
DESIGNED BY DLF DRAWN BY DLF CHECKED BY LD			
H-SCALE 1" = 30' V-SCALE N/A			
JOB NO. 2071.00 DATE ISSUED 3/12/22 SHEET NO. 2 OF 6			

N:\jobs\2071.00\Drawings\207100 SDP-GEC-FDM.dwg, 3/17/2022 2:17:36 PM, DWG To PDF.pc3

MEISMAN PROPERTY
GRADING AND EROSION CONTROL PLAN
EROSION CONTROL PLAN
MARCH 2022

LEGEND

EXISTING CONTOURS - MINOR	---	6132	---
EXISTING CONTOURS - MAJOR	---	6130	---
GRADE & DIRECTION		2.2%	
PROPOSED CONTOUR		62	
PROPOSED	PR		
EXISTING	EX		
WATER LINE	---	W	---
SEWER LINE	---	SS	---
STORM LINE	---	ST	---
OVERHEAD ELECTRICAL LINE	---	DE	---
CHAIN LINK FENCE			
FIRE HYDRANT			
CONCRETE EDGE	CE		
FINISHED GROUND	FG		
FINISHED SURFACE	FS		
FLOWLINE	FL		
SPOT ELEVATION	SE		
ASPHALT EDGE	AE		
LOW POINT	LP		
HIGH POINT	HP		
EXISTING ELEVATION		12.00*	
EXISTING SPOT GRADE	×	EX 7314.00	
PROPOSED SPOT GRADE	×	7314.00	
CONSTRUCTION SITE BOUNDARY & AREA OF SOIL DISTURBANCE			
CUT FILL AREA BOUNDARY			

EROSION CONTROL LEGEND

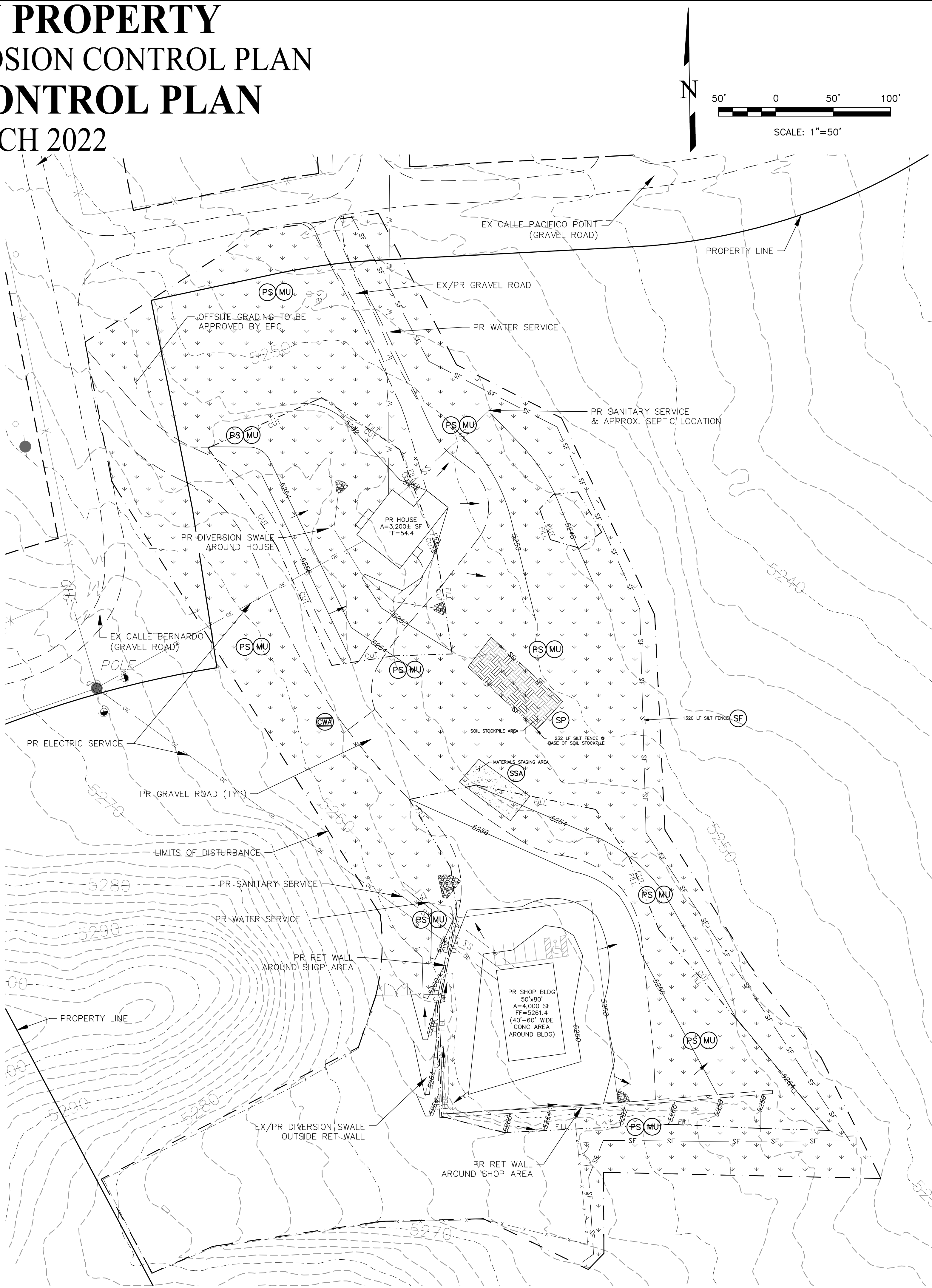
KEY	TITLE	SYMBOL	IMPLEMENTATION PHASE
SF	SILT FENCE	SF	INITIAL
SSA	STABILIZED STAGING AREA		INITIAL
VTC	VEHICLE TRACKING CONTROL		N/A
SP	STOCKPILE MANAGEMENT WITH PROTECTION		INITIAL
CWA	CONCRETE WASHOUT AREA		INITIAL
IP	INLET PROTECTION		N/A
MU	MULCHING - CRIMP FLAT AREAS, HYDROSEED ON SLOPES	MU	FINAL
PS	PERMANENT SEEDING - DRILL SEED FLAT AREAS, BROADCAST SEED OR HYDROSEED ON SLOPES. SEED MIX PER DRAINAGE CRITERIA MANUAL (MAY 2014) VOL 1, TABLE 14-12	PS	FINAL
SB	SEDIMENT BASIN		N/A

NOTES

1. SEDIMENT CONTROL LOGS MAY BE SUBSTITUTED FOR SILT FENCE AND VICE VERSA.
2. SEED AND MULCH DISTURBED AREAS ONLY. SEED AND MULCH OF DIRT ROADS IS OPTIONAL.
3. EXISTING SITE VEGETATION IS NATIVE GRASSES AND SCRUB BRUSH (PER AERIAL PHOTOS). EXISTING GROUND COVER IS 30%-50% DEPENDING ON LOCATION.
4. LOCATIONS OF WASTE CONTAINER, PORTABLE TOILETS, AND SWMP STORAGE ARE TBD.
5. NO VEHICLE TRACKING CONTROL IS REQUIRED, AS THE SITE IS ACCESS FROM GRAVEL ROADS.
6. NO TEMPORARY SEDIMENT BASIN IS PROPOSED, AS A PRIORITY OF THE GRADING DESIGN IS TO LIMIT CHANNEL FLOW AS MUCH AS POSSIBLE. CONCENTRATING RUNOFF INTO A SEDIMENT BASIN CONFLICTS WITH THE GRADING DESIGN. HOWEVER, A TEMPORARY SEDIMENT BASIN WILL BE INSTALLED IN THE EVENT STORMWATER AND SEDIMENT IS TRAVELING OFFSITE.

EROSION CONTROL COST OPINION:

1. 1,552 LF-SILT FENCE @ \$3/LF	\$ 4,656
3. 1 EA-CONCRETE WASHOUT @ \$900/EA	\$ 900
5. 4.6 AC-SEED AND MULCH @ \$1,550/AC	\$ 7,130
7. 40% MAINTENANCE AND REPLACEMENT	\$ 5,074
TOTAL	\$ 17,760



REVISIONS

NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, INC. APPROVES THEIR USE FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR:
GARY MEISMAN
ATTN:
612 HARVARD ST
COLORADO SPRINGS, CO 80911
719.492.0612

Terra Nova

Engineering, Inc.

Creative Civil Engineering

721 S. 23RD STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6426
www.tnecinc.com

MEISMAN PROPERTY

GRADING AND EROSION CONTROL PLAN
EROSION CONTROL PLAN

DESIGNED BY DLF
DRAWN BY DLF
CHECKED BY LD

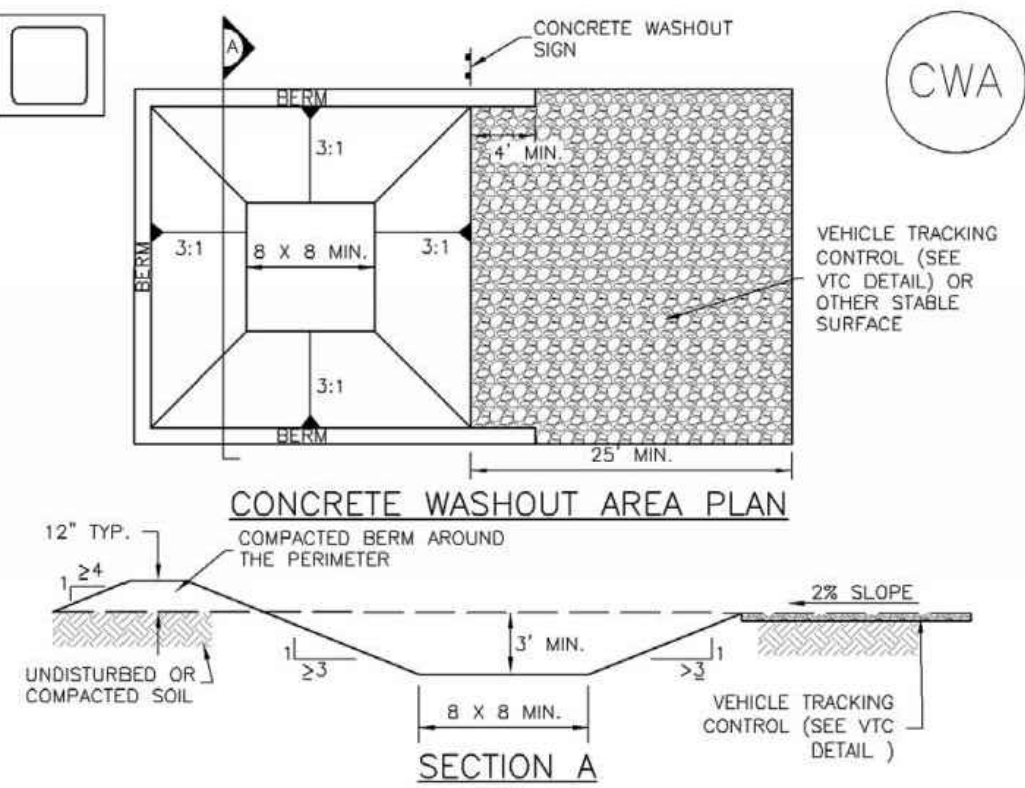
H-SCALE 1" = 30'
V-SCALE N/A

JOB NO. 2071.00
DATE ISSUED 3/12/22
SHEET NO. 3 OF 6

N:\jobs\2071.00\Drawings\207100 SDP-GEC-FDM.dwg, 3/17/2022 2:18:00 PM, DWG To PDF.pc3

Concrete Washout Area (CWA)

MM-1



CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
-CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

November 2010 Urban Drainage and Flood Control District CWA-3
Urban Storm Drainage Criteria Manual Volume 3

MM-1

Concrete Washout Area (CWA)

CWA MAINTENANCE NOTES

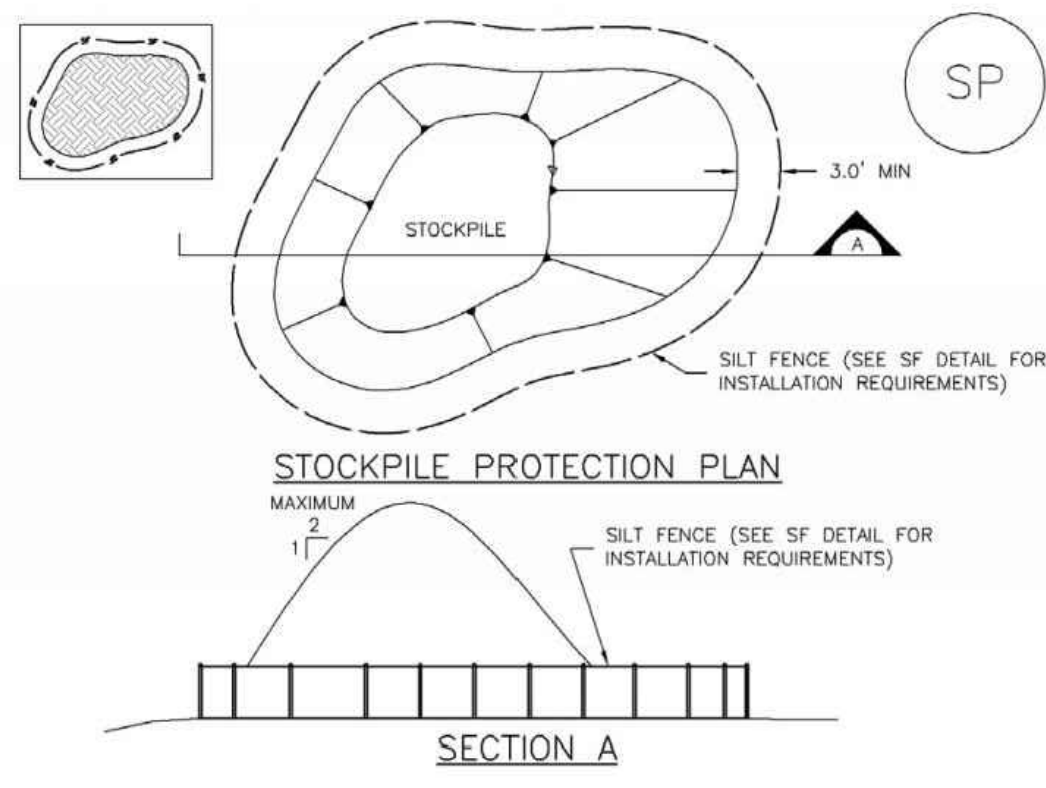
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
5. 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.
6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)
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.

CWA-4 Urban Drainage and Flood Control District November 2010
Urban Storm Drainage Criteria Manual Volume 3

Stockpile Management (SP)

MM-2



SP-1. STOCKPILE PROTECTION

STOCKPILE PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
-LOCATION OF STOCKPILES
-TYPE OF STOCKPILE PROTECTION.
2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE, INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.
3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30-60 DAYS).
4. FOR TEMPORARY 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.

November 2010 Urban Drainage and Flood Control District SP-3
Urban Storm Drainage Criteria Manual Volume 3

MM-2

Stockpile Management (SM)

STOCKPILE PROTECTION MAINTENANCE NOTES

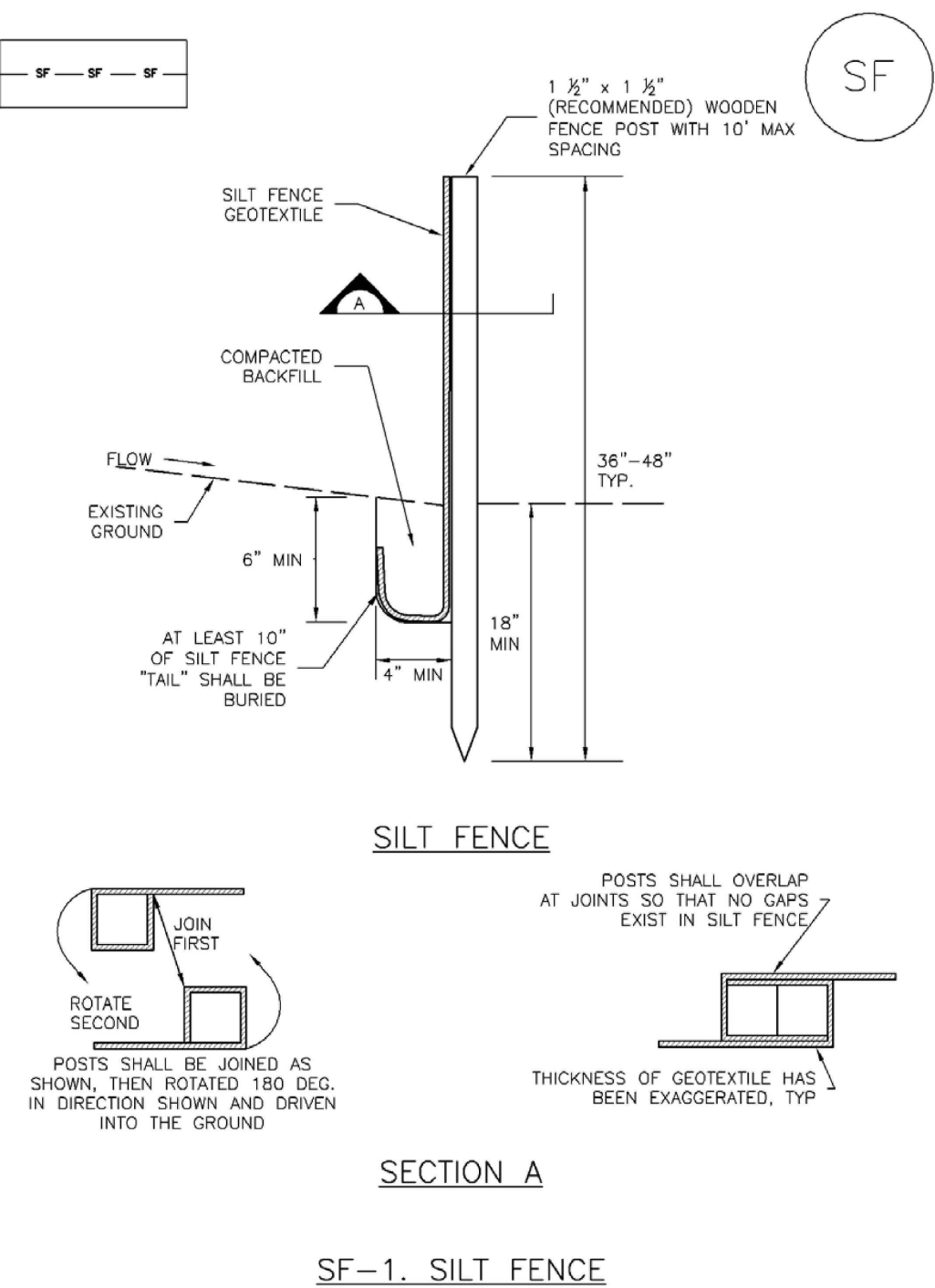
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.
5. STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.

(DETAILS ADAPTED FROM PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)
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.

SP-4 Urban Drainage and Flood Control District November 2010
Urban Storm Drainage Criteria Manual Volume 3

Silt Fence (SF)

SC-1



SF-1. SILT FENCE

November 2010 Urban Drainage and Flood Control District SF-3
Urban Storm Drainage Criteria Manual Volume 3

SC-1

Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.
6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK." THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

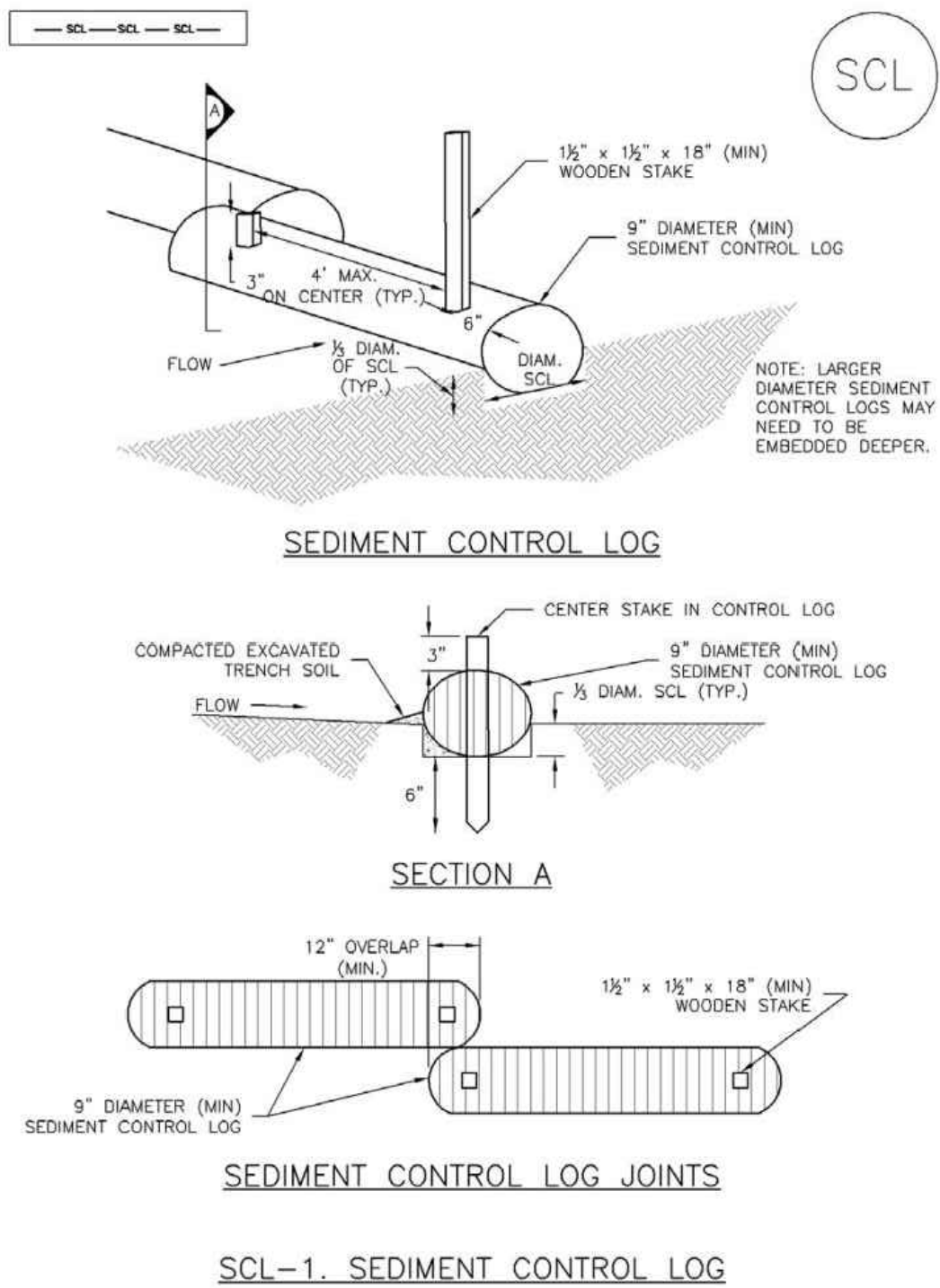
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)
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.

SF-4 Urban Drainage and Flood Control District November 2010
Urban Storm Drainage Criteria Manual Volume 3

Sediment Control Log (SCL)

SC-2



SCL-1. SEDIMENT CONTROL LOG

November 2010 Urban Drainage and Flood Control District SCL-3
Urban Storm Drainage Criteria Manual Volume 3

Sediment Control Log (SCL)

SC-2

SEDIMENT CONTROL LOG INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.
3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCLOSUR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.
4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS OR HIGH VELOCITY DRAINAGE WAYS.
5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/2 OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING.
6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER.
7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 1" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

1. 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 CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION, IF DISTURBED AREAS EXIST AFTER REMOVAL. THEY SHALL BE COVERED WITH TOP SOIL, SEED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

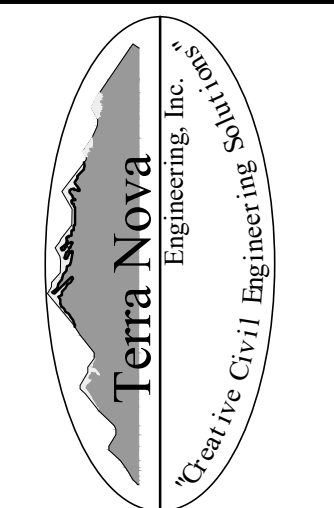
(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

November 2010 Urban Drainage and Flood Control District SCL-5
Urban Storm Drainage Criteria Manual Volume 3

REVIEWS	NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE DESIGNING AGENCIES, THEY ARE NOT TO BE USED FOR ANY PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR:
GARY MEISMAN
ATTN:
612 HARVARD ST
COLORADO SPRINGS, CO 80911
719.492.0612



721 S. 23RD STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6426
www.tnecinc.com

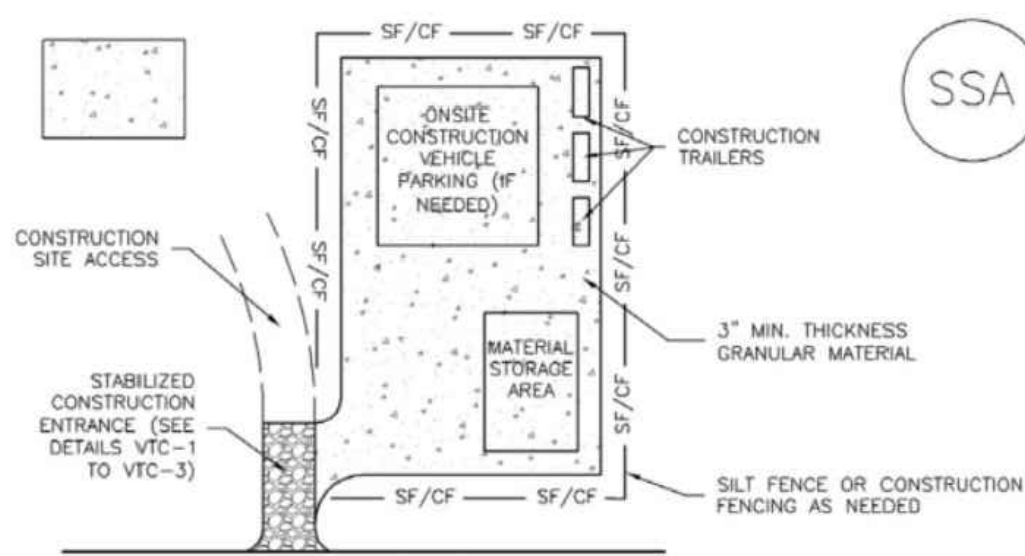
MEISMAN PROPERTY
GRADING AND EROSION CONTROL PLAN
EROSION CONTROL DETAILS

DESIGNED BY DLF
DRAWN BY DLF
CHECKED BY LD
H-SCALE 1" = 30'
V-SCALE N/A
JOB NO. 2071.00
DATE ISSUED 3/12/22
SHEET NO. 4 OF 6

N:\jobs\2071.00\Drawings\207100 SDP-GEC-FDM.dwg, 3/17/2022 2:18:22 PM, DWG To PDF.pc3

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 CAUSES 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 DEGRADED 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

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, SEED, AND MULCH 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 UDPCD 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

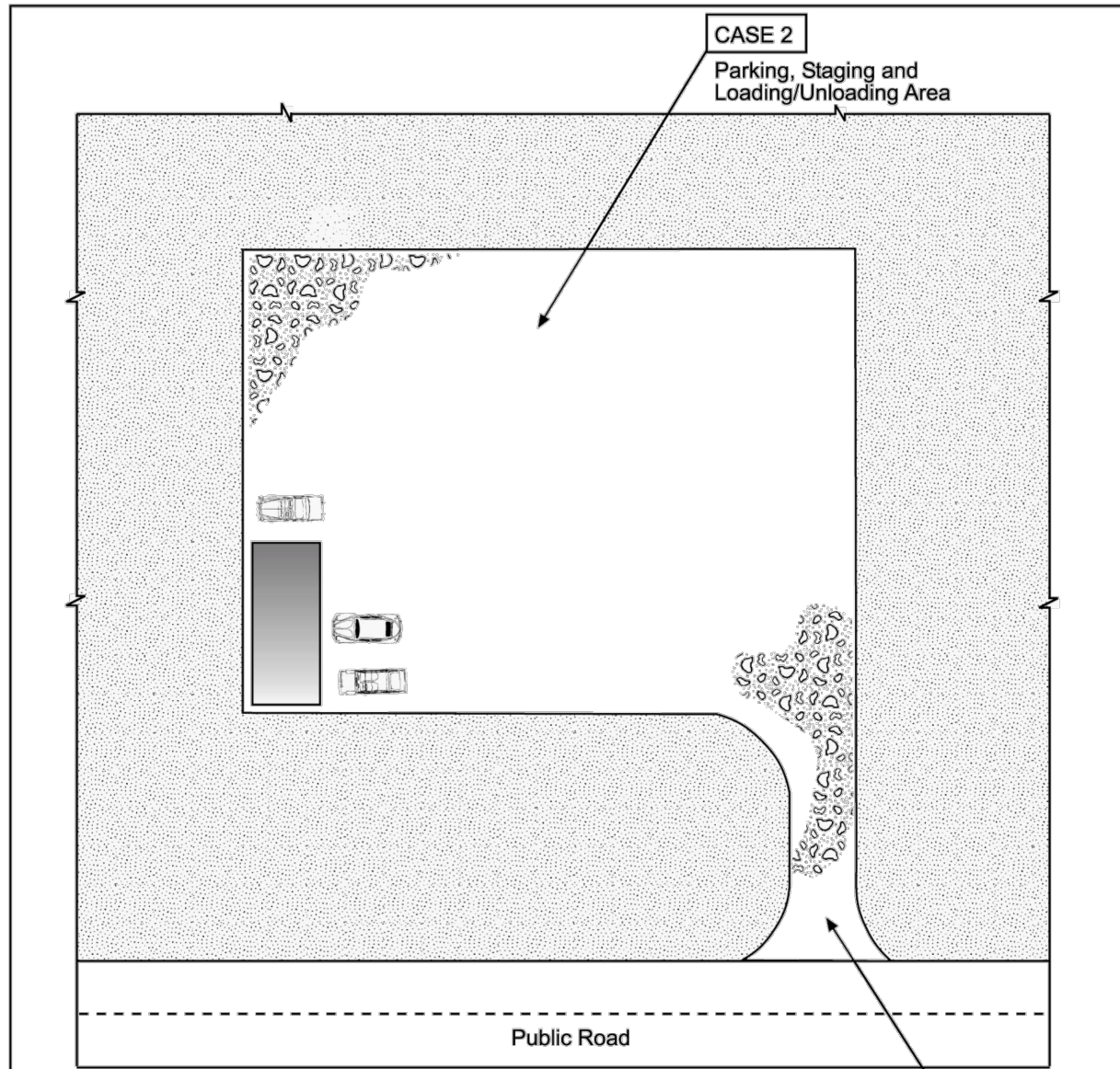


Table VT-1

	Case 1	Case 2
Gravel Thickness	9"	3"
Filter Fabric	YES	NO

City of Colorado Springs
Storm Water Quality

Figure VT-1
Vehicle Tracking
Application Examples

DEHN163722.CS,CB\FVT-1-69

3-53

Mulching (MU)

EC-4

Description

Mulching consists of evenly applying straw, hay, shredded wood mulch, rock, bark or compost to disturbed soils and securing the mulch by crimping, tackifiers, netting or other measures. Mulching helps reduce erosion by protecting bare soil from rainfall impact, increasing infiltration, and reducing runoff. Although often applied in conjunction with temporary or permanent seeding, it can also be used for temporary stabilization of areas that cannot be reseeded due to seasonal constraints.

Mulch can be applied either using standard mechanical dry application methods or using hydromulching equipment that hydraulically applies a slurry of water, wood fiber mulch, and often a tackifier.

Appropriate Uses

Use mulch in conjunction with seeding to help protect the seedbed and stabilize the soil. Mulch can also be used as a temporary cover on low to mild slopes to help temporarily stabilize disturbed areas where growing season constraints prevent effective reseeding. Disturbed areas should be properly mulched and tacked, or seeded, mulched and tacked promptly after final grade is reached (typically within no longer than 14 days) on portions of the site not otherwise permanently stabilized.

Standard dry mulching is encouraged in most jurisdictions; however, hydromulching may not be allowed in certain jurisdictions or may not be allowed near waterways.

Do not apply mulch during windy conditions.

Design and Installation

Prior to mulching, surface-roughen areas by rolling with a crimping or punching type roller or by track walking. Track walking should only be used where other methods are impractical because track walking with heavy equipment typically compacts the soil.

A variety of mulches can be used effectively at construction sites. Consider the following:

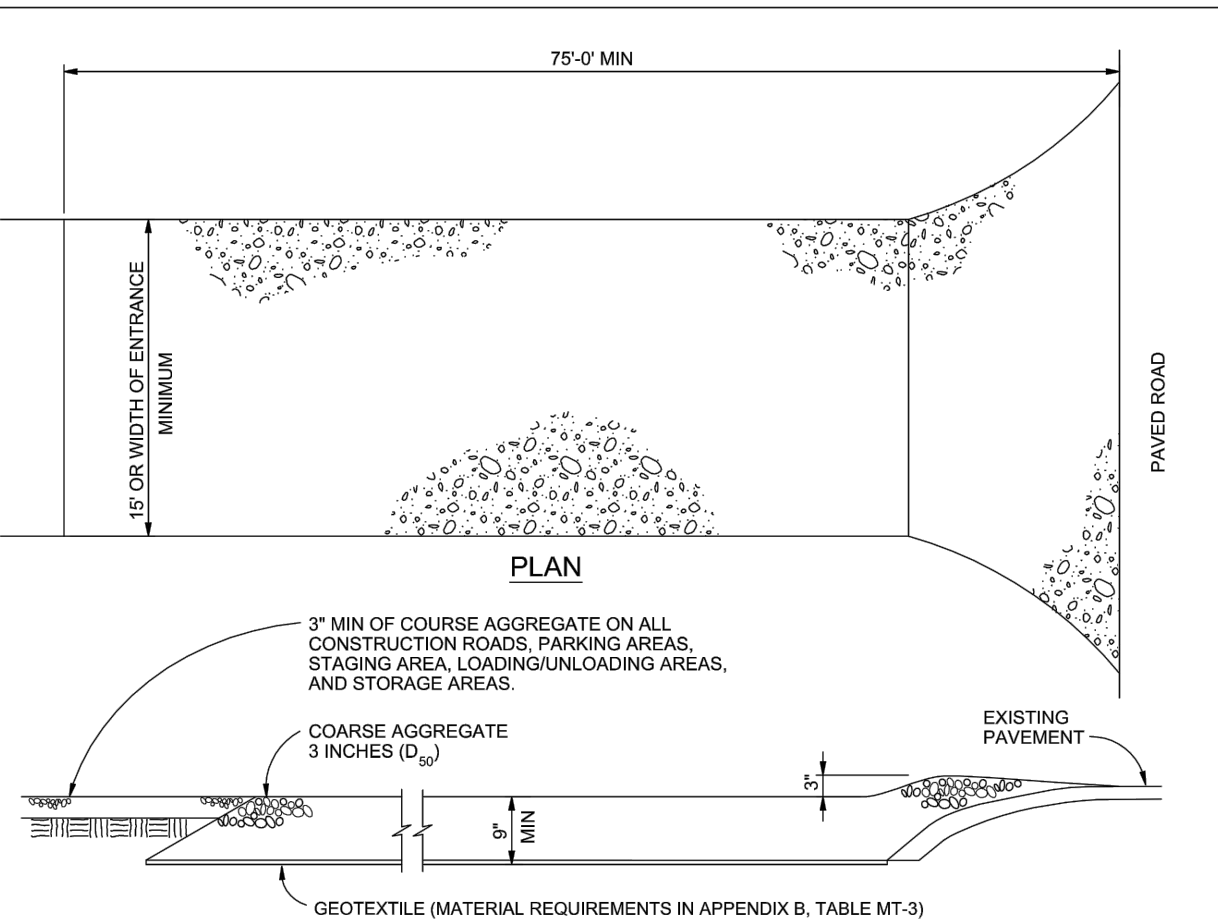
Mulch	
Functions	
Erosion Control	Yes
Sediment Control	Moderate
Site/Material Management	No

June 2012 Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

MU-1



Photograph MU-1. An area that was recently seeded, mulched, and crimped.



VEHICLE TRACKING

INSTALLATION REQUIREMENTS

- ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.
- CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.
- AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.
- CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.
- CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP.

MAINTENANCE REQUIREMENTS

- REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
- STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
- SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.
- STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.
- OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

City of Colorado Springs
Stormwater Quality

Figure VT-2
Vehicle Tracking
Application Examples

3-54

Temporary and Permanent Seeding (TS/PS)

EC-2

Description

Temporary seeding can be used to stabilize disturbed areas that will be inactive for an extended period. Permanent seeding should be used to stabilize areas at final grade that will not be otherwise stabilized. Effective seeding includes preparation of a seedbed, selection of an appropriate seed mixture, proper planting techniques, and protection of the seeded area with mulch, geotextiles, or other appropriate measures.

Appropriate Uses

When the soil surface is disturbed and will remain inactive for an extended period (typically 30 days or longer), proactive stabilization measures should be implemented. If the inactive period is short-lived (on the order of two weeks), techniques such as surface roughening may be appropriate. For longer periods of inactivity, temporary seeding and mulching can provide effective erosion control. Permanent seeding should be used on finished areas that have not been otherwise stabilized.

Typically, local governments have their own seed mixes and timelines for seeding. Check jurisdictional requirements for seeding and temporary stabilization.

Design and Installation

Effective seeding requires proper seedbed preparation, selection of an appropriate seed mixture, use of appropriate seeding equipment to ensure proper coverage and density, and protection with mulch or fabric until plants are established.

The USDCM Volume 2 *Revegetation* Chapter contains detailed seed mix, soil preparations, and seeding and mulching recommendations that may be referenced to supplement this Fact Sheet.

Drill seeding is the preferred seeding method. Hydroseeding is not recommended except in areas where steep slopes prevent use of drill seeding equipment, and even in these instances it is preferable to hand seed and mulch. Some jurisdictions do not allow hydroseeding or hydromulching.

Seedbed Preparation

Prior to seeding, ensure that areas to be revegetated have soil conditions capable of supporting vegetation. Overlot grading can result in loss of topsoil, resulting in poor quality subsoils at the ground surface that have low nutrient value, little organic matter content, few soil microorganisms, rooting restrictions, and conditions less conducive to infiltration of precipitation. As a result, it is typically necessary to provide stockpiled topsoil, compost, or other

Temporary and Permanent Seeding	
Functions	
Erosion Control	Yes
Sediment Control	No
Site/Material Management	No

June 2012 Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

TS/PS-1

Temporary and Permanent Seeding (TS/PS)

soil amendments and rototill them into the soil to a depth of 6 inches or more.

Topsoil should be salvaged during grading operations for use and spread on areas to be revegetated later. Topsoil should be viewed as an important resource to be utilized for vegetation establishment, due to its water-holding capacity, structure, texture, organic matter content, biological activity, and nutrient content. The rooting depth of most native grasses in the semi-arid Denver metropolitan area is 6 to 18 inches. At a minimum, the upper 6 inches of topsoil should be stripped, stockpiled, and ultimately respread across areas that will be revegetated.

Where topsoil is not available, subsoils should be amended to provide an appropriate plant-growth medium. Organic matter, such as well digested compost, can be added to improve soil characteristics conducive to plant growth. Other treatments can be used to adjust soil pH conditions when needed. Soil testing, which is typically inexpensive, should be completed to determine and optimize the types and amounts of amendments that are required.

If the disturbed ground surface is compacted, rip or rototill the surface prior to placing topsoil. If adding compost to the existing soil surface, rototilling is necessary. Surface roughening will assist in placement of a stable topsoil layer on steeper slopes, and allow infiltration and root penetration to greater depth.

Prior to seeding, the soil surface should be rough and the seedbed should be firm, but neither too loose nor compacted. The upper layer of soil should be in a condition suitable for seeding at the proper depth and conducive to plant growth. Seed-to-soil contact is the key to good germination.

Seed Mix for Temporary Vegetation

To provide temporary vegetative cover on disturbed areas which will not be paved, built upon, or fully landscaped or worked for an extended period (typically 30 days or more), plant an annual grass appropriate for the time of planting and mulch the planted areas. Annual grasses suitable for the Denver metropolitan area are listed in Table TS/PS-1. These are to be considered only as general recommendations when specific design guidance for a particular site is not available. Local governments typically specify seed mixes appropriate for their jurisdiction.

Seed Mix for Permanent Revegetation

To provide vegetative cover on disturbed areas that have reached final grade, a perennial grass mix should be established. Permanent seeding should be performed promptly (typically within 14 days) after reaching final grade. Each site will have different characteristics and a landscape professional or the local jurisdiction should be contacted to determine the most suitable seed mix for a specific site. In lieu of a specific recommendation, one of the perennial grass mixes appropriate for site conditions and growth season listed in Table TS/PS-2 can be used. The pure live seed (PLS) rates of application recommended in these tables are considered to be absolute minimum rates for seed applied using proper drill-seeding equipment.

If desired for wildlife habitat or landscape diversity, shrubs such as rubber rabbitbrush (*Chrysothamnus nauseosus*), fourwing saltbush (*Atriplex canescens*) and skunkbrush sumac (*Rhus trilobata*) could be added to the upland seedmixes at 0.25, 0.5 and 1 pound PLS/acre, respectively. In riparian zones, planting root stock of such species as American plum (*Prunus americana*), woods rose (*Rosa woodsii*), plains cottonwood (*Populus sargentii*), and willow (*Populus spp.*) may be considered. On non-topsoiled upland sites, a legume such as Ladak alfalfa at 1 pound PLS/acre can be included as a source of nitrogen for perennial grasses.

TS/PS-2 Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

June 2012

Mulching (MU)

EC-2

- Clean, weed-free and seed-free cereal grain straw should be applied evenly at a rate of 2 tons per acre and must be tacked or fastened by a method suitable for the condition of the site. Straw mulch must be anchored (and not merely placed) on the surface. This can be accomplished mechanically by crimping or with the aid of tackifiers or nets. Anchoring with a crimping implement is preferred, and is the recommended method for areas flatter than 3:1. Mechanical crimpers must be capable of tucking the long mulch fibers into the soil to a depth of 3 inches without cutting them. An agricultural disk, while not an ideal substitute, may work if the disk blades are dull or blunted and set vertically; however, the frame may have to be weighted to afford proper soil penetration.

- Grass hay may be used in place of straw; however, because hay is comprised of the entire plant including seed, mulching with hay may seed the site with non-native grass species which might in turn out-compete the native seed. Alternatively, native species of grass hay may be purchased, but can be difficult to find and are more expensive than straw. Purchasing and utilizing a certified weed-free straw is an easier and less costly mulching method. When using grass hay, follow the same guidelines as for straw (provided above).

- On small areas sheltered from the wind and heavy runoff, spraying a tackifier on the mulch is satisfactory for holding it in place. For steep slopes and special situations where greater control is needed, erosion control blankets anchored with stakes should be used instead of mulch.

- Hydraulic mulching consists of wood cellulose fibers mixed with water and a tackifying agent and should be applied at a rate of no less than 1,500 pounds per acre (1,425 lbs of fibers mixed with at least 75 lbs of tackifier) with a hydraulic mulcher. For steeper slopes, up to 2000 pounds per acre may be required for effective hydros seeding. Hydromulch typically requires up to 24 hours to dry; therefore, it should not be applied immediately prior to inclement weather. Application to roads, waterways and existing vegetation should be avoided.

- Erosion control mats, blankets, or nets are recommended to help stabilize steep slopes (generally 3:1 and steeper) and waterways. Depending on the product, these may be used alone or in conjunction with grass or straw mulch. Normally, use of these products will be restricted to relatively small areas. Biodegradable mats made of straw and jute, straw-coconut, coconut fiber, or excelsior can be used instead of mulch. (See the ECM/TRM BMP for more information.)

- Some tackifiers or binders may be used to anchor mulch. Check with the local jurisdiction for allowed tackifiers. Manufacturer's recommendations should be followed at all times. (See the Soil Binder BMP for more information on general types of tackifiers.)

- Rock can also be used as mulch. It provides protection of exposed soils to wind and water erosion and allows infiltration of precipitation. An aggregate base course can be spread on disturbed areas for temporary or permanent stabilization. The rock mulch layer should be thick enough to provide full coverage of exposed soil on the area it is applied.

Maintenance and Removal

After mulching, the bare ground surface should not be more than 10 percent exposed. Reapply mulch, as needed, to cover bare areas.

MU-2 Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

June 2012

REVISIONS	NO.	DESCRIPTION	DATE

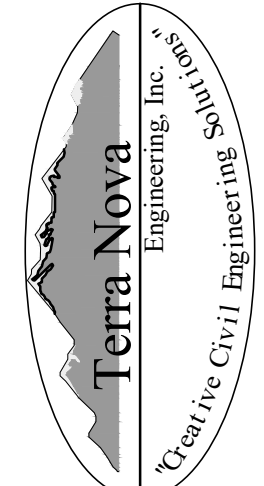
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE AGENCIES REVIEWING AND APPROVING, INC. APPROVES THEIR USE FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR:

GARY MEISMAN

ATTN:

612 HARVARD ST
COLORADO SPRINGS, CO 80911
719.492.0612



721 S. 23RD STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6426
www.tnecinc.com

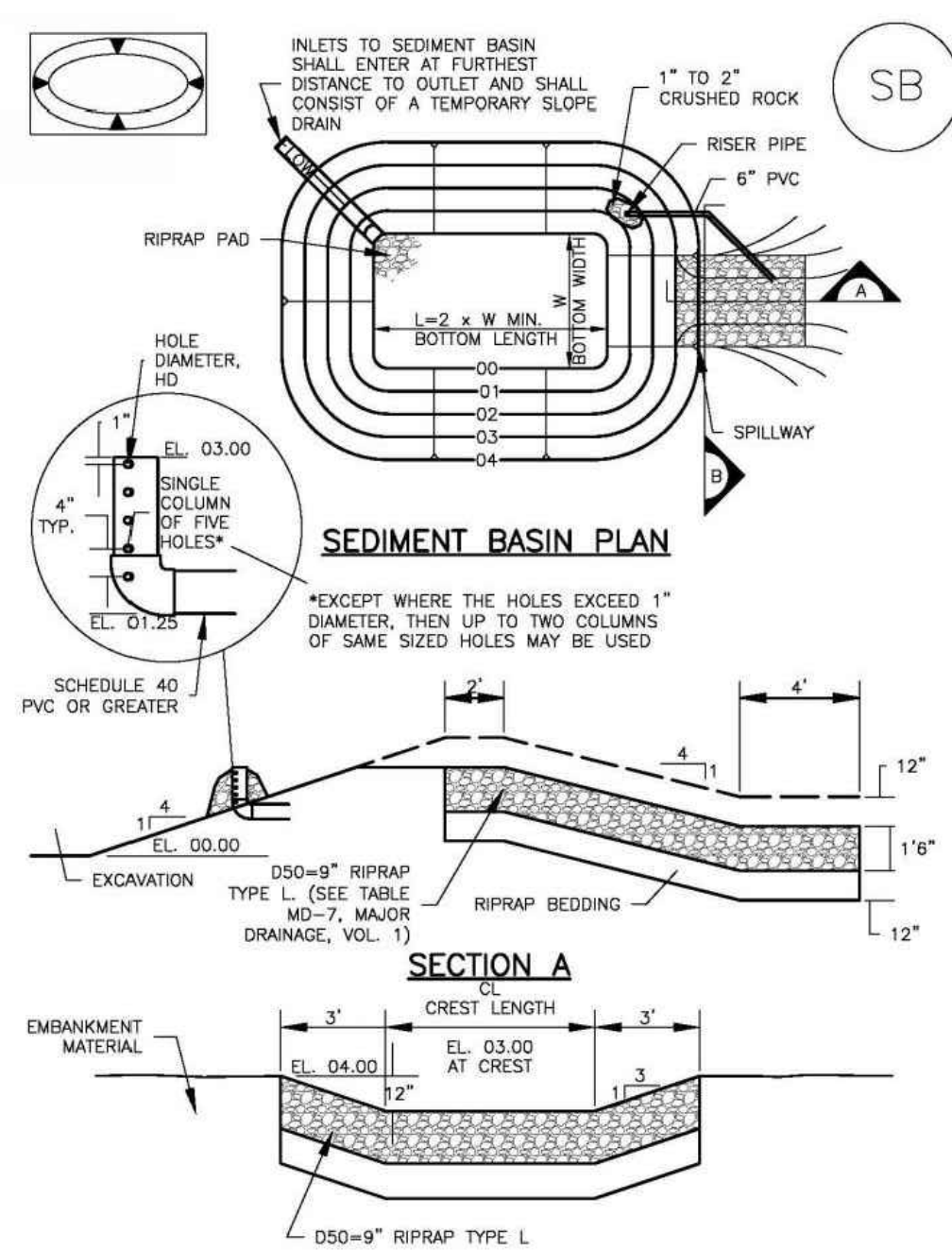
MEISMAN PROPERTY

GRADING AND EROSION CONTROL PLAN
EROSION CONTROL DETAILS

DESIGNED BY	DLF
DRAWN BY	DLF
CHECKED BY	LD
H-SCALE	1" = 30'
V-SCALE	N/A
JOB NO.	2071.00
DATE ISSUED	3/12/22
SHEET NO.	5 OF 6

Sediment Basin (SB)

SC-7



August 2013
Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3
SB-5

SC-7

Sediment Basin (SB)

Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (L), (ft)	Hole Diameter (D), (in)
1	12 $\frac{1}{2}$	2	$\frac{9}{16}$
2	21	3	$\frac{1}{8}$
3	28	5	$\frac{3}{8}$
4	33 $\frac{1}{2}$	6	$\frac{9}{16}$
5	38 $\frac{1}{2}$	8	$\frac{3}{4}$
6	45	9	$\frac{25}{32}$
7	47 $\frac{1}{2}$	11	$\frac{25}{32}$
8	51	12	$\frac{25}{32}$
9	55	13	$\frac{3}{8}$
10	58 $\frac{1}{2}$	15	$\frac{15}{16}$
11	61	16	$\frac{3}{4}$
12	64	18	
13	67 $\frac{1}{2}$	19	$\frac{1}{8}$
14	70 $\frac{1}{2}$	21	$\frac{1}{4}$
15	73 $\frac{1}{2}$	22	$\frac{1}{8}$

SEDIMENT BASIN INSTALLATION NOTES

1. SEE PLAN VIEW FOR
-LOCATION OF SEDIMENT BASIN.
-TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
-FOR STANDARD BASIN, BOTTOM WIDTH W , CREST LENGTH CL AND HOLE DIAMETER H_0 .
-FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN.
INCLUDING RISER HEIGHT H , NUMBER OF COLUMNS N , HOLE DIAMETER H_0 AND PIPE DIAMETER D .
2. FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
3. SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON BASINS AS A STORMWATER CONTROL.
4. EMBAKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE, GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT OF #20 SIEVE.
5. EMBAKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
6. PIPE SCH 40 OR GREATER SHALL BE USED.
7. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBAKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR NONSTANDARD BASIN(S) THAT MAY BE HAVING BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

SB-6
Urban Drainage and Flood Control District
August 2013

Urban Storm Drainage Criteria Manual Volume 3

Sediment Basin (SB)

SC-7

SEDIMENT BASIN MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROGNOSTIC, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE AFTER ANY SIGNIFICANT WEATHER EVENT FOLLOWED BY A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NECESSARY TO MAINTAIN EFFECTIVENESS. TYPES OF REMOVAL DEPEND ON THE DEPTH REACHES ONE FOOT (E.E. TWO FEET BELOW THE SPILLWAY CREST).
5. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND THE COVER ACCEPTED FOR LONG TERM URS CORRECTION.
6. SEDIMENT BASIN COVER SHALL BE MAINTAINED TO PREVENT DISTURBANCE. SHALL COVER WITH TOPSOIL, SEEDING AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY THE DISTRICT ENGINEER.

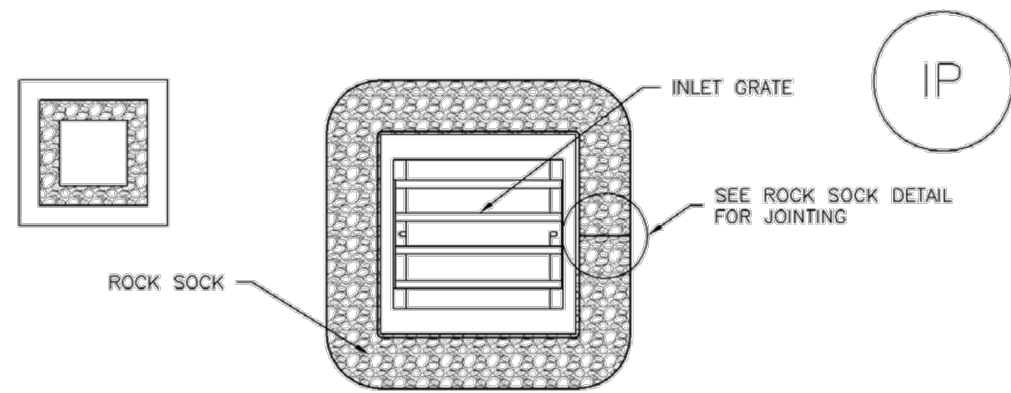
(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)

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.

August 2013 Urban Drainage and Flood Control District SB-7
Urban Storm Drainage Criteria Manual Volume 3

Inlet Protection (IP)

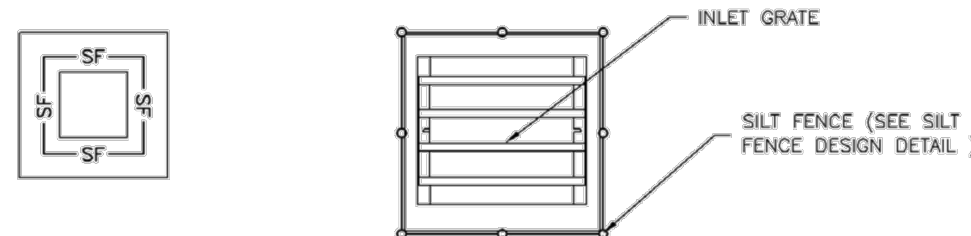
SC-6



IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION

ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



IP-4. SILT FENCE FOR SUMP INLET PROTECTION

SILT FENCE INLET PROTECTION INSTALLATION NOTES

1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.
3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PVIOUS AREAS, INSTALL PER SEDIMENT CONTROL LOG DETAIL.

August 2013 Urban Drainage and Flood Control District IP-5
Urban Storm Drainage Criteria Manual Volume 3

SC-6

Inlet Protection (IP)

GENERAL INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
 - LOCATION OF INLET PROTECTION.
 - TYPE OF INLET PROTECTION (IP.1, IP.2, IP.3, IP.4, IP.5, IP.6)
2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.

INLET PROTECTION MAINTENANCE NOTES

1. 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 AFTER 24 HOURS FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED AS SOON AS POSSIBLE. INLET PROTECTION EFFECTIVENESS, TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR $\frac{1}{4}$ OF THE HEIGHT FOR STRAW BALES.
5. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED. USUALLY THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
6. WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDS AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

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.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF INLET PROTECTION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY PROPRIETARY INLET PROTECTION METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET PROTECTION IS ACCEPTABLE.

IP-8
Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3
August 2013

MEISMAN PROPERTY

GRADING AND EROSION CONTROL PLAN

EROSION CONTROL DETAILS

DESIGNED BY	DLF
DRAWN BY	DLF
CHECKED BY	LD
H-SCALE	1" = 30'
V-SCALE	N/A
JOB NO.	2071.00
DATE ISSUED	3/12/22
SHEET NO.	6 OF 6

PREPARED FOR:

ATTN:

612 HARVARD ST
COLORADO SPRINGS, CO 80911
719.492.0612

721 S. 23RD STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6426
www.tnesinc.com

