

**STORM WATER MANAGEMENT PLAN
FOR
A-1 CHIPSEAL
7245 COLE VIEW, COLORADO SPRINGS**

JULY 2022

Owner/Contractor:

A-1 CHIPSEAL
2505 E 74TH Avenue
Denver, CO 80229
(720) 540-8264
c/o Stephanie Wallis

Qualified Stormwater Manager/CSWMP Administrator:

TBD

Name: _____

Company: _____

Address: _____

Prepared By:

TERRA NOVA ENGINEERING, INC.
721 S. 23rd ST.
Colorado Springs, CO 80904
(719) 635-6422

Job No. 2173.00

County Job No. COM-22-014

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 A-1 Chipseal – 7245 Cole View

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STORM WATER MANAGEMENT PLAN FOR

A-1 Chipseal – 7245 Cole View

SITE DESCRIPTION & EXISTING CONDITIONS

This site is approximately 1.36 acres of developed land located at 7245 Cole View. This site is currently in use as a paving business. The site is in the northeast quarter of Section 8, Township 14 South, Range 65 West of the 6th Principal Meridian within El Paso County. The parcels are bounded to the north and west by Sand Creek, to the southwest by LOT 35 CLAREMONT BUSINESS PARK FIL NO 2, to the southeast by LOTS 13 AND 14 CLAREMONT BUSINESS PARK FIL NO 2, and to the north by LOT 39 CLAREMONT BUSINESS PARK FIL NO 2. (see vicinity map).

The site lies within the Sand Creek Basin, with storm runoff surface draining west across the site, then into a gutter that flows off the site to the south, eventually entering a storm inlet, which drains into the adjacent East Fork Sand Creek. There are also storm inlets in Marksheffel Road that flow into a storm sewer that flows south along Marksheffel to an unknown outfall, which presumably also drains into Sand Creek.

Soils for this project are delineated by the map in the appendix as Ellicott loamy coarse sand, 0 to 5 percent slopes (28). Soils in the study area are shown as mapped by NRCS in the “Soils Survey of El Paso County Area” and contains soils of Hydrologic Group D.

The site is developed with mostly pavement and roof surfaces, and a small amount of landscaping. The site drains to the west, with an average slope of 3.7%. Existing vegetative ground cover is approximately 1% based on aerial photos (site is 95% building and pavement).

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 sand filter in an existing paved area. Proposed construction activities include digging a hole for the sand filter and building the sand filter. 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 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 paved 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 (note: the entire construction area is currently paved). There will be 0.04 acres of disturbed soil area. The estimate for cut on this site is 152 cy and for fill it is 0 cy for a net cut of 154 cy. Extra earthen material will be transported offsite.

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 Fall 2022 and the site will be considered stabilized in the Fall 2022.

Grading will begin in Fall 2022 with completion of construction activities anticipated to be in the Fall of 2022. The construction sequence will be: saw cut pavement, excavate sand filter volume, install sand filter, and cleanup.

Before clearing and grubbing may begin the first level of BMP'S are to be installed. These measures include a concrete washout area (CWA). The Staging Area (SSA) also is setup with appropriate measures to protect downstream.

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. Note: The entire construction area is currently paved, so revegetation is unlikely to be necessary.

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. Proposed BMPs include a concrete washout area, a stabilized staging area, and street sweeping.

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. 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 the onsite sand filter on the southeast corner of the site.

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/217300/Word/217300 SWMP.doc

GENERAL LOCATION MAP

A-1 Chipseal - Location Map

Image Dated May 2020



SITE

EAST
FORK
SAND
CREEK

Cole View

Google Earth

N

100 ft

EROSION CONTROL PLAN & DETAILS
(see back pocket)

GENERAL PERMIT APPLICATION

OPERATION AND MAINTENANCE INSPECTION FORM

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

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 PHOTOLED 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 ENTECH ENGINEERING, INC. 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
WOOD -PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT

A-1 CHIPSEAL
GRADING AND EROSION CONTROL PLAN
COVER SHEET
JULY 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.

SOIL TYPES

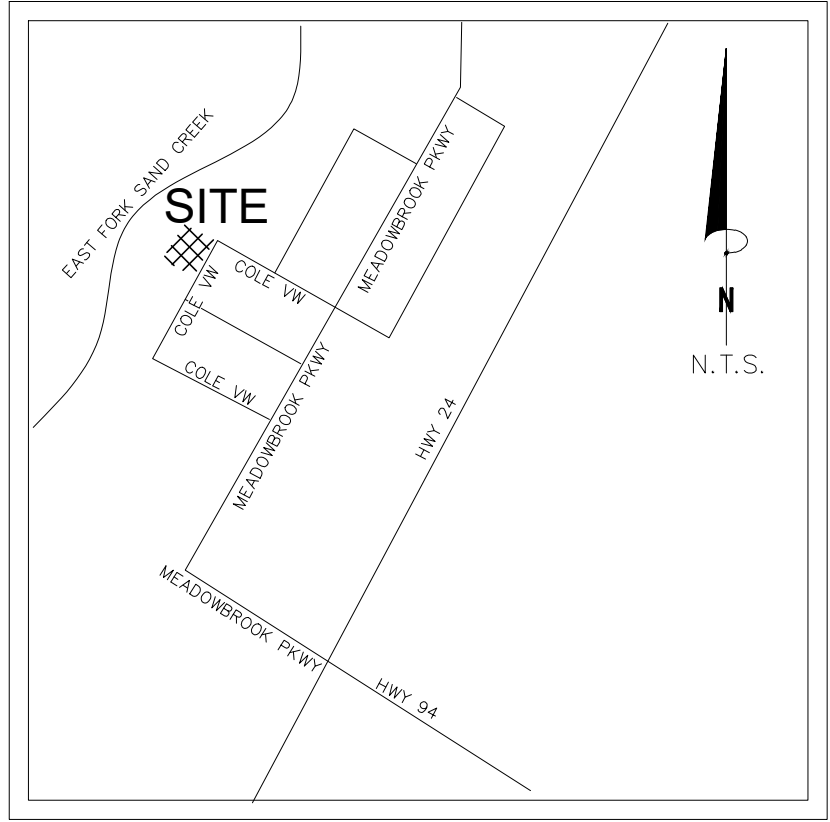
ONSITE SOILS ARE HYDROLOGIC GROUP "A", ELLICOTT LOAMY COARSE SAND, 0 TO 5 PERCENT SLOPES (PER NRCS WEB SOIL SURVEY MAP)

BENCHMARKS

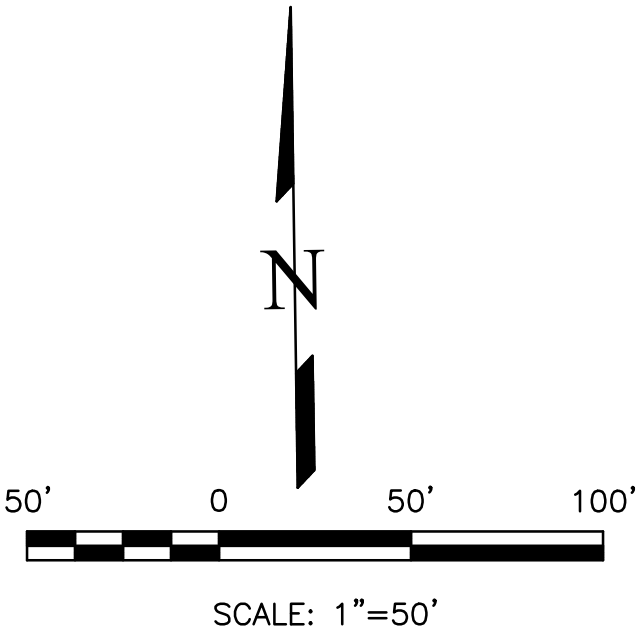
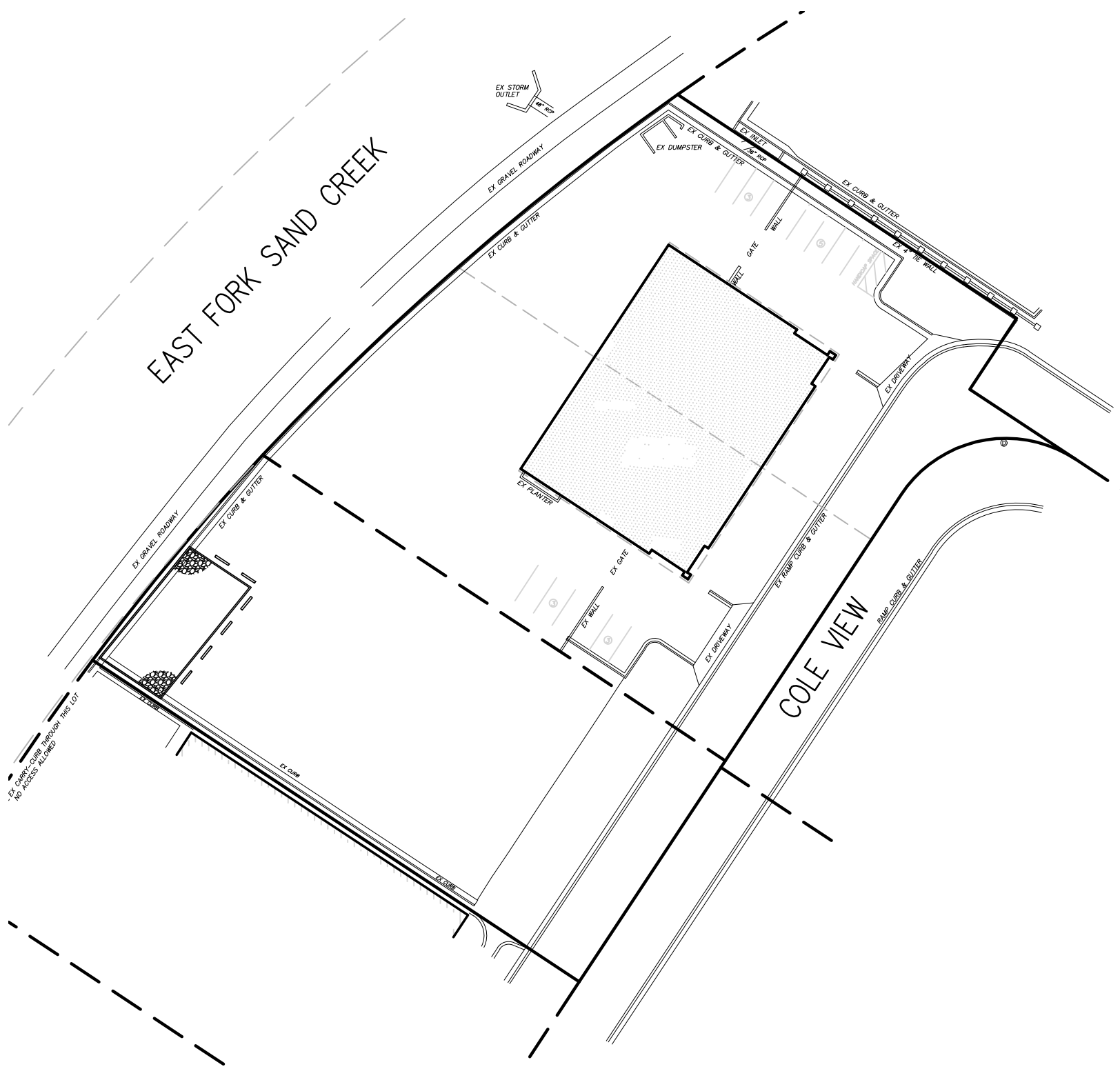
TOP OF NAIL @ 22" OFFSET (NORTHWEST ALONG LOT LINE) FROM SOUTH PROPERTY CORNER OF LOT 26 - ELEV=6338.52

EARTHWORK VOLUMES

ESTIMATED CUT = 152 CY, ESTIMATED FILL = 0 CY, NET = 152 CY <CUT>



VICINITY MAP
N.T.S.



SHEET INDEX

COVER SHEET	1
GRADING PLAN	2
PROPOSED SAND FILTER	3
EROSION CONTROL PLAN	4
EROSION CONTROL DETAILS	5

SITE ADDRESS

7245 COLE VIEW

TAX ID

5408102040, 5408102052

LEGAL DESCRIPTION

LOT 36 CLAREMONT BUSINESS PARK FIL NO 2, LOT 37 CLAREMONT BUSINESS PARK FIL NO 2 AS REVISED BY BDry ADJUSTMENT BY REC #207009144

CONSTRUCTION SCHEDULE

BEGIN GRADING: SUMMER 2022, END GRADING: SUMMER 2022

CONTACT INFORMATION:

OWNER:	A-1 CHIPSEAL, ATTN: STEPHANIE WALLIS 2505 E 74TH AVE DENVER, CO 80229 720.540.8264
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 PLAN.

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.

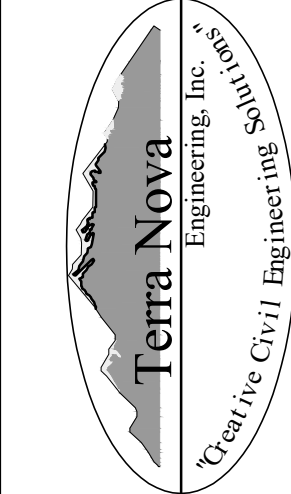
JOSHUA PALMER, P.E. DATE
INTERIM COUNTY ENGINEER

COM-22-014

REVISIONS	NO.	DESCRIPTION	DATE

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

PREPARED FOR:
A-1 CHIPSEAL
ATTN: STEPHANIE WALLIS
2505 E 74TH AVE
DENVER, CO 80229
720.540.8264



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

A-1 CHIPSEAL	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. 2173.00
DATE ISSUED 07/08/22
SHEET NO. 1 OF 5

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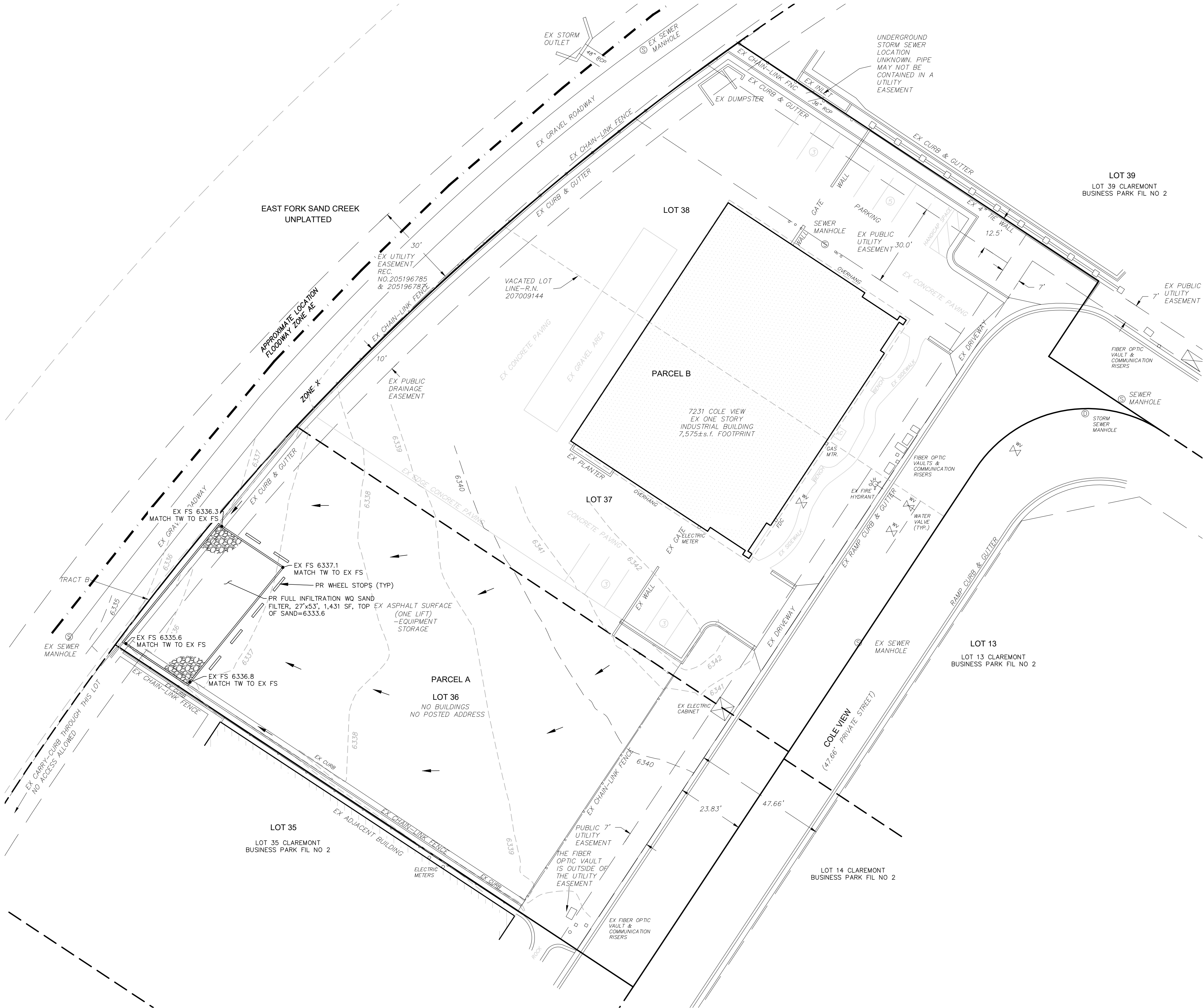
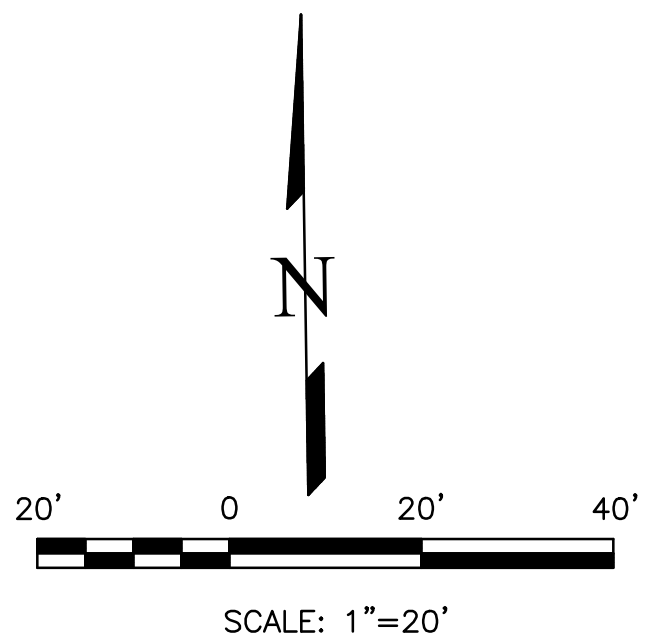
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PROPERTY LINE	
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EXISTING CONTOURS - MAJOR	6130
GRADE & DIRECTION	2.2%
PROPOSED CONTOUR	
PROPOSED	PR
EXISTING	EX
WATER LINE	W
SEWER LINE	SS
STORM LINE	ST
OVERHEAD ELECTRICAL LINE	OE
CHAIN LINK FENCE	
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

NOTES

1. NO GRADING IS PROPOSED. THE ONLY PROPOSED DEVELOPMENT IS THE INSTALLATION OF THE SAND FILTER.

A-1 CHIPSEAL
GRADING AND EROSION CONTROL PLAN
GRADING PLAN
JULY 2022



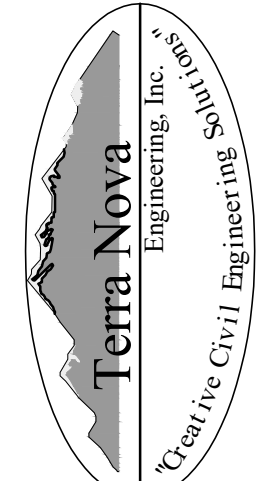
THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION
FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

DANE FRANK
COLORADO P.E. # 50207

REVISIONS	NO.	DESCRIPTION	DATE

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

PREPARED FOR:
A-1 CHIPSEAL
ATTN: STEPHANIE WALLIS
2505 E 74TH AVE
DENVER, CO 80229
720.540.8264



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

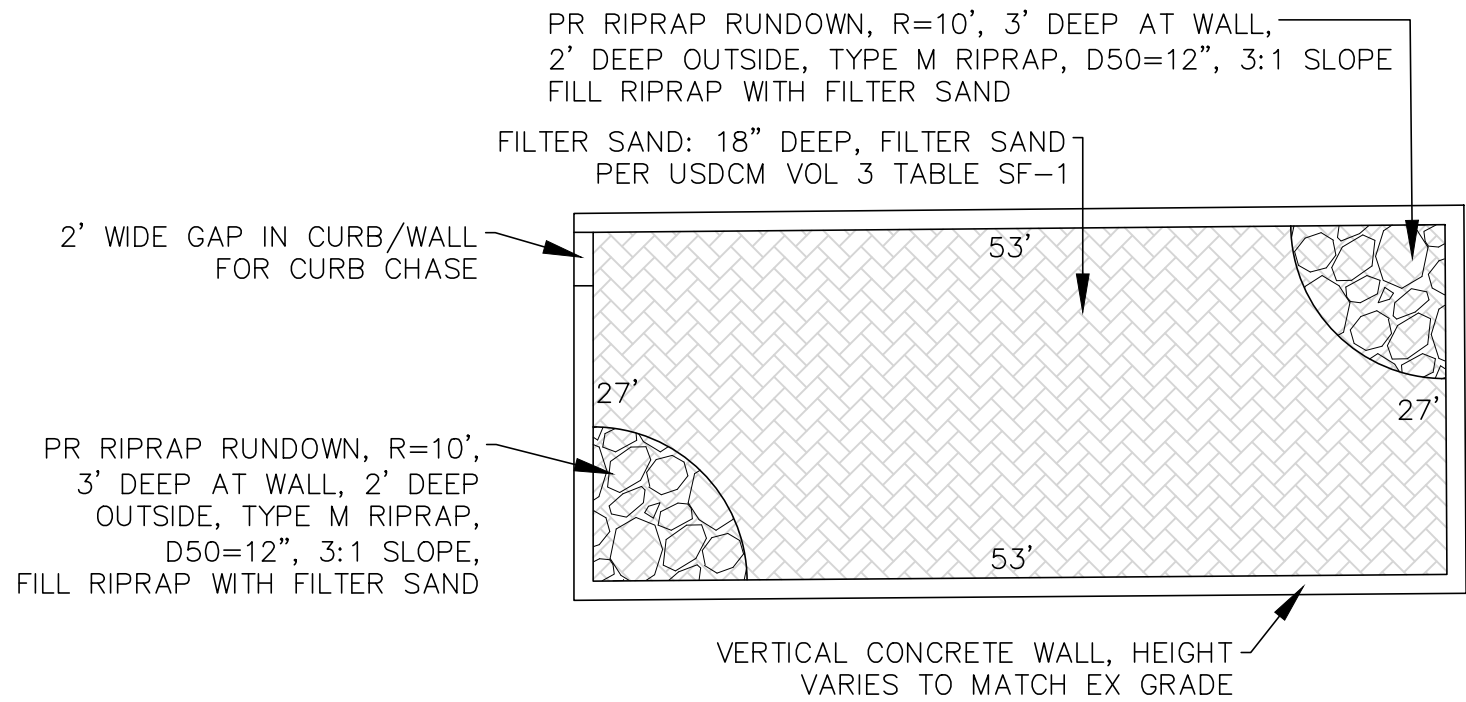
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GRADING AND EROSION CONTROL PLAN
GRADING PLAN

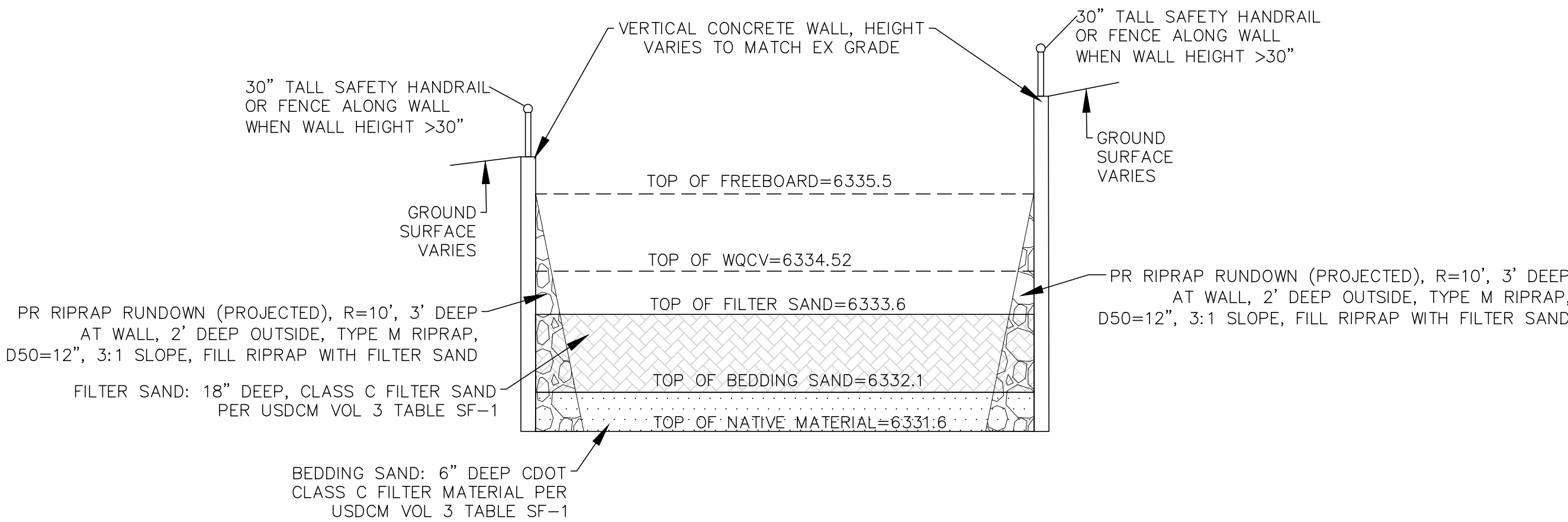
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CHECKED BY	LD
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JOB NO.	2173.00
DATE ISSUED	07/08/22
SHEET NO.	2 OF 5

A-1 CHIPSEAL
GRADING AND EROSION CONTROL PLAN
PROPOSED SAND FILTER
JULY 2022

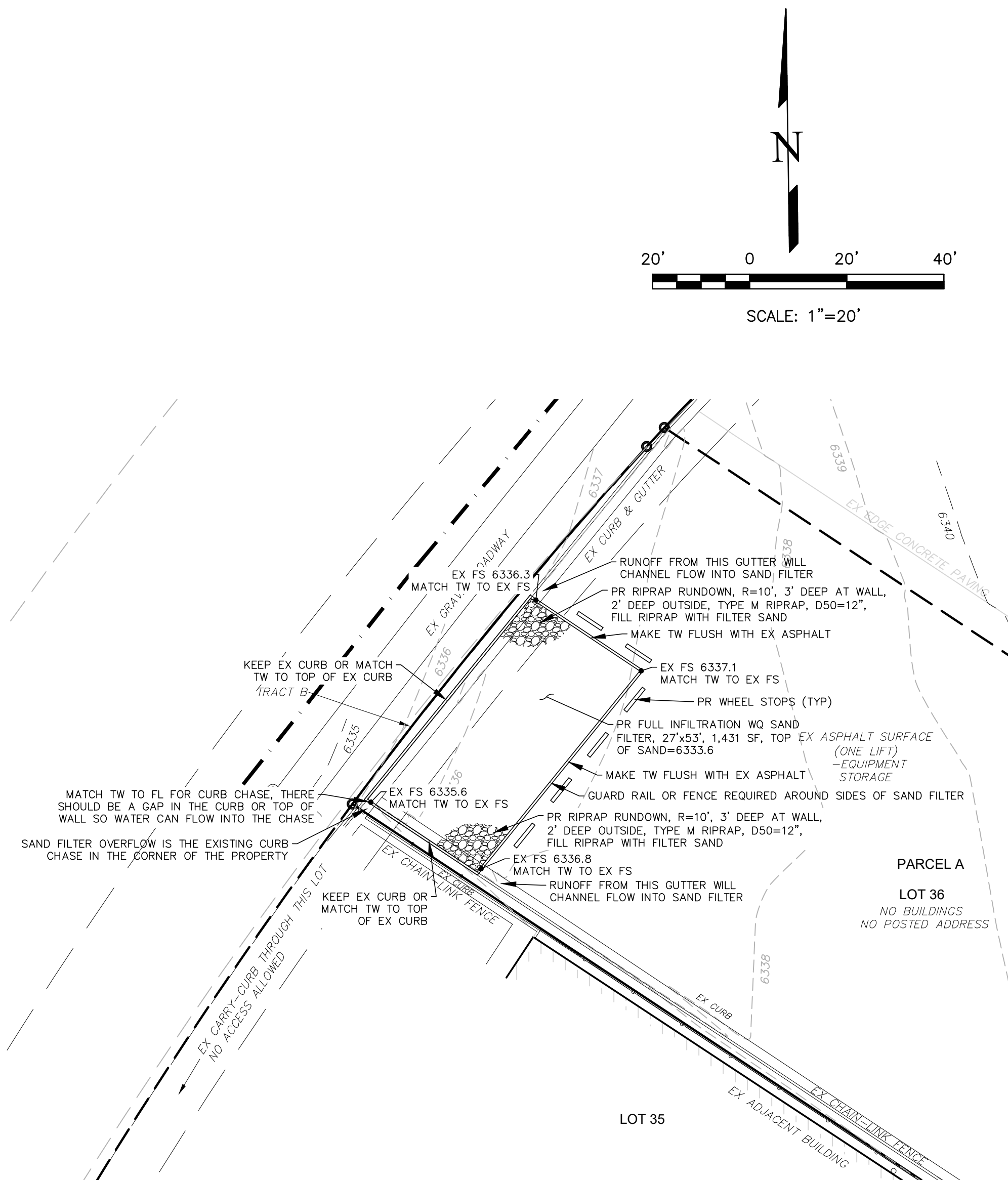
LEGEND	
EXISTING CONTOURS - MINOR	--- 6132 ---
EXISTING CONTOURS - MAJOR	--- 6130 ---
GRADE & DIRECTION	2.2%
PROPOSED CONTOUR	62
PROPOSED	PR
EXISTING	EX
WATER LINE	--- W --- W ---
SEWER LINE	--- SS --- SS ---
STORM LINE	--- ST --- ST ---
OVERHEAD ELECTRICAL LINE	--- OE --- OE ---
CHAIN LINK FENCE	--- □ --- □ ---
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	× EX 7314.00
PROPOSED SPOT GRADE	× 7314.00



SAND FILTER DESIGN - PLAN VIEW
N.T.S.



SAND FILTER DESIGN - PROFILE VIEW
N.T.S.



REVISIONS

NO.	DESCRIPTION	DATE

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A-1 CHIPSEAL
ATTN: STEPHANIE WALLIS
2505 E 74TH AVE
DENVER, CO 80229
720.540.8264

Terra Nova
Engineering, Inc.
Creative Civil Engineers

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

A-1 CHIPSEAL

GRADING AND EROSION CONTROL PLAN
PROPOSED SAND FILTER

DESIGNED BY DLF
DRAWN BY DLF
CHECKED BY LD

H-SCALE AS SHOWN
V-SCALE N/A

JOB NO. 2173.00
DATE ISSUED 07/08/22
SHEET NO. 3 OF 5

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DANE FRANK
COLORADO P.E. # 50207

A-1 CHIPSEAL
GRADING AND EROSION CONTROL PLAN
EROSION CONTROL PLAN
JULY 2022

LEGEND

EXISTING CONTOURS - MINOR	---	6132	---
EXISTING CONTOURS - MAJOR	---	6130	---
GRADE & DIRECTION		2.2%	
PROPOSED CONTOUR		62	
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WATER LINE	---	W	---
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FIRE HYDRANT			
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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	---		---
FLOODPLAIN BOUNDARY	---		---
PROPOSED DRAINAGE EASEMENT	---		---

NOTES

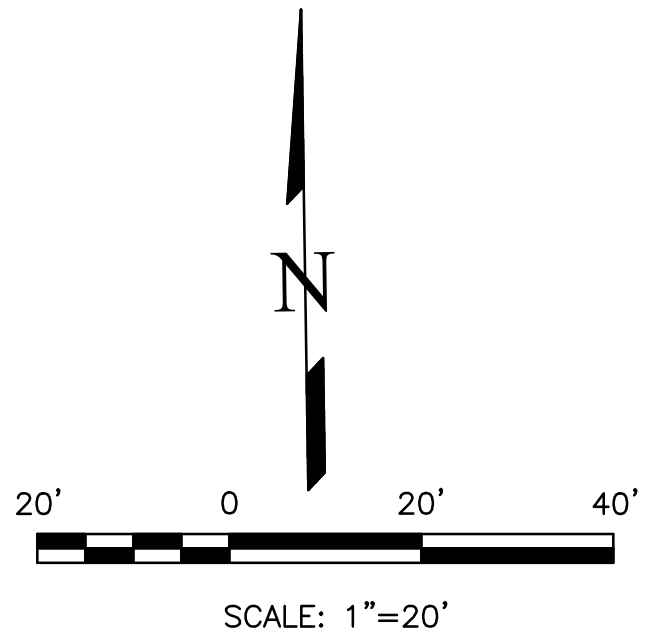
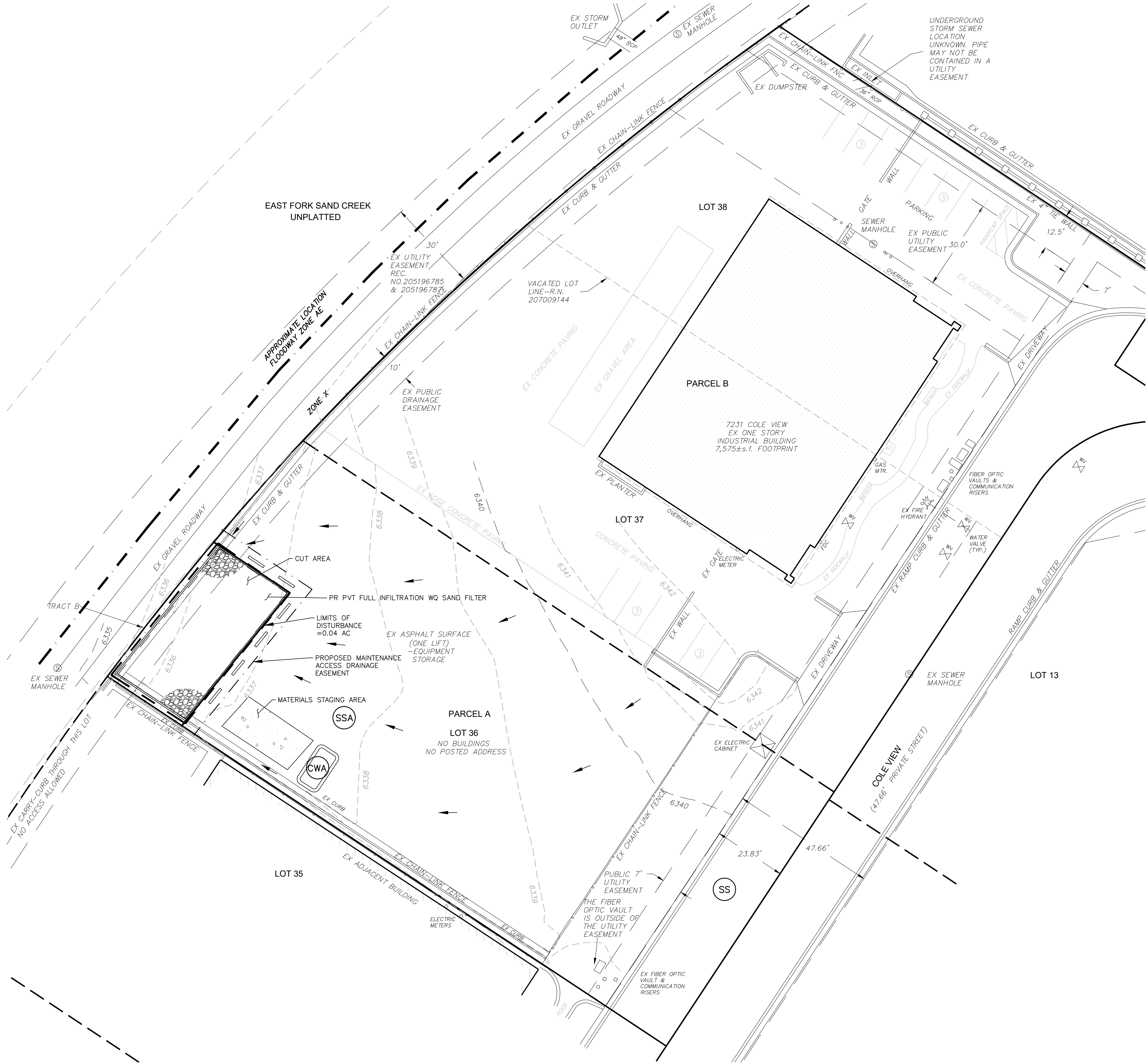
1. SEDIMENT CONTROL LOGS MAY BE SUBSTITUTED FOR SILT FENCE AND VICE VERSA.
2. SEED AND MULCH DISTURBED AREAS ONLY.
3. EXISTING SITE VEGETATION IS LANDSCAPING (PER AERIAL PHOTOS).
4. LOCATIONS OF WASTE CONTAINER, PORTABLE TOILETS, AND SWMP STORAGE ARE TBD.
5. THE ONLY PROPOSED DEVELOPMENT IS THE SAND FILTER. THE AREA AROUND THE SAND FILTER IS CURRENTLY PAVED OUT TO THE STREET.
6. AS THE ENTIRE WORK AREA IS ALREADY PAVED, NO VEHICLE TRACKING CONTROL IS PROPOSED. SOIL TRACKING SHALL BE CONTROLLED WITH SWEEPING.
7. NO SOIL STOCKPILE AREA IS PROPOSED AS THE PROPOSED WORK IS DIGGING A HOLE IN A PAVED AREA TO INSTALL A SAND FILTER. NO SOIL IS TO BE STOCKPILED ONSITE.
8. NO BATCH PLANTS WILL BE UTILIZED ONSITE.

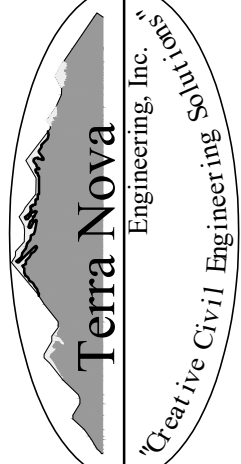
EROSION CONTROL COST OPINION:

1. 1 EA-CONCRETE WASHOUT @ \$932/EA	\$	932
2. 40% MAINTENANCE AND REPLACEMENT	\$	373
TOTAL	\$	1,305

EROSION CONTROL LEGEND

KEY	TITLE	SYMBOL	IMPLEMENTATION PHASE
SSA	STABILIZED STAGING AREA		INTERIM
CWA	CONCRETE WASHOUT AREA		INTERIM
SS	STREET SWEEPING & VACUUMING		INTERIM



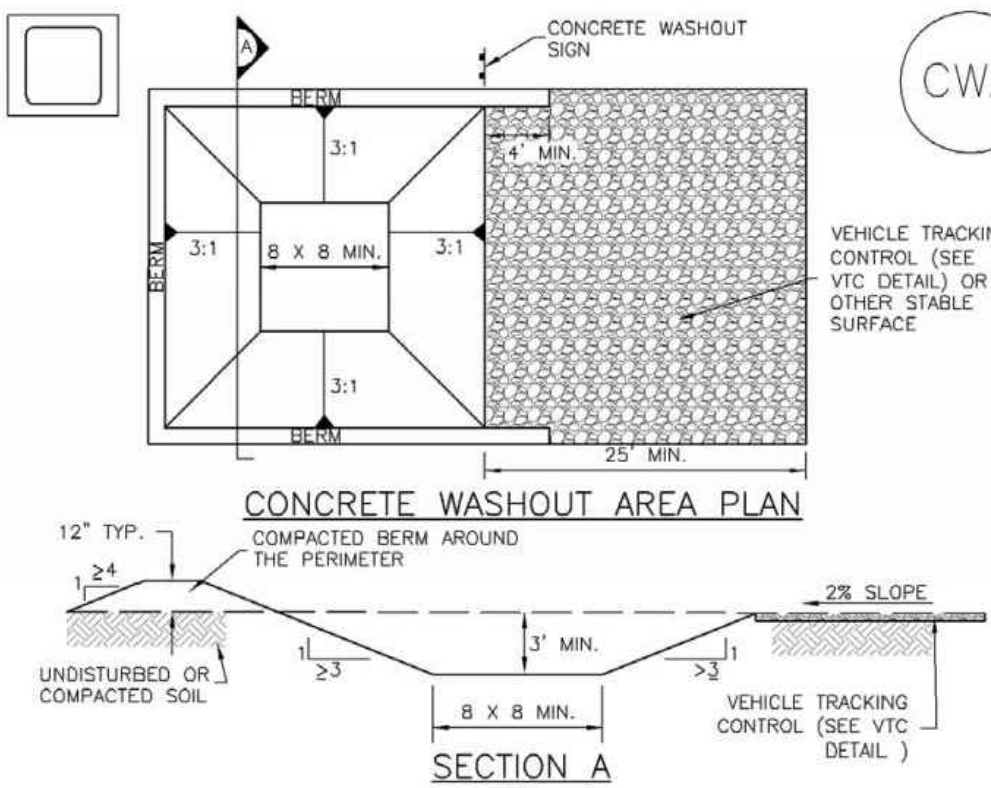
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UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, INC. APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.			
PREPARED FOR: A-1 CHIPSEAL ATTN: STEPHANIE WALLIS 2505 E 74TH AVE DENVER, CO 80229 720.540.8264			
 Terra Nova Engineering, Inc. Creative Civil Engineers 721 S. 23RD STREET COLORADO SPRINGS, CO 80904 OFFICE: 719-635-6422 FAX: 719-635-6426 www.tnecinc.com			
A-1 CHIPSEAL		GRADING AND EROSION CONTROL PLAN EROSION CONTROL PLAN	
DESIGNED BY DLF			
DRAWN BY DLF			
CHECKED BY LD			
H-SCALE AS SHOWN			
V-SCALE N/A			
JOB NO. 2173.00			
DATE ISSUED 07/08/22			
SHEET NO. 4 OF 5			

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FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

DANE FRANK
COLORADO P.E. # 50207

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)

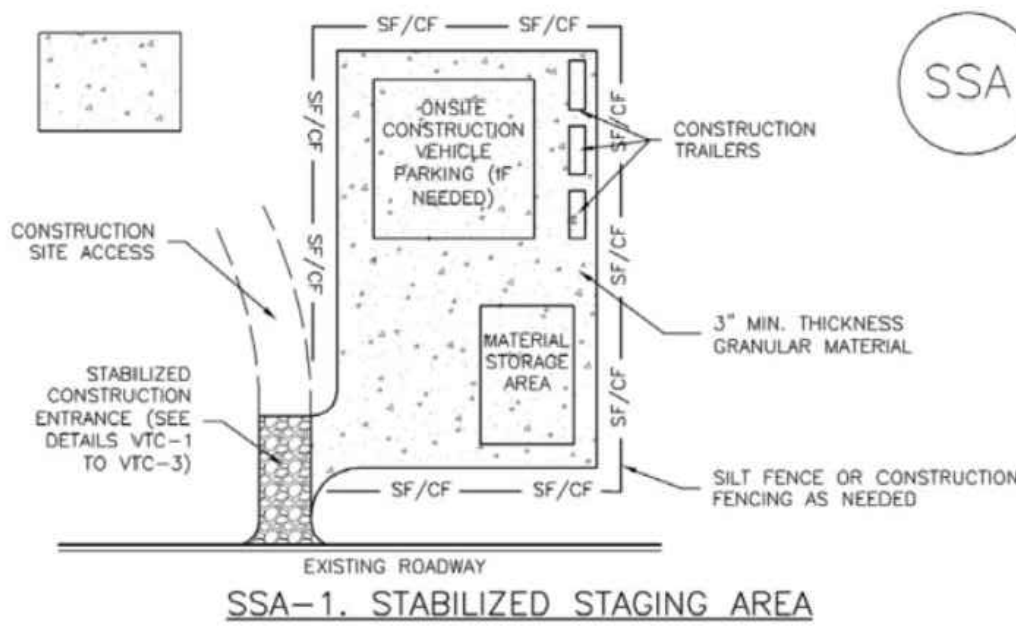
CWA MAINTENANCE NOTES

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.

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Stabilized Staging Area (SSA)

SM-6



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

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

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SM-6

Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
 6. 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, SEEDED 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)

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Street Sweeping and Vacuuming (SS)

SM-7

Description

Street sweeping and vacuuming remove sediment that has been tracked onto roadways to reduce sediment transport into storm drain systems or a surface waterway.

Appropriate Uses

Use this practice at construction sites where vehicles may track sediment offsite onto paved roadways.

Design and Installation

Street sweeping or vacuuming should be conducted when there is noticeable sediment accumulation on roadways adjacent to the construction site. Typically, this will be concentrated at the entrance/exit to the construction site. Well-maintained stabilized construction entrances, vehicle tracking controls and tire wash facilities can help reduce the necessary frequency of street sweeping and vacuuming.

On smaller construction sites, street sweeping can be conducted manually using a shovel and broom. Never wash accumulated sediment on roadways into storm drains.

Maintenance and Removal

- Inspect paved roads around the perimeter of the construction site on a daily basis and more frequently, as needed. Remove accumulated sediment, as needed.
- Following street sweeping, check inlet protection that may have been displaced during street sweeping.
- Inspect area to be swept for materials that may be hazardous prior to beginning sweeping operations.

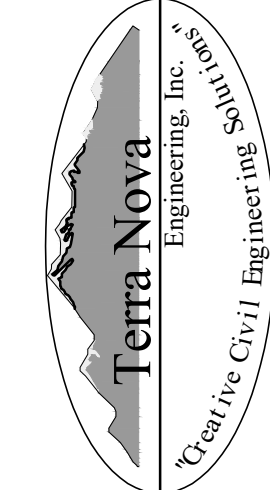


Photograph SS-1. A street sweeper removes sediment and potential pollutants along the curb line at a construction site. Photo courtesy of Tom Gore.

Street Sweeping/ Vacuuming	
Functions	
Erosion Control	No
Sediment Control	Yes
Site/Material Management	Yes

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A-1 CHIPSEAL

GRADING AND EROSION CONTROL PLAN
EROSION CONTROL DETAILS

DESIGNED BY DLF
DRAWN BY DLF
CHECKED BY LD
H-SCALE AS SHOWN
V-SCALE N/A
JOB NO. 2173.00
DATE ISSUED 07/08/22
SHEET NO. 5 OF 5