STORM WATER MANAGEMENT PLAN
FOR
FALCON BIG R STORE EXPANSION
EL PASO COUNTY, COLORADO

December 2021

County ESQCP #:

OWNER/CONTRACTOR:

STORE MASTER FUNDING VIII LLC
100 Big R Street
Pueblo, CO 81001

PREPARED BY:

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

QUALIFIED STORMWATER MANAGER/ CSWMP ADMINISTRATOR:

STORE MASTER FUNDING VIII LLC
100 Big R Street
Pueblo, CO 81001

Job No. 2170.00

PCD Project Number: PPR-21-076

CSWMP 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 FALCON BIG R STORE EXPANSION

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APPENDIX

STORM WATER MANAGEMENT PLAN
FOR
FALCON BIG R STORE EXPANSION

SITE DESCRIPTION & EXISTING CONDITIONS

This Storm Water Management Plan for Falcon Big R Store Expansion is an analysis of an approximately 33.35 acre site which is designated for the installation of 1 10,000 SF retail building addition along with associated parking and drainage improvements. The area to be disturbed mostly consists of areas of asphalt, broken asphalt and a current drive access.

The site is located within section 33, Townships 12 South, Range 64 West of the 6th Principal Meridian currently within El Paso, Colorado. This site is located within the Haegler Ranch drainage basin. The site generally drains from the northwest towards the southeast, travelling by sheet flow towards the south and east property lines. Drainage will then continue along a series of channels and unnamed creeks until they join Black Squirrel Creek. An unnamed creek divides the site in half.

The soils on this site are noted as about 99% Columbine gravelly sandy loam (19), and about 1% Stapleton sandy loam (83). The Columbine soils are in hydrologic soil group A and the Stapleton soils are in hydrologic soil group B. Therefore, the site has mostly low runoff potential. The study area consists of undeveloped land that has natural vegetative cover of about 60% and developed land which is covered by asphalt pavement and buildings based on a site visit. The existing topographic slopes for the soils on site mostly range from 0% to 3%.

include method for determining % ground cover.

CONSTRUCTION ACTIVITY AND STORAGE

No known toxic materials have been treated, stored, disposed, spilled or leaked onto the construction site. Practices to minimize contact of construction materials, equipment and vehicles within 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 gravel staging areas as shown or noted on the plans. Potential pollutants such as adhesives, sediment, porta potty runoff, and oil

spills will also be dealt with as required. 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 all lines have been installed and site vegetation is at 70% established. There will be approximately 0.99 acres of disturbed soil area. Areas of cut and fill for this project are depicted on the plans. No non-stormwater discharges are anticipated at the site. Portions of this construction site are within a designated 100-year floodplain. These areas are shown on the plans.

I dont see any construction areas within the floodplain on the GEC

BEST MANAGEMENT PRACTICES AND OTHER CONTROLS

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.

Construction will begin in Spring of 2022 with completion of the work anticipated to be in Summer of 2022. The 70% established vegetation is estimated to be in Fall of 2022.

Before clearing and grubbing may begin the first level of BMP'S are to be installed. These measures include the Staging Area (SSA) with appropriate measures to protect downstream (i.e., silt fence).

include VTC, construction fencing, temporary sediment basin

The Second and Third level of BMP'S are to check all installed BMP's for conformance and adjust appropriately.

Fourth level of BMP'S shall be installed once the previous BMP'S and construction are completed. This level includes any disturbed areas and stockpiles which are not at final grade, but will remain dormant for longer than 30 days to be mulched within 21 days after interim grading. Any area that is going to remain in an interim state for more than 60 days shall also be seeded. All temporary soil erosion control measures and BMP'S shall be maintained until permanent soil erosion control measures are implemented and vegetation has been established to 70% on areas not to be covered with gravel. These temporary BMPS's are to be removed once the 70% of pre-disturbed levels of vegetation has been established.

discuss concrete washout area

following EPC approval

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
- Significant dust or particulate generating processes
- Onsite waste management practices (waste piles, liquid wastes, dumpsters)
- Non-industrial waste sources such as worker trash and portable toilets
- Vehicle/equipment fueling and maintenance

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. Additional 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 disposal bins should be checked weekly for leaks and overflowing capacity and should be emptied when they reach 75% of capacity.

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.
- Keep spill kits readily accessible.
- Check incoming vehicles for leaking oil and fluids.
- 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.

Toilets

- Portable toilets will be located a minimum of 10 feet from stormwater inlets and 50 feet from state waters They shall be adequately staked and cleaned on a weekly basis. They will be inspected daily for spills.

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 "Monitoring and Maintenance Inspection Record" checklist 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 a qualified stormwater manager (who is sufficiently qualified for the required duties per the ECM Appendix 1.5) using the operation and maintenance inspection record form in the appendix 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 be kept with the SWMP for a period of no less than three (3) years. The inspection logs shall be signed by the stormwater inspector. 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 established to 70% of pre-disturbed levels. Erosion control measures such as sedimentation control log must be removed after final stabilization following EPC approval.

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 LONGTERM STORMWATER MANAGEMENT

Permanent stabilization measures include seeding, and mulching. These temporary BMPS's are to be

removed once the 70% of pre-disturbed levels vegetation has been established following EPC approval.

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.

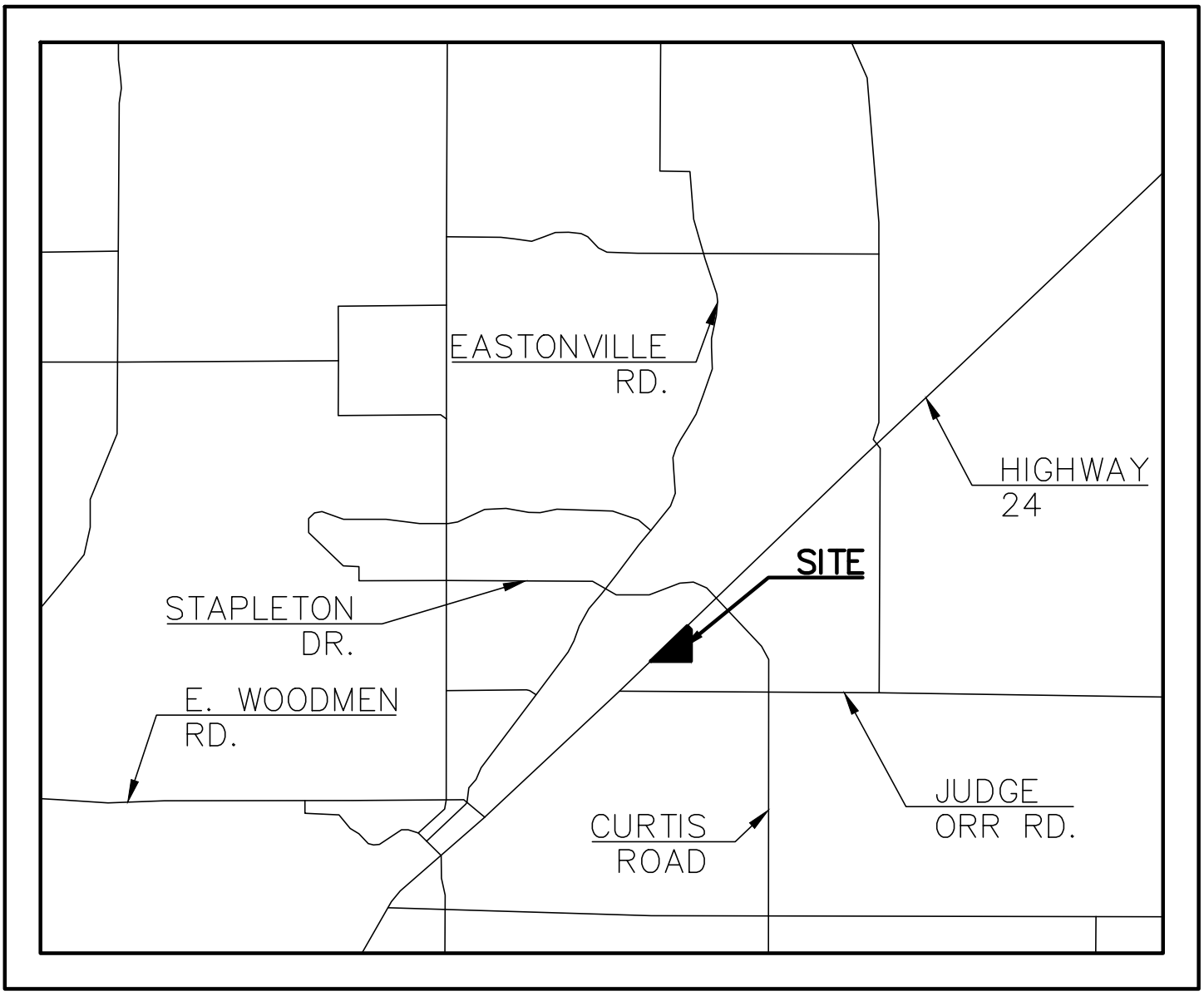
The requirement to show the location of any dedicated asphalt / concrete batch plants is no applicable as no batch plants are proposed.

PREPARED BY:

Terra Nova Engineering, Inc.
L Ducett, P.E.
Project Manager

APPENDIX

GENERAL LOCATION MAP



VICINITY MAP

N.T.S.

N

TEMPORARY EROSION CONTROL DETAILS
(See Sheets 6 & 7 of Grading & Erosion Control Plan)

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.

Construction will begin in Spring of 2022 with completion of the work anticipated to be in Summer of 2022. The 70% established vegetation is estimated to be in Fall of 2022.

Before clearing and grubbing may begin the first level of BMP'S are to be installed. These measures include the Staging Area (SSA) with appropriate measures to protect downstream (i.e., silt fence).

The Second & Third level of BMP'S are to check all installed BMP's for conformance and adjust appropriately.

Fourth level of BMP'S shall be installed once the previous BMP'S and construction are completed. This level includes any disturbed areas and stockpiles which are not at final grade, but will remain dormant for longer than 30 days to be mulched within 21 days after interim grading. Any area that is going to remain in an interim state for more than 60 days shall also be seeded. All temporary soil erosion control measures and BMP'S shall be maintained until permanent soil erosion control measures are implemented and vegetation has been established to 70% on areas not to be covered with gravel. These temporary BMPS's are to be removed once the 70% vegetation or permanent landscaping has been established.

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.

EROSION CONTROL PLAN

(see back pocket)

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			

	YES	NO
Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)	☐	☐

INSPECTION FREQUENCY	
Check the box that describes the minimum inspection frequency utilized when conducting each inspection	
At least one inspection every 7 calendar days	☐
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	☐
• This is this a post-storm event inspection. Event Date: _____	☐
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	☐
• Post-storm inspections at temporarily idle sites	☐
• Inspections at completed sites/area	☐
• Winter conditions exclusion	☐

	YES	NO
Have there been any deviations from the minimum inspection schedule? If yes, describe below.	☐	☐

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	☐	☐	
All disturbed areas	☐	☐	
Designated haul routes	☐	☐	
Material and waste storage areas exposed to precipitation	☐	☐	
Locations where stormwater has the potential to discharge offsite	☐	☐	
Locations where vehicles exit the site	☐	☐	
Other: _____	☐	☐	

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	
	☐	☐	If "YES" document below

Date Observed	Location	Control Measure	Maintenance Required	Date Completed

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.

	NO	YES	
Are there inadequate control measures requiring corrective action?	☐	☐	If "YES" document below

	NO	YES	
Are there additional control measures needed that were not in place at the time of inspection?	☐	☐	If "YES" document below

Date Discovered	Location	Description of Inadequate Control Measure	Description of Corrective Action	Was deficiency corrected when discovered? YES/NO if "NO" provide reason and schedule to correct	Date Corrected

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)

This category would primarily result from the discharge of pollutants in violation of the permit

b. Numeric Effluent Limit Violations

- o Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.b of the Permit)
- o Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.c of the Permit)
- o Daily maximum violations (See Part II.L.6.d of the Permit)

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.

Has there been an incident of noncompliance requiring 24-hour notification?	NO	YES	
	☐	☐	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.

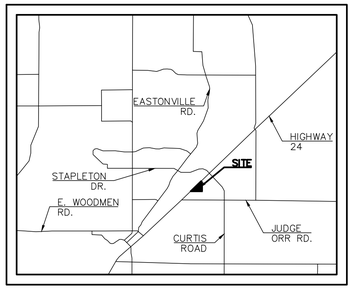
After adequate corrective action(s) and maintenance have been taken, or where a report does not identify any incidents requiring corrective action or maintenance, the individual(s) designated as the Qualified Stormwater Manager, shall sign and certify the below statement:

"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

FALCON BIG R STORE EXPANSION
EL PASO COUNTY
GRADING & EROSION CONTROL PLAN
DECEMBER 2021



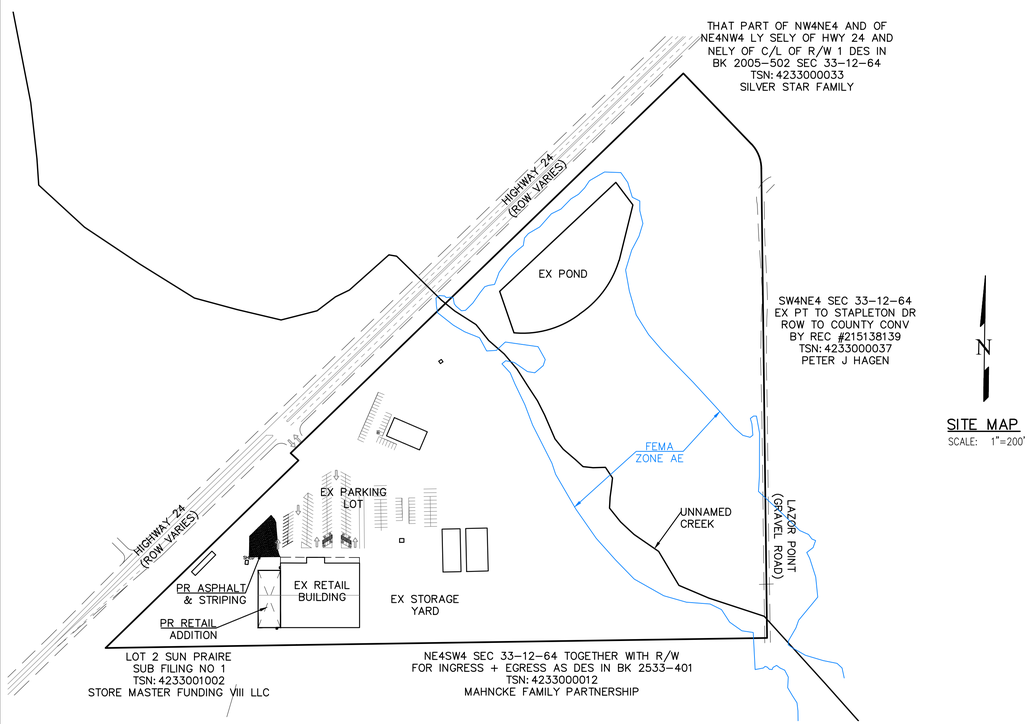
VICINITY MAP
N.T.S.

COLORADO 811
KNOW WHAT'S BELOW. CALL BEFORE YOU DIG.

EROSION CONTROL COST OPINION

1.	1 EA.–CONCRETE WASHOUT AREA $760.00/EA	$ 760
2.	0.40 AC–SEEDING & MULCH @ $785.00/AC	$ 314
3.	1 EA.–FUEL SPILL KIT @ $200.00/EA	$ 200
4.	1 EA.–VEHICLE TRACKING CONTROL @ $1325.00/EA	$ 1,325
5.	40% MAINTENANCE AND REPLACEMENT	$ 2,599
	TOTAL	$ 5,198

SHEET INDEX



SITE MAP
SCALE: 1"=200'

OWNER: STORE MASTER FUNDING VIII LLC
100 BIG R STREET
PUEBLO, CO 81001

CONTRACTOR: T–BONE CONSTRUCTION
1310 FORD STREET
COLORADO SPRINGS, CO 80915
(719) 570–1456

PREPARER: TERRA NOVA ENGINEERING, INC.
721 S. 23RD ST.
COLORADO SPRINGS, CO 80904
(719) 635–6422 OFFICE
(719) 499–2255 MOBILE

PROJECT DATA:

ADDRESS: 14155 E HIGHWAY 24
COLORADO SPRINGS, CO 80831

TSN: 42330–00–021

SITE AREA: 35.33 ACRES

EXISTING & PROPOSED ZONING: CS

EXISTING & PROPOSED USE: MERCHANDISING

AS DETERMINED BY THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL #'S 08041C0554G & 08041C0558G, EFFECTIVE DATE DECEMBER 7, 2018, PORTIONS OF THIS SITE ARE WITHIN A DESIGNATED F.E.M.A. FLOODPLAIN. THOSE AREAS ARE SHOWN ON THE PLANS.

THE SCHEDULE FOR CONSTRUCTION OF THE PROPOSED BUILDING WILL PROCEED IMMEDIATELY AFTER ALL GOVERNMENTAL APPROVALS ARE OBTAINED.

CONTOURS FOR THIS DOCUMENT ARE 1.0' INTERVALS.

SITE IS WITHIN THE HAEGLER RANCH DRAINAGE BASIN

LEGAL DESCRIPTION

PART OF SE4NW4 & PART OF SW4NW4 LY SELY OF HWY 24 & PART OF NE4NW4 LY SELY OF US HWY 24 & SWLY OF C/L OF R/W NO 1 DESC IN BK 2055–502, COUNTY OF EL PASO, STATE OF COLORADO DESCRIPTION

AREA

TOTAL AREA TO BE CLEARED, EXCAVATED, GRADED OR DISTURBED IS 0.99 ACRES.

VOLUME

EARTHWORK VOLUMES: TBD

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.

L DUCETT, P.E. #32339
FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

OWNER'S STATEMENT

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

OWNER NAME: _____ DATE: _____

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 DIRECTORS DISCRETION.

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

COUNTY ESQCP #:DOT2021–XX

REVISIONS

NO.	DESCRIPTION	DATE

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

PREPARED FOR:
T–BONE CONSTRUCTION
ATTN:
1310 FORD STREET
COLORADO SPRINGS, CO 80915
(719) 570–1456

Terra Nova Engineering, Inc.
Creative Civil Engineering Solutions
721 S. 23RD ST
COLORADO SPRINGS, CO 80904
OFFICE: 719–635–6422
FAX: 719–635–6426
www.tnesinc.com

FALCON BIG R STORE EXPANSION
14155 E HIGHWAY 24

GRADING & EROSION CONTROL PLAN
COVER SHEET

DESIGNED BY JF
DRAWN BY JF
CHECKED BY LD
H–SCALE AS NOTED
V–SCALE AS NOTED
JOB NO. 2170.00
DATE ISSUED 12/11/21
SHEET NO. 1 OF 7

N:\jobs\2170.00\Drawings\217000 GEC.dwg, 12/13/2021 3:35:52 PM, DWG To PDF.pc3

FALCON BIG R STORE EXPANSION
EL PASO COUNTY
GRADING & EROSION CONTROL PLAN
DECEMBER 2021

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 (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. DURING CONSTRUCTION THE SWMP IS THE RESPONSIBILITY OF THE DESIGNATED STORMWATER MANAGER, SHALL BE LOCATED ON SITE AT ALL TIMES 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 LOOSENED 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. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.

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
WQCD - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT

EL PASO COUNTY STANDARD CONSTRUCTION NOTES:

1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 & 2 AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).

3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
   A. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
   B. CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 & 2
   C. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
   D. CDOT M & S STANDARDS.

4. 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, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACE WILL BE ENTIERELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (PCD) INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.

7. IT IS THE CONTRACTORS RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.

8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.

9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.

10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.

11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.

12. SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.

13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY PUBLIC WORK DEPARTMENT AND MUTCD CRITERIA.

14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY PWD, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.

15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING OR CONSTRUCTION.

CONSTRUCTION SCHEDULE

BEGIN GRADING: SPRING 2022, END GRADING: FALL 2022

TRAFFIC CONTROL NOTE

THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL DEVICES AND MONITORING NECESSARY TO SAFELY COMPLETE THE WORK SHOWN IN THESE CONSTRUCTION DOCUMENTS IN CONFORMANCE WITH M.U.T.C.D. GUIDELINES. THE CONTRACTOR SHALL COMPLETE ALL NECESSARY WORK FOR PLAN REVIEW, PERMITS AND PROCESSING. TRAFFIC CONTROL WILL NOT BE PAID SEPARATELY BUT IS INCLUDED IN THE COST OF THE PROJECT.

UTILITY NOTES

1. UTILITY LINE LOCATIONS AND ELEVATIONS ARE APPROXIMATE AND ARE TO BE FIELD VERIFIED.
2. BURY DEPTH OF THE WATER MAIN ALONG ARROYA LANE TO BE CONFIRMED PRIOR TO STARTING ANY GRADING ABOVE THE WATER MAIN.

CONSTRUCTION NOTES:

1. ALL WORK SHALL COMPLY WITH THE CODES AND POLICIES FOR EL PASO COUNTY.

2. EXISTING TOPOGRAPHIC INFORMATION SHOWN ON THIS GRADING PLAN WAS OBTAINED FROM AERIAL CONTOURS. THE CONTRACTOR SHALL BE RESPONSIBLE TO EXAMINE THE SITE AND BE FAMILIAR WITH THE EXISTING CONDITIONS.

3. DEPTH OF MOISTURE-DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS:
BASE OF ALL CUTS AND FILLS - 12 INCHES, FULL DEPTH OF ALL EMBANKMENTS.

4. THE CONTRACTOR IS RESPONSIBLE FOR THE RE-ESTABLISHMENT OF ALL SURVEY MONUMENTS DISTURBED WITHIN THE PROJECT LIMITS.

5. THE CONTRACTOR SHALL PROTECT ALL WORK AREAS AND FACILITIES FROM FLOODING AT ALL TIMES. AREAS AND FACILITIES SUBJECTED TO FLOODING, REGARDLESS OF THE SOURCE OF WATER, SHALL BE PROMPTLY DEWATERED AND RESTORED.

6. PRIOR TO PAVING OPERATIONS, THE ENTIRE SUBGRADE SHALL BE PROOF-ROLLED WITH A LOADED 988 FRONT-END LOADER OR SIMILAR HEAVY RUBBER TIRED VEHICLE (GVW OF 50,000 POUNDS WITH 18 KIP PER AXLE AT TIRE PRESSURES OF 90 PSI) TO DETECT ANY SOFT OR LOOSE AREAS. IN AREAS WHERE SOFT OR LOOSE SOILS, PUMPING OR EXCESSIVE MOVEMENT IS OBSERVED, THE EXPOSED MATERIALS SHALL BE OVER-EXCAVATED TO A MINIMUM DEPTH OF TWO FEET BELOW PROPOSED FINAL GRADE OR TO A DEPTH AT WHICH SOILS ARE STABLE. AFTER THIS HAS BEEN COMPLETED, THE EXPOSED MATERIALS SHALL BE SCARIFIED TO A DEPTH OF 12 INCHES AND MOISTURE CONDITIONED. THE SUBGRADE SHALL THEN BE UNIFORMLY COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY (ASTMM D-698) AT 0 TO +4.0% OF OPTIMUM MOISTURE CONTENT FOR A-6 AND A-7-6 SOILS ENCOUNTERED. OTHER SUBGRADE TYPES SHALL BE UNIFORMLY COMPACTED TO A MINIMUM OF 95% OF MODIFIED PROCTOR DENSITY (ASTM D-1557) AT PLUS OR MINUS 2.0% OF OPTIMUM MOISTURE CONTENT. AREAS WHERE STABLE NATURAL SOILS ARE ENCOUNTERED AT PROPOSED SUBGRADE ELEVATION SHALL ALSO BE SCARIFIED (18 INCHES FOR A-7-6 SOILS BELOW FULL-DEPTH ASPHALT CONCRETE) AND COMPACTED AS OUTLINED ABOVE PRIOR TO PAVING OPERATIONS. SUBGRADE FILL SHALL BE PLACED IN SIX-INCH LIFTS AND UNIFORMLY COMPACTED, MEETING THE REQUIREMENTS AS PREVIOUSLY DESCRIBED.

7. SUBGRADE MATERIALS DEEMED UNSUITABLE BY THE ENGINEER SHALL BE EXCAVATED, DISPOSED OF AND REPLACED WITH APPROVED MATERIALS.

8. FILL SHALL BE PLACED IN 8-INCH MAXIMUM LOOSE LIFTS AND SHALL BE COMPACTED PRIOR TO SUCCESSIVE LIFTS.

9. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING AND CONTROLLING EROSION DURING CONSTRUCTION ACTIVITIES AT ALL TIMES DURING GRADING AND CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING EROSION AND SEDIMENT CONTROL MEASURES:
   - -SEDIMENT CONTROL LOGS WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.
   - -SILT FENCE WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.
   - -PERMANENT SEEDING AND MULCHING WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.
   - -CONCRETE WASH AREAS.
   - -VEHICLE TRACKING CONTROL.
   - -SOIL STOCKPILING AREA.
   - -MATERIALS STAGING AREA.

THESE AND ALL EROSION CONTROL BEST MANAGEMENT PRACTICES AS SHOWN IN THE GRADING AND EROSION CONTROL PLANS SHALL BE STRICTLY ADHERED TO.

10. FINISHED CONTOURS/ SPOT ELEVATIONS SHOWN HEREON REPRESENT FINISHED GRADES.

REVISIONS		
NO.	DESCRIPTION	DATE

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

PREPARED FOR:
T-BONE CONSTRUCTION
ATTN:
1310 FORD STREET
COLORADO SPRINGS, CO 80915
(719) 570-1456

Terra Nova Engineering, Inc.
Creative Civil Engineering Solutions
721 S. 23RD ST
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6426
www.tnesinc.com

FALCON BIG R STORE EXPANSION
14155 E HIGHWAY 24

GRADING & EROSION CONTROL PLAN
GRADING NOTES SHEET

DESIGNED BY	JF
DRAWN BY	JF
CHECKED BY	LD
H-SCALE	
V-SCALE	
JOB NO.	2170.00
DATE ISSUED	12/11/21
SHEET NO.	2 OF 7

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N45°48'17"E 752.37'

25' BUILDING SETBACK

EX DOUBLE FENCE

EX SHED DISPLAYS

NEW ASPHALT PAVEMENT

EX BROKEN ASPHALT

EX PUMP HOUSE & U/G STORAGE TANKS

DIRT/GRASS

LIMITS OF DISTURBANCE =0.99 AC

(80.19 EG)

EX LIGHT POLE (TYP)

NEW STRIPING (TYP)

82.00 FG

(79.57 EG)

(80.37 EG)

(80.97 EG)

80.00 FG

79.25 FL

79.50 FG

ASPHALT

(79.99 EG)

(80.47 EG)

EX 3' X 3.5' INLET
12" CMP TO BE REMOVED

(80.26 EG)

(80.33 EG)

(80.41 EG)
EX 11" PVC ROOF DRAIN

COVERED CONCRETE

COVERED CONCRETE

78.95 FL

80.84 TW
80.44 FG
80.44 BW

EX 12"x12" ROOF DRAIN INLET
12" CMP TO BE REMOVED

79.25 FG

EX RETAIL BUILDING
43,000 SF

78.54 FL

79.90 FG

PR RETAIL BUILDING ADDITION
10,000 SF

FF=6880.44

78.09 FL

79.90 FG

DOOR@ 6880.4

EX FNDTN 0.15 INSET FROM WEST WALL

79.38 FG
MATCH EX

77.68 FL

76.99 FL

75.54 FL

SEE PAGE 4

LEACH FIELD

(75.89 EG)

PROPANE

LOADING DOCK & RAMP

EX CHAIN LINK FENCE

EX FHYD

NEW STRIPING FOR 8 ADA SPACES

S89°05'59"W 534.32'

S89°08'32"W 1314.97'

LOT 2 SUN PRAIRE
SUB FILING NO 1
TSN: 4233001002
STORE MASTER FUNDING VIII LLC

6x6-W1.4xW1.4 WIRE MESH PLACED AS SHOWN

FLOW LINE

SLOPE 1/2" PER FOOT

1/2" R. TYP.

2" CLEAR MIN., TYP.

6", MIN.

7", MAX.

3-1/2"

4' WIDTH

4' CONCRETE PAN

N

0 10' 20' 40'

SCALE: 1"= 20'

LEGEND

- PROPOSED ASPHALT
- EXISTING CONCRETE
- EXISTING PROPERTY LINE
- EXISTING PAVEMENT EDGE
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED CONTOUR
- PROPOSED FLOW
- EXISTING SETBACK
- EXISTING IRON FENCE
- EXISTING BARB WIRE FENCE
- EXISTING CHAIN LINK FENCE
- EXISTING ELECTRIC UTILITY
- PROPOSED CONCRETE PAN

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

L DUCETT, P.E.
COLORADO P.E. NO. 32339

REVISIONS

NO.	DESCRIPTION	DATE

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FALCON BIG R STORE EXPANSION
14155 E HIGHWAY 24

GRADING & EROSION CONTROL PLAN
DETAILED GRADING PLAN

DESIGNED BY	JF
DRAWN BY	JF
CHECKED BY	LD
H-SCALE	AS NOTED
V-SCALE	N/A
JOB NO.	2170.00
DATE ISSUED	12/11/21
SHEET NO.	3 OF 7

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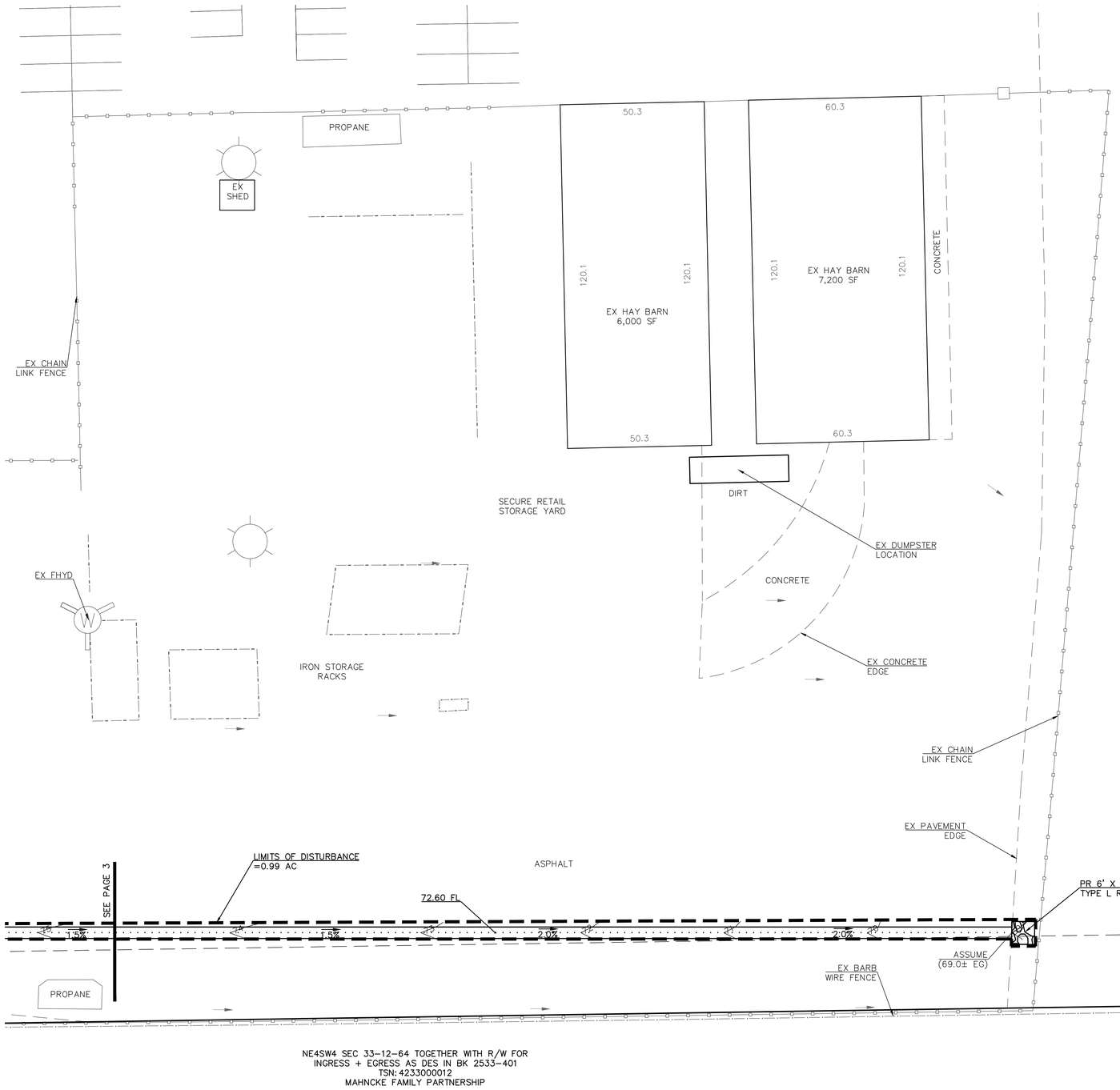
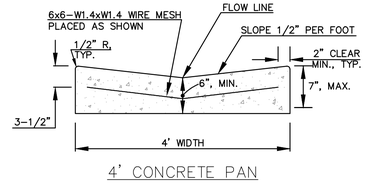
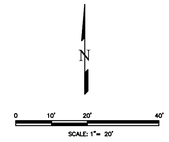


NE4SW4 SEC 33-12-64 TOGETHER WITH R/W FOR
INGRESS + EGRESS AS DES IN BK 2533-401
TSN: 4233000012
MAHNCKE FAMILY PARTNERSHIP



4' CONCRETE PAN



LEGEND

- PROPOSED ASPHALT
- EXISTING CONCRETE
- EXISTING PROPERTY LINE
- EXISTING PAVEMENT EDGE
- 6259 EXISTING MINOR CONTOUR
- 6260 EXISTING MAJOR CONTOUR
- 60 PROPOSED CONTOUR
- PROPOSED FLOW
- EXISTING SETBACK
- EXISTING IRON FENCE
- EXISTING BARB WIRE FENCE
- EXISTING CHAIN LINK FENCE
- EXISTING ELECTRIC UTILITY
- PROPOSED CONCRETE PAN

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

L DUCETT, P.E.
COLORADO P.E. NO. 32339

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FALCON BIG R STORE EXPANSION
14155 E HIGHWAY 24

GRADING & EROSION CONTROL PLAN
DETAILED GRADING PLAN

DESIGNED BY	JF
DRAWN BY	JF
CHECKED BY	LD
H-SCALE	AS NOTED
V-SCALE	N/A
JOB NO.	2170.00
DATE ISSUED	12/11/21
SHEET NO.	4 OF 7

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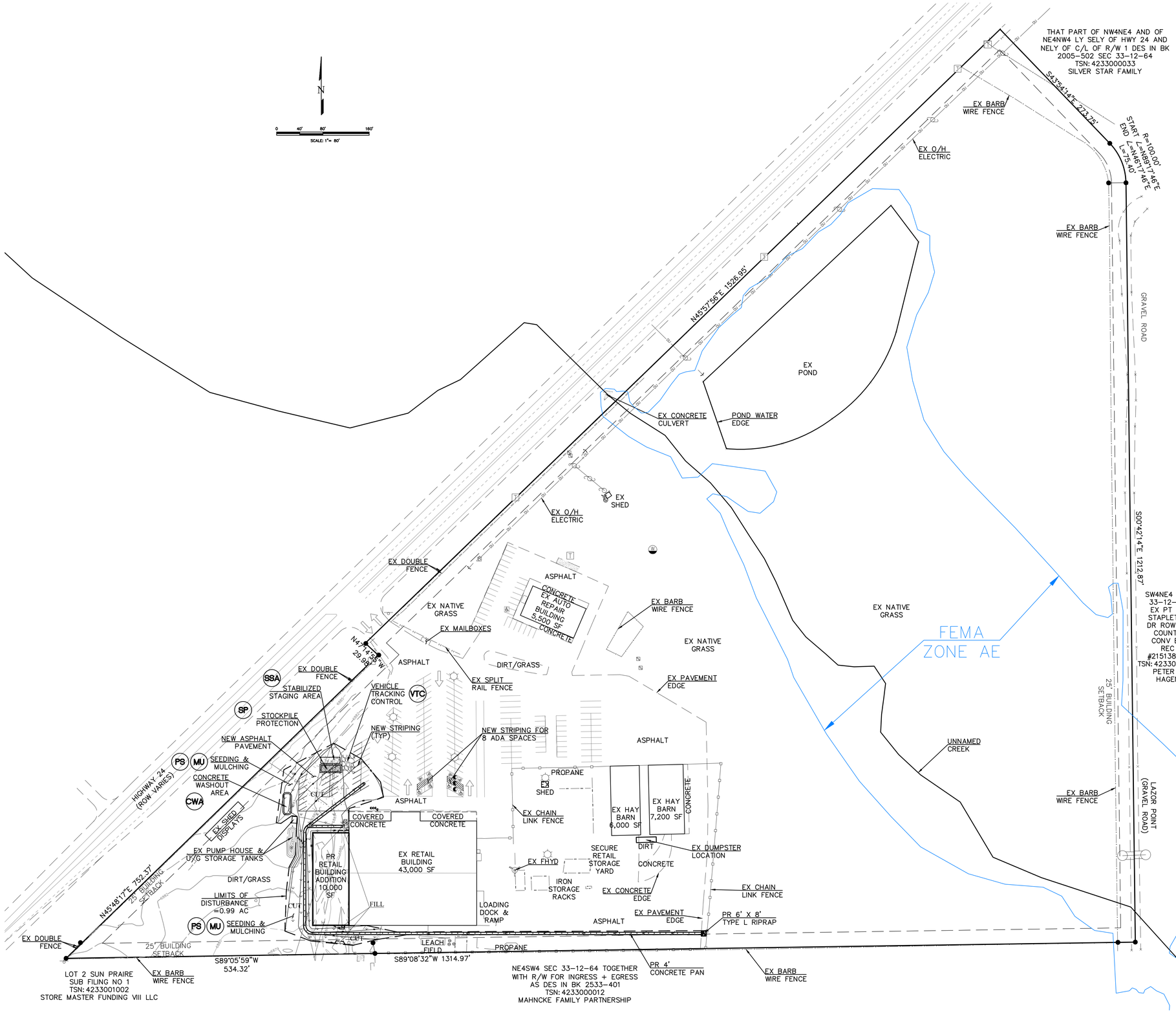

LEGEND

- PROPOSED ASPHALT
- EXISTING CONCRETE
- EXISTING PROPERTY LINE
- EXISTING PAVEMENT EDGE
- 6259 EXISTING MINOR CONTOUR
- 6260 EXISTING MAJOR CONTOUR
- 60 PROPOSED CONTOUR
- PROPOSED FLOW
- EXISTING SETBACK
- EXISTING IRON FENCE
- EXISTING BARB WIRE FENCE
- EXISTING CHAIN LINK FENCE
- EXISTING ELECTRIC UTILITY
- PROPOSED CONCRETE PAN

EROSION CONTROL NOTES

1. SEDIMENT CONTROL LOGS MAY BE SUBSTITUTED FOR SILT FENCE AND VICE VERSA.
2. DRILL SEEDING AND MECHANICALLY CRIMPING MULCH ARE THE PREFERRED INSTALLATION METHODS. USE OTHER METHODS CALLED OUT AS NEEDED ON STEEPER SLOPES AND LIMITED ACCESS AREAS.
3. SEED AND MULCH ALL DISTURBED AREAS NOT BEING PAVED OR BUILT UPON.

EROSION CONTROL LEGEND

	KEY	TITLE	SYMBOL
INITIAL & INTERIM	SF	SILT FENCE	SF
INTERIM	SSA	STABILIZED STAGING AREA	
INTERIM	VTC	VEHICLE TRACKING CONTROL	
INTERIM	SP	STOCKPILE PROTECTION	
INTERIM	CWA	CONCRETE WASHOUT AREA	
FINAL	PS MU	PERMANENT SEEDING AND MULCHING PS – DRILL SEED, HAND SEED, OR HYDROSEED; SEED MIX PER COLORADO SPRINGS DRAINAGE CRITERIA MANUAL (MAY 2014) VOL 1, TABLE 14-12 MU – MECHANICALLY CRIMP MULCH OR HYDROMULCH	

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GRADING & EROSION CONTROL PLAN
SITE PLAN

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JOB NO.	2170.00
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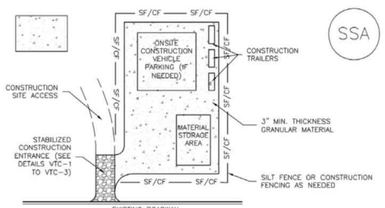
Stabilized Staging Area (SSA) SM-6



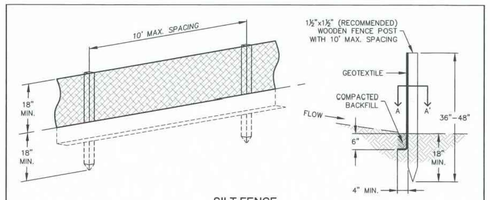
SSA–1, STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

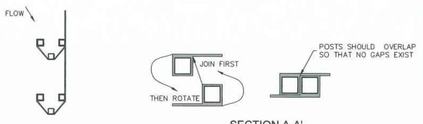
1. SEE PLAN VIEW FOR
   –LOCATION OF STAGING AREA(S).
   –CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
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.



SILT FENCE



J-HOOK INSTALLATION

SECTION A-A'

INSTALLATION NOTES

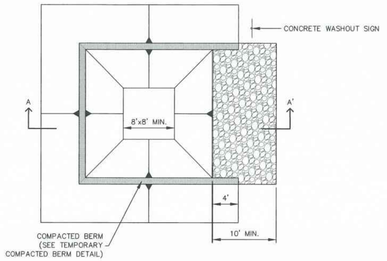
1. SILT FENCE MUST BE PLACED ON A FLAT SURFACE 2'–5' AWAY FROM TOE OF THE SLOPE TO ALLOW FOR PONDING AND DEPOSITION.
2. COMPACT THE TRENCH USING A JUMPING JACK OR WHEEL ROLLING TO THE POINT THAT THE FENCE RESISTS BEING PULLED OUT OF THE GROUND BY HAND.
3. SILT FENCE SHALL BE TAUT WITH NO SAGS AFTER IT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

MAINTENANCE NOTES

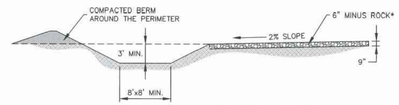
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE DESIGN HEIGHT OF THE SILT FENCE.
3. SILT FENCE MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA AFTER SILT FENCE IS REMOVED.

SF

STORMWATER ENTERPRISE	SILT FENCE		
APPROVED: CMENT MANAGER			
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900–SF	



CONCRETE WASHOUT AREA PLAN

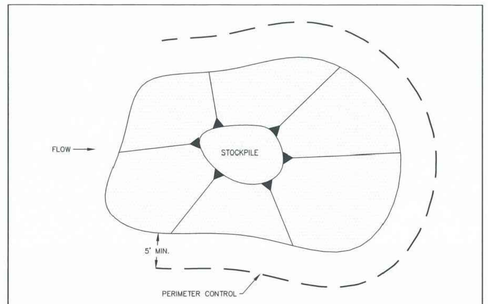


SECTION A-A'

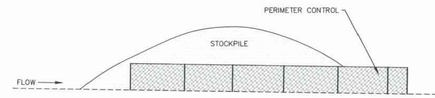
*ROCK REQUIRED BASED ON SITE CONDITIONS AT THE DISCRETION OF THE GEC INSPECTOR

CWA

STORMWATER ENTERPRISE	CONCRETE WASHOUT AREA		
APPROVED: CMENT MANAGER			
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900–CWA–1	



STOCKPILE PROTECTION PLAN



STOCKPILE PROTECTION ELEVATION

INSTALLATION NOTES

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

MAINTENANCE NOTES

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

SP

STORMWATER ENTERPRISE	STOCKPILE PROTECTION		
APPROVED: CMENT MANAGER			
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900–SP	

SM-6 Stabilized Staging Area (SSA)

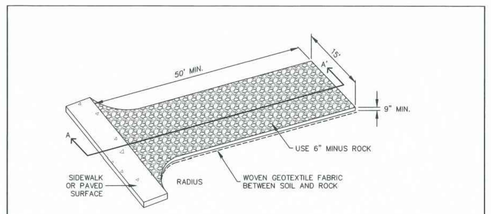
STABILIZED STAGING AREA MAINTENANCE NOTES

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.

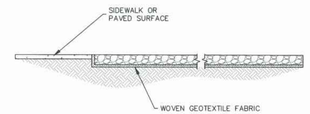
NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE–ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

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)



AGGREGATE VEHICLE TRACKING CONTROL



SECTION A-A'

INSTALLATION NOTES

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

MAINTENANCE NOTES

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

VTC

STORMWATER ENTERPRISE	VEHICLE TRACKING CONTROL		
APPROVED: CMENT MANAGER			
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900–VTC	

INSTALLATION NOTES

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

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. THE CONCRETE WASH AREA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN THE PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF ⅔ THE HEIGHT OF THE CONCRETE WASH AREA.
3. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE, AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER–TIGHT CONTAINER AND DISPOSED OF PROPERLY.
4. THE CONCRETE WASH AREA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
5. PERMANENTLY STABILIZE AREA AFTER CONCRETE WASH AREA IS REMOVED.

CWA

STORMWATER ENTERPRISE	CONCRETE WASHOUT AREA		
APPROVED: CMENT MANAGER			
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900–CWA–2	

NO.	REVISIONS DESCRIPTION	DATE

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FALCON BIG R STORE EXPANSION
14155 E HIGHWAY 24

GRADING & EROSION CONTROL PLAN
EROSION CONTROL DETAILS

DESIGNED BY JF
DRAWN BY JF
CHECKED BY LD

H–SCALE AS NOTED
V–SCALE N/A

JOB NO. 2170.00
DATE ISSUED 12/11/21
SHEET NO. 6 OF 7

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Table 5-1. El Paso County Conservation District All-Purpose Mix for Upland, Transition and Permanent Control Measure Areas

Common Name	Scientific Name	Growth Season / Form	% of Mix	Pounds PLS		
				• Irrigated broadcast • Irrigated hydroseeded 80 seeds/sq ft	• Non-irrigated broadcast • Non-irrigated hydroseeded • Irrigated drilled 40 seeds/sq ft	• Non-irrigated drilled 20 seeds/sq ft
Bluestem, big	*Andropogon gerardii*	Warm, sod	20	4.4	2.2	1.1
Grama, blue	*Bouteloua gracilis*	Warm, bunch	10	0.5	0.25	0.13
Green needlegrass[2]	*Nassella viridula*	Cool, bunch	10	2	1	0.5
Wheatgrass, western[2]	*Pascopyrum smithii*	Cool, sod	20	6.4	3.2	1.6
Grama, sideoats	*Bouteloua curtipendula*	Warm, bunch	10	2	1	0.5
Switchgrass[2]	*Panicum virgatum*	Warm, bunch/sod	10	0.8	0.4	0.2
Prairie sandreed	*Calimovilfa longifolia*	Warm, sod	10	1.2	0.6	0.3
Yellow indiangrass[2]	*Sorghastrum nutans*	Warm, sod	10	2	1	0.5
Seed rate (lbs PLS/acre)				19.3	9.7	4.8

[1]For portions of facilities located near or on the bottom or where wet soil conditions occur. Planting of potted nursery stock wetland plants 2-foot on-center is recommended for sites with wetland hydrology.

[2]Species that will do well in the bottom of pond areas.

1.0 APPLICABILITY

When areas disturbed by construction activities require temporary or permanent revegetation that is not included in a Landscaping Plan, the requirements below must be followed by the Permittee.

2.0 STABILIZATION REQUIREMENTS AND GUIDELINES

2.1 Site Preparation

The following requirements apply to site preparation for revegetation:

- In areas to be seeded, the upper 6 inches of the topsoil must be in a friable condition and not heavily compacted.
- Areas to be planted shall have at least 4 inches of topsoil suitable to support plant growth. Native topsoil, when applicable, must be stripped and saved for this purpose.

If, after one year following seed application, revegetation has not established in accordance with the performance standards included in this manual, the following will be required:

- Soil testing must be performed prior to subsequent seeding efforts. Soil testing is not required on every lot for Associate GEC Permits.
- Soil amendments or fertilizer must be added to correct topsoil deficiencies (e.g., nutrients, pH, organic matter, salinity) based on the soil testing results.
    - If fertilizer is used, slow-release type fertilizers must be used to encourage target vegetation and protect water quality.
    - Soil amendments and/or fertilizer must be worked into soil during seedbed preparation if necessary.

All soil testing, soil amendment and fertilizer documentation, and seed load and bag tickets must be added to the CSWMP.

The following guideline also applies to site preparation for revegetation:

- The City recommends that existing and/or imported topsoil be tested to identify soil deficiencies and any soil amendments necessary to address these deficiencies. Soil amendments and/or fertilizers should be added to correct topsoil deficiencies based on the soil testing results.

As with any construction activity, appropriate equipment must be used to achieve the desired result. The only appropriate method of incorporating large quantities of organic matter thoroughly is by rototilling with heavy equipment that is capable of a 6- to 8-inch cultivating and mixing depth. Discing and harrowing have been found to be inadequate and should not be used.

2.1.11 Grading and Compaction

In areas to be seeded, the upper 6 inches of the soil must not be heavily compacted and should be in a friable condition. Less than an 85% standard proctor density is acceptable. Areas of compaction or general construction activity must be scarified to a depth of 6 to 12 inches prior to spreading topsoil to break up compacted layers and provide a blending zone between different soil layers.

2.2 Seeding

Seed mixtures should be sown at the proper time of year for the mixture. The following requirements and recommendations apply:

- For irrigated native seed projects, seeding should occur between May 1 and August 1. Seeding after August 1 may not allow warm season grasses to grow large enough to survive the winter and may result in poor coverage.
- For non-irrigated projects, seeding should occur between November 15 and April 15.
- Seed should be drill-seeded whenever possible.
    - Seed depth must be 1/3 to 1/2 inches when drill-seeding is used.
    - Cross drilling (double drilling) should be used whenever possible. The seed should be divided between the two operations, drilling the second seed application perpendicular to the first.
    - Drill seeding must be completed with a drill seeding machine equipped with seed boxes designed to plant warm and cool season native grass seed.
- Broadcast seeding or hydro-seeding with tackifier may be substituted on slopes steeper than 3:1 or on other areas not practical to drill seed at the discretion of the GEC Inspector.
    - Seeding rates must match the amounts as shown in Section 4.0 for broadcast seeding or hydro-seeding.
    - Broadcast seed must be lightly hand-raked into the soil.
- Seeded areas shall be mulched, and the mulch must be adequately secured.

2.3 Mulching

Mulching should be completed as soon as practicable after seeding, however planted areas must be mulched no later than 14 days after planting. Mulching requirements include:

- Hay or straw mulch
    - Only certified weed-free and certified seed-free mulch may be used. Mulch must be applied at 2 tons/acre and adequately secured by crimping and/or tackifier.
    - Crimping must not be used on slopes greater than 3:1 and mulch fibers must be tucked into the soil to a depth of 3 to 4 inches.
    - Tackifier must be used in place of crimping on slopes steeper than 3:1.
- Hydraulic mulching
    - Hydraulic mulching is an option on steep slopes or where access is limited.
    - If hydro-seeding is used, mulching must be applied as a separate, second operation.
    - Wood cellulose fibers mixed with water must be applied at a rate of 2,000 to 2,500 pounds/acre, and tackifier must be applied at a rate of 100 pounds/acre.
- Erosion control blanket
    - Erosion control blanket may be used in place of traditional mulching methods.

2.4 Temporary Irrigation

Due to the semi-arid climate and drying winds in Colorado Springs, evapotranspiration exceeds natural precipitation. Temporary irrigation is highly recommended for quickly establishing vegetative cover. Temporary irrigation is required on sites where revegetation efforts have failed (70% of the pre-disturbance vegetative density was not achieved) 12 months after initial seeding.

2.4.1 Site Evaluation

The evaluation and use of irrigation must be coordinated with City Planning if a Landscaping Plan is required.

2.4.2 Method of Irrigation

When needed, temporary irrigation is typically delivered by temporary surface pipes or in-ground pipes.

Table 5-2. El Paso County All-Purpose Low Grow Mix for Upland and Transition Areas

Common Name	Scientific Name	Growth Season / Form	% of Mix	Pounds PLS		
				• Irrigated broadcast 80 seeds/sq ft	• Non-irrigated broadcast • Non-irrigated hydroseeded • Irrigated drilled 40 seeds/sq ft	• Non-irrigated drilled 20 seeds/sq ft
Buffalograss	*Buchloe dactyloides*	Warm, sod	25	9.6	4.8	2.4
Grama, blue	*Bouteloua gracilis*	Warm, bunch	20	10.8	5.4	2.7
Grama, sideoats	*Bouteloua curtipendula*	Warm, bunch	29	5.6	2.8	1.4
Green needlegrass	*Nassella viridula*	Cool, bunch	5	3.2	1.6	0.8
Wheatgrass, western	*Pascopyrum smithii*	Cool, sod	20	12	6	3
Dropseed, sand	*Sporobolus cryptandrus*	Warm, bunch	1	0.8	0.4	0.2
Seed rate (lbs PLS/acre)				42	21	10.3

- Temporary Surface Pipes (above grade): Surface pipes can provide an adequate water supply if properly designed and operated. However, they are susceptible to damage due to vehicle traffic, wildlife, vandalism and exposure to the sun. All visible temporary irrigation components must be removed within 1 year after the system is no longer in use.
- In-Ground Pipes: In-ground pipes can provide the most reliable method of delivering an adequate water supply if properly designed and operated and is the recommend type of irrigation. These systems are less susceptible to damage and may be abandoned in place with less impact to the site.

2.4.3 Water Sources

There are multiple options for irrigation water sources. They include city domestic (potable) water and nonpotable water (groundwater, raw surface water and reclaimed (tertiary-treated) water). The use of any nonpotable water requires approval through Colorado Springs Utilities. This approval includes verification of the applicable water right(s) and user compliance with applicable Colorado Springs Utilities Standards. The use of gray water (wastewater from sources other than toilets, urinals, kitchen sinks, non-laundry utility sinks and dishwashers) may also be an option, but would require coordination and approval through several entities including Colorado Springs Utilities, the El Paso County Department of Health, and the Pikes Peak Building Department.

2.4.4 Preparing an Irrigation Plan

When required, an Irrigation Plan must be prepared in conformance with the City of Colorado Springs Landscape Code and Policy Manual.

2.5 Performance Standard for Vegetation Establishment

Required vegetation coverage for final stabilization is defined as follows:

- Uniform vegetative cover must be established with an individual plant density of at least 70% of the pre-disturbance vegetative density as determined from pre-disturbance photographs, or equivalent permanent, physical erosion reduction methods must be employed.
- The vegetation shall be uniform and of the variety and species found in the City approved mixes or in the approved GEC Plan. Noxious weeds may not be counted in the vegetative density. The City will use pre-disturbance photographs to determine the required coverage area.
- The number and size of non-vegetated areas within the area of land disturbance shall be reviewed and evaluated by the GEC Inspector during the Final Inspection. This evaluation shall take into account the following at a minimum:

- Even coverage across area of land disturbance (no large visible bare spots),
- Location of non-vegetated areas (i.e. next to an inlet would be an area of concern),
- Type of vegetation established (weeds vs. target species), and
- Lack of visible erosion within the site.

- If a nurse crop has been utilized on this site, at least half of the 70% of the counted vegetation must be of the targeted species.

Additional and post-construction revegetation and stabilization requirements are specified in the Landscape Code and Policy Manual.

2.6 Managing Noxious Weeds

Managing noxious weeds is a key component of successful revegetation and habitat restoration. Early detection and rapid response is the preferred method of eradication. For more information involving mitigation measures, refer to the El Paso County Noxious Weeds Website.

3.0 FINAL STABILIZATION PROCEDURE

Before scheduling a Final Inspection, while waiting for vegetation to establish, Permittee(s) shall complete the following inspections and maintenance operations:

1. Fill any eroded rills and gullies with topsoil prior to any reseeding.
2. Ensure all disturbed areas are seeded and mulched according to the City Stormwater Construction Manual.
3. Inspect seeded and mulched areas, as well as the stormwater management system, at least once every month. If repairs are needed, reseed and re-mulch/blanket the site as needed or as recommended by the GEC Inspector for areas failing to meet the required coverage.
4. Control noxious weeds in a manner acceptable to the GEC Inspector.

In addition, GEC Inspectors will make periodic inspections of the revegetation area and stormwater management system. The frequency may be evaluated and adjusted by the Stormwater Enterprise.

REVISIONS

NO.	DESCRIPTION	DATE

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

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FALCON BIG R STORE EXPANSION
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GRADING & EROSION CONTROL PLAN
EROSION CONTROL DETAILS

DESIGNED BY JF
DRAWN BY JF
CHECKED BY LD

H-SCALE AS NOTED
V-SCALE N/A

JOB NO. 2170.00
DATE ISSUED 12/11/21
SHEET NO. 7 OF 7

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