

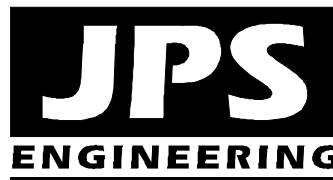
**STORMWATER MANAGEMENT PLAN (SWMP)**  
  
**for**  
  
**WETHERBEE OFFICE / WAREHOUSE BUILDING  
LOT 22, CLAREMONT BUSINESS PARK FILING NO. 2  
7302 COLE VIEW, COLORADO SPRINGS, CO**

**Prepared for:**

**T H E Properties, LLC**  
1950 Victor Place, Suite 110  
Colorado Springs, CO 80915

November 30, 2018

**Prepared by:**



**19 E. Willamette Ave.**  
**Colorado Springs, CO 80903**  
**(719)-477-9429**  
**[www.jpsengr.com](http://www.jpsengr.com)**

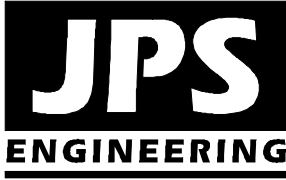
**JPS Project No. 081803**  
**PPR-18-049**

**WETHERBEE OFFICE / WAREHOUSE BUILDING  
LOT 22, CLAREMONT BUSINESS PARK  
FILING NO. 2  
7302 COLE VIEW, COLORADO SPRINGS, CO  
STORMWATER MANAGEMENT PLAN (SWMP)  
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Sheet C1.1	Site Grading & Erosion Control Plan
Sheet C2	Civil Notes & Details
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**WETHERBEE OFFICE / WAREHOUSE BUILDING  
LOT 22, CLAREMONT BUSINESS PARK  
FILING NO. 2  
7302 COLE VIEW, COLORADO SPRINGS, CO  
STORMWATER MANAGEMENT PLAN (SWMP)  
PCD File No. PPR-18-049  
November, 2018**

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**1. Applicant / Contact Information**

**Owner/Developer:** T H E Properties, LLC  
Attn: Tony Wetherbee  
1950 Victor Place, Suite #110  
Colorado Springs, CO 80915  
twetherbee@aol.com

**Engineer:** JPS Engineering, Inc.  
19 E. Willamette Avenue  
Colorado Springs, CO 80903  
Attn: John P. Schwab, P.E. (719)-477-9429  
john@jpsengr.com

**Contractor:** Casco Construction Corp.  
1775 Jet Stream Dr., Suite 102  
Colorado Springs, CO 809211  
Attn: Mike Casimiro (719)-287-8377  
mike@cascocc.com

**2. Site Description**

- a. Tony Wetherbee is planning construct a new office / warehouse building on a vacant commercial property described as Lot 22, Claremont Business Park Filing No. 2 in El Paso County, Colorado. The 0.5-acre lot (El Paso County Assessor's No. 54081-02-026) is located at 7302 Cole View. Site development activities will include site grading, utilities, new warehouse buildings, parking lots, and site landscaping.

The site development plan consists of a proposed 5,000 square-foot office/warehouse building with associated parking and site improvements. Access will be provided by a new driveway connecting to Cole View on the south side of the lot. The proposed internal parking area will be paved with asphalt and concrete.

- b. Proposed sequence of major activities:
  - Mobilization / implementation of BMP's
  - Clearing and grubbing
  - Rough grading
  - Final grading of building site and parking area
- c. Total site area = 0.5 acres; Projected disturbed area = 0.5 acres (approx.)
- d. Historic runoff coefficient,  $C = 0.35$ ;  
Developed runoff coefficient,  $C = 0.88$
- e. Existing vegetation on site: native meadow grasses (approx. 70% coverage)
- f. Potential pollution sources: vehicle fueling on-site
- g. Non-stormwater components of discharge: none anticipated
- h. Receiving water: Surface drainage from this site will flow southwesterly into the existing storm sewer system in Cole View, which flows west and discharges into the East Fork Sand Creek.
- i. Soil erosion potential and potential impacts upon discharge: On-site soils are comprised of Blakeland loamy sand and Ellicott loamy coarse loamy sand, classified as Hydrologic Soils Group A (high infiltration rate).

### 3. Site Map (see Construction Drawings – Sheet C1.1)

### 4. BMP's for Stormwater Pollution Prevention (See Sheet C1.1):

<u>Phase</u>	<u>BMP</u>
Clearing and Grubbing necessary for perimeter controls	VTC's
Initiation of perimeter controls	Silt Fence
Remaining clearing and grubbing	
Site Grading	IP
Rain Garden	RG
Stabilization	SM
Removal of erosion control measures	

- a. Erosion and Sediment Controls
  - 1) Structural Practices:
    - Silt fence along downstream limits of disturbed areas
    - Inlet protection (IP) at storm inlets
    - Rain Garden (RG) at southwest corner of site

2) Non-Structural Practices:

- Preserve existing vegetation beyond limits of work
- Temporary seeding of areas to remain disturbed for significant periods of time
- Permanent seeding/mulching (SM) upon completion of rough grading

b. Materials Handling and Spill Prevention

- No dedicated asphalt / concrete batch plant is proposed on site.
- General Materials Handling Practices:
  - Potential pollutants shall be stored and used in a manner consistent with the manufacturer's instructions in a secure location. To the extent practical, material storage areas should not be located near storm drain inlets and should be equipped with covers, roofs, or secondary containment as required to prevent storm water from contacting stored materials. Chemicals that are not compatible shall be stored and segregated areas so that spilled materials cannot combine and react.
  - Disposal of materials shall be in accordance with the manufacturer's instructions and applicable local, state, and federal regulations.
  - Materials no longer required for construction shall be removed from the site as soon as possible.
- Adequate garbage, construction waste, and sanitary waste handling and disposal facilities shall be provided as necessary to keep the site clear of obstruction and BMPs clear and functional.
- Specific Materials Handling Practices:
  - All pollutants, including waste materials and demolition debris, that occur on-site during construction shall be handled in a way that does not contaminate storm water.
  - All chemicals including liquid products, petroleum products, water treatment chemicals, and wastes stored on site shall be covered and contained and protected from vandalism.
  - Maintenance and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, degreasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants, shall be conducted under cover during wet weather and on an impervious surface to prevent release of contaminants onto the ground. Materials spilled during maintenance operations shall be cleaned up immediately and properly disposed of.
  - Wheel wash water shall be settled and discharged on site by infiltration. Wheel wash water shall not be discharged to the storm water system.

- Application of agricultural chemicals, including fertilizers and pesticides, shall be conducted in a manner and at application rates that will not result in loss of chemical to storm water runoff. Follow manufacturer's recommendations for application rates and procedures.
- pH-modifying sources shall be managed to prevent contamination of runoff and storm water collected on site. The most common sources of pH-modifying materials are bulk cement, cement kiln dust (CKD), fly ash, new concrete washing and curing waters, waste streams generated from concrete grinding and sawing, exposed aggregate processes, an concrete pumping and mixer washout waters.
- Equipment maintenance and fueling: Contractor shall implement appropriate spill prevention and response procedures
- Spill Prevention and Response Procedures:
  - The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize their migration into storm water runoff and conveyance systems. If the release has impacted on-site storm water, it is critical to contain the released materials on site and prevent their release into receiving waters.
  - Spill Response Procedures:
    - Notify site superintendent immediately when a spill, or the threat of a spill, is observed. The superintendent shall assess the situation and determine the appropriate response.
    - If spills represent an imminent threat of escaping on-site facilities and entering the receiving waters, site personnel shall respond immediately to contain the release and notify the superintendent after the situation has stabilized.
    - The site superintendent, or his designee, shall be responsible for completing a spill reporting form and for reporting the spill to the appropriate agency.
    - Spill response equipment shall be inspected and maintained as necessary to replace any materials used in spill response activities.
  - Spill kits shall be on-hand at all fueling sites. Spill kit location(s) shall be reported to the SWMP Administrator.
  - Absorbent materials shall be on-hand at all fueling areas for use in containing inadvertent spills. Containers shall be on-hand at all fueling sites for disposal of used absorbents.
  - Recommended components of spill kits include the following:
    - Oil absorbent pads (one bale)
    - Oil absorbent booms (40 feet)
    - 55-gallon drums (2)

- 9-mil plastic bags (10)
  - Personal protective equipment including gloves and goggles
- Concrete Wash Water: Unless confined in a pre-defined, bermed containment area, the cleaning of concrete truck delivery chutes is prohibited at the job site. The discharge of water containing waste cement to the storm drainage system is prohibited.
- Notification Procedures:
  - In the event of an accident or spill, the SWMP Administrator shall be notified as a minimum.
  - Depending on the nature of the spill material involved, the Colorado Department of Public Health and Environment (24-hour spill reporting line: 877-518-5608), downstream water users, or other agencies may also need to be notified.
  - Any spill of oil which 1) violates water quality standards, 2) produces a “sheen” on a surface water, or 3) causes a sludge or emulsion, or any hazardous substance release, or hazardous waste release which exceeds the reportable quantity, must be reported immediately by telephone to the National Response Center Hotline at (800)-424-8802.

## **5. Final Stabilization and Long-term Stormwater Management**

- Permanent seeding will be provided to achieve long-term stabilization of the site.
- Seed Mix: “Foothills Mix” or approved equal (refer to landscape plans)
- Seeding Application Rate: Drill seed 0.25” to 0.5” into the soil. In small areas not accessible to a drill, hand broadcast at double the rate and rake 0.25” to 0.5” into the soil. Apply seed at the following rates:
  - Dryland: 20-25 lbs/acre
  - Irrigated: 40 lbs/acre
- Soil Stabilization Practices:
  - Mulching Application: Apply 1-1/2 tons of certified weed free hay per acre mechanically crimped into the soil in combination with an organic mulch tackifier. On slopes and ditches requiring a blanket, the blanket shall be placed in lieu of mulch and mulch tackifier.
- Soil Conditioning and Fertilizer Requirements:
  - Soil conditioner, organic amendment shall be applied to all seeded areas at 3 CY / 1000 SF.
  - Fertilizer shall consist of 90% fungal biomass (mycelium) and 10% potassium-magnesia with a grade of 6-1-3 or approved equal. Fertilizer shall be applied as recommended by seed supplier.
- Final stabilization is reached when all soil-disturbing activities at the site have been completed, and uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels, or equivalent permanent, physical erosion reduction methods have been employed.

## **6. Other Controls**

- Contractor shall dispose of all waste materials at a permitted off-site disposal site.
- Vehicle tracking pads will be installed at all access points to limit off-site soil tracking.

## **7. Inspection and Maintenance**

### **a. Inspection Schedules:**

- Contractor shall inspect BMPs bi-weekly as a minimum, and immediately (within 24 hours) after any precipitation or snowmelt event that causes surface erosion (i.e. that results in stormwater running across the ground), to ensure that BMPs are maintained in effective operating condition.

### **b. Inspection Procedures:**

#### **1) Site Inspection / Observation Items:**

- Construction site perimeter and discharge points (including discharges into a storm sewer system)
- All disturbed areas
- Areas used for material / waste storage that are exposed to precipitation
- Other areas having a significant potential for stormwater pollution, such as demolition areas or concrete washout locations, or locations where vehicles enter or leave the site
- Erosion and sediment control measures identified in the SWMP
- Any other structural BMPs that may require maintenance, such as secondary containment around fuel tanks, or the condition of spill response kits.

#### **2) Inspection Requirements:**

- Determine if there is any evidence of, or potential for, pollutants entering the drainage system.
- Review BMPs to determine if they still meet design and operational criteria in the SWMP, and if they continue to adequately control pollutants at the site.
- Upgrade and/or revise any BMPs not operating in accordance with the SWMP, and update the SWMP to reflect any revisions.

### **c. BMP Maintenance / Replacement and Failed BMPs:**

- Contractor shall remove sediment that has been collected by perimeter controls, such as silt fence and inlet protection, on a regular basis to prevent failure of BMPs, and remove potential of sediment from being discharged from the site in the event of BMP failure.

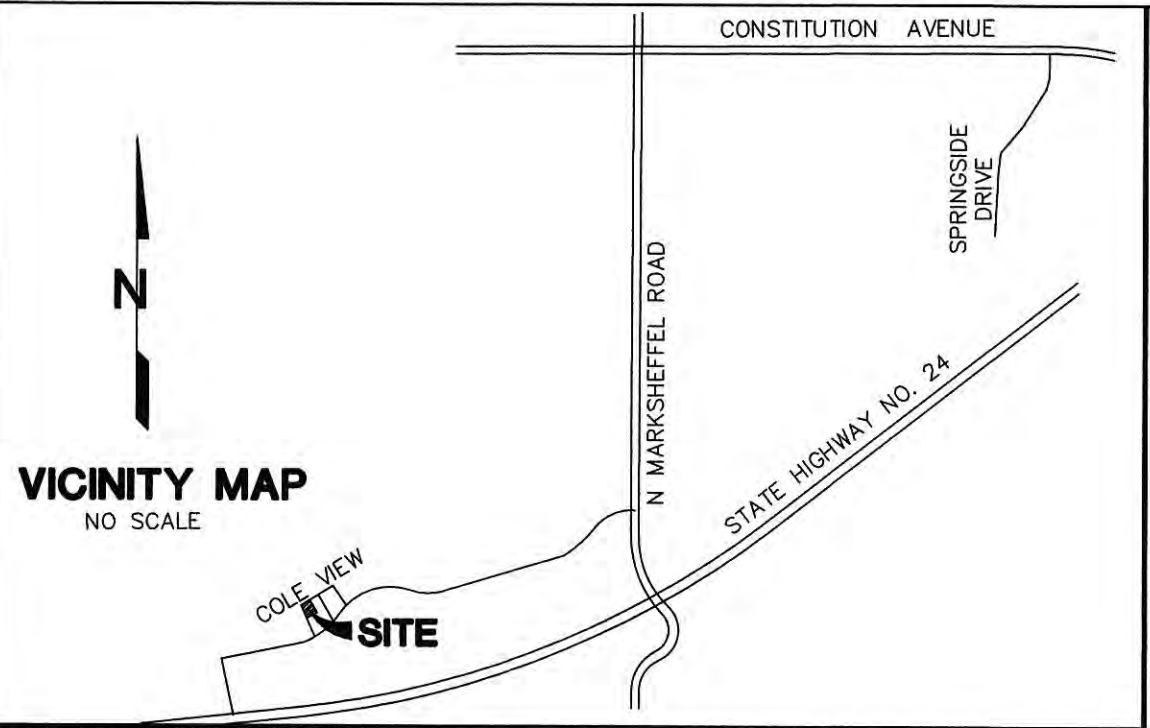


- Removed sediment must be moved to an appropriate location where it will not become an additional pollutant source, and should never be placed in ditches or streams.
  - Contractor shall update Erosion Control Plans as required with any new BMPs added during the construction period.
  - Contractor shall address BMPs that have failed, or have the potential to fail without maintenance or modifications, as soon as possible, immediately in most cases, to prevent discharge of pollutants.
- d. Record Keeping and Documenting Inspections:
- Contractor shall maintain records of all inspection reports, including signed inspection logs, at the project site.
  - Permittee shall document inspection results and maintain a record of the results for a period of 3 years following expiration or inactivation of permit coverage.
  - Site inspection records shall include the following:
    - Inspection date
    - Name and title of personnel making the inspection
    - Location of discharges of sediment or other pollutants from the site
    - Location(s) of BMPs that need to be maintained
    - Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location
    - Location(s) where additional BMPs are needed that were not in place at the time of inspection
    - Deviations from the minimum inspection schedule

## 8. Construction Schedule

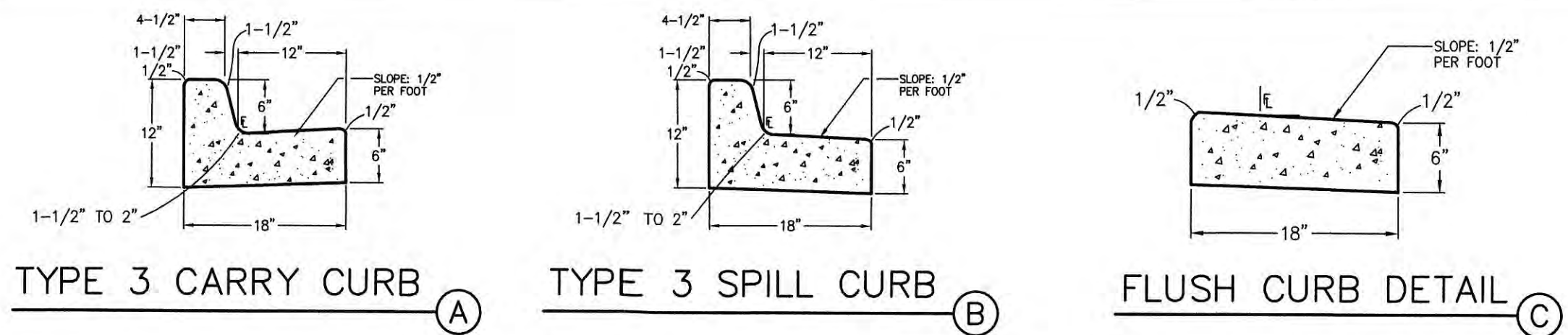
The anticipated start and completion time period of the construction activities is from January, 2019 through August, 2019. Final stabilization is expected to be completed by August, 2020.





EROSION CONTROL LEGEND: LEGEND:

- (VTC) VEHICLE TRACKING CONTROL PAD  
(SF) SILT FENCE  
(SM) SEED & MULCH  
(CWA) CONCRETE WASHOUT AREA (TO BE COMPLETELY CONTAINED & REMOVED UPON COMPLETION OF PROJECT)  
(IP) INLET PROTECTION  
(RG) RAIN GARDEN  
(RR) RIPRAP APRON (5'Lx5'Wx2'D; d<sub>50</sub>=12" RR)
- PROPOSED PROPERTY LINE  
--- EXISTING CONTOURS  
--- PROPOSED CONTOURS  
x 31.5 EXISTING SPOT ELEVATIONS  
x 31.5 PROPOSED SPOT ELEVATIONS  
--- PROPOSED GRADES  
DS ROOF DRAIN DOWNSPOUTS W/TRANSITION COUPLINGS & CONNECTION TO STORM DRAIN



KEYED NOTES:

- 1 TOPSOIL STRIPPING / STOCKPILE AREA
- 2 SITE PAVEMENT (PER GEOTECHNICAL REPORT); MIN. 4" FULL-DEPTH ASPHALT
- 3 PREPARE & COMPACT BUILDING FOUNDATION PER PROJECT GEOTECHNICAL REPORT
- 4 STAGING & MATERIALS STORAGE AREA

HANDICAP ACCESS NOTES:

1. RAMPS ARE NOT TO BE PLACED IN HANDICAP ACCESS AISLES.
2. ACCESS AISLES MAY NOT EXCEED A 2% (1:48) SLOPE IN ANY DIRECTION.
3. HANDICAP RAMPS MAY NOT EXCEED A SLOPE OF 8% (1:12).
4. THE MINIMUM WIDTH FOR HANDICAPPED RAMPS IS 36 INCHES. THE SIDES OF RAMPS MAY NOT EXCEED A SLOPE OF 10% UNLESS PROTECTED WITH A HANDRAIL.
5. HANDICAPPED PARKING SHALL MEET ALL OTHER APPLICABLE CITY AND ADA CODE REQUIREMENTS.

ESTIMATED EARTHWORK QUANTITY:

UNCLASSIFIED EXCAVATION (TOTAL CUT) = 45 CY  
\* EMBANKMENT FILL = 320 CY  
NET (FILL) = 275 CY  
\* (ASSUMES 15% COMPACTION FACTOR)

NOTE: THIS ESTIMATE IS PROVIDED FOR INFORMATION ONLY, REPRESENTING THE CALCULATED BULK EARTHWORK VOLUME TO FINISHED GRADE, EXCLUDING ANY ADJUSTMENT FOR PAVEMENT DEPTHS, ETC. CONTRACTOR SHALL MAKE HIS OWN DETERMINATION OF EARTHWORK QUANTITIES AS BASIS FOR BID PRICING AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

DESIGN ENGINEER'S STATEMENT:

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR LIABILITY CAUSED BY NEGLIGENCE, ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

JOHN P. SCHWAB, P.E. #29891

OWNER/DEVELOPER'S STATEMENT:

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

THE PROPERTIES, LLC  
MR. TONY WETHERBEE  
1950 VICTOR PLACE, SUITE 110  
COLORADO SPRINGS, CO 80915

EL PASO COUNTY:

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

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

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

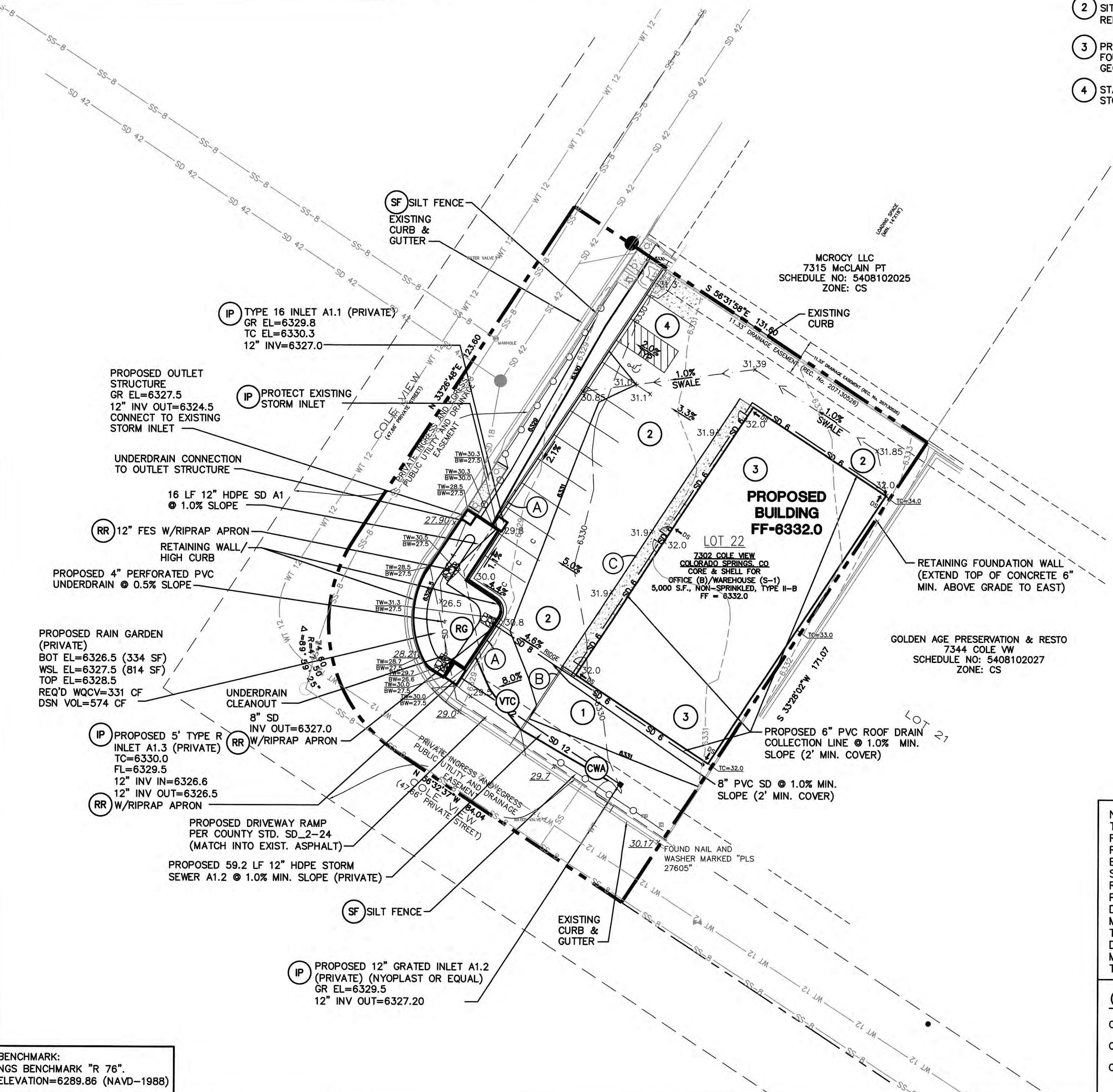
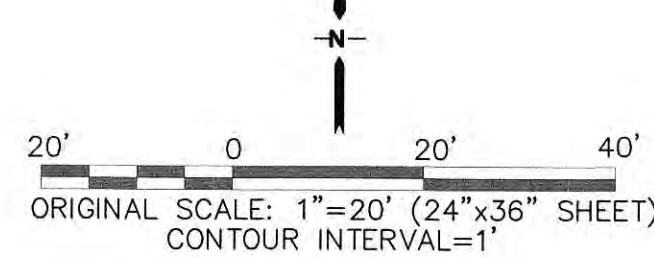
JENNIFER IRVINE, P.E.,  
COUNTY ENGINEER / ECM ADMINISTRATOR

DATE

NOTE: NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED AND APPROVED IN WRITING TO BE ACCEPTABLE.

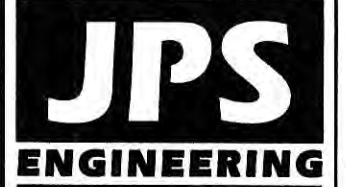
GEC SHEET INDEX:

- C1.1 SITE GRADING & EROSION CONTROL PLAN  
C2 CIVIL NOTES & DETAILS  
C3 GRADING EROSION CONTROL NOTES & DETAILS



BENCHMARK:  
NGS BENCHMARK "R 76".  
ELEVATION=6289.86 (NAVD-1988)

WETHERBEE OFFICE / WAREHOUSE BUILDING  
7302 COLE VIEW, COLORADO SPRINGS, COLORADO 80915



19 E. Willamette Ave.  
Colorado Springs, CO 80903  
PH: 719-477-9429  
FAX: 719-471-0766  
www.jsengr.com



CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
1-800-922-1987  
CALL 2-BUSINESS DAYS IN ADVANCE  
BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MEMBER UTILITIES.

BY	DATE	REVISION
JPS	10/04/18	DP SUBMITTAL
JPS	11/30/18	COUNTY COMMENTS
JPS	12/31/18	COUNTY COMMENTS

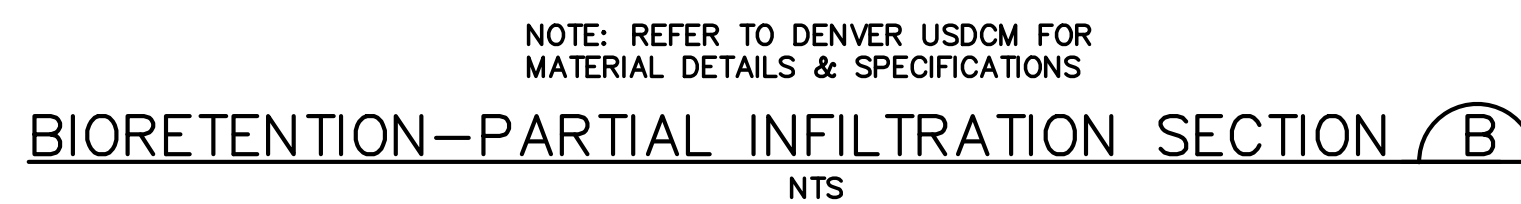
SITE GRADING & EROSION  
CONTROL PLAN

HORIZ. SCALE: 1"=20'	DRAWN: BJJ
VERT. SCALE: N/A	DESIGNED: JPS
SURVEYED: COMPASS	CHECKED: JPS
CREATED: 9/12/18	LAST MODIFIED: 12/31/18
PROJECT NO: 081803	MODIFIED BY: BJJ

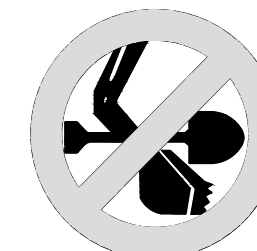
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03 OF 12

PCD PROJECT NO. PPR-18-049





**CIVIL NOTES &  
DETAILS**



CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
1-800-922-1987  
CALL 2-BUSINESS DAYS IN ADVANCE  
BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
UTILITIES. (UTILITY LOCATING)

No.	REVISION	BY	DATE
<u>A</u>	COUNTY SUBMITTAL	JPS	10/04/18
<u>A</u>	COUNTY COMMENTS	JPS	11/28/18

HORIZ. SCALE:	N/A	DRAWN:	B.
VERT. SCALE:	N/A	DESIGNED:	JP
SURVEYED:	COMPASS	CHECKED:	JP
CREATED:	10/04/18	LAST MODIFIED:	11/28/18
PROJECT NO:	081803	MODIFIED BY:	B.

C2

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

1. Construction may not commence until a Construction Permit is obtained from Development Services and a Preconstruction Conference is held with Development Services Inspectors.
2. 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.
3. 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.
4. 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.
5. Once the ESQCP has been issued, the contractor may install the initial stage erosion and sediment control BMPs as indicated on the 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 DSD inspections staff.
6. Soil erosion control measures for all slopes, channels, ditches, or any disturbed land area shall be completed within 21 calendar days after final grading, or final earth disturbance, has been completed. Disturbed areas and stockpiles which are not at final grade but will remain dormant for longer than 30 days shall also be mulched within 21 days after interim grading. An 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 BMPs shall be maintained until permanent soil erosion control measures are implemented and established.
7. Temporary soil erosion control facilities shall be removed and earth disturbance areas graded and stabilized with permanent soil erosion control measures pursuant to standards and specification prescribed in the DCM Volume II and the Engineering Criteria Manual (ECM) appendix I.
8. All persons engaged in earth disturbance shall implement and maintain acceptable soil erosion and sediment control measures including BMPs in conformance with the erosion control technical standards of the Drainage Criteria Manual (DCM) Volume II and in accordance with the Stormwater Management Plan (SWMP).
9. All temporary erosion control facilities including BMPs and all permanent facilities intended to control erosion of any earth disturbance operations, shall be installed as defined in the approved plans, the SWMP and the DCM Volume II and maintained throughout the duration of the earth disturbance operation.
10. Any earth disturbance shall be conducted in such a manner so as to effectively reduce 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.
11. Any temporary or permanent facility designed and constructed for the conveyance of stormwater around, through, or from the earth disturbance area shall be designed to limit the discharge to a non-erosive velocity.
12. Concrete wash water shall be contained and disposed of in accordance with the SWMP. No wash water shall be discharged to or allowed to runoff to State Waters, including any surface or subsurface storm drainage system or facilities.
13. Erosion control blanketing is to be used on slopes steeper than 3:1.
14. Building, construction, excavation, or other 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. BMP's may be required by El Paso County Engineering if deemed necessary, based on specific conditions and circumstances.
15. Vehicle tracking of soils and construction debris off-site shall be minimized. Materials tracked offsite shall be cleaned up and properly disposed of immediately.
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. 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.
18. 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.
19. No chemicals are to be used by the contractor, which have the potential to be released in stormwater unless permission for the use of a specific chemical is granted in writing by the ECM Administrator. In granting the use of such chemicals, special conditions and monitoring may be required.
20. Bulk storage structures for petroleum products and other chemicals shall have adequate protection so as to contain all spills and prevent any spilled material from entering State Waters, including any surface or subsurface storm drainage system or facilities.
21. No person shall cause the impediment of stormwater flow in the flow line of the curb and gutter or in the ditchline.
22. Individuals 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 included in the DCM Volume II and the ECM Appendix I. All appropriate permits must be obtained by the contractor prior to construction (NPDES, Floodplain, 404, fugitive dust, etc.). In the event of conflicts between these requirements and laws, rules, or regulations of other Federal, State, or County agencies, the more restrictive laws, rules, or regulations shall apply.
23. All construction traffic must enter/exit the site at approved construction access points.
24. Prior to actual construction the permittee shall verify the location of existing utilities.
25. A water source shall be available on site during earthwork operations and utilized as required to minimize dust from earthwork equipment and wind.
26. The preliminary soils report for this site prepared by Entech Engineering, dated 2/18/13 shall be considered a part of these plans.
27. At least ten days prior to the anticipated start of construction, for projects that will disturb 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

ESTIMATED TIME SCHEDULE:

INSTALL BMP'S DECEMBER, 2018  
SITE GRADING DECEMBER, 2018  
SEEDING & MULCHING AUGUST, 2019  
STABILIZATION AUGUST, 2020  
TOTAL DISTURBED AREA: 0.5 ACRES  
RECEIVING WATERS: SAND CREEK

EXISTING VEGETATION:

NATIVE GRASSES (APPROXIMATELY 70 PERCENT COVERAGE)

SEEDING MIX:

GRASS	VARIETY	AMOUNT IN PLS LBS. PER ACRE
CRESTED WHEAT GRASS	EPHRAIM OR HYCREST	4.0 LBS.
PERENIAL RYE	LINN	2.0 LBS.
WESTERN WHEATGRASS	SARTON	3.0 LBS.
SMOOTH BROME GRASS	LINCOLN OR MANCHAR	5.0 LBS.
SIDEOATS GRAMA	EPHRAIM	2.5 LBS.
TOTAL:		16.5 LBS.

SEEDING & FERTILIZER APPLICATION: DRILL SEED OR HYDRO-SEED PER CDOT SPEC. SECTION 212.

MULCHING APPLICATION: CONFORM TO CDOT SPEC-SECTION 213.

SEDIMENT CONTROL MAINTENANCE PROGRAM:

PERIODIC SITE INSPECTIONS RE-VEGETATION OF EXPOSED SOILS SEDIMENT REMOVAL FROM BMP'S REMOVAL OF BMP'S	FREQUENCY BI-WEEKLY WITHIN 21 DAYS OF GRADING MONTHLY AFTER STABILIZATION ACHIEVED
--	--

- 1 AND AFTER ANY PRECIPITATION OR SNOW MELT EVENT THAT CAUSES SURFACE EROSION.
- 2 ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED WHEN THE SEDIMENT LEVEL REACHES ONE HALF THE HEIGHT OF THE BMP OR AT ANY TIME THAT SEDIMENT OR DEBRIS ADVERSELY IMPACTS THE FUNCTION OF THE BMP.

**SILT FENCE NOTES**

**INSTALLATION REQUIREMENTS**

- SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- WHEN SLOPES ARE NECESSARY, SILT FENCE GEOTEXTILE SHALL BE SPICED TOGETHER ONLY AT SUPPORT POSTS AND SECURELY SEALED.
- METAL POSTS SHALL BE "STUDDED" TYPE OR "Y" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
- THE FILTER WATERING SHALL BE FASTENED SECURELY TO METAL OR WOOD POSTS USING WIRE TIES, OR TO WOOD POSTS WITH 8" WIDE BY 16" DEEP GUTS. THE SILT FENCE GEOTEXTILE SHALL NOT BE STAPLED TO EXISTING TREES.
- WHILE NOT REQUIRED, WIRE MESH FENCE MAY BE USED TO SUPPORT THE GEOTEXTILE. WIRE SHALL BE FASTENED SECURELY TO THE UNDERSIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 16" LONG. WIRE MESH OR GUTS SHALL NOT BE STAPLED TO THE FENCE. A MINIMUM OF 6" AND SHALL NOT EXTEND MORE THAN 2" ABOVE THE ORIGINAL GROUND SURFACE.
- ALONG THE TOE OF FILLS, INSTALL THE SILT FENCE 10' FROM THE TOE OF THE FILL. PROVIDE AN AREA BEHIND THE FENCE FOR RUNOFF TO POND AND SEDIMENT TO SETTLE. A MINIMUM DISTANCE OF 5 FEET FROM THE TOE OF THE FILL IS RECOMMENDED.
- THE HEIGHT OF THE SILT FENCE FROM THE GROUND SURFACE SHALL BE MINIMUM OF 36 INCHES AND SHALL NOT EXCEED 36 INCHES. HIGHER FENCES MAY INFLUENCE VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.

**MAINTENANCE REQUIREMENTS**

- CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL, AND DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL.
- DAMAGED OR INEFFECTIVE SILT FENCES SHALL BE PROMPTLY REPAIRED OR REPLACED.
- SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCES IMMEDIATELY IF ACCUMULATED TO HALF THE EXPOSED GEOTEXTILE HEIGHT.
- SILT FENCES SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

City of Colorado Springs  
Stormwater Quality

Figure SF-2  
Silt Fence  
Construction, Detail and Maintenance Requirements

**VEHICLE TRACKING NOTES**

**INSTALLATION REQUIREMENTS**

- REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
- CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APPROX 12" GULLY FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SHORT OVERLAP.
- AREAS TO BE STABILIZED ARE TO BE PROPERLY GRASSED AND COMPLETED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.
- CONSTRUCTION ROAD, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.
- CONSTRUCTION ROADS ARE TO BE BUILT TO COMPROMISE WITH GRASSES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP.
- REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
- STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
- SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.
- STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.
- OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

City of Colorado Springs  
Stormwater Quality

Figure VT-2  
Vehicle Tracking  
Application Examples

**CONCRETE WASHOUT AREA PLAN**

**CONCRETE WASHOUT AREA SECTION A**

**CWA-1. CONCRETE WASHOUT AREA**

**CWA INSTALLATION NOTES**

- SEE PLAN VIEW FOR:  
-CWA INSTALLATION LOCATION
- 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 CONDITIONS MAKE THIS IMPOSSIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN THICKNESS) OR SURFACE STORAGE AS SHOWN. USING PRE-CAST CONCRETE WASHOUT DITCHES OR A LINEAR DRAIN SHALL BE USED.
- THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
- 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.
- BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
- VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
- SEED SHALL BE PLANTED AT THE CONSTRUCTION ENTRANCE AT THE CWA, AND (USE WHERE AS NECESSARY TO CLEANLY REMOVE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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

**BLOCK AND GRAVEL BAG CURB INLET PROTECTION**

**BLOCK AND GRAVEL BAG CURB INLET PROTECTION NOTES**

**INSTALLATION REQUIREMENTS**

- INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF PAVEMENT.
- CONCRETE BLOCKS ARE TO BE Laid AROUND THE INLET IN A SINGLE ROW ON THEIR SIDES AND TOPS ONE ANOTHER WITH THE OPEN ENDS OF THE BLOCK FACING OUTWARD.
- GRAVEL BAGS ARE TO BE PLACED AROUND THE CONCRETE BLOCKS CLOSELY ADJUTING THEM TO ANOTHER SO THERE ARE NO GAPS.
- GRAVEL BAGS ARE TO BE COVERED WITH SAND OR GRAVEL APPROXIMATELY 3/4 INCH IN DIAMETER.
- BAGS ARE TO BE MADE OF 14" RICH WIRE MESH (USED WITH GRAVEL ONLY) OR GEOTEXTILE.
- AN ALTERNATE 3/4" TO 1" GRAVEL FILTER OVER A WIRE SCREEN MAY BE USED IN PLACE OF GRAVEL BAGS. THE WIRE MESH SHALL EXTEND ABOVE THE TOP OF THE CONCRETE BLOCKS AND THE GRAVEL PLACED OVER THE WIRE SCREEN TO THE TOP OF THE CONCRETE BLOCKS.
- INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF PAVEMENT.
- DAMAGED OR INEFFECTIVE INLET PROTECTION SHALL PROMPTLY BE REPAIRED OR REPLACED.
- SEDIMENT SHALL BE REMOVED WHEN SEDIMENT HAS ACCUMULATED TO APPROXIMATELY 1/2 THE DEPTH OF THE TRAP.
- INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITHIN THE DRAINAGE AREA AS APPROVED BY THE CITY.

City of Colorado Springs  
Stormwater Quality

Figure IP-3  
Block & Gravel Bag Curb Inlet Protection  
Construction, Detail and Maintenance Requirements

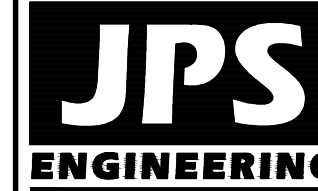
WETHERBEE OFFICE / WAREHOUSE BUILDING  
7302 COLE VIEW, COLORADO SPRINGS, COLORADO 80915

GRADING & EROSION  
CONTROL NOTES &  
DETAILS

HORZ. SCALE:	N/A	DRAWN:	BJJ
VERT. SCALE:	N/A	DESIGNED:	JPS
SURVEYED:	COMPASS	CHECKED:	JPS
CREATED:	10/04/18	LAST MODIFIED:	11/29/18
PROJECT NO:	081803	MODIFIED BY:	BJJ

SHEET:

C3



19 E. Willamette Ave.  
Colorado Springs, CO  
80903

PH: 719-477-9429  
FAX: 719-471-0766  
www.jpsengr.com



CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
1-800-922-1987  
CALL TO DESIGN, LOCATE, AND ADVISE  
BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
MEMBER UTILITIES