

## BIG O TIRES

6985 N. MERIDIAN ROAD, PEYTON, CO 80831

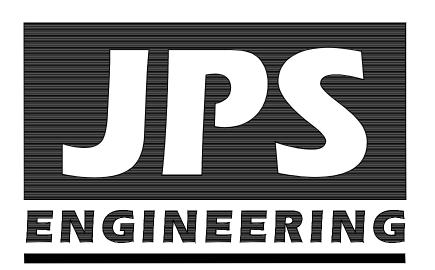
## GRADING AND EROSION CONTROL PLANS El Paso County, Colorado

PREPARED FOR:

### D & D MANAGEMENT, LLC

6485 ALIBI CIRCLE COLORADO SPRINGS, CO 80923

PREPARED BY:



19 East Willamette Avenue Colorado Springs, Colorado 80903 JUNE, 2018

#### AGENCIES/CONTACTS

**DEVELOPER:** MR. DAVID LARGENT 6485 ALIBI CIRCLE COLORADO SPRINGS, CO 80923

CIVIL ENGINEER:

LOCAL ROADS

& DRAINAGE:

**GAS DEPARTMENT:** 

BLACK HILLS ENERGY MR. SEBASTIAN SCHWENDER

EL PASO COUNTY PCD

(719) 520-7945

MR. GILBERT LAFORCE, P.E.

MOUNTAIN VIEW ELECTRIC ASSOCIATION **ELECTRIC DEPARTMENT:** 11140 E. WOODMEN ROAD

(719) 359-3176

JPS ENGINEERING, INC. 19 E. WILLAMETTE AVENUE COLORADO SPRINGS, CO 80903

MR. DAVE WALDNER (719) 495-2283

MR. JOHN P. SCHWAB, P.E. (719) 477-9429

TELEPHONE COMPANY: QWEST COMMUNICATIONS (LOCATORS) (800) 922-1987

2880 INTERNATIONAL CIRCLE COLORADO SPRINGS, CO 80910

A.T. & T. (LOCATORS) (719) 635-3674

FALCON FIRE PROTECTION DISTRICT

COLORADO SPRINGS, CO 80908

(719) 495-4050

### SHEET INDEX

TITLE SHEET

SITE GRADING & EROSION CONTROL PLAN CIVIL NOTES AND DETAILS

CIVIL NOTES AND DETAILS

**IRE** PEYT

80831

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

#### **DESIGN ENGINEER'S STATEMENT**

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 NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

JOHN P. SCHWAB, P.E. #29891 DATE

#### 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.

DATE MR. DAVID LARGENT 6485 ALIBI CIRCLE COLORADO SPRINGS, CO 80923

#### 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.

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

PCD PROJECT NO. SF-18-003

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HORZ. SCALE: RIDGELINE 11/19/17 091701

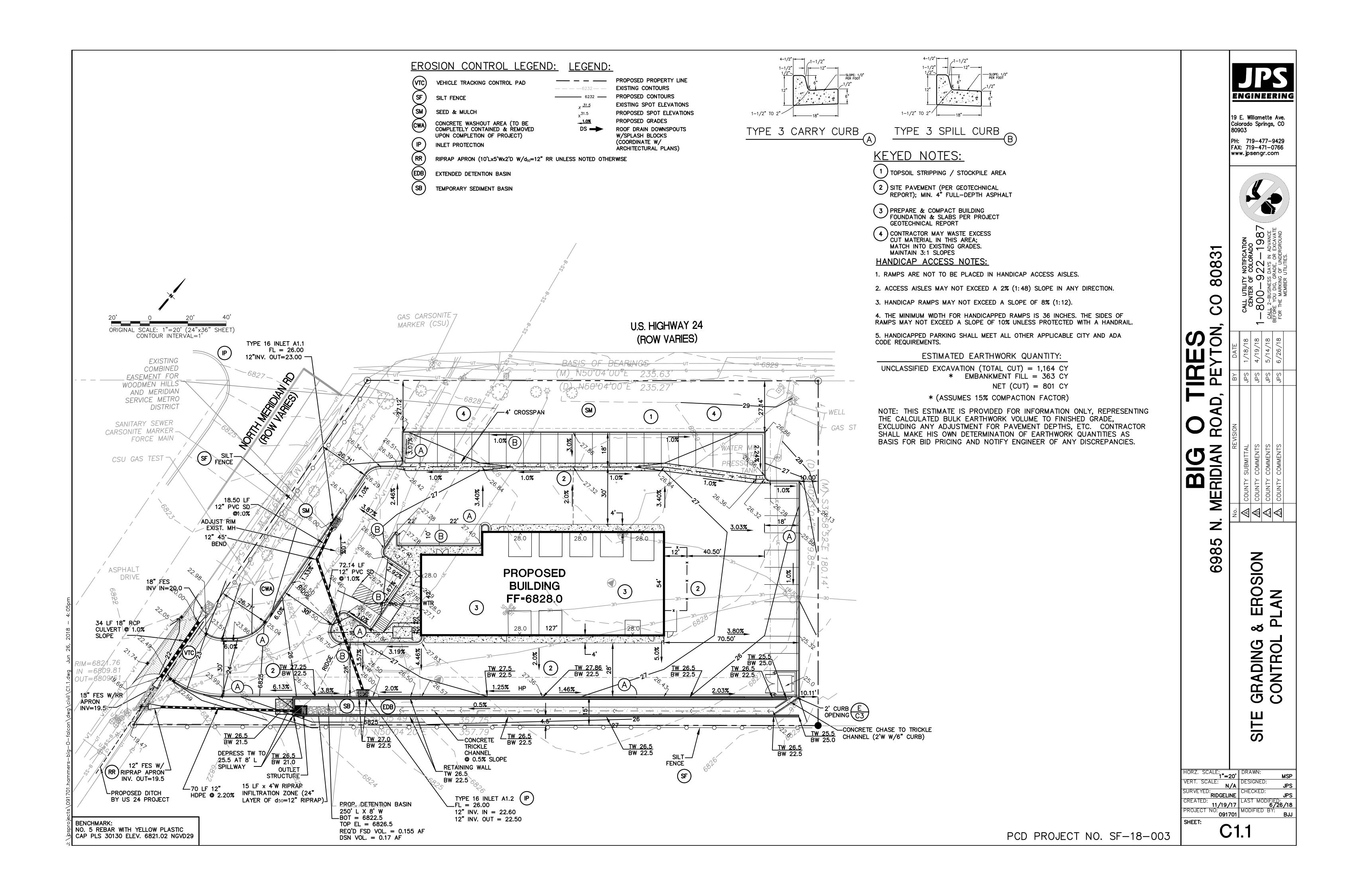
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NOTE: NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF 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.

**BENCHMARK:** NO. 5 REBAR WITH YELLOW PLASTIC CAP PLS 30130 ELEV. 6821.02 NGVD29

FIRE DEPARTMENT:

Revise to VR-18-010



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

1. Construction may not commence until a Construction Permit is obtained from Planning and Community Development (PCD) and a Preconstruction Conference is held with PCD 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 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 PCD 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)

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

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 permitee 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 soils report for this site has been prepared by Entech Engineering (dated 3/28/18) and 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

#### **GENERAL CIVIL NOTES:**

1. All construction shall meet the following standards & specifications:

\* 2009 International Building Code. \* Pikes Peak Regional Building Code, latest edition.

\* El Paso County Engineering Criteria Manual (ECM), latest edition.

2. The contractor shall be responsible for the notification and field location 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 actual construction.

3. The contractor shall have one (1) signed copy of these approved plans and one (1) copy of the appropriate design and construction

standards and specifications at the job site at all times: a. El paso county engineering criteria manual.

4. Storm drain pipe shall be rcp class iii with class c bedding unless otherwise noted.

5. Stationing is at centerline unless otherwise noted. All elevations are at flowline unless otherwise noted. All dimensions are from face of curb unless otherwise noted. Lengths shown for storm sewer pipes are to center of manhole.

6. Contractor shall coordinate with gas, electric, telephone and cable t.V. Utility suppliers for installation of all utilities. Minimum cover for all dry utilities shall be 36".

7. Contractor shall remove and dispose of all existing structures, debris, waste and other unsuitable fill material found within the limits of

8. Match into existing grades at 3:1 max cut and fill slopes.

9. Revegetation of all disturbed areas shall be done with 4" topsoil and dry land grass seed after fine grading is complete ("foothills seed mix").

10. Erosion control shall consist of silt fence and hay bales as shown on the drawing, and topsoil with grass seed, which will be watered until vegetation has been re-established.

11. The erosion control measures outlined on this plan are the responsibility of the contractor to monitor and replace, regrade, and rebuild as necessary until vegetation is re-established.

12. Contractor shall implement best management practices in a manner that will protect adjacent properties and public facilities from the effects of erosion and sedimentation as a result of construction and earthwork activities within the project site.

13. Additional erosion control measures may be required as determined by site conditions.

14. The contractor will take the necessary precautions to protect existing utilities from damage due to this operation. Any damage to the utilities will be repaired at the contractor's expense, and any service disruption will be settled by the contractor.

15. All backfill, sub-base, and/or base course material shall be compacted per the project geotechnical report and County specifications. 16. Concrete used in curb and gutter, sidewalk, and crosspan construction shall meet County criteria.

17. All finished grades shall have a minimum 1.0% slope to provide positive drainage.

18. Contractor shall obtain all required permits prior to beginning work.

INSTALL BMP'S SITE GRADING SEEDING & MULCHING STABILIZATION

TOTAL DISTURBED AREA: 1.2 ACRES RECEIVING WATERS: <u>FALCON BASIN</u>

#### **EXISTING VEGETATION:** NATIVE GRASSES (APPROXIMATELY 70 PERCENT COVERAGE)

SEEDING & FERTILIZER APPLICATION:

**MULCHING APPLICATION:** 

PERIODIC SITE INSPECTIONS RE-VEGETATION OF EXPOSED SOILS SEDIMENT REMOVAL FROM BMP'S REMOVAL OF BMP'S

Sediment Basin (SB)

SEDIMENT BASIN PLAN

Urban Drainage and Flood Control District

WITHIN 21 DAYS OF GRADING AFTER STABILIZATION ACHIEVED

SEDIMENT BASIN DESIGN DATA

12.5

.\Image\MM-1 Concrete Washout Area\_Page\_3.tiff

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DRAINAGE

AREA (AC)

BASIN I

A1

SC-7

<sup>1</sup>AND AFTER ANY PRECIPITATION OR SNOW MELT EVENT THAT CAUSES SURFACE EROSION.

REACHES ONE HALF THE HEIGHT OF THE BMP OR AT ANY TIME THAT SEDIMENT OR DEBRIS ADVERSELY IMPACTS THE FUNCTION OF THE BMP.

### ESTIMATED TIME SCHEDULE:

JULY, 2018 JULY, 2018 MAY, 2019 AUGUST, 2020

# SEEDING MIX:

<u> </u>		
	<u>A</u>	MOUNT IN PLS
<u>GRASS</u>	<u>VARIETY</u> <u>L</u>	BS. PER ACRE
CRESTED WHEAT GRASS PERENIAL RYE WESTERN WHEATGRASS SMOOTH BROME GRASS SIDEOATS GRAMA	LINN SARTON	2.0 LBS. 3.0 LBS.
0.02.07.10 0.17.11.17.	TOTAL:	16.5 LBS.

DRILL SEED OR HYDRO-SEED PER CDOT SPEC. SECTION 212.

CONFORM TO CDOT SPEC-SECTION 213.

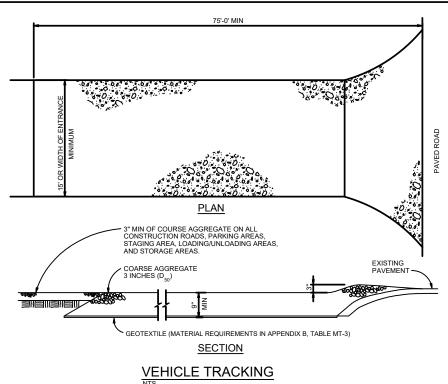
### SEDIMENT CONTROL MAINTENANCE PROGRAM:

**FREQUENCY** 

**BI-WEEKLY** 

<sup>2</sup>ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED WHEN THE SEDIMENT LEVEL

#### SILT FENCE SILT FENCE NOTES INSTALLATION REQUIREMENTS 6. ALONG THE TOE OF FILLS, INSTALL THE SILT AN AREA BEHIND THE FENCE FOR RUNOFF TO PON WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE 5 FEET FROM THE TOE OF THE FILL IS RECOMMENDE SHALL BE SPLICED TOGETHER ONLY AT SUPPORT POST AND SECURELY SEALED. 7 THE HEIGHT OF THE SILT FENCE FROM THE GROUND 3. METAL POSTS SHALL BE "STUDDED TEE" OR "U" TYPE UREACE SHALL BE MINIMUM OF 24 INCHES AND SHA NOT EXCEED 36 INCHES: HIGHER FENCES MAY INPOUN OD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS TION DIMENSION OF 2 INCHES. OLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE. 4. THE FILTER MATERIAL SHALL BE FASTENED SECURELY TO METAL OR WOOD POSTS USING WIRE TIES, OR TO WOOD POSTS WITH 3/4" LONG #9 HEAVY-DUTY STAPLES. THE SILT FENCE GEOTEXTILE SHALL NOT BE STAPLED TO EXISTING TREES. MAINTENANCE REQUIREMENTS WHILE NOT REQUIRED, WIRE MESH FENCE MAY BE USED SUPPORT THE GEOTEXTILE. WIRE FENCE SHALL BE STENED SECURELY TO THE UPSLOPE SIDE OF THE STS USING HEAVY-DUTY WIRE STAPLES AT LEAST 3/4" NG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INEFFECTIVE SILT FENCES SHALL BE PROMPT REPAIRED OR REPLACED. 2. SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCE WHEN IT ACCUMULATES TO HALF I'HE EXPOSED GEOTEXTILE HEIGHT. THE TRENCH A MINIMUM OF 6" AND SHALL NOT EXTEND THAN 3' ABOVE THE ORIGINAL GROUND SURFACE. 3. SILT FENCES SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY. City of Colorado Springs Silt Fence Stormwater Quality Construction Detail and Maintena Requirements



MAINTENANCE REQUIREMENTS

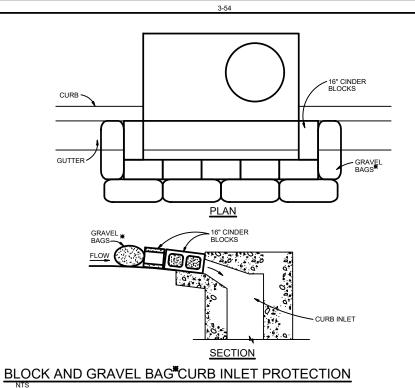
1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM

2. STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.

VEHICLE TRACKING NOTES **INSTALLATION REQUIREMENTS** 1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PA 3. AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOW GEOTEXTILE AND STONE. 4. CONSTRUCTION ROADS, PARKING AREAS, .OADING/UNLOADING ZONES, STORAGE AREAS, AND BTAGING AREAS ARE TO BE STABILIZED.

3. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS. 4. STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY 5. OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING 5. CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE BIDE SLOPES OR ROAD GRADES THAT ARE Figure VT-2 Vehicle Tracking

City of Colorado Springs Stormwater Quality



BLOCK AND GRAVEL BAG CURB INLET PROTECTION NOTES

INSTALLATION REQUIREMENTS 1. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET. 2. CONCRETE BLOCKS ARE TO BE LAID AROUND THE INLET IN A SINGLE ROW ON THEIR SIDES, ABUTTING ONE ANOTHER WITH THE OPEN ENDS OF THE BLOCK 3. GRAVEL BAGS ARE TO BE PLACED AROUND THE CONCRETE BLOCKS CLOSELY ABUTTING ONE ANOTHER SO THERE ARE NO GAPS. 4. GRAVEL BAGS ARE TO CONTAIN WASHED SAND OR GRAVEL APPROXIMATELY 3/4 INCH IN DIAMETER. 5. BAGS ARE TO BE MADE OF 1/4" INCH WIRE MESH (USED WITH GRAVEL ONLY) OR GEOTEXTILE.

 CONTRACTOR SHALL INSPECT INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL. 3. SEDIMENT SHALL BE REMOVED WHEN SEDIMENT HAS ACCUMULATED TO APPROXIMATELY 1/2 THE DESIGN DEPTH OF THE TRAP. 4. INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITH THE DRAINAGE AREA AS APPROVED BY THE CITY.

MAINTENANCE REQUIREMENTS

\*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. City of Colorado Springs Block & Gravel Bag Curb Inlet Protection Stormwater Quality

PCD PROJECT NO. SF-18-003

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



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