

STORMWATER MANAGEMENT PLAN
Springs at Waterview
EL PASO COUNTY, COLORADO

February 20, 2018

PREPARED FOR:

ROS Equity Holdings-Independence, LLC
31 N. Tejon
Suite 500
Colorado Springs, CO 80921

PREPARED BY:

Dakota Springs Engineering
31 N. Tejon Street, Suite 500
Colorado Springs, CO 80903

PROJECT NO. 16-01

PCD File No. SF-16-005

PCD File No. SF-16-017

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Introduction

This Stormwater Management Plan is being submitted on behalf of SWV, LLC for a tract of land known as:

PARCEL A, WATERVIEW PUMP STATION SUBDIVISION EXEMPTION AN EXEMPTION PLAT OF TRACT D OF PAINTED SKY AT WATERVIEW FILING NO. 1, RECORDED JUNE 22, 2015 UNDER RECEPTION NO. 215713634, COUNTY OF EL PASO, STATE OF COLORADO

The purpose of this Stormwater Management Plan (SWMP) is to identify possible pollutant sources that may contribute pollutants to stormwater, and identify Best Management Practices (BMPs) that will reduce or eliminate any possible water quality impacts.

General Location and Description

The site lies in Section 7 of Township 15 South, Range 65 West. The proposed plat is south of Goldfield Drive, north of Bradley Rd, east of Grinnell Boulevard and west of Escanaba Drive. The site is currently zoned A-35 and will be rezoned as RS-5000 and planned for residential development.

Other development in the area includes single family residential development directly east in Painted Sky at Waterview and commercial development north of Goldfield Drive, north of the site.

The proposed site encompasses 15.67 acres. The topography of the site and surrounding area is typical of a high desert; short prairie grass and weeds with slopes generally ranging from 1% to 9%. The area generally drains to the west. This development is in the Windmill Gulch Drainage Basin.

Description of Construction

Construction will consist of site grading, utility installation, and road paving. The majority of the site will be disturbed. Erosion control will be provided prior to construction.

Phasing

All of the site will be graded at one time due to the need to balance the site. There will be no phased construction.

The site will be graded initially as part of the Early Grading Permit issued by El Paso County with the Springs at Waterview Preliminary Plan approval.

Work on the property will continue with Springs at Waterview Final Plat approval.

Once the site is graded and Final Plat is approved, utility construction will begin on the north half and will continue to the south half. Road construction and paving will follow the same pattern; start on the north and move to the south.

Description of Drainage Conveyance

All of the site drains to the west. Storm sewer facilities will be installed throughout the site and streets. Storm flow will be collected and conveyed to an existing 72” pipe under Grinnell Boulevard. This existing 72” pipe conveys storm water to an existing Detention Pond constructed for this site and other development to the east. This pond detains flows and then discharges to Windmill Gulch

Steps for Construction

	<u>Estimated Start</u>	<u>Estimated End</u>
• Clearing and grubbing	May 1, 2018	June 1, 2018
• Rough grading for lots and roads	May 15, 2018	June 15, 2018
• Utility Installation	June 1, 2018	Aug15, 2018
• Final grading, curb and gutter and paving	Sept 1, 2018	Oct 30, 2018
• Final Stabilization		May 1, 2019

Estimates of Excavation

The proposed site encompasses 15.67 acres. Approximately 15 acres of the site will be graded during construction activities. Approximately 35,000 yards of soil will be excavated and placed all within the site boundary.

Soil Properties

The site is comprised of several different soil types. From the Soil Survey of El Paso County, the site falls into the following soil types:

1. “3” Ascalon sandy loam, 3 to 9 percent slopes.
2. “8” Blakeland loamy sand, 1 to9 percent slopes.
3. “97” Truckton sandy loam, 3 to 9 percent slopes.

The Blakeland and Truckton soils are classified at Hydrological Group A and the Ascalon soil is classified as Hydrological Group B. Note: “#” indicates Soil Conservation Survey soil classification number.

Estimated Runoff Coefficients

Average Prior to Construction	C5=0.08 and C100=0.35
Average After Construction	C5=0.49 and C100=0.60

Potential for soil erosion during construction is moderate and focused primarily on the steep slopes. The erosion control plan includes measures to reduce this potential. A sedimentation basin is located just above the 72" culvert under Grinnell Boulevard to reduce or eliminate soil leaving the site. The 72" culvert is the primary drainage structure for the site; the storm sewer will eventually be connected to this structure. The 72" culvert drains directly to an existing detention pond located west of Grinnell Boulevard.

Vegetation

The topography of the site and surrounding area is typical of a high desert; short prairie grass and weeds with slopes generally ranging from 1% to 9%. The estimated vegetative coverage is about 80%. There are no mature trees on site. The surrounding land use is predominantly residential development. The site is currently vacant.

Pollutants

During construction, the largest possible source of non-stormwater pollution will be during equipment refueling operations. The contractor shall be responsible for any spill cleanup while refueling, in accordance with applicable local, county and state regulations. The contractor will also be responsible for cleanup of any off-site vehicle tracking on paved roads. Tracking control will be provided at the entrance to the site. No other source of pollution such as vehicle washing, chemical storage or waste disposal is anticipated. No batch plants will be onsite.

After construction any pollutants will be captured in the Waterview Detention Pond west of Grinnell Boulevard; specifically in the fore bay and will be dealt with as part of regular maintenance by the Waterview I Metropolitan District.

Discharge

There are no anticipated non-stormwater components of the discharge. The receiving waters for this discharge are Windmill Creek, Fountain Creek and ultimately the Arkansas River.

Grading and Erosion Control Plan

A map is provided with this SWMP application that details the site, limits of construction and erosion control measures. This map will be used by the contractor to track installation, maintenance and removal of BMP's during construction; including any field changes that are required during construction.

Best Management Practices

Structural BMP's

Silt fences will be installed prior to any grading occurring on the site. The silt fence will be installed in the areas shown on the provided map. Vehicle tracking control will be provided at the entrances to the site at Escanaba Drive and Bradley Road. As construction

moves forward and storm sewer inlet protection will be installed to help control sediment leaving the site.

A Sedimentation Basin will be installed just upstream of the 72" culvert until the storm sewer system is installed and the site transitions to inlet protection. The drainage report and Grading and Erosion Control plan provides details for the construction of this basin.

Non structural BMP's

Non-structure practices to control erosion and sedimentation will include reseeded ground cover in disturbed areas according to the erosion control plan. Seeding of bank slopes and mulching along steep embankments will be performed as required. Seeding of disturbed areas will be mitigated until growth has reached 70% of pre-disturbed levels: $.7 \times .8 = 56\%$

Material Handling and Spill Prevention

The most probable source of non-stormwater pollution is refueling and daily maintenance operations. If mobile fuel trucks are used to service equipment, absorbent materials and containers for the storage of used absorbent material will be close by. If a fuel tank is left on site, berms will be built around the tank to capture any spilled fuel. Again, absorbent materials and their containers will be on hand.

Final Stabilization and Long Term Storm Water Management

The silt fence installed on site will not be removed until the site is stabilized and the entire site is established with vegetation growth of 70% of pre-disturbed levels: $.7 \times .8 = 56\%$.

Other Controls

There are several best management practices that can be employed to prevent or mitigate the source of pollutants and contamination of stormwater runoff. Some of these are:

- All refuse dumpsters and receptacles shall be equipped with functional lids to prevent rain and snow from entering.
- Storage containers, drums and bags shall be stored away from direct traffic routes to prevent accidental spills.
- Empty drums shall be covered to prevent collection of precipitation.
- Containers shall be stored on pallets or other dunnage to prevent corrosion of containers, which can result when containers come in contact with moisture on the ground.
- Regularly scheduled removal of construction trash and debris.

The contractor is certainly not limited to these good housekeeping measures, and may implement further controls as prudence and good judgement deem necessary.

Inspection and Maintenance

A thorough inspection of the storm water management system shall be performed every 14 days as well as after any rain or snowmelt event that causes surface erosion:

- Erosion of channels and side slopes shall be repaired.
- Silt fences shall be cleaned whenever sediment has reached a depth of 6" at the fence, and broken wooden parts or torn fabric shall be repaired or replaced.
- Any accumulated trash or debris shall be removed from the site.
- Sedimentation basin shall be cleaned when sediment has reached a depth of 6-inches.
- Inspections will include the existing detention pond west of Grinnell Boulevard where the 72" storm system discharges. Any sediment leaving the site and being trapped by this existing pond will be removed from the pond/fore bay.

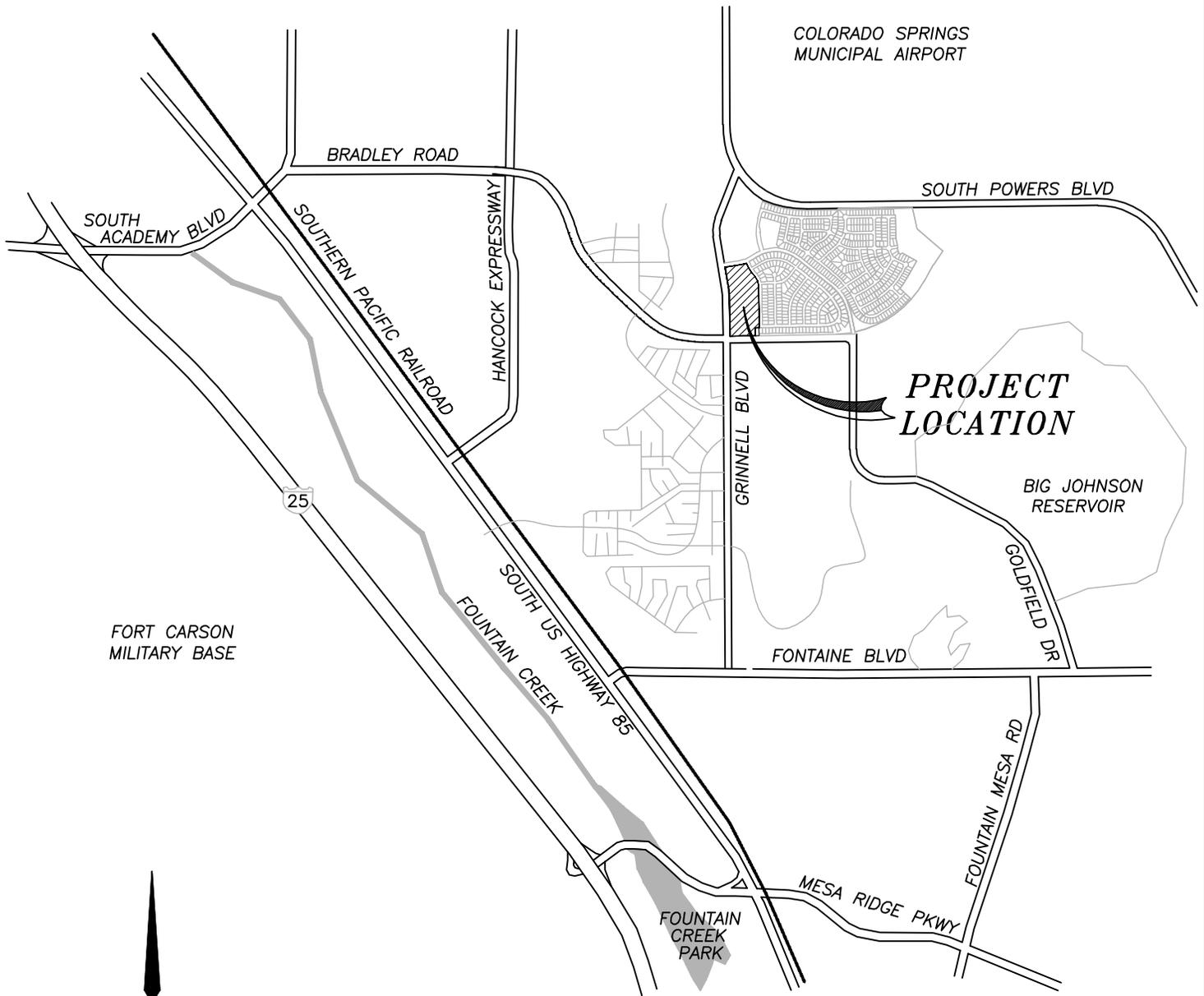
An Inspection and Maintenance Log follows this Storm Water Management Plan.

SWMP Revisions

Revisions to the SWMP will occur from time to time as construction proceeds. The contractor will be responsible for revisions to the plan to include the following:

1. Changes to the plan will be tracked by marking changes on the plan with date and note of the responsible party requesting/requiring the change.
2. Dates and responsible party for addition or removal of BMP's will be noted on the plan.
3. If there are any changes the contractor deems to be a significant modification of the approved GEC plan he must contact the owner prior to proceeding.
4. The SWMP will be kept on site and up to date at all times.

Site Map and Erosion Control Plan



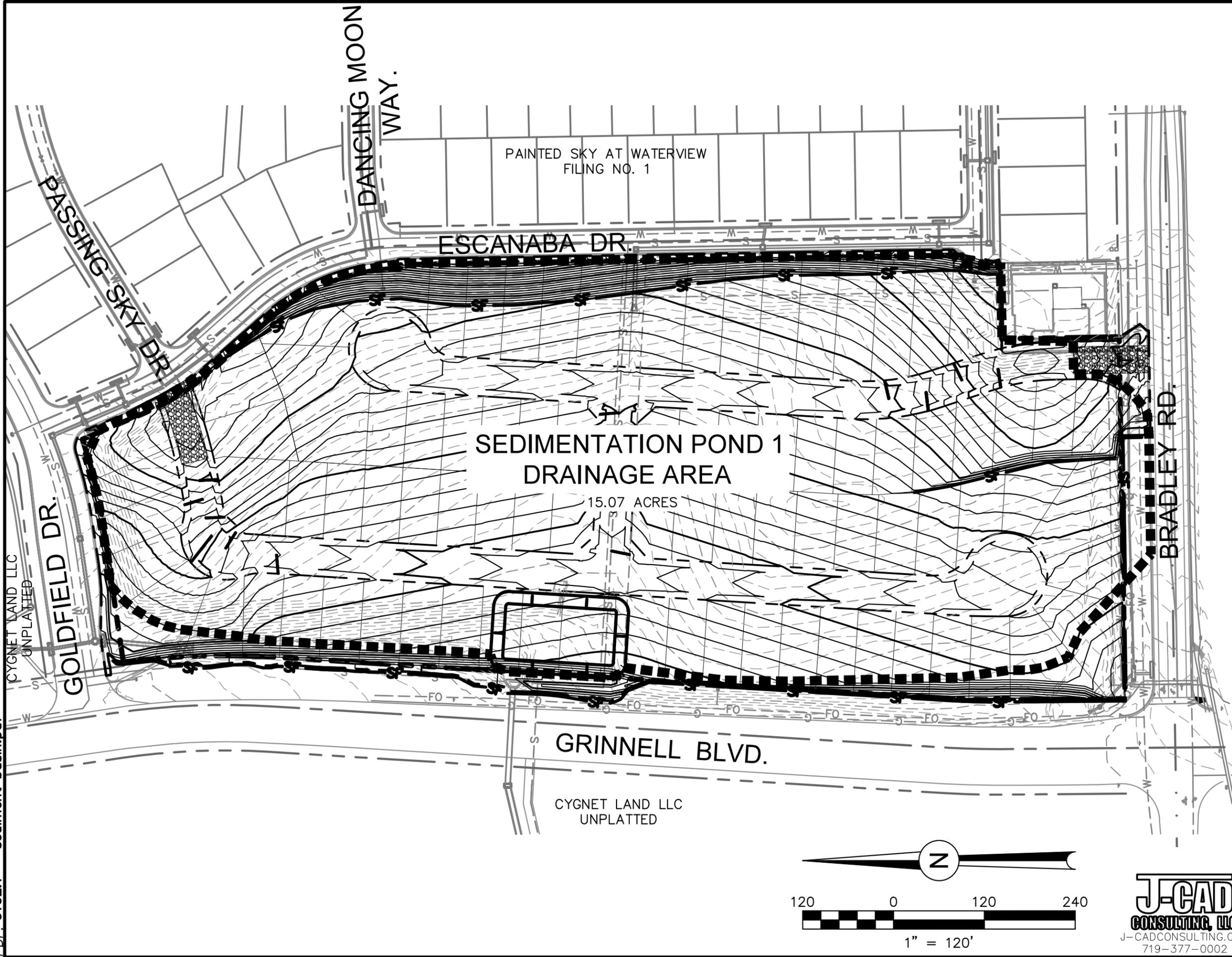
**THE SPRINGS AT WATERVIEW
VICINITY MAP**

DSE *Dakota Springs
Engineering*

31 NORTH TEJON, SUITE 500
COLORADO SPRINGS, CO 80903
TEL: (719) 227-7388
FAX: (719) 227-7392

EXHIBIT

PROJECT NO. 0001-02-16-01



DSE

Dakota Springs
Engineering

31 N. TEJON, SUITE 500
COLORADO SPRINGS, CO 80903
P: (719) 227-7388
F: (719) 227-7392

SPRINGS AT WATERVIEW

SEDIMENTATION BASIN EXHIBIT

JOB NO. 0102.1

DESIGNED BY: JUM DATE: 3/5/18
 DRAWN BY: JUM DATE: 3/5/18
 CHECKED BY: DATE:

48 HOURS BEFORE YOU DIG,
CALL UTILITY LOCATORS

1-800-922-1987

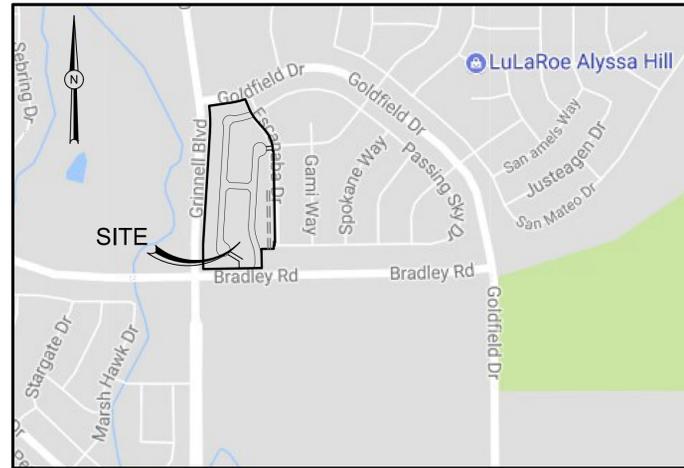
CITY OF COLORADO SPRINGS DEPT. OF UTILITIES
GAS, ELECTRIC, WATER AND WASTEWATER

J-CAD
CONSULTING, LLC

J-CADCONSULTING.COM
719-377-0002

GRADING AND EROSION CONTROL PLANS SPRINGS AT WATERVIEW

EL PASO COUNTY, STATE OF COLORADO



LOCATION MAP

NTS



VICINITY MAP

NTS

LEGAL DESCRIPTION

KNOW ALL MEN BY THESE PRESENTS:

THAT WATERVIEW INVESTMENTS LLC, BEING THE OWNER OF THE FOLLOWING DESCRIBED PARCEL OF LAND:

THAT INCLUDES:

PARCEL A, WATERVIEW PUMP STATION SUBDIVISION EXEMPTION AN EXEMPTION PLAT OF TRACT D OF PAINTED SKY AT WATERVIEW FILING NO. 1, RECORDED JUNE 22, 2015 UNDER RECEPTION NO. 215713634, COUNTY OF EL PASO, STATE OF COLORADO.

TOTAL AREA CONTAINS 15.68 ACRES, MORE OR LESS.

BASIS OF BEARING

BEARINGS ARE BASED IN THE SOUTHERLY LINE OF THE NORTHWEST QUARTER OF SECTION 7, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6th PRINCIPAL MERIDIAN. SAID LINE IS MONUMENTED ON THE EAST END BY A 3 1/4" ALUMINUM CAP, LS# 17496 AND ON THE WEST END BY A 3 1/4" ALUMINUM CAP, LS# 17496 AND IS ASSUMED TO BEAR S89°01'29"W.

BENCHMARK

BENCHMARK FOR THIS SITE IS CSU FIMS MONUMENT "5501V", A RAILROAD SPIKE SET IN CONCRETE NEXT TO A RAILROAD RAIL FENCE POST SOUTHWEST OF A 90° CURVE IN POWERS BOULEVARD. SAID POINT APPARENTLY MONUMENTS THE CORNER COMMON TO SECTIONS 6 AND 7, T15S, R65W, AND SECTIONS 1 AND 12, T15S, R66W OF THE 6TH P.M.

ELEVATION = 5905.44

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 FOR SEPARATELY BUT IS INCLUDED IN THE COST OF THE PROJECT.

OWNER/DEVELOPER

SWV, LLC
31 N. TEJON STREET, SUITE 500
COLORADO SPRINGS, CO 80903
719-377-0244
CONTACT: P.A. KOSCIELSKI

ENGINEER/PLANNER

DAKOTA SPRINGS ENGINEERING, LLC
31 N. TEJON, SUITE 500
COLORADO SPRINGS, CO 80903
719-227-7388
CONTACT: CHARLES K. COTHERN, P.E.

EL PASO COUNTY

PLANNING AND COMMUNITY DEVELOPMENT
2880 INTERNATIONAL CIRCLE, SUITE 110
COLORADO SPRINGS, COLORADO 80910
719-520-6695

SECURITY FIRE PROTECTION DISTRICT

400 SECURITY BOULEVARD
SECURITY, COLORADO 80911
719-392-7121

WATER/SANITARY

COLORADO SPRINGS UTILITIES
SECURITY WATER AND SANITATION DISTRICTS
231 SECURITY BOULEVARD
COLORADO SPRINGS, COLORADO 80921
719-392-3475

GAS

COLORADO SPRINGS UTILITIES
1521 HANCOCK EXPRESSWAY
COLORADO SPRINGS, COLORADO 80903
719-668-8111

ELECTRIC

COLORADO SPRINGS UTILITIES
1521 HANCOCK EXPRESSWAY
COLORADO SPRINGS, COLORADO 80903
719-668-8111

TELEPHONE

CENTURYLINK
7925 INDUSTRY ROAD
COLORADO SPRINGS, COLORADO 80939
719-278-4651

CABLE

COMCAST
P.O. BOX 173838
DENVER, COLORADO 80217
970-641-4774

DEVELOPER'S STATEMENT

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

BUSINESS NAME: SWV, LLC.

BY: P.A. KOSCIELSKI

TITLE: MANAGER

ADDRESS: 31 N. TEJON, SUITE 500
COLORADO SPRINGS, CO 80903

EL PASO COUNTY CONSTRUCTION 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 MANUALS VOL. 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.
COUNTY ENGINEER/ECM ADMINISTRATOR

ENGINEER'S APPROVAL

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 NEGLIGENT ACTS, ERRORS, OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

CHARLES K. COTHERN, P.E. 24997
FOR OR ON BEHALF OF DAKOTA SPRINGS ENGINEERING



31 N. TEJON, SUITE 500
COLORADO SPRINGS, CO 80903
P: (719) 227-7388
F: (719) 227-7392

DSE Dakota Springs Engineering

PROJECT SPRINGS AT WATERVIEW

SHEET TITLE TITLE SHEET

FROM . TO .

JOB NO. 0102.1 SHEET 1 OF 7

PCD NO. SP-16-005

REVISIONS:		
NO.	DESCRIPTION	DATE

ENGINEER:
DESIGNED BY: JMM DATE: 3/1/18
DRAWN BY: JMM DATE: 3/1/18
CHECKED BY: DATE:

48 HOURS BEFORE YOU DIG,
CALL UTILITY LOCATORS
1-800-922-1987
CITY OF COLORADO SPRINGS DEPT. OF UTILITIES
GAS, ELECTRIC, WATER AND WASTEWATER

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

- CONSTRUCTION MAY NOT COMMENCE UNTIL A CONSTRUCTION PERMIT IS OBTAINED FROM DEVELOPMENT SERVICES AND A PRECONSTRUCTION CONFERENCE IS HELD WITH DEVELOPMENT SERVICES INSPECTIONS.
- 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.
- 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.
- A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. 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.
- ONCE THE ESQCP HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL BMP'S AS INDICATED ON THE DEC. 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.
- 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 BMP'S SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND ESTABLISHED.
- 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.
- ALL PERSONS ENGAGED IN EARTH DISTURBANCE SHALL IMPLEMENT AND MAINTAIN ACCEPTABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BMP'S 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).
- ALL TEMPORARY EROSION CONTROL FACILITIES INCLUDING BMP'S 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.
- 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.
- 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.
- 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.
- EROSION CONTROL BLANKETING IS TO BE USED ON SLOPES STEEPER THAN 3:1.
- 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.
- VEHICLE TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFFSITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- 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.
- 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.
- 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.
- 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.
- 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.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER OR IN THE DITCHLINE.
- 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.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO ACTUAL CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY KUMAR AND ASSOCIATES AND SHALL BE CONSIDERED A PART OF THESE PLANS.
- 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

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION

- 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 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD LOCATIONS 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).
- 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:
 - EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
 - CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
 - COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
 - CDOT M & S STANDARDS
- 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 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. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
- 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.
- CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (PCD) - INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
- IT IS THE CONTRACTOR'S 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.
- 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.
- ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.
- 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.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- 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.
- SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DOT AND MUTCD CRITERIA. [IF APPLICABLE, ADDITIONAL SIGNING AND STRIPING NOTES WILL BE PROVIDED.]
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY PUBLIC SERVICES DEPARTMENT, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
- 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 NOTES

- ALL WORK SHALL COMPLY WITH THE CODES AND POLICIES FOR EL PASO COUNTY.
- EXISTING TOPOGRAPHIC INFORMATION SHOWN ON THIS GRADING PLAN WAS OBTAINED FROM A TOPOGRAPHIC SURVEY AND PREVIOUS CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO EXAMINE THE SITE AND BE FAMILIAR WITH THE EXISTING CONDITIONS.
- DEPTH OF MOISTURE-DENSITY CONTROL FOR THIS PROJECT SHALL BE AS DICTATED BY THE GEOLOGIC HAZARD STUDY PREPARED BY ENTECH ENGINEERING CONSULTANTS, INC. DATED 3/15/17
- THE CONTRACTOR IS RESPONSIBLE FOR THE RE-ESTABLISHMENT OF ALL SURVEY MONUMENTS DISTURBED WITHIN THE PROJECT LIMITS.
- THE CONTRACTOR SHALL PROTECT ALL WORK AREAS AND FACILITIES FROM FLOODING AT ALL TIMES. AREAS AND FACILITIES SUBJECT TO FLOODING, REGARDLESS OF THE SOURCE OF WATER, SHALL BE PROMPTLY DEWATERED AND RESTORED.
- PRIOR TO PAVING OPERATIONS. THE ENTIRE SUBGRADE SHALL BE INSPECTED IN ACCORDANCE WITH THE GEOLOGIC HAZARD STUDY PREPARED BY ENTECH ENGINEERING CONSULTANTS, INC. DATED 3/15/17.
- SUBGRADE MATERIALS DEEMED UNSUITABLE BY THE GEOLOGIC HAZARD STUDY PREPARED BY ENTECH ENGINEERING CONSULTANTS, INC. DATED 3/15/17 SHALL BE EXCAVATED, DISPOSED OF AND REPLACED WITH APPROVED MATERIALS.
- FILL SHALL BE PLACED IN ACCORDANCE WITH THE GEOLOGIC HAZARD STUDY PREPARED BY ENTECH ENGINEERING CONSULTANTS, INC. DATED 3/15/17.
- 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:
 - HAY BALE BARRIERS WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.
 - SILT FENCE WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.
 - TEMPORARY SEDIMENTATION BASINS WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.
 - MULCHING AND SEEDING OF EXCESSIVE SLOPED AREAS AS NEEDED OR AS DIRECTED BY THE ENGINEER.
 - TEMPORARY VEHICLE TRACKING CONTROL AS NEEDED AND/OR DIRECTED BY THE ENGINEER.
 - CONCRETE WASH AREAS.
 - INLET PROTECTION.
 THESE AND ALL EROSION CONTROL BEST MANAGEMENT PRACTICES AS SHOWN IN THE GRADING AND EROSION CONTROL PLANS SHALL BE STRICTLY ADHERED TO.
- FINISHED CONTOURS/SPOT ELEVATIONS HEREON REPRESENT FINISHED GRADES. ALL PAVEMENT SUBGRADES ARE BASED ON THE COMPOSITE ASPHALT PAVEMENT RECOMMENDATIONS MADE IN THE "GEOTECHNICAL STUDY" FOR THIS PROJECT.
- ALL GRADING SHALL CONFORM TO THE GEOTECHNICAL RECOMMENDATIONS FOR SPRINGS AT WATERVIEW PREPARED BY ENTECH ENGINEERING CONSULTANTS, INC. DATED 3/15/17.
- THERE MAY BE SOME TOPSOIL WITHIN SPRINGS AT WATERVIEW THAT IS NOT SUITABLE FOR RE-USE. CONTRACTOR SHALL AMEND THE TOPSOIL AS NECESSARY AND RE-SPREAD IN ACCORDANCE WITH THE GEOTECHNICAL RECOMMENDATIONS. IF TOPSOIL CANNOT BE AMENDED IT SHALL BE USED AS FILL WHERE NO FUTURE STRUCTURES OR ROADS WILL BE BUILT.

PDF: 0102-1 - GRADING.PDF

REVISIONS:		
NO.	DESCRIPTION	DATE

ENGINEER:
DESIGNED BY: JJM DATE: 3/2/18
DRAWN BY: JJM DATE: 3/2/18
CHECKED BY: _____ DATE: _____

48 HOURS BEFORE YOU DIG,
CALL UTILITY LOCATORS
1-800-922-1987
CITY OF COLORADO SPRINGS DEPT. OF UTILITIES
GAS, ELECTRIC, WATER AND WASTEWATER



DSE *Dakota Springs Engineering*

31 N. TEJON, SUITE 500
COLORADO SPRINGS, CO 80903
P: (719) 227-7388
F: (719) 227-7392

PROJECT SPRINGS AT WATERVIEW

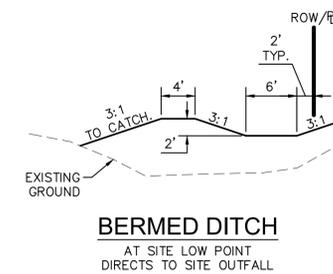
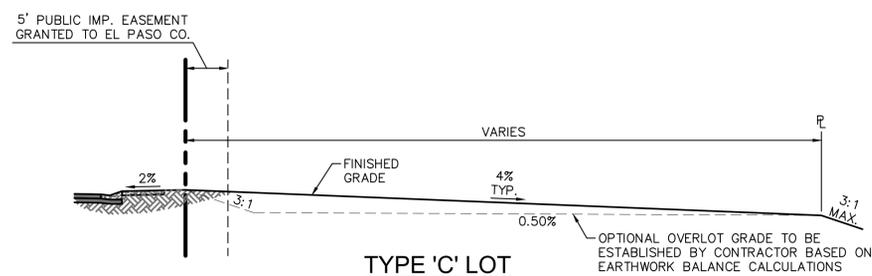
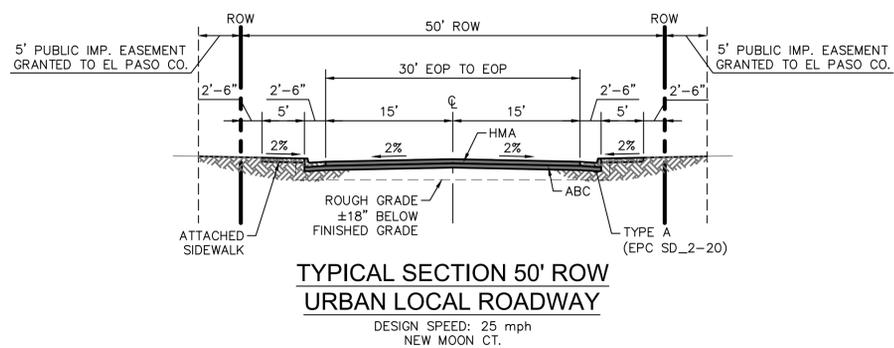
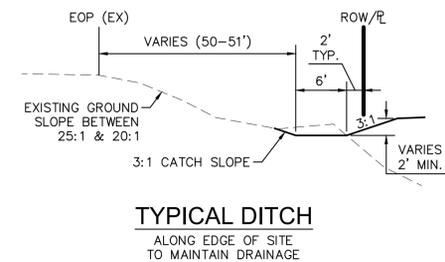
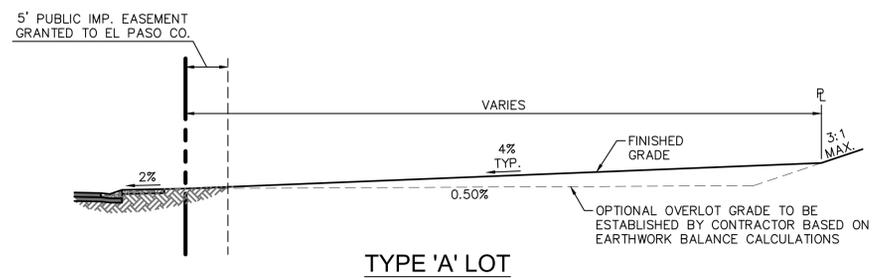
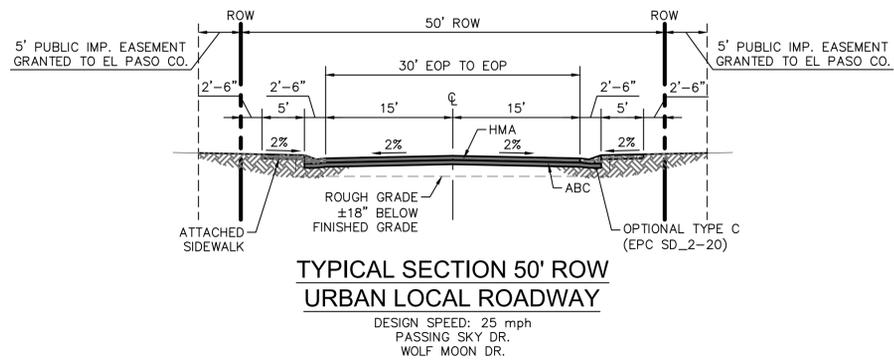
SHEET TITLE GENERAL NOTES

FROM _____ TO _____

JOB NO. 0102.1 SHEET 2 OF 7



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719-377-0002



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REVISIONS:		
NO.	DESCRIPTION	DATE

ENGINEER:
DESIGNED BY: JJM DATE: 3/2/18
DRAWN BY: JJM DATE: 3/2/18
CHECKED BY: _____ DATE: _____

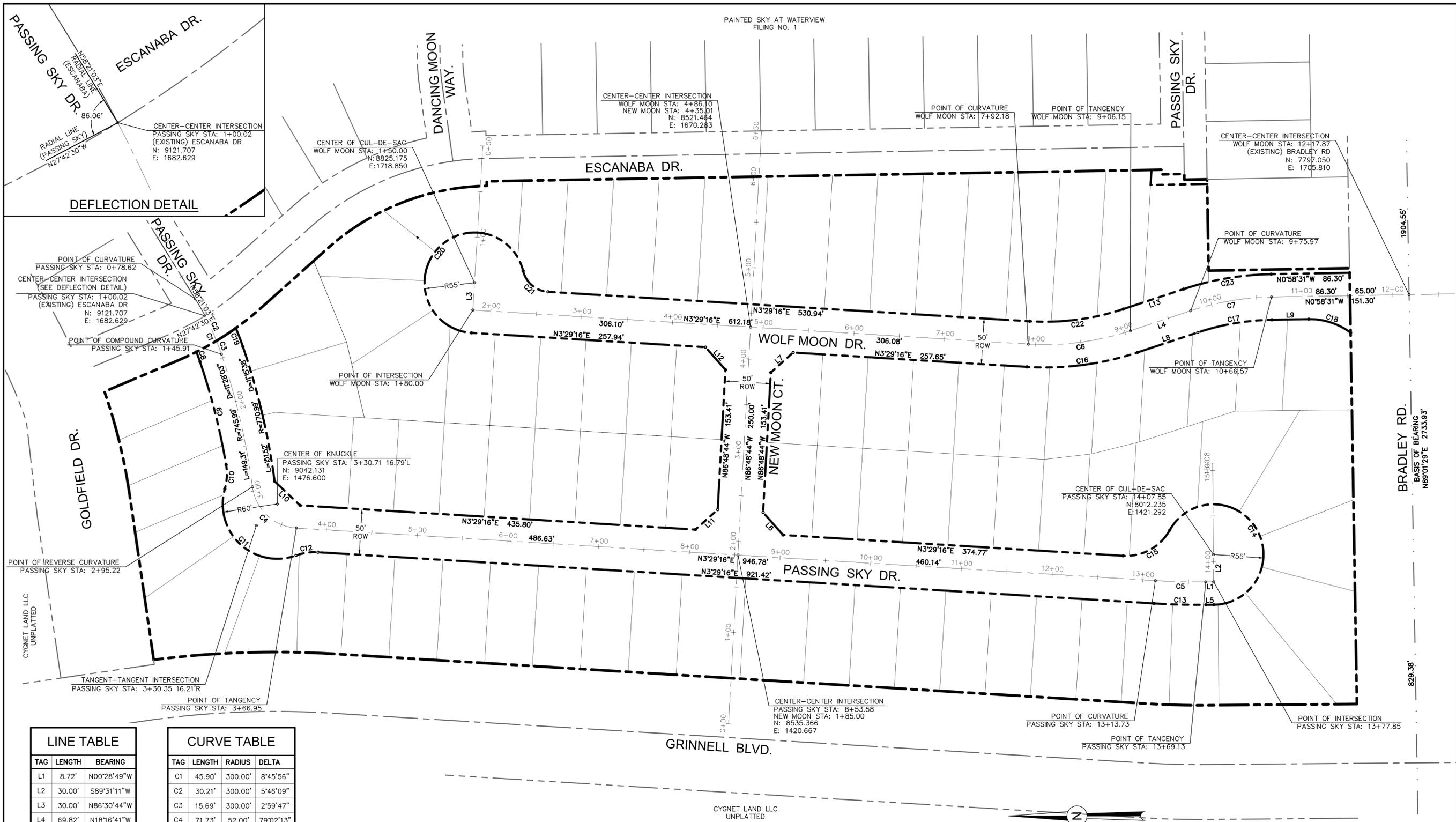
48 HOURS BEFORE YOU DIG,
CALL UTILITY LOCATORS
1-800-922-1987
CITY OF COLORADO SPRINGS DEPT. OF UTILITIES
GAS, ELECTRIC, WATER AND WASTEWATER

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CONSULTING, LLC
J-CADCONSULTING.COM
719-377-0002

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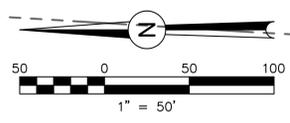
31 N. TEJON, SUITE 500
COLORADO SPRINGS, CO 80903
P: (719) 227-7388
F: (719) 227-7392

PROJECT SPRINGS AT WATERVIEW
SHEET TITLE GENERAL DETAILS
FROM _____ TO _____
JOB NO. 0102.1 SHEET 3 OF 7



LINE TABLE		
TAG	LENGTH	BEARING
L1	8.72'	N00°28'49"W
L2	30.00'	S89°31'11"W
L3	30.00'	N86°30'44"W
L4	69.82'	N18°16'41"W

CURVE TABLE			
TAG	LENGTH	RADIUS	DELTA
C1	45.90'	300.00'	8°45'56"
C2	30.21'	300.00'	5°46'09"
C3	15.69'	300.00'	2°59'47"
C4	71.73'	52.00'	79°02'13"
C5	55.40'	800.00'	3°58'05"
C6	113.97'	300.00'	21°45'57"
C7	90.60'	300.00'	17°18'10"



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REVISIONS:		
NO.	DESCRIPTION	DATE

ENGINEER:
 DESIGNED BY: JJM DATE: 3/28/18
 DRAWN BY: JJM DATE: 3/28/18
 CHECKED BY: _____ DATE: _____

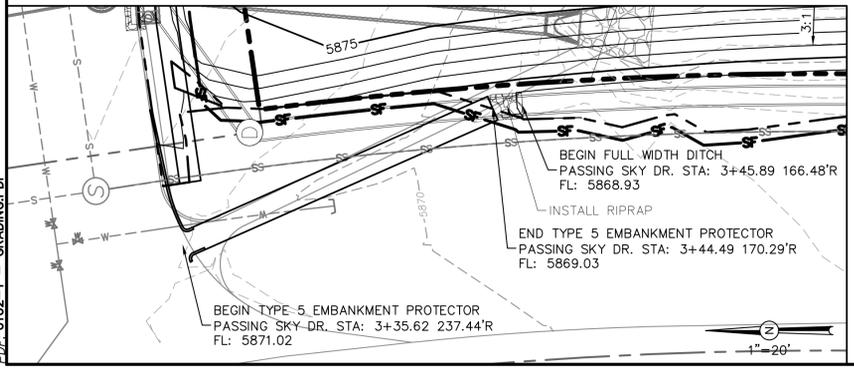
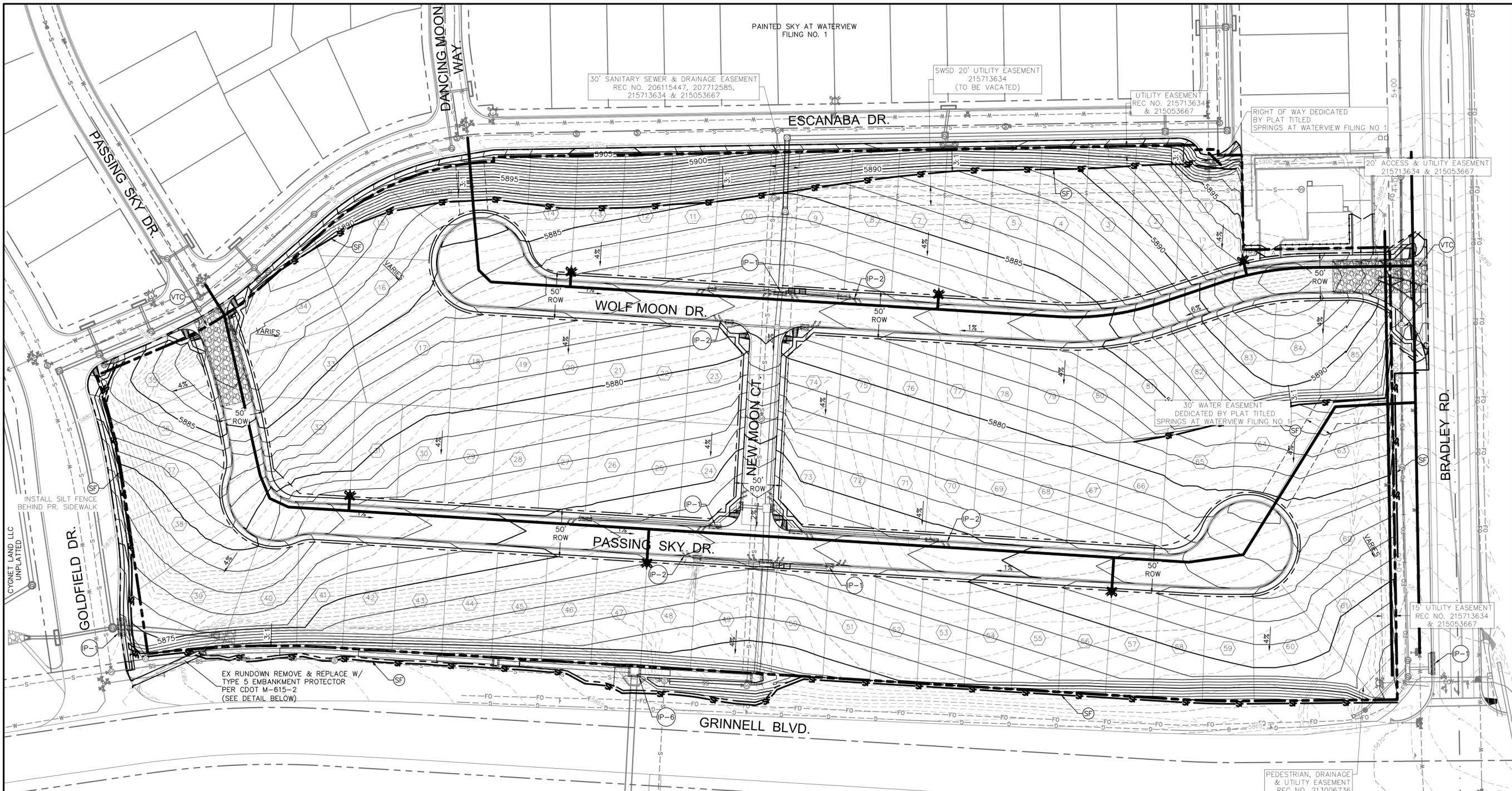
48 HOURS BEFORE YOU DIG,
 CALL UTILITY LOCATORS
1-800-922-1987
 CITY OF COLORADO SPRINGS DEPT. OF UTILITIES
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DSE *Dakota Springs Engineering*

31 N. TEJON, SUITE 500
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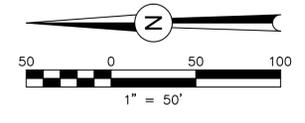
PROJECT SPRINGS AT WATERVIEW
 SHEET TITLE HORIZONTAL CONTROL PLAN
 FROM _____ TO _____
 JOB NO. 0102.1 SHEET 4 OF 7





LEGEND

EXISTING MAJOR CONTOUR	---
EXISTING MINOR CONTOUR	- - - -
PROPOSED MAJOR CONTOUR	—
PROPOSED MINOR CONTOUR	- - -
SILT FENCE	—SF—
VEHICLE TRACKING	[Pattern]



REVISIONS:

NO.	DESCRIPTION	DATE

ENGINEER:
 DESIGNED BY: **JJM** DATE: **3/3/18**
 DRAWN BY: **JJM** DATE: **3/3/18**
 CHECKED BY: _____ DATE: _____

48 HOURS BEFORE YOU DIG,
 CALL UTILITY LOCATORS
1-800-922-1987
 CITY OF COLORADO SPRINGS DEPT. OF UTILITIES
 GAS, ELECTRIC, WATER AND WASTEWATER

DSE *Dakota Springs Engineering*

31 N. TEJON, SUITE 500
 COLORADO SPRINGS, CO 80903
 P: (719) 227-7388
 F: (719) 227-7392

PROJECT **SPRINGS AT WATERVIEW**

SHEET TITLE **GRADING & EROSION CONTROL PLAN**

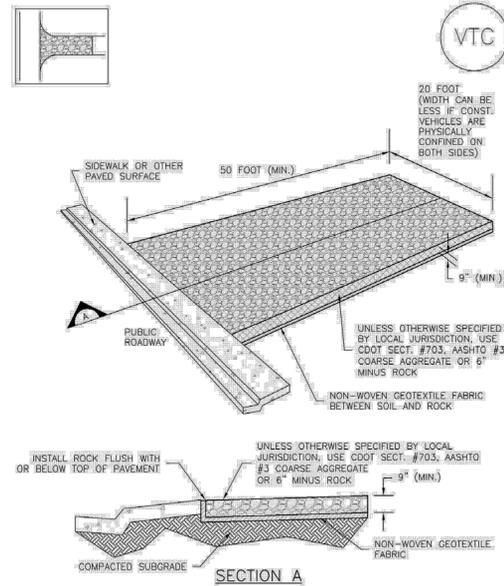
FROM _____ TO _____

JOB NO. **0102.1** SHEET **5** OF **7**

PDF: 0102-1 - GRADING.PDF

Vehicle Tracking Control (VTC)

SM-4



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

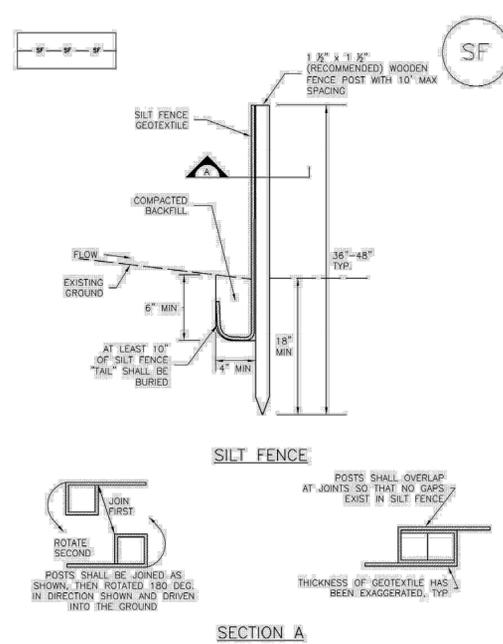
- SEE PLAN VIEW FOR LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S). TYPE OF CONSTRUCTION ENTRANCE(S)/EXIT(S) WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TBM.
- CONSTRUCTION MAT OR TBM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
- A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
- STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.
- A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SHALL BE REAPPLIED OR REPAIRED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.
- SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SKEEPIING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

Silt Fence (SF)

SC-1



SF-1. SILT FENCE

SILT FENCE INSTALLATION NOTES

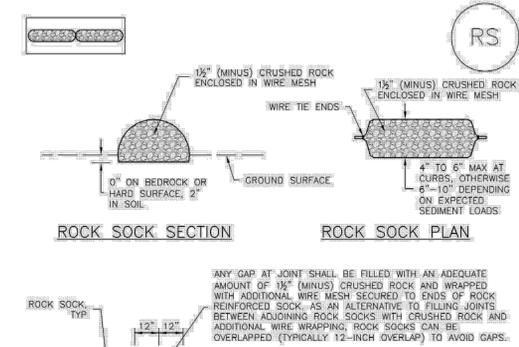
- SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
- A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE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

SILT FENCE MAINTENANCE NOTES

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

Rock Sock (RS)

SC-5



ROCK SOCK PERIMETER CONTROL

ROCK SOCK INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION(S) OF ROCK SOCKS.
- CRUSHED ROCK SHALL BE 1/2" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1/2" MINUS).
- WIRE MESH SHALL BE FABRICATED OF 10 GAGE POLYURETHANE OR EQUIVALENT, WITH A MAXIMUM OPENING OF 1/2", RECOMMENDED MINIMUM ROLL WIDTH OF 48".
- WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2' CENTERS ON ENDS OF SOCKS.
- SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE ROCK ENCLOSURE.

ROCK SOCK MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, OR DAMAGED BEYOND REPAIR.
- SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCKS SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE ROCK SOCK.
- ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
- WHEN ROCK SOCKS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

GRADATION TABLE

SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
NO. 4	100
2"	90 - 100
1 1/2"	20 - 55
3/4"	0 - 15
3/8"	0 - 5

MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M 83. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.

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

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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

PDF: 0102-1 - GRADING.PDF

REVISIONS:		
NO.	DESCRIPTION	DATE

ENGINEER: _____
 DESIGNED BY: **JMM** DATE: **3/2/18**
 DRAWN BY: **JMM** DATE: **3/2/18**
 CHECKED BY: _____ DATE: _____

48 HOURS BEFORE YOU DIG,
 CALL UTILITY LOCATORS
1-800-922-1987
 CITY OF COLORADO SPRINGS DEPT. OF UTILITIES
 GAS, ELECTRIC, WATER AND WASTEWATER

DSE *Dakota Springs Engineering*

31 N. TEJON, SUITE 500
 COLORADO SPRINGS, CO 80903
 P: (719) 227-7388
 F: (719) 227-7392

PROJECT **SPRINGS AT WATERVIEW**

SHEET TITLE **EROSION CONTROL DETAILS (1 OF 2)**

FROM _____ TO _____

JOB NO. **0102.1** SHEET **6** OF **7**



J-CAD CONSULTING, LLC
 719-377-0002

General Permit Application

**EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP)
EL PASO COUNTY DEPARTMENT OF TRANSPORTATION
APPLICATION AND PERMIT**

PERMIT NUMBER _____

APPLICANT INFORMATION

Applicant Contact Information	
Owner	Springs at Waterview
Name (person of responsibility)	Paul Koscielski
Company/Agency	SWV, LLC
Position of Applicant	Manager
Address (physical address, not PO Box)	31 N. Tejon, Suite 500
City	Colorado Springs
State	Colorado
Zip Code	80803
Mailing address, if different from above	
Telephone	719-377-0244
FAX number	
Email Address	
Cellular Phone number	

CONTRACTOR INFORMATION

Contractor	
Name (person of responsibility)	Unknown
Company	Unknown
Address (physical address, not PO Box)	
City	
State	Colorado
Zip Code	
Mailing address, if different from above	
Telephone	
FAX number	
Email Address	
Cellular Phone number	
Erosion Control Supervisor (ECS)*	
ECS Phone number*	
ECS Cellular Phone number*	

*Required for El Paso County Department of Transportation Projects.

PROJECT INFORMATION

Project Specifications	
Project Name	Springs at Waterview
Legal Description	Schedule No. 5507206036 PARCEL A, WATERVIEW PUMP STATION SUBDIVISION EXEMPTION AN EXEMPTION PLAT OF TRACT D OF PAINTED SKY AT WATERVIEW FILING NO. 1, RECORDED JUNE 22, 2015 UNDER RECEPTION NO. 215713634, COUNTY OF EL PASO, STATE OF COLORADO
Address (or nearest major cross streets)	Grinnell Boulevard and Bradley Road
Acreage (total and disturbed)	Total: 15.68 acres Disturbed: 15.68 acres
Schedule	Start of Construction: June 2018 Completion of Construction: December 2018 Final Stabilization: July 2019
Project Purpose	Single family Lots
Description of Project	Grading, Utilities and drainage for 80 single family lots
Tax Schedule Number	5507206036

FOR OFFICE USE ONLY

The following signature from the ECM Administrator signifies the approval of this ESQCP. All work shall be performed in accordance with the permit, the El Paso County Engineering Criteria Manual (ECM) Standards, City of Colorado Springs Drainage Criteria Manual, Volume 2 (DCM2) as adopted by El Paso County Addendum, approved plans, and any attached conditions. The approved plans are an enforceable part of the ESQCP. Construction activity, except for the installation of initial construction BMPs is not permitted until issuance of a Construction permit and Notice to Proceed.

Signature of ECM Administrator: _____ Date _____

1.1 REQUIRED SUBMISSIONS

In addition to this completed and signed application, the following items must be submitted to obtain an ESQCP:

- Permit fees
- Stormwater Management Plan (SWMP) meeting the requirements of DCM2 and ECM either as part of the plan set or as a separate document;
- Cost estimates of construction and maintenance of construction and permanent stormwater control measures (Cost estimates shall be provided on a unit cost basis for all stormwater BMPs);
- Financial surety in an amount agreeable to the ECM Administrator based on the cost estimates of the stormwater quality protection measures provided. The financial surety shall be provided in the form of a Letter of Credit, Surety with a Bonding Company, or other forms acceptable to El Paso County;
- Operation and Maintenance Plan for any proposed permanent BMPs; and
- Signed Private Stormwater Quality Structural Best Management Practices Agreement and Easement, if any private permanent BMPs are proposed.

1.2 RESPONSIBILITY FOR DAMAGE

The County and its officers and employees, including but not limited to the ECM Administrator, shall not be answerable or accountable in any manner, for injury to or death of any person, including but not limited to a permit holder, persons employed by the permit holder, persons acting in behalf of the permit holder, or for damage to property resulting from any activities undertaken by a permit holder or under the direction of a permit holder. The permit holder shall be responsible for any liability imposed by law and for injuries to or death of any person, including but not limited to the permit holder, persons employed by the permit holder, persons acting in behalf of the permit holder, or damage to property arising out of work or other activity permitted and done by the permit holder under a permit, or arising out of the failure on the permit holder's part to perform the obligations under any permit in respect to maintenance or any other obligations, or resulting from defects or obstructions, or from any cause whatsoever during the progress of the work, or other activity, or at any subsequent time work or other activity is being performed under the obligations provided by and contemplated by the permit.

To the extent allowed by law, the permit holder shall indemnify, save, and hold harmless the County and its officers and employees, including but not limited to the BOCC and ECM Administrator, from all claims, suits or actions of every name, kind and description brought for or on account of injuries to or death of any person, including but not limited to the permit holder, persons employed by the permit holder, persons acting in behalf of the permit holder and the public, or damage to property resulting from the performance of work or other activity under the permit, or arising out of the failure on the permit holder's part to perform his obligations under any permit in respect to maintenance or any other obligations, or resulting from defects or obstructions, or from any cause whatsoever during the progress of the work, or other activity or at any subsequent time work or other activity is being performed under the obligations provided by and contemplated by the permit, except as otherwise provided by state law. The permit holder waives any and all rights to any type of expressed or implied indemnity against the County, its officers or employees.

1.3 APPLICATION CERTIFICATION

I, as the Applicant or the representative of the Applicant, hereby certify that this application is correct and complete as per the requirements presented in this application and the El Paso County Engineering Criteria Manual and Drainage Criteria Manual, Volume 2 and El Paso County Addendum.

I, as the Applicant or the representative of the Applicant, have read and will comply with all of the requirements of the specified Stormwater Management Plan and any other documents specifying stormwater best management practices to be used on the site including permit conditions that may be required by the ECM Administrator. I understand that the Best Management Practices are to be maintained on the site and revised as necessary to protect stormwater quality as the project progresses. I further understand that a Construction Permit must be obtained and all necessary stormwater quality control BMPs are to be installed in accordance with the SWMP and the El Paso County Engineering Criteria Manual and Drainage Criteria Manual, Volume 2 and El Paso County Addendum before land disturbance begins and that failure to comply will result in a Stop Work Order and may result in other penalties as allowed by law. I further understand and agree to indemnify, save, and hold harmless the County and its officers and employees, including but not limited to the BOCC and ECM Administrator, from all claims, suits or actions of every name, kind and description as outlined in Section 1.2 Responsibility for Damage.

Date: _____

Signature of Applicant or Representative

Print Name of Applicant or Representative

Permit Fee	\$1,900.00	
Surcharge	\$25.00	
Financial Surety	_____	Type of Surety _____
Total	\$_____	