

STORMWATER MANAGEMENT PLAN
Falcon Landing
EL PASO COUNTY, COLORADO

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PREPARED FOR:

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PROJECT NO. PPR-18-053

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Introduction

This Stormwater Management Plan is being submitted on behalf of Falcon Properties, LLC for:

LOT 3 BECKETT AT WOODMEN HILLS FILING 3, 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 13 South, Range 64 West. The proposed plat is south of Woodmen Rd, north of Flower Rd, east of N. Meridian Rd. on McLaughlin Rd. The site is currently zoned CR and planned for commercial development.

Other development in the area includes various commercial developments and a residential development known as Courtyards at Woodmen Hills South, Filing 2.

The proposed site encompasses 1.07 acres. The topography of the site and surrounding area is typical of a high desert; short prairie grass and weeds with generally flat slopes. The area generally drains to the north. This development is in the Falcon Basin.

Description of Construction

Construction will consist of site grading, utility installation, and parking lot paving. The majority of the site, but less than 1 acre, 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. Once the site is graded utility construction will begin from existing stubs on the northeast corner. Parking lot paving will follow moving from west to east.

Description of Drainage Conveyance

The site drains to three locations. The building, parking lot, and the northerly stretch of landscaping all drain to a proposed PLD that drains to an existing Type R inlet along the north access road. This existing inlet conveys storm water to the existing Detention Pond 5 as defined in the Final Drainage Report for Beckett at Woodmen Hills Filing No. 3. The loading dock and landscape just north of said loading dock drain to the access road to the west and runs along the existing curb and gutter to the existing Type R inlet defined

as Design Point 4 in the Final Drainage Report for Beckett at Woodmen Hills Filing No. 3. The remaining landscaped area continues to McLaughlin Rd. McLaughlin Rd. drains to the same Design Point 4 in the Final Drainage Report for Beckett at Woodmen Hills Filing No. 3.

Update Start and Completion Dates.

Steps for Construction

	<u>Estimated Start</u>	<u>Estimated End</u>
• Clearing and grubbing	Jan 1, 2019	Feb 1, 2019
• Rough grading for lots and roads	Jan 15, 2019	Feb 15, 2019
• Utility Installation	Feb 1, 2019	Apr 15, 2010
• Final grading, curb and gutter and paving	May 1, 2019	Jun 30, 2019
• Final Stabilization		Aug 1, 2019

Estimates of Excavation

The proposed site encompasses 1.07 acres. Approximately 0.97 acres of the site will be graded during construction activities. Approximately 1,000 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 type:

1. “19” Columbine gravelly sandy loam, 0 to 3 percent slopes

The Columbine soil is classified at Hydrological Group A. 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 minimal as the site is generally flat. The erosion control plan includes measures to reduce this potential. The connection to the existing Type R is the primary drainage structure for the site; the primary point of connection to the inlet is the outfall structure of the PLD proposed on the northern portion of the site. The inlet drains directly to an existing storm system servicing the surrounding commercial properties.

Vegetation

The topography of the site and surrounding area is typical of a high desert; short prairie grass and weeds. The estimated vegetative coverage is about 65%. There are no mature trees on site. The surrounding land use is predominantly commercial 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 proposed PLD onsite and will be dealt with as part of regular site maintenance.

Discharge

There are no anticipated non-stormwater components of the discharge. The receiving waters for this discharge are the Middle Tributary Falcon Basin 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 entrance to the site from the access road to the north. As construction moves forward and storm sewer inlet protection will be installed to help control sediment leaving the site.

Non structural BMP's

Non-structure practices to control erosion and sedimentation will include reseeded of 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: $.7 \times .65 = 46\%$

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: $.7 \times .65 = 46\%$.

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.

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

Please Include these
(revised) plans.

General Permit Application