STORMWATER MANAGEMENT PLAN (SWMP)
for
FALCON FIRE STATION NO. 3
7030 OLD MERIDIAN ROAD, FALCON, CO 80831

Prepared for:

Falcon Fire Protection District
7030 Old Meridian Road
Peyton, CO 80831

July 20, 2020

Prepared by:

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JPS Project No. 042001
PCD Project No. __-20-___

PPR-20-24

Qualified Stormwater Manager:

Contractor: Hammers Constructors, Inc.
1411 Woolsey Heights
Colorado Springs, CO 80915
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APPENDIX

Grading & Erosion Control (GEC) Plans (incorporated by reference)

General SWMP Notes:

1. There are no existing streams, wetlands, or other surface waters within 50 feet of the construction limits.
2. There are no dedicated asphalt / concrete batch plants proposed.

Address Checklist Item 14

FALCON FIRE STATION NO. 3
7030 OLD MERIDIAN ROAD, FALCON, CO 80831
STORMWATER MANAGEMENT PLAN (SWMP)

June 2020

I. QUALIFIED STORMWATER MANAGER

A. Qualified Stormwater Manager

Contractor: Hammers Constructors, Inc.
1411 Woolsey Heights
Colorado Springs, CO 80915
Attn: Joe Butler (719)-570-1599
JButler@hammersconstruction.com

B. Applicant / Contact Information

Owner/Developer: Falcon Fire Protection District
7030 Old Meridian Road
Colorado Springs, CO 80831

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

II. SPILL PREVENTION AND RESPONSE PLAN

A. 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

B. 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.

III. MATERIALS HANDLING

A. 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.

B. 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.

C. 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, de-greasing 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 ad 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, and concrete pumping and mixer washout waters.

D. Equipment maintenance and fueling: Contractor shall implement appropriate spill prevention and response procedures

E. 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.

IV. POTENTIAL SOURCES OF POLLUTION

Potential pollutant sources will be addressed as follows:

POTENTIAL POLLUTION SOURCES

Potential Pollution Sources	**Possible Site Contributions of Pollutants to Stormwater Discharges**
All disturbed and stored soils	Stockpiles of fill from site excavations, topsoil stockpiles.
Vehicle tracking of sediments	See GEC Plans for vehicle entrance and exits. Vehicle tracking control pads will be installed and maintained at all construction access points.
Management of contaminated soils	No contaminated soils are expected to be encountered.
Loading and unloading operations	Loading and unloading of construction materials
Outdoor storage activities (building material, fertilizers, chemicals, etc.)	Stockpiles and equipment storage areas (no fertilizers, petroleum or chemical products will be stored on-site).
Vehicle and equipment maintenance and fueling	Fueling will occur on-site using mobile equipment (will not be stored on-site). Equipment maintenance will occur off-site.
Significant dust or particulate-generating processes	Vehicle tracking, soil removed from excavation, stockpiles.
Routine maintenance activities involving fertilizers, pesticides, detergents, fuels, solvents, oils, etc.	All equipment maintenance will occur off-site. No fertilizers, pesticides, detergents, and/or solvents will be used or stored on-site.
On-site waste management practices (waste piles, liquid wastes, dumpsters, etc.)	All waste will be removed from site as soon as possible, and disposed of at a permitted off-site disposal site
Concrete truck/equipment washing, including the concrete truck chute and associated fixtures and equipment	Properly contained concrete washout areas may be designated and maintained within the site, based on construction phasing.
Dedicated asphalt and concrete batch plants	No dedicated asphalt or concrete batch plants are planned on-site.

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

Non-industrial waste sources such as worker trash and portable toilets	Worker trash will be removed from the site as soon as possible. Portable toilets will be utilized and maintained as required based on construction phasing.
Other areas or procedures where potential spills can occur	Petroleum releases from equipment are possible.

V. IMPLEMENTATION OF CONTROL MEASURES

Narrative Description of Appropriate Stormwater Controls and Measures

Construction Phasing

Phase 1 – Mobilization, Clearing & Grubbing Operations
Clearing and grubbing will be completed prior to initial overlot grading activities for this site. Perimeter control measures will be installed prior to the start of construction operations. These perimeter controls will include silt fencing and a vehicle tracking control pad.

Phase 2 – Earthwork, Road Grading, and Utility Installation
Major earthwork activities will include overlot grading, foundation over-excavation, backfill, and compaction, utility construction, and rough and final grading for site improvements.

Phase 3 – Building Construction and Final Grading Activities
This phase will include final grading of building sites and landscape areas. Appropriate temporary BMP's will be maintained until vegetation is re-established throughout the site.

Phase 4 – Stabilization
All disturbed areas within the project will be revegetated. The specific revegetation requirements will include the following:

- Landscape plantings – per approved landscape plans
- Native seeding – all other disturbed areas

Phase 5 – Removal of Temporary Control Measures
Temporary sediment control measures shall remain in place until vegetation has been adequately established to prevent erosion from storm runoff. Once adequate vegetation has been established, the temporary erosion control measures will be removed and disposed of off-site.

BMP's for Stormwater Pollution Prevention (See GEC Plans):

Phase	BMP
Clearing and Grubbing necessary for perimeter controls	VTC's
Initiation of perimeter controls	Silt Fence
Remaining clearing and grubbing	
Site Grading	IP / SCL
Extended detention basin (sediment pond during construction)	EDB / SB
Stabilization	SM
Removal of erosion control measures	

Proposed Sequence of Major Activities / Timing Schedule

Item V - Include this table (or similar in GEC Plans

The anticipated start and completion time period of the construction activities is from August 2020 through May 2021. The estimated schedule for erosion control activities is as follows:

Major Activity	Start Date	Control Measures
• Install Initial BMP's:	August 2020	Initial Control Measures
• Site Grading:	August 2020	Interim Control Measures
• Seeding & Mulching:	May 2021	Interim Control Measures
• Final Stabilization:	May 2022	Final Control Measures

Erosion and Sediment Controls:

1) Structural Practices / Control Measures (all structural Control Measures shall conform to ECM / DCM standards and details; see details on Sh. C2.2):
   - Silt fence at toe of slope along downstream limits of disturbed areas
   - Sediment control logs (SCL) along drainage swales
   - Inlet protection (IP) at storm inlets
   - Sediment Basin (SB)
   - Extended Detention Basin (EDB)

Include outlet protection

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

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.
- Street Sweeping: Contractor shall perform street sweeping following storm events and as required to keep adjoining public streets clean.

VI. SITE DESCRIPTION

A. Nature of Construction Activity
- The Falcon Fire Protection District is planning to construct a new Fire Station No. 3 on their existing fire station site at 7030 Old Meridian Road The property is a partially developed 7.2-acre unplatted site (El Paso County Assessor's Parcel No. 53124-00-015) located at the northwest corner of US Highway 24 (US24) and Meridian Road in the Falcon area of El Paso County, Colorado. The property is currently an unplatted tract described as a portion of Section 7, Township 13S, Range 64W, and a portion of Section 12, Township 13S, Range 65W of the 6th P.M., El Paso County, Colorado.
- The proposed Site Development Plan consists of constructing a new 8,382 square-foot fire station, along with associated parking and site improvements. In conjunction with the new fire station building project, the existing fire station building in the northeast corner of the site will be remodeled to serve as an Administration Building.

B. Proposed sequence of major activities:
- Mobilization / implementation of BMP's
- Clearing and grubbing
- Rough grading
- Final grading of building sites and parking areas

C. Total site area = 7.2-acres; Projected disturbed area = 2.4-acres (approx.)

D. Soil erosion potential and potential impacts upon discharge:
- According to the Soil Survey of El Paso County prepared by the Soil Conservation Service (SCS), on-site soils are comprised
- According to the Soil Survey of El Paso County prepared by the Soil Conservation Service (SCS), on-site soils are comprised of Columbine gravelly sandy loam soils, and these well-drained soils are classified as hydrologic soils group "A" (low to moderate erosion hazard)
- Potential impacts upon discharge would include sedimentation clogging and/or adversely affecting downstream waterways and habitat.

E. Existing vegetation on site:
- Native meadow grasses and shrubs (approx. 70% coverage, based on site inspection)

add "visual"

F. Allowable non-stormwater components of discharge: none anticipated

G. Receiving water: Surface drainage from this site will flow southeasterly to the existing grass-lined drainage swale along the northwest side of US Highway 24. This area flows to a downstream drainage channel in the Falcon Drainage Basin, which ultimately flows to Black Squirrel Creek (ultimate receiving water).

H. Stream Crossings: There are no stream crossings located within the construction site boundary.

VII. SITE MAP

- SWMP Maps are provided on attached GEC Plan – Sheet C1
- Qualified Stormwater Manager shall update SWMP Maps as required based on field conditions throughout the project.
- Contractor shall update and annotate the SWMP Maps to show the location of the construction trailer, stabilized staging area, CWA, and other items as these locations are determined on site.

VIII. FINAL STABILIZATION AND LONG-TERM STORMWATER MANAGEMENT

A. Permanent seeding will be provided to achieve long-term stabilization of the site.

B. Seed Mix: "Foothills Mix" or approved equal:

C. 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

D. 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 much and mulch tackifier.

E. 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.

F. 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.

G. Structural Control Measures:
- Re-Seeding and Landscaping for site stabilization
- Permanent Stormwater Detention Basin A

H. Non-Structural Control Measures:
- Proper Housekeeping Procedures
- Proper Spill Containment Procedures

Item 21 - Add text to Section VII above, stating that the SWMP should be viewed as a "living document" that is continuously being reviewed and modified as a part of the overall process of evaluating and managing stormwater quality issues at the site. The Qualified Stormwater Manager shall amend the SWMP when there is a change in design, construction, operation or maintenance of the site which would require the implementation of new or revised BMPs or if the SWMP proves to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity or when BMPs are no longer necessary and are removed.

IX. INSPECTION REPORTS

A. Qualified Stormwater Manager: Designated Inspector shall be a Qualified Stormwater Manager per CDPHE criteria.

B. Inspection Frequency:
- 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.

C. Inspection Procedures:

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.

D. 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.

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 / SWMP Maps and SWMP Plan 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.

E. Inspection Reports:

- Contractor shall maintain records of all inspection reports, including signed inspection logs, at the project site. SWMP records shall be located in the project trailer.
- Inspection logs shall be signed by the Qualified Stormwater Manager.
- 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, along with Inspector's signature
  - 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
  - Notations regarding updates and revisions to SWMP Maps based on field conditions