# STORMWATER MANAGEMENT PLAN (SWMP)

# **VISTA WEST SUBDIVISION**

LOCATED IN THE SOUTHEAST QUARTER OF SECTION 26, TOWNSHIP 2 NORTH, RANGE 64 WEST OF THE 6<sup>TH</sup> P.M.
TOWN OF KEENESBURG
COUNTY OF WELD
STATE OF COLORADO

Applicant/Owner:

**MSP Investment CO, LLP** 

720 S. Colorado Blvd. STE #940 North Tower Denver, CO 80249 (303) 339-9804

Contact: marcus@MSPCompanies.com

Prepared By:

**Baseline Engineering Corporation** 

112 North Rubey Drive, Suite 210 Golden, Colorado 80403 (303) 940-9966 Michael L. Lujan

December 15, 2021





**Vicinity Map** 

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# I. Stormwater Management Plan (SWMP) General Requirements

The Federal Clean Water Act and the Colorado Water Quality Control Act require stormwater discharge permits during construction at development sites that disturb one or more acres of land.

# 1. Colorado Department of Public Health and Environment (CDPHE) General Requirements

- A stormwater management plan (SWMP) shall be developed for each construction site covered by the Construction Stormwater Permit prior to commencement of construction activities.
  - For public emergency related sites, a plan shall be created no later than days after the commencement of construction activities.
- 2. The SWMP shall be prepared in accordance with good engineering, hydrologic and pollution control practices.
  - The plan need not be prepared by a registered engineer.
- 3. The permittee need only submit the SWMP to the CDPHE upon request, it is not required with the application for the Construction Stormwater Permit.
- 4. The permittee must implement the provisions of the SWMP as written and updated, from commencement of construction activity until final stabilization is complete.
- 5. A copy of the SWMP must be retained onsite or be onsite when construction activities are occurring at the site unless the permittee specifies another location and obtains approval from the CDPHE.

# 2. Signatory Requirements for Documents Submitted to the CDPHE

Documents required for submittal to the CDPHE in accordance with the Construction Stormwater Permit, including applications for permit coverage and other documents as requested by the CDPHE, must include signatures by both the <u>owner</u> and the <u>operator</u>, except for instances where the duties of the owner and operator are managed by the owner.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

| Marcus Palkowitsh (Applicant/Owner) |  |
|-------------------------------------|--|
| MSP Investment CO, LLP              |  |
|                                     |  |
| TBD (Operator)                      |  |

# 3. Consistency with Other Plans

The permittee may incorporate, by reference, applicable portions of plans prepared for other purposes at their facility. Plans or portions of plans incorporated by reference must be available along with the SWMP, the Erosion Control Plans are located under **Appendix D**.

# 4. Required SWMP Modifications

At nearly every site, the implemented control measures will have to be modified to adapt to changing site conditions, or to ensure that potential pollutants are consistently and properly managed. The pollutant sources and management practices at a site must be reviewed on an ongoing basis. When control measures or other site conditions change, the SWMP must be modified to accurately reflect the actual field conditions. Examples include, but are not limited to, removal of control measures, identification of new potential pollutant sources, addition of control measures, modification of control measure installation and implementation criteria or maintenance procedures, and changes in items included in the site map and/or description. The plan should be viewed as a living document that is continuously being reviewed and modified as part of the overall process of assessing and managing stormwater quality issues at the site. The SWMP must be amended when the following occurs:

- A change in design, construction, operation, or maintenance of the site requiring implementation of new or revised control measures;
- The plan proves ineffective in controlling pollutants in stormwater runoff in compliance with the permit conditions;
- Control measures identified in the SWMP are no longer necessary and are removed; and
- Corrective actions are taken onsite that result in a change to the SWMP.

For SWMP revisions made prior to or following a change(s) onsite, including revisions to sections addressing site conditions and control measures, a notation must be included in the plan that identifies:

- The date of the site change, the control measure removed, or modified,
- The locations(s) of those control measures, and
- Any changes to the control measures(s).

The permittee must ensure the site changes are reflected in the SWMP. The permittee is noncompliant with the Construction Stormwater Permit until the plan revisions have be made.

# II. Stormwater Management Plan Requirements

# A. Qualified Stormwater Manager

An individual knowledgeable in the principles and practices of erosion and sediment control and pollution prevention, and with the skills to assess conditions at construction sites that could impact stormwater quality and to assess the effectiveness of stormwater controls implemented to meet the requirements of this permit.

TBD (Qualified Stormwater Manager)

# B. Spill Prevention and Response Plan

#### Procedures for preventing, responding to and reporting spills and leaks.

- 1. Stored soils shall be kept in a designated area on the SWMP away from drainage areas.
  - Soil Storage area shall have a covered enclosure installed at the perimeter of the area.
- 2. Vehicle Tracking of Sediment
  - > A vehicle tracking control pad shall be installed at all entrances to the staging areas.
- 3. Management of Contaminated soils
  - Contaminated soil shall be removed from the site and treated as required.
  - Soil shall be contained by earth dike during removal.
- 4. Loading and unloading operations
  - All loading and uploading activities shall be in the stabilized staging area as designated on the SWMP
- Outdoor storage area
  - Chemical storage shall be in the area designated on the SWMP.
  - > Storage area shall have a covered enclosure to protect area.
  - Any and all hazardous materials used will be contained in an area specified by the contractor, and Material Safety Data Sheets (MSDS) will be available for inspection at any point during construction.
- 6. On-site waste management
  - All waste piles, dumpster, etc. shall be contained in the chemical storage area designated on the SWMP.
- 7. Concrete truck/equipment washing
  - A concrete washout area will be constructed at the staging area and constructed according to the Mile-High Flood District.
- 8. Vehicle Equipment
  - Fueling and vehicular maintenance will be performed on the jobsite as needed, but there will be limited storage of vehicles on site.

- > A secondary berm area shall be constructed to contain any spills that may occur.
- 9. Significant dust or particulate generating processes
  - Potable water shall be used to prevent airborne particulate matter.
- 10. Routine maintenance activities involving fertilizers, pesticides, detergents, fuel, solvents, oils, etc.
  - > Routine maintenance activities shall be conducted in the Chemical storage area if possible
  - If conducted outside of the Chemical storage area, then care should be taken to minimize the potential pollutant with the use of ground cover over dirt areas, such as tarps.
- 11. Wastes from geo-technical testing
  - All testing waste shall be removed for the site and/or disposed of in appropriate waste disposal containers.
- 12. Non-industrial waste sources worker trash, portable toilets, etc.
  - Worker trash shall be placed in appropriate trash receptacles.
  - ➤ Daily site inspection should be conducted to ensure site is free from trash.
  - All portable toilets shall be secured to the ground to insure against tip over.

# Should any spills occur, the SWMP administrator must take appropriate measures to assure complete, proper and legal cleanup.

- 1. For non-hazardous materials such as gasoline, paint, or oil that may be spilled in small quantities, the following measures shall be implemented:
  - > Personal safety is the primary importance
  - > Use absorbent materials to contain spills and clean the area of residuals.
  - > Dispose of the absorbent material, soil, and/or rotomill properly.
  - Do not hose down spill area with water.
- 2. For non-hazardous materials that qualify as a significant spill, the following measures shall be implemented:
  - ➤ Contact the Colorado Department of Public Health and Environment (CDPHE) 24-hour Environmental Emergency Spill Reporting Line (1-877-518-5608) within 24 hours of the spill event. A written notification to CDPHE is necessary within 5 days.
  - Contact the County of Larimer Health Department Emergency Response (970-498-6739).
  - Contact the Qualified Stormwater Manager, TBD (XXX-XXX-XXXX).
  - Clean up spills immediately. Use absorbent materials if the spill is on an impermeable surface. Construct a slightly compacted earth dike to contain a spill on dirt areas. If rainfall is present at the time of the spill, cover the spill with a tarp to prevent contaminating runoff.
- 3. For spills involving hazardous materials, the following measures shall be implemented:
  - Personal safety is the primary importance. Stay upwind and at a safe distance/secure the area from anyone being harmed.
  - Contact the local emergency response team by dialing 911.

- ➤ Contact the Colorado Department of Public Health and Environment (CDPHE) 24-hour Environmental Emergency Spill Reporting Line (1-.877-518-5608) within 24 hours of the spill event. A written notification to CDPHE is necessary within 5 days.
- Contact Weld County Environmental Health Services (970)304-6415.
- Contact the Qualified Stormwater Manager, TBD (XXX)XXX-XXXX.
- A licensed contractor or a Hazmat team shall be used to properly clean up spills

# C. Materials Handling

Control measures implemented at the site to minimize impacts from handling significant materials that could contribute pollutants to runoff:

- 1. Concrete Washout Area with Masonry Mixing Station designated bermed area appropriately labeled and maintained within Stabilized Staging Area.
- 2. Stockpile Management designated stockpile locations surrounded by silt fence.
- 3. Stabilized Staging Area clearly designated area on the south end of the site, where construction equipment and vehicles, and other materials are stored and temporary dedicated concrete or asphalt batch plants will be located (if needed).

#### D. Potential Sources of Pollution

Potential pollutant sources for this site include the following:

- 1. All disturbed and stored soils to be mitigated by the use of silt fence, temporary or permanent seeding, and erosion control blankets;
- 2. Vehicle tracking of sediments to be mitigated by vehicle tracking control measures at the entrances to the site:
- 3. Management of contaminated soils not anticipated for this site;
- 4. Loading and unloading operations to be mitigated by use of a designated stabilized staging area:
- 5. Outdoor storage activities (building materials, fertilizers, chemicals, etc.) to be mitigated by use of designated stabilized staging area;
- 6. Vehicle and equipment maintenance and fueling to be mitigated by use of a designated stabilized staging area;
- 7. Significant dust or particulate generating processes to be mitigated by road watering as needed;
- 8. Routine maintenance activities involving fertilizers, pesticides, detergents, fuels, solvents, oils, etc. to be mitigated by limiting use and proper storage within the stabilized staging area;
- 9. On-site waste management practices (waste piles, liquid wastes, dumpsters, etc.) to be mitigated by having a designated location for waste;
- Concrete truck/equipment washing, including the concrete truck chute and associated fixtures and equipment – to be mitigated by use of a concrete washout area located within the stabilized staging area;

- 11. Dedicated asphalt and concrete batch plants to be mitigated by containing within the stabilized staging area;
- 12. Non-industrial waste sources such as worker trash and portable toilets to be mitigated by having a designated location for each;
- 13. Other areas or procedures where potential spills can occur to be mitigated by having a spill procedure in place and containment provided by silt fencing around the site.

# **E.** Implementation of Control Measures

- 1. Structural Practices for Erosion and Sediment Control:
  - a. Silt Fence (SF) a sediment barrier designed to intercept sheet flow runoff from disturbed areas.
  - b. Construction Fence (CF) restricts site access to designated entrances and exits, delineates construction site boundaries, and keep construction out of sensitive areas.
  - c. Culvert Inlet Protection and Inlet Protection (IP) permeable barriers installed around an inlet to filter runoff and remove sediment prior to entering a storm drain system.
  - d. Rock Socks (RS) rock socks placed along roadways after construction in the curb and gutter systems to reduce sediment traveling downstream.
  - e. Temporary Sediment Basin (TSB) the location of the proposed onsite detention pond will be used as the temporary pond. This pond will be built on the construction site to capture eroded or disturbed soil transported in storm runoff prior to discharge from the site. The initial use of a sediment basin will require a temporary orifice plate to be used and later replaced with the ultimate design once the site grading has been established.
  - f. Vehicle Tracking Control (VTC) provides stabilized construction site access where vehicles exit the site onto paved public roads.
  - g. Stabilized Staging Area (SSA) a clearly designated area where construction equipment and vehicles, stockpiles, waste bins, and other construction related materials are stored.
  - h. Concrete Washout Area (CWA) a properly maintained area of the construction site designed to receive wash water from washing of tools, concrete mixer chutes, liquid concrete waste from dump trucks, mobile batch mixers, or pump trucks.
  - i. Diversion Ditch (DD) used to reroute water from a stream or restrict flows to a designated portion of the stream channel to allow for construction activities to take place in the stream, along the banks or beneath the active channel.
- 2. Non-Structural Practices for Erosion and Sediment Control:
  - a. Permanent Seeding (PS) an erosion control method used to stabilize disturbed areas that will be inactive for an extended period or are at final grade and will not be otherwise stabilized.
  - Erosion Control Blanket (ECB) manufactured products, made of biodegradable natural materials, designed to control erosion and enhance vegetation establishment and survivability on slopes.
- 3. Phased Implementation:

- a. Pre-disturbance and Site Access Phase (Initial Phase) includes installation of construction fencing, silt fencing, and vehicle tracking control at site entrances.
- b. Site Clearing and Grubbing Phase (Initial Phase) includes the designation of stockpile locations with perimeter control, installation of stabilized staging areas, establishment of concrete washout areas with masonry mixing stations, grading temporary sediment basins, and diversion ditches.
- c. Utility and Infrastructure Installation Phase (Interim Phase) includes inlet protection, slope protection, and rock sock.
- d. Final Stabilization Phase (Final Phase) includes temporary or permanent seeding and removing all temporary control measures (VTC, SSA, CWA, SF, CF, TSB, IP, RS, DD) when site has reached final stabilization.
- 4. Vehicle Tracking Control will be implemented during the initial phase at the site entrance to help remove sediment from vehicles, reducing tracking onto paved surfaces.
- 5. Street Sweeping will be implemented throughout construction to reduce and remove sediment on roadways.
- 6. Wind Erosion / Dust Control site watering will be utilized throughout construction to keep soil particles from entering the air.
- 7. Groundwater and Stormwater Dewatering not anticipated for this site.

### F. Site Description

- Site Acreage
  - ➤ Total Site Area = 31.55 acres
  - Total Disturbed Area = 32.38 acres
- Existing Site Conditions:

Historical ground cover for the on-site basin consists of native grasses which generally slope from the northwest corner of the site to the southeast corner. On-site hydraulic soil grouping is primarily a type 'C' (Weld loam) and a type 'B' (Colby loam). The type 'C' hydraulic soil grouping was used for drainage calculations as a conservative approach. A soil map for the entire drainage basin developed using the online NRCS Web Soil Survey mapping tool can be found in **Appendix A**.

Historically, the site generally drains from its northwest corner towards the southeast corner with slopes ranging from 1.8% to 10%. In historic conditions, all the flows are transmitted overland via sheet flow across the property. There is an existing irrigation pond at the center of the site and an existing wetland area to the south of the site.

#### Proposed Development

The proposed improvements consist of 120 single-family residential home lots with lot sizes varying from 5,500 SF to 9,000 SF. Additional improvements include the associated roadways, trail system, community park, open space, and a proposed detention pond.

- ➤ The area of disturbance is approximately 29.71 acres including the construction staging areas
- Site Earthwork (adjusted)
  - Total estimated cut = 88,537 CY
  - Total estimated fill = 76,570 CY
  - Net (Cut) = 11,968 CY

The developed site will consist of single-family residences with piped roof drainage and associated private driveways, proposed roadways and right-of-way improvements, and the open space & trail network. The site will consist of public streets with curb & gutter, infrastructure, and open space tracts.

#### Soil Characteristics

65.3% of the soil on-site is composed of a Colby Loam, 3% to 5% slope. 34.1% of the site is composed of a Weld Loam 1% to 3% slopes. On-site hydraulic soil grouping is primarily a type 'C' (Weld loam) and a type 'B' (Colby loam). The type 'C' hydraulic soil grouping was used for drainage calculations as a conservative approach. Refer to **Appendix A** for the soil map. Per the USDA NRCS, Hydrologic Soil Group C has a slow infiltration rate when thoroughly wet. These soils have a slow rate of water transmission.

# G. Site Map



# H. Final Stabilization and Long-term Stormwater Management

Final stabilization will include temporary or permanent seeding on all disturbed areas left unpaved. Final stabilization will be achieved once uniform vegetation of at least 70% has been established. During final stabilization, all temporary control measures will be removed. Long-term stormwater management will include maintenance of the subdivision sediment basin.

# I. Site Inspection Reports

Inspection and maintenance should be performed on all control measures periodically and after every significant storm event. The minimum inspection schedule of the stormwater management system must be performed and documented at least every 7 days, and within 24 hours of any precipitation or snowmelt event. If more frequent inspections are required to

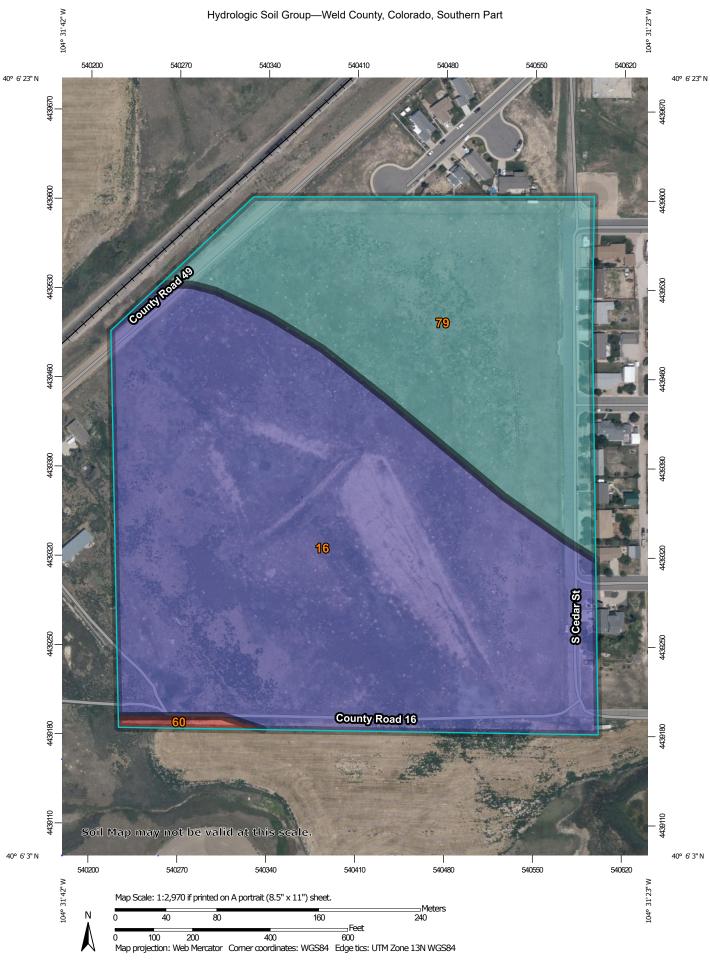
ensure that control measures are properly maintained and operated, the inspection schedule must be modified to meet this need. A Site Inspection Report must be completed for each inspection, this report is included in **Appendix C** of this report.

# **References**

- 1. *Drainage Criteria Manual,* Volumes 1-3, Mile High Flood District, Volume 1 August 2018; Volume 2 September 2017; Volume 3 January 2021.
- 2. Stormwater Management Plan Preparation Guidance, Colorado Department of Public Health and Environment, 2018.
- 3. Town of Keenesburg Design Standards, Town of Keenesburg, September 21, 2020
- 4. National Flood Insurance Program, Flood Insurance Rate Map Larimer County, Colorado, Map Number 08123C2157E, January 20, 2016.
- 5. United States Department of Agriculture, Natural Resources Conservation Service, Custom Soil Resource Report for Larimer County Area, Colorado, May, 2020.

# **APPENDIX A**

NRCS Soil Survey Temporary Sediment Pond Calculations



#### MAP LEGEND MAP INFORMATION The soil surveys that comprise your AOI were mapped at Area of Interest (AOI) С 1:24.000. Area of Interest (AOI) C/D Soils Warning: Soil Map may not be valid at this scale. D Soil Rating Polygons Enlargement of maps beyond the scale of mapping can cause Not rated or not available Α misunderstanding of the detail of mapping and accuracy of soil **Water Features** line placement. The maps do not show the small areas of A/D contrasting soils that could have been shown at a more detailed Streams and Canals Transportation B/D Rails ---Please rely on the bar scale on each map sheet for map measurements. Interstate Highways C/D Source of Map: Natural Resources Conservation Service **US Routes** Web Soil Survey URL: D Major Roads Coordinate System: Web Mercator (EPSG:3857) Not rated or not available -Local Roads Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts Soil Rating Lines Background distance and area. A projection that preserves area, such as the Aerial Photography Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required. This product is generated from the USDA-NRCS certified data as of the version date(s) listed below. Soil Survey Area: Weld County, Colorado, Southern Part Survey Area Data: Version 19, Jun 5, 2020 Soil map units are labeled (as space allows) for map scales 1:50.000 or larger. Not rated or not available Date(s) aerial images were photographed: Jul 19, 2018—Aug 10. 2018 **Soil Rating Points** The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background A/D imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident. B/D

# **Hydrologic Soil Group**

|                          | _   |        |              |                |
|--------------------------|---|--------|--------------|----------------|
| Map unit symbol          | Map unit name   | Rating | Acres in AOI | Percent of AOI |
| 16                       | Colby loam, 3 to 5 percent slopes                     | В      | 24.8         | 65.3%          |
| 60                       | Shingle-Renohill<br>complex, 3 to 9<br>percent slopes | D      | 0.2          | 0.6%           |
| 79                       | Weld loam, 1 to 3 percent slopes                      | С      | 12.9         | 34.1%          |
| Totals for Area of Inter | est   | 37.9   | 100.0%       |                |

# **Description**

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

# **Rating Options**

Aggregation Method: Dominant Condition
Component Percent Cutoff: None Specified

Tie-break Rule: Higher



PROJECT : Vista West PROJECT LOCATION: Keenseburg DATE : 12/15/2021

PROJECT NO. : 3490 BY : MLL

|                      | Temporar     | y Sediment Basiı | 1           |
|----------------------|--------------|------------------|-------------|
| quired Volume        |              |                  |             |
| Total                | Tribut       | ary              | TSB Vol (1) |
| Tributary Area (ac)  | Un-Distrubed | Disturbed        | (CF)        |
| 32.38                | 0.00         | 32.38            | 116568.00   |
| 50% TSB Volume 58,   | 284 cu-ft    |                  |             |
|                      |              |                  |             |
| 100% TSB Volume 1165 | 68.00 cu-ft  |                  |             |

#### **Provided Volume**

| Stage (ft) | Contour<br>Elevation<br>(ft) | Area<br>(ft <sup>2)</sup> | 1/3 (A1 + A2 +<br>(A1A2) <sup>1/2</sup> ) D | Total Volume (ft <sup>3</sup> ) | Total Volume (ac-ft) |
|------------|------------------------------|---------------------------|---|---------------------------------|----------------------|
| 0.00       | 4938.00                      | 54                        |   | 0                               | 0.00                 |
| 1.00       | 4939.00                      | 11,132                    | 3,987                                       | 3,987                           | 0.09                 |
| 2.00       | 4940.00                      | 19,326                    | 15,042                                      | 19,029                          | 0.44                 |
| 3.00       | 4941.00                      | 21,874                    | 20,587                                      | 39,616                          | 0.91                 |
| 4.00       | 4942.00                      | 24,544                    | 23,196                                      | 62,812                          | 1.44                 |
| 5.00       | 4943.00                      | 27,373                    | 25,946                                      | 88,758                          | 2.04                 |
| 6.00       | 4944.00                      | 30,286                    | 28,817                                      | 117,575                         | 2.70                 |
| 7.00       | 4945.00                      | 33,233                    | 31,748                                      | 149,323                         | 3.43                 |
| 8.00       | 4946.00                      | 34,416                    | 33,823                                      | 183,146                         | 4.20                 |
|            |                              |                           |   |                                 |                      |
|            |                              |                           |   |                                 |                      |
|            |                              |                           |   |                                 |                      |

|                       | <u>WSEL</u> | Depth (ft) | Area (SF) |  |  |
|-----------------------|-------------|------------|-----------|--|--|
| 50% TSB =             | 4941.80     | 3.80       | 24022.80  |  |  |
| 100% TSB=             | 4943.97     | 5.97       | 30184.22  |  |  |
| Pond Overflow Crest = | 4946.00     |            |           |  |  |

#### Reference:

1) TSB Volume Criteria:

Assumes 1800 CF/AC for undistrubed Area Assumes 3600 CF/AC for distrubed Area

| AP |  |  |  |
|----|--|--|--|

CDPS General Permit Stormwater Discharges Associated with Construction Activity



# CERTIFICATION TO DISCHARGE UNDER CDPS GENERAL PERMIT COR400000 STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES

Certification Number: COR413669

This Certification to Discharge specifically authorizes:

Owner MSP Corporation
Operator MSP Corporation
to discharge stormwater from the facility identified as

Vista West Subdivision

To the waters of the State of Colorado, including, but not limited to:

**Lost Creek** 

Facility Activity: Residential Development

**Disturbed Acres:** 29.71 acres

Facility Located at: West of Cedar Street and West Nelson Avenue, Keenesburg CO 80643

Weld County

Latitude 40.104198 Longitude -104.525333

Specific Information (if applicable):

**Certification is issued and effective:** 8/6/2021 Expiration date of general permit: 3/31/2024

This certification under the permit requires that specific actions be performed at designated times. The certification holder is legally obligated to comply with all terms and conditions of the permit.

This certification was approved by: Meg Parish, Section Manager Permits Section Water Quality Control Division





Dedicated to protecting and improving the health and environment of the people of Colorado

Chad Rodriguez, Vice President MSP Corporation 720 S. Colorado Blvd., Suite 940N Denver, CO 80246

Chad Rodriguez, Vice President MSP Corporation 720 S. Colorado Blvd., Suite 940N Denver, CO 80246

**DATE:** 2021-08-06

MEMO RE: Certification, Colorado Discharge Permit System

Permit No., COR400000, Certification Number: COR413669

DIVISION CONTACTS: Joseph Sturgeon, 303-691-4019, Joseph.Sturgeon@state.co.us

ATTACHMENTS: Certification COR413669, COR400000 General Permit

The Water Quality Control Division (the Division) has reviewed the application submitted for the Vista West Subdivision facility and determined that it qualifies for coverage under the CDPS General Permit for Stormwater Discharges Associated with Construction Activities (the permit). Enclosed please find a copy of the permit certification, which was issued under the Colorado Water Quality Control Act.

#### FEE INFORMATION: 29.71 acres

An application fee of \$175 (50% of the annual fee) will be assessed for all new applications. Beginning July 1, 2019 an annual fee of \$350 category 7, subcat - Stormwater Construction 1-30 acres disturbed [per CRS 25-8-502] will be assessed and invoiced every July for as long as the permit certification is in effect.

It is the responsibility of the permittee to submit a termination application when the permit is no longer needed. Fees are assessed and invoiced for every permit that is active July 1 of the fiscal year. Permits for which termination applications are received by June 30 of the current fiscal year will not be invoiced for the new fiscal year.

#### **CERTIFICATION RECORDS INFORMATION:**

The following information is what the Division records show for this certification.

For any changes to Contacts - Owner, Operator, Facility, or Billing - a "Notice of Change of Contacts form" must be managed through the Division's new platform called the Colorado Environmental Online Services (CEOS). The Notice of Change of Contacts form must be electronically signed by both the owner and the operator.

Facility: Vista West Subdivision Weld County

Construction Activities Residential Development

**Owner** (receives all legal documentation pertaining to the permit certification):

Chad Rodriguez, Vice President Phone number: 303-399-9804
MSP Corporation Email: chad@mspcompanies.com

720 S. Colorado Blvd., Suite 940N

Denver, CO 80246

**Operator** (receives all legal documentation pertaining to the permit certification):

Chad Rodriguez, Vice President Phone number: 303-399-9804
MSP Corporation Email: chad@mspcompanies.com

720 S. Colorado Blvd., Suite 940N

Denver, CO 80246

**Facility Contact** (contacted for general inquiries regarding the facility):

Chad Rodriguez, Vice President Phone number: 303-399-9804
MSP Corporation Email: chad@mspcompanies.com

720 S. Colorado Blvd., Suite 940N Denver, CO 80246

**Billing Contact** (receives the invoice pertaining to the permit certification):

John Will, Controller

MSP Corporation

Phone number: 303-399-9804

Email: john@mspcompanies.com



720 S. Colorado Blvd., Suite 940N Denver, CO 80246





#### COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

**Water Quality Control Division** 

#### CDPS GENERAL PERMIT STORMWATER DISCHARGES ASSOCIATED WITH

CONSTRUCTION ACTIVITY AUTHORIZATION TO DISCHARGE UNDER THE COLORADO DISCHARGE PERMIT SYSTEM (CDPS)

#### COR400000

In compliance with the provisions of the Colorado Water Quality Control Act, (25-8-101 et seq., CRS, 1973 as amended) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq.; the "Act"), this permit authorizes the discharge of stormwater associated with construction activities (and specific allowable non-stormwater discharges in accordance with Part I.A.1. of the permit) certified under this permit, from those locations specified throughout the State of Colorado to specified waters of the State.

Such discharges shall be in accordance with the conditions of this permit. This permit specifically authorizes the facility listed on the certification to discharge in accordance with permit requirements and conditions set forth in Parts I and II hereof. All discharges authorized herein shall be consistent with the terms and conditions of this permit.

This permit becomes effective on April 1, 2019, and shall expire at midnight March 31, 2024.

Issued and signed this 28th day of January, 2021.

Weg Parish
Meg Parish, Permits Section Manager Water Quality Control Division

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

#### **Permit History**

Minor Modification Issued January 28, 2021 Effective February 1, 2021 Modification Issued December 31, 2020 Effective February 1, 2021 Originally signed and issued October 31, 2018; effective April 1, 2019

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#### Part I

Note: At the first mention of terminology that has a specific connotation for the purposes of this permit, the terminology is electronically linked to the definitions section of the permit in Part I.E.

#### A. COVERAGE UNDER THIS PERMIT

#### 1. Authorized Discharges

This general permit authorizes permittee(s) to discharge the following to state waters: stormwater associated with construction activity and specified non-stormwater associated with construction activity. The following types of stormwater and non-stormwater discharges are authorized under this permit:

#### a. Allowable Stormwater Discharges

- i. Stormwater discharges associated with construction activity.
- ii. Stormwater discharges associated with producing earthen materials, such as soils, sand, and gravel dedicated to providing material to a single contiguous site, or within ¼ mile of a construction site (e.g. borrow or fill areas).
- iii. Stormwater discharges associated with dedicated asphalt, concrete batch plants and masonry mixing stations (Coverage under this permit is not required if alternative coverage has been obtained.)

#### b. Allowable Non-Stormwater Discharges

The following non-stormwater discharges are allowable under this permit if the discharges are identified in the stormwater management plan in accordance with <a href="Part I.C">Part I.C</a> and if they have appropriate control measures in accordance with <a href="Part I.B.1">Part I.B.1</a>.

- Discharges from uncontaminated springs that do not originate from an area of land disturbance.
- ii. Discharges to the ground of concrete washout water associated with the washing of concrete tools and concrete mixer chutes. Discharges of concrete washout water must not leave the site as surface runoff or reach receiving waters as defined by this permit. Concrete on-site waste disposal is not authorized by this permit except in accordance with <a href="Part I.B.1.a.ii(b">Part I.B.1.a.ii(b)</a>.
- iii. Discharges of landscape irrigation return flow.
- iv. Discharges from diversions of state waters within the permitted site.

#### c. Emergency Fire Fighting

Discharges resulting from emergency firefighting activities during the active emergency response are authorized by this permit.

#### 2. Limitations on Coverage

Discharges not authorized by this permit include, but are not limited to, the discharges and activities listed below. Permittees may seek individual or alternate general permit coverage for the discharges, as appropriate and available.

#### a. Discharges of Non-Stormwater

Discharges of non-stormwater, except the authorized non-stormwater discharges listed in Part

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I.A.1.b., are not eligible for coverage under this permit.

- b. Discharges Currently Covered by another Individual or General Permit
- c. Discharges Currently Covered by a Water Quality Control Division (division) Low Risk Guidance Document

#### Permit Certification and Submittal Procedures

#### a. Duty to Apply

The following activities shall apply for coverage under this permit:

- i. Construction activity that will disturb one acre or more; or
- ii. Construction activity that is part of a common plan of development or sale; or
- iii. Stormwater discharges that are designated by the division as needing a stormwater permit because the discharge:
  - (a) Contributes to a violation of a water quality standard; or
  - (b) Is a significant contributor of pollutants to state waters.

#### b. Application Requirements

To obtain authorization to discharge under this permit, applicants applying for coverage following the effective date of the renewal permit shall meet the following requirements:

- i. Owners and operators submitting an application for permit coverage will be co-permittees subject to the same benefits, duties, and obligations under this permit.
- ii. Signature requirements: Both the owner and operator (permittee) of the construction site, as defined in Part I.E., must agree to the terms and conditions of the permit and submit a completed application that includes the signature of both the owner and the operator. In cases where the duties of the owner and operator are managed by the owner, both application signatures may be completed by the owner. Both the owner and operator are responsible for ensuring compliance with all terms and conditions of the permit, including implementation of the stormwater management plan.
- iii. The applicant(s) must develop a stormwater management plan (SWMP) in accordance with the requirements of Part I.C. The applicant(s) must also certify that the SWMP is complete, or will be complete, prior to commencement of any construction activity.
- iv. In order to apply for certification under this general permit, the applicant(s) must submit a complete, accurate, and signed permit application form as provided by the division by electronic delivery at least 10 days prior to the commencement of construction activity, except those construction activities that are in response to a public emergency related site; public emergency related sites shall apply for coverage no later than 14 days after the commencement of construction activities. The provisions of this part in no way remove a violation of the Colorado Water Quality Control Act if a point source discharge occurs prior to the issuance of a CDPS permit.
- v. The application in its entirety must be submitted via the division's online permitting system unless a waiver is granted by the division. If a waiver is granted, the application in its entirety, including signatures by both the owner and operator, must be submitted to:

Colorado Department of Public Health and Environment Water Quality Control Division Permits Section, WQCD-PS-B2 4300 Cherry Creek Drive South Denver, CO 80246

vi. The applicant(s) must receive written notification that the division granted permit coverage prior to conducting construction activities except for construction activities that are in response to a public emergency related site.

#### c. Division Review of Permit Application

Within 10 days of receipt of the application, and following review of the application, the division may:

- i. Issue a certification of coverage;
- ii. Request additional information necessary to evaluate the discharge;
- iii. Delay the authorization to discharge pending further review;
- iv. Notify the applicant that additional terms and conditions are necessary; or
- v. Deny the authorization to discharge under this general permit.
- d. Alternative Permit Coverage
  - i. Division Required Alternative Permit Coverage:

The division may require an applicant or permittee to apply for an individual permit or an alternative general permit if it determines the discharge does not fall under the scope of this general permit, including if any additional terms and conditions are necessary in order to ensure that discharges authorized by this permit shall not cause, have the reasonable potential to cause, or measurably contribute to an exceedance of any applicable water quality standard, including narrative standards for water quality. In this case, the division will notify the applicant or permittee that an individual permit application is required.

ii. Permittee Request for Alternative Permit Coverage:

A permittee authorized to discharge stormwater under this permit may request to be excluded from coverage under this general permit by applying for an individual permit. In this case, the permittee must submit an individual application, with reasons supporting the request, to the division at least 180 days prior to any discharge. When an individual permit is issued, the permittee's authorization to discharge under this permit is terminated on the effective date of the individual permit.

e. Submittal Signature Requirements

Documents required for submittal to the division in accordance with this permit, including applications for permit coverage and other documents as requested by the division, must include signatures by **both** the <u>owner</u> and the <u>operator</u>, except for instances where the duties of the owner and operator are managed by the owner.

Signatures on all documents submitted to the division as required by this permit must meet the Standard Signatory Requirements in <a href="Part II.K">Part II.K</a> of this permit in accordance with 40 C.F.R. 122.41(k).

i. Signature Certification

Any person(s) signing documents required for submittal to the division must make the following

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#### certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

#### f. Compliance Document Signature Requirements

Documents which are required for compliance with the permit, but for which submittal to the division is not required unless specifically requested by the division, must be signed by the individual(s) designated as the Qualified Stormwater Manager, as defined in Part I.E.

i. Any person(s) signing inspection documents required for compliance with the permit per <a href="Part">Part</a>
<a href="LD.5.c.xiii">LD.5.c.xiii</a> must make the following statement and provide the date of the statement:

"I verify that, to the best of my knowledge and belief, that if any corrective action items were identified during the inspection, those corrective actions are complete, and the site is currently in compliance with the permit."

g. Field Wide Permit Coverage for Oil and Gas Construction

At the discretion of the division, a single permit certification may be issued to a single oil and gas permittee to cover construction activity related discharges from an oil and gas field at multiple locations that are not necessarily contiguous.

h. Permit Coverage without Application

Qualifying Local Program: When a small construction site is within the jurisdiction of a qualifying local program, the owner and operator of the construction activity are authorized to discharge stormwater associated with small construction activity under this general permit without the submittal of an application to the division. Sites covered by a qualifying local program are exempt from the following sections of this general permit: Part I.A.3.a.; Part I.A.3.b.; Part I.A.3.c.; Part I.A.3.d.; Part I.A.3.g.; Part I.A.3.i.; Part I.A.3.k.

Sites covered by a qualifying local program are subject to the following requirements:

- i. Local Agency Authority: This permit does not pre-empt or supersede the authority of local agencies to prohibit, restrict, or control discharges of stormwater to storm drain systems or other water courses within their jurisdiction.
- ii. Permit Coverage Termination: When a site under a Qualifying Local Program is finally stabilized, coverage under this permit is automatically terminated.
- iii. Compliance with Qualifying Local Program: Qualifying Local Program requirements that are equivalent to the requirements of this permit are incorporated by reference. Permittees authorized to discharge under this permit, must comply with the equivalent requirements of the Qualifying Local Program that has jurisdiction over the site as a condition of this permit.
- iv. Compliance with Remaining Permit Conditions. Requirements of this permit that are in addition to or more stringent than the requirements of the Qualifying Local Program apply in addition to the requirements of the Qualifying Local Program.
- v. Written Authorization of Coverage: The division or local municipality may require any permittee within the jurisdiction of a Qualifying Local Program covered under this permit to

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apply for, and obtain written authorization of coverage under this permit. The permittee must be notified in writing that an application for written authorization of coverage is required.

#### i. Permittee Initiated Permit Actions

Permittee initiated permit actions, including but not limited to modifications, contact changes, transfers, and terminations, shall be conducted following <a href="Part II.L">Part II.L</a>, division guidance and using appropriate division-provided forms.

#### j. Sale of Residence to Homeowner

**Residential construction sites only:** The permittee may remove residential lots from permit coverage once the lot meets the following criteria:

- The residential lot has been sold to the homeowner(s) for private residential use;
- ii. A certificate of occupancy, or equivalent, is maintained on-site and is available during division inspections;
- iii. The lot is less than one acre of disturbance;
- iv. All construction activity conducted on the lot by the permittee is complete;
- v. The permittee is not responsible for final stabilization of the lot; and
- vi. The SWMP was modified to indicate the lot is no longer part of the construction activity.

If the residential lot meets the criteria listed above then activities occurring on the lot are no longer considered to be construction activities with a duty to apply and maintain permit coverage. Therefore, the permittee is not required to meet the final stabilization requirements and may terminate permit coverage for the lot.

#### k. Permit Expiration and Continuation of Permit Coverage

Authorization to discharge under this general permit shall expire at midnight on March 31, 2024. While Regulation 61.4 requires a permittee to submit an application for continuing permit coverage 180 days before the permit expires, the division is requiring that permittees desiring continued coverage under this general permit must reapply at least 90 days in advance of this permit expiration. The division will determine if the permittee may continue to discharge stormwater under the terms of the general permit. An individual permit may be required for any facility not reauthorized to discharge under the reissued general permit.

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued and remain in force and effect. For permittees that have applied for continued permit coverage, discharges authorized under this permit prior to the expiration date will automatically remain covered by this permit until the earliest of:

- i. An authorization to discharge under a reissued permit, or a replacement of this permit, following the timely and appropriate submittal of a complete application requesting authorization to discharge under the new permit and compliance with the requirements of the new permit; or
- ii. The issuance and effect of a termination issued by the division; or
- iii. The issuance or denial of an individual permit for the facility's discharges; or
- iv. A formal permit decision by the division not to reissue this general permit, at which time the division will identify a reasonable time period for covered dischargers to seek coverage under

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an alternative general permit or an individual permit. Coverage under this permit will cease when coverage under another permit is granted/authorized; or

v. The division has informed the permittee that discharges previously authorized under this permit are no longer covered under this permit.

#### **B. EFFLUENT LIMITATIONS**

1. Requirements for Control Measures Used to Meet Effluent Limitations

The permittee must implement control measures to minimize the discharge of pollutants from all potential pollutant sources at the site. Control measures must be installed prior to commencement of construction activities. Control measures must be selected, designed, installed and maintained in accordance with good engineering, hydrologic and pollution control practices. Control measures implemented at the site must be designed to prevent pollution or degradation of state waters.

a. Stormwater Pollution Prevention

The permittee must implement structural and/or nonstructural control measures that effectively minimize erosion, sediment transport, and the release of other pollutants related to construction activity.

i. Control Measures for Erosion and Sediment Control

Control measures for erosion and sediment control may include, but are not limited to, wattles/sediment control logs, silt fences, earthen dikes, drainage swales, sediment traps, subsurface drains, pipe slope drains, inlet protection, outlet protection, gabions, sediment basins, temporary vegetation, permanent vegetation, mulching, geotextiles, sod stabilization, slope roughening, maintaining existing vegetation, protection of trees, and preservation of mature vegetation.

Specific control measures must meet the requirements listed below.

- (a) Structural and nonstructural vehicle tracking controls shall be implemented to minimize vehicle tracking of sediment from disturbed areas and may include tracking pads, minimizing site access, wash racks, graveled parking areas, maintaining vehicle traffic to paved areas, street sweeping and sediment control measures.
- (b) Stormwater runoff from all disturbed areas and soil storage areas must utilize or flow to one or more control measures to minimize erosion or sediment in the discharge. The control measure(s) must be selected, designed, installed and adequately sized in accordance with good engineering, hydrologic and pollution control practices for the intended application. The control measure(s) must contain or filter flows in order to prevent the <u>bypass</u> of flows without treatment and must be appropriate for stormwater runoff from disturbed areas and for the expected flow rate, duration, and flow conditions (e.g. sheet or concentrated flow).
- (c) Selection of control measures should prioritize the use of structural and nonstructural control measures that minimize the potential for erosion (i.e. covering materials). Selection should also prioritize phasing construction activities to minimize the amount of soil disturbance at any point in time throughout the duration of construction.
- (d) Outlets that withdraw water from or near the surface shall be installed when discharging from basins and impoundments, unless infeasible.
- (e) Maintain pre-existing vegetation or equivalent control measures for areas within 50 horizontal feet of receiving waters as defined by this permit, unless infeasible.

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- (f) Soil compaction must be minimized for areas where infiltration control measures will occur or where final stabilization will be achieved through vegetative cover.
- (g) Unless infeasible, topsoil shall be preserved for those areas of a site that will utilize vegetative final stabilization.
- (h) Minimize the amount of soil exposed during construction activity, including the disturbance of steep slopes.
- (i) Diversion control measures must minimize soil transport and erosion within the entire diversion, minimize erosion during discharge, and minimize run-on into the diversion. The permittee must minimize the discharge of pollutants throughout the installation, implementation and removal of the diversion. Diversions must meet one or more of the following conditions:
  - (1) Lined or piped structures that result in no erosion in all flow conditions.
  - (2) Diversion channels, berms, and coffer dams must be lined or composed of a material that minimizes potential for soil loss in the entire wetted perimeter during anticipated flow conditions (e.g. vegetated swale, non-erosive soil substrate). The entire length of the diversion channel must be designed with all of the following considerations: maximum flow velocity for the type of material(s) exposed to the anticipated flows to ensure that the calculated maximum shear stress of flows in the channel is not expected to result in physical damage to the channel or liner and result in discharge of pollutants. Additionally, the conditions relied on to minimize soil loss must be maintained for the projected life of the diversion (i.e. a vegetated swale must be limited to a period of time that ensures vegetative growth, minimizes erosion and maintains stable conditions).
  - (3) An alternative diversion criteria, approved by the division prior to implementation. The diversion method must be designed to minimize the discharge of pollutants and to prevent the potential for pollution or degradation to state waters as a result of the diverted flow through the diversion structure. In addition, the alternative diversion method must minimize the discharge of pollutants throughout the installation, implementation and removal of the diversion.

#### ii. Practices for Other Common Pollutants

- (a) Bulk storage, individual containers of 55 gallons or greater, for petroleum products and other liquid chemicals must have secondary containment, or equivalent protection, in order to contain spills and to prevent spilled material from entering state waters.
- (b) Control measures designed for concrete washout waste must be implemented. This includes washout waste discharged to the ground as authorized under this permit and washout waste from concrete trucks and masonry operations contained on site. The permittee must ensure the washing activities do not contribute pollutants to stormwater runoff, or receiving waters in accordance <a href="Part I.A.1.b.ii">Part I.A.1.b.ii</a>. Discharges that may reach groundwater must flow through soil that has buffering capacity prior to reaching groundwater, as necessary to meet the effluent limits in this permit, including <a href="Part I.B.3.a">Part I.B.3.a</a>. The concrete washout location must not be located in an area where shallow groundwater may be present and would result in buffering capacity not being adequate, such as near natural drainages, springs, or wetlands. This permit authorizes discharges to the ground of concrete washout waste, but does not authorize on-site waste disposal per <a href="Part I.B.3.d">Part I.B.3.d</a>.
- (c) In the event that water remains onsite and contains pollutants either from the

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firefighting activities or picked up from the site (i.e. in a gutter, sediment basin, etc.) after active emergency response is complete, the permittee must ensure the remaining water containing pollutants is properly removed and disposed of in order to minimize pollutants from discharging from the site, unless infeasible.

#### iii. Stabilization Requirements

The following requirements must be implemented for each site.

- (a) Temporary stabilization must be implemented for earth disturbing activities on any portion of the site where ground disturbing construction activity has permanently ceased, or temporarily ceased for more than 14 calendar days. Temporary stabilization methods may include, but are not limited to, tarps, soil tackifier, and hydroseed. The permittee may exceed the 14-day schedule when either the function of the specific area of the site requires it to remain disturbed or physical characteristics of the terrain and climate prevent stabilization. The SWMP must document the constraints necessitating the alternative schedule, provide the alternate stabilization schedule, and identify all locations where the alternative schedule is applicable on the site map. Minimum inspection frequency and scope, as directed in Part I.D., must be followed for temporarily stabilized areas.
- (b) Final stabilization must be implemented for all construction sites covered under this permit. Final stabilization is reached when (1), (2), and (3) below are complete:
  - (1) All construction activities are complete.
  - (2) Permanent stabilization methods are complete. Permanent stabilization methods include, but are not limited to, permanent pavement or concrete, hardscape, xeriscape, stabilized driving surfaces, vegetative cover, or equivalent permanent alternative stabilization methods. The division may approve alternative final stabilization criteria for specific operations. Vegetative cover must meet the following criteria:
    - a. Evenly distributed perennial vegetation, and
    - b. Coverage, at a minimum, equal to 70 percent of what would have been provided by native vegetation in a local, undisturbed area or adequate reference site, and
  - (3) The permittee must ensure all temporary control measures are removed from the construction site once final stabilization is achieved, except when the control measure specifications allow the control measure to be left in place (i.e. biodegradable control measures).
- (c) Final stabilization must be designed and installed as a permanent feature. Final stabilization measures for obtaining a vegetative cover or alternative stabilization methods include, but are not limited to, the following as appropriate:
  - (1) Seed mix selection and application methods;
  - (2) Soil preparation and amendments;
  - (3) Soil stabilization methods to provide adequate protection to minimize erosion (e.g. crimped straw, hydro mulch or rolled erosion control products);
  - (4) Appropriate sediment control measures as needed until final stabilization is achieved;

- (5) Permanent pavement, hardscape, xeriscape, stabilized driving surfaces;
- (d) Other alternative stabilization practices as applicable.

#### b. Maintenance

The permittee must ensure that all control measures remain in effective operating condition and are protected from activities that would reduce their effectiveness. Control measures must be maintained in accordance with good engineering, hydrologic and pollution control practices. Observations leading to the required maintenance of control measures can be made during a site inspection, or during general observations of site conditions. The necessary repairs or modifications to a control measure requiring routine maintenance, as defined in Part I.E., must be conducted to maintain an effective operating condition. This section is not subject to the requirements in <a href="Part">Part</a>
I.B.1.c below.

#### c. Corrective Actions

The permittee must assess the adequacy of control measures at the site, and the need for changes to those control measures, to ensure continued effective performance.

When an inadequate control measure, as defined in Part I.E., is identified (i.e., new or replacement control measures become necessary), the following corrective action requirements apply. The permittee is in noncompliance with the permit until the inadequate control measure is replaced or corrected and returned to effective operating condition in compliance with <a href="Part I.B.1">Part I.B.1</a> and the general requirements in <a href="Part I.B.3">Part I.B.3</a>. If the inadequate control measure results in noncompliance that meets the conditions of Part II.L., the permittee must also meet the requirements of that section.

- i. The permittee must take all necessary steps to minimize or prevent the discharge of pollutants from the permitted area and manage any stormwater run-on onto the site until a control measure is implemented and made operational and/or an inadequate control measure is replaced or corrected and returned to effective operating condition. If it is infeasible to install or repair the control measure immediately after discovering the deficiency, the following must be documented in the SWMP in <a href="Part I.D.5.c">Part I.D.5.c</a> and kept on record in accordance with the recordkeeping requirements in Part II.
  - (a) Describe why it is infeasible to initiate the installation or repair immediately; and
  - (b) Provide a schedule for installing or repairing the control measure and returning it to an effective operating condition as soon as possible.
- ii. If applicable, the permittee must remove and properly dispose of any unauthorized release or discharge within and from the permitted area (e.g., discharge of non-stormwater, untreated stormwater containing pollutants, spill, or leak not authorized by this permit.) The permittee must also clean up any contaminated surfaces, if feasible, to minimize discharges of the material in subsequent storm events, including water remaining from the response that contains pollutants after active emergency firefighting response is complete.

#### Discharges to an Impaired Waterbody

#### a. Total Maximum Daily Load (TMDL)

If the discharge from the site of permit coverage flows to or could reasonably be expected to flow to any water body for which a TMDL has been approved, and stormwater discharges associated with construction activity were assigned a pollutant-specific Wasteload Allocation (WLA) under the TMDL, the division may:

i. Ensure the WLA is implemented properly through alternative local requirements, such as by a

municipal stormwater permit; or

- ii. Notify the permittee of the WLA and amend the permittee's certification to add specific effluent limits and other requirements, as appropriate. The permittee may be required to do the following:
  - (a) Under the permittee's SWMP, implement specific control measures based on requirements of the WLA, and evaluate whether the requirements are met through implementation of existing stormwater control measures or if additional control measures are necessary. Document the calculations or other evidence demonstrating that the requirements are expected to be met; and
  - (b) If the evaluation shows that additional or modified control measures are necessary, describe the type and schedule for the control measure additions or modifications.
- iii. Discharge monitoring may also be required. The permittee may maintain coverage under the general permit provided they comply with the applicable requirements outlined above. The division reserves the right to require individual or alternate general permit coverage.

#### 3. General Requirements

- a. Discharges authorized by this permit shall not cause, have the reasonable potential to cause, or measurably contribute to an exceedance of any applicable water quality standard, including narrative standards for water quality.
- b. The division may require sampling and testing, on a case-by-case basis, in the event that there is reason to suspect that the SWMP is not adequately minimizing pollutants in stormwater or in order to measure the effectiveness of the control measures in removing pollutants in the effluent. Such monitoring may include Whole Effluent Toxicity testing.
- c. The permittee must comply with the lawful requirements of federal agencies, municipalities, counties, drainage districts and other local agencies including applicable requirements in Municipal Stormwater Management Programs developed to comply with CDPS permits. The permittee must comply with local stormwater management requirements, policies and guidelines including those for erosion and sediment control.
- d. All construction site wastes must be properly managed to prevent potential pollution of state waters. This permit does not authorize on-site waste disposal.
- e. This permit does not relieve the permittee of the reporting requirements in 40 CFR 110, 40 CFR 117 or 40 CFR 302. Any discharge of hazardous material must be handled in accordance with the division's Noncompliance Notification Requirements (see <a href="Part II.L">Part II.L</a> of the permit).

#### C. STORMWATER MANAGEMENT PLAN (SWMP) REQUIREMENTS

#### 1. SWMP General Requirements

- a. A SWMP shall be developed for each construction site listed under <a href="Part I.A.3.a">Part I.A.3.a</a>, including but not limited to, construction activity that will disturb one acre or more and/or are part of a common plan of development or sale covered by this permit. The SWMP must be prepared in accordance with good engineering, hydrologic and pollution control practices.
  - i. For public emergency related sites, a SWMP shall be created no later than 14 days after the commencement of construction activities.
- b. The permittee must implement the provisions of the SWMP as written and updated, from commencement of construction activity until final stabilization is complete. The division may review the SWMP.

c. A copy of the SWMP must be retained onsite or be onsite when construction activities are occurring at the site unless the permittee specifies another location and obtains approval from the division.

#### SWMP Content

- a. The SWMP, at a minimum, must include the following elements.
  - i. <u>Qualified Stormwater Manager.</u> The SWMP must list individual(s) by title and name who are designated as responsible for implementing the SWMP in its entirety and meet the definition of a <u>Qualified Stormwater Manager</u>. This role may be filled by more than one individual.
  - ii. Spill Prevention and Response Plan. The SWMP must have a spill prevention and response plan. The plan may incorporate by reference any part of a Spill Prevention Control and Countermeasure (SPCC) plan under section 311 of the Clean Water Act (CWA) or a Spill Prevention Plan required by a separate CDPS permit. The relevant sections of any referenced plans must be available as part of the SWMP consistent with Part 1.C.4.
  - iii. Other CDPS Permits. The SWMP must list the applicable CDPS permits associated with the permitted site and the activities occurring on the permitted site (e.g. a CDPS Dewatering Permit).
  - iv. <u>Materials Handling</u>. The SWMP must describe handling procedures of all control measures implemented at the site to minimize impacts from handling significant materials that could contribute pollutants to runoff. These handling procedures can include control measures for pollutants and activities such as, exposed storage of building materials, paints and solvents, landscape materials, fertilizers or chemicals, sanitary waste material, trash and equipment maintenance or fueling procedures.
  - v. <u>Potential Sources of Pollution.</u> The SWMP must list all potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges associated with construction activity from the site. This may include, but is not limited to, the following pollutant sources:
    - (a) Disturbed and stored soils;
    - (b) Vehicle tracking of sediments;
    - (c) Management of contaminated soils, if known to be present, or if contaminated soils are found during construction;
    - (d) Loading and unloading operations;
    - (e) Outdoor storage activities (erodible building materials, fertilizers, chemicals, etc.);
    - (f) Vehicle and equipment maintenance and fueling;
    - (g) Significant dust or particulate generating processes (e.g., saw cutting material, including dust);
    - (h) Routine maintenance activities involving fertilizers, pesticides, herbicides, detergents, fuels, solvents, oils, etc.;
    - (i) On-site waste management practices (waste piles, liquid wastes, dumpsters);
    - (j) Concrete truck/equipment washing, including washing of the concrete truck chute and associated fixtures and equipment;
    - (k) Dedicated asphalt, concrete batch plants and masonry mixing stations;

- (1) Non-industrial waste sources such as worker trash and portable toilets.
- vi. <u>Implementation of Control Measures.</u> The SWMP must include design specifications that contain information on the implementation of all the structural and nonstructural control measures in use on the site in accordance with good engineering, hydrologic and pollution control practices; including, as applicable, drawings, dimensions, installation information, materials, implementation processes, control measure-specific inspection expectations, and maintenance requirements.

The SWMP must include a documented use agreement between the permittee and the owner or operator of any control measures located outside of the permitted area, that are utilized by the permittee's construction site for compliance with this permit, but not under the direct control of the permittee. The permittee is responsible for ensuring that all control measures located outside of their permitted area, that are being utilized by the permittee's construction site, are properly maintained and in compliance with all terms and conditions of the permit. The SWMP must include all information required of and relevant to any such control measures located outside the permitted area, including location, installation specifications, design specifications and maintenance requirements.

- vii. <u>Site Description.</u> The SWMP must include a site description which includes, at a minimum, the following:
  - (a) The nature of the construction activity at the site;
  - (b) The proposed schedule for the sequence for major construction activities and the planned implementation of control measures for each phase. (e.g. clearing, grading, utilities, vertical, etc.);
  - (c) Estimates of the total acreage of the site, and the acreage expected to be disturbed by clearing, excavation, grading, or any other construction activities;
  - (d) A summary of any existing data and sources used in the development of the construction site plans or SWMP that describe the soil types found in the permitted area and the erodibility of the identified soil types;
  - (e) A description of the percent cover of native vegetation on the site if the site is undisturbed, or the percent cover of native vegetation in a similar, local undisturbed area or adequate reference area if the site is disturbed. Include the source or methodology for determining the percentage. If a percent cover is not appropriate for the site location (i.e. arid), describe the technique and justification for the identified cover of native vegetation;
  - (f) A description of any allowable non-stormwater discharges at the site, including those being discharged under a separate CDPS permit or a division low risk discharge guidance policy, and applicable control measures installed;
  - (g) A description of the drainage patterns from the site, including a description of the immediate source receiving the discharge and the receiving water(s) of the discharge, if different than the immediate source. If the stormwater discharge is to a <a href="mailto:municipal separate storm sewer system">municipal separate storm sewer system</a>, include the name of the entity owning that system, the location(s) of the stormwater discharge, and the receiving water(s);
  - (h) A description of all stream crossings located within the construction site boundary; and
  - (i) A description of the alternate temporary stabilization schedule, if applicable (Part I.B.1.a.iii(a)).

- (j) A description of the alternative diversion criteria as approved by the division, if applicable (Part I.B.1.a.i(i)(3)).
- viii. Site Map. The SWMP must include a site map which includes, at a minimum, the following:
  - (a) Construction site boundaries;
  - (b) Flow arrows that depict stormwater flow directions on-site and runoff direction;
  - (c) All areas of ground disturbance including areas of borrow and fill;
  - (d) Areas used for storage of soil;
  - (e) Locations of all waste accumulation areas, including areas for liquid, concrete, masonry, and asphalt;
  - (f) Locations of dedicated asphalt, concrete batch plants and masonry mixing stations;
  - (g) Locations of all structural control measures;
  - (h) Locations of all non-structural control measures (e.g. temporary stabilization);
  - (i) Locations of springs, streams, wetlands, diversions and other state waters, including areas that require pre-existing vegetation be maintained within 50 feet of a receiving water, where determined feasible in accordance with Part I.B.1.a.i(e);
  - (j) Locations of all stream crossings located within the construction site boundary; and
  - (k) Locations where alternative temporary stabilization schedules apply.
- ix. Temporary Stabilization, Final Stabilization and Long Term Stormwater Management.
  - (a) The SWMP must document the constraints necessitating an alternative temporary stabilization schedule, as referenced in <a href="Part I.B.1.a.iii(a)">Part I.B.1.a.iii(a)</a>, provide the alternate stabilization schedule, and identify all locations where the alternative schedule is applicable on the site map.
  - (b) The SWMP must describe and locate the methods used to achieve final stabilization of all disturbed areas at the site, as listed in <a href="Part I.B.1.a.iii(b)">Part I.B.1.a.iii(b)</a>.
  - (c) The SWMP must describe the measures used to establish final stabilization through vegetative cover or alternative stabilization method, as referenced in <a href="Part">Part</a>
    <a href="L.B.1.a.iii(c)">L.B.1.a.iii(c)</a>, and describe and locate any temporary control measures in place during the process of final stabilization.
  - (d) The SWMP must describe and locate any planned permanent control measures to control pollutants in stormwater discharges that will occur after construction operations are completed, including but not limited to, detention/retention ponds, rain gardens, stormwater vaults, etc.
- x. Inspection Reports. The SWMP must include documented inspection reports in accordance with Part I.D.5.c.

#### SWMP Review and Revisions

Permittees must keep a record of SWMP changes made that includes the date and identification of the changes. The SWMP must be amended when the following occurs:

a. A change in design, construction, operation, or maintenance of the site requiring implementation

of new or revised control measures;

- b. The SWMP proves ineffective in controlling pollutants in stormwater runoff in compliance with the permit conditions;
- c. Control measures identified in the SWMP are no longer necessary and are removed; and
- d. Corrective actions are taken onsite that result in a change to the SWMP.
- e. The site or areas of the site qualifying for reduced frequency inspections under Part I.D.4.

For SWMP revisions made prior to or following a change(s) onsite, including revisions to sections addressing site conditions and control measures, a notation must be included in the SWMP that identifies the date of the site change, the control measure removed, or modified, the location(s) of those control measures, and any changes to the control measure(s). The permittee must ensure the site changes are reflected in the SWMP. The permittee is noncompliant with the permit until the SWMP revisions have been made.

#### SWMP Availability

A copy of the SWMP must be provided upon request to the division, EPA, and any local agency with authority for approving sediment and erosion plans, grading plans or stormwater management plans within the time frame specified in the request. If the SWMP is required to be submitted to any of these entities, the submission must include a signed certification in accordance with <a href="Part I.A.3.e">Part I.A.3.e</a>, certifying that the SWMP is complete and compliant with all terms and conditions of the permit.

All SWMPs required under this permit are considered reports that must be available to the public under Section 308(b) of the CWA and Section 61.5(4) of the CDPS regulations. The permittee must make plans available to members of the public upon request. However, the permittee may claim any portion of a SWMP as confidential in accordance with 40 CFR Part 2.

#### D. SITE INSPECTIONS

Site inspections must be conducted in accordance with the following requirements. The required inspection schedules are a minimum frequency and do not affect the permittee's responsibility to implement control measures in effective operating condition as prescribed in the SWMP, <a href="Part I.C.2.a.vi">Part I.C.2.a.vi</a>, as proper maintenance of control measures may require more frequent inspections. Site inspections shall start within 7 calendar days of the commencement of construction activities on site.

#### 1. Person Responsible for Conducting Inspections

The person(s) inspecting the site may be on the permittee's staff or a third party hired to conduct stormwater inspections under the direction of the permittee(s). The permittee is responsible for ensuring that the inspector meets the definition of a Qualified Stormwater Manager. The inspector may be different than the individual(s) listed in Part I.C.2.a.i.

#### 2. Inspection Frequency

Permittees must conduct site inspections in accordance with on the following minimum frequencies, unless the site meets the requirements of <a href="Part I.D.3">Part I.D.3</a>. All inspections must be recorded per <a href="Part I.D.5.c">Part I.D.5.c</a>.

- a. At least one inspection every 7 calendar days; or
- b. At least one inspection every 14 calendar days, if post-storm event inspections are conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion. Post-storm inspections may be used to fulfill the 14-day routine inspection requirement.
- c. When site conditions make the schedule required in this section impractical, the permittee may

petition the division to grant an alternate inspection schedule. The alternative inspection schedule must not be implemented prior to written approval by the division and incorporation into the SWMP.

#### 3. Inspection Frequency for Discharges to Outstanding Waters

Permittees must conduct site inspections at least once every 7 calendar days for sites that discharge to a water body designated as an Outstanding Water by the Water Quality Control Commission.

#### 4. Reduced Inspection Frequency

The permittee may perform site inspections at the following reduced frequencies when one of the following conditions exists:

a. Post-Storm Inspections at Temporarily Idle Sites

For permittees choosing an inspection frequency pursuant to <a href="Part I.D.2.b">Part I.D.2.b</a> and if no construction activities will occur following a storm event, post-storm event inspections must be conducted prior to re-commencing construction activities, and no later than 72 hours following the storm event. If the post-storm event inspection qualifies under this section, the inspection delay must be documented in the inspection record per <a href="Part I.D.5.c">Part I.D.5.c</a>. Routine inspections must still be conducted at least every 14 calendar days.

#### b. Inspections at Completed Sites/Areas

When the site, or portions of a site, are awaiting establishment of a vegetative ground cover and final stabilization, the permittee must conduct a thorough inspection of the stormwater management system at least once every 30 days. Post-storm event inspections are not required under this schedule. This reduced inspection schedule is allowed if all of the following criteria are met:

- i. All construction activities resulting in ground disturbance are complete;
- ii. All activities required for final stabilization, in accordance with <a href="Part I.B.1.a.iii(b) & (c)">Part I.B.1.a.iii(b) & (c)</a> and with the SWMP, have been completed, with the exception of the application of seed that has not occurred due to seasonal conditions or the necessity for additional seed application to augment previous efforts; and
- iii. The SWMP has been amended to locate those areas to be inspected in accordance with the reduced schedule allowed for in this paragraph.

#### c. Winter Conditions Inspections Exclusion

Inspections are not required for sites that meet all of the following conditions: construction activities are temporarily halted, snow cover exists over the entire site for an extended period, and melting conditions posing a risk of surface erosion do not exist. This inspection exception is applicable only during the period where melting conditions do not exist, and applies to the routine 7-day, 14-day and monthly inspections, as well as the post-storm-event inspections. When this inspection exclusion is implemented, the following information must be documented in accordance with the requirements in Part I.C.3 and Part I.D.5.c:

- i. Dates when snow cover existed;
- ii. Date when construction activities ceased; and
- iii. Date melting conditions began.

#### Inspection Scope

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#### a. Areas to Be Inspected

When conducting a site inspection the following areas, if applicable, must be inspected for evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters:

- i. Construction site perimeter;
- ii. All disturbed areas;
- iii. Locations of installed control measures;
- iv. Designated haul routes;
- v. Material and waste storage areas exposed to precipitation;
- vi. Locations where stormwater has the potential to discharge offsite; and
- vii. Locations where vehicles exit the site.

#### Inspection Requirements

- i. Visually verify whether all implemented control measures are in effective operational condition and are working as designed in their specifications to minimize pollutant discharges.
- ii. Determine if there are new potential sources of pollutants.
- iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges.
- iv. Identify all areas of non-compliance with the permit requirements and, if necessary, implement corrective action(s) in accordance with <a href="Part I.B.1.c">Part I.B.1.c</a>.

#### c. Inspection Reports

The permittee must keep a record of all inspections conducted for each permitted site. Inspection reports must identify any incidents of noncompliance with the terms and conditions of this permit. All inspection reports must be signed and dated in accordance with <a href="Part I.A.3.f">Part I.A.3.f</a>. Inspection records must be retained in accordance with <a href="Part II.O">Part II.O</a>. At a minimum, the inspection report must include:

- i. The inspection date;
- ii. Name(s) and title(s) of personnel conducting the inspection;
- iii. Weather conditions at the time of inspection;
- iv. Phase of construction at the time of inspection;
- v. Estimated acreage of disturbance at the time of inspection;
- vi. Location(s) and identification of control measures requiring routine maintenance;
- vii. Location(s) and identification of discharges of sediment or other pollutants from the site;
- viii. Location(s) and identification of inadequate control measures;
- ix. Location(s) and identification of additional control measures needed that were not in place at the time of inspection;

- x. Description of corrective action(s) for items vii, viii, ix, above, dates corrective action(s) were completed, including requisite changes to the SWMP, as necessary;
- xi. Description of the minimum inspection frequency (either in accordance with <u>Part I.D.2</u>, <u>Part I.D.3</u> or <u>Part I.D.4</u>.) utilized when conducting each inspection.
- xii. Deviations from the minimum inspection schedule as required in <a href="Part I.D.2">Part I.D.2</a>. This would include documentation of division approval for an alternate inspection schedule outlined in <a href="Part">Part</a>
  <a href="I.D.2.c">I.D.2.c</a>;</a>
- xiii. After adequate corrective action(s) have been taken, or where a report does not identify any incidents requiring corrective action, the report shall contain a statement as required in <a href="Part">Part</a>
  I.A.3.f.

#### E. DEFINITIONS

For the purposes of this permit:

- (1) Bypass the intentional diversion of waste streams from any portion of a treatment facility in accordance with 40 CFR 122.41(m)(1)(i) and Regulation 61.2(12).
- (2) Common Plan of Development or Sale A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules, but remain related. The division has determined that "contiguous" means construction activities located in close proximity to each other (within ¼ mile). Construction activities are considered to be "related" if they share the same development plan, builder or contractor, equipment, storage areas, etc. "Common plan of development or sale" includes construction activities that are associated with the construction of field wide oil and gas permits for facilities that are related.
- (3) Construction Activity Ground surface disturbing and associated activities (land disturbance), which include, but are not limited to, clearing, grading, excavation, demolition, installation of new or improved haul roads and access roads, staging areas, stockpiling of fill materials, and borrow areas. Construction does not include routine maintenance to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. Activities to conduct repairs that are not part of routine maintenance or for replacement are construction activities and are not routine maintenance. Repaving activities where underlying and/or surrounding soil is exposed as part of the repaving operation are considered construction activities. Construction activity is from initial ground breaking to final stabilization regardless of ownership of the construction activities.
- (4) Control Measure Any best management practice or other method used to prevent or reduce the discharge of pollutants to state waters. Control measures include, but are not limited to, best management practices. Control measures can include other methods such as the installation, operation, and maintenance of structural controls and treatment devices.
- (5) Control Measure Requiring Routine Maintenance Any control measure that is still operating in accordance with its design and the requirements of this permit, but requires maintenance to prevent a breach of the control measure. See also inadequate control measure.
- (6) Dedicated Asphalt, Concrete Batch Plants and Masonry Mixing Stations Are batch plants or mixing stations located on, or within ¼ mile of, a construction site and that provide materials only to that specific construction site.
- (7) Diversion Discharges of state waters that are temporarily routed through channels or structures (e.g. in-stream, uncontaminated springs, non-pumped groundwater, temporary rerouting of surface waters).
- (8) Final Stabilization The condition reached when construction activities at the site have been

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completed, permanent stabilization methods are complete, and temporary control measures are removed. Areas being stabilized with a vegetative cover must have evenly distributed perennial vegetation. The vegetation coverage must be, at a minimum, equal to 70 percent of what would have been provided by native vegetation in a local, undisturbed area or adequate reference site.

- (9) Good Engineering, Hydrologic and Pollution Control Practices: are methods, procedures, and practices that:
  - a. Are based on basic scientific fact(s).
  - b. Reflect best industry practices and standards.
  - Are appropriate for the conditions and pollutant sources.
  - d. Provide appropriate solutions to meet the associated permit requirements, including practice based effluent limits.
- (10) Inadequate Control Measure Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. See also Control Measure Requiring Routine Maintenance.
- (11) Infeasible Not technologically possible, or not economically practicable and achievable in light of best industry practices.
- (12) Minimize reduce or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice.
- (13) Municipality A city, town, county, district, association, or other public body created by, or under, State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or a designated and approved management agency under section 208 of CWA (1987).
- (14) Municipal Separate Storm Sewer System (MS4) A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):
  - a. Owned or operated by a State, city, town, county, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under section 208 of the CWA that discharges to state waters;
    - i. Designed or used for collecting or conveying stormwater;
    - ii. Are not a combined sewer; and
    - iii. Are not part of a Publicly Owned Treatment Works (POTW). See 5 CCR 1002-61.2(62).
- (15) Municipal Stormwater Management Program A stormwater program operated by a municipality, typically to meet the requirements of the municipalities MS4 discharge certification.
- (16) Operator The party that has operational control over day-to-day activities at a project site which are necessary to ensure compliance with the permit. This party is authorized to direct individuals at a site to carry out activities required by the permit (i.e. the general contractor).

- (17) Outstanding Waters Waters designated as outstanding waters pursuant to Regulation 31, Section 31.8(2)(a). The highest level of water quality protection applies to certain waters that constitute an outstanding state or national resource.
- (18) Owner The party that has overall control of the activities and that has funded the implementation of the construction plans and specifications. This is the party that may have ownership of, a long term lease of, or easements on the property on which the construction activity is occurring (e.g. the developer).
- (19) Permittee(s) The owner <u>and</u> operator named in the discharge certification issued under this permit for the construction site specified in the certification.
- (20) Point Source Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. Point source does not include irrigation return flow. See 5 CCR 102-61.2(75).
- (21) Pollutant Dredged spoil, dirt, slurry, solid waste, incinerator residue, sewage, sewage sludge, garbage, trash, chemical waste, biological nutrient, biological material, radioactive material, heat, wrecked or discarded equipment, rock, sand, or any industrial, municipal or agricultural waste. See 5 CCR 1002-61.2(76).
- (22) Presentation of credentials a government issued form of identification, if in person; or (ii) providing name, position and purpose of inspection if request to enter is made via telephone, email or other form of electronic communication. A Permittee's non-response to a request to enter upon presentation of credentials constitutes a denial to such request, and may result in violation of the Permit.
- (23) Process Water Any water which, during manufacturing or processing, comes into contact withor results from the production of any raw material, intermediate product, finished product, by product or waste product.
- (24) Public Emergency Related Site a project initiated in response to an unanticipated emergency (e.g., mud slides, earthquake, extreme flooding conditions, disruption in essential public services), for which the related work requires immediate authorization to avoid imminent endangerment to human health or the environment, or to reestablish essential public services.
- (25) Qualified Stormwater Manager An individual knowledgeable in the principles and practices of erosion and sediment control and pollution prevention, and with the skills to assess conditions at construction sites that could impact stormwater quality and to assess the effectiveness of stormwater controls implemented to meet the requirements of this permit.
- (26) Qualifying Local Program A municipal program for stormwater discharges associated with small construction activity that was formally approved by the division as a qualifying local program.
- (27) Receiving Water Any classified or unclassified surface water segment (including tributaries) in the State of Colorado into which stormwater associated with construction activities discharges. This definition includes all water courses, even if they are usually dry, such as borrow ditches, arroyos, and other unnamed waterways.
- (28) Severe Property Damage substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. See 40 CFR 122.41(m)(1)(ii).
- (29) Significant Materials Include, but not limited to, raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in

food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the permittee is required to report under section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges.

- (30) Small Construction Activity The discharge of stormwater from construction activities that result in land disturbance of equal to, or greater than, one acre and less than five acres. Small construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale, if the larger common plan ultimately disturbs equal to, or greater than, one acre and less than five acres.
- (31) Spill An unintentional release of solid or liquid material which may pollute state waters.
- (32) State Waters means any and all surface and subsurface waters which are contained in or flow in or through this state, but does not include waters in sewage systems, waters in treatment works of disposal systems, waters in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed.
- (33) Steep Slopes: where a local government, or industry technical manual (e.g. stormwater BMP manual) has defined what is to be considered a "steep slope", this permit's definition automatically adopts that definition. Where no such definition exists, steep slopes are automatically defined as those that are 3:1 or greater.
- (34) Stormwater Precipitation runoff, snow melt runoff, and surface runoff and drainage. See 5 CCR 1002-61.2(103).
- (35) Total Maximum Daily Loads (TMDLs) -The sum of the individual wasteload allocations (WLA) for point sources and load allocations (LA) for nonpoint sources and natural background. For the purposes of this permit, a TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL includes WLAs, LAs, and must include a margin of safety (MOS), and account for seasonal variations. See section 303(d) of the CWA and 40 C.F.R. 130.2 and 130.7.
- (36) Upset an exceptional incident in which there is unintentional and temporary noncompliance with permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation in accordance with 40 CFR 122.41(n) and Regulation 61.2(114).

#### F. MONITORING

The division may require sampling and testing, on a case-by-case basis. If the division requires sampling and testing, the division will send a notification to the permittee. Reporting procedures for any monitoring data collected will be included in the notification.

If monitoring is required, the following applies:

- 1. The thirty (30) day average must be determined by the arithmetic mean of all samples collected during a thirty (30) consecutive-day period; and
- 2. A grab sample, for monitoring requirements, is a single "dip and take" sample.

#### G. OIL AND GAS CONSTRUCTION

Stormwater discharges associated with construction activities directly related to oil and gas exploration, production, processing, and treatment operations or transmission facilities are regulated under the Colorado Discharge Permit System Regulations (5 CCR 1002-61), and require coverage under this permit in accordance with that regulation. However, references in this permit to specific authority under the CWA do not apply to

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stormwater discharges associated with these oil and gas related construction activities, to the extent that the references are limited by the federal Energy Policy Act of 2005.

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#### Part II: Standard Permit Conditions

#### A. DUTY TO COMPLY

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Water Quality Control Act and is grounds for:

- 1. Enforcement action;
- 2. Permit termination, revocation and reissuance, or modification; or
- 3. Denial of a permit renewal application.

#### **B. DUTY TO REAPPLY**

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain authorization as required by Part I.A.3.k. of the permit.

#### C. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

#### D. DUTY TO MITIGATE

A permittee must take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

#### E. PROPER OPERATION AND MAINTENANCE

A permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit. This requirement can be met by meeting the requirements for Part I.B., I.C., and I.D. above. See also 40 C.F.R. § 122.41(e).

#### F. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated for cause. The permittee request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. Any request for modification, revocation, reissuance, or termination under this permit must comply with all terms and conditions of Regulation 61.8(8).

#### G. PROPERTY RIGHTS

In accordance with 40 CFR 122.41(g) and 5 CCR 1002-61, 61.8(9):

- 1. The issuance of a permit does not convey any property or water rights in either real or personal property, or stream flows or any exclusive privilege.
- 2. The issuance of a permit does not authorize any injury to person or property or any invasion of personal rights, nor does it authorize the infringement of federal, state, or local laws or regulations.
- 3. Except for any toxic effluent standard or prohibition imposed under Section 307 of the Federal act or any standard for sewage sludge use or disposal under Section 405(d) of the Federal act, compliance with a permit during its term constitutes compliance, for purposes of enforcement, with Sections 301,

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302, 306, 318, 403, and 405(a) and (b) of the Federal act. However, a permit may be modified, revoked and reissued, or terminated during its term for cause as set forth in Section 61.8(8) of the Colorado Discharge Permit System Regulations.

#### H. DUTY TO PROVIDE INFORMATION

The permittee shall furnish to the division, within a reasonable time, any information which the division may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the division, upon request, copies of records required to be kept by this permit in accordance with 40 CFR 122.41(h) and/or Regulation 61.8(3)(q).

#### I. INSPECTION AND ENTRY

The permittee shall allow the division and the authorized representative, upon the <u>presentation of credentials</u> as required by law, to allow for inspections to be conducted in accordance with 40 CFR 122.41(i), Regulation 61.8(3), and Regulation 61.8(4):

- 1. To enter upon the permittee's premises where a regulated facility or activity is located or in which any records are required to be kept under the terms and conditions of this permit;
- 2. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit;
- At reasonable times, inspect any monitoring equipment or monitoring method required in the permit; and
- 4. To enter upon the permittee's premises in a reasonable manner and at a reasonable time to inspect or investigate, any actual, suspected, or potential source of water pollution, or any violation of the Colorado Water Quality Control Act. The investigation may include: sampling of any discharges, stormwater or <u>process water</u>, taking of photographs, interviewing site staff on alleged violations and other matters related to the permit, and assessing any and all facilities or areas within the site that may affect discharges, the permit, or an alleged violation.

The permittee shall provide access to the division or other authorized representatives upon presentation of proper credentials. A permittee's non-response to a request to enter upon presentation of credentials constitutes a denial of such request, and may result in a violation of the permit.

#### J. MONITORING AND RECORDS

- 1. Samples and measurements taken for the purpose of monitoring must be representative of the volume and nature of the monitored activity.
- 2. The permittee must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date the permit expires or the date the permittee's authorization is terminated. This period may be extended by request of the division at any time.
- 3. Records of monitoring information must include:
  - a. The date, exact place, and time of sampling or measurements;
  - b. The individual(s) who performed the sampling or measurements;
  - c. The date(s) analyses were performed

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- d. The individual(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of such analyses.
- 4. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit.

#### K. SIGNATORY REQUIREMENTS

#### 1. Authorization to Sign:

All documents required to be submitted to the division by the permit must be signed in accordance with the following criteria:

- a. For a corporation: by a responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means:
  - A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or
  - ii. The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
- For a <u>municipality</u>, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes
  - i. The chief executive officer of the agency, or
  - ii. A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency. (e.g. Regional Administrator of EPA)

#### 2. Electronic Signatures

For persons signing applications for coverage under this permit electronically, in addition to meeting other applicable requirements stated above, such signatures must meet the same signature, authentication, and identity-proofing standards set forth at 40 CFR § 3.2000(b) for electronic reports (including robust second-factor authentication). Compliance with this requirement can be achieved by submitting the application using the Colorado Environmental Online Service (CEOS) system.

#### 3. Change in Authorization to Sign

If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be submitted to the division, prior to the re-authorization, or together with any reports, information, or applications to be signed by an authorized representative.

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#### L. REPORTING REQUIREMENTS

#### 1. Planned Changes

The permittee shall give advance notice to the division, in writing, of any planned physical alterations or additions to the permitted facility in accordance with 40 CFR 122.41(l) and Regulation 61.8(5)(a). Notice is required only when:

- a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.41(a)(1).

#### Anticipated Non-Compliance

The permittee shall give advance notice to the division, in writing, of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements. The timing of notification requirements differs based on the type of non-compliance as described in subparagraphs 5, 6, 7, and 8 below.

#### 3. Transfer of Ownership or Control

The permittee shall notify the division, in writing, ten (10) calendar days in advance of a proposed transfer of the permit. This permit is not transferable to any person except after notice is given to the division.

- a. Where a facility wants to change the name of the permittee, the original permittee (the first owner or operators) must submit a Notice of Termination.
- The new owner or operator must submit an application. See also signature requirements in Part II.K, above.
- c. A permit may be automatically transferred to a new permittee if:
  - i. The current permittee notifies the division in writing 30 calendar days in advance of the proposed transfer date; and
  - ii. The notice includes a written agreement between the existing and new permittee(s) containing a specific date for transfer of permit responsibility, coverage and liability between them; and
  - iii. The division does not notify the existing permittee and the proposed new permittee of its intent to modify, or revoke and reissue the permit.
  - iv. Fee requirements of the Colorado Discharge Permit System Regulations, Section 61.15, have been met.

#### 4. Monitoring reports

Monitoring results must be reported at the intervals specified in this permit per the requirements of 40 CFR 122.41(l)(4).

#### 5. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule in the permit, shall be submitted on the date listed

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in the compliance schedule section. The fourteen (14) calendar day provision in Regulation 61.8(4)(n)(i) has been incorporated into the due date.

#### 6. Twenty-four Hour Reporting

In addition to the reports required elsewhere in this permit, the permittee shall report the following circumstances orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall mail to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances:

- a. Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident;
- b. Circumstances leading to any unanticipated bypass which exceeds any effluent limitations in the permit;
- Circumstances leading to any <u>upset</u> which causes an exceedance of any effluent limitation in the permit;
- d. Daily maximum violations for any of the pollutants limited by Part I of this permit. This includes any toxic pollutant or hazardous substance or any pollutant specifically identified as the method to control any toxic pollutant or hazardous substance.
- e. The division may waive the written report required under subparagraph 6 of this section if the oral report has been received within 24 hours.

#### Other Non-Compliance

A permittee must report all instances of noncompliance at the time monitoring reports are due. If no monitoring reports are required, these reports are due at least annually in accordance with Regulation 61.8(4)(p). The annual report must contain all instances of non-compliance required under either subparagraph 5 or subparagraph 6 of this subsection.

#### 8. Other Information

Where a permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Permitting Authority, it has a duty to promptly submit such facts or information.

#### M. BYPASS

#### 1. Bypass Not Exceeding Limitations

The permittees may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part II.M.2 of this permit. See 40 CFR 122.41(m)(2).

#### 2. Notice of Bypass

- a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, the permittee must submit prior notice, if possible at least ten days before the date of the bypass. ee 40 CFR \$122.41(m)(3)(i) and/or Regulation 61.9(5)(c).
- b. Unanticipated bypass. The permittee must submit notice of an unanticipated bypass in accordance with Part II.L.6. See 40 CFR §122.41(m)(3)(ii).

#### 3. Prohibition of Bypass

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Bypasses are prohibited and the division may take enforcement action against the permittee for bypass, unless:

- a. The bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;
- b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- c. Proper notices were submitted to the division.

#### N. UPSET

#### 1. Effect of an upset

An upset constitutes an affirmative defense to an action brought for noncompliance with permit effluent limitations if the requirements of Part II.N.2. of this permit are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review in accordance with Regulation 61.8(3)(j).

Conditions Necessary for Demonstration of an Upset

A permittee who wishes to establish the affirmative defense of upset shall demonstrate through properly signed contemporaneous operating logs, or other relevant evidence that:

- a. An upset occurred and the permittee can identify the specific cause(s) of the upset;
- b. The permitted facility was at the time being properly operated and maintained; and
- c. The permittee submitted proper notice of the upset as required in Part II.L.6.(24- hour notice); and
- d. The permittee complied with any remedial measure necessary to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. In addition to the demonstration required above, a permittee who wishes to establish the affirmative defense of upset for a violation of effluent limitations based upon water quality standards shall also demonstrate through monitoring, modeling or other methods that the relevant standards were achieved in the receiving water.

#### 3. Burden of Proof

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

#### O. RETENTION OF RECORDS

1. Post-Expiration or Termination Retention

Copies of documentation required by this permit, including records of all data used to complete the application for permit coverage to be covered by this permit, must be retained for at least three years from the date that permit coverage expires or is terminated. This period may be extended by request of EPA at any time.

#### 2. On-site Retention

The permittee must retain an electronic version or hardcopy of the SWMP at the construction site from

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the date of the initiation of construction activities to the date of expiration or inactivation of permit coverage; unless another location, specified by the <u>permittee</u>, is approved by the division.

#### P. REOPENER CLAUSE

#### 1. Procedures for Modification or Revocation

Permit modification or revocation of this permit or coverage under this permit will be conducted according to Regulation 61.8(8).

#### 2. Water Quality Protection

If there is evidence indicating that the stormwater discharges authorized by this permit cause, have the reasonable potential to cause or contribute to an excursion above any applicable water quality standard, the permittee may be required to obtain an individual permit, or the permit may be modified to include different limitations and/or requirements.

#### Q. SEVERABILITY

The provisions of this permit are severable. If any provisions or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances and the application of the remainder of this permit shall not be affected.

#### R. NOTIFICATION REQUIREMENTS

#### 1. Notification to Parties

All notification requirements, excluding information submitted using the CEOS portal, shall be directed as follows:

a. Oral Notifications, during normal business hours shall be to:

Clean Water Compliance Section Water Quality Control Division Telephone: (303) 692-3500

b. Written notification shall be to:

Clean Water Compliance Section Water Quality Control Division Colorado Department of Public Health and Environment WQCD-WQP-B2 4300 Cherry Creek Drive South Denver, CO 80246-1530

#### S. RESPONSIBILITIES

#### 1. Reduction, Loss, or Failure of Treatment Facility

The permittee has the duty to halt or reduce any activity if necessary to maintain compliance with the effluent limitations of the permit. It shall not be a defense for a permittee in an enforcement action that it would be necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

#### T. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 (Oil and Hazardous Substance Liability) of the CWA.

#### **U. EMERGENCY POWERS**

Nothing in this permit shall be construed to prevent or limit application of any emergency power of the division.

#### V. CONFIDENTIALITY

Any information relating to any secret process, method of manufacture or production, or sales or marketing data which has been declared confidential by the permittee, and which may be acquired, ascertained, or discovered, whether in any sampling investigation, emergency investigation, or otherwise, shall not be publicly disclosed by any member, officer, or employee of the Water Quality Control Commission or the division, but shall be kept confidential. Any person seeking to invoke the protection of this section shall bear the burden of proving its applicability. This section shall never be interpreted as preventing full disclosure of effluent data.

#### W. FEES

The permittee is required to submit payment of an annual fee as set forth in the 2016 amendments to the Water Quality Control Act. Section 25-8-502 (1.1) (b), and the Colorado Discharge Permit System Regulations 5 CCR 1002-61, Section 61.15 as amended. Failure to submit the required fee when due and payable is a violation of the permit and will result in enforcement action pursuant to Section 25-8-601 et. seq., C.R.S.1973 as amended.

#### X. DURATION OF PERMIT

The duration of a permit shall be for a fixed term and shall not exceed five (5) years. If the permittee desires to continue to discharge, a permit renewal application shall be submitted at least ninety (90) calendar days before this permit expires. Filing of a timely and complete application shall cause the expired permit to continue in force to the effective date of the new permit. The permit's duration may be extended only through administrative extensions and not through interim modifications. If the permittee anticipates there will be no discharge after the expiration date of this permit, the division should be promptly notified so that it can terminate the permit in accordance with Part I.A.3.i.

#### Y. SECTION 307 TOXICS

If a toxic effluent standard or prohibition, including any applicable schedule of compliance specified, is established by regulation pursuant to Section 307 of the Federal Act for a toxic pollutant which is present in the permittee's discharge and such standard or prohibition is more stringent than any limitation upon such pollutant in the discharge permit, the division shall institute proceedings to modify or revoke and reissue the permit to conform to the toxic effluent standard or prohibition

## **APPENDIX C**

Site Inspection Reports

# CONSTRUCTION STORMWATER SITE INSPECTION REPORT

| Facility Name  |             |            | Permittee                      |                   |             |            |
|--|-------------|------------|--------------------------------|-------------------|-------------|------------|
| Date of Inspection   |             |            | Weather Conditions             |                   |             |            |
| Permit Certification #   |             |            | Disturbed Acreage              |                   |             |            |
| Phase of Construction  |             |            | Inspector Title                |                   |             |            |
| Inspector Name   |             |            |                                |                   |             |            |
| Is the above inspector a qualified storm   |             |            |                                |                   | YES         | NO         |
| (permittee is responsible for ensuring t   | hat the ir  | spector    | is a qualified stormwater r    | manager)          |             |            |
|  |             |            |                                |                   |             |            |
| INSPECTION FREQUENCY   |             |            |                                |                   |             |            |
| Check the box that describes the minim   | num inspe   | ection fre | equency utilized when cond     | ducting each insp | ection      |            |
| At least one inspection every 7 calenda  | •           |            |                                |                   |             |            |
| At least one inspection every 14 calendary   |             |            |                                |                   | Г           | 7          |
| 24 hours after the end of any precipitat   | tion or sn  | owmelt     | event that causes surface e    | erosions          | L           | _          |
| <ul> <li>This is this a post-storm event i</li> </ul>  | nspection   | n. Event   | Date:                          |                   |             |            |
| Reduced inspection frequency - Include   | site cond   | ditions t  | hat warrant reduced inspec     | ction frequency   |             |            |
| Post-storm inspections at temporary  | orarily idl | e sites    |                                |                   |             | <u>-</u>   |
| <ul> <li>Inspections at completed sites/</li> </ul>  |             |            |                                |                   |             | <u>-</u>   |
| Winter conditions exclusion  | area        |            |                                |                   |             |            |
|  |             |            |                                |                   | L           |            |
| Have there been any deviations from the  | ne minimu   | ım inspe   | ection schedule?               |                   | YES         | NO         |
| If yes, describe below.  |             |            |                                |                   | Ш           |            |
|  |             |            |                                |                   |             |            |
|  |             |            |                                |                   |             |            |
| INSPECTION REQUIREMENTS*   |             |            |                                |                   |             |            |
| <ul> <li>i. Visually verify all implemented co<br/>designed in the specifications</li> </ul>   | ontrol me   | asures a   | re in effective operational    | condition and ar  | e working   | as         |
| ii. Determine if there are new poter   | itial sourc | es of no   | Hutants                        |                   |             |            |
| iii. Assess the adequacy of control materials  |             |            |                                | a new or modifie  | d control   | measures   |
| to minimize pollutant discharges   | cusui es u  | t the site | e to identify dreas requiring  | g new or mounte   | u control   | measures   |
| iv. Identify all areas of non-complian   | ce with t   | he perm    | it requirements, and if neo    | essary, impleme   | nt correct  | ive action |
| *Use the attached Control Measures   |             | •          |                                |                   |             |            |
| Corrective Action forms to document re   |             |            |                                | -                 |             | -          |
| To the second se |             | 1113 4336. | sometic that thigger entirer h | inamice of or     |             | 300.01.3   |
| AREAS TO BE INSPECTED  |             |            |                                |                   |             |            |
| Is there evidence of, or the potential f   |             |            |                                | ooundaries, ente  | ring the st | tormwater  |
| drainage system or discharging to state  | waters a    | t the fol  |                                |                   |             |            |
|  |             |            | If "YES" describe discharç     |                   |             |            |
|  | NO          | YES        | Document related mainte        |                   |             |            |
|  |             |            | and corrective actions         | •                 | Control     | Measures   |
| Construction site perimeter  |             |            | Requiring Corrective Act       | tion form         |             |            |
| All disturbed areas  |             |            |                                |                   |             |            |
| Designated haul routes   |             |            |                                |                   |             |            |
| <u> </u>   |             | Ш          |                                |                   |             |            |
| Material and waste storage areas exposed to precipitation  |             |            |                                |                   |             |            |
| Locations where stormwater has the   |             |            |                                |                   |             |            |
| potential to discharge offsite   |             |            |                                |                   |             |            |
| Locations where vehicles exit the site   |             |            |                                |                   |             |            |
|  |             |            |                                |                   |             |            |
| Other:   |             | 1 Ш        |                                |                   |             |            |

### CONTROL MEASURES REQUIRING ROUTINE MAINTENANCE

Definition: Any control measure that is still operating in accordance with its design and the requirements of the permit, but requires maintenance to prevent a breach of the control measure. These items are not subject to the corrective action requirements as specified in Part I.B.1.c of the permit.

| Are there control measures requiring maintenance? | NO | YES |                         |
|---|----|-----|-------------------------|
| Are there control measures requiring maintenance: |    |     | If "YES" document below |

| Date<br>Observed | Location | Control Measure | Maintenance Required | Date<br>Completed |
|------------------|----------|-----------------|----------------------|-------------------|
|                  |          |                 |                      |                   |
|                  |          |                 |                      |                   |
|                  |          |                 |                      |                   |
|                  |          |                 |                      |                   |
|                  |          |                 |                      |                   |
|                  |          |                 |                      |                   |
|                  |          |                 |                      |                   |
|                  |          |                 |                      |                   |
|                  |          |                 |                      |                   |
|                  |          |                 |                      |                   |
|                  |          |                 |                      |                   |
|                  |          |                 |                      |                   |

#### INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

| Are there inadequate central measures requiring corrective action?                             |    | YES |                         |
|--|----|-----|-------------------------|
| Are there inadequate control measures requiring corrective action?                             |    |     | If "YES" document below |
|  |    |     |                         |
|  |    |     |                         |
| Are there additional control measures needed that were not in place at the time of inspection? | NO | YES |                         |
| Are there additional control measures needed that were not in place at the time of inspection: |    |     | If "YES" document below |

| Date<br>Discovered | Location | Description of Inadequate<br>Control Measure | Description of Corrective Action | Was deficiency corrected when discovered? YES/NO if "NO" provide reason and schedule to correct | Date<br>Corrected |
|--------------------|----------|--|----------------------------------|---|-------------------|
|                    |          |  |                                  |   |                   |
|                    |          |  |                                  |   |                   |
|                    |          |  |                                  |   |                   |
|                    |          |  |                                  |   |                   |
|                    |          |  |                                  |   |                   |
|                    |          |  |                                  |   |                   |
|                    |          |  |                                  |   |                   |
|                    |          |  |                                  |   |                   |

#### REPORTING REQUIREMENTS

The permittee shall report the following circumstances orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall mail to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances. The division may waive the written report required if the oral report has been received within 24 hours.

| All Noncompliance Requiring 24-Hour Notification per Part II.L.6 of the Permit   |
|--|
| a. Endangerment to Health or the Environment   |
| Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.6.a of the Permit)  |
| This category would primarily result from the discharge of pollutants in violation of the permit   |
| <ul> <li>b. Numeric Effluent Limit Violations</li> <li>Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.b of the Permit)</li> <li>Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.c of the Permit)</li> <li>Daily maximum violations (See Part II.L.6.d of the Permit)</li> <li>Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.</li> </ul> |
|  |

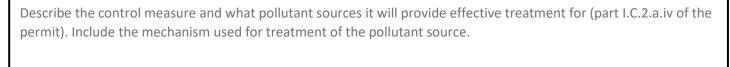
| Has there been an incident of noncompliance requiring 24-hour notification? |          |                                 |                                  | NO   | YES                     |   |
|---|----------|---------------------------------|----------------------------------|------|-------------------------|---|
|   |          |                                 |                                  |      | ☐ If                    | If "YES" document below                   |
| _   |          |                                 |                                  |      |                         |   |
| Date and<br>Time of   | Location | Description of<br>Noncompliance | Description of Corrective Action | 24 I | and Time o<br>Hour Oral | f Date of 5 Day Written<br>Notification * |

| Time of<br>Incident | Location | Noncompliance | Description of Corrective Action | 24 Hour Oral<br>Notification | Notification * |
|---------------------|----------|---------------|----------------------------------|------------------------------|----------------|
|                     |          |               |                                  |                              |                |
|                     |          |               |                                  |                              |                |
|                     |          |               |                                  |                              |                |
|                     |          |               |                                  |                              |                |
|                     |          |               |                                  |                              |                |
|                     |          |               |                                  |                              |                |

<sup>\*</sup>Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

| After adequate corrective action(s) and maintenance have been taken, or where a report does not identify any incidents requiring corrective action or maintenance, the individual(s) designated as the Qualified Stormwater Manager, shall sign and certify the below statement: |   |  |  |  |  |  |
|--|---|--|--|--|--|--|
| "I verify that, to the best of my knowledge and bell<br>during the inspection are complete, and the site is  | ief, all corrective action and maintenance items identified currently in compliance with the permit." |  |  |  |  |  |
| Name of Qualified Stormwater Manager   | Title of Qualified Stormwater Manager   |  |  |  |  |  |
| Signature of Qualified Stormwater Manager  | Date  |  |  |  |  |  |
| Notes/Comments   |   |  |  |  |  |  |
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## Description



## **Implementation**

Describe how the control measure will be implemented in accordance with good engineering, hydrologic and pollution control practices. Include the phase(s) of construction the control measure will be implemented for.

## **Installation Procedures**

Describe the process required to install the control measure and have it adequately treat the intended pollutant source. Include specific depths, lengths, materials, and any other applicable information necessary to properly install the control measure.

## **Inspection Expectations**

Describe how often the control measure will be inspected and what key features should be checked during each inspection (is the silt fence tail entrenched, are the straw wattles staked ever 4 feet, etc.)

# **Maintenance Requirements** Describe maintenance requirements, such as how to repair damaged sections, what qualifies as a failed control measure and when it needs to be replaced. Also include criteria that would trigger maintenance (i.e. 50% capacity of the control measure has been reached). **Control Measure Diagram**

**APPENDIX D** 

Erosion Control Plans

INITIAL/INTERIM BMP'S TO BE REMOVED AFTER FINAL STABILIZATION OF THE SITE IS COMPLETE

CONSTRUCTION

OWEN AVE

W. MORGAN AVE

W. NELSON AVE

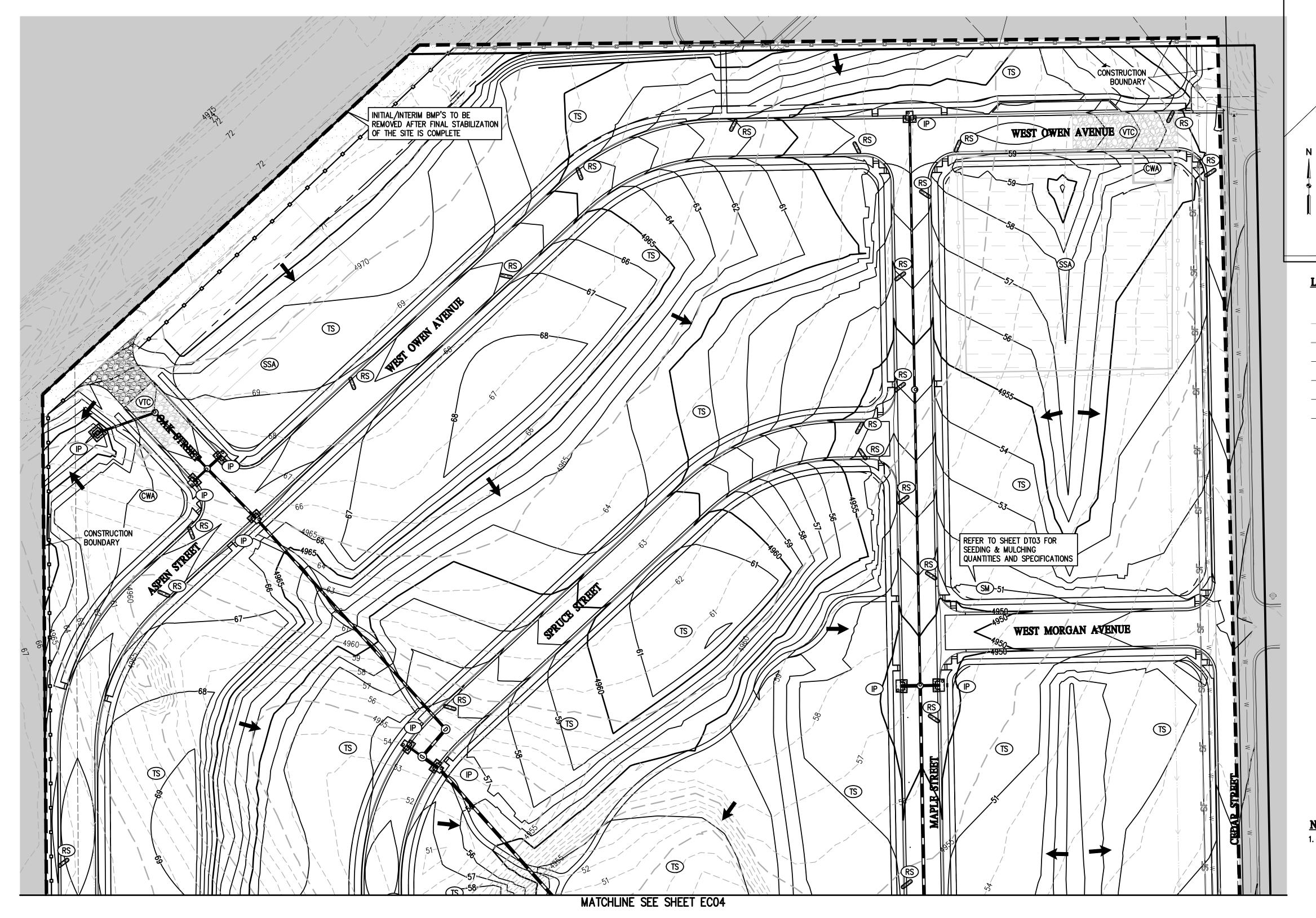
SUBDIVISION

**MSTA** 

SURVEY DATE 10/02/2020

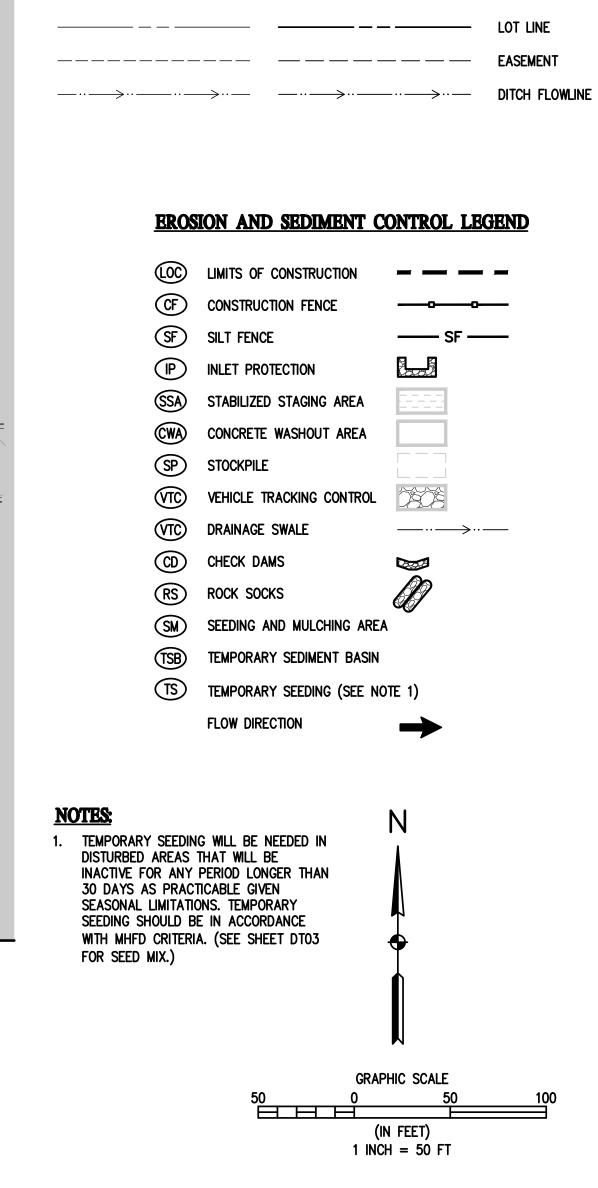
CO3490

SMITH AVE.



GRADING, EROSION AND SEDIMENT CONTROL NOTE:

- 1. TEMPORARY SEEDING OF DISTURBED AREAS MUST BE PROVIDED FOR ANY LOCATION THAT WILL BE INACTIVE FOR ANY PERIOD LONGER THAN 30 DAYS GIVEN SEASONAL LIMITATIONS. TEMPORARY SEEDING SHALL BE IN ACCORDANCE WITH MILE HIGH FLOOD DISTRICT CRITERIA.
- 2. REFER TO DETAILS SHEET DT02 FOR INFORMATION REGARDING TEMPORARY SEEDING MIX.



KEY MAP 1"=300'

PROPOSED LINETYPES

**EXISTING LINETYPES** 



OWEN AVE

W. MORGAN AVE

W. NELSON AVE

MINOR CONTOUR (1' INTERVAL)

MAJOR CONTOUR (5' INTERVAL)

SUBDIVISIO

**MSTA** 

INITIAL SUBMITTAL 06/30/202 DRAWING SIZE 24" X 36"

DRAWING NAME 3490 GSEC Initail\_Interum\_Final.dr

SHEET 8 OF 64

**SURVEY DATE** 10/02/2020

CO3490

SURVEY FIRM SURVEY FIRM

JOB NO.

69

INVESTMENT

EC05

\_\_\_ CF \_\_\_ CF \_\_\_ CF \_

MIN

' MIN.

4' MIN.

**SPACING** 

CONSTRUCTION FENCE INSTALLATION NOTES

-LOCATION OF CONSTRUCTION FENCE.

MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.

STUDDED STEEL

- PLASTIC CAP, TYP.

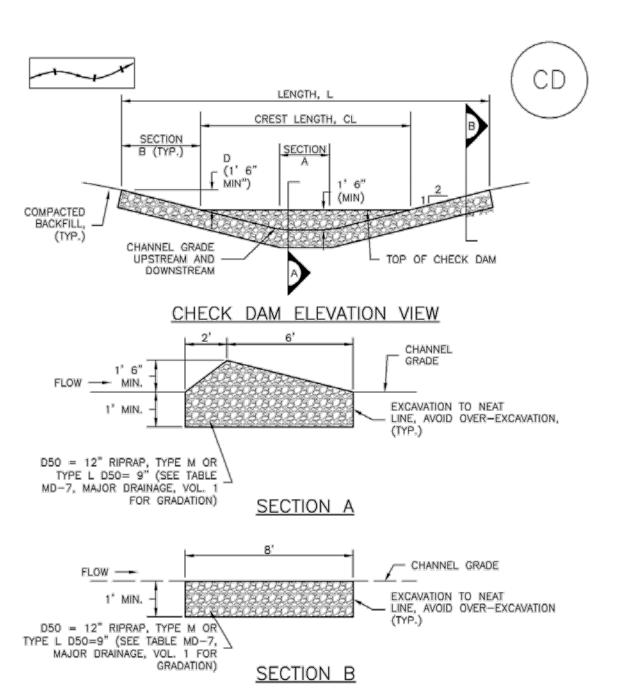
CONSTRUCTION FENCE OR APPROVED EQUAL

STUDDED STEEL

CF-3

FOR AND ON BEHALF OF BASELINE CORPORATION INITIAL SUBMITTAL 06/30/20 DRAWING SIZE 24" X 36" URVEY FIRM SURVEY DATE 10/02/202

SURVEY FIRM JOB NO. CO3490 DRAWING NAME 3490—Cover, Notes, & Details.dv **SHEET** 58 **OF** 64



CHECK DAM INSTALLATION NOTES

1. SEE PLAN VIEW FOR: -LOCATION OF CHECK DAMS. -CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM). -LENGTH (L), CREST LENGTH (CL), AND DEPTH (D).

2. CHECK DAMS INDICATED ON INITIAL SWMP SHALL BE INSTALLED AFTER CONSTRUCTION FENCE, BUT PRIOR TO ANY UPSTREAM LAND DISTURBING ACTIVITIES.

3. RIPRAP UTILIZED FOR CHECK DAMS SHOULD BE OF APPROPRIATE SIZE FOR THE APPLICATION. TYPICAL TYPES OF RIPRAP USED FOR CHECK DAMS ARE TYPE M (D50 12") OR TYPE L (D50 9").

4. RIPRAP PAD SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1'.

5. THE ENDS OF THE CHECK DAM SHALL BE A MINIMUM OF 1' 6" HIGHER THAN THE CENTER OF THE CHECK DAM.

CHECK DAM MAINTENANCE NOTES

1. 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.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON

4. SEDIMENT ACCUMULATED UPSTREAM OF THE CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN 1/2 OF THE HEIGHT OF THE CREST.

6. WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACKFILL. DISTURBED AREA SHALL BE SEEDED AND MULCHED AND COVERED WITH GEOTEXTILE OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

5. CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)  ${\color{red} {\rm NOTE:}}$  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.

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5. CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

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CF-1. PLASTIC MESH CONSTRUCTION FENCE

2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING

3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR-GRADE MATERIAL THAT IS AT LEAST 4' HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY.

4. STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE.

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**EC-6** 

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**Rolled Erosion Control Products (RECP** 

# **Concrete Washout Area (CWA)**

CHANNEL GRADE

CD-1. CHECK DAM

CONCRETE WASHOUT

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**MM-1** 

VEHICLE TRACKING

CONTROL (SEE VTC DETAIL) OR

OTHER STABLE SURFACE

VEHICLE TRACKING

DETAIL )

CONTROL (SEE VTC

## **Concrete Washout Area (CWA) MM-1**

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DIFFERENCES ARE NOTED.

CD-4

CWA MAINTENANCE NOTES 1. 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.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'. 5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS

IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY. 6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.

7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION. (DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, 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

DIVERSION DITCH

TYPICALLY AT TOP OF

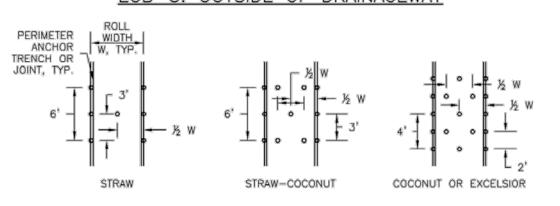
**Rolled Erosion Control Products (RECP)** 

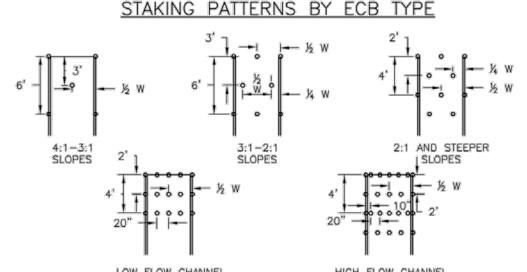
STAGGER OVERLAPS - OVERLAPPING JOINT STAKING PATTERN PER MANUFACTURER SPEC. OR PATTERN BASED ON ECB AND/OR SLOPE

TYPE (SEE STAKING PATTERN DETAIL)

ECB-3. OUTSIDE OF DRAINAGEWAY

PERIMETER ANCHOR





LOW FLOW CHANNEL HIGH FLOW CHANNEL STAKING PATTERNS BY SLOPE OR CHANNEL TYPE

# SECTION A CWA-1. CONCRETE WASHOUT AREA

8 X 8 MIN.

CONCRETE WASHOUT AREA PLAN

MIN.

COMPACTED BERM AROUND

CWA INSTALLATION NOTES 1. SEE PLAN VIEW FOR:

-CWA INSTALLATION LOCATION.

UNDISTURBED OR 1

LEAST 3' DEEP.

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COMPACTED SOIL

2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY, DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES, IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.

3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE. 4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT

5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 11.

6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.

7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.

8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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#### Urban Drainage and Flood Control District CWA-4 CWA-3 Urban Storm Drainage Criteria Manual Volume 3 Urban Storm Drainage Criteria Manual Volume 3

# RECP-8

## Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

## POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE. 2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN DOCUMENTED THOROUGHLY.

CONSTRUCTION FENCE MAINTENANCE NOTES

EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE, INSPECT BMPs AS SOON AS

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION. 5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH

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.

TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL

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

# EROSION CONTROL BLANKET INSTALLATION NOTES

SEE PLAN VIEW FOR:

 LOCATION OF ECB.

**EC-6** 

-TYPE OF ECB (STRAW, STRAW-COCONUT, COCONUT, OR EXCELSIOR). -AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.

2. 100% NATURAL AND BIODEGRADABLE MATERIALS ARE PREFERRED FOR RECPS, ALTHOUGH SOME JURISDICTIONS MAY ALLOW OTHER MATERIALS IN SOME APPLICATIONS. 3. IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE

4. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.

5. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE

6. INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs. 7. OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs

8. MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB-1. 9. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBS

SHALL BE RESEEDED AND MULCHED. 10. DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

| TABLE ECB-1. ECB MATERIAL SPECIFICATIONS  |                    |                    |                   |                       |  |  |
|---|--------------------|--------------------|-------------------|-----------------------|--|--|
| TYPE  | COCONUT<br>CONTENT | STRAW<br>CONTENT   | EXCELSIOR CONTENT | RECOMMEND<br>NETTING* |  |  |
| STRAW*  | =                  | 100%               |                   | DOUBLE/<br>NATURAL    |  |  |
| STRAW-<br>COCONUT   | 30% MIN            | 70% MAX            | _                 | DOUBLE/<br>NATURAL    |  |  |
| COCONUT   | 100%               |                    | ::                | DOUBLE/<br>NATURAL    |  |  |
| EXCELSIOR   | 100%               | DOUBLE/<br>NATURAL |                   |                       |  |  |
| STRAW ECBS MAY ONLY BE USED OUTSIDE OF STREAMS AND DRAINAGE CHANNEL.  **ALTERNATE NETTING MAY BE ACCEPTABLE IN SOME JURISDICTIONS |                    |                    |                   |                       |  |  |

1. 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

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION, INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON

4. ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, OR DAMAGED

6. ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS

7. WHEN ROCK SOCKS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH

(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.

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 NDORSES 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

TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL

CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN

5. SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCKS SHALL BE REMOVED AS NEEDED TO

MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS

**SC-5** 

— SF —— SF —— SF —

**GEOTEXTILE** 

COMPACTED

FLOW -

AT LEAST 10"

OF SILT FENCE

BURIED

"TAIL" SHALL BE

POSTS SHALL BE JOINED AS

SHOWN, THEN ROTATED 180 DEC

IN DIRECTION SHOWN AND DRIVEN

INTO THE GROUND

**Stabilized Staging Area (SSA)** 

CONSTRUCTION SITE ACCESS

STABILIZED

TO VTC-3)

1. SEE PLAN VIEW FOR

FROM THE LOCAL JURISDICTION.

FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

EROSION, AND PERFORM NECESSARY MAINTENANCE.

UNDERLYING SUBGRADE BECOMES EXPOSED.

CONSTRUCTION

ENTRANCE (SEE

DETAILS VTC-1

**BACKFILL** 

VESTMENT S

INITIAL SUBMITTAL 06/30/20

DRAWING SIZE 24" X 36" URVEY FIRM SURVEY DAT 10/02/202 SURVEY FIRM

JOB NO. CO3490 DRAWING NAME 3490—Cover, Notes, & Details.d **SHEET** 59 **OF** 64

EROSION CONTROL BLANKET MAINTENANCE NOTES

RESEEDED AND MULCHED AND THE ECB REINSTALLED.

1. 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.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

REMOVED BY THE LOCAL JURISDICTION. 5. ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATED A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED,

4. ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE

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.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO AND TOWN OF PARKER COLORADO, NOT AVAILABLE IN AUTOCAD)

1½" (MINUS) CRUSHED ROCK ENCLOSED IN WIRE MESH 1½" (MINUS) CRUSHED ROCK ENCLOSED IN WIRE MESH WIRE TIE ENDS 4" TO 6" MAX AT CURBS, OTHERWISE - GROUND SURFACE O" ON BEDROCK OR - 6"-10" DEPENDING HARD SURFACE, 2" IN SOIL SEDIMENT LOADS

ANY GAP AT JOINT SHALL BE FILLED WITH AN ADEQUATE AMOUNT OF 11/2" (MINUS) CRUSHED ROCK AND WRAPPED WITH ADDITIONAL WIRE MESH SECURED TO ENDS OF ROCK REINFORCED SOCK. AS AN ALTERNATIVE TO FILLING JOINTS ROCK SOCK, BETWEEN ADJOINING ROCK SOCKS WITH CRUSHED ROCK AND ADDITIONAL WIRE WRAPPING, ROCK SOCKS CAN BE OVERLAPPED (TYPICALLY 12-INCH OVERLAP) TO AVOID GAPS. GRADATION TABLE

ROCK SOCK JOINTING

ROCK SOCK INSTALLATION NOTES 1. SEE PLAN VIEW FOR: -LOCATION(S) OF ROCK SOCKS.

ROCK SOCK SECTION

SIEVE SIZE MASS PERCENT PASSING SQUARE MESH SIEVES NO. 4 MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.

ROCK SOCK PLAN

2. CRUSHED ROCK SHALL BE 1½" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (11/2" MINUS). 3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF 1/2", RECOMMENDED MINIMUM ROLL WIDTH OF 48"

4. 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.

Urban Drainage and Flood Control District

STOCKPILE

STOCKPILE PROTECTION PLAN

SECTION A

SP-1. STOCKPILE PROTECTION

INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS.

SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF

TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN

THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS

3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND

EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED

WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14

DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE

4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE

OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE

MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN

PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES, CONSIDERATIONS FOR DETERMINING THE APPROPRIATE

STOCKPILE PROTECTION INSTALLATION NOTES

-TYPE OF STOCKPILE PROTECTION.

PERIMETER CONTROLS MAY NOT BE REQUIRED.

-LOCATION OF STOCKPILES.

1. SEE PLAN VIEW FOR:

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5. SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE RS-1. ROCK SOCK PERIMETER CONTROL

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**MM-2** 

Rock Sock (RS)

ROCK SOCK MAINTENANCE NOTES

DOCUMENTED THOROUGHLY.

DISCOVERY OF THE FAILURE.

DIFFERENCES ARE NOTED.

IN THE MANUFACTURER'S DETAILS.

EROSION, AND PERFORM NECESSARY MAINTENANCE

IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE ROCK SOCK.

STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

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SF-1. SILT FENCE

SILT FENCE

SECTION A

— SF/CF —— SF/CF —

ONSITE

VEHICLE

PARKING (1F

NEEDED)

AREA

SSA-1. STABILIZED STAGING AREA

-CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL

2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE.

OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.

3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.

SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR

5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT

6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT

1. 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.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR

EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE

— SF/CF —— SF/CF —

EXISTING ROADWAY

STABILIZED STAGING AREA INSTALLATION NOTES

-LOCATION OF STAGING AREA(S).

INSTRUCTION

1 ½" x 1 ½"

SPACING

(RECOMMENDED) WOODEN

FENCE POST WITH 10' MAX

POSTS SHALL OVERLAP AT JOINTS SO THAT NO GAPS ? EXIST IN SILT FENCE/

THICKNESS OF GEOTEXTILE HAS

CONSTRUCTION

3" MIN. THICKNESS

FENCING AS NEEDED

SILT FENCE OR CONSTRUCTION

GRANULAR MATERIAL

BEEN EXAGGERATED, TY

SF-3

**SM-6** 

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Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

3. 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

4. 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. 5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES

6. 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 "J-HOOK." THE "J-HOOK."

1. 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.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN

4. 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". 5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING,

6. 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

7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

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

**Stockpile Management (SP)** 

RS-2

MM-2

SILT FENCE (SEE SF DETAIL FOR

INSTALLATION REQUIREMENTS)

SILT FENCE (SEE SF DETAIL FOR

INSTALLATION REQUIREMENTS)

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STOCKPILE PROTECTION MAINTENANCE NOTES

EROSION, AND PERFORM NECESSARY MAINTENANCE. 2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN

STOCKPILE PROTECTION MAINTENANCE NOTES 4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE

5. STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE

(DETAILS ADAPTED FROM PARKER, 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.

1. 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

**Stockpile Management (SM)** 

EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

PERIMETER CONTROLS BY THE END OF THE WORKDAY.

STOCKPILE HAS BEEN USED.

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1. 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

2. 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

OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.

EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10" - 20").

# 7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

EFFECTIVE OPERATING CONDITION, INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

TEARING, OR COLLAPSE.

SEDIMENT CONTROL BMP.

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

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DOCUMENTED THOROUGHLY.

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OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.

IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30-60 DAYS).

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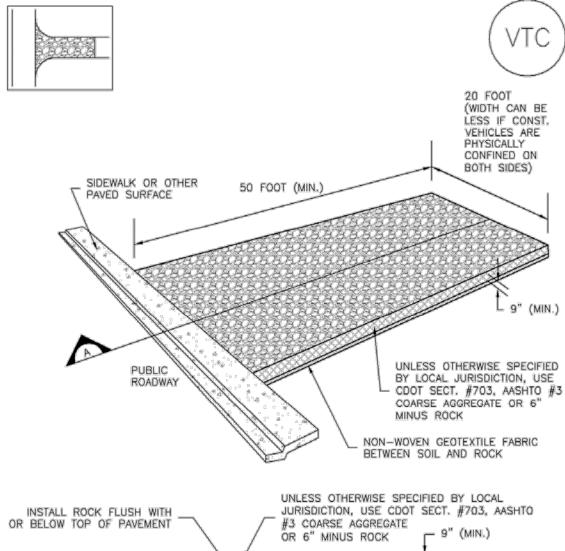
5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.

6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

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.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES 1. SEE PLAN VIEW FOR

-LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
-TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).

2. CONSTRUCTION MAT OR TRM 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.

3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.

4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.

6. 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

1. 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.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.

5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

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.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

Sand Bluestem (Champ, Chet) lbs pls/acre Sand Lovegrass nd, Native, Ne27) 2.50 lbs pls/acre Indian Ricegrass (Nezpar, Rimrock) 3.00 lbs pls/acre Prairie Sandreed (Goshen) 0.75 lbs pls/acre 1.50 lbs pls/acre Green Needlegrass (Lodorm) Little bluestem Cimarron, Camper) 0.75 lbs pls/acre Yellow Indiangrass (Cheyenne, Holt, Scout) 0.50 lbs pls/acre Switchgrass (Blackwell, Nebraska 28) 1.50 lbs pls/acre 0.50 lbs pls/a Total: 12.00 pounds pls/acre

**General Seed Mixes for Weld County** 

## Wetter Site Mix

| Western wheatgrass (Arriba, Barton, Rosana)          | 3.00 lbs pls/acre |
|--|-------------------|
| Slender wheatgrass (Pryor, San Luis)                 | 2.00 lbs pls/acre |
| Alkaligrass (Fults II, Salt on Sea)                  | 2.50 lbs pls/acre |
| Streambank Wheatgrass (Sodar)                        | 2.50 lbs pls/acre |
| Switchgrass (Nebraska 28, Blackwell)                 | 1.75 lbs pls/acre |
| Green Needlegrass (Lodorm)                           | 0.50 lbs pls/acre |
| Sideoats Grama (Butte, El Reno, Pierre)              | 1.00 lbs pls/acre |
| Perennial Ryegrass (Calibra or Garibaldi tetraploid) | 0.50 lbs pls/acre |
| Sand Dropseed  | 0.25 lbs pls/acre |
|  |                   |

Total: 14.00 pounds pls/acre

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NON-WOVEN GEOTEXTILE

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LLP. SUBDIVISION

WEST

MSP INVESTMENT CO.

**SHEET** 60 **OF** 64

COMPACTED SUBGRADE

VTC-6