

## **SECTION III**

### **CONSTRUCTION OBSERVATION AND STORM WATER QUALITY MANAGEMENT**

#### **III-1. GENERAL**

Each phase of improvements, constructed to these specifications, must be observed by the City Engineer or a representative of the Public Works Director prior to proceeding with subsequent phases.

The City will observe, as considered necessary, the construction of public improvements required as a condition of approval of any land development or entitlement. Improvements constructed without observation or approval as provided above, or constructed contrary to the direction of the City's representative, will not be accepted.

#### **III-2. ACCEPTANCE OF PUBLIC IMPROVEMENTS**

At the completion of construction of public improvements, the design engineer shall submit the following items to the City Engineer:

- 1) Engineer's Improvement Certification
- 2) Soil Testing Reports
- 3) Material Compliance Reports
- 4) Record Drawings
- 5) Other documentation that may be required by the City Engineer to determine satisfactory completion of the project.

All improvements constructed in public right-of-ways established by subdivision maps must be formally accepted by the City Council.

#### **III-3. STORM WATER QUALITY**

##### **Water Quality**

This section applies to both public and private projects regardless of size. The purpose of these requirements is to prevent the pollution of storm water runoff and non-storm water discharges from construction projects, regardless of size.

All construction activities shall be performed in a manner that prevents, to the maximum extent practicable, the discharge of any non-storm water discharges and pollutants from entering directly or indirectly the storm water system, and natural waterways.

##### **A. State General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities**

Any construction activity that disturbs one or more acres of land, or disturbs less than one acre but is part of a larger common plan of development or sale, must comply with the State Construction General Permit (CGP). The WDID # or proof of a waiver must be submitted to the City prior to issuance of a grading permit.

The Contractor shall maintain a copy of a Storm Water Pollution Prevention Plan (SWPPP) prepared in compliance with the CGP, on site at all times. The Contractor shall be responsible for implementing, maintaining, and repairing all storm water pollution controls or Best Management Practices (BMPs) described in the SWPPP for the duration of the work.

The project owner will be responsible to the City for any damages to City resulting from failure to make the repairs or properly maintain pollution prevention devices. The Contractor is responsible for submitting an annual compliance certificate to the State Water Board.

## **B. Erosion and Sediment Control**

Erosion prevention techniques are designed to protect soil particles from the force of rain and wind so that they will not erode. These techniques include, but are not limited to such things as construction scheduling, ground cover and plantings, and installation of erosion control matting.

Sediment control measures are designed to capture soil particles after they have been dislodged in order to retain the soil particles on-site. These measures include, but are not limited to silt fences, sediment barriers, and settling or sediment detention basins. Both erosion prevention techniques and sediment control measures have appropriate uses; however, it has been shown that sediment control measures are less effective in preventing soil movement and water quality impacts than erosion prevention techniques.

### **1. Erosion and Sediment Control Plan Submittal**

*A site specific Erosion and Sediment Control Plan (E&SCP) shall be submitted with all grading and building plans regardless of size.*

- Sites less than 1 acre may use the E&SCP template. (See Buildings or Engineering at [www.prcity.com](http://www.prcity.com))
- Sites 1 acre or greater in size must submit an E&SCP in accordance with section 2 below.
- A SWPPP developed pursuant to the CGP may be substituted for the E&SCP. The City will review the sections applicable to erosion and sediment control.
- The E&SCP must be approved in writing by the City Engineer or representative of the Public Works Director prior to the grading or building permit being issued.
- If any part of the E&SCP is revised, it must be approved in writing by the City.

## 2. Erosion and Sediment Control Plan Requirements

The E&SCP shall include:

### a. Narrative

A written narrative shall be included with the grading plan with a signed sheet by the person responsible for the plan preparation. The E&SCP narrative shall include the following:

- A list of applicable environmental permits directly associated with the grading activity
- Contractor information including a 24 hour telephone number of person responsible for erosion and sediment control
- Construction schedule for the entire length of the project
- Description of vegetation and distance to nearest waterways
- Description of critical areas of high erosion potential such as unstable slopes
- Description of erosion control measures of slopes, lots, streets, etc.
- Description of sediment detention basins, including design assumption and calculations
- The rationale used for selecting BMPs including supporting soil loss calculations, if necessary

### b. Site Plan

The site plan shall include the following information:

- Scale, north arrow and legend
- Vicinity map
- Watershed boundaries with project
- Critical areas within or near the project (waterways, channels, steep slopes, etc.)
- Limits of clearing and grading
- Waterway top of bank, delineation of any waterway buffer areas and existing vegetation and any special trees to be fenced and protected
- Location and types of temporary and permanent erosion and control measures
- Site access location
- Signature block for plan preparer

### c. Best Management Practices

Best Management Practices (BMPs) are applied during construction activities to reduce the pollutants in storm water discharges throughout construction. These Construction Site BMPs provide both temporary erosion and sediment control, as well as control for potential pollutants other than sediment. There are six categories of BMPs suitable for controlling potential pollutants on construction sites. BMPs from each of the six categories below, when applicable, shall be included in the E&SCP.

#### 1. Soil Stabilization BMPs

- Preservation of existing vegetation

- Hydraulic mulch
- Hydroseeding
- Soil binders
- Geotextiles, plastic covers and erosion control blankets
- Wood mulching
- Earth dikes/drainage swales and ditches
- Outlet protection/velocity dissipation devices
- Slope drains
- Streambank stabilization

## 2. Sediment Control Practices

- Silt Fence
- Gravel bag berm
- Desilting basin
- Sediment trap
- Sand bag barrier
- Check dam
- Fiber rolls
- Storm drain inlet protection
- Street sweeping and vacuuming

## 3. Tracking Control Practices

- Rock entrance or steel plates with ribs
- Stabilized construction roadway; and
- Entrance/outlet tire wash

## 4. Wind Erosion Control

- All graded surfaces and materials shall be wetted, treated or to prevent dust from leaving the site
- Stockpiles shall be protected year-round from blowing dust
- Upon completion of grading the site shall be thoroughly wetted in order to form a crust over the exposed dirt surfaces. Further applications or other methods acceptable to the City Engineer may be necessary if the site is disturbed

## 5. Source Controls

Source control BMPs that prevent pollution by limiting or reducing potential pollutants at their source before they come in contact with storm water for the following operations must be in place throughout all grading and construction phases when applicable.

- Vehicle and equipment fueling
- Dewatering operations
- Vehicle and equipment maintenance
- Paving and grinding operations
- Temporary stream crossing

- Concrete curing
  - Saw cutting
  - Illicit connection/illegal discharge
  - Potable water/irrigation
  - Vehicle and equipment cleaning
6. Waste Management and Materials Pollution Control  
BMPs for the following activities related to waste management and materials pollution control are required to prevent pollution by reducing pollutants at their source, and require a clean, well-kept site.
- Material delivery and storage
  - Material use
  - Hazardous waste management
  - Contaminated soil management
  - Stockpile management
  - Concrete waste management
  - Spill prevention and control
  - Sanitary/septic waste management
  - Solid waste management
  - Liquid waste management

#### **D. Erosion Control and Stormwater Management Manuals**

The following manuals may be used as a reference:

- EPA's Construction Stormwater Runoff Control BMPs  
<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm>
- *2012 CASQA Construction BMP Handbook*  
<http://www.prcity.com/stormwater>

#### **E. Site Inspections**

- During the rainy season (September 1<sup>st</sup> and April 30<sup>th</sup>), all projects must be inspected by a representative of the Public Works Director to ensure all necessary erosion and sediment controls are in place prior to any land disturbance.
- Periodic site inspections shall be performed to ensure compliance with the E&SCP.
- At the conclusion of the project, an inspection will be conducted to ensure that all erosion and sediment control measures that are no longer needed have been removed.

## **F. Contractor Training and Awareness**

- All employees/subcontractors shall be trained on the storm water pollution prevention requirements contained in these specifications.