

SECTION 01 57 01
STORM WATER POLLUTION PREVENTION
Construction Specification

PART 1 GENERAL

1.1 BACKGROUND:

- A. Storm drains may discharge directly to creeks and the Bay without treatment. Discharge of pollutants (any substance, material, or waste other than uncontaminated storm water) from construction activities into the storm drain system is strictly prohibited by the Federal Clean Water Act, the State Water Resources' Control Board and the California Regional Water Quality Control Board's (RWQCB) Water Quality Control Plan.
- B. San Mateo County Community College District is strongly committed to promoting sustainability throughout their campus projects. Section 01 81 13 Sustainability of the Design Standard provides guidelines and recommendations for implementing sustainability strategies. Where relevant, specific sustainability criteria is noted in this section; however, each project team should review and cross reference that front section while developing the specific project and its documentation. Each discipline shall confirm that specific performance and manufacturer information provided in the specification section is in alignment with code requirements, LEED criteria, and any other goals for sustainability.

1.2 GENERAL CONTRACTOR SCOPE:

- A. Provide all material, labor, equipment, for installation, implementation, and maintenance of all surface-water pollution prevention measures throughout the full extent of the project.
- B. This work includes the following:
 - 1. Furnishing, placing, and installing effective measures for preventing erosion and runoff of soil, silts, gravel, hazardous chemicals or other materials prohibited by the California State Water Resources Control Board from entering the storm water drainage system.
 - 2. Management of on-site construction materials and non-storm water in such a manner as to prevent said materials from contacting storm water or wash water and running off into the storm drain system.
 - 3. Complying with applicable standards and regulations per Paragraph 1.03.
 - 4. If part of the project, include post-construction storm water pollution prevention structures in the storm water pollution prevention plan, Contractor shall use construction drawings as the reference for post-construction BMPs.
- C. Specifications Included By Reference:
 - 1. Site Preparation, Section 31 10 00
 - 2. Trench Excavation and Backfill, Section 31 23 33
 - 3. De-Watering, Section 31 23 19
- D. In this section, the term "storm drain system" shall include permanent storm water treatment areas and devices, storm water conduits, storm drain inlets and other storm drain structures, street gutters, channels, watercourses, creeks, lakes, and waters of the overall San Francisco Bay.

- E. Contractor shall have storm drain pollution prevention measures in place and follow this specification throughout the course of the project. It is the responsibility of the Contractor to be prepared for a rain event in the non-rainy season, and to be aware of weather predictions. The Owner is not responsible for informing the contractor of rain predictions.
- F. Contractor shall not allow any non-storm water to enter the storm drain system. Non-storm water includes domestic supply water used to wash streets, painting and drywall equipment, tools, equipment, or vehicles.

1.3 REGULATIONS AND STANDARDS:

- A. Contractor shall comply with the following applicable regulations:
 - 1. Clean Water Act, United States Environmental Protection Agency, and Porter-Cologne Clean Water Act, State of California.
 - 2. National Pollutant Discharge Elimination System (NPDES), General Permit for Storm Water Discharges associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ (CGP)
 - 3. "San Francisco Bay Basin (Region 2) Water Quality Control Plan" (Basin Plan), California Regional Water Quality Control Board, December 31, 2010 Edition.
 - 4. Local Governing Agency requirements.
- B. Contractor shall comply with the following standards and guidelines on storm drain pollution prevention:
 - 1. California Storm Water Quality Association (CASQA) Storm Water Best Management Practice Handbook Portal: Construction November 2009 (Available on CASQA website only)
 - 2. CALTRANS Storm Water Quality Handbooks: Construction Site Best Management Practices (BMP's) Manual, March 2003

1.4 SUBMITTALS/DELIVERABLES:

- A. Submit a Storm Water Pollution Prevention Plan (SWPPP) prepared by a Qualified SWPPP Developer (QSD) with any Permit Related Documents (PRDs) and conforming to the requirements of the CGP to the Owner's Representative for review and approval. The Contractor will have 10 working days after the "Notice to Proceed" is issued to SWPPP and the PRDs to the owner's representative. The Contractor shall pay to the City the sum of \$500 per day, for each and every calendar days delay in submitting the SWPPP in excess of the number of working days prescribed above.
- B. The QSD shall review the post construction storm water facilities in the Storm Water Management Plan (SWMP) and attempt to utilize the construction level BMP's as part of the permanent BMP's.
- C. The Owner of the property is responsible for setting up the SMARTS account and will designate the QSD and QSP to be Data submitters. The QSD will then fill out the NOI and submit the SWPPP document into the system, and the QSP will be responsible for submitting on-going reports during the construction phase. The Owner will be responsible for certifying all reports.
- D. Contractor shall not disturb soil onsite until the Owner approves the plan.
- E. At a minimum the plan shall include the following:

1. Title Page:

The title page should primarily identify that the document is a SWPPP. Elements that should be included on the title page are the following:

- a. Name of the project, and project number,
- b. Owner and contractor of the project,
- c. Contact person(s)/address/daytime and emergency phone number.

2. Table of Contents:

Include a table of contents in the SWPPP, including page numbers.

3. Introduction:

The introduction shall provide the following information:

- a. Type and size of the construction project, including land area in acres).
- b. Project location, including county, and address.
- c. The beginning date of the project groundbreaking.
- d. The beginning and end dates for all phases.

4. Source Identification and Best Management Practices:

Identify storm water and non-storm water pollutant sources at the construction site. Choose an appropriate storm water pollution prevention best management practice (BMP) to control the pollution source.

Provide in the SWPPP a geographical description of potential storm water pollution sources. Topographic and site maps shall be used for this purpose.

a. Topography Map:

- 1) The map shall extend approximately one quarter mile beyond the construction site boundary and show the following: the construction site, surface water bodies (including springs and wetlands), known wells, an outline of off-site drainage discharging into the construction site, general topography, and the stormwater discharge locations for construction site stormwater.
- 2) Contractor shall use a U.S. Geological Survey quad map and shall modify it to show the required information. Include dimensions, scale, legends, flow direction of water bodies, run-on and run-off water and drainage, drainage locations, and delineation of permanent erosion and sediment control measures.

b. Site Map:

- 1) The contractor shall identify pollution sources, construct and implement stormwater and non-stormwater pollution prevention BMPs at the construction site. The contractor shall implement the SWPPP. Contractor shall include SWPPP for the post-construction pollution sources and

erosion and sediment control BMPs. A separate map may be used for showing the locations of the post-construction BMPs.

- 2) The site map shall be one or more detailed map(s) showing the location of pollution sources, (e.g. construction site drainage patterns, grading activities that change drainage patterns, drain inlets, hazardous materials storage, contaminated soil). The site map shall show the location of BMPs designed to prevent pollution sources from causing stormwater or non-stormwater pollution. The Contractor will choose the best available performance-based technology and methods to prevent storm water pollution for construction site activity. Many of those methods are detailed in the reference materials listed in Paragraph 1.03.
- 3) The following is a list of BMPs, geographic features or pollution sources to be shown (if applicable) on the site map. Further detail on these topics is in Part 3.0 of this Section (Paragraph number in parentheses).
 - a) Storm water flow drainage patterns and grading activities that change drainage patterns (3.01);
 - b) Perennial, intermittent or seasonal surface water bodies, oceans, lakes, rivers, creeks or streams, ponds, springs, and wetlands. (3.02)
 - c) Areas of existing vegetation (3.03)
 - d) Areas of disturbed soil (3.04)
 - e) Existing and planned paved areas and buildings (3.05)
 - f) Dust suppression water management (3.06)
 - g) Fire hydrant protection (3.07)
 - h) De-watering and sediment settling (3.08);
 - i) Erosion and sediment control measures (3.09);
 - j) On-site soils movement and storage (3.10);
 - k) Site ingress and egress mud tracking prevention (3.11);
 - l) Storm drain inlet protection (3.12);
 - m) Construction materials storage (3.13);
 - n) Concrete, mortar, saw cutting (3.14);
 - o) Sanitary Sewer Discharge Point Identification (3.15);
 - p) Fueling, washing and equipment cleaning (3.16);
 - q) Building wash or hydro-blasting water management (3.17);
 - r) Inspection, monitoring and maintenance of BMP control structures (3.18);
 - s) Spill Prevention and Control (3.19);

- t) Water Main Break Contingency Plan (3.20);
 - u) House Keeping Practices (3.21);
 - v) Post-construction stormwater run-off control (3.22);
- c. Personnel Training (3.23):
- The contractor shall provide a record of training for all its employees and subcontractors working on the construction site.
- d. List of contractors, designated SWPPP contacts (3.24):
- The contractor shall provide a list of employees, contractors with phone numbers, that will be responsible for writing, implementing, and updating the SWPPP.
- e. The contractor shall provide other appropriate site-specific storm drain pollution prevention methods necessary to achieve the objectives stated in subpart 1.02(A) in accordance with the applicable regulations and standards in subpart 1.03.

1.5 ENVIRONMENTAL ENFORCEMENT:

The RWQCB and the local governing agency have the authority to enforce, through codified regulations, any portions of this Section that if not implemented may violate applicable regulations. Agency enforcement may include but is not limited to: citations, orders to abate, bills for cleanup costs and administration, civil suits, and/or criminal charges.

PART 2 MATERIALS:

2.1 GENERAL:

Provide materials as required for execution of the work in accordance with the regulations and standards of 1.03 above.

PART 3 EXECUTION:

For each applicable sub-parts below, the contractor shall delineate on the site map BMP locations and provide a detailed description in the plan for pollution prevention structures or methods that will be constructed, implemented and maintained on site in accordance with the regulations and standards of 1.03 above.

3.1 STORMWATER DRAINAGE PATTERNS AND GRADED SLOPES:

Drainage patterns shall be shown on the site map within the SWPPP document. Drainage patterns that are modified during the construction of the project should be clearly shown on the site map. All slopes should indicate grading ratio and flow direction

3.2 SURFACE WATER LOCATIONS:

All surface water locations shall be clearly delineated on the site map. Surface water bodies include: oceans, lakes, rivers, creeks or streams, ponds, springs and wet lands. Include intermittent or seasonal surface water bodies.

3.3 AREAS OF EXISTING VEGETATION:

Contractor shall protect existing vegetation that is to be preserved on the site from mechanical or other injury during the project. Areas of existing vegetation shall be clearly delineated on the site map and supporting documentation.

3.4 AREAS OF DISTURBED SOIL:

Contractor shall clearly identify on the site map all areas of soil disturbance. These areas shall include soil removal or augmentation, such as holes, pits, excavations, trenches, berms, slopes, fill, and imported top soil.

3.5 EXISTING AND PLANNED PAVED AREAS AND BUILDINGS:

Areas that are covered by concrete, asphalt, or other permanent coverage of the soil shall be clearly delineated on the site map. Imprints of buildings shall also be indicated whether they are permanent or temporary.

3.6 DUST-SUPPRESSION WATER MANAGEMENT:

Contractor shall use best available dust suppression equipment and methods to control dust so that the dust does not cause discomfort or nuisance to occupants of the project site neighboring property. Contractor shall control dust suppression water so that it is effective in controlling dust, but does not enter the storm drain system. Contractor shall describe their dust suppression water management methods in this plan.

3.7 FIRE HYDRANT PROTECTION:

Contractor shall protect fire hydrants on and near the project site from damage. If the project personnel cause damage that results in a release of fire suppression water, the Contractor shall implement the procedures described in subpart 3.20.

3.8 DE-WATERING AND SEDIMENT MANAGEMENT:

- A. If stormwater or groundwater in site excavations or drilled holes, (e.g., trenches, pits, pier holes, footings), needs to be removed, it shall be made clean by filtering, settling, or other method capable of removing solids and suspended particles from this water prior to discharge to the storm drain system. The Contractor shall ensure that this discharge complies with all applicable provisions of the Construction General Permit (see Paragraph 1.01 of this Section).
- B. If excavation water is domestic supply water, or the water is contaminated with a hazardous substance, then the contractor shall dispose of according to guidance from the Owner. For disposal authorization, the contractor shall contact the Owner to determine the discharge requirement. The Owner will work with the Office of Environment, Health & Safety (EH&S) who will establish the discharge requirements.
- C. If the Contractor suspects the presence of contaminated groundwater, or domestic supply water, the Contractor shall immediately notify Owner representative or local Fire Department. The Contractor shall not attempt to pump out or treat any material suspected of containing a hazardous material or petroleum product.

3.9 DESCRIPTION OF EROSION AND SEDIMENT CONTROL MEASURES:

- A. Provide a description of erosion and sediment control measures that will be used on the site, and correlate the description with the site map (may be listed on the map in a comments section). Areas requiring erosion control measures are exposed soil, such as soil piles, bare soil, sloped soil, and any area of disturbed soil. Erosion control measures include paving, tarp placement, soil blankets, mulching, seeding, hydro-mulching, the use of straw wattles, and spreading straw. Sediment control measures include drain inlet protection, filter fabric,

geo-textile silt fencing, gravel placement, gravel or sandbag placement, sediment settling tanks, and straw wattle placement. This list is not all inclusive and the contractor should refer to the resources listed in Paragraph 1.03 of this Section. Both erosion and sediment control practices are designed to be implemented as an integrated system of pollution control. Without erosion controls, sediment controls are easily overwhelmed and will not prevent pollution.

3.10 ON-SITE SOILES MOVEMENT AND STORAGE:

- A. The Contractor shall describe and implement proven methods to prevent erosion from soils stored on site. Soil types (i.e. top soil, aggregate, mixed spoils, etc.) shall be appropriately separated, stored and protected. Soil testing may be required where on-site reuse or disposal is deemed appropriate.

3.11 SITE INGRESS AND EGRESS MANAGEMENT MUD TRACKING PREVENTION:

- A. The Contractor shall ensure that mud is not tracked from the site onto public or private roads. Contractor shall select the most appropriate BMP to accomplish this requirement.

3.12 STORM DRAIN INLET PROTECTION:

- A. The Contractor shall protect storm drain inlets from receiving sediment, hazardous chemicals, gasoline, diesel, oil or grease, trash, debris or other pollutants from the construction site.

3.13 CONSTRUCTION MATERIALS STORAGE:

Storage and exposure of raw materials, byproducts, finished products, and hazardous materials containers shall be controlled as described below:

- A. All construction materials shall be stored at least ten feet away from storm drain system inlets, catch basins, and curb returns.
- B. The Contractor shall not allow any material to enter the storm drain system.
- C. At the end of each working day, the Contractor shall collect and prepare for disposal all scrap, debris, and waste material generated by project activities.
- D. During wet weather or when rain is in the forecast, the Contractor shall store materials, (that can flow or be transported by storm water), inside a building or under a secured waterproof covering to prevent accidental release to the storm drain system. Examples: use sealed debris bins in rainy weather; store fuel containers out of the weather; cover soil, sand, or debris piles with tarps.
- E. The Contractor is responsible for ensuring that storage and disposal of all hazardous materials brought on site for this project (e.g., coatings, thinners, solvents, and fuels), and all hazardous waste generated during project activities (e.g., waste oil) is in compliance with all applicable federal, state, and local standards and requirements.
- F. Liquid materials shall be stored in secondary containment. The containment shall be designed to hold at least 110% of the volume of the largest stored container.

3.14 CONCRETE, MORTAR, SAWCUTTING:

For concrete or mortar application to be performed on site (if any), the Contractor shall comply with the following provisions:

- A. Washing sweepings of exposed aggregate concrete into the street or storm drain system [as defined in paragraph 1.02 (C)] is prohibited. Collect and return sweepings to aggregate base stockpile, or dispose of as construction debris.
- B. Do not wash out concrete trucks and equipment into the storm drain system. Whenever possible, perform washout of concrete trucks (if any) and equipment off-site where discharge is controlled.
- C. If on-site washout of trucks and equipment is necessary, then the Contractor shall comply with the following procedures:
 - 1. Locate washout area at least 50 feet from storm drains, open ditches or water bodies, preferably in a dirt area.
 - 2. Do not allow storm water run-off from the washout area.
 - 3. Construct a temporary pit or bermed area large enough to contain the wash-water and surplus concrete waste.
 - 4. Wash out concrete waste into the temporary pit where the concrete can set, be broken up, and then disposed of as construction debris. If the volume of water is greater than what will allow concrete to set, allow the wash water to concentrate and/or evaporate, if possible. Otherwise, allow water to settle before filtering it, and then pump to the sanitary sewer (as long as the pH is less than hazardous waste limit of 12.5).
 - 5. Wash-water from tools used for mixing mortar, in sheet rock work, plaster, drywall, mortar work or similar work shall be settled before disposal to the sanitary sewer. Solids shall be disposed to the debris bin. This wash-water is prohibited from stormwater discharge.
 - 6. Concrete sawing or drill cutting lubricating/cooling water or shall be collected using a wet-vacuum. The lubricating/cooling water shall be settled before disposal to the sanitary sewer. Solids shall be disposed to the debris bin. This lubricant/cooling water is prohibited from stormwater discharge.

3.15 SANITARY SEWER DISCHARGE POINT IDENTIFICATION:

If the Contractor will be disposing of water from a settling operation, or any other water approved by the local Sanitation Agency for disposal, the Contractor will verify with that agency the manhole used for disposal is a sanitary sewer and not a storm drain. (Note: Do not assume that a manhole is a sanitary sewer, even if the words "sanitary sewer" are embossed on it. Sometimes utility maps and manhole cover designations are incorrect.)

3.16 FUELING, WASHING AND EQUIPMENT CLEANING:

- A. The Contractor shall not perform vehicle cleaning on site, unless a properly designed wash area prevents run-off from entering the storm drain system. Washing and equipment cleaning may be limited due to drought conditions. Water use prohibitions for each water agency shall be referenced prior to cleaning of equipment. Adherence to any and all water use restrictions/prohibitions are the responsibility of the contractor. Domestic water supply is prohibited from entering the storm drain because it contains chloramines. It can go to the sanitary sewer if the sediment is allowed to settle before discharge and it meets the standards of the local sanitary sewer agency.
- B. If fueling must occur on-site, use designated areas away from drainage. Locate on-site fuel storage tanks within a bermed area designed to hold the tank volume. The area should be covered so that rain water will not get into the bermed area. The bermed area shall be lined

so that leaks, spills or drips will not contaminate the soil. Use secondary containment while fueling or changing fluids to catch drips or small spills.

- C. The Contractor shall dispose of wash water from the cleaning of non-hazardous water-based coating equipment (such as latex paints or drywall compounds) and tools to the sanitary sewer. Unused latex paint, oil based paint, used or new paint thinner and solvents are prohibited from disposal to the sanitary sewer and the storm drain system. The Contractor shall dispose of these wastes in accordance with federal, state, and local hazardous waste and solid waste regulations.

3.17 BUILDING WASH OR HYDRO-BLASTING WATER MANAGEMENT:

- A. Construct a containment system to eliminate wash-water from draining to the storm drain or the sanitary sewer system.
- B. Pour, pump or drain the wash-water into a containment tank.
- C. Use a filter system (e.g., cartridge filters) to remove suspended paint solids. Use settling methods to minimize the amount of solids entering the filter system. This will prevent filter saturation.
- D. Sample the filtered water before it is discharge to the sanitary sewer. Have the sample analyzed for the 13 priority pollutant metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, zinc) and any other chemicals of concern that could be present to determine whether or not the water is suitable for sanitary sewer discharge. Send a copy of the analytical results to the local Sanitation Agency for disposal method determination.

3.18 INSPECTION, MONITORING AND MAINTANENCE OF POLLUTION CONTROL SYSTEMS

- A. Inspections shall be performed in accordance with the requirements of the CPG. Provide documentation of these inspections, and improvements or modifications of the control systems. Contractor shall designate an Qualified SWPPP Practitioner (QSP), preferably a third party QSP and list the name of the QSP in the list of contacts page as described in subpart 1.04(B)(4)(d). Contractor shall maintain structural controls and updates/amendments to the SWPPP. The owner will conduct periodic inspections of the site to verify adequacy of storm drain pollution prevention controls and compliance with applicable regulations and standards as stated in subpart 1.03(A).

3.19 SPILL PREVENTION AND CONTROL

- A. The Contractor shall take precautions to prevent accidental spills of pollutants, including hazardous materials brought onsite by the Contractor. However, in the event of a spill, the Contractor shall be held responsible for the following:
- B. Immediately contain and prevent leaks and spills of prohibited pollutants from entering the storm drain system. Clean up the spill and label the container. Store the container in a safe place and contact the Owner to arrange disposal of the waste. The Contractor shall keep a spill kit on site at all times for this purpose.
- C. Contractor shall comply with all federal, state, and local hazardous waste requirements and ensure that no spilled materials are washed into the stormwater or non-stormwater systems.
- D. Report any hazardous or unknown material spills immediately to the Fire Department. After contacting the Fire Department, immediately contact the Owner.
 - 1. The Contractor is responsible for ensuring that its employees and subcontractors (if any) working on site are aware of the location of a phone nearest the project site.

3.20 WATER MAIN AND SANITARY SEWER LINE BREAK CONTINGENCY PLAN:

- A. If working on or near a water main line or sanitary sewer line, the Contractor shall have a written emergency response plan that states procedures for responding to a break and release of supply water to the storm drain system. The contractor can refer to the Districts on-line Utility Mapping system "LANDMARK" for approximate location of existing site utilities. The Contractor shall meet the following requirements:
1. Water Main Work:
 - a. Determine the direction of water flow if the main were to break.
 - b. Build a containment berm between the work area and the storm drain inlet(s) that the water would flow into. Make the containment structure large enough to hold the water so that it can be pumped to a sanitary sewer.
 - c. Build this containment structure before digging.
 - d. If there is a water main break, pump the water that collects in the containment structure to a sanitary sewer.
 - e. If the containment fails, prevent chlorinated water from entering the storm drain system by placing dechlorination sodium sulfite tablets in the sewage.
 - f. Put in place, before digging, sediment control structures upstream of drain inlets and at drain inlets.
 - g. If a break occurs contact the Owner and the local Water District immediately.
 2. Sanitary Sewer Line Work:
 3. This sub-part applies only to Contractors that are hired to work on sanitary sewer lines and are trained to work near sewage.
 - a. Determine where the sewage will flow if the work could cause a blockage.
 - b. Build a containment structure between the work area and the storm drain inlet(s) that the sewage water would flow into. Make the containment structure large enough to hold the sewage flow so that it can be pumped to a sanitary sewer.
 - c. Build the containment before working on the sewer line. Put in place, before digging, solids (toilet paper, etc.) control structures upstream of drain inlets and at drain inlets.
 - d. If a sewage blockage occurs, pump it to a sanitary sewer, and do not allow it to flow into the storm drain system.
 - e. If the containment fails, prevent chlorinated water from entering the storm drain system by placing dechlorination sodium sulfite tablets in the sewage.
 - f. If a sewage blockage or spill occurs contact the Owner and local Sanitation Agency immediately.
 4. Excavation Work:
 - a. This Paragraph applies to Contractors that excavate in the vicinity of sanitary sewer lines and cause or discover a sewage spill, leak or blockage.

- b. Immediately notify the Owner and local Sanitation Agency.

3.21 HOUSE KEEPING PRACTICE:

- A. The Contractor shall implement the following applicable good housekeeping practices:
 1. Store materials that have the potential to be transported to the storm drain system by storm runoff or spillage away from areas of heavy traffic and under cover in a contained area or in sealed waterproof containers.
 2. Use tarps on the ground to collect fallen debris or splatters that could contribute to storm water pollution.
 3. Secure opened bags of powdered materials (if any) that could contribute to storm water pollution and visible dust emissions.
 4. Pick up litter, construction debris, and other waste generated by project activities daily from adjacent areas, including the sidewalk area, gutter, street pavement, and storm drains impacted by the project. All wastes shall be stored in covered containers, disposed of, or recycled immediately.
 5. Clean sidewalks, driveways, or other paved areas within the construction site to eliminate or prevent mud-tracking conditions. Vacuuming, power sweeping, or manual sweeping is acceptable. Dispose of sweepings in a place that will not pollute the storm drain system. Domestic water may be used but it shall be contained and directed to landscapes or the sanitary sewer. The discharge of wash-water to the storm drain system is prohibited.
 6. Inspect vehicles and equipment arriving on-site for leaking fluids, and promptly repair leaking vehicles and equipment. Use drip pans to catch leaks until repairs are made.
 7. Avoid spills by handling materials carefully. Keep a stockpile of appropriate spill clean-up materials, such as rags or absorbent materials, readily accessible on site. Clean up all spills of materials brought on site for project activities according to Sub-part 3.19.
 8. Train employees regularly on good housekeeping practices and procedures. Assign responsibility to specific employees for inspecting good housekeeping, and responding to spills.

3.22 POST-CONSTRUCTION STORMWATER RUN-OFF CONTROL MEASURES:

- A. All permanent structural and nonstructural control measures that are planned for the project to control pollutants in stormwater discharges after construction is completed shall be delineated on a site map. These controls shall be part of the design of the project and included in the architectural drawings. Post-construction BMPs include, but are not limited to:
 1. Minimization of land disturbance
 2. Minimization of impervious surfaces
 3. Treatment of stormwater run-off using infiltration or filtration structures.
 4. Water detention/retention BMP's
 5. Rain Water Harvesting BMP's
 6. Bio-filter BMPs

7. Efficient irrigation systems
 8. Ensuring that interior building drains and trash enclosures are tied to the sanitary sewer system, and not the stormdrain system
 9. Appropriately designed and constructed energy dissipation devices
- B. Post construction BMPs must be consistent with Districts Storm Water Management Program requirements, policies and guidelines.
 - C. Contractor shall provide operation and maintenance manuals for post-construction stormwater management controls installed as part of this project.
 - D. Contractor shall refer to construction drawings for post-construction BMPs and include them in the SWPPP.

3.23 PERSONNEL TRAINING:

- A. The Contractor shall train its employees working on the site on the requirements contained in this Section. The Contractor shall document this training in writing.
- B. The Contractor shall inform all subcontractors (if any) of the water pollution prevention requirements contained in this specification and include appropriate subcontract provisions to ensure that these requirements are met.

3.24 List of Contractors Designated SWPP Contacts and Phone Numbers:

Provide a list of employees that will be responsible for writing, implementing and updating the SWPPP.

END OF SECTION