

SECTION 01 57 13

STORM WATER POLLUTION PREVENTION CONTROLS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. The Project is within a Caltrans Right Of Way.
- B. The Contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) and file a Notice of Intent (NOI) with the Regional Water Quality Control Board (RWQCB) and the San Francisco Public Utilities Commission (SFPUC).
- C. The Contractor shall also submit a Construction Site Runoff Control Permit Application to the SFPUC.
- D. The Contractor shall also ensure compliance with the National Pollution Discharge Elimination System (NPDES) General Permit, SFPUC's regulations, and the California Department of Transportation (Caltrans) requirements.
- E. This Section specifies the general requirements to the Contractor for furnishing all labor, materials, equipment, and operations necessary for work related to storm water and erosion and sediment controls pursuant to the requirements of the National Pollution Discharge Elimination System (NPDES) General Permit [Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002] for Storm Water Discharges Associated with Construction and Land Disturbance Activities (hereinafter referred to as "General Permit") including any new revisions or amendments that occur during the course of the Project. The complete General Permit is available online at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo_2009_0009_complete.pdf.
- F. This Section also specifies City's requirements of the San Francisco Public Utilities Commission (SFPUC) Construction Site Runoff Control:
<http://www.sfwater.org/index.aspx?page=235>. Best Management Practices (BMPs) and erosion and sediments controls shall be implemented at all construction sites to minimize the discharge of pollutants into the City's combined sewer system. The Contractor shall complete the application and obtain a Construction Site Runoff Control Permit ("Permit").
- G. The Contractor shall prepare and implement a site-specific Storm Water Pollution Prevention Plan (SWPPP) to ensure compliance with the General Permit as described herein, Caltrans requirements, and the SFPUC Construction Site Runoff Control. The Contractor shall obtain approval of its SWPPP from the SFPW (Department of Public Works), Caltrans, and SFPUC.
- H. In accordance with Federal, State, and local regulations, it is unlawful to discharge pollutants from construction sites into the City's combined sewer system. Failure to implement the stormwater pollution control prohibited discharges in to the City's sewerage system, and control discharge pollutants from construction site is subject to regulatory fines.
- I. Liquidated Damages: In addition to regulatory fines, should the Contractor fail to implement the SWPPP, the control of prohibited discharges in to the City's sewerage system, and control of discharge pollutants from construction site as per this Section, or promptly take all required remedial actions to the City's satisfaction herein, the City Representative reserves the right to issue environmental non-

compliance notices, have the necessary work performed by others, assess fines of one thousand dollars (\$1,000.00) per non-compliance occurrence or per event, or to deduct or withhold all monies required therefore as permitted under the Contract Documents.

- J. All work in this section shall be considered as incidental work to mobilization (Bid Item G-11), unless noted otherwise.

1.2 RELATED SECTIONS

- A. 01 35 45 - Health and Safety Criteria
- B. 01 35 49 - Minimum Environmental Procedures
- C. 01 35 50 - Additional Environmental Procedures
- D. 01 41 00 - Regulatory Requirements
- E. 02 81 10 - Environmental Management of Excavated Materials
- F. 33 24 00 - Ground Water Wells

1.3 CONSTRUCTION SITE RUNOFF CONTROL PERMIT

- A. The Contractor shall complete the application and obtain a Construction Site Runoff Control Permit ("Permit") with the San Francisco Public Utilities Commission, Wastewater Enterprise, Collection System Division (SFPUC-WWE/CSD). The Contractor shall comply with all Permit requirements.
- B. The Construction Site Runoff Control Permit Application can be found at: <http://www.sfwater.org/index.aspx?page=498> or obtained at the San Francisco Public Utilities Commission, Wastewater Enterprise, Collection System Division, 3801 3rd Street, Suite 600, San Francisco, telephone (415) 695-7339 or San Francisco Permit Center, 1660 Mission Street, San Francisco.
- C. The "Permit" application shall include the SWPPP developed signed and stamped by a Qualified Stormwater Developer (QSD), as described in this section and as per the requirements of the SFPUC Construction Site Runoff Control Ordinance. <http://www.sfwater.org/index.aspx?page=235>
- D. The Contractor is responsible for obtaining the Construction Site Runoff Control Permit in a timely manner and prior to the commencement of any land-disturbing activities. The City will not honor any claims from the contractor arising from delays in obtaining the Construction Site Runoff Control Permit.
- E. The Contractor shall comply at all times with provisions contained in the Construction Site Runoff Control Permit which may include but not be limited to specific sampling, inspection, or reporting requirements.
- F. Contractor shall maintain a copy of the Construction Site Runoff Control Permit and the SWPPP onsite at all times.
- G. The SWPPP shall include all the requirements of the Erosion and Sediment Control (ESC) and Best Management Practices (BMP's).

1.4 REFERENCES

- A. The following web addresses provide access to the forms, worksheets and similar documentation required for compliance with the General Permit's storm water related requirements. Contractor shall contact the City Representative in the event that any of the listed addresses are inoperable.
1. http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wgo_2009_0009_complete.pdf – for accessing the General Permit (pages 50 through 93 of 276), and for accessing the Risk Determination Worksheets (pages 216 through 222 of 276)
 2. http://www.swrcb.ca.gov/water_issues/programs/stormwater/constpermits.shtml – same as Subparagraph 1 above, for accessing the General Permit (click on the word 'Order')
 3. <https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp> – for accessing the Water Boards Storm Water Multiple Application & Report Tracking System (SMARTS)
 4. http://www.swrcb.ca.gov/water_issues/programs/stormwater/docs/constpermits/draft_construction/app3_reap.pdf – for accessing the Rain Event Action Plan (REAP) form templates
 5. <http://www.casqa.org> – for purchasing a CASQA subscription to access the California Stormwater Construction BMP Handbook, SWPPP template and its inspection and sampling field log sheets
- B. The California Department of Transportation (Caltrans) requirements.
<https://dot.ca.gov/programs/construction/storm-water-and-water-pollution-control>
- C. SFPUC Regulations
- D. The City's Stormwater Ordinance (Ordinance No. 83-10).

1.5 ABBREVIATIONS AND DEFINITIONS

- A. Abbreviations:
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|-----|-------|---|
| 1. | ATS | Active Treatment System |
| 2. | BMP | Best Management Practices |
| 3. | CASQA | California Stormwater Quality Association |
| 4. | CPESC | Certified Professional in Erosion and Sediment Control™ |
| 5. | CPSWQ | Certified Professional in Storm Water Quality™ |
| 6. | CWA | Clean Water Act |
| 7. | GP | General Permit |
| 8. | LUP | Linear Underground/Overhead Project |
| 9. | MDL | Method Detection Limit |
| 10. | MS4 | Municipal Separate Storm Sewer System |
| 11. | SDS | Safety Data Sheet |
| 12. | NPDES | National Pollutant Discharge Elimination System |
| 13. | QSD | Qualified SWPPP Developer |

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|-----|-------|--------------------------------------|
| 14. | QSP | Qualified SWPPP Practitioner |
| 15. | REAP | Rain Event Action Plan |
| 16. | RUSLE | Revised Universal Soil Loss Equation |
| 17. | RWQCB | Regional Water Quality Control Board |
| 18. | SWRCB | State Water Resources Control Board |

B. Definitions:

1. Active Treatment System – A treatment system that employs chemical coagulation, chemical flocculation, or electrocoagulation to aid in the reduction of turbidity caused by fine suspended sediment.
2. Beneficial Uses – As defined in the California Water Code, beneficial uses of the waters of the state that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.
3. Effluent – Any discharge of water by a discharger either to the receiving water or beyond the property boundary controlled by the discharger.
4. General Permit – the National Pollution Discharge Elimination System (NPDES) General Permit [Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006, NPDES No. CAS000002] for Storm Water Discharges Associated with Construction and Land Disturbance Activities; accessed via the State Water Resources Control Board website http://www.swrcb.ca.gov/water_issues/programs/stormwater/constpermits.shtml, and clicking on the word 'Order'; Repeated references to General Permit within this Section pertain to this Order.
5. Inactive Construction – Areas of construction activity that are not active and those that have been active and are not scheduled to be re-disturbed for at least 14 days.
6. Likely precipitation event – A likely precipitation event is any weather pattern that is forecast to have a 50% or greater probability of producing precipitation in the project area. Obtain likely precipitation forecast information from the National Weather Service Forecast Office by entering the zip code of the project's location at <http://www.srh.noaa.gov/>.
7. Non-storm Water Discharges – Discharges that do not originate from precipitation events. They can include, but are not limited to, discharges of process water, vehicle wash water, sanitary wastes, concrete washout water, paint wash water, irrigation water, or pipe testing water.
8. Qualifying Rain Event – Any event that produces 0.5 inches or more precipitation within a 48 hour or greater period between rain events.

1.6 REGULATORY REQUIREMENTS

- A. Contractor shall comply with the Clean Water Act, as amended in 1972. No debris, soil, ash, silt, sand, cement or concrete, or washing thereof, oil or petroleum products or other organic materials from Contractor's operation shall be allowed to enter or be placed where it may be washed by rainfall or run-off directly into streams

or other waters of the United States or state. The Contractor shall comply with all provision the SFPUC regulations.

- B. Contractor shall comply with all provision of the U.S. Army Corps of Engineers 404 permit, the California Department of Fish and Wildlife 1602 Streambed Alteration Agreement, and the Regional Water Quality Control Board (RWQCB) 401 Certification, as applicable. See Section 00 73 00/APA for Permits and Agreements which will be obtained by the City.
- C. Contractor shall comply with all provision of the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities [Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ, NPDES No. CAS000002] including any new revisions or amendments that occur during the course of the project, inclusive of the applicable Basin Plan water quality objectives.
- D. Contractor shall be liable for any penalties under Section 309(c)(4) of the Clean Water Act (CWA) for knowingly making any false material statement, representation, or certification in any record or other document submitted or required to be maintained under the General Permit.
- E. The Contractor shall comply and be responsible for payment of all fines imposed due to any violations of the Permit requirements or violations of Article 4.1 and 4.2 of the Public Works Code
https://law.resource.org/pub/us/code/city/ca/SanFrancisco/Public%20Works%20Code/article04_01.pdf, and the Public Works Code – Control of Construction Site Runoff, Ordinance 260-13
<http://sfwater.org/modules/showdocument.aspx?documentid=5041>
- F. Contractor shall be liable for any penalties under Section 309 of the CWA for violating a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any such section in a permit issued under Section 402. Contractor shall be liable for any penalties for violations of the Porter-Cologne Water Quality Control Act.
- G. Contractor shall comply with Water Quality Objectives for San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan) for project location.
- H. If work is performed in a Caltrans right of way: For all work within a Caltrans right of way, Contractor shall be in full compliance with the Caltrans Storm Water Program and the Caltrans NPDES permit requirements

<https://dot.ca.gov/programs/construction/storm-water-and-water-pollution-control>
 - 1. The California Department of Transportation (Caltrans) requirements. The Contractor shall use in the planning and implementation of stormwater monitoring programs at construction sites, and comply with:
 - a. Construction General Permit, Order No. 2009-0009-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002.
 - b. Caltrans Stormwater permit, Order No. 2012-0011 -DWQ, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS000003.
 - c. Caltrans Construction Site Monitoring Program Guidance Manual: This manual also contains Construction Site Monitoring Program (CSMP) requirements based on:

- Caltrans Statewide Stormwater Management Plan (SWMP), (Caltrans, 2016).
- Caltrans Standard Specification.
- Caltrans Standard Special Provisions

1.7 QUALITY ASSURANCE

- A. The SWPPP shall be developed, certified and signed by a Qualified Storm water Developer (QSD).
- B. The Contractor shall have a qualified person, such as a Qualified Stormwater Practitioner (QSP), or otherwise qualified individual trained by a Qualified Stormwater Developer (QSD), to oversee the SWPPP including implementation of all BMPs, erosion and sediment control measures, inspections, and its reporting requirements.
- C. The QSD and QSP shall both meet the requirements for registrations/certifications, training, and appropriate experience listed in the General Permit. SWPPP preparation, amendment, certification, and implementation shall be managed by the QSD and QSP, as defined in the General Permit and herein. In addition to the General Permit QSD and QSP requirements for registrations/certifications, training, and experience.
- D. QSD qualifications
 - 1. The Contractor shall provide a Qualified SWPPP developer certified by the California Stormwater Quality Association (CASQA). In addition to the CASQA certification, if the Contractor's QSD is a registered Civil Engineer, registered landscape Architect, or professional hydrologist, Contractor's QSD shall also possess one of the following certifications:
 - a. A Certified Professional (and Investigator) in Erosion and Sediment Control (CPESC) registered through Enviro Cert International, Inc.
 - b. A Certified Professional in Storm Water Quality (CPSWQ) registered through Enviro Cert International, Inc.
 - 2. QSD shall have prepared a minimum of five (5) SWPPPs, including at least two (2) SWPPPs for Risk Level 2 and/or LUP Type 2. All five (5) SWPPPs shall be available on SMARTS and to document these QSD qualifications.
- E. QSP qualifications.
 - 1. The QSP shall have a minimum of 4 years demonstrable experience implementing SWPPPs and performing field inspections including two years on Risk Level 2 and/or LUP Type 2 projects under the General Permit.

1.8 SUBMITTALS

- A. As per Section 01 33 00 –Submittal Procedures, forty (40) days prior to proceeding with construction activities (e.g., potholing, silt fence installation, demolition, vegetation clearing, excavation, grading, etc.), the Contractor shall submit for review and approval the following documentation listed below.
 - 1. QSD Qualifications Submittals:

- a. QSD's name and CASQA or CEPSC certification number(s).
 - b. A table listing QSD SWPPPs prepared for five (5) projects, including at least two (2) SWPPPs for Risk Level 2 and/or LUP Type 2 with their Waste Discharge Identification Numbers, the projects' owner/operator names, the projects' site/facility names, and the projects' Risk Level or LUP Types. All five (5) SWPPPs shall be available on SMARTS.
2. QSP Qualification Submittals
 - a. QSP's name and CASQA or CEPSC certification number or name of the qualified individual with a statement that this designated person as QSP was trained and will be supervised by a QSD
 - b. A table listing the projects' site/facility names, the begin/end dates the QSP worked on the projects, the projects' Waste Discharge Identification Numbers, the projects' owner/operator names, and the projects' Risk Level or LUP Types.
3. The Contractor shall prepare and submit to the City Representative, Caltrans, and SFPUC for review and acceptance a SWPPP prepared from the latest CASQA template showing all proposed storm water control facilities, defining the sequence of construction, and describing all erosion/sedimentation control procedures to be used.
 - a. The SWPPP shall be submitted within (30) thirty calendar days after the Notice to Proceed and before commencement of demolition and earthmoving activities. No work will start without the SWPPP certified and signed by the Contractor's QSD, the SFPUC Construction Site Runoff Control permit approved, and Caltrans approval.
 - b. The Contractor shall submit a copy of the SWPPP along with the Construction Site Runoff Control Permit ("Permit") application to the San Francisco Public Utilities Commission, Wastewater Enterprise, Collection System Division (SFPUC-WWE/CSD).
 - c. Upon Permit issuance, submit a copy of the SFPUC Construction Site Runoff Control Permit to the City Representative.
 - d. Submit copies of the inspection reports on a monthly basis. Reports shall also be made available upon request if requested by the SFPUC Inspector, Caltrans, or the City Representative.
4. Technical Product Literature – At least 14 days prior to the use of any product with the potential to cause water pollution, the Contractor shall submit Safety Data Sheet(s) (SDS) and technical product literature for all commercial products to be used for storm water management and erosion/sedimentation control (e.g., soil binder, bonded fiber matrix, flexible growth medium, tackifier, etc.).
5. For Risk Level 1, 2 and 3: Monthly Storm Water Site Inspection Reports – Contractor shall submit Monthly Storm Water Site Inspection Report to the City Representative on a monthly basis.
6. SWPPP Amendments Submittals:
 - a. When changes in the SWPPP are required during the course of the Project, the Contractor shall prepare and certify an amendment to

the SWPPP and then submit it to the City Representative for review. SWPPP amendments shall be certified by Contractor's QSD, the Contractor shall prepare an amendment to the SWPPP when one or more of the following conditions exist:

1. Whenever there is a change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system;
 2. Annually, prior to the defined rainy season, if required by the Project's Contract Documents; or
 3. When deemed necessary by the City Representative or SFPUC.
- b. The SWPPP amendments shall be submitted and the amended provisions implemented within 14 calendar days after notification by the City, and Caltrans.
- B. Milestone notification – Contractor shall notify the SFPUC Inspector and the City Representative at least two working days before the following milestones occur:
1. Start of construction.
 2. Erosion and sediment control measures are completely installed.
 3. Final grading has been completed.
 4. Project completion.
- C. Daily Inspection, Maintenance and Repair Procedures: Contractor shall each day inspect, maintain, and repair all graded surfaces and erosion and sediment controls, drainage structures, and other protective devices, plantings, and ground cover installed while construction is active.
1. The person(s) conducting inspections for the Contractor must be a Qualified Storm water Pollution Prevention Plan Developer or Practitioner (QSD or QSP), or person trained by a QSP with experience in erosion and sediment control. Contractor shall maintain documentation onsite demonstrating inspector qualifications for review by SFPUC Inspector or City Representative.
 2. The Contractor must daily inspect all of the following areas:
 - a. Disturbed areas.
 - b. Material storage areas.
 - c. Locations where vehicles enter and exit the site.
 - d. All catch basins, storm drains and inlets. The contractor shall provide an inventory of the inlets existing conditions and their maintenance.
 - e. All areas where erosion and sediment control BMPs are used.
 3. Any necessary modification to BMPs shall be initiated within 72 hours of identification and completed as soon as possible.

- D. Weekly Inspection Report and Retention of Records: Contractor shall prepare weekly inspection reports to document inspection, maintenance and repair Procedures.
1. Weekly inspection report shall be in the form of a checklist, table or report and shall indicate:
 - a. The name of the individual preparing the report.
 - b. A statement work activities that occurred during the reporting period.
 - c. The locations that were inspected.
 - d. Description of maintenance and repairs performed.
 - e. Results of any sampling performed during the reporting period.
 - f. Statement of adequacy of the erosion and sediment control measures and any required upgrades to BMPs or to the ESCP.
 - g. A signature below the following statement: "I certify under penalty of perjury that this information is accurate and true."
 2. Weekly inspection reports shall be kept at the job trailer so that during an inspection, it can be shown to the SFPUC Inspector and City Representative.
 3. The Contractor shall submit copies of the inspection reports on a monthly basis.
- E. Monthly Submittals – Contractor shall submit the following items to the City Representative on a monthly basis:
1. For LUP Type 2 or 3 or Risk Level 2 or 3: Weather Forecasts – Contractor shall obtain daily weather forecasts from the National Weather Service Forecast Office by entering the zip code of the project's location at <http://www.srh.noaa.gov>. Contractor shall place hard copies of daily weather forecasts into the SWPPP and submit to City Representative on a monthly basis.
 2. For LUP Type 1, 2, and 3: Contractor shall prepare Daily Inspection Logs and submit to City Representative on a monthly basis. Copies of the SWPPP inspection checklists shall be submitted monthly with progress payment request. progress payments shall be withheld if contractor fails to submit the SWPPP inspection reports with payment request.
 3. For Risk Level 1, 2 and 3: Contractor shall prepare Weekly Inspection Reports and submit to City Representative on a monthly basis. copies of the SWPPP inspection checklists shall be submitted monthly with progress payment request. progress payments shall be withheld if contractor fails to submit the SWPPP inspection reports with payment request.
 4. For Risk Level 1, 2 and 3 or LUP Type 2 and 3: Contractor shall prepare Storm Event Inspection Reports and submit to City Representative on a monthly basis.
 5. For LUP Type 1, 2, and 3: Photographs – During inspections Contractor shall take photographs of the site before likely precipitation events (50% or greater probability as forecast by the National Weather Service Forecast

- Office), and during rain events. Contractor shall also take photographs of the site after rain events. Photographs shall be labeled and submitted to the City Representative on a monthly basis for submittal to SMARTS once every three rain events.
6. Updated BMP Site Maps – Contractor's QSP shall prepare and submit Updated BMP Site Maps to the City Representative on a monthly basis and include the updated maps in the SWPPP.
 7. Rain Gauge Readings – Contractor shall record rainfall readings and submit to City Representative on a monthly basis and include the data in the SWPPP.
- F. Certificates of Quarantine Compliance – Contractor shall submit to the City Representative Certificate of Quarantine Compliance from County Agricultural Commissioner documenting that hay, straw, or mulch used on the project has been inspected and is weed free.

1.9 GENERAL REQUIREMENTS

- A. Best Management Practices (BMPs): Within the area of work, The Contractor shall employ Best Management Practices. These shall be included in its SWPPP. Refer to recommended BMP's from the following:
1. SFPUC's Construction Best Management Practices Handbook, available for download at:
<http://sfwater.org/modules/showdocument.aspx?documentid=4282>.
 2. California Stormwater Quality Association's Construction Best Management Practice Handbook, available for download at:
<http://www.cabmphandbooks.com/Documents/Construction/Construction.pdf>.
- B. Water Control
1. The Contractor is responsible for the continuous control of surface and ground water at all times during the course of the construction, including Saturdays, Sundays, holidays, work stoppages, during periods of labor strikes, and during periods of work stoppages.
 2. The Contractor is wholly responsible for obtaining the sewer discharge permit in a timely manner if required. The City will not honor any claims from the contractor arising from delays in obtaining the sewer discharge permit.
- C. Discharges to the City's combined sewer system shall meet the requirements of the following prior to discharges:
1. Industrial Waste Ordinance No. 116-97 (Chapter X (Public Works Code), Part II, San Francisco Municipal Code, Article 4.1 and 4.2), the pre-treatment standards of the San Francisco Municipal Code, section 123, Industrial Waste Ordinance #19-92 and DPW Order No. 158170
 2. Requirements for Batch Wastewater Discharges - the San Francisco Public Utilities Commission Waste Water Enterprise, Collection System Division (SFPUC-WWE/CSD).

3. The Construction De-watering Site Discharge Limits of the Southeast Water Pollution Control Plant (SEWPCP) as per Section 31 23 19 Dewatering.
- D. Prohibited Discharge: Discharge of other materials other than stormwater and approved non-storm water discharges to the combined sewer system is prohibited unless a batch discharge permit is obtained from the SFPUC. Approved non-stormwater discharges include incidental discharges of potable water from irrigation of vegetative erosion control measures, and water from dust control applications. Non-stormwater discharges requiring a batch discharge permit include groundwater from excavations, water from truck washing activities, and water from the cleaning or testing of pipes or tanks.
1. The Contractor is advised that the SFPUC-WWE/CSD have the authority to order immediate ceasing of discharge(s) to the combined sewer system. The Contractor is solely responsible for all costs associated with ceasing discharges, any and all costs for delay in operations, and liquidated damages as specified in this Section.
 2. Should the existing wastewater be uncontaminated, and subsequently become contaminated due to the Contractor's operations, all costs related to satisfactory cleanup and disposal shall be the responsibility of the Contractor. Such costs shall include re-design, re-construction, pretreatment, sewer service permit, and usage fees costs necessary to satisfy the above requirements, and liquidated damages as specified in this Section.

1.10 STORMWATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS

- A. A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared in consideration to the site existing topography and how it will be altered. It shall provide information of the erosion and sediment controls measures that will be used to minimize the risk of sediment pollution and how they will be implemented and maintained for the project construction duration. The SWPPP shall include an Erosion and Sediment Control Plan (ESCP) as well as Best Management Practices (BMPs). A drawing or set of plans shall depict the specific BMPs or equivalent measures and sequencing to be used to control erosion and sediments.
- B. The SWPPP may utilize plans, details, notes, and other information provided in the construction documents; however, such information shall not, in itself, be construed to meet the requirements of this section. The Contractor shall observe firsthand the conditions of the site and then provide additional details to ensure that the SWPPP accurately reflects the contractor's means and methods for construction, to include: construction sequencing, site layout, construction access, temporary facilities, specific sedimentation, erosion and runoff discharge controls, and project organization.
- C. As part of the SWPPP, the Contractor shall prepare and implement an ESCP that conforms to Section 146.7 of the Construction Site Runoff Control Ordinance, and contain the following documentation:
1. A cover letter with:
 - a. The Project name
 - b. The Contractor name and signature with the following statement "I certify under penalty of perjury that the information contained on the ESCP is accurate and true."

- c. Name, address, phone number, email and qualifications of the qualified person for erosion and sediment and control measures designated to implement the ESCP.
 - d. Total square foot or acreage proposed land disturbing activities.
 - e. The location and perimeter of the project site;
 - f. The location of nearby storm drains and/or catch basins;
 - g. existing and proposed roadways and drainage pattern within the project site;
 - h. A drawing or diagram of the sediment and erosion control devices to used onsite.
 - i. Narrative discussion of management controls; inspection, maintenance, and repair procedures, and reporting schedules.
 - j. Any other information deemed necessary by the SFPUC General Manager.
- D. The ESCP shall provide a narrative description of the erosion and sediment control BMPs that will be implemented at the site in consideration to construction sequence and schedules for the following:
 - 1. Pre-Construction Actions: Before construction, evaluate, mark and protect unique areas surrounding the project site.
 - 2. Construction Access: Stabilize bare areas (equipment parking areas, construction routes, site entrances) immediately with gravel and other means to control track out.
 - 3. Sediment Barriers and Traps: Install basins, traps, silt fences or inlet protection as needed for grading.
 - 4. Runoff Control: Install diversion, perimeter dikes and outlet protection as needed.
 - 5. Land clearing and grading: Begin major clearing and grading after installing sediment and runoff measures. Clear disposal areas as needed.
 - 6. Surface Stabilization: Apply temporary and permanent seeding, mulch, and sod for stabilization immediately on all disturbed areas where work is delayed or completed.
 - 7. Building construction: Install necessary erosion and sediment controls while excavation, paving and installing utilities.
 - 8. Landscaping and final stabilization: Stabilize all open areas including spoil areas. Remove temporary control measures and stabilize.
- E. The ESCP shall include a Plan View drawing or set of drawings depicting:
 - 1. The site layout, construction site boundaries,
 - 2. Area drainage and proposed drainage channels.
 - 3. Suitable contours for the existing topography and proposed grading

4. The location of all existing and proposed catch basins, storm drains and inlets and BMP protection proposed.
 5. Proposed site erosion and sediment controls.
 6. Locations of erosion and sediment control BMPs including the site access points and their track out controls
 7. Stockpile location, storage and staging areas, if any.
 8. Street profile, utility locations, property boundaries and easement delineations as applicable.
 9. Dewatering controls where applicable.
 10. Soil stabilization measures where applicable.
- F. The ESCP shall include a sample copy of the daily inspection check list and weekly inspection reports for the ESCP measures and BMPs inspected and implemented weekly and 24 hours prior and after a rain event
- G. The ESCP shall provide a Contractor's measures in the event of a spill.
- H. For projects requiring coverage under the State Water Resources Control Board's (SWRCB) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (General Permit) Order Number (No.) 2009-0009-DWQ as amended by Order No. 2012-0006-DWQ (National Pollutant Discharge Elimination System [NPDES] No. CAS000002), the required Storm Water Pollution Prevention Plan (SWPPP) may be submitted in lieu of an Erosion and Sediment Control Plan.

1.11 EROSION AND SEDIMENT CONTROL (ESCP) IMPLEMENTATION

- A. The Contractor shall at all times comply with the Construction Site Runoff Control Ordinance contained in San Francisco's Public Works Code, Article 4.2 Sewer System Management, Section 146, Construction Site Runoff Control, including but not limited to the items below.
1. Design, testing, installation, and maintenance of erosion and sediment control operations and facilities shall adhere to the standards and specifications contained in the Construction Site Runoff Control Ordinance and regulations developed by SFPUC.
 2. Deposition of eroded sediment onto adjacent properties, a public right-of-way, a publicly controlled wetland, or the combined sewer system is prohibited.
 3. All erosion control materials shall be certified weed-free and shall be free of plastic monofilament netting or mesh.
 4. Contractor shall remove any erosion control materials that are not biodegradable upon project completion.
 5. Contractor shall promptly remove and correct damage resulting from any soil, miscellaneous debris or other materials washed, spilled, tracked dumped or otherwise deposited on public streets, highways, sidewalks or other public thoroughfare, incident to the construction activity, or during transit to and from the construction site.

6. Erosion control facilities shall be maintained daily. These facilities shall control and contain erosion-caused silt deposits and provide for the safe discharge of silt free storm water into existing and proposed storm drain facilities. Design of these facilities must be approved and updated each year by the engineer (Oct 1 – April 15).
 7. The Contractor shall provide devices or locations necessary to conduct sampling or metering operations, if requested by the SFPUC Inspector or the City Representative.
 8. The Contractor shall notify the SFPUC Inspector or the City Representative of any suspected, formed or unconfirmed release of Pollutants that creates a risk of non-storm water discharges into the combined sewer system.
 9. Storm Water Pollution Prevention Plan shall be available on site at all times.
- B. Milestone notification – Contractor shall notify the SFPUC Inspector and the City Representative at least two working days before the following milestones occur:
1. Start of construction.
 2. Erosion and sediment control measures are completely installed.
 3. Final grading has been completed.
 4. Project completion.
- C. Daily Inspection, Maintenance and Repair Procedures: Contractor shall each day inspect, maintain, and repair all graded surfaces and erosion and sediment controls, drainage structures, and other protective devices, plantings, and ground cover installed while construction is active.
1. The person(s) conducting inspections for the Contractor must be a Qualified Storm water Pollution Prevention Plan Developer or Practitioner (QSD or QSP), or person trained by a QSP with experience in erosion and sediment control. Contractor shall maintain documentation onsite demonstrating inspector qualifications for review by SFPUC Inspector or City Representative.
 2. The Contractor must daily inspect all of the following areas:
 - a. Disturbed areas.
 - b. Material storage areas.
 - c. Locations where vehicles enter and exit the site.
 - d. All catch basins, storm drains and inlets. The contractor shall provide an inventory of the inlets existing conditions and their maintenance.
 - e. All areas where erosion and sediment control BMPs are used.
 3. Any necessary modification to BMPs shall be initiated within 72 hours of identification and completed as soon as possible.
- D. Weekly Inspection Report and Retention of Records: Contractor shall prepare weekly inspection reports to document inspection, maintenance and repair Procedures.

1. Weekly inspection report shall be in the form of a checklist, table or report and shall indicate:
 - a. The name of the individual preparing the report.
 - b. A statement work activities that occurred during the reporting period.
 - c. The locations that were inspected.
 - d. Description of maintenance and repairs performed.
 - e. Results of any sampling performed during the reporting period.
 - f. Statement of adequacy of the erosion and sediment control measures and any required upgrades to BMPs or to the ESCP.
 - g. A signature below the following statement: "I certify under penalty of perjury that this information is accurate and true."
2. Weekly inspection reports shall be kept at the job trailer so that during an inspection, it can be shown to the SFPUC Inspector and City Representative.
3. The Contractor shall submit copies of the inspection reports on a monthly basis.

1.12 MINIMUM BEST MANAGEMENT PRACTICES (BMPs) REQUIREMENTS

A. Management of Construction Materials

1. Cover and berm loose stockpiled construction materials that are not actively being used. Locate stockpiles at minimum 50 yards away from concentrated flows of storm water, drainage courses and inlets. All stockpiles should be completely covered and secured.
2. Stockpiles should be protected with a temporary linear sediment barrier berm prior to the onset of precipitation. During the rainy season, all stockpiles shall be protected from storm water runoff by completely covering them and keeping the perimeter barriers around at all times.
3. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).
4. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.)
5. Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.
6. Provide for the continuous misting of water using hoses on the project, and on roads and other areas immediately adjacent to the project limits, wherever traffic or buildings that are occupied or in use, are affected by such dust caused by his hauling or other operations. The materials and methods used for water laying shall be subject to the approval of the Engineer.

7. Provide for prompt and daily proper removal from existing roadways of all dirt and other materials that have been spilled, washed, tracked, or otherwise deposited thereon by Contractor's hauling and other operations.

B. Rainstorm BMPs

1. During the rainy season, all paved areas are to be kept clear of earth material and debris. The site is to be maintained so as to minimize sediment runoff to any storm drain system.
2. During periods when storms are forecast:
 - a. Excavated soils should not be placed in streets or on paved area.
 - b. Any excavated soils should be removed from the site by the end of the day if feasible.
 - c. Where stockpiling is necessary, use a tarpaulin or surround the stockpile material with fiber rolls, gravel sediment barrier, silt fence or other runoff controls.
 - d. Use inlet controls as needed (E.G. block gravel sediment barrier from storm drain adjacent to the project or stockpiled soil.)
3. Stand-by crews shall be alerted by the permit applicant or contractor for emergency work during rainstorms.
4. After October 1st to April 15th, all erosion control measures will be inspected daily and after each storm. BMP will be repaired at the close of each day and whenever rain is forecast.
5. Sandbags shall be stockpiled on site and placed at intervals shown on erosion control plans when the rain forecast is 40% or greater or when directed by the inspector.
6. After rainstorms contractor shall check for and remove sediment trapped by sandbags at staging area. Replace sandbags if deterioration is evident.

C. Waste Management BMPs

1. Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the combined sewer system.
2. Sediment and trash accumulated in drainages or detention basins shall be removed as soon as possible. In addition, oil and material floating on water surface must be skimmed weekly and the debris properly disposed of.
3. Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the combined sewer system. Licensed waste material handlers must service portable sanitary facilities and trash dumpsters regularly.
4. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.
5. Cover waste disposal containers at the end of every business day and during a precipitation event.
6. Prevent discharges from waste disposal containers to the combined sewer system.

7. Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.
8. Implement procedures that effectively address hazardous and non-hazardous spills.
9. Utilize spill response procedures that include: providing equipment and materials for cleanup of spills on site, so that spills and leaks may be cleaned up immediately and properly disposed, and assigning and training appropriate spill response personnel.
10. Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

D. Vehicle Storage and Maintenance BMPs

1. Prevent oil, grease, or fuel from leaking in to the ground, storm drains, and catch basins.
2. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.
3. On-site vehicles must be monitored for leaks; inactive equipment must be stored with drip pans to contain any fluid leaks. Drip pans containing oil must be drained into waste oil drums on a regular basis.
4. Contractor shall be responsible for ensuring safety of vehicles operating in roadway adjacent to erosion control facilities.

E. Erosion and Sediment Control BMPs

1. Temporary sediment barriers such as silt fences, berms, dikes, fiber rolls, sandbags, gravel bags or straw bale barriers. These barriers shall be installed at the locations with potential erosion and to the limits shown on the approved ESCP and as otherwise directed by the City Representative. They shall be relocated as necessary for construction operations, with prior approval from the City Representative. Remove the temporary barriers at the end of the project.
2. Dust Control: Employ construction methods and means that will keep airborne dust to the minimum.
3. Silt dams shall be installed and maintained on public streets to prevent sediments from flowing into storm drain inlets and public streets. Storm drain inlets shall be protected surrounding the inlets with BMPs such as fiber rolls or filters media appropriate to type of traffic and as approved by the City Representative.
4. Erosion Control Blankets shall be used to control to stabilize disturbed and exposed soil, if weather warrants such blankets.
5. Silt fencing shall be installed at the foot of the slope around the entire perimeter of the stockpiled soil.
6. V-ditches and silt traps/sediment traps shall be installed at the perimeter of the stockpile to collect runoff where necessary to allow flow to continue to storm drain inlets.
7. Soil stabilization measures, placement of hay bales, and sediment basins shall be constructed to reduce erosion of exposed soils.

8. As part of the erosion control measures, underground storm drain facilities shall be installed complete as show on the improvement plans.
9. Borrow areas and temporary stockpiles shall be protected with appropriate erosion control measures to the satisfaction of the city engineer.
10. If existing driveway is removed during construction, the contractor shall place drain rock as a gravel roadway (8" minimum thickness for the full width and length of site egress area as defined in these plans) at the entrance of the site.

1.13 SPILL PREVENTION AND RESPONSE PROCEDURES

- A. Spill Prevention and Response: The Contractor is responsible for minimizing the potential for spills of pollutants stored onsite. Leaks and spills shall be minimized and if observed, the Contractor shall clean it up immediately and institute preventive measures.
 1. Be aware of potential spill areas and drainage routes in their work areas.
 2. Containers must remain closed at all times except when transferring contents.
 3. Do not attempt to carry or move heavy containers of oil or hazardous material without assistance or the use of a drum dolly.
 4. Use funnels; pumps with closed hose systems, or other means to prevent spills while transferring material from large containers to small ones. Pumps in operation shall not be left on, unattended.
 5. Hazardous materials will be stored in a designated area that is away from vehicle/traffic areas.
 6. Immediately notify the supervisor of any spill occurring in the work area. It is the responsibilities of the Contractor's designated Project Safety Officer to direct the cleanup activities and contact necessary regulatory agencies.
 7. The Contractor shall know the proper methods to clean up small spills in their work areas, and how spent cleanup material shall be managed.
 8. The Contractor is responsible for recording all steps taken to control spills in the field notes/daily log.
 9. Spill cleanup equipment must be readily available on site. Emergency response equipment includes absorbent socks, over pack drums, personal protective equipment, shovel, labels, valves, valve charts, valve wrenches to shut off water supply, etc.
 10. Well-maintained equipment shall be used to perform the construction work, and, except in cases of failure or breakdown, equipment maintenance shall be performed off-site.
 11. Equipment shall be inspected daily by the operator for leaks or spills. If leaks or spills are encountered, the source of the leak shall be identified, leaked material shall be cleaned up, and the cleaning materials shall be collected and disposed of properly.
 12. The Contractor shall have on-site at all times sufficient absorbent materials and cleanup supplies, which shall be kept both on land and on barges (if

used). The following includes a list of standard items that shall be available on each site as needed:

- Resistant gloves;
- Coveralls;
- Petroleum absorbent socks, pillows, and diapers;
- Chemical resistant disposal bags; and
- Department of Transportation labels.
- Material Safety Data Sheets ("MSDSs") are available on site with the contractor.

13. In addition to items listed above, spill kits shall be available at strategic locations. The purpose of the spill kit is to be prepared to clean up liquid releases of hazardous materials such as hydraulic oil and motor oil from parked trucks and vehicles or paints, solvents, or fuels. Burst hydraulic lines are a common source of pollution from heavy vehicles.

At a minimum, spill kits shall contain the following items:

- Absorbent spill pads and socks;
- Absorbent material (e.g., solvent absorbent, vermiculite, etc.);
- Hydrophobic mop (i.e., a mop that absorbs oil, but not water);
- Safety gloves (that are appropriate for oils and other petroleum);
- 5 – 20 gallon bucket/drum with lid; and
- Drum labels and writing instrument.

Any spill shall be controlled using the following measures:

- Store all materials with secondary containment;
- Use secondary containment with drip reservoirs for dispensers;
- Place absorbent pads or drip pans under equipment that contains fluids;
- Keep a properly sized spill kit in all areas with the potential for leaks;
- Stock spill prevention equipment and spill cleanup kits at various locations around the project site;
- At a minimum, provide oil-absorbent mats for all equipment;
- Place secondary containment for any stationary equipment that needs to be within the setback area for streams, wetlands, or drainages; and
- Have absorbent pads and spill kits handy whenever hazardous materials are being used near surface water during construction.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Contractor shall store adequate quantities of BMP materials on-site at all times for installation as needed.
- B. Erosion control materials shall be imported, certified weed free, and natural/biodegradable (e.g. straw wattles, hay bales, straw mulch). Contractor shall submit to the City Representative Certificate of Quarantine Compliance from County Agricultural Commissioner documenting that hay, straw, or mulch used on the project has been inspected and is weed free.
- C. Fiber or sediment rolls and erosion control blankets/fabric/mat shall consist of biodegradable fibers. Plastic monofilament netting shall not be allowed because of potential entanglements of wildlife in these materials and because the SWRCB considers that materials containing plastic netting (including plastic specified as photo-degradable) as trash in the environment (i.e., construction materials and waste) and therefore these materials must be disposed of per the General Permit for a NOT.
- D. The Contractor shall use proposed erosion control chemical materials (e.g., tackifier, bonded fiber matrix, flexible growth medium, etc.) approved by the City Representative prior to its use.
- E. The Contractor shall have dechlorination tablets or equivalent on-site to deploy for treating chlorinated water if inadvertently released (i.e., if a local water line is broken) prior to reaching a storm drain or surface waters. Example of such products can be found at: <http://www.vita-d-chlor.com>.

PART 3 - EXECUTION

(Not Used)

END OF SECTION