APPENDIX C

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Storm Water Pollution Prevention Plan

For: County of Orange Health Care Agency

401 S. Tustin Street
GB090039

Prepared for:
Orange County Public Works
1152 E. Fruit St., Building 1
Santa Ana, California 92701
Stephen Johsz, Senior Project Manager
(714) 567-7742

Project Site Location/Address:
401 S. Tustin Street, Orange, CA 92866

SWPPP Prepared by:
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Ken Taylor, P.E.; Division Manager

SWPPP Preparation Date:
March 2009

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Attachment M ..... Annual Certification of Compliance Form
Attachment N ..... Other Plans /Permits
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Attachment P ..... Notice of Termination (NOT)
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Section 100
SWPPP Certifications and Approval

100.1 SWPPP Certification by Preparer

Project Name: 401 S. Tustin Street

Project Number: GB090039

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

Preparer's Signature | Date

Preparer's Name and Title | Telephone Number

100.2 Owner Approval and Certification of SWPPP

Owner's (or Authorized Representative) Approval and Certification of the Storm Water Pollution Prevention Plan

Project Name: 401 S. Tustin Street

Project Number: GB090039

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

Owner (or Authorized Representative) Signature Date

Stephen Johsz, Sr. Project Manager
Name and Title

(714) 567-7742
Telephone Number

100.3 Annual Compliance Certification

By July 1 of each year, the Contractor shall complete an Annual Certification of Compliance stating compliance with the terms and conditions of the Permit and the SWPPP. The Annual Certification of Compliance Form is included in Attachment M. Completed Annual Certifications of Compliance and Approvals can be found in the following pages.

Section 200 SWPPP Amendments

200.1 SWPPP Amendment Certification and Approval

This SWPPP shall be amended:

- 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 (MS4); or
- If any condition of the Permits is violated or the general objective of reducing or eliminating pollutants in storm water discharges has not been achieved. If the RWQCB determines that a Permit violation has occurred, the SWPPP shall be amended and implemented within 14-calendar days after notification by the RWQCB;
- Annually, prior to the defined rainy season; and
- When deemed necessary by the Owner.

The following items will be included in each amendment:

- Who requested the amendment.
- The location of proposed change.
- The reason for change.
- The original BMP proposed, if any.
- The new BMP proposed.

The amendments for this SWPPP, along with the Owner's Certification and the Owner approval, can be found in the following pages. Amendments are listed in the Amendment Log in section 200.2

SWPPP Amendment No.

Project Name: 401 S. Tustin Street

Project Number: GB090039

Preparer Certification of the Storm Water Pollution Prevention Plan Amendment

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

Preparer's Signature | Date

Preparer's Name and Title | Telephone Number

Owner (or Owner's Authorized Representative) Approval of the Storm Water Pollution Prevention Plan Amendment

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

Owner (or Authorized Representative) Signature | Date

Stephen Johsz, Senior Project Manager
Name and Title

(714) 567-7742
Telephone Number

200.2 Amendment Log

Project Name: 401 S. Tustin Street

Project Number: GB090039

Amendment No.	Date	Brief Description of Amendment	Prepared By

Section 300
Introduction and Project Description

300.1 Introduction and Project Description

Orange County Health Care Agency plans to construct several new buildings at 401 S. Tustin St. Orange, CA 92866-2503 to best utilize current and future needs. The facility contains offices, examination rooms, counseling rooms, classrooms, and other additional meeting areas. The project includes construction of a Wellness / Peer Support Center (approx. 7,600-square feet), Crisis Residential Building (approx. 9,300-square feet), Educational Training Center(approx. 7,600-square feet), and maintenance building (approx. 700-square feet). The location of the new parking lot will be on the westerly and easterly most portions of the property. Driveways will be constructed around the perimeter of the proposed buildings. The proposed landscape areas will be located between the Crisis Residential Building and the Educational Training Center. The Crisis Residential Building includes a private garden. The lawn will be located around the proposed recreational areas.

300.2 Unique Site Features

The site includes recreational facilities such as Volleyball and Basketball courts.

300.3 Construction Site Estimates

The following are estimates of the construction site:

Construction site area	2.73 acres
Percentage impervious area before construction	98 %
Runoff coefficient before construction [1]	.7
Percentage impervious area after construction	85 %
Runoff coefficient after construction [1]	.7
Anticipated storm water flow on to the construction site [2]	12.90 cfs

[1] Calculations are shown in Attachment D
[2] Calculations are shown in Attachment E

300.4 Project Schedule/Water Pollution Control Schedule

Contract Awarded: 02/02/10
SWPPP Approval by Resident Engineer and Submittal of SWPPP to RWQCB by 04/29/09
Mobilization of Equipment and Materials to begin on 01/27/10 Install Stabilized Construction Entrance on 01/27/10 Site Preparation: Clearing and Grubbing will occur from 01/27/10 Estimated Construction Start: 03/17/10
Submit Annual Rainy Season Implementation Schedule: 04/29/09
Implement Erosion Control: 04/15/10 Rainy Season Begins: 10/15/09 Rainy Season Ends: 04/15/10 Estimated Construction Finish: 02/22/11 Start Final Stabilization and Revegetation: 02/22/11 Project Complete: 02/22/11

300.5 Contact Information/List of Responsible Parties

The Storm Water Pollution Prevention Manager (SWPPM) assigned to this project is:

Name- Stephen Johsz

Telephone Number(s) - (714)567-7742

Orange County Public Works

1152 E. Fruit Street, Building 1

Santa Ana, CA 92701

The SWPPM shall have primary responsibility and significant authority for the implementation, maintenance, inspection and amendments to the approved SWPPP. Duties of the contractor include, but are not limited to:

- Ensuring full compliance with the SWPPP and the Permit
- Implementing all elements of the SWPPP, including but not limited to:
  - Implementation of prompt and effective erosion and sediment control measures
  - Implementing all non-storm water management, and materials and waste management activities such as: monitoring discharges (dewatering, diversion devices); general site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring that no materials other than storm water are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems; etc.
- Pre-storm inspections
- Storm event inspections
- Post-storm inspections

- Routine inspections as specified in the project's specifications or described in the SWPPP
- Updates/Amendments to the SWPPP, as needed
- Preparing annual compliance certification for owner's, or owner's authorized representative, signature
- Ensuring elimination of all unauthorized discharges
- The _____ to mobilize crews in order to make immediate repairs to the control measures
- Coordinate to assure all of the necessary corrections/repairs are made immediately, and that the project complies with the SWPPP, the Permit and approved plans at all times
- Submitting Notices of Discharge and reports of Illicit Connections or Illegal Discharges

Section 400
References

The following documents are made a part of this SWPPP by reference:

- Project plans and specifications
- State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity.
- California Stormwater BMP Handbook - Construction, January 2003

Section 500 Body of SWPPP

500.1 Objectives

This Storm Water Pollution Prevention Plan (SWPPP) has six main objectives:

- Identify all pollutant sources, including sources of sediment that may affect the quality of storm water discharges associated with construction activity (storm water discharges) from the construction site, and

  Identify non-storm water discharges, and

  Identify, construct, implement in accordance with a time schedule, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the construction site during construction, and

  Develop a maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed (post-construction BMPs).

- Identify a sampling and analysis strategy and sampling schedule for discharges from construction activity which discharge directly into water bodies listed on Attachment 3 of the Permit (Clean Water Act Section 303(d) [303(d)] Water Bodies listed for Sedimentation).

- For all construction activity, identify a sampling and analysis strategy and sampling schedule for discharges that have been discovered through visual monitoring to be potentially contaminated by pollutants not visually detectable in the runoff.

This SWPPP conforms with the required elements of the General Permit No. CAS000002 issued by the State of California, State Water Resources Control Board (SWRCB). This SWPPP will be modified and amended to reflect any amendments to the Permit or any changes in construction or operations that may affect the discharge of pollutants from the construction site to surface waters, groundwaters, or the municipal separate storm sewer system (MS4). The SWPPP will also be amended if it is in violation of any condition of the Permit or has not achieved the general objective of reducing pollutants in storm water discharges. The SWPPP shall be readily available on-site for the duration of the project.

500.2 Vicinity Map

The construction project vicinity map showing the project location, surface water boundaries, geographic features, construction site perimeter, and general topography, is located in Attachment A. The project's Title Sheet provides more detail regarding the project location and is also included in Attachment A.

500.3 Pollutant Source Identification and BMP Selection

500.3.1 Inventory of Materials and Activities that May Pollute Storm Water

The following is a list of construction materials that will be used and activities that will be performed that will have the potential to contribute pollutants, other than sediment, to storm water runoff (control practices for each activity are identified in the Water Pollution Control Drawings (WPCDs) and/or in Sections 500.3.4 through 500.3.9:

- Motor Graders
- Excavators
- Loaders
- Compaction Equipment
- Water Trucks
- Paving Machines
- Concrete Trucks
- Dump Trucks
- Pick-up Trucks

Construction activities that have the potential to contribute sediment to storm water discharges include:

- Demolition
- Grading
- Utility Construction

- Paving
- Concrete Construction
- Landscaping
- Dewatering Operations
- Vehicle/Equipment Cleaning, Fueling, & Maintenance

Attachment C lists all Best Management Practices (BMPs) that have been selected for implementation in this project. Implementation and location of BMPs are shown on the WPCDs in Attachment B. Narrative descriptions of BMPs to be used during the project are listed by category in each of the following SWPPP sections. Attachment Q includes a list, and/or copies of the fact sheets of all the BMPs selected for this project.

500.3.2 Existing (pre-construction) Control Measures

The following are existing (pre-construction) control measures encountered within the project site:

- Clearing & grub site
- Fiber Rolls
- Gravel Bag Berm
- Street Sweeping & Vacuuming
- Sand Bag Barrier
- Storm Drain Inlet Protection

500.3.3 Nature of Fill Material and Existing Data Describing the Soil

The information obtained from the subsurface investigation and existing reports indicate that the site has underling alluvial deposits and is covered by a thin veneer of fill soils. The soil is composed mainly of Gravelly Sandy Silt and Sandy Silt as stated in the Geotechnical Report. Groundwater was not encountered in any of the exploratory borings during the site investigation. The results of the geotechnical tests suggest that the site soil poses a moderate risk of damage to buried metal objects.

Existing site features that, as a result of past usage, may contribute pollutants to storm water (e.g., toxic materials that are known to have been treated, stored, disposed, spilled, or leaked onto the construction site) include:

- None

500.3.4 Erosion Control

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in storm water runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles. This project will incorporate erosion control measures required by the contract documents, and other measures selected by the Contractor, SWPPP Manager, or Owner. This project will implement the following practices for effective temporary and final erosion control during construction:

1) Preserve existing vegetation where required and when feasible.

2) Apply temporary erosion control to remaining active and non-active areas as required by the California Stormwater BMPs Handbook – Construction, and the contract documents. Reapply as necessary to maintain effectiveness.

3) Implement temporary erosion control measures at regular intervals throughout the defined rainy season to achieve and maintain the contract's disturbed soil area requirements. Implement erosion control prior to the defined rainy season.

4) Stabilize non-active areas as soon as feasible after the cessation of construction activities.

5) Control erosion in concentrated flow paths by applying erosion control blankets, erosion control seeding, and lining swales as required in the contract documents.

6) Apply seed to areas deemed substantially complete by the Owner during the defined rainy season.

7) At completion of construction, apply permanent erosion control to all remaining disturbed soil areas.

Sufficient erosion control materials will be maintained on-site to allow implementation in conformance with Permit requirements and described in this SWPPP. This includes implementation requirements for active areas and non-active areas that require deployment before the onset of rain.

Implementation and locations of temporary erosion control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B and/or described in this section. The BMP Consideration Checklist in Attachment C indicates the BMPs that will be implemented to control erosion on the construction site; these are:

- SS-1. Scheduling
- SS-9. Earth Dikes/ Drainage Swales & Lined Ditches

500.3.5 Sediment Control

Sediment controls are structural measures that are intended to complement and enhance the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water. This project will incorporate sediment control measures required by the contract documents, and other measures selected by the Contractor, SWPPP Manager, or Owner.

Sufficient quantities of temporary sediment control materials will be maintained on-site throughout the duration of the project, to allow implementation of temporary sediment controls in the event of predicted rain, and for rapid response to failures or emergencies, in conformance with other Permit requirements and as described in this SWPPP. This includes implementation requirements for active areas and non-active areas before the onset of rain.

Implementation and locations of temporary sediment control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B. The BMP Consideration Checklist in Attachment C indicates all the BMPs that will be implemented to control sediment on the construction site; these are:

- SC-5. Fiber Rolls
- SC-6. Gravel Bag Barrier
- SC-7. Street Sweeping and Vacuuming
- SC-8. Sand Bag Barrier
- SC-10. Storm Drain Inlet Protection

500.3.6 Tracking Control

The following BMPs have been selected to reduce sediment tracking from the construction site onto private or public roads:

- SC-7, Street Sweeping and Vacuuming

500.3.7 Wind Erosion Control

The following BMPs have been selected to control dust from the construction site:

- Wind Erosion Control

500.3.8 Non-Storm Water Control

An inventory of construction activities and potential non-storm water discharges is provided in Section 5.3.1. The BMP Consideration Checklist in Attachment C and the following list indicates the BMPs that have been selected to control non-storm water pollution on the construction site. Implementation and locations of some non-storm water control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B. A narrative description of each BMP follows.

- NS-1, Water Conservation Practices
- NS-2, Dewatering Operations
- NS-3, Paving & Grinding Operations
- NS-6, Illicit Connection/Illegal Discharge Detection and Reporting
- NS-8, Vehicle and Equipment Cleaning
- NS-9, Vehicle and Equipment Fueling
- NS-10, Vehicle and Equipment Maintenance
- NS-12, Concrete Curing
- NS-14, Concrete Finishing

500.3.9 Waste Management and Materials Pollution Control

An inventory of construction activities, materials, and wastes is provided in Section 5.3.1. The BMP Consideration Checklist in Attachment C and the following list indicates the BMPs that have been selected to handle materials and control construction site wastes. A narrative description of each BMP follows.

- WM-1, Material Delivery and Storage
- WM- 2, Material Use
- WM-3, Stockpile Management
- WM-4, Spill Prevention and Control
- WM-5, Solid Waste Management
- WM-9, Sanitary/Septic Waste Management

500.3.10 Cost Breakdown for Water Pollution Control

500.4 Water Pollution Control Drawings (WPCDs)

The Water Pollution Control Drawings can be found in Attachment B of the SWPPP.

500.5 Construction BMP Maintenance, Inspection, and Repair

Inspections will be conducted as follows:

- Prior to a forecast storm
- after a rain event that causes runoff from the construction site
- at 24-hour intervals during extended rain events
- at any other time(s) or intervals of time specified in the contract documents

Completed inspection checklists will be kept with the SWPPP.

A tracking or follow-up procedure shall follow any inspection that identifies deficiencies in BMPs. A program for Maintenance, Inspection and Repair of BMPs is shown in Attachment G.

500.6 Post-Construction Storm Water Management

500.6.1 Post-Construction Control Practices

The following are the post-construction BMPs that are to be used at this construction site after all construction is complete:

- Vegetated Swale
- Inflitration Basin
- Periodic Maintenance by owner
- Permanent Landscaping
- Roadway Paving
- Concrete curb and gutter

500.6.2 Operation/Maintenance after Project Completion

The post-construction BMPs that are described above will be funded and maintained by County of Orange Health Care Agency.

500.7 Training

Section 500.7 shows the name of the Contractor's Storm Water Pollution Prevention Manager (SWPPM). This person has received the following training:

_____

_____

_____

- (To be completed by the Contractor.)

The Contractor shall conduct a training session for Contractor and/or Subcontractor personnel who will be responsible for the implementation and maintenance of the pollution control systems. The Contractor and its Subcontractors will ensure that new personnel will undergo training prior to work engagement. The Contractor will periodically advise onsite personnel of their responsibility to participate in reducing pollutants (see sample memorandum Attachment J-Subcontractor Notification Letter and Log). Subcontractors will be encouraged to inform their staff in a similar manner.

The training log showing formal and informal training of various Contractor personnel is shown in Attachment L. Personnel trained in water quality sampling procedures shall collect water samples.

This SWPPP was prepared by Willdan, Ken Taylor P.E.

500.8 List of Subcontractors

All contractors and subcontractors will be notified of the requirement for storm water management measures during the project. A list of contractors will be maintained and included in the SWPPP. If subcontractors change during the project, the list will be updated accordingly. The subcontractor notification letter and log is included in the SWPPP as Attachment J.

500.9 Other Plans/Permits

Attachment N includes copies of other local, state, and federal plans and permits. Following is a list of the plans and permits included in Attachment N:

- State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity.

Section 600
Monitoring Program and Reports

600.1 Site Inspections

The Contractor will inspect the site prior to a forecast storm, after a rain event that causes runoff from the construction site, at 24-hour intervals during extended rain events, and as specified in the contract documents. The results of all inspections and assessments will be documented. Copies of the completed inspection checklists will be maintained with the SWPPP. Site inspections conducted for monitoring purposes will be performed using the inspection checklist shown in Attachment H.

The name(s) and contact number(s) of the assigned inspection personnel are listed below:

Assigned inspector: _____ Contact phone: _____

600.2 Non-Compliance Reporting

If a discharge occurs or if the project receives a written notice of non-compliance, the Contractor will immediately notify the Owner and will file a written report to the Owner within 7 days of the discharge or notice. The Owner is responsible for filing a written report to the Regional Water Quality Control Board (RWQCB) within 30 days or identification of non-compliance. Corrective measures will be implemented immediately following the discharge, notice or order. A sample Notice of Non-Compliance (NONC) form is provided in Attachment K. All discharges will be documented on a Discharge Reporting Log using the example form in Attachment T.

The report to the Owner and to the RWQCB will contain the following items:

- The date, time, location, nature of operation, and type of unauthorized discharge, including the cause or nature of the notice or order,
- The control measures (BMPs) deployed before the discharge event, or prior to receiving notice or order,
- The date of deployment and type of control measures (BMPs) deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent re-occurrence, and
- An implementation and maintenance schedule for any affected BMPs

600.3 Record Keeping and Reports

Records shall be retained for a minimum of three years for the following items:

- Site inspections
- Compliance certifications
- Discharge reports
- Approved SWPPP document and amendments

600.4 Sampling and Analysis Plan for Sediment (Not Applicable)

This project does not have the potential to discharge directly to a water body listed as impaired due to Sedimentation/Siltation and/or Turbidity pursuant to Clean Water Act. Section 303(d).

600.4.1 Scope of Monitoring Activities (Not Applicable)

This project does not discharges directly into any known 303(d) water body and does not receive run-on with the potential to combine with storm water that discharges directly to the 303(d) listed water body.

600.4.2 Monitoring Strategy (Not Applicable) Sampling Schedule

Upstream, downstream, discharge, and run-on samples, if applicable, shall be collected for [specify impairment: Sedimentation/Siltation and/or Turbidity] during the first two hours of discharge from rain events that result in a direct discharge from the project site to [enter 303(d) water body]. Samples shall be collected during daylight hours (sunrise to sunset) and shall be collected regardless of the time of the year, status of the construction site, or day of the week.

All storm events that occur during daylight hours will be sampled up to a maximum of four rain events within a 30-day period. In conformance with the U.S. Environmental Protection Agency definition, a minimum of 72 hours of dry weather will be used to distinguish between separate rain events.

Sampling Locations

Sampling locations ~~are~~ based on proximity to identified discharge or run-on location(s), accessibility for sampling, personnel safety, and other factors in accordance with the applicable requirements in the General Permit. Sampling locations are shown on the WPCDs and include:

- A sample location (designated number) is upstream of all direct discharge from the construction site for the collection of a control sample to be analyzed for the prevailing condition of the receiving water without any influence from the construction site. The control sample will be used to determine the background levels of [specify impairment: Sedimentation/Siltation and/or Turbidity] in the 303(d) listed water body upstream of the project, if any.

  Sample location number is located .

- A sample location (designated number) is immediately downstream from the last point of direct discharge from the construction site for the collection of a sample to be analyzed for potential increases in [specify impairment: Sedimentation/Siltation and/or Turbidity] in the 303(d) listed water body caused by the storm water discharged from the project, if any.
    - Sample location number is located .
- [Enter number of locations] sampling location(s) (designated number(s)) has been identified for the collection of samples of run-on to the project site with the potential to combine with discharges from the construction site in other than MS4 to the 303(d) water body. These samples will identify potential [specify impairment: Sedimentation/Siltation and/or Turbidity] that originates off the project site and contributes to direct storm water discharges from the construction site to the 303(d) listed water body.
    - Sample location number is located .
    - If needed Sample location number is located .
    - If needed Sample location number is located .

600.4.3 Monitoring Preparation (Not Applicable)

Samples on the project site will Select one of the following Contractor sampling personnel:

Name/Telephone Number: Name Phone Number

Name/Telephone Number: Name Phone Number

Alternate(s)/Telephone Number: Name Phone Number

Alternate(s)/Telephone Number: Name Phone Number

Prior to the rainy season, all sampling personnel and alternates will review the SAP. Qualifications of designated Contractor personnel describing environmental sampling training and experience are provided in Attachment I.

An adequate stock of supplies and equipment for monitoring [specify impairment: Sedimentation/Siltation and/or Turbidity] will be available on the project site or provided by [specify laboratory] prior to a sampling event. Monitoring supplies and equipment will be stored in a cool-temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule.

Supplies maintained at the project site will include, but will not be limited to, surgical gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, Sampling Activity Log forms, and Chain of Custody (COC) forms. The Contractor will obtain and maintain the field-testing instruments, as identified in Section 600.4.5, for analyzing samples in the field by Contractor sampling personnel. Safety practices for sample collection will be in accordance with the [enter title and publication date of contactor health and safety plan for the project].

Samples on the project site will be collected by the following [specify laboratory or environmental consultant]:

Company Name:

Address:

Telephone Number:

Point of Contact:

Qualifications of designated Contractor personnel describing environmental sampling training and experience are provided in Attachment I.

SWPPM will contact [specify name of laboratory or environmental consultant] [enter number of hours] hours prior to a predicted rain event to ensure that adequate sample collection personnel, supplies and field test equipment for monitoring [specify impairment: Sedimentation/Siltation and/or Turbidity] are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

[Specify name of laboratory or environmental consultant] will obtain and maintain the field-testing instruments, as identified in Section 600.4.5, for analyzing samples in the field by their sampling personnel.

600.4.4 Sample Collection and Handling (Not Applicable)

Sample Collection Procedures

Grab samples will be collected and preserved in accordance with the methods identified in Table 600-1, "Sample Collection, Preservation and Analysis for Monitoring Sedimentation/Siltation and/or Turbidity" provided in Section 600.4.5. Only personnel trained in proper water quality sampling will collect samples.

Upstream samples will be collected to represent the condition of the water body upgradient of the construction site. Downstream samples will be collected to represent the water body mixed with direct flow from the construction site. Samples will not be collected directly from ponded, sluggish, or stagnant water.

Upstream and downstream samples will be collected using one of the following methods:

- Placing a sample bottle directly into the stream flow in or near the main current upstream of sampling personnel, and allowing the sample bottle to fill completely;

  OR,

- Placing a decontaminated or 'sterile' bailer or other 'sterile' collection device in or near the main current to collect the sample, and then transferring the collected water to appropriate sample bottles, allowing the sample bottles to fill completely.

Run-on samples, if applicable, will be collected to identify potential sedimentation/siltation and/or turbidity that originates off the project site and contributes to direct discharges from the construction site to the 303(d) listed water body. Run-on samples will be collected downgradient and within close proximity of the point of run-on to the project by pooling or ponding water and allowing the ponded water to spill over into sample bottles directly in the stream of water.

To maintain sample integrity and prevent cross-contamination, sampling collection personnel will:

- Wear a clean pair of surgical gloves prior to the collection and handling of each sample at each location.
- Not contaminate the inside of the sample bottle by not allowing it to come into contact with any material other than the water sample.
- Discard sample bottles or sample lids that have been dropped onto the ground prior to sample collection.
- Not leave the cooler lid open for an extended period of time once samples are placed inside.
- Not touch the exposed end of a sampling tube, if applicable.
- Avoid allowing rainwater to drip from rain gear or other surfaces into sample bottles.
- Not eat, smoke, or drink during sample collection.
- Not sneeze or cough in the direction of an open sample bottle.
- Minimize the exposure of the samples to direct sunlight, as sunlight may cause biochemical transformation of the sample to take place.

- Decontaminate sampling equipment prior to sample collection using a TSP-soapy water wash, distilled water rinse, and final rinse with distilled water.
- Dispose of decontamination water/soaps appropriately; i.e., not discharge to the storm drain system or receiving water.

Sample Handling Procedures

Immediately following collection, sample bottles for laboratory analytical testing will be capped, labeled, documented on a Chain of Custody (COC) form provided by the analytical laboratory, sealed in a re-sealable plastic storage bag, placed in an ice-chilled cooler, at as near to 4 degrees Celsius as practicable, and delivered within 24 hours to the following California state-certified laboratory:

Laboratory Name:

Address:

Telephone Number:

Point of Contact:

Immediately following collection, samples for field analysis will be tested in accordance with the field instrument manufacturer's instructions and results recorded on the Sampling Activity Log.

Sample Documentation Procedures

All original data documented on sample bottle identification labels, Chain of Custody forms, Sampling Activity Logs, and Inspection Checklists will be recorded using waterproof ink. These will be considered accountable documents. If an error is made on an accountable document, the individual will make corrections by lining through the error and entering the correct information. The erroneous information will not be obliterated. All corrections will be initialed and dated. Copies of the Sampling Activity Log and Chain of Custody form are provided in Attachment R. Sampling and field analysis activities will be documented using the following:

- Sample Bottle Identification Labels: Sampling personnel will attach an identification label to each sample bottle. At a minimum, the following information will be recorded on the label, as appropriate:
  - Project name
  - Project number
  - Unique sample identification number and location.
    [Project Number]-[Six digit sample collection date]-[Location]
    (Example: 06G5304-081801-Upstream).

Quality assurance/quality control (QA/QC) samples shall be identified similarly using a unique sample number or designation
(Example: 0G5304-081801-DUP1).

- Collection date/time (No time applied to QA/QC samples)
- Analysis constituent

■ Sampling Activity Logs: A log of sampling events will identify:

- Sampling date
- Separate times for sample collection of upstream, downstream, run-on, and QA/QC samples recorded to the nearest minute
- Unique sample identification number and location
- Analysis constituent
- Names of sampling personnel
- Weather conditions (including precipitation amount)
- Field analysis results
- Other pertinent data

- Chain of Custody (COC) forms: All samples to be analyzed by a laboratory will be accompanied by a COC form provided by the laboratory. Only the sample collectors will sign the COC form over to the lab. COC procedures will be strictly adhered to for QA/QC purposes.
- Storm Water Quality Construction Inspection Checklists: When applicable, the Contractor's storm water inspector will document on the checklist that samples for sedimentation/siltation and/or turbidity were taken during a rain event.

600.4.5 Sample Analysis (Not Applicable)

Samples will be analyzed for the constituents indicated in Table 600-1, "Sample Collection, Preservation and Analysis for Monitoring Sedimentation/Siltation and/or Turbidity".

Table 600-1 Sample Collection, Preservation and Analysis for Monitoring Sedimentation/Siltation and/or Turbidity

Constituent [1]	Analytical Method	Test to be Used?	Sample Preservation	Minimum Sample Volume	Sample Bottle	Maximum Holding Time	Reporting Limit
(a) Suspended Sediment Concentration (SSC)	ASTM D3977-97	YES NO	Store at 4° C (39.2° F)				
(b) Settleable Solids (SS)	EPA 160.5 Std Method 2540(f)	YES NO	Store at 4° C (39.2° F)				mL/L/hr
(c) Total Suspended Solids (TSS)	EPA 160.2 Std Method 2540(d)	YES NO	Store at 4° C (39.2° F)				mg/L
(d) Turbidity	EPA 180.1 Std Method 2130(b)	YES NO	Store at 4° C (39.2° F)				NTU

Notes: [1] Samples shall be analyzed by using methods (b) and (c), or only method (a)

ASTM – American Society for Testing and Materials
C – Degrees Celsius
F – Degrees Fahrenheit
EPA – U.S. Environmental Protection Agency
L – Liter
mL/L/hr – Milliliters per liter per hour
mg/L – Milligrams per liter
mL – Milliliters
NTU – Nephelometric Turbidity Unit
Std Method – Per the *Standard Methods for the Examination of Water and Wastewater*, 20th Edition, American Water Works Association

For samples collected for field analysis, collection, analysis and equipment calibration will be in accordance with the field instrument manufacturer's specifications.

The following field instrument(s) will be used to analyze the following constituents:

Field Instrument	Constituent

- The instrument(s) will be maintained in accordance with manufacturer's instructions.
- The instrument(s) will be calibrated before each sampling and analysis event.
- Maintenance and calibration records will be maintained with the SWPPP.

600.4.6 Quality Assurance/Quality Control (Not Applicable)

For an initial verification of laboratory or field analysis, duplicate samples will be collected at a rate of 10 percent or 1 duplicate per sampling event. The duplicate sample will be collected, handled, and analyzed using the same protocols as primary samples, and will be collected where contaminants are likely, and not on the upstream sample. A duplicate sample will be collected immediately after the primary sample has been collected. Duplicate samples will not influence any evaluations or conclusions; however, they will be used as a check on laboratory quality assurance.

600.4.7 Data Management and Reporting (Not Applicable)

A copy of all water quality analytical results and QA/QC data will be included in the on-site SWPPP within 5 days of sampling (for field analyses) and within 30 days of sampling (for laboratory analyses). Lab reports and COCs will be reviewed for consistency between lab methods, sample identifications, dates, and times for both primary samples and QA/QC samples. All data, including COC forms and Sampling Activity Logs, shall be kept with the SWPPP document.

600.4.8 Data Evaluation (Not Applicable)

An evaluation of the water quality sample analytical results, including figures with sample locations, the water quality analytical results, and the QA/QC data for every event that samples are collected, will be included in the on-site SWPPP. Should the downstream sample concentrations exceed the upstream sample concentrations, the Storm Water Pollution Prevention Manager or other personnel will evaluate the BMPs, site conditions, surrounding influences (including the run-on sample analysis), and other site factors to determine the probable cause for the increase.

As determined by the data and project evaluation, appropriate BMPs will be repaired or modified to mitigate increases in sediment concentrations in the water body. Any revisions to the BMPs will be recorded as an amendment to the SWPPP.

600.4.9 Change of Conditions (Not Applicable)

Whenever SWPPP monitoring, pursuant to Section B of the General Permit, indicates a change in site conditions that might affect the appropriateness of sampling locations, testing protocols will be revised accordingly. All such revisions will be recorded as amendments to the SWPPP.

600.5 Sampling and Analysis Plan for Non-Visible Pollutants (Contractor to complete all parts of this section)

This Sampling and Analysis Plan (SAP) for Non-Visible Pollutants describes the sampling and analysis strategy and schedule for monitoring non-visible pollutants in storm water discharges from the project site and off-site activities directly related to the project, in accordance with the requirements of Section B of the General Permit, including SWRCB Resolution 2001-046.

600.5.1 Scope of Monitoring Activities

The following construction materials, wastes or activities, as identified in Section 500.3.1, are potential sources of non-visible pollutants to storm water discharges from the project. Storage, use, and operational locations are shown on the WPCDs in Attachment B.

- Concrete Curing
- Asphalt
- Solvents/Thinners

The following existing site features, as identified in Section 500.3.3, are potential sources of non-visible pollutants to storm water discharges from the project. Locations of existing site features contaminated with non-visible pollutants are shown on the WPCDs in Attachment B.

- None

The following soil amendments have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil and will be used on the project site. Locations of soil amendment application are shown on the WPCDs in Attachment B.

- None

The project has the potential to receive storm water run-on with the potential to contribute non-visible pollutants to storm water discharges from the project. Locations of such run-on to the project site are shown on the WPCDs in Attachment B.

- None

Sampling for non-visible pollutants will be conducted when (1) a breach, leakage, malfunction, or spill is observed; and (2) the leak or spill has not been cleaned up prior to the rain event; and (3) there is the potential for discharge of non-visible pollutants to surface waters or drainage system.

600.5.2 Monitoring Strategy

Sampling Schedule

Samples for the applicable non-visible pollutant(s) and a sufficiently large uncontaminated background sample shall be collected during the first two hours of discharge from rain events that result in a sufficient discharge for sample collection. Samples shall be collected during daylight hours (sunrise to sunset) and shall be collected regardless of the time of year, status of the construction site, or day of the week.

In conformance with the U.S. Environmental Protection Agency definition, a minimum of 72 hours of dry weather will be used to distinguish between separate rain events.

Collection of discharge samples for non-visible pollutant monitoring will be triggered when any of the following conditions are observed during the required inspections conducted before or during rain events:

- Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions. Watertight conditions are defined as (1) storage in a watertight container, (2) storage under a watertight roof or within a building, or (3) protected by temporary cover and containment that prevents storm water contact and runoff from the storage area.

- Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but (1) a breach, malfunction, leakage, or spill is observed, (2) the leak or spill is not cleaned up prior to the rain event, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.

- An operational activity, including but not limited to those in Section 600.5.1, with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the rain event, (2) applicable BMPs were observed to be breached, malfunctioning, or improperly implemented, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.

- Soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.

- Storm water runoff from an area contaminated by historical usage of the site has been observed to combine with storm water runoff from the site, and there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.

Sampling Locations

Sampling locations are based on proximity to planned non-visible pollutant storage, occurrence or use; accessibility for sampling, personnel safety; and other factors in accordance with the applicable requirements in the Permit. Planned sampling locations are shown on the WPCDs in Attachment B and include the following:

- [Enter number of locations] sampling locations have been identified for the collection of samples of runoff that drain areas where soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil will be applied.

- If applicable Sample location number(s) is located

- [Enter number of locations] sampling locations have been identified for the collection of samples of runoff that drain areas contaminated by historical usage of the site.

- If applicable Sample location number(s) is located

- [Enter number of locations] sampling locations have been identified for the collection of samples of run-on to the project site with the potential to combine with discharges being sampled for non-visible pollutants. These samples are intended to identify sources of potential non-visible pollutants that originate off the project site.

- If applicable Sample location number(s) is located

- A location has been identified for the collection of an uncontaminated sample of runoff as a background sample for comparison with the samples being analyzed for non-visible pollutants. This location was selected such that the sample will not have come in contact with (1) operational or storage areas associated with the materials, wastes, and activities identified in Section 500.3.1; (2) potential non-visible pollutants due to historical use of the site as identified in Section 500.3.3; (3) areas in which soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied; or (4) disturbed soils areas.

- If applicable Sample location number(s) is located

If an operational activity or storm water inspection conducted 24 hours prior to or during a rain event identifies the presence of a material storage, waste storage, or operations area with spills or the potential for the discharge of non-visible pollutants to surface waters or a storm sewer system that was an unplanned location and has not been identified on the WPCDs, sampling locations will be selected using the same rationale as that used to identify planned locations.

600.5.3 Monitoring Preparation

Samples on the project site will be collected by the following Contractor sampling personnel:

Name/Telephone Number:
Name/Telephone Number:
Alternate(s)/Telephone Number:
Alternate(s)/Telephone Number:

Prior to the rainy season, all sampling personnel and alternates will review the SAP. Qualifications of designated Contractor personnel describing environmental sampling training and experience are provided in Attachment I.

An adequate stock of monitoring supplies and equipment for monitoring non-visible pollutants will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool-temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule.

Supplies maintained at the project site will include, but are not limited to, surgical gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, Sampling Activity Log forms, and Chain of Custody (COC) forms. The Contractor will obtain and maintain the field-testing instruments, as identified in Section 600.5.6, for analyzing samples in the field by Contractor sampling personnel.

Safety practices for sample collection will be in accordance with the [NO KNOWN CONTRACTOR'S HEALTH AND SAFETY PLAN NOR SPECIFIC REQUIREMENTS – REGULATIONS FOR THE PROJECT AT THE TIME OF REPORT PREPARATION. TO BE COMPLETED BY THE CONTRACTOR].

Sample collection on the project site will be the responsibility of the Contractor. The Contractor will select a qualified laboratory or consultant to analyze any required sampling.

Company Name:

Address:

Telephone Number:

Point of Contact:

Qualifications of designated Contractor personnel describing environmental sampling training and experience are provided in Attachment I.

Contractor will contact [specify name of laboratory or environmental consultant] [enter number of hours] hours prior to a predicted rain event and if one of the triggering conditions is identified during an inspection before, during, or after a storm event to ensure that adequate sample collection personnel, supplies and field test equipment for monitoring non-visible pollutants are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

Contractor will be responsible to obtain and maintain the field-testing instruments, as identified in Section 600.5.6, for analyzing samples in the field by their sampling personnel.

600.5.4 Analytical Constituents (Contractor to Complete)

Identification of Non-Visible Pollutants

Table 600-2 lists the specific sources and types of potential non-visible pollutants on the project site and the applicable water quality indicator constituent(s) for that pollutant.

Table 600-2

Potential Non-Visible Pollutants and Water Quality Indicator Constituents (Contractor to Complete)

Pollutant Source	Pollutant	Water Quality Indicator Constituent

600.5.5 Sample Collection and Handling

Sample Collection Procedures

Samples of discharge will be collected at the designated sampling locations shown on the WPCDs for observed breaches, malfunctions, leakages, spills, operational areas, soil amendment application areas, and historical site usage areas that triggered the sampling event.

Grab samples will be collected and preserved in accordance with the methods identified in the Table 600-3, "Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants," provided in Section 600.5.6. Only personnel trained in proper water quality sampling will collect samples.
Samples will be collected by placing a separate lab-provided sample container directly into a stream of water downgradient and within close proximity to the potential non-visible pollutant discharge location. This separate lab-provided sample container will be used to collect water, which will be transferred to sample bottles for laboratory analysis. The upgradient and uncontaminated background samples shall be collected first prior to collecting the downgradient to minimize cross-contamination. The sampling personnel will collect the water upgradient of where they are standing. Once the separate lab-provided sample container is filled, the water sample will be poured directly into sample bottles provided by the laboratory for the analyte(s) being monitored.

To maintain sample integrity and prevent cross-contamination, sampling collection personnel will:

- Wear a clean pair of surgical gloves prior to the collection and handling of each sample at each location.
- Not contaminate the inside of the sample bottle by not allowing it to come into contact with any material other than the water sample.
- Discard sample bottles or sample lids that have been dropped onto the ground prior to sample collection.
- Not leave the cooler lid open for an extended period of time once samples are placed inside.
- Not sample near a running vehicle where exhaust fumes may impact the sample.
- Not touch the exposed end of a sampling tube, if applicable.
- Avoid allowing rainwater to drip from rain gear or other surfaces into sample bottles.
- Not eat, smoke, or drink during sample collection.
- Not sneeze or cough in the direction of an open sample bottle.
- Minimize the exposure of the samples to direct sunlight, as sunlight may cause biochemical transformation of the sample to take place.

- Decontaminate sampling equipment prior to sample collection using a TSP-soapy water wash, distilled water rinse, and final rinse with distilled water.

- Dispose of decontamination water/soaps appropriately; i.e., not discharge to the storm drain system or receiving water.

Sample Handling Procedures

Immediately following collection, sample bottles for laboratory analytical testing will be capped, labeled, documented on a Chain of Custody form provided by the analytical laboratory, sealed in a re-sealable storage bag, placed in an ice-chilled cooler, at as near to 4 degrees Celsius as practicable, and delivered within 24 hours to the following California state-certified laboratory:

(CONTRACTOR TO COMPLETE)

Laboratory Name:

Address:

Telephone Number:

Point of Contact:

Immediately following collection, samples for field analysis will be tested in accordance with the field instrument manufacturer's instructions and results recorded on the Sampling Activity Log.

Sample Documentation Procedures

All original data documented on sample bottle identification labels, Chain of Custody forms, Sampling Activity Logs, and Inspection Checklists will be recorded using waterproof ink. These will be considered accountable documents. If an error is made on an accountable document, the individual will make corrections by lining through the error and entering the correct information. The erroneous information will not be obliterated. All corrections will be initialed and dated. Copies of the Sampling Activity Log and Chain of Custody form are provided in Attachment R.

Sampling and field analysis activities will be documented using the following:

- Sample Bottle Identification Labels: Sampling personnel will attach an identification label to each sample bottle. At a minimum, the following information will be recorded on the label, as appropriate:

  - Project name
  - Project number
  - Unique sample identification number and location. [Project Number]-[Six digit sample collection date]-[Location] *(Example:* 0G5304-081801-Inlet472).
    Quality assurance/quality control (QA/QC) samples shall be identified similarly using a unique sample number or designation *(Example:* 0G5304-081801-DUP1).

- Collection date/time (No time applied to QA/QC samples
- Analysis constituent

■ Sampling Activity Logs: A log of sampling events will identify:

- Sampling date
- Separate times for collected samples and QA/QC samples recorded to the nearest minute
- Unique sample identification number and location
- Analysis constituent
- Names of sampling personnel
- Weather conditions (including precipitation amount)
- Field analysis results
- Other pertinent data

■ Chain of Custody (COC) forms: All samples to be analyzed by a laboratory will be accompanied by a COC form provided by the laboratory. Only the sample collectors will sign the COC form over to the lab. COC procedures will be strictly adhered to for QA/QC purposes.

■ Storm Water Quality Construction Inspection Checklists: When applicable, the Contractor's storm water inspector will document on the checklist that samples for non-visible pollutants were taken during a rain event.

600.5.6 Sample Analysis

Samples will be analyzed for the applicable constituents using the analytical methods identified in Table 600-3, "Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants" in this section.
For samples collected for field analysis, collection, analysis and equipment calibration will be in accordance with the field instrument manufacturer's specifications.

The following field instrument(s) will be used to analyze the following constituents:

Field Instrument	Constituent

■ The instrument(s) will be maintained in accordance with manufacturer's instructions.

■ The instrument(s) will be calibrated before each sampling and analysis event.

■ Maintenance and calibration records will be maintained with the SWPPP.

Table 600-3 Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants

Constituent	Analytical Method	Minimum Sample Volume	Sample Bottle	Sample Preservation	Reporting Limit	Maximum Holding Time
Notes:						

600.5. 7 Quality Assurance/Quality Control

For an initial verification of laboratory or field analysis, duplicate samples will be collected at a rate of 10 percent or 1 duplicate per sampling event. The duplicate sample will be collected, handled, and analyzed using the same protocols as primary samples. A duplicate sample will be collected at each location immediately after the primary sample has been collected. Duplicates will be collected where contamination is likely, not on the background sample. Duplicate samples will not influence any evaluations or conclusions; however, they will be used as a check on laboratory quality assurance.

600.5.8 Data Management and Reporting

A copy of all water quality analytical results and QA/QC data will be included in the on-site SWPPP within 5 days of sampling (for field analyses) and within 30 days (for laboratory analyses).

Lab reports and COCs will be reviewed for consistency between lab methods, sample identifications, dates, and times for both primary samples and QA/QC samples. All data, including COC forms and Sampling Activity Logs, shall be kept with the SWPPP.

600.5.9 Data Evaluation

An evaluation of the water quality sample analytical results, including figures with sample locations, the water quality analytical results, and the QA/QC data, will be included in the on-site SWPPP.

Should the runoff/downgradient sample show an increased level of the tested analyte relative to the background sample, the BMPs, site conditions, and surrounding influences will be assessed to determine the probable cause for the increase. As determined by the site and data evaluation, appropriate BMPs will be repaired or modified to mitigate discharges of non-visual pollutant concentrations. Any revisions to the BMPs will be recorded as an amendment to the SWPPP.

600.5.10 Change of Conditions

Whenever SWPPP monitoring, pursuant to Section B of the General Permit, indicates a change in site conditions that might affect the appropriateness of sampling locations or introduce additional non-visible pollutants of concern, testing protocols will be revised accordingly. All such revisions will be recorded as amendments to the SWPPP.

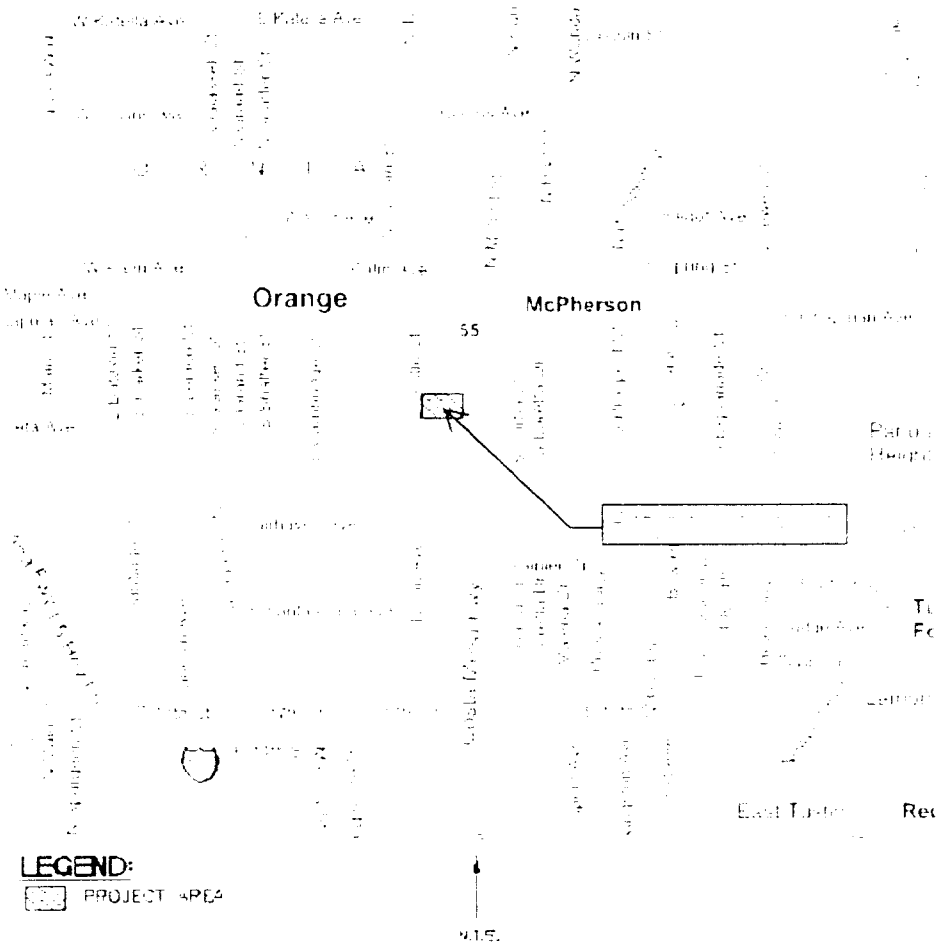
Attachment A

Vicinity Map / Site Map

STORMWATER POLLUTION PREVENTION PLAN

VICINITY MAP

FOR THE CONSTRUCTION ON COUNTY OF ORANGE, HEALTH CARE AGENCY AT 401 S. TUSTIN ST., ORANGE, CA 92866-2503 IN ORANGE COUNTY IN THE CITY OF ORANGE



Attachment B

Water Pollution Control Drawings

NPDES NOTES:

1. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOWS, SWALES, NATURAL DRAINAGE COURSES, OR WIND.
2. STOCKPILE OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
3. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
4. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS A SOLID WASTE.
5. TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION BY RAIN WATER AND DISPERSAL BY WIND.
6. SEDIMENTS AND OTHER MATERIALS ANY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC RIGHT OF WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
7. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
8. THE FOLLOWING BMP'S AS OUTLINED IN, BUT NOT LIMITED TO, THE CALIFORNIA STORM WATER BEST MANAGEMENT PRACTICE HANDBOOK, CALIFORNIA STORM WATER QUALITY TASK FORCE, SACRAMENTO, CALIFORNIA 2003, OR THE LATEST REVISED EDITION, MAY APPLY DURING CONSTRUCTION (ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY THE INSPECTOR.)

EROSION CONTROL

SS1 – SCHEDULING
SS2 – PRESERVATION OF EXISTING VEGETATION
SS3 – HYDRAULIC MULCH
SS4 – HYDROSEEDING
SS5 – SOIL BINDERS
SS6 – STRAW MULCH
SS7 – GEOTEXTILES AND MATS
SS8 – WOOD MULCHING
SS9 – EARTH DIKES AND DRAINAGE SWALES
SS10 – VELOCITY DISSIPATION DEVICES
SS11 – SLOPE DRAINS
SS12 – STREAMBANK STABILIZATION
SS13 – POLYACRYLAMIDE

TEMPORARY SEDIMENT CONTROL

SC1 – SILT FENCE
SC2 – SEDIMENT BASIN
SC3 – SEDIMENT TRAP
SC4 – CHECK DAM
SC5 – FIBER ROLLS
SC6 – GRAVEL BAG BERM
SC7 – STREET SWEEPING AND VACUUMING
SC8 – SANDBAG BARRIER
SC9 – STRAW BALE BARRIER
SC10 – STORM DRAIN INLET PROTECTION

WIND EROSION CONTROL

WE1 – WIND EROSION CONTROL

EQUIPMENT TRACKING CONTROL

TC1 – STABILIZED CONSTRUCTION ENTRANCE EXIT
TC2 – STABILIZED CONSTRUCTION ROADWAY
TC3 – ENTRANCE/OUTLET TIRE WASH

TEMPORARY SOIL STABILIZATION BMPs

SS1 – SCHEDULING *[BLANKET]*
SS9 – EARTH DIKES/DRAINAGE SWALES & LINED DITCHES

NON-STORM WATER MANAGEMENT

NS1 – WATER CONSERVATION PRACTICES
NS2 – DEWATERING OPERATIONS
NS3 – PAVING AND GRINDING OPERATIONS
NS4 – TEMPORARY STREAM CROSSING
NS5 – CLEAR WATER DIVERSION
NS6 – ILLICIT CONNECTION/ILLEGAL DISCHARGE DETECTION AND REPORTING
NS7 – POTABLE WATER/IRRIGATION
NS8 – VEHICLE AND EQUIPMENT CLEANING
NS9 – VEHICLE AND EQUIPMENT FUELING
NS10 – VEHICLE AND EQUIPMENT MAINTENANCE
NS11 – PILE DRIVING OPERATIONS
NS12 – CONCRETE CURING
NS13 – MATERIAL AND EQUIPMENT USE OVER WATER
NS14 – CONCRETE FINISHING
NS15 – STRUCTURE DEMOLITION/REMOVAL

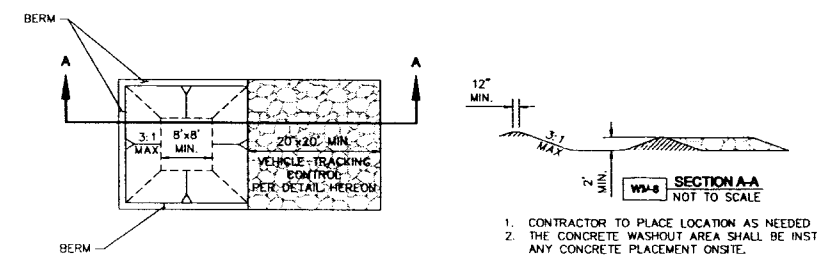
WASTE MANAGEMENT & MATERIAL POLLUTION CONTROL

WM1 – MATERIAL DELIVERY AND STORAGE
WM2 – MATERIAL USE
WM3 – STOCKPILE MANAGEMENT
WM4 – SPILL PREVENTION AND CONTROL
WM5 – SOLID WASTE MANAGEMENT
WM6 – HAZARDOUS WASTE MANAGEMENT
WM7 – CONTAMINATION SOIL MANAGEMENT
WM8 – CONCRETE WASTE MANAGEMENT
WM9 – SANITARY/SEPTIC WASTE MANAGEMENT
WM10 – LIQUID WASTE MANAGEMENT

EROSION CONTROL NOTES:

(A) SINGLE ROW, SINGLE HEIGHT GRAVELBAGS SHALL BE PLACED END TO END WITH NO GAPS BETWEEN THE BAGS

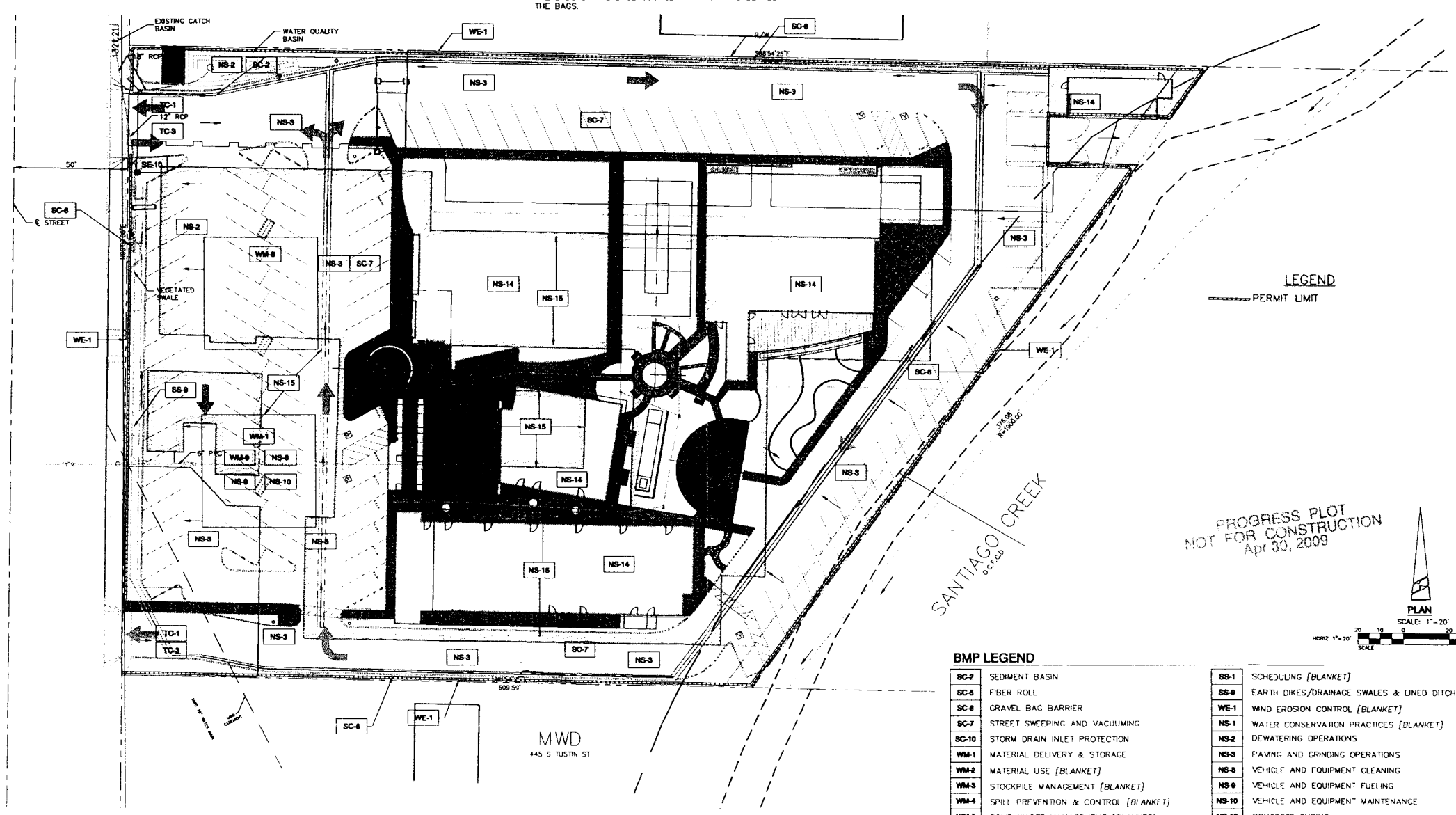
(B) SINGLE ROW, DOUBLE HEIGHT GRAVELBAGS; BASE COURSE SHALL BE PLACED END TO END WITH NO GAPS BETWEEN THE BAGS. TOP COURSE BAGS SHALL BE CENTERED OVER THE ENDS OF THE BASE COURSE WITH NO GAPS BETWEEN THE BAGS.



SECTION A-A
NOT TO SCALE

1. CONTRACTOR TO PLACE LOCATION AS NEEDED
2. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ONSITE.

CONCRETE WASTE MANAGEMENT DETAIL
NOT TO SCALE



LEGEND

PERMIT LIMIT

BMP LEGEND

SC-2	SEDIMENT BASIN	SS-1	SCHEDULING *[BLANKET]*
SC-6	FIBER ROLL	SS-9	EARTH DIKES/DRAINAGE SWALES & LINED DITCHES
SC-8	GRAVEL BAG BARRIER	WE-1	WIND EROSION CONTROL *[BLANKET]*
SC-7	STREET SWEEPING AND VACUUMING	NS-1	WATER CONSERVATION PRACTICES *[BLANKET]*
SC-10	STORM DRAIN INLET PROTECTION	NS-2	DEWATERING OPERATIONS
WM-1	MATERIAL DELIVERY & STORAGE	NS-3	PAVING AND GRINDING OPERATIONS
WM-2	MATERIAL USE *[BLANKET]*	NS-8	VEHICLE AND EQUIPMENT CLEANING
WM-3	STOCKPILE MANAGEMENT *[BLANKET]*	NS-9	VEHICLE AND EQUIPMENT FUELING
WM-4	SPILL PREVENTION & CONTROL *[BLANKET]*	NS-10	VEHICLE AND EQUIPMENT MAINTENANCE
WM-5	SOLID WASTE MANAGEMENT *[BLANKET]*	NS-12	CONCRETE CURING
WM-8	CONCRETE WASTE MANAGEMENT	NS-14	CONCRETE FINISHING
WM-9	SANITARY/SEPTIC WASTE MANAGEMENT	TC-1	STABILIZED CONSTRUCTION ENTRANCE EXIT
		TC-3	ENTRANCE/OUTLET TIRE WASH

County of Orange
OC PUBLIC WORKS
Architecture & Engineering

Sym.	Description	Date	By

Revisions

Consultants
WILLDAN

A-E Seal

A-E ALEXANDER + HIBBS, AIA, INC.

Design	DRAWN	Chkd.	CKRD	Date	NOV. 6, 2008
Drawn	Chkd.	Date			

Sht Title SWPPP SITE PLAN
Project COUNTY OF ORANGE HEALTH CARE AGENCY
401 SOUTH TUSTIN STREET
401 SOUTH TUSTIN STREET
ORANGE, CA 92868
PROJ. NO. 100-042-210-1900 H2407P20

Plan No.

Sheet 1

E16 COUNTY OF ORANGE HEALTH CARE AGENCY 401 SOUTH TUSTIN STREET

Attachment C

BMP Consideration Checklist

CONSTRUCTION SITE BMPs
CONSIDERATION CHECKLIST

The contractor shall consider using all BMPs listed hereon. Those BMPs which are not included in the SWPPP shall be checked as "Not Used" with a brief statement describing why it is not being used. All selected BMPs shall be included in the schedule of values, except for those items shown on the plans and paid for as a separate item or work

TEMPORARY SOIL STABILIZATION BMPs

BMP No.	BMP	MINIMUM REQUIREMENT (2)	CHECK IF CONTRACT REQUIREMENT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
SS-1	Scheduling	✓		✓		
SS-2	Preservation of Existing Vegetation	✓			✓	Complete Redevelopment
SS-3	Hydraulic Mulch	✓ (1)			✓	No soil requiring temporary protection
SS-4	Hydroseeding	✓ (1)			✓	No soil requiring temporary protection
SS-5	Soil Binders	✓ (1)			✓	No soil requiring temporary protection
SS-6	Straw Mulch	✓ (1)			✓	No soil requiring temporary protection
SS-7	Geotextiles, Plastic Covers, & Erosion Control Blankets/Mats	✓ (1)		✓		Limited Site Area
SS-8	Wood Mulching				✓	No soil requiring temporary protection
SS-9	Earth Dikes/Drainage Swales & Lined Ditches			✓		
SS-10	Outlet Protection/ Velocity Dissipation Devices				✓	No drainage pipes outlets
SS-11	Slope Drains				✓	None on slopes
SS-12	Stream Bank Stabilization				✓	No proposed work within the channel

(1) The Contractor shall select one of the five measures listed or a combination thereof to achieve and maintain the contract's rainy season disturbed soil area (DSA) requirements.

(2) Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be verified by the contractor or determined by Caltrans.

CONSTRUCTION SITE BMPs CONSIDERATION CHECKLIST

The Contractor shall consider using all BMPs listed hereon. Those BMPs which are not included in the SWPPP shall be checked as "Not Used" with a brief statement describing why it is not being used. All selected BMPs shall be included in the Schedule of Values, except for those items shown on the plans and paid for as a separate item or work

BMP No.	BMP	MINIMUM REQUIREMENT (2)	CHECK IF CONTRACT REQUIREMENT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
TEMPORARY SEDIMENT CONTROL BMPs						
SC-1	Silt Fence	✓		✓		
SC-2	Sediment/Desilting Basin			✓		
SC-3	Sediment Trap				✓	No sediment runoff produced from the site
SC-4	Check Dam				✓	No proposed work within the channel
SC-5	Fiber Rolls	✓		✓		
SC-6	Gravel Bag Berm			✓		
SC-7	Street Sweeping and Vacuuming	✓		✓		
SC-8	Sand Bag Barrier				✓	Limited Site Area
SC-9	Straw Bale Barrier				✓	Limited Site Area
SC-10	Storm Drain Inlet Protection	✓		✓		
WIND EROSION CONTROL BMPs						
WE-1	Wind Erosion Control	✓		✓		
TRACKING CONTROL BMPs						
TC-1	Stabilized Construction Entrance/Exit			✓		
TC-2	Stabilized Construction Roadway				✓	Site adjacent to major street
TC-3	Entrance/Outlet Tire Wash			✓		

(3) The contractor shall select either sediment control measure or a combination thereof to achieve and maintain the contract's disturbed soil area (DSA) protection requirements.

CONSTRUCTION SITE BMPs
CONSIDERATION CHECKLIST

The Contractor shall consider using all BMPs listed hereon. Those BMPs which are not included in the SWPPP shall be checked as "not used" with a brief statement describing why it is not being included. All selected BMPs shall be included in the Schedule of Values, except for those items shown on the plans and paid for as a separate item or work

NON-STORM WATER MANAGEMENT BMPs

BMP No.	BMP	MINIMUM REQUIREMENT (2)	CHECK IF CONTRACT REQUIREMENT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
NS-1	Water Conservation Practices			x		
NS-2	Dewatering Operations			V		
NS-3	Paving and Grinding Operations			V		
NS-4	Temporary Stream Crossing				V	No streams on the site
NS-5	Clear Water Diversion				V	No streams on the site
NS-6	Illicit Connection/Illegal Discharge Detection and Reporting	V		V		
NS-7	Potable Water/Irrigation				V	No water to be discharged for the site
NS-8	Vehicle and Equipment Cleaning	S		V		
NS-9	Vehicle and Equipment Fueling	S		V		
NS-10	Vehicle and Equipment Maintenance	S		V		
NS-11	Pile Driving Operations				V	No piles will be used on the site
NS-12	Concrete Curing			V		
NS-13	Material and Equipment Use Over Water				V	Site is not over any water
NS-14	Concrete Finishing			V		
NS-15	Structure Demolition/Removal				V	Site is not over any water

CONSTRUCTION SITE BMPs
CONSIDERATION CHECKLIST

The Contractor shall consider using all BMPs listed hereon. Those BMPs which are not included in the SWPPP shall be checked as "not used" with a brief statement describing why it is not being used. All selected BMPs shall be included in the Schedule of Values, except for those items shown on the plans and paid for as a separate item or work

WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs

BMP No.	BMP	MINIMUM REQUIREMENT (2)	CHECK IF CONTRACT REQUIREMENT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
WM-1	Material Delivery and Storage	V		V		
WM-2	Material Use	V		V		
WM-3	Stockpile Management	V		V		
WM-4	Spill Prevention and Control	V		V		
WM-5	Solid Waste Management	S		V		
WM-6	Hazardous Waste Management				V	No hazardous waste to be used
WM-7	Contaminated Soil Management				V	No contaminated soil found on the site
WM-8	Concrete Waste Management			V		
WM-9	Sanitary/Septic Waste Management	V		V		
WM-10	Liquid Waste Management				V	No Liquid Waste on the site

Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be verified by the contractor or determined by Caltrans.

Attachment D

Computation Sheet for Determining Runoff Coefficients

Total Site Area	2.73	(A)

Existing Site Conditions

Impervious Site Area[1] Impervious Site Area	2.67 acres	(B)
Runoff Coefficient [2, 4]	0.7	(C)
Pervious Site Area[3] Pervious Site Area Runoff	0.06 acres	(D)
Coefficient[4]	01	(E)
Existing Site Area Runoff Coefficient (BxC)+(DxE) (A)	0.68	(F)

Proposed Site Conditions (after construction)

Impervious Site Area[1]	=	2.32 acres	(G)
Impervious Site Area Runoff Coefficient [2, 4]	=	0.7	(H)
Pervious Site Area[3]	=	0.41 acres	(I)
Pervious Site Area Runoff Coefficient[4]	=		(J)
Proposed Site Area Runoff Coefficient GxH (A) J		0.1	(K)
		0.61	

1. Includes paved areas, areas covered by buildings, and other impervious surfaces.
2. Use 0.95 unless lower or higher runoff coefficient can be verified.
3. Includes areas of vegetation, most unpaved or uncovered soil surfaces, and other pervious areas.
4. See the table on the following page for typical C values.

Figure 819.2A

Runoff Coefficients for Undeveloped Areas
Watershed Types

	Extreme	High	Normal	Low
Relief	**.28 -.35** Steep, rugged terrain with average slopes above 30%	**.20 -.28** Hilly, with average slopes of 10 to 30%	**.14 -.20** Rolling, with average slopes of 5 to 10%	**.08 -.14** Relatively flat land, with average slopes of 0 to 5%
Soil Infiltration	**.12 -.16** No effective soil cover, either rock or thin soil mantle of negligible infiltration capacity	**.08 -.12** Slow to take up water, clay or shallow loam soils of low infiltration capacity, imperfectly or poorly drained	**.06 -.08** Normal; well drained light or medium textured soils, sandy loams, silt and silt loams	**.04 -.06** High; deep sand or other soil that takes up water readily, very light well drained soils
Vegetal Cover	**.12 -.16** No effective plant cover, bare or very sparse cover	**.08 -.12** Poor to fair; clean cultivation crops, or poor natural cover, less than 20% of drainage area over good cover	**.06 -.08** Fair to good; about 50% of area in good grassland or wood-land, not more than 50% of area in cultivated crops	**.04 -.06** Good to excellent; about 90% of drainage area in good grassland, woodland or equivalent cover.
Surface Storage	**.10 -.12** Negligible surface depression few and shallow; drainageways steep and small, no marshes	**.08 -.10** Low; well defined system of small drainageways; no ponds or marshes	**.06 -.08** Normal; considerable surface depression storage; lakes and pond marshes	**.04 -.06** High; surface stor-age, high; drainage system not sharply defined; large flood plain storage or large number of ponds or marshes.

Given An un developed watershed consisting of:

1) rolling terrain with average slopes of 5%.
2) clay type soils.
3) good grassland area, and
4) normal surface depressions.

Solution:

Relief	0.14
Soil Infiltration	0.08
Vegetal Cover	0.04
Surface Storage	0.06 C=
	0.32

Find The r unoff coefficient, C, for the above watershed.

Table 819.2B

Runoff Coefficients for Developed Areas

Type of Drainage Area	Runoff Coefficient
Business:	
Downtown areas	0.70 - 0.95
Neighborhood areas	0.50 - 0.70
Residential:	
Single-family areas	0.30 - 0.50
Multi-units, detached	0.40 - 0.60
Multi-units, attached	0.60 - 0.75
Suburban	0.25 - 0.40
Apartment dwelling areas	0.50 - 0.70
Industrial:	
Light areas	0.50 - 0.80
Heavy areas	0.60 - 0.90
Parks, cemeteries:	0.10 - 0.25
Playgrounds:	0.20 - 0.40
Railroad yard areas:	0.20 - 0.40
Unimproved areas:	0.10 - 0.30
Lawns:	
Sandy soil, flat, 2%	0.05 - 0.10
Sandy soil, average, 2-7%	0.10 - 0.15
Sandy soil, steep, 7%	0.15 - 0.20
Heavy soil, flat, 2%	0.13 - 0.17
Heavy soil, average, 2-7%	0.18 - 0.25
Heavy soil, steep, 7%	0.25 - 0.35
Streets:	
Asphaltic	0.70 - 0.95
Concrete	0.80 - 0.95
Brick	0.70 - 0.85
Drives and walks	0.75 - 0.85
Roofs:	0.75 - 0.95

Attachment E

Computation Sheet for Determining Run-on Discharges

Existing Site Conditions

Area Runoff Coefficient		=	0.7	(A)
Area Rainfall Intensity		=	6.75 in/hr	(B)
Drainage Area		=	2.73 acres	(C)
Site Area Run-on Discharge	(A) x (B) x (C)	=	12.90 cfs	(D)

Figure 819.2A

Runoff Coefficients for Undeveloped Areas
Watershed Types

	Extreme	High	Normal	Low
Relief	**.28 -.35** Steep, rugged terrain with average slopes above 30%	**.20 -.28** Hilly, with average slopes of 10 to 30%	**.14 -.20** Rolling, with average slopes of 5 to 10%	**.08 -.14** Relatively flat land, with average slopes of 0 to 5%
Soil Infiltration	**.12 -.16** No effective soil cover, either rock or thin soil mantle of negligible infiltration capacity	**.08 -.12** Slow to take up water, clay or shallow loam soils of low infiltration capacity, imperfectly or poorly drained	**.06 -.08** Normal; well drained light or medium textured soils, sandy loams, silt and silt loams	**.04 -.06** High; deep sand or other soil that takes up water readily, very light well drained soils
Vegetal Cover	**.12 -.16** No effective plant cover, bare or very sparse cover	**.08 -.12** Poor to fair; clean cultivation crops, or poor natural cover, less than 20% of drainage area over good cover	**.06 -.08** Fair to good; about 50% of area in good grassland or wood-land, not more than 50% of area in cultivated crops	**.04 -.06** Good to excellent; about 90% of drainage area in good grassland, woodland or equivalent cover.
Surface Storage	**.10 -.12** Negligible surface depression few and shallow; drainageways steep and small, no marshes	**.08 -.10** Low; well defined system of small drainageways; no ponds or marshes	**.06 -.08** Normal; considerable surface depression storage; lakes and pond marshes	**.04 -.06** High; surface stor-age, high; drainage system not sharply defined; large flood plain storage or large number of ponds or marshes.

Given An un developed watershed consisting of;

1) rolling terrain with average slopes of 5%,
2) clay type soils,
3) good grassland area, and
4) normal surface depressions.

Solution:

Relief	0.14
Soil Infiltration	0.08
Vegetal Cover	0.04
Surface Storage	0.06 C=
	0.32

Find The r unoff coefficient, C, for the above watershed.

Table 819.2B

Runoff Coefficients for Developed Areas

Type of Drainage Area	Runoff Coefficient
Business:	
Downtown areas	0.70 - 0.95
Neighborhood areas	0.50 - 0.70
Residential:	
Single-family areas	0.30 - 0.50
Multi-units, detached	0.40 - 0.60
Multi-units, attached	0.60 - 0.75
Suburban	0.25 - 0.40
Apartment dwelling areas	0.50 - 0.70
Industrial:	
Light areas	0.50 - 0.80
Heavy areas	0.60 - 0.90
Parks, cemeteries:	0.10 - 0.25
Playgrounds:	0.20 - 0.40
Railroad yard areas:	0.20 - 0.40
Unimproved areas:	0.10 - 0.30
Lawns:	
Sandy soil, flat, 2%	0.05 - 0.10
Sandy soil, average, 2-7%	0.10 - 0.15
Sandy soil, steep, 7%	0.15 - 0.20
Heavy soil, flat, 2%	0.13 - 0.17
Heavy soil, average, 2-7%	0.18 - 0.25
Heavy soil, steep, 7%	0.25 - 0.35
Streets:	
Asphaltic	0.70 - 0.95
Concrete	0.80 - 0.95
Brick	0.70 - 0.85
Drives and walks	0.75 - 0.85
Roofs:	0.75 - 0.95

Attachment F

Notice of Construction (NOC) / Notice of Intent (NOI)

Attachment G

Maintenance, Inspection, and Repair of Construction Site BMPs

SWPPP Inspection, Maintenance and Repair Program			
BEST MANAGEMENT PRACTICES (BMPs)	**INSPECTION FREQUENCY**		**MAINTENANCE/REPAIR PROGRAM**
	Rainy	**Non-Rainy**	
TEMPORARY SOIL STABILIZATION BMPs			
			■ ■
			■ ■
TEMPORARY SEDIMENT CONTROL BMPs			
			■ ■ ■ ■ ■
			■ ■ ■ ■
WIND EROSION CONTROL BMPs			
TRACKING CONTROL BMPs			
			■ ■
NON-STORM WATER MANAGEMENT BMPs			
			■ ■ ■ ■ ■ ■

Attachment G
Sample Maintenance, Inspection and Repair of Construction Site BMPs

SWPPP Inspection, Maintenance and Repair Program			
BEST MANAGEMENT PRACTICES (BMPs)	**INSPECTION FREQUENCY**		**MAINTENANCE/REPAIR PROGRAM**
	Rainy	**Non-Rainy**	
WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs			
			■ ■ ■ ■ ■ ■
			■ ■ ■ ■ ■ ■

Site inspections shall be conducted by the Contractor's WPCM or other Caltrans approved 24-hour trained staff at the following minimum frequencies:

- Prior to a forecast storm;
- After a rain event that causes runoff

from the construction site;

- At 24-hour intervals during extended rain events;
- Daily inspections within the Lake Tahoe Hydrologic Unit;
- Weekly during the rainy season;
- Every 2 weeks during the non-rainy season; and
- At any other time(s) or intervals of time specified in the Contract Special Provisions.

Completed inspection checklists shall be submitted to the Resident Engineer within 24 hours of inspection. Copies of the completed checklists will be kept with the SWPPP. A tracking or follow-up procedure shall follow any inspection that identifies deficiencies in BMPs.

Attachment H

Stormwater Quality Construction Site Inspection Checklist

GENERAL INFORMATION				
Project Name				
Caltrans Contract No.				
Contractor				
Inspector's Name				
Inspector's Title				
Signature				
Date of Inspection				
Inspection Type (Check Applicable)	*n* Prior to forecast rain *n* 24-hr intervals during extended rain		*n* After a rain event *n* Other	
Season (Check Applicable)	□ Rainy		□ Non-Rainy	
Storm Data	Storm Start Date & Time:		Storm Duration (hrs):	
	Time elapsed since last storm (Circle Applicable Units)	Min. Hr. Days	Approximate Rainfall Amount (mm)	

PROJECT AREA SUMMARY AND DISTURBED SOIL AREA (DSA) SIZE LIMITS FROM SPECIAL PROVISIONS

Total Project Area	Hectares	Acres
Rainy Season DSA Limit	Hectares	Acres
Field Estimate of Non-Active DSAs	Hectares	Acres
Field Estimate of Active DSAs	Hectares	Acres

OTHER REQUIREMENTS				
Requirement	**Yes**	**No**	**N/A**	**Corrective Action**
Preservation of Existing Vegetation				
Is temporary fencing provided to preserve vegetation in areas where no construction activity is planned?				
Location:				
Location:				
Location:				
Location:				
Temporary Soil Stabilization				
Does the applied temporary soil stabilization provide 100% coverage for the required areas?				
Are any non-vegetated areas that may require temporary soil stabilization?				
Is the area where temporary soil stabilization required free from visible erosion?				
Location:				
Location:				
Location:				
Location:				
Temporary Linear Sediment Barriers				
Are temporary linear sediment barriers properly installed in accordance with the details, functional and maintained?				
Are temporary linear sediment barriers free of accumulated litter?				
Is the built-up sediment less than 1/3 the height of the barrier?				
Are cross barriers installed where necessary and properly spaced?				
Are fiber rolls installed and maintained on required slopes in accordance with the details, functional and maintained?				
Location:				
Location:				
Location:				
Location:				
Location:				
Storm Drain Inlet Protection				
Are storm drain inlets internal to the project properly protected with either Type 1, 2 or 3 inlet protection?				
Are storm drain inlet protection devices in working order and being properly maintained?				
Location:				
Location:				
Location:				
Location:				

OTHER REQUIREMENTS				
Requirement	**Yes**	**No**	**N/A**	**Corrective Action**
Location:				
Desilting Basins				
Are basins maintained to provide the required retention/detention?				
Are basin controls (inlets, outlets, diversions, weirs, spillways, and racks) in working order?				
Location:				
Location:				
Location:				
Location:				
Stockpiles				
Are all locations of temporary stockpiles, including soil, hazardous waste, and construction materials in approved areas?				
Are stockpiles protected from run-on, run-off from adjacent areas and from winds?				
Are stockpiles located at least 50 ft from concentrated flows, downstream drainage courses and storm drain inlets?				
Are required covers and/or perimeter controls in place?				
Location:				
Location:				
Location:				
Location:				
Concentrated Flows				
Are concentrated flow paths free of visible erosion?				
Location:				
Location:				
Location:				
Location:				
Tracking Control				
Are points of ingress/egress to public/private roads inspected, swept, and vacuumed daily?				
Are all paved areas free of visible sediment tracking or other particulate matter?				
Is rock at Temporary Construction Entrance(s) 12-inches or more in thickness?				
Does sediment need to be removed from the rock, or does the rock need to be replaced?				
For Type 2 Construction Entrance, does sediment need to be removed from ribbed plates?				
Location:				
Location:				
Location:				
Location:				

OTHER REQUIREMENTS				
Requirement	**Yes**	**No**	**N/A**	**Corrective Action**
Wind Erosion Control				
Is dust control implemented in conformance with Section 10 of the Standard Specifications?				
Location:				
Location:				
Location:				
Location:				
Dewatering Operations				
Is dewatering handled in conformance with the dewatering permit issued by the RWQCB?				
Is required treatment provided for dewatering effluent?				
Location:				
Location:				
Location:				
Location:				
Vehicle & Equipment Fueling, Cleaning, and Maintenance				
Are vehicle and equipment fueling, cleaning and maintenance areas reasonably clean and free of spills, leaks, or any other deleterious material?				
Are vehicle and equipment fueling, cleaning and maintenance activities performed on an impermeable surface in dedicated areas?				
If no, are drip pans used?				
Are dedicated fueling, cleaning, and maintenance areas located at least 15 m away from downstream drainage facilities and watercourses, and protected from run-on and runoff?				
Is wash water contained for infiltration/ evaporation and disposed of outside the highway right of way?				
Is on-site cleaning limited to washing with water (no soap, soaps substitutes, solvents, or steam)?				
On each day of use, are vehicles and equipment inspected for leaks and if necessary, repaired?				
Location:				
Location:				
Location:				
Location:				
Waste Management & Materials Pollution Control				
Are material storage areas and washout areas protected from run-on and runoff, and located at least 50 ft from concentrated flows and downstream drainage facilities?				
Are all material handling and storage areas clean; organized; free of spills, leaks, or any other deleterious material; and stocked with appropriate clean-up supplies?				

OTHER REQUIREMENTS				
Requirement	**Yes**	**No**	**N/A**	**Corrective Action**
Are liquid materials, hazardous materials, and hazardous wastes stored in temporary containment facilities?				
Are bagged and boxed materials stored on pallets?				
Are hazardous materials and wastes stored in appropriate, labeled containers?				
Are proper storage, clean-up, and spill-reporting procedures for hazardous materials and wastes posted in open, conspicuous and accessible locations adjacent to storage areas?				
Are temporary containment facilities free of spills and rainwater?				
Are temporary containment facilities and bagged/boxed materials covered?				
Are temporary concrete washout facilities designated and being used?				
Are temporary concrete washout facilities functional for receiving and containing concrete waste and are concrete residues prevented from entering the drainage system?				
Do temporary concrete washout facilities provide sufficient volume and freeboard for planned concrete operations?				
Are the temporary concrete washout facilities' PVC liners free from punctures and holes?				
Are concrete wastes, including residues from cutting and grinding, contained and disposed of off-site or in concrete washout facilities?				
Are spills from mobile equipment fueling and maintenance properly contained and cleaned up?				
Is the site free of litter?				
Are trash receptacles provided in the Contractor's yard, field trailer areas, and at locations where workers congregate for lunch and break periods?				
Is litter from work areas within the construction limits of the project site collected and placed in watertight dumpsters?				
Are waste management receptacles free of leaks?				
Are the contents of waste management receptacles properly protected from contact with storm water or from being dislodged by winds?				
Are waste management receptacles filled at or beyond capacity?				
Location:				
Location:				
Location:				
Location:				
Temporary Water Body Crossing or Encroachment				
Are temporary water body crossings and encroachments constructed as shown on the plans or as approved by the engineer?				
Does the project conform to the requirements of the 404 permit and/or 1601agreement?				
Location:				
Location:				

OTHER REQUIREMENTS				
Requirement	**Yes**	**No**	**N/A**	**Corrective Action**
Location:				
Location:				
Illicit Connection/Illegal Discharge Detection and Reporting				
Is there any evidence of illicit discharges or illegal dumping on the project site?				
If yes, has the Engineer been notified?				
Location:				
Location:				
Location:				
Location:				
Discharge Points				
Are discharge points and discharge flows free from noticeable pollutants?				
Are discharge points free of any significant erosion or sediment transport?				
Location:				
Location:				
Location:				
Location:				
WPCP/SWPPP Update				
Do the WPCP/SWPPP, Project Schedule/Water Pollution Control Schedule and WPCDs adequately reflect the current site conditions and contractor operations?				
Are all BMPs shown on the WPCDs installed in the proper location(s) and according to the details for the plan?				
Location:				
Location:				
Location:				
Location:				
General				
Are there any other potential water pollution control concerns at the site?				
Location:				
Location:				
Location:				
Location:				
Storm Water Monitoring				
Does storm water discharge directly to an water body listed as impaired for sediment/sedimentation or turbidity in the General Construction Activity Permit?				

OTHER REQUIREMENTS				
Requirement	**Yes**	**No**	**N/A**	**Corrective Action**
If yes, were samples for sediment/sedimentation or turbidity collected pursuant to the sampling and analysis plan, if required, during rain events?				
Were there any BMPs not properly implemented, or breaches, malfunctions, leakages or spills observed, which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water?				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan during rain events?				
Were soil amendments (e.g., gypsum) used on the project?				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan during rain events?				
Did storm water contact stored materials or waste and resulted in a discharge from the construction site? (Materials not in watertight containers, etc.)				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan during rain events?				

Attachment I

Trained Contractor Personnel Log

Stormwater Management Training Log

Project Name: County of Orange, Health Care Agency

Caltrans Contract Number: _____

Storm Water Management Topic: (check as appropriate)

- ☐ Temporary Soil Stabilization
- ☐ Temporary Sediment Control
- ☐ Wind Erosion Control
- ☐ Tracking Control
- ☐ Non-storm water management
- ☐ Waste Management and Materials Pollution Control
- ☐ Storm Water Sampling

Specific Training Objective: _____

Location: _____ Date: _____

Instructor: _____ Telephone: _____

Course Length (hours): _____

Attendee Roster (attach additional forms if necessary)

Name	Company	Phone

Attachment I
Trained Contractor Personnel Log Sheet

Name	Company	Phone

COMMENTS:

Attachment J

Subcontractor Notification Letter and Notification Log

SWPPP Notification

Company:
Address: City,
State, Zip:

Dear Sir/Madam,

Please be advised that the California State Water Resources Control Board has adopted the NPDES Statewide Storm Water Permit (Permit) to the State of California, Department of Transportation (Caltrans) in 1999 (CAS000003, Order No. 99-06-DWQ); and the General Permit (General Permit) for Storm Water Discharges Associated with Construction Activity (CAS000002, Order No. 99-08-DWQ), and modifications thereto. The goal of these permits is prevent the discharge of pollutants associated with construction activity from entering the storm drain system, ground and surface waters.

[Contractor] has developed a Storm Water Pollution Prevention Plan (SWPPP) in order to implement the requirements of the Permits.

As a subcontractor, you are required to comply with the SWPPP and the Permits for any work that you perform on site. Any person or group who violates any condition of the Permits may be subject to substantial penalties in accordance with state and federal law. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP and the Permits. A copy of the Permits and the SWPPP are available for your review at the construction office. Please contact me if you have further questions.

Sincerely,

Title:

SUBCONTRACTOR NOTIFICATION LOG

Project Name: County of Orange, Health Care Agency

Caltrans Contract Number:

SUBCONTRACTOR COMPANY NAME	CONTACT NAME	ADDRESS	PHONE NUMBER	PAGER/ FIELD PHONE	DATE NOTIFICATION LETTER SENT	TYPE OF WORK

USE ADDITIONAL PAGES AS NECESSARY

Attachment K

Notice of Discharge

To: Name of Resident Engineer
Date: Insert Date

Subject: Notice of Discharge

Project Name: County of Orange, Health Care Agency
Contract Number:

In accordance with the Caltrans NPDES Statewide Permit for Storm Water Discharges Associated with Construction Activity, the following instance of discharge is noted:

Date, time, and location of discharge

Nature of the operation that caused the discharge

Initial assessment of any impact caused by the discharge

Existing BMP(s) in place prior to discharge event

Date of deployment and type of BMPs deployed after the discharge.

Steps taken or planned to reduce, eliminate and/or prevent recurrence of the discharge

Implementation and maintenance schedule for any affected BMPs

If further information or a modification to the above schedule is required, notify the contact person below.

Name of Contact Person	Title
Company	Telephone Number
Signature	Date

Attachment M

Annual Certification of Compliance Form

Annual Certification of Compliance for the Construction Contractor

Project Name: County of Orange, Health Care Agency

Contract Number: Contractor

Company Name:

Contractor Address:

Annual Certification Inspection Date:

Description of Work:

Work Now in Progress:

Work Planned for Next 12 Months:

Water Pollution Control Manager Findings

I, and/or personnel acting under my direction and supervision, have inspected the project site and the work described above and certify:

1. YES NO Stormwater pollution control measures are being implemented in accordance with the SWPPP approved for the project.

2. YES NO The project site and activities thereon are in compliance with the Caltrans Statewide NPDES Permit No. CAS000003, the NPDES General Permit No. CAS000002, or local NPDES permits, which ever is applicable.

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

Contractor Signature: Date:

Approval by the Resident Engineer for the Annual Certification of Compliance

Resident Engineer's Findings

I, and/or personnel acting under my direction and supervision, have inspected the project site and the work described above and find as follows:

1. YES NO Stormwater pollution control measures are being implemented in accordance with the SWPPP approved for the project.

2. YES NO The project site and activities thereon are in compliance with the Caltrans Statewide NPDES Permit No. CAS000003, the NPDES General Permit No. CAS000002, or local NPDES permits, which ever is applicable.

When both 1 and 2 above are checked "yes", the resident engineer must complete the annual certification below.

If either 1 or 2 above are checked "no", the resident engineer must:

- File a notice of non-compliance within 30 days of identification of the noncompliance;
- Document follow up actions below;
- Notify the contractor; and
- Initiate corrective actions in accordance with the contract.

Is a Local Agency administering the project?

CYes CNo

Resident Engineer's Follow up Actions:

I, and or personnel acting under my direction and supervision, have reviewed and approved of the Contractor's Annual Certification of Compliance. However, the Contractor remains responsible and liable at all times for compliance with applicable requirements for which compliance is ultimately determined by the Regional Water Quality Control Board and/or the State Water Resources Control Board, and/or the EPA.

CERTIFICATION BY CALTRANS OR LOCAL AGENCY / PRIVATE ENTITY RESIDENT ENGINEER

Resident Engineer's Name and Signature Date

CERTIFICATION BY CALTRANS OVERSIGHT ENGINEER (IF LOCAL AGENCY / PRIVATE ENTITY IS ADMINISTERING PROJECT)

Caltrans Oversight Engineer's Name and Signature Date

Attachment N

Other Plans/Permits/Agreements

Attachment P

Notice of Completion of Construction / Notice of Termination

Attachment Q

BMPs Selected for the Project

- NS-2 Dewatering Operations
- NS-3 Paving & Grinding Operations
- NS-12 Concrete Curing
- NS-14 Material Over Water
- NS-15 Demolition Adjacent to Water
- SC-2 Sediment Basin
- SC-6 Gravel Bag Berm
- SC-7 Street Sweeping & Vacuuming
- TC-1 Stabilized Construction Entrance/Exit
- TC-3 Entrance/Outlet Tire Wash
- WE-1 Wind Erosion Control
- WM-8 Concrete Waste Management

Attachment R

Sampling Activity Log and Chain-of-Custody Forms

RAIN EVENT GENERAL INFORMATION				
Project Name	County of Orange, Health Care Agency			
Contract N°				
Contractor				
Sampler's Name				
Signature				
Date of Sampling				
Season (Check Applicable)	n Rainy		□ Non-Rainy	
Storm Data	Storm Start Date & Time:		Storm Duration (hrs):	
	Time elapsed since last storm (Circle Applicable Units)	Min. Hr. Days	Approximate Rainfall Amount (mm)	

For rainfall information: http://cdec.water.ca.gov/weather.html or http://www.wrh.noaa.gov/wrh/nwspage.html

SAMPLE LOG		
Sample Identification	**Sample Location**	**Sample Collection Date and Time**

Specific sample locations descriptions may include: 30m upstream from discharge at eastern boundary, runoff from northern waste storage area, downgradient of inlet 57 at kilometer post 36, etc.

FIELD ANALYSIS		
	Yes No	
Sample Identification	**Test**	**Result**

Attachment S

Pollutant Testing Guidance Table

Attachment S Pollutant Testing Guidance Table

Category	Construction Site Material	Visually Observable?	Pollutant Indicators [2]	Suggested Analyses Field [3]	Laboratory
Asphalt Products (Sections 37, 39, 92, 93, 94, and Special Provisions)	Hot Asphalt	Yes - Rainbow Surface or Brown Suspension	Visually Observable - No Testing Required		
	Asphalt Emulsion				
	Liquid Asphalt (tack coat)				
	Cold Mix				
	Crumb Rubber	Yes – Black, solid material	Visually Observable - No Testing Required		
	Asphalt Concrete (Any Type)	Yes - Rainbow Surface or Brown Suspension	Visually Observable - No Testing Required		
Cleaning Products	Acids	No	**pH** Acidity Anions (acetic acid, phosphoric acid, sulfuric acid, nitric acid, hydrogen chloride)	pH Meter Acidity Test Kit	EPA 150.1 (pH)
					SM 2310B (Acidity)
					EPA 300.0 (Anion)
	Bleaches	No	**Residual Chlorine**	Chlorine	SM 4500-CL G (Res. Chlorine)
	Detergents	Yes - Foam	Visually Observable - No Testing Required		
	TSP	No	**Phosphate**	Phosphate	EPA 365.3 (Phosphate)
	Solvents	No	**VOC**	None	EPA 601/602 or EPA 624 (VOC)
			SVOC	None	EPA 625 (SVOC)
Portland Concrete	Portland Cement (PCC)	Yes - Milky Liquid	Visually Observable - No Testing Required		

Attachment S Pollutant Testing Guidance Table

Category	Construction Site Material	Visually Observable?	Pollutant Indicators [2]	Suggested Analyses Field [3]	Laboratory
Cement & Masonry Products (Section 27, 28, 29, 40, 41, 42, 49, 50, 51, 53, 63, 65, 72, 73, 80, 81, 83, 90, and Special Provisions)	Masonry products	No	**pH**	pH Meter Alkalinity or Acidity Test Kit	EPA 150.1 (pH)
			Alkalinity		SM 2320 (Alkalinity)
	Sealant (Methyl Methacrylate - MMA)	No	**Methyl Methacrylate**	None	EPA 625 (SVOC)
			Cobalt		EPA 200.8 (Metal)
			Zinc		
	Incinerator Bottom Ash Bottom Ash Steel Slag Foundry Sand Fly Ash Municipal Solid Waste	No	**Aluminum** **Calcium** **Vanadium** **Zinc**	Calcium Test	EPA 200.8 (Metal) EPA 200.7 (Calcium)
	Mortar	Yes - Milky Liquid	Visually Observable - No Testing Required		
	Concrete Rinse Water	Yes - Milky Liquid	Visually Observable - No Testing Required		
	Non-Pigmented Curing Compounds	No	Acidity	pH Meter Alkalinity or Acidity Test Kit	SM 2310B (Acidity)
			Alkalinity		SM 2320 (Alkalinity)
			pH		EPA 150.1 (pH)
			VOC		EPA 601/602 or EPA 624 (VOC)
			SVOC		EPA 625 (SVOC)
Landscaping and Other	Aluminum Sulfate	No	Aluminum	TDS Meter	EPA 200.8 (Metal)

Attachment S Pollutant Testing Guidance Table

Category	Construction Site Material	Visually Observable?	Pollutant Indicators [2]	Suggested Analyses Field [3]	Laboratory
Products (Section 20, 24, and Special Provisions)			**TDS**	Sulfate	EPA 160.1 (TDS)
			Sulfate		EPA 300.0 (Sulfate)
	Sulfur-Elemental	No	**Sulfate**	Sulfate	EPA 300.0 (Sulfate)
	Fertilizers-Inorganic [4]	No	**Nitrate**	Nitrate	EPA 300.0 (Nitrate)
			Phosphate	Phosphate	EPA 365.3 (Phosphate)
			Organic Nitrogen	None	EPA 351.3 (TKN)
			Potassium	None	EPA 200.8 (Metal)
	Fertilizers-Organic	No	TOC	Nitrate	EPA 415.1 (TOC)
			Nitrate		EPA 300.0 (Nitrate)
			Organic Nitrogen		EPA 351.3 (TKN)
			COD		EPA 410.4 (COD)
	Natural Earth (Sand, Gravel, and Topsoil)	Yes - Cloudiness and turbidity	Visually Observable - No Testing Required		
	Herbicide	No	**Herbicide**	None	Check lab for specific herbicide or pesticide
	Pesticide		**Pesticide**		
	Lime		Alkalinity	pH Meter Alkalinity or Acidity Test Kit	SM 2320 (Alkalinity)
			pH		EPA 150.1 (pH)
Painting Products (Section 12-3.08, 20-2.32,	Paint	Yes	Visually Observable - No Testing Required		

Attachment S Pollutant Testing Guidance Table

Category	Construction Site Material	Visually Observable?	Pollutant Indicators [2]	Suggested Analyses Field [3]	Laboratory
50-1.05, 59, 91, and Special Provisions)	Paint Strippers	No	**VOC**	None	EPA 601/602 or EPA 624 (VOC)
			SVOC	None	EPA 625 (SVOC)
	Resins	No	**COD**	None	EPA 410.4 (COD)
			SVOC		EPA 625 (SVOC)
	Sealants	No	**COD**	None	EPA 410.4 (COD)
	Solvents	No	**COD**	None	EPA 410.4 (COD)
			VOC		EPA 601/602 or EPA 624 (VOC)
			SVOC		EPA 625 (SVOC)
	Lacquers, Varnish, Enamels, and Turpentine	No	**COD**	None	EPA 410.4 (COD)
			VOC		EPA 601/602 or EPA 624 (VOC)
			SVOC		EPA 625 (SVOC)
	Thinners	No	VOC	None	EPA 601/602 or EPA 624 (VOC)
			COD		EPA 410.4 (COD)
Portable Toilet Waste Products	Portable Toilet Waste	Yes	Visually Observable - No Testing Required		
Contaminated Soil [5]	Aerially Deposited Lead[3]	No	**Lead**	None	EPA 200.8 (Metal)

Attachment S Pollutant Testing Guidance Table

Category	Construction Site Material	Visually Observable?	Pollutant Indicators [2]	Suggested Analyses Field [3]	Laboratory
	Petroleum	Yes – Rainbow Surface Sheen and Odor	Visually Observable - No Testing Required		
	Mining or Industrial Waste, etc.	No	**Contaminant Specific**	Contaminant Specific – Check with laboratory	Contaminant Specific – Check with laboratory
Line Flushing Products	Chlorinated Water	No	**Total chlorine**	Chlorine	SM 4500-CL G (Res. Chlorine)
Adhesives	Adhesives	No	COD	None	EPA 410.4 (COD)
			Phenols	Phenol	EPA 420.1 (Phenol)
			SVOC	None	EPA 625 (SVOC)
Dust Palliative Products (Section 18)	Salts (Magnesium Chloride, Calcium Chloride, and Natural Brines)	No	Chloride	Chloride	EPA 300.0 (Chloride)
			TDS	TDS Meter	EPA 160.1 (TDS)
			Cations (Sodium, Magnesium, Calcium)	None	EPA 200.7 (Cations)
Vehicle	Antifreeze and Other Vehicle Fluids	Yes - Colored Liquid	Visually Observable - No Testing Required		
	Batteries	No	Sulfuric Acid	None	EPA 300.0 (Sulfate)
			Lead	None	EPA 200.8 (Metal)
			pH	pH Meter Alkalinity or Acidity Test Kit	EPA 150.1 (pH)
	Fuels, Oils, Lubricants	Yes - Rainbow Surface Sheen and Odor	Visually Observable - No Testing Required		
Soil Amendment/Stabilization	Polymer/Copolymer [6 7]	No	**Organic Nitrogen**	None	EPA 351.3 (TKN)
			BOD	None	EPA 405.1 (BOD)

Attachment S Pollutant Testing Guidance Table

Category	Construction Site Material	Visually Observable?	Pollutant Indicators [2]	Suggested Analyses Field [3]	Laboratory
Products			COD	None	EPA 410.4 (COD)
			DOC	None	EPA 415.1 (DOC)
			Nitrate	Nitrate	EPA 300.0 (Nitrate)
			Sulfate	Sulfate	EPA 300.0 (Sulfate)
			Nickel	None	EPA 200.8 (Metal)
	Straw/Mulch	Yes - Solids	Visually Observable - No Testing Required		
	Lignin Sulfonate	No	Alkalinity	Alkalinity	SM 2320 (Alkalinity)
			TDS	TDS Meter	EPA 160.1 (TDS)
	Psyllium	No	COD	None	EPA 410.4 (COD)
			TOC		EPA 415.1 (TOC)
	Guar/Plant Gums	No	COD	None	EPA 410.4 (COD)
			TOC		EPA 415.1 (TOC)
			Nickel		EPA 200.8 (Metal)
	Gypsum	No	pH	pH Meter Alkalinity or Acidity Test Kit	EPA 150.1 (pH)
			Calcium	Calcium	EPA 200.7 (Calcium)
			Sulfate	Sulfate	EPA 300.0 (Sulfate)
			Aluminum	None	EPA 200.8 (Metal)
			Barium		
			Manganese		
			Vanadium		
Treated Wood Products (Section 58, 80-3.01B(2), and Special Provisions)	Ammoniacal-Copper-Zinc-Arsenate (ACZA)	No	Arsenic	Total Chromium	EPA 200.8 (Metal)
			Total Chromium		

Attachment S Pollutant Testing Guidance Table

Category	Construction Site Material	Visually Observable?	Pollutant Indicators [2]	Suggested Analyses Field [3]	Laboratory
	Copper-Chromium-Arsenic (CCA) Ammoniacal-Copper-Arsenate (ACA) Copper Naphthenate		**Copper** Zinc		
	Creosote	Yes - Rainbow Surface or Brown Suspension	Visually Observable - No Testing Required		

Notes:

1. 1 If specific pollutant is known, analyze only for that specific pollutant. See MSDS to verify.
2. For each construction material, test for one of the pollutant indicators. Bolded pollutant indicates lowest analysis cost or best indicator. However, the composition of the specific construction material, if known, is the first criterion for selecting which analysis to use.
3. See www.hach.com, www.lamotte.com, www.ysi.com and www.chemetrics.com for some of the test kits
4. If the type of inorganic fertilizer is unknown, analyze for all pollutant indicators listed.
5. Only if special handling requirements are required in the Standard Special Provisions for aerially deposited lead (ADL)
6. If used with a dye or fiber matrix, it is considered visually observable and no testing is required.
7. Based upon research conducted by Caltrans, the following copolymers/polymers do not discharge pollutants and water quality sampling and analysis is **not** required: Super Tak™, M-Binder™, Fish Stik™, Pro40dc™, Fisch-Bond™, Soil Master WR™, and EarthGuard™.

Acronyms:

BOD – Biochemical Oxygen Demand
COD – Chemical Oxygen Demand
DOC – Dissolved Organic Carbon
EPA – Environmental Protection Agency
HACH – Worldwide company that provides advanced analytical systems and technical support for water quality testing.
SM – Standard Method
SVOC – Semi-Volatile Organic Compounds
TDS – Total Dissolved Solids
TKN – Total Kjeldahl Nitrogen
TOC – Total Organic Carbon
TSP – Tri-Sodium Phosphate
VOC - Volatile Organic Compounds

References:

Construction Storm Water Sampling and Analysis Guidance Document, California Stormwater Quality Task Force, October 2001.
Environmental Impact of Construction and Repair Materials on Surface and Ground Waters, Report 448, National Cooperative Highway Research Program, 2001
Soil Stabilization for Temporary Slopes, Environmental Programs, California Department of Transportation, October 1, 1999.
Statewide Storm Water Management Plan, Division of Environmental Analysis, California Department of Transportation, April 2002.
Statewide Storm Water Quality Practice Guidelines, Environmental Program, California Department of Transportation, August 2000.
Soil Stabilization for Temporary Slopes and District 7 Erosion Control Pilot Study, June 2000.
Stormwater Monitoring Protocols, Guidance Manual, California Department of Transportation, May 2000.

Attachment T

Sampling Data Reporting Form

RAIN EVENT GENERAL INFORMATION				
Project Name	County of Orange, Health Care Agency			
Caltrans Contract N°				
Contractor				
Sampler's Name				
Signature				
Date of Sampling				
Season (Check Applicable)	□ Rainy		□ Non-Rainy	
Storm Data	Storm Start Date & Time:		Storm Duration (hrs):	
	Time elapsed since last storm (Circle Applicable Units)	Min. Hr. Days	Approximate Rainfall Amount (mm)	

SAMPLE LOG		
Sample Identification	**Sample Location**	**Sample Collection Date and Time**

Specific sample locations descriptions may include: 30m upstream from discharge at eastern boundary, runoff from northern waste storage area, downgradient of inlet 57 at kilometer post 36, etc.

FIELD ANALYSIS		
	Yes No	
Sample Identification	**Test**	**Result**

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I

am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Contractor's Signature

Date

Contractor's Name and Title

Contractor's Telephone Number

Attachment U

Discharge Reporting Log

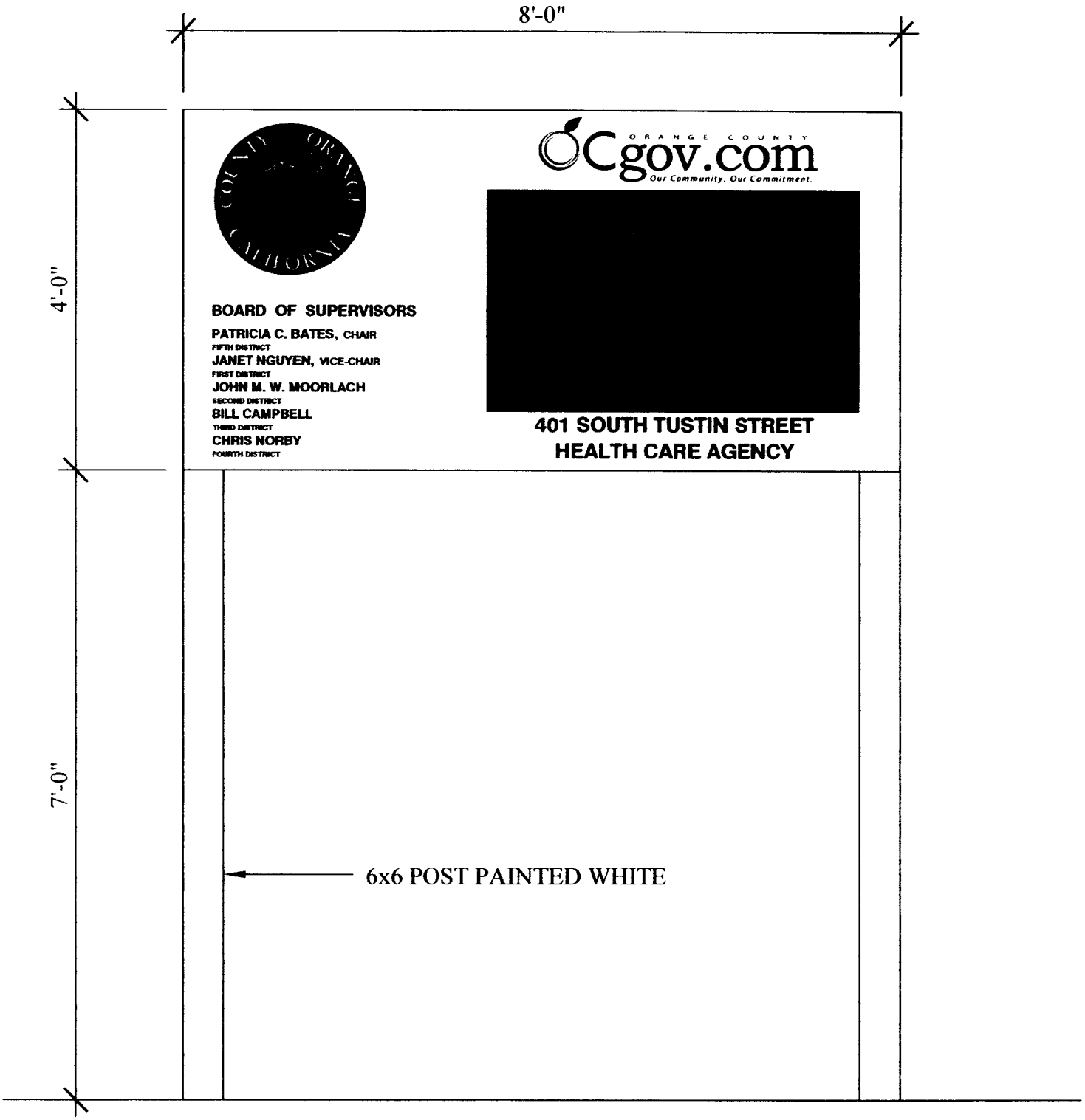
Project Name: County of Orange, Health Care Agency

Caltrans Contract Number:

Date	Material(s) Discharged	Estimated Quantity	Observed By

APPENDIX D

PROJECT SIGN



SIGNAGE NOTED:

1. PROVIDE MDO BOARD SIGN WITH SILK SCREENED COLOR GRAPHICS ON A WHITE BACKGROUND.

2. INSTALL IN LOCATION AS DIRECTED BY COUNTY PROJECT MANAGER.

3. ARCHITECT WILL PROVIDE CONTRACTOR WITH GRAPHICS IN AN ELECTRONIC FORMAT AS REQUIRED BY SIGNAGE COMPANY.