

WATER POLLUTION AND EROSION CONTROL NOTES:

A. GENERAL:

1. The Contractor is reminded of the requirements of Section 209 – Temporary Water Pollution, Dust, and Erosion Control, and Section 620 –Dust Control in the contract documents. Section 209 describes but is not limited to: submittal requirements; scheduling of a water pollution and erosion control conference with the Engineer; construction requirements; method of measurement; and basis of payment.
2. The Contractor shall follow the guidelines in the "Best Management Practices Manual for Construction Sites in Honolulu", dated May 1999 in developing, installing and maintaining the Best Management Practices (BMP) for the project.
3. The Contractor shall follow the guidelines in the Honolulu's City & County "Rules Relating to Soil Erosion Standards and Guidelines" along with applicable Soil Erosion Guidelines for projects on Maui, Molokai, Kauai, and Hawaii and ASTM 6462.
4. The Engineer may assess liquidated damages of up to \$27,500 for non-compliance of each BMP requirement and each requirement stated in Section 209, for every day of non-compliance. There is no maximum limit on the amount assessed per day.
5. The Engineer will deduct the cost from the progress payment for all citations received by the Department for non-compliance, or the Contractor shall reimburse the State for the full amount of the outstanding cost incurred by the State.
6. For projects that require an NPDES Permit from the Department of Health, install a rain gage prior to any field work including the installation of any site-specific Best Management Practices. The rain gage shall have a tolerance of at least 0.05 inches of rainfall, and have an opening of at least one-inch in diameter. Install the rain gage on the project site in an area that will not deter rainfall from entering the gage opening. The rain gage installation shall be stable and plumbed. Do not begin field work until the rain gage is installed and site-specific Best Management Practices are in-place.

B. WASTE DISPOSAL:

1. Waste Materials  
All waste materials shall be collected and stored in a securely lidded metal dumpster. The dumpster shall meet all local and State solid waste management regulations. All trash and construction debris from the site shall be deposited in the dumpster. The dumpster shall be emptied a minimum of twice per week or as often as is deemed necessary. No construction waste materials shall be buried onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Notices stating these practices shall be posted in the office trailer and the Contractor shall be responsible for seeing that these procedures are followed.
2. Hazardous Waste  
All hazardous waste materials shall be disposed of in the manner specified by local or State regulations or by the manufacturer. The Contractor's site personnel shall be instructed in these practices and shall be responsible for seeing that these practices are followed.
3. Sanitary Waste  
All sanitary waste shall be collected from the portable units a minimum of once per week, or as required.

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

1. All control measures shall be inspected at least once each week and within 24 hours of any rainfall event of 0.5 inches or greater within a 24 hour period.
2. All measures shall be maintained in good working order. If repair is necessary, it shall be initiated within 24 hours after the inspection.
3. Built-up sediment shall be removed from silt fence when it has reached one-third the height of the fence.

4. Silt screen or fence shall be inspected for depth of sediment, tears, to verify that the fabric is securely attached to the fence posts or concrete slab and to verify that the fence posts are firmly in the ground. The bottom of the silt screen shall be inspected and verified that it is buried a minimum of 6 inches below the existing ground.
5. Temporary and permanent seeding and planting shall be inspected for bare spots, washouts and healthy growth.
6. A maintenance inspection report shall be made promptly after each inspection by the Contractor and a copy shall be submitted to the Engineer no later than one week from the date of the inspection.
7. Provide a stabilized construction entrance to reduce vehicle tracking of sediments. Include stabilized construction entrance in the Water Pollution, Dust, and Erosion Control submittals. Minimum length should be 50 feet. Minimum width should be 30 feet. Minimum depth should be 6 inches and underlain with geo-textile fabric. The paved street adjacent to the site entrance shall be cleaned daily or as required to remove any excess mud, cold planed materials, dirt or rock tracked from the site. Dump trucks hauling material from the construction site shall be covered with a tarpaulin.
8. Include designated Concrete Washout Area(s) in the Water Pollution, Dust, and Erosion Control submittals.
9. The Contractor shall submit the name of a specific individual designated responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.
10. Personnel selected for the inspection and maintenance responsibilities shall receive training from the Contractor. They shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.
11. The Contractor shall contain, remove, and dispose slurry generated from saw cutting of pavement in accordance with approved BMP. Payment for confinement, removal, and disposal of slurry shall be considered incidental to the various contract items.

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

1. Materials Pollution Prevention Plan
- a. Applicable materials or substances listed below are expected to be present onsite during construction. Other materials and substances not listed below shall be added to the inventory.
- Concrete  
Detergents  
Paints (enamel and latex)  
Metal Studs  
Tar

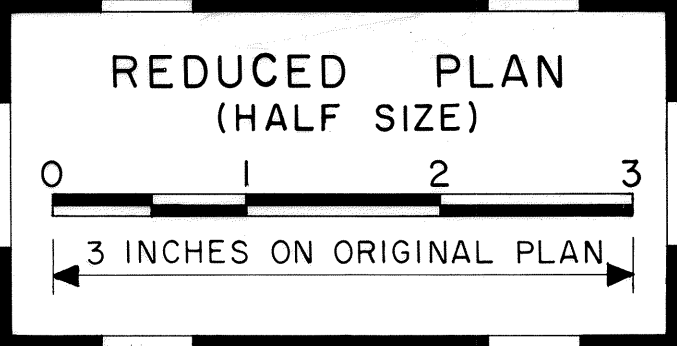
Fertilizers  
Petroleum Based Products  
Cleaning Solvents  
Wood  
Masonry Block
- b. Material Management Practices shall be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. An effort shall be made to store only enough product as is required to do the job.
- c. All materials stored onsite shall be stored in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.
- d. Products shall be kept in their original containers with the original manufacturer's label.
- e. Substances shall not be mixed with one another unless recommended by the manufacturer.

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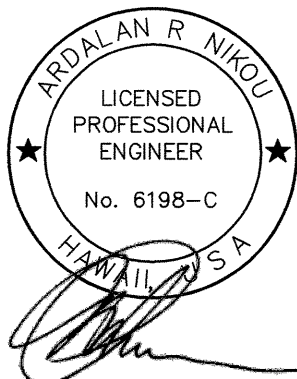
- f. Whenever possible, a product shall be used up completely before disposing of the container.
- g. Manufacturer's recommendations for proper use and disposal shall be followed.
- h. The Contractor shall conduct a daily inspection to ensure proper use and disposal of materials onsite.
2. Hazardous Material Pollution Prevention Plan
- a. Products shall be kept in original containers unless they are not resealable.
- b. Original labels and material safety data sheets (MSDS) shall be retained.
- c. Surplus products shall be disposed of according to manufacturers' instructions or local and State recommended methods.

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| SURVEY PLOTTED BY | S.M. KATHI     | DATE |  |
| DESIGNED BY       | BRANDON WEAVER |      |  |
| NOTED BY          | RANDY HAMAMOTO |      |  |
| QUANTITIES BY     | BRANDON WEAVER |      |  |
| CHECKED BY        | ARULAN NIKOU   |      |  |

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EarthTech  
A tyco International Ltd. Company



EXPIRATION DATE OF THE LICENSE 4/30/2008  
THIS WORK WAS PREPARED BY  
ME OR UNDER MY SUPERVISION.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

WATER POLLUTION  
AND EROSION CONTROL NOTES

KAUMUALII HIGHWAY & RICE STREET,  
EMERGENCY SLOPE STABILIZATION  
PROJECT NO. HWY-K-06-07

Scale: As Noted      Date: Apr 2007

SHEET No. 1 OF 2 SHEETS



WATER POLLUTION AND EROSION CONTROL NOTES: –Cont.

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES: –Cont.

3. Onsite and Offsite Product Specific Plan

The following product specific practices shall be followed onsite:

- a. Petroleum Based Products:  
All onsite vehicles shall be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products shall be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used onsite shall be applied according to the manufacturer's recommendation.
  - b. Fertilizers:  
Fertilizers used shall be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer shall be worked into the soil to limit exposure to storm water. Storage shall be in a covered shed. The contents of any partially used bags of fertilizer shall be transferred to a sealable plastic bin to avoid spills.
  - c. Paints:  
All containers shall be tightly sealed and stored when not required for use. Excess paint shall not be discharged to the highway drainage system but shall be properly disposed of according to manufacturers' instructions or State and local regulations.
  - d. Concrete Trucks:  
Concrete trucks shall be allowed to wash out or discharge drum wash water only at a designated site. Water shall not be discharged in the highway drainage system or waters of the United States. The Contractor shall contact Drinking Water Branch, Department of Health at 586-4258 to receive permission to designate a disposal site. The Contractor shall clean disposal site as required or as requested by the Owner's representative.
4. Spill Control Plan
- a. A spill prevention plan shall be posted to include measures to prevent and clean up each spill.
  - b. The Contractor shall be the spill prevention and cleanup coordinator. The Contractor shall designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel shall be posted in the material storage area and in the office trailer onsite.
  - c. Manufacturers' recommended methods for spill cleanup shall be clearly posted and site personnel shall be made aware of the procedures and the location of the information and cleanup supplies.
  - d. Materials and equipment necessary for spill cleanup shall be kept in the material storage area onsite.
  - e. All spills shall be cleaned up immediately after discovery.
  - f. The spill area shall be kept well ventilated and personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
  - g. Spills of toxic hazardous material shall be reported to the appropriate State or local government agency, regardless of the size.

E. PERMIT REQUIREMENTS

The Contractor shall comply with all the conditions stated in the following permits, including but not limited to:

- 1. Noise Permit, Department of Health
- 2. NPDES Permit for construction activities.

SILT FENCE NOTES:

- 1. Filter fabric shall be of the type specified and installed in combination with a support net of polyester netting or approved equal. The filter fabric shall be a minimum of 36 inches wide and the support net a minimum of 30 inches. Silt fence shall meet ASTM 6462.
- 2. If silt fence is obtained from manufacturer as a package (i.e. fabric attached to post) the manufacturer's installation instructions shall be adhered to.
- 3. Posts shall be metal where possible, cross section of post will be substantial enough to support a loaded silt fence without bending. Post spacing shall be 6 feet maximum.
- 4. Some manufacturers only supply silt fence with wooden post. During installation, measures should be taken to prevent damage to post.
- 5. Locate utility, drainage, and irrigation lines prior to driving post into the ground.

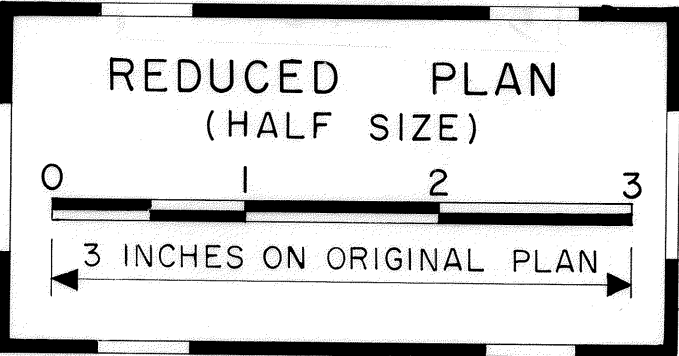
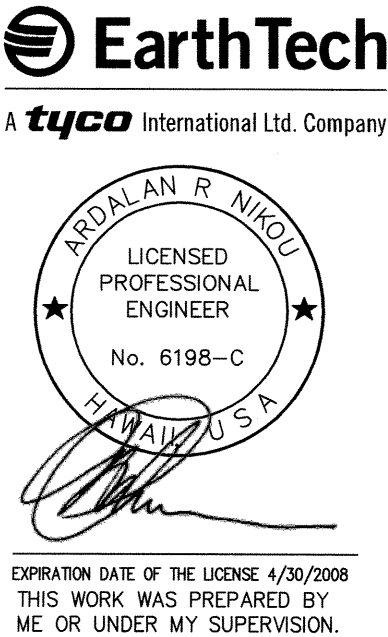
EROSION CONTROL / BMP NOTES:

- 1. Measures to control erosion and other pollutants shall be in place before any construction work is initiated. These measures shall be properly constructed and maintained throughout the construction period.
- 2. Construct temporary silt fence as shown per plans.
- 3. All storm drain inlets that may receive runoff as a result of the construction work shall use an inlet filter device. Inlet filters shall remain until completion of construction work. Contractor shall periodically inspects inlet filters, especially during heavy rainfall, to ensure drainage through material is maintained.
- 4. At the end of the grading operation, existing storm drain inlets surrounding the project site shall be inspected and any accumulated sediment and debris found in the storm drain inlets shall be removed. Flushing into the storm drain is prohibited.
- 5. Good housekeeping shall be utilized to ensure protection of roadways from mud, dirt, and debris.
- 6. The Contractor shall ensure that all tires of construction vehicles are sufficiently cleaned off so that dirt or debris is not tracked off the construction site. Washing off tires with water will not be acceptable unless the runoff is contained and does not enter the storm drain system or onto the State's ROW.
- 7. The Contractor shall ensure that existing roadways used to access the project are cleaned of all debris, trash, dirt, mud, etc., throughout the work day.
- 8. The final lift of each day's work shall be compacted to prevent erosion of fill material.
- 9. Any dirt or grassed area disturbed shall be restored by seeded hydro-mulch. Contractor is to ensure grass is fully established.

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| KAUAI               | HAWAII | HWY-K-06-07 | 2007        | 7         | 31           |

|               |      |
|---------------|------|
| ORIGINAL PLAN | DATE |
| DESIGNED BY   | DATE |
| TRACED BY     | DATE |
| NOTE BOOK     | DATE |
| DESIGNED BY   | DATE |
| QUANTITIES BY | DATE |
| CHECKED BY    | DATE |

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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

WATER POLLUTION AND  
EROSION CONTROL NOTES

KAUMUALII HIGHWAY & RICE STREET,  
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