

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-056-1(51)	2008	ADD. 3	284

CONSTRUCTION NOTES:

GENERAL:

1. The project includes replacing the existing Plantation Bridge Deck with a Prefabricated Metal Bridge; constructing additional bridge spans on both the North and South sides of the existing bridge; constructing retaining walls; relocating utilities; widening the roadway from North Leho Drive to Kuamoo Road and adding a bike/pedestrian lane.
 2. Construction and restoration of all existing highway facilities within State highway right-of-way shall be done in accordance with all applicable sections of the current "Standard Specifications For Road and Bridge Construction, 2005", the Project Plans and Special Provisions.
 3. The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall tone for all utility lines before starting any work. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.
 4. Smooth riding connections shall be constructed at the limits of new road construction, including the beginning and end of project, connecting approaches, side streets and driveways as shown on the plans and/or as directed by the Engineer.
 5. All saw cutting and cleanup work shall be considered incidental to Roadway Excavation. The Contractor shall clean up any cuttings and shall not wash down material into the storm drain or sewer systems. Clean up shall be completed before road is open to traffic.
 6. All work specified in the contract but not listed separately in the proposal schedule shall be considered incidental to other various contract items and shall not be paid for separately.
 7. All work to remove temporary facilities by the Contractor shall be considered incidental to the various contract items in the proposal.
- a. Work performed before or after permitted hours.
 - b. Failure to maintain roadway surfaces in a smooth and safe condition.
 - c. Failure to clean up construction debris generated from project work.
 - d. Failure to provide proper traffic control.
 - e. Failure to replace damaged pavement markings and signs.
- Any revocation of the permit shall be at the Contractor's expense and no additional cost to the State and no additional contract time will be added.
11. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting paving operations.
 12. The Contractor shall notify the Fire and Police Departments, Ambulance and Kauai Bus, seven (7) days prior to any paving operations.
 13. The Contractor shall inform the Engineer at least two (2) days prior to closing any lanes or performing any trench restoration work. This work shall include any backfilling and compacting of trench material; placing and compacting of base course material; and any paving operations. Any trench restoration work performed by the Contractor that is not witnessed by a State representative will be required to be removed and restored with a State representative present. All restoration work will be at the Contractor's expense.
 14. In the event any artifacts or human remains are uncovered during construction operations, the Contractor shall immediately suspend work and notify the Kauai Police Department, the State Department of Land and Natural Resources—Historic Preservation Division (742-7033), and the Engineer.
- PRECAUTION:
15. The Contractor shall exercise care to minimize damages to existing highway improvements. All damages shall be repaired by the Contractor, at his expense, to the satisfaction of the Engineer.

PRECAUTION:

15. *The Contractor shall exercise care to minimize damages to existing highway improvements. All damages shall be repaired by the Contractor, at his expense, to the satisfaction of the Engineer.*
16. *The Contractor shall exercise care when performing work in or adjacent to the State highway right-of-way. Damages to the existing facilities shall be immediately reported to the respective utility company, and/or County/State agency. The repair work shall be done at the Contractor's expense.*
17. *Contractor shall take proper precautions when working near overhead lines.*

WORK EXECUTION:

18. No material and/or equipment shall be stockpiled or otherwise stored within the Highway Right-of-Way except at locations designated in writing and approved by the Engineer.

19. The Contractor shall reference to the satisfaction of the Engineer, all existing traffic signs, posts & pavement markings prior to the commencement of construction. The Contractor shall replace or repair all traffic signs, posts & pavement markings disturbed by his activities, unless directed otherwise by the Engineer or his representative.
20. All regulatory, guide and construction signs and barricades shall be of high intensity reflective sheeting. Portable steel barriers shall be reflectorized in accordance to the "Standard Plans", State of Hawaii, Department of Transportation.
21. All traffic control devices including: signs, barricades, vertical panels, drums, warning lights, arrow boards, changeable message signs, cones and tubular markers shall conform to the requirements of American Traffic Safety Services Association (ATSSA) "Quality Standard for Work Zone Traffic Control Devices", dated 2003, and the MUTCD. Compliance with these requirements shall be as described in Section 645 – Work Zone Traffic Control.
22. The Contractor shall provide, install, and maintain all necessary signs, lights, flares, markers, barricades, cones, and other protective facilities, and shall take all necessary precautions for the protection, convenience, and safety of public traffic. All such protective facilities and precautions to be taken shall conform with the "Administrative Rules of Hawaii Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways", adopted by the Director of Transportation, and the current U.S. Federal Highways Administration "Manual on Uniform Traffic Control Devices, Part VI – Standards and Guides for Traffic Controls for Street and Highway Construction, Maintenance, Utility and Incident Management Operations".
23. All construction signs shall be left in place until all construction items have been completed unless otherwise directed by the Engineer. The Contractor shall obtain prior approval from the Engineer to remove construction signs.
24. After the project is completed, the Contractor shall restore grades and ground cover within the project limits to a condition equal or better than the existing condition prior to construction.

ACCESS:

25. Existing Pedestrian routes shall be maintained in an ADA accessible condition or an alternate route shall be provided around the construction area.
26. Where pedestrian walkways exist, they shall be maintained in a safe and ADA passable condition, or other facilities for pedestrians shall be provided. Passages between walkways at intersections shall likewise be provided.
27. Driveways shall be kept open unless the owners of the properties using these rights-of-way are otherwise provided for satisfactorily.
28. The minimum clearance around fire hydrants, utility poles, light standard, or any other obstruction shall be 3'-0".

29. A minimum of 36" clear width and 80" headroom clearance height shall be maintained along sidewalk and potential walkways.
 30. The Contractor shall provide for access to and from all existing side streets, sidewalks, ADA access routes complying w/ ADAAG 4.3, driveways and adjacent properties at all times.
- PHASING:
31. Contractor shall work phases in numerical order, starting at Phase 1.
 32. Finish all work in phase before proceeding to the next phase. Inform Engineer that next phase is ready to start. Engineer will determine if next phase may start by providing Contractor with written agreement that the next phase can start.
 33. Contractor may not start next phase until Engineer agrees phase is complete and next phase may start.

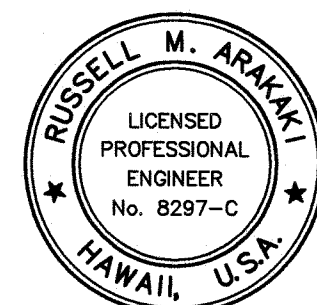
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33. Contractor may not start next phase until Engineer agrees phase is complete and next phase may start.

ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
NOTE BOOK	DRAWN BY _____	_____
	TRACED BY _____	_____
	DESIGNED BY _____	_____
	QUANTITIES BY _____	_____
	CHECKED BY _____	_____
No. _____		

NOTIFICATION:

8. *All necessary permits for work within the jurisdiction of the County of Kauai shall be obtained by the Contractor at his own cost.*
9. *The Contractor shall obtain a Permit to Perform Work Upon State Highways from the Kauai District Engineer, State Highways, at 1720 Haleukana Street, prior to commencement of work within the State's highway right-of-way.*



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Russell M. Chakrabarti
ParEn, Inc.
dba PARK ENGINEERING
LICENSE EXPIRES 4-30-10

8/07/08 Revised Note 2.

<i>DATE</i>	<i>REVISION</i>
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**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION**

CONSTRUCTION NOTES

KUHIO HIGHWAY, SHORT TERM IMPROVEMENTS

Wailua Cane Haul Bridge Widening

Fed. Aid Project No. BR-056-1(51)

Scale: None Date: MAY 2008

SHEET No. 1 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-056-1(51)	2008	4	284

CONSTRUCTION NOTES:

TRENCHING:

34. Prior to commencing trench excavation work, the Contractor shall take a profile along the centerline of the proposed utility trench. This information shall be used in the verification of restoring the roadway to its original condition. A copy of the profile shall be submitted to the Engineer.
35. Unless otherwise noted, no trench shall be opened more than 300 feet in advance of installed and tested pipeline and/or ductline.
36. The Contractor shall provide an adequate and safe non-skid bridging material, including shoring, over trenches in pavement areas. The bridging shall be able to support all types of vehicular traffic.
37. The Contractor will make every effort to minimize the use and the duration of use of steel plates. All steel plates shall have a non-skid surface. Steel plates shall be maintained, including non-skid surface. Steel plates shall be installed in such a manner that no objectionable noise is produced by the steel plate when vehicles go over it. The State may require the backfilling of patches of trenches due to the excessive usage of steel plates.
38. Temporary cold mix trench patches will be permitted in any given area for a maximum duration of two weeks, and shall be a minimum of 2-inches thick. All temporary patches shall be placed over properly placed and compacted backfill and base course layers. The Contractor shall be responsible for maintaining all temporary patches and to make repairs to unsatisfactory patches within 24 hours.
39. At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of traffic.

DRAINAGE:

40. Existing drainage systems will be functional at all times during construction. The Contractor shall furnish materials, equipment, labor, tools and incidentals necessary to accomplish maintenance and control of flow. The cost shall be incidental to the various Contract Items.
41. The Contractor shall verify the locations of all existing culverts and utilities in the field. Any existing culverts and utilities damaged during construction shall be repaired or replaced by the Contractor at his own expense.
42. Only non-pneumatic type of drill as accepted by the Engineer will be permitted for drilling holes in concrete. Where indicated on Plans, the approximate diameter of drilled holes for installation of dowels shall be 7/8"Ø, and voids after installing dowels shall be filled with non-gaseous, non-shrink epoxy grout. Locate existing rebars before drilling and drill holes so they miss the existing rebars.
43. The existing drainage system and longitudinal drainage along the highway will be maintained and be functional at all times during construction. The Contractor shall furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to the various contract items.

44. The Contractor shall remove all silt and debris deposited in drainage facilities, on roadways and in other areas resulting from his work. The costs incurred for any necessary remedial action by the Engineer shall be payable by the Contractor.

NOTES FOR CONSTRUCTION WITHIN COUNTY RIGHT-OF-WAY:

- All work shall be done in accordance with the County of Kauai Department of Public Works "Standard Details for Public Works Construction", dated Sept. 1984, and "Hawaii Standard Specifications for Road and Bridge Construction, 2005". If there is any conflict between the documents, the more beneficial result shall be used. The State Engineer will determine which is the most beneficial.
- The Contractor shall verify the location of all existing utilities whether shown on the plans or not, and shall be responsible for the repair or replacement of same in the event of damages due to his construction activities. The Contractor shall coordinate his work with the respective utility companies.
- The Contractor shall provide and install traffic control devices in conformance with the latest "Manual on Uniform Traffic Control Devices for Streets and Highways", the latest AASHTO standard specifications for structural supports for highway signs, luminaries and traffic signals and its subsequent interim specifications with interim supplements and modifications by the Highways Division, Department of Transportation, State of Hawaii, and as directed by the Chief Engineer and accepted by the State D.O.T.
- The Contractor shall notify the Dept. of Public Works and the State D.O.T. 48 hours before the commencement of any utility work to schedule a field review and secure approval of the proposed utility line location within the County right-of-way.
- The proposed utility line location shall be laid out in the field prior to the conducting of the field review by the Dept. of Public Works and the State D.O.T.
- Field adjustments that are accepted by the State D.O.T. shall be made as directed by the Dept. of Public Works prior to the commencement of any utility line work.
- The Contractor shall apply and pay for any necessary construction permits prior to the start of construction. A road permit shall be obtained from the Dept. of Public Works.
- The Contractor shall provide at least one (1) clear lane for traffic movement at all times. Two (2) lanes shall be provided during non-work hours.
- The existing pavement shall be saw-cut prior to starting any trenching work.
- Any pavement outside the contract zone limits damaged as a result of construction operations shall be restored to its original or better condition as directed by the Chief Engineer and accepted by the State D.O.T.
- A temporary cold mix patch shall be applied immediately upon completion of backfilling operation and shall be maintained until a permanent patch is authorized by the Dept. of Public Works.
- No material, except for the trench excavated material, shall be stockpiled closer than six (6) feet from the edge of pavement.
- No construction equipment shall be parked within the road right-of-way in such a manner that the equipment will obstruct the normal movement and sight distance of the driving motorist, except at locations designated in writing and approved by the Chief Engineer and accepted by the State D.O.T.
- During non-working hours, all signs which are not applicable to construction activity, such as "Men Working" or "Flagman Ahead", shall be covered or laid down. However, all signs necessary for the safety of the public shall be maintained.
- Any pavement markings, structures, and appurtenances damaged by the Contractor shall be replaced or repaired to the satisfaction of the Dept. of Public Works and the State D.O.T.
- During non-working hours, all trenches shall be covered with a safe non-skid bridging material and all lanes shall be open to traffic.
- The permittee shall maintain, to the satisfaction of the Dept. of Public Works and the State D.O.T. the area worked within the County right-of-way, including any repairs to pavement and shoulder damaged as a result of the installation work, for a period of one (1) year from the date of final inspection as noted by the Dept. of Public Works and the State D.O.T. The permittee shall undertake repairs expeditiously whenever directed by the Chief Engineer and the State D.O.T. during the maintenance period.
- All work including repair of damaged pavement and shoulder shall be inspected and approved by the Dept. of Public Works and accepted by the State D.O.T. All unapproved work shall shall be considered unacceptable and shall be reworked and corrected as directed by the Dept. of Public Works, at the Contractor's expense.
- Damaged shoulders shall be restored to a condition equal to or better than existing condition.
- The Contractor shall conduct his operations so as to offer the least possible obstruction and inconvenience to the public and he shall have under construction no greater length or amount of work that he can prosecute properly with due regards to the rights of the public.

21. The Contractor shall retain the services of a Geotechnical Engineer, licensed in the State of Hawaii, for quality control. Certification from the licensed Geotechnical Engineer shall be submitted to the Dept. of Public Works at the completion of the project. Geotechnical Engineer shall certify that the completed construction work meets the requirements of the "Standard Specifications". Geotechnical Engineer shall also submit test results as requested by the Dept. of Public Works.
22. See Subsection 108.20 – Rental Fees for Use of Wailua Beach Park of the Special Provisions for additional requirements.

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	



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Russell M. Arakaki
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d/b/a PARK ENGINEERING
LICENSE EXPIRES 4-30-10

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
CONSTRUCTION NOTES	
KUHO HIGHWAY, SHORT TERM IMPROVEMENTS	
Wailua Cane Haul Bridge Widening	
Fed. Aid Project No. BR-056-1(51)	
Scale: None	Date: MAY 2008
SHEET No. 2 OF 10 SHEETS	

WATER POLLUTION AND EROSION CONTROL NOTES:

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-056-1(51)	2008	5	284

A. GENERAL:

- 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. Sections 209 and 620 describe 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.
- 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.
- The Contractor shall also 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.
- The Engineer may assess liquidated damages of up to \$27,500 for non-compliance of each BMP requirement and each requirement stated in Sections 209 and 620, for every day of non-compliance. There is no maximum limit on the amount assessed per day.
- 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.
- Install a rain gage prior to any field work including the installation of any site-specific best management practices (BMPs). 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 BMPs are in place and inspected. Take rain gage reading every day of the year at approximately the same time. Report reading together with submittal every week along with BMP inspection report required below.

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 regulation 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:

- All control measures shall be inspected at least once each week and following any rainfall event of 0.5 inches or greater. Submit a copy of the inspection report to the Engineer, no later than 1 week from date of inspection.

- All measures shall be maintained in good working order. If repair is necessary, it shall be initiated within 24 hours after the inspection.
- Built-up sediment shall be removed from silt fence when it has reached one-third the height of the fence.
- 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.
- Temporary and permanent seeding and planting shall be inspected for bare spots, washouts and healthy growth.
- 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.
- 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 shall be 50 feet. Minimum width shall be 30 feet. Minimum depth shall be 6 inches and underlain with geotextile fabric. Remove any mud, cold planed materials, dirt, material or rock tracked onto the pavement from the site immediately. Dump trucks hauling material from the construction site shall be covered with a tarpaulin.
- 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.
- 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.
- The Contractor shall contain, remove and dispose of slurry generated from saw cutting of pavement in accordance with approved BMP practices. 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

- 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	Fertilizers
Detergents	Petroleum Based Products
Paints (enamel and latex)	Cleaning Solvents
Metal Studs	Wood
Tar	Masonry Block

- 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.

- 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.

- Products shall be kept in their original containers with the original manufacturer's label.

- Substances shall not be mixed with one another unless recommended by the manufacturer.



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LICENSE EXPIRES 4-30-10

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
WATER POLLUTION & EROSION CONTROL NOTES	
KUHI0 HIGHWAY, SHORT TERM IMPROVEMENTS	
Wailua Cane Haul Bridge Widening	
Fed. Aid Project No. BR-056-1(51)	
Scale: None	Date: MAY 2008
SHEET No. 3 OF 10 SHEETS	

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QUANTITIES BY	
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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WATER POLLUTION AND EROSION CONTROL NOTES: (Cont.)

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES: (Cont.)

- 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.

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 drum wash water only at a designated site. Water shall not be discharged in the highway drainage system or waters of the United States or directly or indirectly on the ground. 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

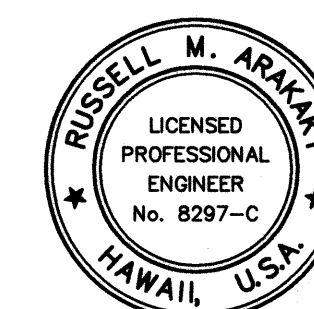
- a. *A spill prevention plan shall be posted to include measures to prevent and clean up each spill.*
- b. *The Contractor shall be the spill prevention and cleanup coordinator. The Contractor shall designate at least three site personnel who shall receive spill prevention and cleanup training. These 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:

1. *A National Pollutant Discharge Elimination System (NPDES) Permit is required for Construction Activities of one acre or more, the Contractor shall submit to the Engineer six sets of the Water Pollution and Erosion Control Submittals as detailed in Subsection 209.03 of the specifications.*
2. *The Contractor shall comply with all applicable State and Federal Permit conditions. Permits may include but are not limited to the following:*
 - a. *NPDES Permit for Construction Activities*
 - b. *NPDES Permit for Construction Dewatering*
 - c. *NPDES Permit for Hydrotesting Waters*

ORIGINAL PLAN	SURVEY PLOTTED BY _____ DATE _____
NOTE BOOK	
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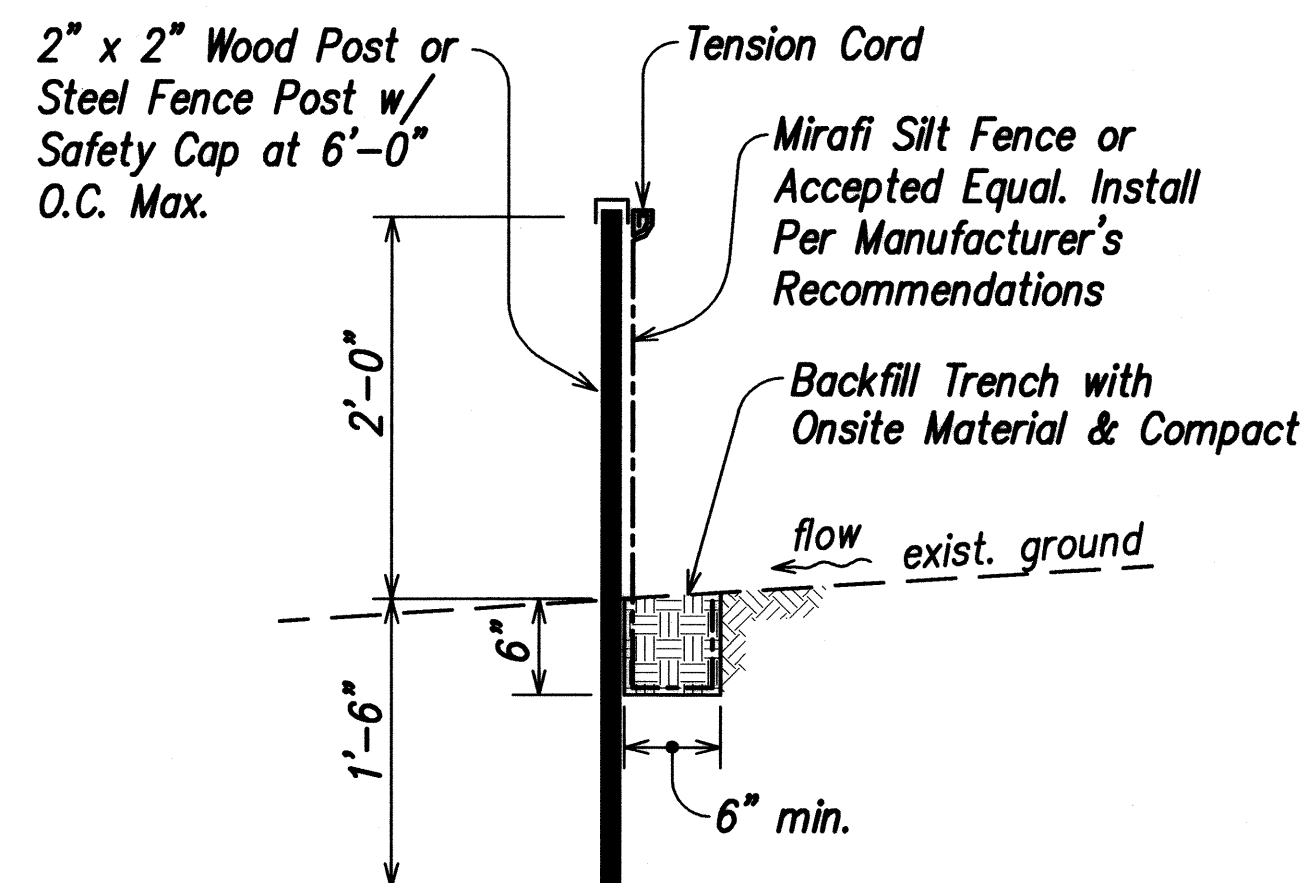
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**WATER POLLUTION &
EROSION CONTROL NOTES**
KUHIO HIGHWAY, SHORT TERM IMPROVEMENTS
Wailua Cane Haul Bridge Widening
Fed. Aid Project No. BR-056-1(51)
Scale: None Date: MAY 2008
SHEET No. 4 OF 10 SHEETS

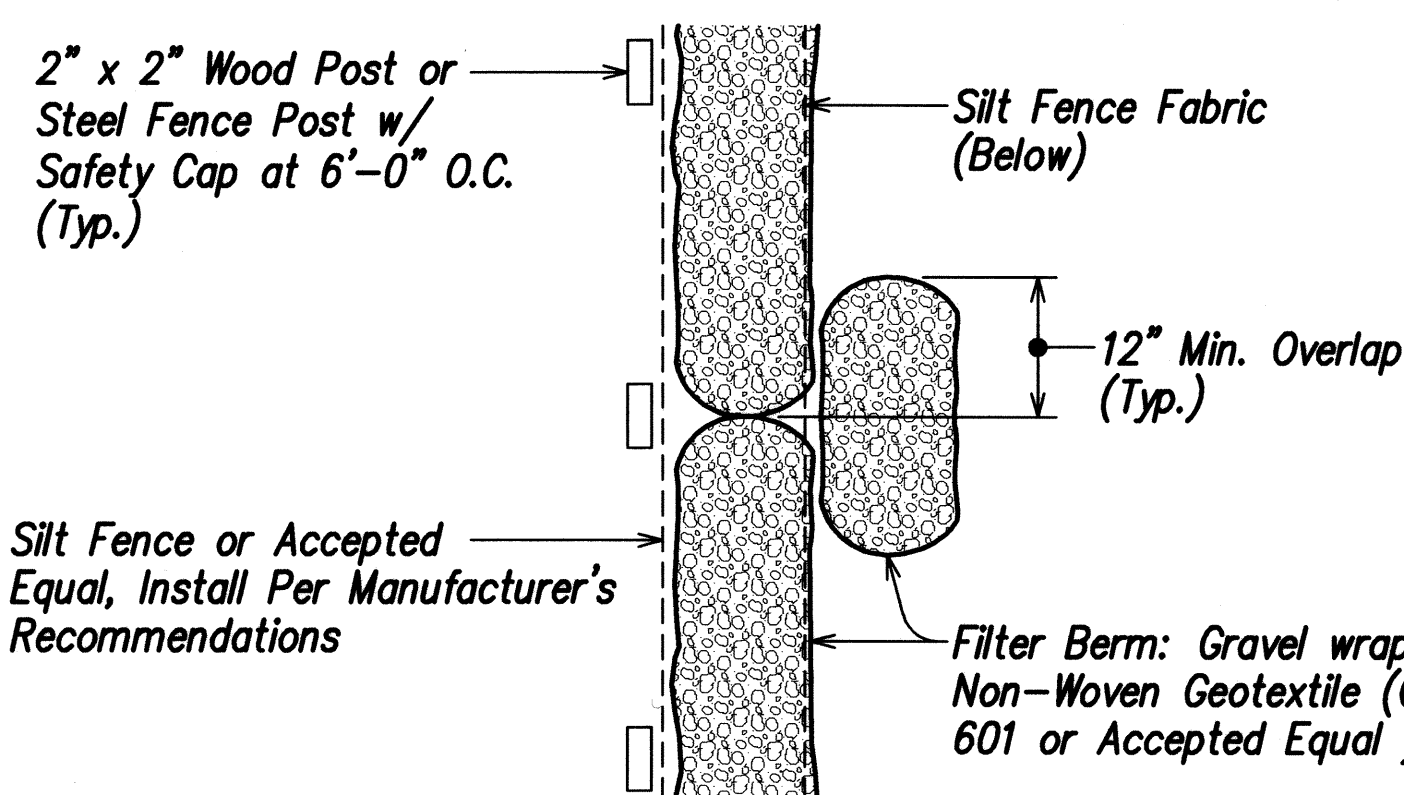
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BEST MANAGEMENT PRACTICES (BMP's) NOTES:

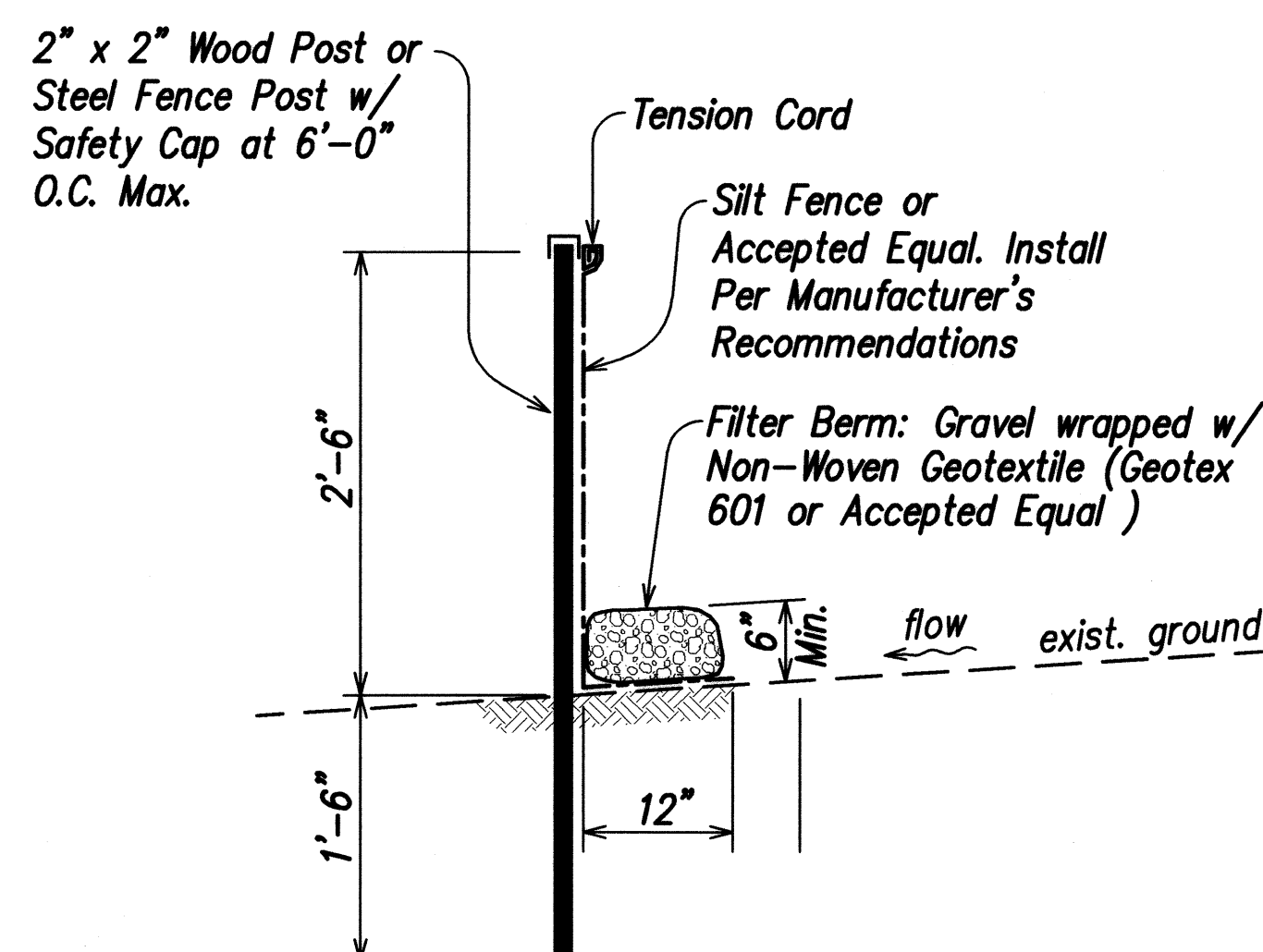
- The Contractor shall install the erosion control measures at the locations shown, or as directed by the Engineer, as soon practicable.
- The construction ingress and egress shall be constructed with 8" thick crushed rock (#2 coarse) layer over geotextile fabric (Geotex 250ST or accepted equal) to the dimensions and at the locations shown on the phasing plans. Should the Contractor require an ingress and egress other than what is shown on the plans, the Contractor shall be responsible to obtain all necessary approvals, including relocating the crushed rock area as required.
- Slopes and exposed areas shall be sodded or planted as soon as final grades have been established. Planting shall not be delayed until all grading has been completed. Grading to final grade shall be continuous and any area within which work has been interrupted or delayed shall be planted.
- All Best Management Practices (BMP's) shall not be removed until all permanent erosion control controls are in place and established.
- The Contractor shall cover the openings to all existing and proposed storm drain inlets with a filter system until permanent ground cover is established. Maintenance of inlet filters by the Contractor shall be included for the duration of the project.
- At the ending of grading operations, existing storm drain inlets and manholes surrounding the project site shall be inspected and any accumulated sediment and debris found in the drain structures shall be removed. Flushing into the inlets and manholes is prohibited.



SECTION (FOR NON-ROCK AREAS)



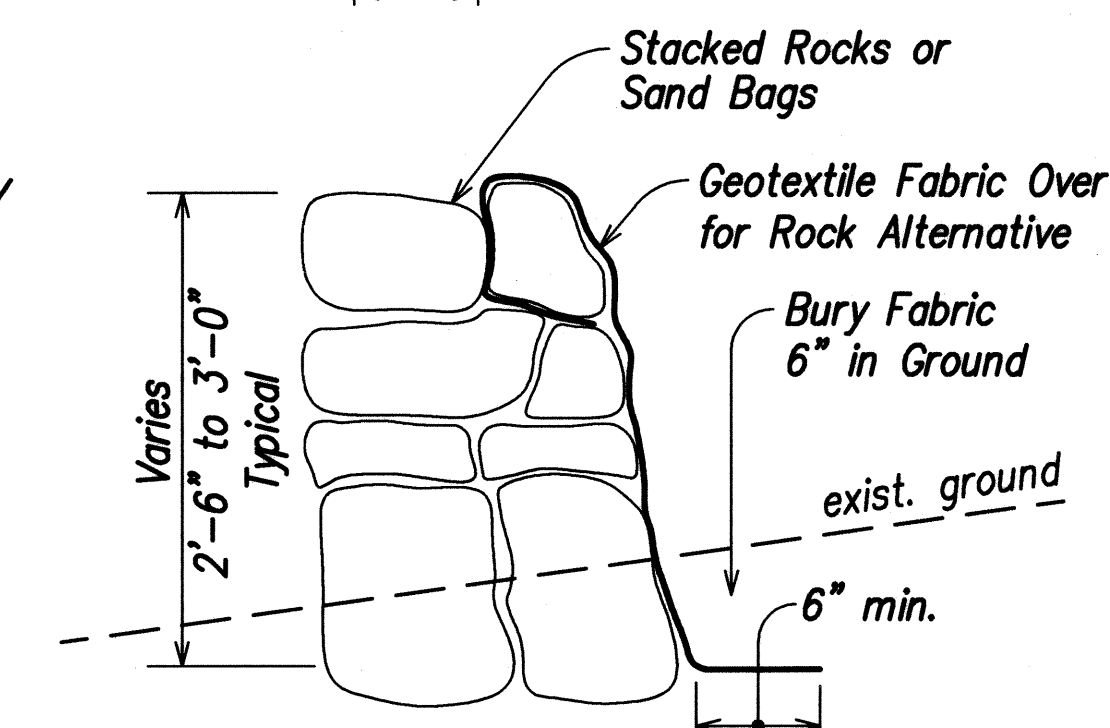
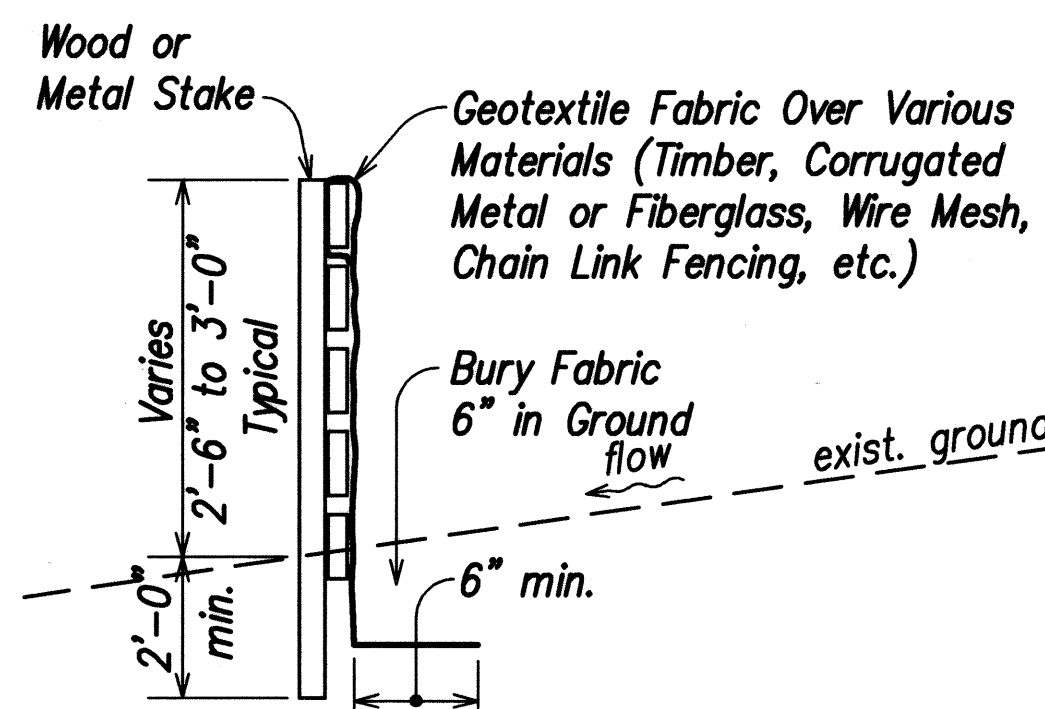
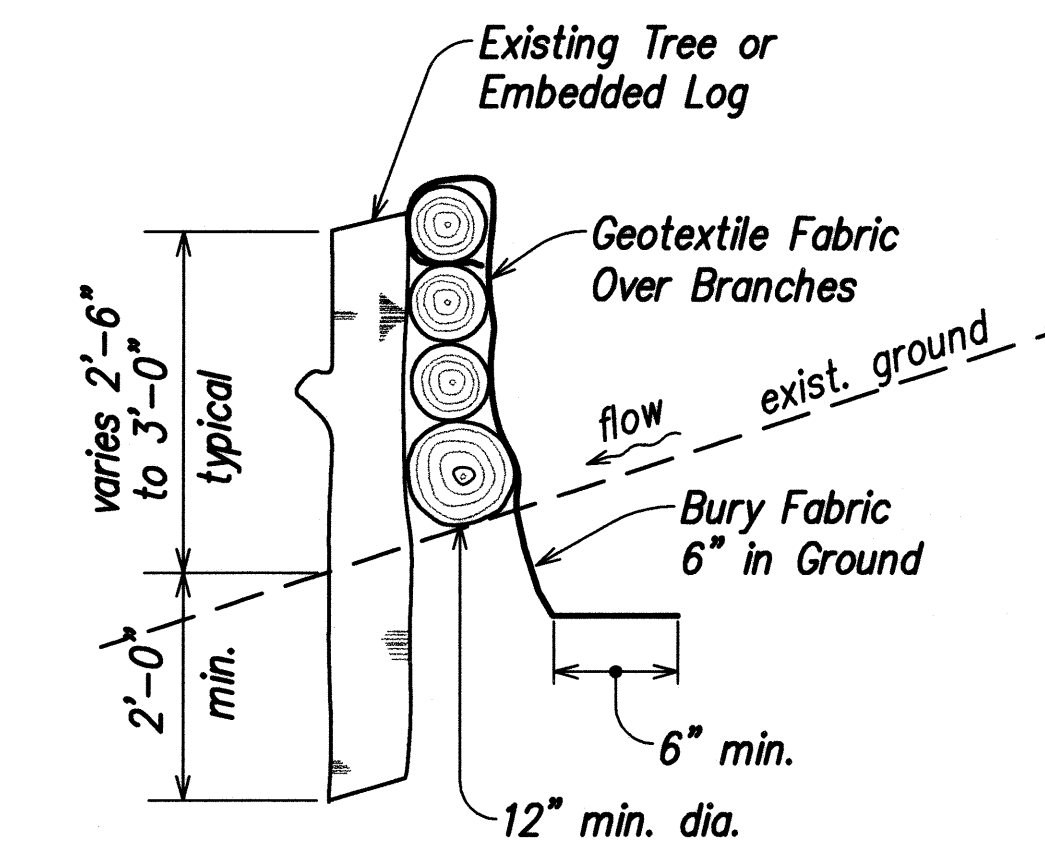
PLAN (FOR ROCK AREAS ONLY)



SECTION (FOR ROCK AREAS ONLY)

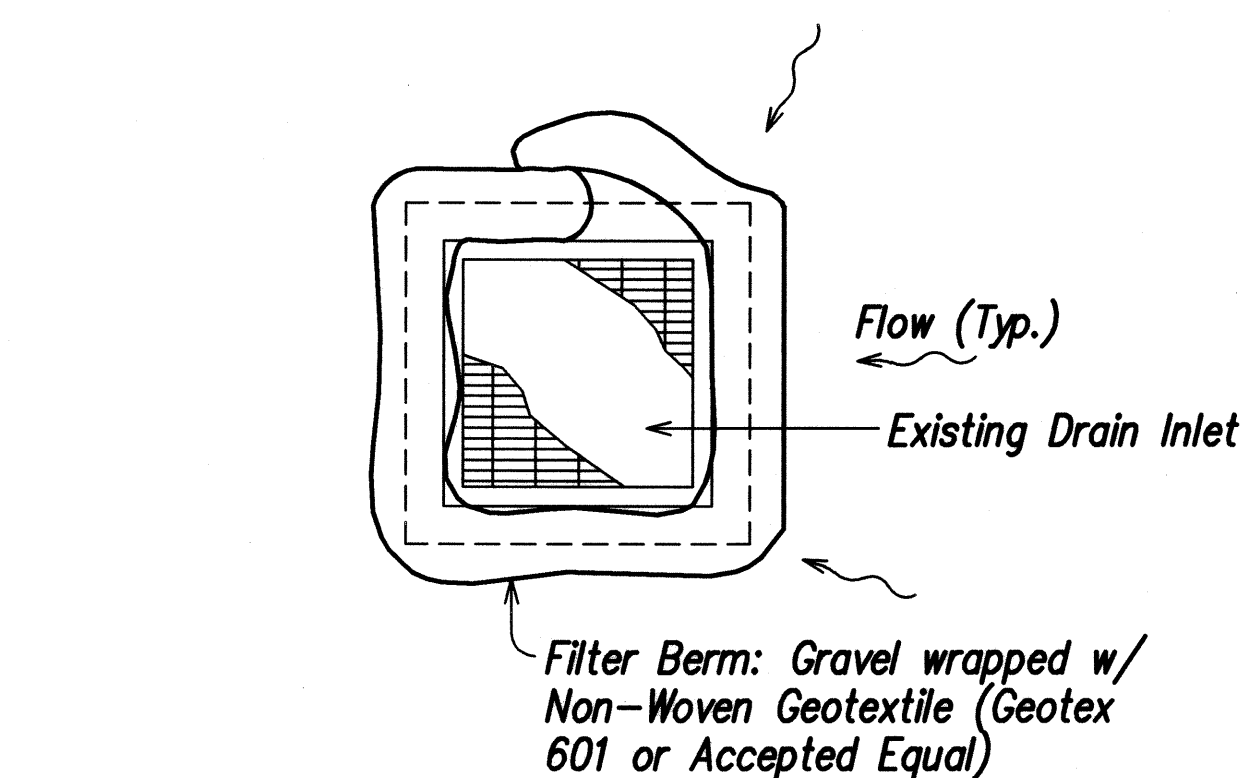
TYPICAL SILT FENCE DETAIL

NOT TO SCALE

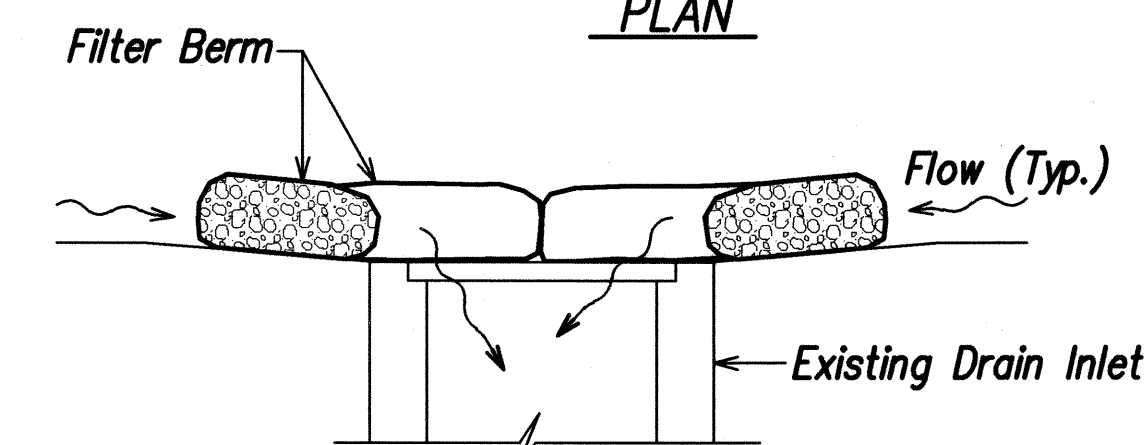


SEDIMENT CONTROL DEVICES
AND/OR ENERGY DISSIPATOR

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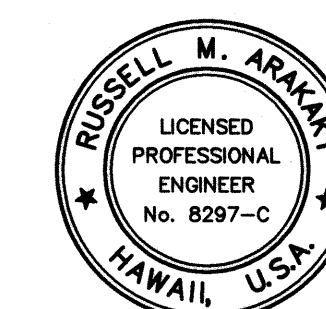
PLAN



SECTION

TYPICAL FILTER BERM DETAIL

NOT TO SCALE



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Russell M. Araki
Park Engineering, Inc.
also PARK ENGINEERING
LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
EROSION CONTROL
NOTES & DETAILS
KUHIO HIGHWAY, SHORT TERM IMPROVEMENTS
Wailua Cane Haul Bridge Widening
Fed. Aid Project No. BR-056-1(51)
Scale: As Noted Date: MAY 2008
SHEET No. 5 OF 10 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

GRADING NOTES:

1. All grading work shall be done in accordance with the requirements of Article 7 of the Grading Ordinance, 1996 as amended, of the County of Kauai.
2. The Contractor, at his own expense, shall keep the project area and surrounding area free from dust nuisance. The work shall be in conformance with the Air Pollution Control Standards contained in the Hawaii Administrative Rules, Chapter 11-60, "Air Pollution Control".
3. All grading operations shall be performed in conformance with the applicable provisions of the Water Quality and Water Pollution Control Standards contained in Hawaii Administrative Rules, Chapter 11-54, "Water Quality Standards" and Chapter 11-55, "Water Pollution Control" and the NPDES permit for the project.
4. The State shall be informed of the location of the borrow/disposal site for the project when the application for grading permit is made. The borrow/disposal site must also fulfill the requirements of the grading ordinance.
5. After major excavations and installations of abutments, channels and embankments, the areas of exposed ground shall be immediately hydromulched to prevent erosion.
6. No Contractor shall perform any grading operation so as to cause falling rock, soil or debris in any form to fall, slide or flow onto to adjoining properties, streets or natural watercourses. Should such violations occur, the Contractor may be cited and the Contractor shall immediately make all remedial actions necessary.
7. Adequate provisions shall be made to prevent surface waters from damaging the cut face of an excavation or the sloped surfaces of a fill. Furthermore, adequate provisions shall be made to prevent sediment-laden runoff from leaving the site.
8. All slopes and exposed areas shall be sodded or planted as soon as final grades have been established. Planting shall not be delayed until all grading work has been completed. Grading to final grade shall be continuous, and any area within which work has been interrupted or delayed shall be planted.
9. Fill on slopes steeper than 5:1 shall be benched.
10. No grading work shall be done on Saturdays, Sundays and holidays at any time without prior notice to the Engineer.
11. The limits of the area to be graded shall be flagged by the contractor before the commencement of the grading work.
12. Where applicable and feasible, the measures to control erosion and other pollutants shall be in place before any earth moving phase of the grading is initiated.
13. Temporary erosion controls shall not be removed before permanent erosion controls are in place and established.
14. Temporary erosion control procedures shall be submitted for approval prior to application for grading permit.
15. If the grading work involves contaminated soil, then all grading work shall be done in conformance with applicable State and Federal requirements.
16. Non-compliance to any of the above requirements shall mean immediate suspension of all work, and remedial work should commence immediately. All costs incurred shall be billed to the violator. Furthermore, violators shall be subjected to administrative, civil and/or criminal penalties.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-056-1(51)	2008	8	284

ORIGINAL PLAN	SURVEY PLATTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	DESIGNED BY	
	CHECKED BY	



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

Russell M. Araki
PerEn, Inc.
480 PARK ENGINEERING
LICENSE EXPIRES 4-30-10

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
GRADING NOTES	
KUHI0 HIGHWAY, SHORT TERM IMPROVEMENTS	
Wailua Cane Haul Bridge Widening	
Fed. Aid Project No. BR-056-1(51)	
Scale: None	Date: MAY 2008
SHEET No. 6 OF 10 SHEETS	

WATER NOTES:

1. Unless otherwise specified, all materials and construction of water facilities and appurtenances shall be in accordance with the "Water System Standards", 2002, as adopted by the Department of Water, County of Kauai, including all subsequent amendments and additions.
2. The Contractor shall arrange a pre-construction conference at least 10 days before construction and shall notify the Dept. of Water at least 3 working days prior to the start of construction.
3. The Contractor shall submit the name and telephone number of its authorized superintendent on the job. And the names and telephone numbers of at least three (3) persons to contact in case of emergency during non-working hours.
4. The Contractor shall notify the Dept. of Water at least 24 hours prior to any trenching, pipe laying, backfilling, testing or chlorination to insure that inspectional services will be available.
5. All materials, pipe, pipe lubricants, paints, sealants, form oil, concrete admixtures, etc., in direct contact with the potable water shall have National Sanitation Foundation (NSF) approvals. The Contractor shall submit these approvals to the Dept. of Water for review and approval prior to its application.
6. The location of existing water mains and appurtenances shown on the plans are approximate only. The Contractor shall verify the exact locations in the field. Excavation around any existing water main shall be done by hand.
7. The Contractor shall provide unobstructed access to existing fire hydrants, valves and water meters at all times.
8. The Contractor shall secure all excavations in accordance with OSHA regulations.
9. There shall be no physical connection between a public or private potable water system and a non-potable water system, sewer, or appurtenance thereto which could permit the passage of any sewage or polluted water into the potable water supply.
10. Trench excavation, backfilling in lifts, and repaving shall conform to the "Hawaii Standard Specifications for Road, Bridge, and Public Works Construction, 2005".
11. Warning tape shall be in accordance with Division 200, Section 212.08 of the "Water System Standards" the warning tape shall be four mil thick, non-metallic, acid and alkali resistant polyethylene and 6-inches wide with minimum strength of 1,750 psi lengthwise and 1,500 psi crosswise. Tape color shall be "Safety Precaution Blue" and shall bear a continuous printed inscription "Caution Water Line Buried Below". Inscription shall be 2-inches high, black text.
12. All fire hydrants shall receive a minimum SSPC SP3 surface preparation and coated in accordance with Division 200, Section 206.01 of the "Water System Standards".

13. Unless otherwise directed, prior to the connection of any pipeline to the existing main, the pipeline installed shall be cleaned, pressure tested, chlorinated, flushed, and sampled in accordance with Divison 300, Sections 302.27 to 302.29 of the "Water System Standards". Water samples shall be analyzed by the MF Method on M-Endo Agar and also tested for HPC.
14. Polyurethane foam "pigs" shall be "pushed" through the length of the installed pipeline using pressurized water.
15. All connections shall be scheduled in coordination with the Department of Water.
 - A. An advance deposit is required for operating valves, flushing lines and notifying consumers affected by a water shutdown during connections. The Contractor will be charged the actual cost. (Deposits and fees waived for Department of Water contracts.)
 - B. The Contractor shall place the deposit prior to scheduling the connection date.
 - C. Connections shall be scheduled on Tuesdays through Thursdays, no connections shall be scheduled on Mondays, Fridays, Weekends, and holidays.
 - D. All materials shall be on hand and approved by the Engineer prior to scheduling the connection date.
 - E. Pumps used to de-water the connection area shall be operated in the presence of the Engineer prior to scheduling the connection date.
 - F. All connections shall be performed in the presence of the Engineer.
16. In order to prevent damage to the polyethylene encasement from excessive handling, the polywrap shall be installed around the barrel of the ductile iron pipe at its final location along the trenchline. The polyethylene encased pipe shall be lifted using a fabric type sling or a suitably padded cable or chain to prevent damage to the polyethylene.
17. The Contractor shall take all necessary compaction tests while the waterline trench is being backfilled and while the subbase/basecourse is being placed. If the test results indicate that additional compaction is required, the corrective work shall be completed before any additional trench excavation or placing of subbase/basecourse is allowed.

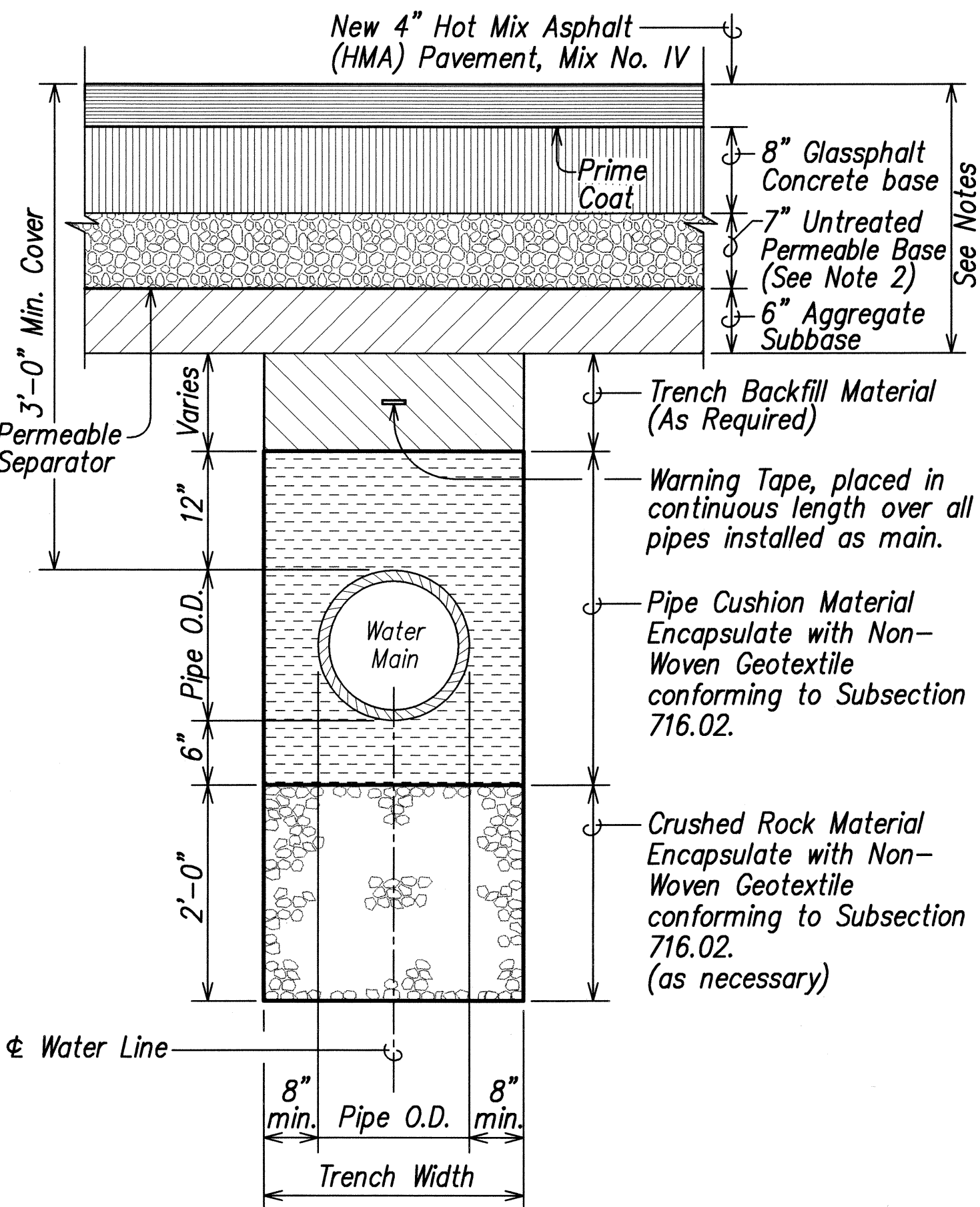
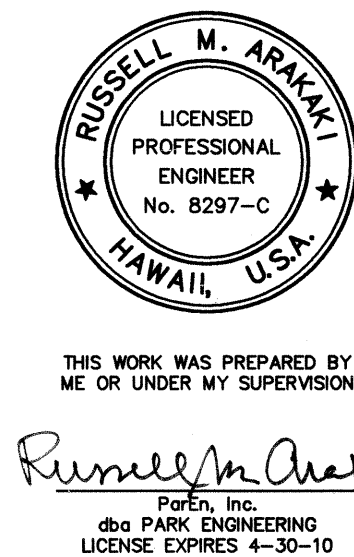
The Contractor shall retain the services of a registered Geotechnical Engineer for quality control. The compaction test results shall be certified by the Geotechnical Engineer and submitted to the Department of Water, State Highway Division for work done within State r/w and the Dept. of Public Works for work done within County r/w. The Geotechnical Engineer shall certify that the compaction results meet the requirements of the current "Standard Specifications For Road and Bridge Construction, 2005".

18. The Contractor shall connect all existing consumer piping to the new service laterals. The Department of Water will transfer the existing water meters only.
19. All fittings shall be mechanical joint (MJ) at each end unless otherwise noted.
20. The Contractor shall obtain all applicable Department of Health permits prior to the start of construction. Permits include, but are not limited to, National Pollution Discharge Elimination System (NPDES) permits for storm water, hydrostatic test, dewatering, and for construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area.

The Contractor shall be responsible for the proper disposal of storm water discharges and effluent associated with construction activities including hydrotesting and disinfection operations, to safeguard public health and safety in accordance with applicable Department of Health requirements. All permits and licenses for storm water and construction water disposal, including all application, charges, fees, and taxes, are the responsibility of the Contractor.
21. Prior to commencing his operations, the Contractor shall contact the County of Kauai, Department of Water Operations Division (phone no. 245-5444) and make arrangements for the Department to "tone" and mark the existing water facilities located within the project limits, such as waterlines, valve boxes and manhole frame/ covers (including ones that may have been inadvertently paved over on previous resurfacing projects). If required, the tops of existing valve boxes and manhole frame/covers shall be adjusted to match the new finished grades noted on the construction plans.
22. If adjustment of valve boxes and manhole frame/covers are required, it shall be the Contractor's responsibility to offset and record the location of the valve boxes and manhole frame/covers as marked by the Department of Water for the purposes of adjusting to the new finish grade. The Contractor shall preserve all of their offset stakes marking locations of the valve boxes and manhole frame/covers. If offset stakes are damaged or lost, it shall be the Contractor's sole responsibility to survey and re-stake the locations of the valve boxes and manhole frame/covers at their expense.
23. Adjusting water meter boxes - If necessary, existing service lateral piping shall be adjusted to maintain a spacing of 6" from the centerline of the piping in the meter box to the bottom of the meter box cover. In new sidewalk areas, replace the Type "B" meter box & cover with Type "X" meter box & cover. The top of all water meter boxes shall be flush with the new sidewalk surface.

APPROVED:
Bruce Dwyer
for Manager and Chief Engineer
Dept. of Water, County of Kauai

5/16/08
Date



- Notes:**
1. A.C. Pavement and Base Course to match existing thickness or the minimum thicknesses shown, whichever is greater. Pavement structure shall be equal to or better than existing in thickness and quality.
 2. Permeable Base and Permeable Separator shall not be installed in areas where the existing adjacent pavement do not have a permeable base. Install aggregate subbase in lieu of untreated permeable base.

TYPICAL WATER LINE TRENCH DETAIL
Not to Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER NOTES

KUHIO HIGHWAY, SHORT TERM IMPROVEMENTS
Wailua Cane Haul Bridge Widening
Fed. Aid Project No. BR-056-1(51)

Scale: None Date: MAY 2008

SHEET No. 7 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-056-1(51)	2008	10	284

SEWER NOTES:

1. The effluent system shall conform to all requirements of the "Guidelines for the treatment and reuse of reclaimed water by the Department of Health, State of Hawaii, dated November 1993.

2. All new buried transmission piping in the reclaimed water system, be colored purple, suggested color pantone 512 or equal, and embossed or be integrally stamped/marked "RECLAIMED WATER – DO NOT DRINK", or be installed with a purple identification tape, or a purple polyethylene wrap, suggested color index 77742 Violet #16.

3. Valve boxes shall be the standard concrete or fiberglass box conforming with "WATER SYSTEM STANDARDS" Volume 1, State of Hawaii, 1985, and as amended. All valve covers on reclaimed water lines shall contain "RECLAIMED WATER" Inscriptions on the top surface.

4. All sewer lines and appurtenances shall conform to the "HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2005", and as amended; and "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, dated September 1984", and as amended, (Hereinafter STANDARD DETAILS).

5. All sewer lines and appurtenances shall follow the "SEWER DESIGN STANDARDS" of the County of Kauai dated June 1973, and as amended (Hereinafter SEWER STANDARDS).

6. The County Engineer or his duly authorized representative has the right to stop construction should any work be found contrary to the approved plans and specifications, or detrimental to public health, safety and interest.

7. All existing utilities, whether or not shown on the plans, if damaged during construction, shall be repaired by the Contractor and the Contractor shall pay all expenses.

8. Should the Contractor excavate beyond the trench payment width, as specified in the Standard Details, and such action results in a greater load to the pipe, the Contractor shall provide, at the Contractor's expense, a higher class of bedding material approved by the Engineer, that will withstand the added load.

9. Where the clearance between a sewer or effluent line and a new or existing water line is 18 inches or less, the sewer line shall be concrete jacketed in accordance with the sewer standards.

10. All backfill for effluent line trenches shall be compacted in eight (8) inch lifts to a minimum of 95% or its maximum density.

11. Prior to installation of flow meters and final acceptance, all effluent lines installed shall be flushed with reuse water and accumulated construction debris and other foreign materials shall be removed at Contractor's expense.
12. The Contractor shall maintain a "Job Site Copy" of the plans at the project site which will record any changes made in the field. "AS-BUILT" drawings shall be submitted as a condition for final acceptance of the project.

13. The wastewater treatment plant, pump stations and other operating functions of the sewer system must be in operation at all times. Construction work shall be coordinated with the County of Kauai, Department of Public Works to minimized interruptions in services, and to schedule power shut downs and generator operations. Overtime costs, if required by County employees to accommodate construction work, shall be chargeable to the Contractor.

14. The Contractor shall notify the Division of Wastewater Management seven (7) days prior to commencement of sewer work. In the event that any changes in the alignment or grade for the proposed sewers are required due to unforeseen conflict with the underground utilities, the Contractor shall immediately notify the Engineer and provide the Engineer the necessary data in order that the Engineer will be able to determine what changes in alignment or grade are required.

15. The underground pipes, cables or duct lines known to exist by the Engineer from his research of records are indicated on the plans. The Contractor shall verify the location and depth of the facilities and exercise proper care in excavating the area.

16. The Contractor shall verify the location and invert of all existing utilities whether shown or not shown as required.

17. The Contractor shall be responsible to maintain existing sewage flow conditions until final connection is made. The Contractor shall provide for all necessary by-pass, pumps, generators, etc. to insure a continuous uninterrupted flow of sewage at all times, This work shall be considered incidental to pipe and structure installation.

18. The Contractor shall be responsible and pay for all damages and costs levied by the State Department of Health (DOH) for any sewage spills caused as a result of construction activities. The Contractor shall notify the DOH, utilize appropriate sampling and analyzing procedures and any remediation action required by DOH. The Contractor shall also be responsible for any material cost and overtime labor cost generated by the County as a result of the spill.

19. Crushed rock cradle shall be required for all sewer line, and other construction as indicated on the construction plans except in areas of unsuitable soils. The Engineer shall utilize every effort to determine the ground conditions during design, however if unanticipated ground conditions occur during construction the Contractor shall notify the Engineer immediately to rectify the situation.
20. Construction and installation of sewer lines and appurtenances shall be performed in accordance with the requirements of the "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, DEPARTMENT OF PUBLIC WORKS, COUNTY OF KAUAI", dated September 1986, and as amended; and the "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, DEPARTMENT OF PUBLIC WORKS, COUNTY OF KAUAI", dated September 1984, and as amended.

21. Sewer pipe material shall be as indicated on the construction drawings.

22. Before construction commences, the Contractor shall schedule and document a pre-construction meeting with all agencies with utilities which may be affected by the work.

23. The Engineer will expend every effort to identify and locate existing utilities in the construction area; and the Contractor shall verify all existing utilities by hand exploration or other means which will not damage the existing utilities, and through direct contact with the utility companies, land owners, lessees, etc. The Contractor shall maintain a log of its personal contact with the aforementioned and submit a copy to the Engineer prior to start of construction.

24. The sewer system must be in operation at all times. Construction work shall be coordinated with the County of Kauai, Department of Public Works to minimize interruptions in services, and to schedule power shut downs and generator operations, overtime costs, if required shall be chargeable to the Contractor.

25. Utility lines running parallel to sewer or sewer effluent lines shall maintain a minimum horizontal separation of 24 inches measured for the outside face and vertical tangent of the pipe diameter. Utility lines crossing the sewer line shall maintain minimum vertical separation of 24 inches. For utility line other than water lines, the crossing conduit shall be identified with a plastic tape marker installed parallel to the utility conduit and be no less than 18 inches above the utility line and extend 4 feet beyond the sewer line on each side. (or some simile)

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ORIGINAL PLAN	
NOTE BOOK	
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ParEn, Inc.
480 PARK ENGINEERING
LICENSE EXPIRES 4-30-10

APPROVED:

Edward Pacheco
Chief, Division of Wastewater Management

EJZ/08
Date

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
SEWER NOTES	
KUHO HIGHWAY, SHORT TERM IMPROVEMENTS	
Wailua Cane Haul Bridge Widening	
Fed. Aid Project No. BR-056-1(51)	
Scale: None	Date: MAY 2008
SHEET No. 10 OF 10 SHEETS	

KAUAI ISLAND UTILITY COOPERATIVE (KIUC) CONSTRUCTION NOTES:

UNDERGROUND CONSTRUCTION NOTES AND REQUIREMENTS

1. These notes are not intended to be used in place of the service installation manual, please refer to service installation manual for all service issues.
2. Contractor shall contact Kauai Island Utility Cooperative (KIUC) Construction Coordinator/Inspector prior to start of work on KIUC facilities and for scheduling site inspections. [Westside: 246-2323; Eastside: 246-4343].
3. Contractor shall contact KIUC's Distribution Engineer @ 246-2373 for design approvals, standard detail drawings, and any items not addressed in these notes or drawings.
4. All Contractor entering KIUC facilities must be approved by KIUC and must have proper licensing and insurance coverage. Contact KIUC legal coordinator @ 335-6244 for details.
5. All trenches and pullboxes must be inspected by KIUC prior to backfilling and concrete-encasing operations. For dtailed trenching and backfilling requirements refer to KIUC's Service Installation Manual.
6. The Contractor shall provide a poly-line 200lb. test line or equivalent as a pulling wire in all 1 inch, 2 inch, 3 inch and 4 inch conduits. In 5 inch and 6 inch conduits, the contractor shall install NEPTCO WP1800 muletape as a pulling line.
7. All conduits, pullboxes, handholes & manholes shall be cleaned and free from objectionable materials. Conduit ends shall be adequately covered until the conductor is installed by the electric company. (covers shall be Carlon Plug with Pull Tab Series P258 equivalent or better.)
8. For all conduit other than services, refer to conduit schedule on drawings.
9. For all services where the conductor is 3/0 or less, the distance from KIUC's handhole and customer's meter is less than 125 feet, and not crossing any driveways or roads the conduit shall be 2 inch schedule 40 PVC. For services greater than 125 feet but less than 150 feet, contact KIUC planner for field verification and underground service requirements. Any deviations will require KIUC written line.
10. Primary and secondary conduits for new line extensions shall be schedule 40 PVC. (Carlton P&C duct type DB equivalent or better.) Under driveways and roadways, the conduits shall be encased in a minimum of 3 inches concrete jacket extending 12 inches outside the edge of that pavement.
11. Schedule 80 PVC conduit may be substituted for the concrete encased schedule 40 PVC for service conduit only crossing under unpaved private driveways and roadways from KIUC pole/handhole to customer's meter. If concrete driveway will be built over service conduit immediately after conduit is installed, then schedule 40 PVC may be used provided that it meets with Rule No. 21.
12. All primary and secondary conduits which are crossing state or country roadways shall be schedule 40 pvc encased in a minimum 3 inch concrete jacket, which shall extend a minimum of 12 inches outside of the edge of pavement.
13. Electrical supply ducts, when installed near communication cables, shall be separated from communication duct systems and buried communication cables or conductors by not less than 3 inches of concrete or 12 inches of earth when paralleling or crossing.
14. Chairs shall be installed and spaced at a maximum of 5 feet separation when concrete encasing conduits.
15. All conduits shall enter boxes at a 90 degree angle, perpendicular and flush to the wall with bell ends to prevent cable damage.
16. 90 degree conduit bends shall be factory-made with a minimum raidius of 3 feet in trench runs.
17. Conduit bends exceeding 90 degrees will not be accepted.
18. A 36 inch minimum horizontal clearance shall be maintained when running KIUC conduit parallel to water & sewer lines. If clearance is less than 36 inches, KIUC conduit shall be concrete encased.
19. No foreign pull boxes, handholes, manholes, concrete slabs,/ boxes, structures, etc. are to be installed over KIUC facilities with the exception of Hawaiian Telcom, CATV or waterline conduit crossings. Such crossing must be approved by KIUC's Service Assurance Department and KIUC conduit to be concrete encased. Concrete encasement must be minimum of 3 inch encasement and extend a minimum of 1 foot beyond crossing conduit or pipe.
20. Yellow marker tape to be placed 1 foot above electrical conduits in the trench during backfilling. (E-Z code WBT 6 inch wide 4 mill polyethylene Protect-A-Line warning tape NA-0708 "Electric Line" in yellow, equivalent or better).
21. Unless otherwise noted, the top of all conduits shall be at a depth of 24 inches.
22. All handholes, pullboxes, and manholes shall be Walker Industries type or approved equal. Contact KIUC prior to ordering underground boxes for vendor approval. Customer to submit manufacturer's shop drawings if substituting from Walker Industries type.
23. Typically, the top of all electrical utility boxes shall be 1 inch above finish grade, single phase transformer pads shall be 2 inches above finish grade, and three phase transformer pads shall be 4 inches above finish grade unless otherwise noted. (Special conditions may apply to sidewalks, roadways, etc. See specific location notation).
24. At no time shall cement mortar, wood, or any other material be used between pre-cast sections of KIUC pullboxes, handholes, or manholes. The permanent installation of wooden wedges to level or raise the precast sections shall not be permitted.
25. A minimum of 6 inches of #3 crushed rock backfill shall be placed loosely beneath the bottom section of handholes and pullboxes. Crushed rock or other foreign materials are not to be placed inside handholes and pullboxes.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-056-1(51)	2008	11	284

SURVEY PLOTTED BY	DATE
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Russell M. Araki
ParEn, Inc.
dba PARK ENGINEERING
LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KIUC NOTES

KUHIO HIGHWAY, SHORT TERM IMPROVEMENTS

Wailua Cane Haul Bridge Widening

Fed. Aid Project No. BR-056-1(51)

Scale: None Date: MAY 2008

SHEET No. 9 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-056-1(51)	2008	ADD. 12	284

HAWAIIAN TELCOM GENERAL CONSTRUCTION/DESIGN NOTES

1. The Contractor shall procure and pay for all licenses and permits and shall give all notices necessary and incident to the due and lawful prosecution of the work.

2. The Contractor shall call the Hawaii One Call Center at 811 at least two weeks prior to the start of construction.

3. The locations of existing utilities are approximate only. the Contractor shall exercise extreme caution and shall maintain proper clearances whenever construction crosses or is in close proximity of Hawaiian Telcom facilities. The Contractor shall verify their locations and shall be liable for any damages to Hawaiian Telcom facilities. Any damages shall be reported immediately to Hawaiian Telcom's Repair Section at #611 (24 hours) or to the Construction Manager at 652-2804 (normal working hours, Monday through Friday, except holidays). As a result of his operations, adjustments to the new ductline alignment, if required, shall be made to provide required clearances.

4. The Contractor shall take necessary precaution not to damage existing cables or ducts. A Hawaiian Telcom Inspector or designated representative is required to be at any job site. whenever there will be a breakage into or entry into any structure that contain Hawaiian Telcom facilities. temporary cable and duct supports shall be provided wherever necessary.

5. The Contractor shall notify Hawaiian Telcom's Inspector or designated representative a minimum of 72 hours prior to excavation, bracing or backfilling of Hawaiian Telcom's structures or facilities.

6. All applicable construction work shall be done in accordance with the "Hawaiian Telcom Standard Specifications for Placing Underground Telephone systems" dated March 1999. All subsequent amendments and additions, and all other pertinent standards for telephone construction. Contractor shall familiarize his personnel by obtaining applicable specifications.

7. When excavation is adjacent to or beneath Hawaiian Telcom's existing structures or facilities, the Contractor shall:

A. Sheet and/or brace the excavation to prevent slides, cave-ins, or settlements to ensure no movement to Hawaiian Telcom's structures or facilities.

B. Protect existing structures and/or facilities with beams, struts, or underpinning while excavating beneath them to ensure no movement to Hawaiian Telcom's structures or facilities.

8. The Contractor shall brace all poles or light standards near the ductline, manhole, or handhole during his operations.

9. The Contractor shall saw-cut A.C. pavement and concrete gutter whenever new manholes, handholes, or ductlines are to be placed and shall restore to existing condition or better.

10. The Contractor shall comply with the policy adopted by the Department of Public Works, Kauai County, concerning the replacement of concrete sidewalks after excavation work.

11. The underground pipes, cables, or ductlines known to exist by the Engineer from his Search of Records are indicated on the plans. The Contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the area. Whenever connections of new utilities to existing utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for the new lines.

12. Whenever connections to existing utilities are shown on the plans, the Contractor shall expose the existing lines prior to excavation of the main trenches to verify their locations and depths.

13. The Contractor, at his own expense, shall keep the project and surrounding area free from dust nuisance. The cost for additional measures, when required by Kauai County and the State (HDOT) shall be borne by the Contractor.

14. The Contractor shall pump all manholes dry during final inspection.

15. The Contractor shall notify Hawaiian Telcom Inspector 24 hours prior to the pouring of concrete or backfilling.

16. When connecting to manhole walls, all existing reinforcing bars shall be left intact. ducts shall be adjusted in the field in order to clear reinforcing.

17. The Contractor shall be responsible for laying out all required lines and grades and shall preserve all bench marks and working points necessary to lay out the work correctly. The new ductline shall be adjusted by the Contractor to suit the existing conditions and the details as described in the plans.

18. Minimum concrete strength shall be:

For Ductline 2500 psi at 28 days

For Manhole 3000 psi at 28 days

or as specified in design notes

19. Bends in the duct alignment, due to changes in grade shall have a minimum radius of 25 feet. All 90 degree C-bends at a pole or at the building floor slab penetration, shall have a bend radius of ten times the diameter of the duct or greater.

20. After ductline has been completed, a mandrel with a square front not less then 12" long and having a diameter of 1/4" less than the inside diameter of the duct, shall be pulled through each duct after which a brush with stiff bristles shall be pulled through to make certain that no particles of earth, sand, or gravel have been left inside. Ducts shall be completely dry and clean.

21. All ducts and conduits shall have an 1800# Polyester Mule-Tape (Neptco, WP1800P, Hawaiian Telcom Material Code No. 571154) installed throughout its entire length. All ducts shall be capped to prevent entry of foreign material during construction and at the completion of installation.
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| ORIGINAL
PLAN | SUBMIT
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| | QUANTITIES BY | |
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-
- THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION
- Russell M. Arakaki*
ParEn, Inc.
dba PARK ENGINEERING
LICENSE EXPIRES 4-30-10
- 8/07/08 Revised Notes.
- DATE REVISION
- STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
- HAWAIIAN TELCOM NOTES
- KUHI0 HIGHWAY, SHORT TERM IMPROVEMENTS
- Wailua Cane Haul Bridge Widening
- Fed. Aid Project No. BR-056-1(51)
- Scale: None
- Date: MAY 2008
- SHEET No. 10 OF 10 SHEETS
- ADD. 12