

ORIGINAL PLAN	SURVEY PLOTTED BY	_____	DATE	_____
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NOTE BOOK	DESIGNED BY	_____	_____	_____
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No.	CHECKED BY	_____	_____	_____
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GENERAL NOTES

- The project is on Kula Highway between mileposts 14.22 and 21.13. The scope of work includes reconstruction and resurfacing of existing pavement; adjusting monuments, guardrail posts, manhole frame and covers; installation of guardrails, signs and pavement markings; cleaning of culverts; and all incidental work.
- The Contractor is reminded of the requirements of Subsection 105.16 – Subcontracts, which requires him to perform work amounting to not less than 30 percent of the total contract cost less deductible items. Non-compliance with this Subsection may be grounds for rejection of bid.
- The Contractor's attention is directed to subsection 107.06 – Contractor duty regarding public convenience, subsection 104.09 – maintenance of traffic and section 645 – work zone traffic control, and subsection 104.11 – utilities and services.
- At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.
- 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 be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.
- The exact locations and limits or areas to be filled with leveling course, reconstructed and cold planed shall be determined in the field by the Engineer.
- Prior to resurfacing, the existing surface shall be cleaned as described in Section 310 of the Standard Specifications and as amended. Payment shall be considered incidental to Asphalt Concrete Pavement, Mix No. IV and will not be paid separately.
- The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting paving operations.
- The Contractor shall remove and dispose of all existing raised pavement markers prior to the overlaying of Asphalt Concrete. This work shall be considered incidental to Asphalt Concrete Pavement, Mix No. IV and will not be paid for separately.
- All holes, depressions and wheel ruts shall be filled and compacted with Asphalt Concrete Pavement, Mix No. V prior to resurfacing. This work will be paid for under Asphalt Concrete Pavement, Mix No. V.
- Cold planed connections shall be constructed at all limits of resurfacing, 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. Exact locations shall be determined in the field by the Engineer. Payment for this work approaches, side streets and driveways as shown on the plans shall be considered incidental to Asphalt Concrete Pavement, Mix IV.
- Smooth riding connections shall be constructed at the beginning and end of the project and at all connecting approaches, side roads and driveways and as directed by the engineer.
- Dressing of shoulder shall consist of clearing, grubbing, grading, reshaping and compacting the unpaved shoulders with suitable material as shown on the plans and/or as directed by the Engineer. This work shall be considered incidental to the various contract items. Shoulder areas without guardrails shall be dressed at 6:1 slope (max.) unless shown on the plans or directed by the Engineer.
- All saw cutting work shall be considered incidental to various contract items of work.
- Existing drainage system shall be functional at all times during construction. The Contractor is to furnish materials, equipment, labor, tools and incidentals necessary to maintain flow, the cost of which shall be considered incidental to various contract items.
- The Contractor shall provide for safe access to and from all existing driveways and streets at all times.
- All construction signs shall be left in place until all construction items have been completed. The Contractor shall obtain prior approval from the Engineer to remove construction signs. This work shall not be paid for separately but shall be considered incidental to various contract items.
- Unless directed or approved by the engineer, staggered paving resulting in longitudinal dropoff will not be permitted. In case of emergency transition wedge with 10:1 slope shall be constructed along the longitudinal joint. Furthermore, temporary markings consisting of double, 4-inch yellow reflective tape with type "D" markers at 20' o.c. shall be installed. Prior to resuming paving, the transition shall be removed by saw cutting. Furnishing, paving and removing the transition wedge will not be paid for separately but will be considered incidental to Asphalt Concrete Pavement, Mix No. IV.

- At the end of each paving day, transveres joint must be constructed to provide a smooth riding connection. Transition wedge shall be constructed at 10:1 slope or flatter. Prior to resuming paving, the transition wedge shall be removed by saw cutting. Furnishing, paving and removing the transition wedge will not be paid for separately but will be considered incidental to Asphalt concrete Pavement, Mix No. IV.
- The location of guardrails shown on this plans are approximate. The exact locations shall be determined in the field by the Engineer.
- Resetting or adjusting of existing guardrail heights shall include adjustment of terminal sections including foundations, etc. to required height.
- Street survey monuments shown on plans shall be verified in the field prior to any resurfacing activity. Monuments that are shown on plans but are missing in the field shall be re-established and re-installed by the Contractor. Payment for this work shall be made under item No. 613.0300, Adjusting Centerline Survey Monuments.
- Street survey monuments shall not be disturbed during cold planing and/or pavement reconstruction. Adjustments of these monuments shall be in accordance with applicable details as shown on the Standard Plans.
- Contractor shall adjust pipe casings of existing centerline survey monument whether shown or not on the plans, in accordance with Standard Plan D-06 or any other method as directed by the Engineer to suit field conditions. Contractor to verify existing conditions prior to construction. Adjustment of centerline monument will be paid for at the Contract Unit Price regardless of method used. Contractor shall clean existing monuments to expose survey pins.
- Prior to cold planing over an existing structure, the Contractor shall determine the actual depth of the existing asphalt concrete pavement. The Contractor shall take several cross section measurements throughout the structure. If the thickness of the existing pavement is less than the proposed resurfacing thickness, the Contractor shall remove the existing pavement to the level of the structure and resurface to the original thickness.
- In cold planing the pavement over the structure, the Contractor shall exercise care not to damage any portion of the structure, specially the structure deck, joints, drain pipes or reinforcement. Any damage to the structure during the cold planing operation shall be repaired by the Contractor at his own expense. Repair work shall be as directed by the Engineer. The Contractor shall verify the existing pavement thickness by hand digging at various locations. This work shall be considered incidental to Cold Planing.
- Sign posts shall be square tube posts.
- Existing striping and markings must be referenced by the Contractor for future use. Installation of pavement markings shall not commence until the layout is approved by the Engineer.
- For resurfacing of all dirt and gravel driveways, use A.C. Pavement Reconstruction Detail on sheet 5.
- Relocation of existing mailboxes as shown on the plans or as directed by the Engineer will be considered incidental to the various contract items.
- Existing guardrail appurtenances and existing signs and posts that will be removed and replaced shall be nicely bound and delivered to the Maui District Baseyard in a re-usable condition. Payment for removal, storage and delivery shall be considered incidental to various guardrail and regulatory and warning sign pay items.

DEPARTMENT OF WATER SUPPLY
NOTES FOR WATER SYSTEM

- The contractor shall notify the Department of Water Supply (D.W.S.) in writing, one (1) week prior to commencement of work.
- All materials used and method of construction of water system facilities shall be in accordance with the latest revisions of D.W.S. standards. Contractor shall obtain the latest revisions of the D.W.S. standard details before commencing construction.
- The exact depth and location of existing waterlines, service laterals and other utilities are not known. It shall be the contractor's responsibility to locate same prior to trenching for the new waterline. The cost of lowering, relocating or adjusting existing waterlines, service laterals and other utilities shall be considered incidental to the cost of the new waterline, unless noted otherwise, and will not be paid for separately.
- Concrete for reaction blocks and anchor blocks shall be D.W.S. class 2500.
- The maximum distance between valve nut and top of manhole cover shall be three (3) feet.
- The contractor shall submit a materials list to D.W.S. for approval prior to construction.
- Connection to D.W.S. system:
 - The contractor shall verify the exact location, depth, type and condition of the existing line before ordering materials for the hook-up. He shall, however, check with D.W.S. before excavating for verification purposes. He shall be responsible for furnishing all necessary fittings and other materials required for the hook-up.
 - Whenever feasible, mechanical joint fittings shall be used.
 - Authorized D.W.S. personnel will make the final connection to the existing line. The contractor shall be responsible for all costs incurred by D.W.S. for said work, including the cost of pressure testing.
 - The contractor shall be responsible for furnishing all material, equipment and labor for chlorination, trench excavation, back filling, paving, and other work necessary to complete the hookup, as directed by and to the satisfaction of the Department of Water supply.
- The developer shall submit a cost list along with an affidavit for the water system prior to acceptance.
- The contractor shall submit two sets of record drawings via a consultant prior to acceptance of the water system.
- Minimum cover over water main, 6" diameter or larger, shall be 3'-0", for 4" diameter shall be 2'-6", for diameters less than 4" shall be 1'-6", or beneath the pavement structure, whichever is grater.
- The contractor shall paint and number the fire hydrant. Numbering to be furnished by D.W.S.
- All buried metals shall be wrapped with poly-wrap. For ductile iron pipe installation, poly-wrap shall be required.
- All nuts and bolts shall be painted with asphaltic paint.
- Lubricate hydrant nozzle threads with non-toxic grease.
- Water mains and appurtenances shall be subject to hydrostatic testing in accordance with the latest revision of AWWA C600, under the "Hydrostatic Testing" section, to a pressure of at least 1.5 times the working pressure. Unless otherwise stated in the construction documents or limited by the pressure rating of equipment, the pressure test and leakage test shall be performed at 225 pounds per square in pressure.

LEGEND

- °pp Existing Power Pole
- °tp Existing Telephone Pole
- w—12— Existing 12" Water Line
- i—24— Existing 24" Irrigation Line
- °wmh Existing Water Manhole
- °WMH Adjusted Water MH Frame/Cover
- °av Existing Water Air Valve
- °AV Adjusted Water Air Valve MH Frame/Cover
- °wv Existing Water Valve Box
- °WV Adjusted Water Valve Box
- °wm Existing Water Meter
- °WM Adjusted Water Meter
- °fh Existing Fire Hydrant
- R/W Right of Way
- s—12— Existing Sewer Line
- °smh Existing Sewer Manhole
- °SMH Adjusted Sewer MH Frame/Cover
- °mon. Existing Monument
- °MON. Adjusted Monument
- d—24— Existing 24" Drain Line
- °sdmh Existing Storm Drain Manhole
- °SDMH Adjusted Storm Drain MH Frame/Cover
- °gdi Existing Grated Drop Inlet
- °cb Existing Catch Basin
- °b Existing Traffic Sign
- ° Existing Highway Lighting Standard
- g— Existing Metal Guardrail
- New Single Metal Guardrail
- x—x— Existing Fence
- Reconstruction Areas
- Leveling Areas
- Cold Planing Areas
- Resurfacing Limits

 <i>Michael T. Ishikawa</i> LICENSE EXPIRES 4/30/2010 This work was prepared by me or under my supervision and construction of this project will be under my observation.	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION GENERAL NOTES AND LEGEND KULA HIGHWAY RESURFACING KEKAULIKE AVENUE TO ULUPALAKUA PROJECT NO. 37CDE - 01 - 07M Scale: NONE Date: May 2009 SHEET No. 1 OF 2 SHEETS	
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ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
	TRACED BY _____	_____
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WATER POLLUTION AND EROSION CONTROL

A. GENERAL:

- See Section 209 – Water Pollution and Erosion Control. 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.
- Effective October 1, 2008, follow the guidelines in the "Construction Best Management Practices Field Manual", dated January 2008 in developing, installing and maintaining the Best Management Practices (BMP) for the project.
- 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 Section 209, 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.
- 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:

- Waste Materials
Collect and store all waste materials in a securely lidded metal dumpster. The dumpster shall meet all local and State solid waste management regulations. Deposit all trash and construction debris from the site in the dumpster. Empty the dumpster a minimum of twice per week or as often as is deemed necessary. Do not bury construction waste materials onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Post notices stating these practices in the office trailer and the Contractor shall be responsible for seeing that these procedures are followed.
- Hazardous Waste
Dispose all hazardous waste materials in the manner specified by local or State regulations and 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.
- Sanitary Waste
Collect all sanitary waste from the portable units a minimum of once per week, or as required.

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

- Inspect all control measures at least once each week and within 24 hours of any rainfall event of 0.5 inches or greater within a 24 hour period.
- Maintain all measures in good working order. If repair is necessary, it shall be initiated within 24 hours after the inspection.
- Remove built-up sediment from silt fence when it has reached one-third the height of the fence.
- Inspect silt screen or fence 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. Inspect and verify the bottom of the silt screen is buried a minimum of 6 inches below the existing ground.
- Inspect temporary and permanent seeding and planting for bare spots, washouts and healthy growth.
- Make a maintenance inspection report promptly after each inspection. Submit a copy 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 should be 50 feet. Minimum width should be 30 feet. Minimum depth should be 6 inches and underlain with geo-textile fabric. Clean the paved street adjacent to the site entrance daily or as required to remove any excess mud, cold planed materials, dirt or rock tracked from the site. Cover dump trucks hauling material from the construction site with a tarpaulin.
- Include designated Concrete Washout Area(s) in the Water Pollution, Dust, and Erosion Control submittals.
- 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.
- Contain, remove, and dispose 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:

- 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
Detergents
Paints (enamel and latex)
Metal Studs
Tar

Fertilizers
Petroleum Based Products
Cleaning Solvents
Wood
Masonry Block
 - Use Material Management Practices to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. Make an effort to store only enough product as is required to do the job.
 - Store all materials stored onsite in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.
 - Keep products in their original containers with the original manufacturer's label.
 - Do not mix substances with one another unless recommended by the manufacturer.
 - Whenever possible, use a product up completely before disposing of the container.
 - Follow manufacturer's recommendations for proper use and disposal.
 - Conduct a daily inspection to ensure proper use and disposal of materials onsite.
- Hazardous Material Pollution Prevention Plan
 - Keep products in original containers unless they are not resealable.
 - Retain original labels and material safety data sheets (MSDS).
 - Dispose of surplus products according to manufacturers' instructions and local and State regulations.
- Onsite and Offsite Product Specific Plan
The following product specific practices shall be followed onsite:
 - Petroleum Based Products:
Monitor all onsite vehicles for leaks and perform regular preventive maintenance to reduce the chance of leakage. Store petroleum products in tightly sealed containers which are clearly labeled. Apply asphalt substances used onsite according to the manufacturer's recommendation.
 - Fertilizers:
Apply fertilizers used only in the minimum amounts recommended by the manufacturer. Once applied, work fertilizer into the soil to limit exposure to storm water. Storage shall be in a covered shed. Transfer the contents of any partially used bags of fertilizer to a sealable plastic bin to avoid spills.
 - Paints:
Seal and store all containers when not required for use. Do not discharge excess paint to the highway drainage system. Dispose properly according to manufacturers' instructions or State and local regulations.
 - Concrete Trucks:
Wash out or discharge concrete truck drum wash water only at a designated site. Do not discharge water in the highway drainage system or waters of the United States. Contact Drinking Water Branch, Department of Health at 586-4258 to receive permission to designate a disposal site. Clean disposal site as required or as requested by the Owner's representative.

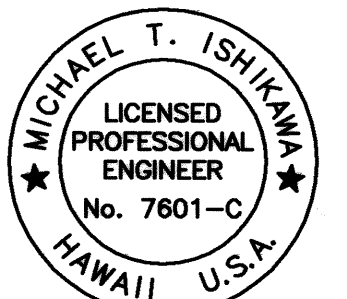
- Spill Control Plan
 - Post a spill prevention plan to include measures to prevent and clean up each spill.
 - The Contractor shall be the spill prevention and cleanup coordinator. Designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. Post the names of responsible spill personnel in the material storage area and in the office trailer onsite.
 - Clearly post manufacturers' recommended methods for spill cleanup. Make site personnel aware of the procedures and the location of the information and cleanup supplies.
 - Keep materials and equipment necessary for spill cleanup in the material storage area onsite.
 - Clean up all spills immediately after discovery.
 - Keep the spill area well ventilated. Personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
 - Report spills of toxic hazardous material to the appropriate State or local government agency, regardless of the size.

E. PERMIT REQUIREMENTS:

- If a National Pollutant Discharge Elimination System (NPDES) Permit is required for Construction Activities of one acre or more, submit to the Engineer six sets of the Water Pollution and Erosion Control Submittals as detailed in Subsection 209.03 of the specifications.
- If an NPDES Permit for Construction Dewatering is required, the Contractor shall be responsible to obtain the Permit from the Department of Health, Clean Water Branch.
 - NPDES Permit for Construction Activities
 - NPDES Permit for Construction Dewatering
 - NPDES Permit for Hydrotesting Waters
 - Water Quality Certification
 - Stream Channel Alteration Permit
 - Section 404 Army Corps of Engineer Permit
- Comply with all applicable State and Federal Permit conditions. Permits may include but are not limited to the following:

HAWAIIAN TELCOM (HTCO) GENERAL NOTES:

- Installation of htco and communications ductline system shall be in conformance with the requirements of htco "standard specifications for placing underground telecommunications systems, may 1992, unless otherwise modified in these plans. check with htco prior to ordering material for the ductline system installation work.
- The contractor will provide a 5/8" x 8' galvanized ground rod in each handhole and/or pull box and below a telephone cabinet. Minimum telephone cabinet size is 18" x 24" x 6"
- All conduits will enter and leave the handhole/pull box at 90 degrees to the face of the box.
- The maximum size conduit that may enter the side wall of a handhole/pull box is 2".
- All conduits will be terminated with a bell end, grouted around the conduit. the bell end shall be flush with the inside face of the handhole/pull box wall. No protrusion of the bell end will be permitted. The inside surface shall be finished smooth and flush with the existing wall surface.
- All conduits shall have an 1800#, polyester mule tape (neptco WP 1800P, htco material code no. 751154) installed throughout its entire length. All conduits shall be capped with a temporary cap to prevent the entry of foreign material during construction. The temporary caps shall remain installed on each conduit entering a handhole/pull box at the completion of the installation.
- All conduit handhole/ pull box installed by the contractor for the use by htco will be subject to inspection. The inspection shall take place prior to back fill or concrete encasement. Inspections must be scheduled 3 working days in advance.
- All handhole/pull boxes installed in non-sidewalk areas will require 10" x 5" thick concrete collar around the entire frame, feathered to finished grade, placed on a compacted 6" base of sand or htco type "B" backfill.
- After ductline has been completed, A mandrel not less than 12" long and having a diameter of ¼" less than the inside diameter of the duct shall be pulled through each duct.
- A htco standby man is required to be at the job site anytime non-utility co. personnel will be breaking into or entering any structures that contain communication facilities. Three working days notice is required for any inspection or standby man. Five working days advance notice is required for underground cable locating and marking.
- All conduits will enter telephone cabinets from the extreme left knockout.
- The developer will be responsible for all revisions required on telephone design due to field conditions.
- One piece 2' x 4' pull boxes are non htco standard and will not be accepted.
- The approval of the subject drawing(s) is good for a period of 180 days. If Construction activities have not commenced within the 180 days of htco approved date, the approval will be void. Should this occur the contractor will be notified upon receipt for inspection of underground.

 <i>Michael T. Ishikawa</i> LICENSE EXPIRES 4/30/2010 This work was prepared by me or under my supervision and construction of this project will be under my observation.	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION GENERAL NOTES AND LEGEND KULA HIGHWAY RESURFACING KEKAULIKE AVENUE TO ULUPALAKUA PROJECT NO. 37CDE - 01 - 07M Scale: NONE Date: May 2009 SHEET No. 2 OF 2 SHEETS
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