

GENERAL NOTES

- Improvements consist of realigning two sections of the existing roadway and extending a concrete box culvert, which includes excavation, structure excavation and backfill, grading, paving, installing pavement markers, striping, temporary striping, relocating existing traffic signs, and extension of an existing drainage facility.
- All roadway, structural and drainage system work shall be done in accordance with all applicable sections of "Standard Specifications for Road and Bridge Construction" Highways Division, Department of Transportation, 1985 as amended.
- The Contractor shall verify the location of all existing utilities, whether shown on the plans or not, and shall protect existing utilities at all times. The Contractor shall be responsible for the repair or replacement of the existing utilities in the event of damages due to his construction practices. The Contractor shall coordinate his work with the respective utility companies.
- The existing waterlines shown on plans are approximate and should there be a conflict with the new drainage facilities, the adjustment to the 8" waterline shall be done on force account basis, under a contract change order.
- The Contractor's attention is directed to Subsection 107.13-Public Convenience and Safety of the Special Provisions.
- No material and/or equipment shall be stockpiled/stored within the State Highway right-of-way except at locations approved in writing by the Engineer. The Contractor may dispose excess excavated material along low areas adjacent to the existing roadway (vicinity of the project), and as directed by the Engineer. This work will be considered incidental to roadway excavation.
- Asphalt concrete for leveling course shall be paid under Item No. 401.0500-Asphalt Concrete Pavement, Mix No. V.
- Tack Coat shall be incidental to Item No. 401.0500-Asphalt Concrete Pavement, Mix No. V.
- Construct smooth and easy riding connections at all pavement cut lines where new pavement abuts existing pavement.
- Field Office location shall be provided by the Project Engineer.

POLE RELOCATION NOTES

- The Contractor shall coordinate his work with HELCO and HTCO.
- The Contractor shall excavate between existing poles to finish grade as requested by HELCO and HTCO, prior to the relocation of the poles by HELCO and HTCO.
- Where a minimum clearance of 5 feet cannot be maintained from the existing pole and the finish grade is more than 2 feet below the existing ground level, the Contractor shall provide the material and arrange for HELCO to brace poles in accordance with the temporary pole bracing requirements. Materials provided by the Contractor will not be measured for payment, but will be considered incidental to the project.

GRADING NOTES

- All grading work shall conform to Chapter 10 of the Hawaii County Code and shall not commence until a grading permit is approved.
- The Contractor shall remove all silt and debris resulting from his work and deposited in drainage facilities, roadways and other areas. The costs incurred for any necessary remedial action by the Chief Engineer, Department of Public Works, County of Hawaii, shall be payable by the Contractor.
- 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 and Regulations of the State Department of Health.
- All grading operations shall be performed in conformance with the applicable provisions of the Water Pollution Control and Water Quality Standards contained in the Public Health Regulations, State Department of Health, on Water Pollution Control and Water Quality Standards, and to the Erosion and Sedimentation Control Standards and Guidelines of the Department of Public Works, County of Hawaii.
- All slopes and exposed areas shall be sodded or planted immediately after the grading work has been completed.
- The County shall be informed of the location of the disposal/borrow site for the excess material from the project when the application for a grading permit is made. The disposal/borrow site must also fulfill the requirements of the grading code.
- All vegetation shall be removed prior to placing fill on natural ground surface.

ESTIMATED IN-PLACE EARTHWORK QUANTITIES

Excavation = 32,882 Cu. Yds.  
Embankment = 128 Cu. Yds.  
Area of Grading = 2.0 Acres

- The earthwork quantities above are approximate and are shown for permit purposes only. The Contractor shall make his own determination and verify these figures.
- The above quantities are computed to finish grade as shown on the grading plan, and have been adjusted to include base course, pavement and walkways. No corrections have been made for topsoil, if required, or for backfill material for trees and plants.
- The Contractor shall make his own determination for import borrow material required.

TRAFFIC NOTES

- All traffic signs and pavement markings shall conform to the latest edition of the Manual on Uniform Traffic Control Devices for Streets and Highways, as amended.
- Pavement areas to receive pavement marking and striping shall be broomed-off by the Contractor prior to commencement of work. This work shall be considered incidental to Item No. 629-1016, 4-inch wide white edge striping.
- The Contractor shall install permanent or temporary pavement markers, striping and markings as required by Section 629 of the Hawaii Standard Specifications for Road and Bridge Construction, 1985 edition, as amended by the Special Provisions.
- All pavement markings that become inapplicable shall be removed by the Contractor at his own expense. Removal shall be by "sand-blasting" or by other methods approved by the Engineer before the new pavement markings are applied.
- The Contractor shall provide, install and maintain all necessary signs, lights, flares, barricades, markers, cones, and other protective facilities and shall take all necessary precautions for the protection and for the convenience and safety of public traffic. All such protective facilities and precautions to be taken, shall conform with the Hawaii Administration Rules 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 Highway Administration's Manual on Uniform Traffic Control Devices for Streets and Highways, Part VI - Traffic Control for Highway Construction and Maintenance Operations. Traffic maintenance, detours and temporary construction signs shall be considered incidental to the contract.

NOTES FOR WORK WITHIN NATURAL

AREA RESERVE

- The Contractor shall notify the Engineer 10 (Ten) calendar days prior to starting any work within the Natural Area Reserve.
- No fill or borrow from outside the Natural Area Reserve shall be used for construction of the roadway within the reserve.
- No disturbance of native vegetation unless absolutely necessary.
- Caution will be exercised to guard against fuel and/or oil spills, and fire.
- Abandoned curves (roadway), shall not be used for storage of any kind.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	11BC-01-91	1991	243	25

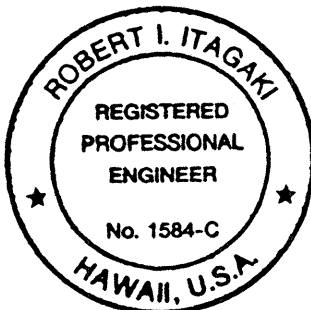
WATERLINE NOTES

- All work shall conform to the Department of Water Supply "Water System Standards," Volumes 1 and 2, dated 1985, as amended.
- The Contractor shall inform the D.W.S. Engineer 72 hours prior to the beginning of any waterline work and one week prior to any connection, chlorination, shut-off or relocation work.
- All work, equipment, and material furnished by the D.W.S. shall be paid for by the Contractor.
- All existing waterlines, waterline appurtenances and other utility locations shown on the plans are obtained from latest reliable sources. The Contractor shall be responsible to verify the exact location of all utilities in the field and shall bear all cost for damages done during the contract period.
- All connections to existing waterlines shall be done by the D.W.S. The Contractor shall perform all excavation, backfill, road repair, traffic control, and provide equipment and materials necessary to complete the connection.
- Where water shut off of more than 3 hours becomes necessary, the Contractor, at his own cost, shall provide a temporary by-pass line. The by-pass size shall be determined by the D.W.S. Engineer. If necessary, the D.W.S. Engineer may require a by-pass line, regardless of the expected water shut off period.
- Minimum horizontal clearance between waterlines and other utilities shall be 8 feet unless otherwise specified. Minimum vertical clearance between waterlines and other utilities shall be 12" provided concrete jackets are used, and 18" if no concrete jackets are used. In all instances, the waterlines shall be at a grade higher than other utilities.
- All fittings (Class 250) and all gate valves (Class 200) shall be cast iron, with mechanical joints unless specified otherwise.
- All pipelines, 4" and larger in diameter, shall be ductile iron, push on joint Class 52, and all pipelines smaller than 4" in diameter shall be soft copper, type K; unless otherwise specified.
- Relocation of existing meters shall be done under D.W.S. supervision. Relocation of customer service lines to relocated meters shall be done by the Contractor. Existing meter boxes damaged by the Contractor shall be replaced at the Contractor's cost.
- Solder and flux shall contain not more than 0.2 percent lead.
- Materials used as pipe cushion for copper pipes shall be No. 4 fine, manufactured sand, as specified in Volume I, Part III, Section 2.2.2, paragraph C2.
- The waterline shall be tested at a minimum of 225 psi, at the low point under D.W.S. supervision.
- The Contractor shall be responsible for the chlorination of the water system and shall bear all cost. The persons engaged to do the chlorination work must be licensed by the State of Hawaii and approved by the Department of Health.

APPROVED:

11/19/92  
MANAGER, DEPT. OF WATER SUPPLY  
COUNTY OF HAWAII

11/19/92  
DATE  
REVISED QUANTITIES AND ADDED NOTES.  
REVISION



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

NOTES  
HAWAII BELT ROAD  
IMPROVEMENTS  
PAPA TO HONAUNAU - UNIT 2  
PROJECT NO. 11BC-01-91

SHEET NO. OF SHEETS

C.O.3