



SCALE: 1/2"=1'-0"

WATER NOTES:

- 1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS" VOLUME 1, DATED 1985, THE "APPROVED MATERIAL LIST AND STANDARD DETAILS FOR WATER SYSTEM CONSTRUCTION", VOLUME 2, DATED 1985, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 1991, and all subsequent amendments and additions.
- 2. All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply. All other features of the water system, such as lines, grades, fittings, drainage, etc., and other features of improvements shall not be the responsibility of the Board of Water Supply. Compliance with the American Disabilities Act (ADA) requirements, shall not be the responsibility of the Board of Water Supply.
- 3. Test pressure shall be 150 psi.
- 4. The Contractor shall notify BWS Planning and Engineering Division, Construction Section one week prior to commencing work on the water system.
- 5. The Contractor shall chlorinate the entire inside surface of each pipe and fitting with disinfection solution of 5 ounces of sodium hypochlorite mixed with 10 gallons of water (For connection only)
- 6. The Contractor shall be responsible for the protection of all water lines during construction. The Contractor shall be especially careful when excavating behind water lines, tees and bends wherever there is a possibility of water line movement due to the removal of the supporting earth beyond the existing reaction blocks. The Contractor shall take whatever measure necessary to protect the water lines, such as constructing special reaction blocks (with BWS approval) and/or modifying his construction method.
- 7. The existence and location of underground utilities and structures as shown on the plans are from the latest available data but is not guaranteed as to the accuracy or the encountering of other obstacles during the course of the work. The Contractor shall be responsible and shall pay for all damages to existing utilities. The Contractor shall not assume that where no utilities are shown, that none exist.
- 8. Prior to installation, the Contractor shall submit for approval by Board of Water Supply, the manufacturer?s certification that all cast iron (gray or ductile) fittings for the project conform in all respects to the Water System Standards, dated 1985.
- 9. Polygon shape for mechanical joint glands as described in AWWA Standard C111 shall be "straight-sided" or an approved equal on a job to job basis.
- 10. Re-approval shall be required if this project is not under construction within a period of two years.
- 11. Contractor shall cut and plug all existing unused laterals at the main whether or not shown on the plans. The damaged area shall be repaired to an equal or better condition than the immediate area. All work shall be done at the expense of the Contractor.
- 12. The Contractor/Developer shall obtain a NPDES permit prior to chlorination and/or dewatering. A copy of the permit shall be submitted to the Board of Water Supply, Planning and Engineering Division, Construction Section.
- 13. Pipe cushion shall be of high resistivity material. The contractor shall submit a soil certification that high resistant cushion material has a resistivity greater than 5,000 OHM—CM. Remainder of the backfill material shall be as specified in Volume 1 of the Water System Standards. Pipe cushion and backfill material shall contain no hazardous substances above regulatory action levels including but not limited to lead, asbestos, mercury, chromium, cadium, zinc, strontium, and polychlorinated biphenyl's (PCB).
- 14. All ductile iron pipe, fittings and valves shall be wrapped with two layers of 8 mil. polyethylene wrap.
- 15. Cleaning shall be by the use of "pigs" introduced into the pipeline and run completely through all installed pipelines and all branch lines for fire hydrants. "Pigging" of service laterals is not required. Bare foam "pigs" shall be used to swab piping clean as each length of the pipeline is installed. Each "pig" consist of a cylindrical piece of polyurethane foam with a density of 3–7 pounds per cubic foot and a vinyl—coated nose. Outside diameter of the "pig" shall be equal to 1–1/4 to 1–1/2 times the inside diameter of the pipe being installed. The length of the "pig" shall be 1–1/2 to 2 times its diameter. Prior to use, the "pig" shall be submerged in a chlorine solution of 1 oz. of 5% chlorine bleach in 5 gallons of water. "Pigging" of the pipeline shall be considered incidental to the installation of the new pipeline.
- 16. At all times during the construction, the contractor shall maintain pedestrians and bicyclists passage around work areas.

NPDES GENERAL NOTES:

- 1. Discharges into receiving waters (streams, rivers, ocean channels, drainage systems, etc.) from dewatering and/or hydrotesting activities require NPDES permit(s) from the Department of Health (DOH). If the contractor options to discharge dewatering and/or hydrotesting effluent into receiving waters, the contractor shall submit to the engineer four (4) sets of best management practices (BMP?S) and four (4) copies of the quality of discharge test results. The plans and test results shall be submitted no later than thirty (30) calendar days after the award of the contract.
- 2. No dewatering and/or hydrotesting activities will be authorized until the receipt of the NPDES permits from DOH.
- 3. Any citation (fine) received by the State for non-compliance of the NPDES permit requirements shall be deducted from the progress payment.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	<i>72C-02-98</i>	1997	8	8

GENERAL CONSTRUCTION NOTES:

- 1. The scope of work for this project consists of sidewalk modification and F. H. relocation.
- 2. The contractor is reminded of the requirements of Subsection 108.01 Subletting of Contract, which requires him to perform work amounting to not less than 50 percent of the total contract cost less deductible items. Non-compliance with this subsection may be grounds for rejection of bid.
- 3. The contractors attention is directed to the following sections of the special provisions: Subsection 107.13 Public Convenience and Safety; Subsection 107.21 Contractor?s Responsibility for Utility Property and Services; and Section 645 Traffic Control.
- 4. At the end of each days work, the contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.
- 5. 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.
- 6. Existing drainage system will be functional at all times during construction. The contractor is to furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to various contract items.
- 7. The contractor shall provide for access to and from all existing side streets at all times.
- 8. Location of the new underground ductlines and structures is shown on the drawings. The contractor should anticipate making provisions for dewatering of trenches below water line. Contractor shall be responsible for all NPDES and discharge to receiving waters (see NPDES General Notes). All trenches shall be dry and free of water before ducts are installed.
- 9. All existing facilities shown are approximately only. Contractor shall verify their locations and shall make adjustments to any new or existing facilities as directed by the State?s resident engineer.
- 10. The contractor will immediately report damages discovered or caused by this work to:
 - A. HTCO @ Ph. No.: 611
- B. HECO @ Ph. No.: 543-7874
- C. Oceanic @ Ph. No.: 625-8437
- D. Chronicle Cablevision @ Ph. No.: 395-1847
- 11. The contractor shall exercise extreme caution when the excavation and construction crosses or is in close proximity to underground electrical facilities and shall maintain minimum 13?—0? clearance for his equipment while working close to and/or under overhead facilities.
- 12. When trench excavation is adjacent to or under existing utilities, structures or facilities, the contractor shall be responsible for properly sheeting and bracing the excavation and stabilizing the existing ground to render it safe and secure from possible slides, cave—ins and settlement, and for properly supporting existing structures and facilities with beams, struts or underpinning to fully protect it from damage.
- 13. 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 district engineer.
- 14. 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.
- 15. Where pedestrian walkways exist, they shall be maintained in a safe and passable condition, or other facilities for pedestrians shall be provided. Passages between walkways at intersections shall likewise be provided. Light base shall be placed so that minimum 4 ft. clear sidewalk surface is maintained.
- 16. The contractor shall notify Oahu Transit Services, Inc. (OTS), Ed Sniffen at 848-4571, or Lowell Tom at 848-4578, two weeks prior to commencing any work. The contractor shall inform OTS of the location and scope of work, proposed closure of any street of traffic lanes, and the need to relocate any bus stop.

Chief, Planning and Engineering Division, Board of Water Supply, City and County of Honolulu

Date



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FIRE HYDRANT RELOCATION DETAIL

STATE OF HAWA!

KALANIANAOLE HIGHWAY

SIDEWALK MODIFICATION & F.H. RELOCATION

West Hind Drive to Keahole Street

Project No. 72C-02-98

Scale: As Shown

Date: June, 1997

SHEET No. 1 OF 1 SHEETS

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