HECO NOTES: (Rev. 12/04/19)

Location of HECO Facilities

The location of HECO's overhead and underground facilities shown on the plans are from existing records with varying degrees of accuracy and are not quaranteed as shown. The Contractor shall verify in the field the locations of the facilities and shall exercise proper care in excavating and working in the area. Wherever connections of new utilities to existing utilities and utility crossings are shown, the Contractor shall expose the existing lines at the proposed connections and crossings to verify the depths prior to excavation for the new lines. The Contractor shall be responsible for any damages to HECO's facilities whether shown or not shown on the plans.

2. Compliance with Hawaii Occupational Safety and Health Laws The Contractor shall comply with the State of Hawaii's Occupational Safety and Health laws and regulations, including without limitation, those related to working on or near exposed or energized electrical lines and equipment.

3. Excavation Clearance

The Contractor shall obtain an excavation clearance from HECO's Planning and Design Section of the Customer Installations Department (543-5654) located at 820 Ward Avenue, 4th Floor, a minimum of ten (10) working days prior to starting construction.

4. Caution!!! Electrical Hazard!!!

Existing HECO overhead and underground lines are energized and will remain energized during construction unless prior special arrangements have been made with HECO. Only HECO personnel are to handle these energized lines and erect temporary guards to protect these lines from damage. The Contractor shall work cautiously at all times to avoid accidents and damage to existing HECO facilities, which can result in electrocution.

5. Overhead Lines

State law (OSHA) requires that a worker and the longest object he or she may contact cannot come closer than a specified minimum radial clearance when working close to or under any overhead lines rated 50kV and below. It is the Contractor's responsibility to be informed of and comply with any revisions or amendments to the law.

At ant time should the Contractor anticipate that his work will result in the need to encroach within the minimum required clearance as stated in the law, the Contractor shall notify Hawaiian Electric at least three (3) months prior to the planned encroachment so that, if feasible, the necessary protections (e.g. relocate or de-energize Hawaiian Electric lines) can be investigated. Hawaiian Electric may also be able to blanket its distribution (12kV and below) lines to provide a visual aid in preventing accidental contact. Hawaiian Electric's cost of safeguarding or identifying its lines will be charged to the Contractor.

Contact Hawaiian Electric's Customer Installations Division at 543-7070 for assistance in identifying and safeguarding overhead power lines.

6. Pole Bracing

Contractor shall not excavate within 10 feet from Hawaiiam Electric's utility poles or any anchor system supporting the utility pole. If Contractor must excavate closer than 10 feet from a utility pole or its anchor system, Contractor will be responsible for protecting, supporting, securing and taking all precautions to prevent damage to or leaning of existing poles. Before commencing such excavation, Contractor must submit its bracing calculations and drawings, prepared and stamped by a licensed

Structural Engineer, to Hawaiian Electric's Customer Installations Division (543-7070) for review. Hawaiian Electric requires a minimum of ten (10) working days to conduct the review of Contractor's submittal. Contractor shall be responsible for the design, installation, and removal of the temporary pole bracing system, as well as all costs incurred by Hawaiian Electric to review Contractor's drawings and to repair or straighten poles impacted by Contractor's activities, including response and restoration costs incurred by failure to meet the foregoing requirements. Hawaiian Electric's review and approval of any Contractor submittals including its work procedure shall not relieve Contractor from any liability resulting from Contractor's excavation near or around Hawaiian Electric's utility poles.

Underground Lines

The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of underground lines. HECO's existing electrical cables are energized and will remain energized during construction. Only HECO personnel are to break into existing HECO facilities, handle these cables, and erect temporary guards to protect these cables from damage. The cost of HECO's assistance in providing proper support and protection of its underground lines will be charged to the Contractor. For assistance/coordination in providing proper support and protection of these lines, the Contractor shall call HECO's Customer Installations Division at 543-7070 a minimum of ten (10) working days in advance.

Special precautions are required when excavating near HECO's 138KV or 46KV underground lines (see HECO instructions to Consultants/Contractors on "Excavation near HECO's underground 138KV and or 46KV Lines" for detailed requirements).

For verification of underground lines, the Contractor shall call the Hawaii One Call Center at 866-423-7287 minimum of five (5) working days in advance.

8. Underground Fuel Pipelines

The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of HECO's underground fuel oil pipelines. Special precautions are required when excavating near HECO's underground fuel oil pipelines (See HECO's Specific Fuel Pipeline "Guidelines" to Consultants/Contractors on "Excavation near HECO's Underground Fuel Pipelines" for detailed requirements).

9. Excavations

When trench excavation is adjacent to or beneath HECO's existing structures or facilities, the Contractor is responsible for:

- a) Arranging for HECO standby personnel to observe work at Contractor's
- b) Sheeting, bracing, or otherwise supporting the excavation and stabilizing the existing ground to render it safe and secure and to prevent possible slides, cave-ins, and settlements.
- c) Properly supporting existing structures or facilities with beams, struts, under-pinnings, or other necessary methods to fully protect if from damage.
- d) Backfilling with proper backfill material including special thermal backfill where existing (refer to engineering department for thermal backfill specifications).

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FEDERAL AID

FISCAL SHEET

10. Relocation of HECO Facilities

Any work required to relocate or modify HECO facilities shall be done by HECO, or by the Contractor under HECO's supervision. The Contractor shall be responsible for all coordination, and shall provide necessary support for HECO's work, which may include, but not be limited to, staking of pole/anchor location, identifying right of way and property lines, excavation and backfill, permits and traffic control, barricading, and restoration of pavement, sidewalks, and other facilities.

FED. ROAD

All costs associated with any relocation or modification (either temporary or permanent) for the convenience of the Contractor, or to enable the Contractor to perform his work in a safe and expeditious manner in fulfilling his contract obligations shall be borne by the Contractor.

11. Conflicts

Any redesign or relocation of HECO's facilities not shown on the plans may be cause for lengthy delays. The Contractor acknowledges that HECO is not responsible for any delay or damage that may arise as a result of any conflicts discovered or identified with respect to the location or construction of HECO's electrical facilities in the field, regardless of whether the Contractor has met the requested minimum advance notices. In order to minimize any delay or impact arising from such conflicts, HECO should be notified immediately upon discovery or identification of such conflict.

12. Damage to HECO facilities

The Contractor shall be responsible for the protection of all HECO surface and subsurface utilities and shall be responsible for any damages to HECO's facilities as a result of his operations. The Contractor shall immediately report such damages or any hazardous conditions related to HECO's lines to HECO's trouble dispatcher at 548-7961. Repair work shall be done by HECO or by the contractor under HECO's supervision. Costs for damages to HECO's facilities shall be borne by the Contractor.

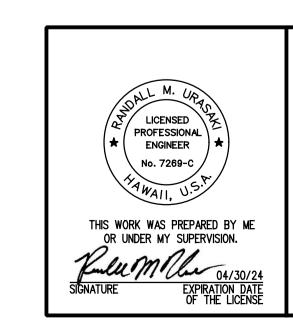
In case of damage or suspected damage to HECO's fuel pipeline, the Contractor shall immediately notify HECO's Security Command Center at 543-7685 (A 24 hour number) so HECO personnel can secure the damaged section and report any oil spills to the proper authorities. All costs associated with the damage, repair, and oil spill cleanup shall be borne by the Contractor.

13. HECO Stand-By Personnel

The Contractor may request HECO to provide an inspector to stand-by during construction near HECO's facilities. The cost of such inspection will be charged to the Contractor.

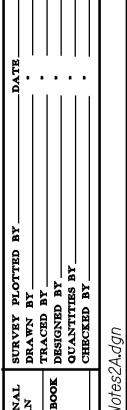
The Contractor shall call HECO's Customer Installations Division at 543-7070 a minimum of three (3) months in advance to arrange for HECO stand-by personnel.

Scale: None



<u>UTILITY NOTES</u> INTERSTATE ROUTE H-3 H-3 FINISH, UNIT VIIC FAIP NO. I-H3-1(75), UNIT VIIC

SHEET No. G-5 OF 8SHEETS



Date: Feb. 2022

HECO NOTES: - Cont.

(Rev. 12/04/19)

14. Clearances

The following clearances shall be maintained between HECO's ductline and all adjacent structures (charted and uncharted) in the trench:

GUIDELINES FOR MINIMUM HORIZONTAL (PARALLEL) CLEARANCES BETWEEN HAWAIIAN ELECTRIC AND OTHER UNDERGROUND UTILITIES						
Underground Utility	Hawaiian Electric Direct Buried Cable	Hawaiian Electric	Hawaiian Electric 3" (Minimum) Concrete Encasement	Applicable Notes:		
Hawaiian Electric DB Conduits	12"	3"	0"			
Hawaiian Electric 3" Encasement	0"	0"	0"			
Telephone/CATV DB	12"	12"	6"			
Telephone/CATV DB Ducts	12"	12"	6"			
Telephone/CATV 3" Encasement	0"	0"	0"	5		
Traffic Signal	12"	12"	12"			
Water DB (BWS Owned)	36"	36"	36"	1, 4		
Customer Owned Water Service Laterals	12"	12"	12"			
Water (Concrete Jacketed) (BWS Owned)	36"	36"	36"	1, 4		
Gas DB	12"	12"	12"	1		
Gas (Concrete Jacketed)	12"	12"	12"	1		
Sewer DB	36"	36"	36"	1, 2		
Sewer (Concrete Jacketed)	36"	36"	36"	1, 2		
Drain	12"	12"	12"	1		
Fuel Pipelines				3		

Notes:

- Where space is available, parallel clearance to other utilities, or foreign structures other than communication or traffic signal shall be 36".
- 2. If 36" clearance cannot be met:
 - If clearance is less than 12", jacket sewer line with reinforced concrete (per Hawaiian Electric's std. 30-1030) for a distance of 5' plus pipe diameter.
 - If clearance is between 12" and 36", jacket sewer line with plain concrete.
- 3. All Fuel Pipeline crossings shall be reviewed and approved by the company that owns and maintains it.
- 4. 5 feet clear to water mains 16" and larger.
- 5. For situations with 0" minimum separation, a 6" separation is recommended.
- 6. Clearances measured from outer edges or diameters of utilities. Whenever concrete jackets are involved, clearances shall be total clear distance between the concrete jacket and utility concerned.

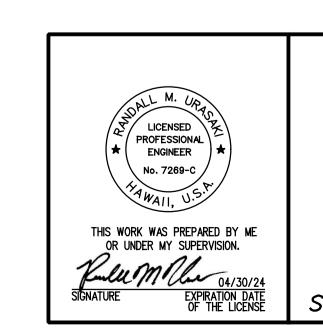
FED. ROAD	STATE	FEDERAL AID	FISCAL	SHEET	TOTAL
DIST. NO.		PROJ. NO.	YEAR	NO.	SHEETS
HAWAII	HAW.	I-H3-1(75), UNIT VIIC	2022	8	50

GUIDELINES FOR MIN BETWEEN HAWAIIAN ELE				
Underground Utility	Hawaiian Electric Direct Buried Cable	Hawaiian Electric	Hawaiian Electric 3" (Minimum)	Applicable Notes:
Hawaiian Electric DB Conduits	6"	3"	0"	
Hawaiian Electric 3" Encasement	0"	0"	0"	
Telephone/CATV DB	12"	12"	6"	
Telephone/CATV DB Ducts	12"	12"	6"	
Telephone/CATV 3" Encasement	0"	0"	0"	3
Traffic Signal	12"	12"	6"	
Water DB (BWS Owned)	12"	12"	12"	5
Customer Owned Water Service Laterals	6"	6"	6"	
Water (Concrete Jacketed) (BWS Owned)	12"	12"	12"	5
Gas DB	12"	12"	12"	
Gas (Concrete Jacketed)	12"	12"	12"	
Sewer DB	24"	24"	24"	1
Sewer (Concrete Jacketed)	24"	24"	24"	1
Drain	12"	12"	6"	
Fuel Pipelines				2
Notes.				

Notes:

- 1. If 36" clearance cannot be met:
 - If clearance is less than 12", jacket sewer line with reinforced concrete (per Hawaiian Electric's std. 30-1030) for a distance of 5' plus pipe diameter.
 - If clearance is between 12" and 24", jacket sewer line with plain concrete.
- 2. All Fuel Pipeline crossings shall be reviewed and approved by the company that owns and maintains it.
- 3. For situations with 0" minimum separation, a 6" separation is recommended.
- 4. Clearances measured from outer edges or diameters of utilities. Whenever concrete jackets are involved, clearances shall be total clear distance between the concrete jacket and utility concerned.
- 5. 36" clearance is required for trenchless installation work.

The Contractor shall notify the Construction Manager and HECO of any heat sources (power cable duct bank, steamline, etc.) encountered that are not properly identified on the drawings.

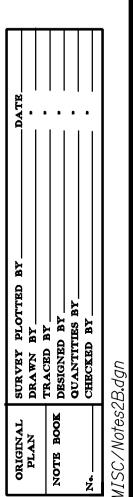


STATE OF HAWAII HIGHWAYS DIVISION

UTILITY NOTES INTERSTATE ROUTE H-3 H-3 FINISH, UNIT VIIC FAIP NO. I-H3-1(75), UNIT VIIC Date: Feb. 2022

SHEETS

Scale: None SHEET No. *G-6* OF



HECO NOTES: - Cont. (Rev. 12/04/19)

15. Indemnity

The Contractor shall indemnify, defend and hold harmless HECO from and against all losses, damages, claims, and actions, including but not limited to reasonable attorney's fees and costs based upon or arising out of damage to property or injuries to persons, or other tortious acts caused or contributed to by Contractor or anyone acting under its direction or control or on its behalf; provided Contractor's indemnity shall not be applicable to any liability based upon the sole negligence of HECO.

ADDITIONAL NOTES WHEN WORK INVOLVES CONSTRUCTION OF HECO FACILITIES

16. Schedule

Contractor shall furnish his construction schedule six (6) months prior to starting work on HECO facilities. Contractor shall give HECO, in writing, three (3) months notice to proceed with HECO's portion of work.

17. Authority

All construction, restoration work, and inspection shall be subject to whichever governmental agency has authority over the work.

18. Specifications

Construction of HECO's underground facilities shall be constructed in accordance with the latest revisions of HECO specifications CS7001, CS7003, CS7202, CS9301, and CS9401 and applicable HECO standards.

19. Construction

Contractor shall furnish all labor, materials, equipment, and services to properly perform and fully complete all work shown on the contract, drawings, and specification. All materials shall be new and manufactured in the United States of America. All manhole, handhole, and ductline installations shall be inspected and approved by HECO prior to excavation and prior to placing concrete. Contractor shall notify HECO's Inspection Group at 543-4399 at least five (5) working days prior to installing facilities or placing concrete.

Contractor to coordinate work to break into HECO's existing electrical facilities with HECO's Inspection Group at 543-4399 at least ten (10) working days in advance.

20. Stakeout

The Contractor shall arrange for toneouts of all underground facilities and shall stakeout all proposed HECO facilities within the project area so as to not conflict with any utility (existing or proposed) and any proposed construction or improvement work for verification by HECO before proceeding with HECO work.

21. Ductlines

All ductline installations shall be PVC schedule 40 encased in concrete, unless otherwise noted. All completed ductlines shall be mandrel tested by the Contractor in the presence of HECO's Inspector using HECO's standard practice. The Contractor shall install 1800# tensile strength muletape pull line in all completed ductlines after mandrel testing is complete.

22. Joint Pole Removal

The last joint pole occupant off the poles shall remove the poles.

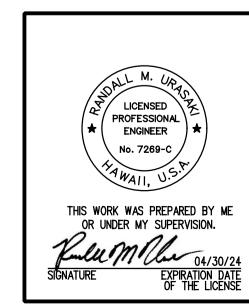
23. As-Built Plans

The Contractor shall provide HECO with a set of electronic and hard copy plans of each set showing the offsets, stationing, and vertical elevation of the ductline(s) constructed.

BOARD OF WATER SUPPLY NOTES:

- 1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION, dated 2005, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, 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.
- 3. The Contractor shall notify BWS Maintenance Unit Engineering, Construction Section in writing and submit five (5) sets of approved construction plans one week prior to commencing work on the water system.
- 4. 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 pay for all damages to existing utilities. The Contractor shall not assume that where no utilities are shown, that none exist.
- 5. Re-approval shall be required if this project is not under construction within a period of two years.
- 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 their construction methods.
- 7. Prior to any excavating, the Contractor shall verify in the field the location of existing water mains and appurtenances.
- 8. The project shall pay the applicable water system facilities and/or one-time service charge and for the meter which will be furnished by BWS and installed by the Contractor when the lateral is installed.
- 9. Contractor shall cut and plug all existing unused laterals at the main whether or not shown on the plans. Meter and valve boxes to be or already abandoned shall be demolished or removed and properly disposed of. 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.
- 10. Board of Water Supply approval of these plans does not constitute a water commitment. Availability of water will be determined when building permit is presented to the Department. Water commitment will depend upon the status of the water system at that time. Should water service be made available, the water commitment will be effective when the project receives an approved building permit from the Building Department. All water commitments will be canceled in the event the building permit is canceled.

FED. ROAD FEDERAL AID FISCAL SHEET DIST. NO. PROJ. NO. YEAR HAW. | I-H3-1(75), UNIT VIIC | 2022 | 9

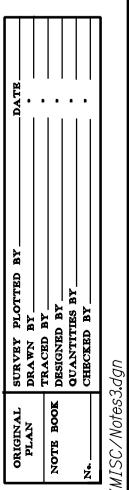


STATE OF HAWAII

<u>UTILITY NOTES</u> INTERSTATE ROUTE H-3 H-3 FINISH, UNIT VIIC FAIP NO. I-H3-1(75), UNIT VIIC

Scale: None

SHEET No. G-7 OF 8SHEETS



Date: Feb. 2022

BOARD OF WATER SUPPLY NOTES: - Cont.

- 11. The project shall be subject to the Board of Water Supply's Cross-Connection Control requirements prior to issuance of the Building Permit.
- 12. The installation, chlorination and testing of the water main facilities after the meter shall not be the responsibility of the Board of Water Supply.
- 13. Install 4 mil thick, non-metallic, blue colored, 6 inches wide warning tape over centerline of the pipe and below the base course along the entire length of trench. Tape should be marked "CAUTION WATER LINE BURIED" BELOW".
- 14. The Contractor shall furnish and install polyethylene wrap, 3 feet minimum at all taps (for DI pipe and copper lateral combination only) and plastic pipe (PE tubing) 3 feet long after meters for all service lateral connections.

HAWAIIAN TELCOM NOTES:

- 1. All applicable construction work shall be done in accordance with the Hawaiian Telcom "Standard Specifications for Placing Underground Telecommunications System", dated March 1999, and all subsequent amendments and additions.
- 2. 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.
- 3. The locations of existing utilities are approximate only. The Contractor shall verify their locations and exercise proper care in excavating in the area. The Contractor shall be responsible for any damages to these utilities as a result of their operations.
- 4. The location of telephone facilities are approximate only. Arrange to have telephone facilities toned prior to commencing excavation activities in the vicinity of underground telephone facilities. Excavation permit and toning request information can be obtained at the Excavation Desk on the 3rd flr. at 3239 Ualena Street.
- 5. The Contractor shall take necessary precaution not to damage existing cables or ducts. Any work involving existing cables or ducts shall be done in the presence of the Hawaiian Telecom inspector or their representative.

MECHANICAL/ELECTRICAL DESIGN AND ENGINEERING DIVISION NOTES:

- 1. The Contractor shall notify the Joint Pole Committee two (2) weeks in advance of any relocation of utility pole(s) that may be necessary.
- 2. The Contractor shall notify the Mechanical/Electrical Design and Engineering Division, Department of Design and Construction, three (3) working days prior to commencing work on the street lighting system (Phone: 527-5002).
- 3. The street lighting system shall be kept operational during construction. Any relocation required shall be approved by the Mechanical/Electrical Design and Engineering Division, Department of Design and Construction and paid for by the Contractor.
- 4. The Contractor shall be responsible for any damages to existing street lighting, traffic signal, and fiber optic facilities, including the traffic signal interconnect system, and any and all damages to these facilities shall be repaired by the Contractor at his cost in accordance with the requirements of the City and County of Honolulu.

PUBLIC HEALTH, SAFETY, AND CONVENIENCE:

- 1. The Contractor shall observe and comply with all federal, state and local laws required for the protection of public health and safety and environmental quality.
- 2. The Contractor at his own expense, shall keep the project and its surrounding areas free from dust nuisance. The work shall be in conformance with the Air Pollution Standards and Regulations of the State Department of Health. The City may require supplementary measures as
- 3. 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, convenience, and safety of the public.

FED. ROAD FEDERAL AID FISCAL SHEET DIST. NO. PROJ. NO. YEAR HAW. | I-H3-1(75), UNIT VIIC | 2022 | 10

PROFESSIONAL THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. Pulum O4/30/24
DIGNATURE EXPIRATION DATE
OF THE LICENSE

HIGHWAYS DIVISION

<u>UTILITY NOTES</u> INTERSTATE ROUTE H-3 H-3 FINISH, UNIT VIIC FAIP NO. I-H3-1(75), UNIT VIIC

Date: Feb. 2022 Scale: None SHEET No. G-8 OF 8 SHEETS

STATE OF HAWAII