

GENERAL NOTES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-098-1(011)	2012	ADD. 3R	64

1. The scope of work for this project consists of cold planing, resurfacing, reconstructing weakened pavement areas, replacing existing damaged curb, gutter, and sidewalk, installing new concrete bus pads, installing loop detectors and traffic signal head back plates, adjusting utility manholes and pullboxes, pavement markings and striping, extension of left turn lanes, and landscaping.
2. The Contractor is reminded of the requirements of Subsection 105.16 - Subcontracts, which requires him to perform work 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.
3. The Contractor's attention is directed to the following Sections of the Special Provisions: Subsection 104.09 Maintenance of Traffic; Subsection 104.11 - Utilities and Services; Subsection 107.06 - Contractor Duty Regarding Public Convenience; and Section 645 - Work Zone Traffic Control.
4. 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.
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. All damaged portions shall be replaced in accordance with the standards and specifications of the affected utility company at no cost to the State.
6. The Contractor shall verify the presence of existing aerial and underground utilities which may conflict with construction activities and shall coordinate with the utility company for temporary relocation as necessary. All cost associated with the temporary relocations shall be borne by the Contractor.
7. The exact locations and limits of areas to be reconstructed and cold planed shall be determined in the field by the Engineer.
8. The Contractor shall notify in writing, the Oahu Transit Services Inc. Roads Supervision Office, 811 Middle Street, Honolulu, Hawaii 96819 (ph. no. 848-4571), seven (7) days prior to any paving operations, informing them of location, scope of work, and closure of Vineyard Boulevard and/or traffic lanes and dates of closure.
9. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting construction operations.
10. The Contractor shall obtain all necessary permits prior to start of work at his own cost.
11. The Contractor shall submit maintenance plans and schedules, including traffic detours, road or lane closures, lane switches, and the placement of temporary traffic control devices, to the Engineer for acceptance prior to Construction.
12. The Contractor shall schedule construction to begin at Olomea Street/Halona Street so as to avoid conflict with the construction of other planned projects within the vicinity. The Contractor shall coordinate with the Contractors of those projects as listed in Subsection 108.01 - Notice to Proceed.

13. The Contractor shall remove and dispose of all existing raised pavement markers and traffic tapes prior to the overlaying of Asphalt Concrete. This work shall be considered incidental to HMA Pavement, Mix No. IV and will not be paid for separately.
14. All holes, depressions and wheel ruts shall be filled and compacted with Asphalt Concrete, Mix No. IV prior to resurfacing. This work will be paid for under HMA Pavement, Mix No. IV.
15. Smooth riding connections shall be constructed at all limits of project, including the beginning and end of project, connecting approaches, side streets, walkways and driveways as shown on the plans and/or as directed by the Engineer.
16. Existing drainage system shall be kept 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 and will not be paid for separately.
17. The Contractor shall provide and maintain for access to and from all existing driveways, sidewalks and ADA access routes complying with ADAAG Section 403, and side streets and cross streets at all times. This work shall be considered incidental to the various contract items and will not be paid for seperately.
18. All saw cutting will not be measured or paid for separately, but shall be incidental to the various contract items.
19. Contractor shall dispose or deliver any removed material at no cost to the State.
20. Prior to his resurfacing operations, the Contractor shall be responsible for locating, preserving and marking all utility and highway facilities that will require adjustments to the new finished pavement grade. Additionally, the Contractor shall submit to the Engineer a list of all items, including water, drainage, sewer, electrical, telephone, and cable utilities to be adjusted to the new finished grade. This work shall be considered incidental to the various contract items.
21. After completion of resurfacing, the Contractor and the Engineer will test for, and determine ponding areas (i.e. low spots within the resurfaced area). It shall be the responsibility of the Contractor to correct and resurface and/or repair all such ponding areas. Corrective measures shall be approved by the Engineer.
22. 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. If use of location is approved by the Engineer, the Contractor shall obtain a permit to use the property within the highway right-of-way from the State Highways Right-of-Way Branch at telephone no. 692-7332.
23. Tack coat shall be incidental to the various Asphalt Concrete Pavement items.
24. The Contractor is to take special measures to reduce dust from cold planing operations including but not limited to use of water misters on cold planing equipment and vacuum sweepers. Use of power brooms to sweep road is not allowed if a dust nuisance is created.

25. All work specified in the Contract but not listed separately in the proposal shcedule shall be considered incidental to other various contract items and shall not be paid for separately.
26. Existing concrete sidewalk shall be saw cut at scorelines prior to reconstructing the sidewalk. Actual location of the shore-line shall be determined in the field. Saw cutting shall be considered incidental to reconstructing the sidewalk. The exact locations and limits of concrete sidewalk to be reconstructed shall be determined in the field by the Engineer. Demolition and disposal of existing sidewalk shall be considered incidental to new sidewalk.
27. Demolition and disposal of existing curb and gutter, driveways, and any debris shall be considered incidental to the various contract items.
28. The Contractor might encounter Portland Cement Concrete Pavement when cold planing over left turn lanes. If P.C.C. pavement is encountered, the Contractor shall cold plane to the top of the P.C.C. pavement and put back the same A.C. thickness. Any additional costs shall be considered incidental to the various contract items.
29. The Contractor shall replace damaged detectable warnings and install new detectable warnings at curb ramps as shown on the plans and/or as directed by the Engineer. This work will be paid for under Item No. 650.1000.
30. Existing facilities and/or pavement to remain which has been damaged by the Contractor shall be restored to its original condition at no cost to the State.
31. The Contractor shall be held liable for any damages incurred to the existing landscaping as a result of his operations.
32. All utilites on sidewalk shall be adjusted to the new finished sidewalk grade. This work shall be considered incidental to new sidewalk.
- △ 33. The Contractor shall be responsible for all survey monuments (Highway, City and County and Survey Office Brass Disks) in the project site. Any survey monuments that will be disturbed or destroyed during construction shall notify Highways Surveyor immediately and provide a minimum of 30 days to have the survey monument referenced. If lane closure is needed, the Contractor shall provide the surveyor a safe zone to work on the road.
- △ 34. HECO's existing 138kV lines run from Liliha Street to Miller Street on the mauka side and from Miller Street onto Lusitana Street on the makai side. HECO's existing Transmission Splice Vaults (TSV) are located at approximately ± Sta. 107+30± and ± Sta. 110+95±. Approximate depth from top of existing pavement for TSV ranges from 2.68 feet to 3.47 feet.

ORIGINAL PLAN	DATE
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QUANTITIES BY	
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△ 4	3/25/13	Revised General Note No. 34.
△ 3	2/25/13	Added General Note No. 34.
△ 2	1/10/13	Added General Note No. 33.
DATE	REVISION	

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
<b>GENERAL NOTES AND LEGEND</b>
VINEYARD BOULEVARD RESURFACING Vicinity of Palama St. to End of H-1 On-and-off Ramp Federal Aid Project No. STP-098-1(011)
Date: November, 2012
SHEET No. 1 OF 2 SHEETS



PAVING AROUND MANHOLES:

1. The Contractor shall first lower manholes more than 3" prior to cold planing. The work shall be considered incidental to the various paving contract items. Upon final paving, the manhole shall be raised and paid under various contract items pertaining to manhole adjustments.
2. The Contractor shall place hot asphalt concrete around manholes and compact properly with a vibrating plate compactor.
3. If a plate compactor is not used, the Contractor shall use a pneumatic roller to roll the area around the manhole which is not rolled by the steel roller.
4. The Contractor shall fog seal or brush emulsion seal on the material placed as backfill on the area around the manhole that was not compacted by the roller. Black sand shall be used to blot out the area if the fog is too heavy.

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LEGEND

- Reconstruction Areas
- Resurfacing Limits
- New PCC Bus Pad Pavement
- Existing Electrical Line
- Existing Power Pole
- Existing Guywire
- Existing Electric Manhole
- Adjusted Elec. MH Frame/Cover
- Existing Electric Pullbox
- Existing Telephone Manhole
- Adjusted Tele. MH Frame/Cover
- Existing Telephone Pullbox
- Existing Telephone Cabinet
- Existing TV Cable
- Existing 2½" Water Line
- Existing 6" Water Line
- Existing 8" Water Line
- Existing 12" Water Line
- Existing 24" Water Line
- Existing 42" Water Line
- Existing Water Manhole
- Adjusted Water MH Frame/Cover
- Existing Water Valve Box
- Adjusted Water Valve Box
- Existing Water Meter
- Existing Fire Hydrant
- Existing 6" Sewer Line
- Existing 8" Sewer Line
- Existing 10" Sewer Line
- Existing 12" Sewer Line
- Existing Sewer Manhole
- Adjusted Sewer MH Frame/Cover

Existing ⅝" Gas Line

Existing ¾" Gas Line

Existing 1" Gas Line

Existing 1¼" Gas Line

Existing 2" Gas Line

Existing 3" Gas Line

Existing 6" Gas Line

Existing Monument

Adjusted Monument

Existing Storm Drain Manhole

Adjusted Storm Drain MH Frame/Cover

Existing Grated Drop Inlet

Existing Catch Basin

Existing Traffic Sign

Existing Highway Lighting Standard

Existing Highway Lighting Pullbox

Existing Traffic Signal Pole

Existing Traffic Signal Pullbox

Relocate Existing Traffic Pullbox

Existing Traffic Signal Cabinet

Existing Telephone Pullbox

Existing Utility Pullbox

Relocate Existing Utility Pullbox

Existing Utility Cabinet

Existing Metal Guardrail

2	2/8/13	Removed HECO and Hawaii Gas Notes.
DATE	REVISION	
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION		
<u>GENERAL NOTES AND LEGEND</u>		
<u>VINEYARD BOULEVARD RESURFACING</u>		
<u>Vicinity of Palama St. to End of H-1 On- and Off-Ramp</u>		
<u>Federal Aid Project No. STP-098-1(011)</u>		
Date: November, 2012		
SHEET No. 2 OF 2 SHEETS		

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HAWAII	HAW.	STP-098-1(011)	2012	ADD4S-1R	64

HECO NOTES:

1. 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 guaranteed 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 ener-gized and will remain energized during construction unless prior special arrangements have been made with HECO. Only HECO personnel are to handle these ener-gized 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. It is the Contractor's responsibility to be informed of and comply with the law.

At any 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 HECO at least four (4) weeks prior to the planned encroachment so that, if feasible, the necessary protections (e.g. relocate or de-energize HECO lines) can be investigated. HECO may also be able to blanket its distribution (12kV and below) lines to provide a visual aid in preventing accidental contact. HECO's cost of safeguarding or identifying its lines will be charged to the Contractor.

Contact HECO's Customer Installations Department at 543-7846 for assistance in identifying and safeguarding overhead power lines.

6. POLE BRACING

A minimum clearance of 10 feet must be maintained when excavating around utility poles and/or their anchor system to prevent weakening or pole support failure. Should work require excavating within 10 feet of a pole and/or its anchor system, the Contractor shall protect, support, secure, and take all other precautions to prevent damage to or leaning of these poles. The Contractor is responsible for all pole bracing designs and structural calculations, as well as the associated costs to brace, repair, or straighten poles. All means of structural support for the pole and/or anchor system proposed by the Contractor shall be submitted to HECO's Customer Installations Department (543-7846) for review a minimum of ten (10) working days prior to implementation. The cost of HECO's review/assistance in providing proper support and protection of its poles will be charged to the Contractor.

7. UNDERGROUND LINES

The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of under-ground 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 Department at 543-7846 a minimum of ten (10) working days in advance.

Special precautions are required when excavating near HECO's 138kV underground lines (See HECO Instructions to Consultants/Contractor's on "Excavation near HECO's Underground 138kV 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 respon-sible for:

- a) Arranging for HECO standby personnel to observe work at Contractor's cost.
- 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 it from damage.
- d) Backfilling with proper backfill material including special thermal backfill where existing (refer to Engineering Department for thermal backfill specifi-cations).

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION		
UTILITY NOTES		
VINEYARD BOULEVARD RESURFACING		
Vicinity of Palama St. to End of H-1 On-and-off Ramp		
Federal Aid Project No. STP-098-1(011)		
Date: February 2013		
SHEET No. 1 OF 2 SHEETS		

4	3/25/13	Replaced HECO Notes.
2	2/12/13	Added New Sheet.
DATE	REVISION	

ADD. 4S-1R

SURVEY PLOTTED BY	DATE
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HECO NOTES: (Continued)

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 locations, identifying right of way and property lines, excavation and backfill, permits and traffic control, barricading, and restoration of pavement, sidewalks, and other facilities.

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 Honolulu Power Plant Shift Supervisor at 533-2102 (a 24-hour number) so HECO personnel can secure the damaged section and report any oil spills to the proper authorities. In case of damage or suspected damage to the Waiau or Kahe fuel pipelines, the Contractor shall also notify Chevron at 682-2227. 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 Department at 543-7846 a minimum of five (5) working days in advance to arrange for HECO stand-by personnel.

14. CLEARANCES

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

MINIMUM SEPARATION CLEARANCES TO EXISTING UNDERGROUND DUCTLINES HORIZONTAL (PARALLEL)				
UTILITY BEING INSTALLED	EXISTING DIRECT BURIED CABLE	EXISTING DIRECT BURIED IN CONDUIT (no concrete encasement)	EXISTING 3" CONCRETE ENCASEMENT	APPLICABLE NOTES
HECO DB Conduits	12"	3"	0"	
HECO 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	36"	36"	36"	1, 4
Water Service Laterals	12"	12"	12"	
Water (Concrete Jacketed)	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".
  - If 36" clearance cannot be met:
    - If clearance is less than 12", Jacket sewer line with reinforced concrete (per HECO'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.
  - All Fuel Pipeline crossings shall be reviewed and approved by the company that owns and maintains it.
  - 5 feet clear to water mains 16" and larger.
  - For situations with 0" minimum separation, a 6" separation is recommended.
  - Clearances measured from outer edges or diameters of utilities.

4	3/25/13	Replaced HECO Notes.
2	2/12/13	Added New Sheet.
DATE		REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION		
UTILITY NOTES		
VINEYARD BOULEVARD RESURFACING Vicinity of Palama St. to End of H-1 On-and-off Ramp Federal Aid Project No. STP-098-1(011)		
Date: March 2013		
SHEET No. 2 OF 2 SHEETS		

ADD. 4S-2R

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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HECO NOTES: (Continued)

MINIMUM SEPARATION CLEARANCES TO EXISTING UNDERGROUND DUCTLINES VERTICAL (CROSSING)				
UTILITY BEING INSTALLED	EXISTING DIRECT BURIED CABLE	EXISTING DIRECT BURIED IN CONDUIT (no concrete encasement)	EXISTING 3" CONCRETE ENCASEMENT	APPLICABLE NOTES
HECO DB Conduits	6"	3"	0"	
HECO 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"	6"	
Water Service Laterals	6"	6"	6"	
Water DB	6"	6"	6"	2
Water (Concrete Jacketed)	6"	6"	6"	2
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				3
<div>Notes:</div> <div><div>1. If clearance cannot be met:</div><div><div>- If clearance is less than 12", Jacket sewer line with reinforced concrete (per HECO's std. 30-1030) for a distance of 5' plus pipe diameter.</div><div>- If clearance is between 12" and 24", jacket sewer line with plain concrete.</div></div><div>2. 12" vertical clearance for pipe diameters greater than 16".</div><div>3. All Fuel Pipeline crossings shall be reviewed and approved by the company that owns and maintains it.</div><div>4. 5 feet clear to water mains 16" and larger.</div><div>5. For situations with 0" minimum separation, a 6" separation is recommended.</div><div>6. Clearances measured from outer edges or diameters of utilities.</div></div>				

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 drawing.

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.

Excavation Near Heco's 138kV Underground Lines

16. HECO's 138 kV High Pressure Fluid Filled (HPFF) underground cables are installed in specially coated, cathodically protected steel pipes and are surrounded by a special low strength (approx. 100 psi) Fluidized Thermal Backfill (FTB). FTB is a backfill engineered to meet specific thermal resistivity, thermal stability, strength, and flowability requirements as well as provide construction advantages. FTB is a concrete-like backfill consisting of a coarse and/or medium stone aggregate, sand, and a small amount of cement for strength. The proportions are selected to minimize thermal resistivity, and maximize flowability without segregation of the components. FTB will flow readily to fill all the voids yet harden quickly to a uniform density. It provides mechanical protection for the cable system and support for underground and surface facilities. FTB is supplied as a ready-mix in concrete trucks and may be installed by pouring or pumping.
17. The following precautions must be taken when excavating near HECO's 138kV underground lines:
- a) The Contractor shall call The Hawaii One Call Center at 866-423-7287 for field verification of HECO's underground lines a minimum of 5 working days prior to excavation.

b) The Contractor is responsible for properly supporting and protecting the 138kV cable pipes and FTB ductbank at all times.

c) A HECO stand-by inspector must be on-site anytime the excavation is within 10 feet of the outside face of the FTB enclosure surrounding the 138kV cable pipes. The cost of such inspection will be charged to the Contractor.

d) Once the Contractor reaches the FTB surrounding the 138kV cable pipes, the Contractor shall use only hand tools to further excavate and remove the FTB.

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4	3/25/13	Replaced HECO Notes.
2	2/12/13	Added New Sheet.
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STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION		
UTILITY NOTES		
VINEYARD BOULEVARD RESURFACING Vicinity of Palama St. to End of H-1 On-and-off Ramp Federal Aid Project No. STP-098-1(011)		
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HECO NOTES: (Continued)

- e) The Contractor shall take great care when excavating the FTB and nearing the 138kV cable pipes to prevent damage to the protective coating on the cable pipes. Only HECO personnel are to handle these cable pipes and erect temporary guards to protect these cable pipes from damage. The cost of HECO's assistance in providing proper support and protection of its underground lines will be charged to the Contractor. The Contractor shall exercise due care and precautions to avoid disturbing any energized cables and temporary guards and shall work cautiously at all times to avoid accidents.
  - f) The Contractor shall be responsible for any damages to HECO's facilities and all costs associated with the damage and repair as a result of his operations. Repair work shall be done by HECO or by the Contractor under HECO's supervision.
  - g) If the coating is damaged in any way, it is imperative that the HECO stand-by inspector on-site be notified as soon as possible such that the coating may be repaired before backfilling. Even a nick or pinhole puncture in the protective coating can jeopardize the integrity and reliable operation of the underground cable system.
  - h) The 138kV lines will remain energized at all times. However, in the event that the 138kV lines are damaged, depending on the extent of the damage, the 138kV line may be instantaneously de-energized as a result of sophisticated relay protection equipment operating, or it may need to be manually de-energized by following a system operational protocol.
  - i) If any portion of the FTB is removed during excavation, the FTB must be replaced per HECO specifications. The base design mix ID# for FTB is XX67N015 per the Ameron Hawaii Concrete Mix Submittal Number 2388 dated 4/25/02. Please note: Do not use any other additives such as air entraining agent, water reducing agent, etc., in the above mixture.
18. Please contact the Hawaii One Call Center at 866-423-7287 at least 5 working days prior to any trenching and/or backfilling near the existing HECO 138kV underground transmission lines.
19. In case of damage or suspected damage, please immediately contact HECO Trouble Dispatcher at ph. 548-7961 (this phone number is manned 24-hours a day).

HAWAII GAS NOTES:

1. The Contractor shall call the Hawaii One Call Center at 811 prior to commencement of excavation to avoid accidental damage to gas pipelines. Information on the location of Hawai'i Gas' pipelines is available by contacting Hawaii Gas Maps & Records Department for Oahu at 808-594-5575.

<b>ORIGINAL PLAN</b>	SURVEY PLOTTED BY _____ DATE _____ DRAWN BY <u>X</u> _____ TRACED BY _____ <b>NOTE BOOK</b> _____ <u>003</u> DESIGNED BY <u>X</u> _____ QUANTITIES BY _____ CHECKED BY _____
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4	3/25/13	Replaced HECO Notes.
2	2/12/13	Added New Sheet.
DATE		REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**UTILITY NOTES**

VINEYARD BOULEVARD RESURFACING  
*Vicinity of Palama St. to End of H-1 On-and-off Ramp*  
Federal Aid Project No. STP-098-1(011)

*Date: March 2013*

SHEET No. 2 OF 2 SHEETS

ADD. 4S-4R