

GENERAL NOTES

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2020	3	167

- ORIGINAL PLAN

NOTE BOOK

No. _____

SURVEY PLOTTED BY _____

DRAWN BY _____

DESIGNED BY _____

CHECKED BY _____

DATE _____

• • • • •
1. The scope of work for this project consists of cold planing; resurfacing; reconstruction of weakened pavement areas; utility adjustment; widening; regrading; hydro-mulch seeding; removal of existing guardrail and existing obsolete irrigation pipes; installation of guardrail, end treatments, grouted rubble paving (GRP); safety edge, shoulder dressing, pavement markings, striping, retroreflective borders on all overhead traffic signal heads, milepost reference markers, signs, curb ramps, curbing, traffic signals, and shared-use path; modification of traffic signal timing and phasing; and upgrading of existing railroad crossing.

2. 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.

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 the 2005 Hawaii Standard Specifications for Road and Bridge Construction Section 645 - Work Zone Traffic Control.

4. 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 tone for the exact locations and depths of all underground utilities, either shown on or omitted from the plans, in areas where work, such as the placement of sign posts, installation of guardrail, catch basins, traffic signal, widening, etc. may affect these properties. Toning shall be considered incidental to the various contract items and will not be paid for seperately. 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.

5. All existing utilities, whether or not shown on the plans, shall be protected at all times by the Contractor during construction unless specified on the plans to be abandoned. The Contractor shall be held liable for any damages incurred to the existing utilities 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 relocations, as necessary. All costs associated with temporary relocations shall be borne by the Contractor.

7. The Contractor shall indemnify and be solely responsible for the protection of adjacent properties, utilities and existing structures from damages due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.

8. Prior to 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.

9. The Contractor shall submit maintenance plans and schedules, including road or lane closures, lane switches, and the placement of temporary traffic control devices to the Engineer for acceptance prior to Construction.

10. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting construction operations.

11. The exact locations and limits of areas to be reconstructed and cold planed shall be determined in the field by the Engineer.

12. The Contractor shall notify the Department of Transportation Services, Public Transit Division at ph. #768-8396 and the Oahu Transit Services, Inc. Bus Operations (ph. #848-4578 or 852-6016) and Paratransit Operations (ph. #454-5041 or 454-5020) of the scope of work, location, proposed closure of any street, traffic lane, sidewalk, or bus stop, and duration of project at least two (2) weeks prior to starting construction operations.

13. The Contractor shall obtain all necessary permits prior to start of work at his own cost.

14. 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.

15. 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 Hot Mix Asphalt Pavement, Mix No. IV and will not be paid for separately.

16. All holes, depressions and wheel ruts shall be filled and compacted with Hot Mix Asphalt Pavement, Mix No. V prior to resurfacing. This work shall be considered incidental to various contract items.

17. The 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 various contract items.

18. Smooth riding connections shall be constructed at all limits of resurfacing 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. This work shall be considered incidental to various contract items.

19. The Contractor shall clean and remove any accumulation of aggregates along the roadside within 10 feet of the edge of pavement. This work shall be considered incidental to various contract items.

20. Tack coat shall be incidental to various Asphalt Concrete Pavement items.

21. 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.

22. Removal and disposal of existing guardrail, end terminals, asphalt concrete pavement, and any debris shall be considered incidental to their respective bid items.

23. All saw cutting and safety edge work shall be considered incidental to various contract items.

24. The Contractor shall provide for vehicular and pedestrian access to and from all existing side streets and driveways at all times.

25. 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.

26. The Contractor shall be held liable for any damages incurred to the existing landscaping as a result of his operations.

27. Contractor shall dispose or deliver any removed material at no cost to the State.

28. The Contractor shall provide and maintain for access to and from all existing driveways, sidewalks, ADA access routes complying with 2010 ADAAG Section 206.I, side streets, and cross streets at all times. This work shall be considered incidental to various contract items and will not be paid for separately.

29. After completion of resurfacing, the Contractor and the Engineer will test for and determine ponding areas (i.e. low spots within 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.

30. 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.

31. The vertical riding surface drop-off between adjacent surfaces shall not exceed 3-inches. This shall include differences in height between adjacent pavement surfaces, cold planed surfaces, bridge decks and new concrete slabs. If a vertical riding surface drop-off exists at the end of each day's work, the Contractor shall provide temporary transition tapers with maximum slopes of 48:1 for travel in the longitudinal direction and 6:1 for transverse movements. See detail on Sheet No. A5.

32. The Contractor shall not perform any construction work during periods of heavy rainfall.

33. The Contractor shall use the Traffic Control setup included in the 2005 Hawaii Standard Specifications for Road and Bridge Construction Section 645, and/or develop a site specific Traffic Control Plan where warranted.

34. The Contractor shall coordinate with the Honolulu Police Department Special Duty Section to hire police officers for traffic control operations and transporting of project equipment to ensure minimal delay due to lane closures.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES & LEGEND

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS

Roosevelt Avenue to Farrington Highway

Project No. 901A-01-19

Date: January, 2020

SHEET No. 1 OF 6 SHEETS

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GENERAL NOTES (Cont.)

35. Any Survey Monuments that are disturbed shall be restored under the supervision of a licensed land surveyor registered in the State of Hawaii at no cost to the State. All survey data shall be certified by the surveyor and submitted to the Engineer.
36. All work specified in the contract but not listed seperately in the proposal schedule shall be considered incidental to the other various contract items and shall not be paid for seperately.
37. Material and/or equipment shall be stockpiled or stored within the highway right-of-way 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 ph. #692-7332.
38. The Contractor shall probe to verify the exact location of any underground utilities within the project limits prior to installing guardrail posts. The Contractor shall adjust the location of guardrail posts accordingly to account for the actual locations of underground utilities. Any adjustments to the contract or underground utilities shall be considered incidental to various items of work. The Contractor shall be held liable for any damages incurred to 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 the Contractor's expense.
39. Hydro-mulch Seed newly graded areas with Bermuda Seeding.
40. For toning of US Army Cables, one of the following vendors shall be utilized to do the work:
1. Verizon Federal/AT#T
Contact: Doug Ellenberg (Douglas.Ellenberg@verizon.com) or Nichole Nakamichi (Nichole.L.Nakamichi@verizon.com)

2. Bering Sea (BSeT)
Contact: Shelton Choy (Shelton.Choi@beringseagroup.com)

Cables shall be toned prior to the start of the project.

PAVING AROUND MANHOLES

1. The Contractor shall first lower manholes more than cold planing thickness indicated on typical sections 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 the 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 our the area if the fog is too heavy.

HAWAII ONE CALL CENTER

1. Before conducting any excavation in the public right of way or on private property, the Contractor shall call the Hawaii One Call Center at least five (5) working days before beginning excavation operations. Be sure to give them the address and location of the nearest cross street(s) near the planned excavation site.
- Call 811 toll-free 24 hours a day. For more information, go to www.callbeforeyoudig.org
2. The Hawaii One Call Center will contact all utility companies to tone, mark, or identify the location of their underground utilities for free. Mark the area where you plan to excavate in White and label all of the other utilities as listed below.
- RED

Electric power lines, cables, or conduits, and lighting cables.
- YELLOW

Gas, oil steam, petroleum or other hazardous liquid or gaseous materials.
- ORANGE

Communications, cable TV, alarm or signal lines, cables, or conduits.
- BLUE

Water, irrigation, and slurry lines.
- GREEN

Sewers, storm sewer facilities or other drain lines.
- WHITE

Proposed excavation.
- PINK

Temporary survey markings.
- PURPLE

Reclaimed water, irrigation and slurry lines.

HAWAIIAN TELCOM UTILITY ADJUSTMENT NOTES

1. Adjust existing manholes to the required elevations to match final roadway surface. All applicable construction work shall be in accordance with the "Hawaiian Telcom Standard Specifications for Placing Telephone Systems" dated January 2007, all subsequent amendments and additions, and all other pertinent standards for telecommunications construction. The Contractor shall familiarize his personnel by obtaining the applicable specifications.

DIVISION OF FORESTRY AND WILDLIFE NOTES

1. To avoid impacts to the Hawaiian hoary bat, no barbed wire shall be used, and woody plants greater than 15 feet tall shall not be disturbed, removed or trimmed during the bat birthing and pup rearing season (June 1 through September 15).
2. If nighttime lighting is required, any lights used shall be fully shielded to minimize impacts to native seabirds.
3. Soil or plant material shall not be moved from the project site to be used in other locations on the island due to the possible presence of pathogens.

LEGEND

	Reconstruction Areas		Existing 30" Sewer Line
	Resurfacing Limits		Existing 18" Sewer Line
	Existing Electrical Line		Existing 12" Sewer Line
	Existing Guy Pole		Existing 10" Sewer Line
	Existing Power Pole		Existing 8" Sewer Line
	Existing Hawaiian Electric Manhole		Existing Sewer Manhole
	Adjusted Elec. MH Frame/Cover		Adjusted Sewer MH Frame/Cover
	Existing Hawaiian Electric Hand Hole		Existing Oil Line
	Existing Hawaiian Electric Pullbox		Existing 6" Gas Line
	Existing Underground Telephone Line		Existing 4" Gas Line
	Existing Telephone Pole		Existing 2" Gas Line
	Existing Telephone Manhole		Existing 1" Gas Line
	Adjusted Telephone Manhole Frame/Cover		Existing 3/4" Gas Line
	Existing Telephone Hand Hole		Existing Gas Valve Box
	Existing Hawaiian Telcom Manhole		Adjusted Gas Valve Box
	Adjusted Hawaiian Telcom Manhole Frame/Cover		Existing Gas Manhole
	Existing Hawaiian Telcom Pullbox		Adjusted Gas MH Frame/Cover
	Existing Signal Corps Line		Existing Monument
	Existing US Army Line		Adjusted Monument
	Existing US Navy Line		Existing 24" Drain Line
	Existing TV Manhole		Existing Storm Drain Manhole
	Adjusted TV Manhole Frame/Cover		Adjusted Storm Drain MH Frame/Cover
	Existing TV Cable		Existing Grated Drop Inlet
	Existing 30" Water Line		Existing Catch Basin
	Existing 24" Water Line		Existing Highway Lighting Standard
	Existing 12" Water Line		Existing Highway Lighting Standard Pullbox
	Existing 8" Water Line		Adjusted Highway Lighting Standard Pullbox
	Existing 6" Water Line		Existing Traffic Signal Pole
	Existing 4" Water Line		Existing Traffic Signal Pole
	Existing 2 1/2" Water Line		Existing Traffic Signal Pullbox
	Existing 2" Water Line		Adjusted Traffic Signal Pullbox
	Existing 1 1/2" Water Line		New Traffic Signal Pullbox
	Existing 1" Water Line		Existing Utility Pullbox
	Existing Water Manhole		
	Adjusted Water MH Frame/Cover		
	Existing Water Air Valve		
	Adjusted Water Air Valve		
	Existing Water Valve Box		
	Adjusted Water Valve Box		
	Existing Water Meter		
	Adjusted Water Meter		
	Existing Fire Hydrant		
	Adjusted Fire Hydrant		
	Existing Irrigation Box		
	Existing 42" Reinforced Concrete Pipe		
	Existing 30" Reinforced Concrete Pipe		

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES & LEGEND

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS

Roosevelt Avenue to Farrington Highway

Project No. 901A-01-19

Date: January, 2020

SHEET No. 2 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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CITY & COUNTY OF HONOLULU CONSTRUCTION NOTES

1.

All applicable construction work shall be done in accordance with the Standard Specifications for Public Works Construction, September 1986 and Standard Details for Public Works Construction, September 1984, as amended, of the Department of Public Works, City and County of Honolulu and the Counties of Kauai, Maui, and Hawaii.
2.

The underground pipes, cables or ductlines known to exist by the engineer from his search of records are indicated on the plans. The Contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the area. Wherever connections of new utilities to existing utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for the new lines.
3.

No Contractor shall perform any construction operation so as to cause falling rocks, soil or debris in any form to fall, slide or flow into existing City drainage systems, or adjoining properties, streets or natural watercourses. Should such violations occur, the Contractor may be cited and the Contractor shall immediately make all remedial actions necessary.
4.

The general contractor/developer/owner of the project shall be responsible for conformance with applicable provisions of the Hawaii Administrative Rules, Title 11, Chapter 54, "Water Quality Standards," and Title 11, Chapter 55, "Water Pollution Control", as well as Chapter 14 of the Revised Ordinances of Honolulu, as amended. Best Management Practices shall be employed at all times during construction.

The general contractor/developer/owner of the project shall obtain National Pollutant Discharge Elimination System (NPDES) Permit coverage(s) for the following:

1.

Storm water discharges associated with construction activities that disturb one (1) acre or more, and
2.

Discharges of hydrotesting effluent, dewatering effluent, and well drilling effluent to state waters.

In accordance with State law, all discharges related to project construction or operations are required to comply with State Water Quality Standards (Hawaii Administrative Rules, Chapter 11-54). Best Management Practices shall be used to minimize or prevent the discharge of sediment, debris, and other pollutants to State waters. Permit coverage is available from the Department of Health, Clean Water Branch at <http://health.Hawaii.gov/cwb>. The owner/developer/contractor is responsible for obtaining other Federal, State, or local authorizations as required by law.

5.

For non-City projects, the Contractor shall notify the Civil Engineering Branch, D.P.P. at 768-8084 to arrange for inspectional services and submit two (2) sets of approved Construction Plans seven (7) days prior to commencement of construction work. For City projects, the Contractor shall coordinate inspectional services with the responsible City agency.
6.

For non-City projects, the Contractor may submit a substitution request to precast any City owned and/or maintained drainage structure (ex., catch basins, drain manholes, drain inlets, culverts, etc). However, prior to construction and installation of any precast structure, the Contractor shall a) submit six (6) sets of shop drawings to the Civil Engineering Branch, Department of Planning and Permitting and obtain written approval and b) notify the Civil Engineering Branch, Department of Planning and Permitting at 768-8084 to arrange for inspectional services. Non-compliance with any of these requirements shall mean immediate suspension of all precast construction work and rejection of all precast structures already constructed.

For City projects, the Contractor shall submit shop drawings to the responsible City agency for review and approval. Also, the Contractor shall coordinate inspectional services with the responsible City agency.

7. Confined Space

For entry by City personnel, including inspectors, into a permit required confined space as defined in 29 CFR Part 1910.146(b), the Contractor shall be responsible for providing:

- I.

All safety equipment required by the confined space regulations applicable to all parties other than the construction industry, to include, but not limited to, the following:

a.

Full body harnesses for up to two personnel.

b.

Lifeline and associated clips.

c.

Ingress/egress and fall protection equipment.

d.

Two-way radios (walkie-talkies) if out of line-of-sight.

e.

Emergency (escape) respirator (10 minute duration).

f.

Cellular telephone to call for emergency assistance.

g.

Continuous gas detector (calibrated) to measure oxygen, hydrogen sulfide, carbon monoxide and flammables (capable of monitoring at a distance at least 20-feet away).

h.

Personal multi-gas detector to be carried by inspector.
- II.

Continuous forced air ventilation adequate to provide safe entry conditions.
- III.

One attendant/rescue personnel topside (two, if conditions warrant it).
8.

Pursuant to Chapter 6E, HRS, in the event any artifacts or human remains are uncovered during construction operations, the Contractor shall immediately suspend work and notify the Honolulu Police Department, the State Department of Land and Natural Resources-Historic Preservation Division (692-8015). In addition, for non-City projects, the Contractor shall inform the Civil Engineering Branch, Department of Planning and Permitting (768-8084); and for City projects, notify the responsible City agency.
9.

For projects abutting State Highways rights-of way, the owner or his authorized representative shall notify the State Department of Transportation, Highways Division, Oahu District, Drainage Discharge Unit at 831- 6793 for an assessment of State Highways permit requirements.
10.

For Bench Mark, see Roadway Plans.
11.

Prior to commencement of work within City Right-of-Way, the Contractor shall obtain a Street Usage Permit from the Department of Transportation Services (DTS) and a Trenching Permit from the Department of Planning and Permitting (DPP). DPP will provide an over-the-counter plan review for the Trenching Permit.

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STATE OF HAWAII
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HAWAIIAN ELECTRIC COMPANY NOTES

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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1. Location of Hawaiian Electric Facilities.

The location of Hawaiian Electric'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 Hawaiian Electric'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 Hawaiian Electric's Planning and Design Section of the Customer Installations division (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 Hawaiian Electric overhead and underground lines are energized and will remain energized during construction unless prior special arrangements have been made with Hawaiian Electric. Only Hawaiian Electric 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 Hawaiian Electric 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 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.

The Contractor shall not excavate within 10 feet from Hawaiian Electric's utility poles Or any anchor system supporting the utility pole. If the Contractor must excavate Closer than 10 feet from a utility pole or its anchor system, the 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, the 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 the Contractor's submittal. The 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 the Contractor's drawings and to repair or straighten poles impacted by the Contractor's activities, including response and restoration costs incurred by Hawaiian Electric arising out of or related to outages caused by the Contractor's failure to meet the foregoing requirements. Hawaiian Electric's review and approval of any Contractor submittals including its work procedure shall not relieve the Contractor from any liability resulting from the Contractor's excavation near or around Hawaiian Electric's utility poles.

7. Underground Lines.

The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of underground lines. Hawaiian Electric's existing electrical cables are energized and will remain energized during construction. Only Hawaiian Electric personnel are to break into existing Hawaiian Electric facilities, handle these cables, and erect temporary guards to protect these cables from damage. The cost of Hawaiian Electric'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 Hawaiian Electric's customer installations division at 543-7070 a minimum of ten (10) working days in advance.

Special precautions are required when excavating near Hawaiian Electric's 138kv or 46kv underground lines (see Hawaiian Electric instructions to Consultants/Contractors on "Excavation Near Hawaiian Electric'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 a 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 Hawaiian Electric's underground fuel oil pipelines. Special precautions are required when excavating near Hawaiian Electric's underground fuel oil pipelines (see Hawaiian Electric's specific fuel pipeline "Guidelines" to Consultants/Contractors on excavation near Hawaiian Electric's underground fuel pipelines for detailed requirements).

9. Excavations. When trench excavation is adjacent to or beneath Hawaiian Electric's existing structures or facilities, the Contractor is responsible for:
- a) Arranging for Hawaiian Electric 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 division for thermal backfill specifications).

10. Relocation of Hawaiian Electric Facilities.

Any work required to relocate or modify Hawaiian Electric facilities shall be done by Hawaiian Electric, or by the Contractor under Hawaiian Electric's supervision. The Contractor shall be responsible for all coordination, and shall provide necessary support for Hawaiian Electric'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 Hawaiian Electric's facilities not shown on the plans May be cause for lengthy delays. The Contractor acknowledges that Hawaiian Electric 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 Hawaiian Electric'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, Hawaiian Electric should be notified immediately upon discovery or identification of such conflict.

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Project No. 901A-01-19

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HAWAIIAN ELECTRIC COMPANY NOTES (Cont.)

12. Damage To Hawaiian Electric Facilities.

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

In case of damage or suspected damage to Hawaiian Electric's fuel pipeline, the Contractor shall immediately notify Hawaiian Electric's security command center at 543-7685 (a 24-hour number) so Hawaiian Electric 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. Hawaiian Electric Stand-by Personnel.

The Contractor may request Hawaiian Electric to provide an inspector to stand-by during construction near Hawaiian Electric's facilities. The cost of such inspection Will be charged to the Contractor. The Contractor shall call Hawaiian Electric's customer installations division at 543-7070 a minimum of three (3) months in advance to arrange for Hawaiian Electric stand-by personnel.

14. Clearances.

The following clearances shall be maintained between Hawaiian Electric'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 DIRECT BURIED IN CONDUIT (no conc. encasement)	HAWAIIAN ELECTRIC 3" (MIN.) 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".
- 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.
- 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. Whenever concrete jackets are involved, clearances shall be total clear distance between the concrete jacket and utility concerned.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2020	7	167

GUIDELINES FOR MINIMUM VERTICAL (CROSSINGS) CLEARANCES BETWEEN HAWAIIAN ELECTRIC AND OTHER UNDERGROUND UTILITIES				
UNDERGROUND UTILITY	HAWAIIAN ELECTRIC DIRECT BURIED CABLE	HAWAIIAN ELECTRIC DIRECT BURIED IN CONDUIT (no conc. encasement)	HAWAIIAN ELECTRIC 3" (MIN.) CONCRETE ENCASEMENT	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:

- If 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.
- All Fuel Pipeline crossings shall be reviewed and approved by the company that owns and maintains it.
- For situations with 0" minimum separation, a 6" separation is recommended.
- 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.
- 36" clearance is required for trenchless installation work.

The Contractor shall notify the construction manager & Hawaiian Electric 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 Hawaiian Electric 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 Hawaiian Electric.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES & LEGEND

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
Roosevelt Avenue to Farrington Highway
Project No. 901A-01-19

Date: January, 2020

HAWAIIAN ELECTRIC COMPANY NOTES (Cont.)

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2020	8	167

ADDITIONAL NOTES WHEN WORK INVOLVES CONSTRUCTION OF HAWAIIAN ELECTRIC FACILITIES

16. Schedule.

The Contractor shall furnish his construction schedule six (6) months prior to starting work on Hawaiian Electric Facilities. The Contractor shall give Hawaiian Electric, in writing, three (3) months notice to proceed with Hawaiian Electric'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 Hawaiian Electric's underground facilities shall be constructed in accordance with the latest revisions of Hawaiian Electric Specifications CS7001, CS7003, CS7202, CS9301 and CS9401 and applicable Hawaiian Electric Standards.

19. Construction.

The Contractor shall furnish all labor, materials, equipment, and services to properly perform and fully complete all work shown on the contract, drawings, and specifications. 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 Hawaiian Electric prior to excavation and prior to placing concrete. The Contractor shall notify Hawaiian Electric's Inspection Group at 543-4399 at least five (5) working days prior to installing facilities or placing concrete.

The Contractor to coordinate work to break into Hawaiian Electric's existing electrical facilities with Hawaiian Electric'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 Hawaiian Electric 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 Hawaiian Electric before proceeding with Hawaiian Electric 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 Hawaiian Electric's Inspector using Hawaiian Electric'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 Hawaiian Electric with a set of electronic and hard copy plans of each sheet showing the offsets, stationing, and vertical elevation of the ductline(s) constructed.

ORIGINAL PLAN	SURVEY PLOTTED BY	_____	DATE	_____
	DRAWN BY	_____		_____
	TRACED BY	_____		_____
	DESIGNED BY	_____		_____
NOTE BOOK	CHECKED BY	_____		_____
		_____		_____
	No.	_____		_____

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES & LEGEND

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS

Roosevelt Avenue to Farrington Highway

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Date: January, 2020