



ALOHA SOLAR ENERGY FUND II - KALAELOA

TMK (1) 9-1-013:070
Honouliuli (Kalaehoa), 'Ewa, O'ahu, Hawai'i



Hawai'i Community Development Authority Development Permit Application

Applicant:



2969 Mapunapuna Place, Suite 220
Honolulu, HI 96819

October 2017

Prepared by:



925 Bethel Street, 5th Floor
Honolulu, HI 96813

EXHIBIT A



Hawaii Community Development Authority
461 Cooke Street
Honolulu, Hawaii 96813
(808) 620-9643 FAX (808) 594-0299

KALAELOA PERMIT APPLICATION



APPLICANT INFORMATION

Applicant Aloha Solar Energy Fund II, LLC

Mailing Address 2969 Mapunapuna Place, Suite 220
Honolulu, HI 96813

Telephone No. (808) 486-3707

Project Site Address TMK: (1) 9-1-013:070

Landowner Hawai'i Community Development Authority

Address 547 Queen Street, Honolulu, HI 96813

Description of Work to be Done 5 megawatt solar power utility installation,
transferred along an approximate 1.78 mile
12 kilovolt (kV) interim electrical distribution line

TYPE OF REQUEST

- ☐ Rules Clearance
☐ Improvement Permit
☒ Development Permit
☐ Conditional Use Permit
☐ Conditional Use of Vacant Land
☐ Other _____

PARCEL INFORMATION

Tax Map Key: (1) 9-1-013:070

Transect Zone: T2 - Rural/Open Space

PROJECT INFORMATION

Existing Use, Size and Height

- ☐ Commercial _____
☐ Industrial _____
☐ Residential _____
☒ Other Vacant Lot
TOTAL _____
☐ Parking Requirement (HAR §15-215-47) _____

Nature of Work

- ☐ New Building * ☐ Repair
☐ Addition * ☒ Electrical
☐ Demolition ☐ Plumbing
☐ Alteration
☒ Other PV panels / electrical line / perimeter fence

Proposed Use, Size and Height

- ☐ Commercial _____
☐ Industrial _____
☐ Residential _____
☒ Other PV / 6'-0" perimeter fence
TOTAL _____

Notes:

*NOTE TO APPLICANT

- Please refer to Subchapter 5 of the Kalaeloa CDD Rules, Chapter 215, Hawaii Administrative Rules, for detailed information on procedures, permit requirements and fee schedule.
- Final approval by HCDA is required prior to issuance of a building permit for any development within the Kalaeloa CDD.

For approval of building permits, submit the building permit application form and the following sets of plans:
 - Building Department copy
 - Job site copy
 - HCDA copy (if applicable)
- For any project where construction drawings are not available, submit two (2) sets of project information as listed in "Filing Procedures".

PUBLIC FACILITIES DEDICATION (HAR §15-215-64):

- ☐ Land _____ sq. ft. ☐ In Lieu Fee _____

RESERVED HOUSING (HAR Chapter 15-216) (if applicable)

- ☐ Units _____ sq. ft. ☐ In Lieu Fee _____

OPEN SPACE REQUIREMENT: (HAR §15-215-46)

Land _____ sq. ft.

I hereby acknowledge that I have read this application and attached information for the above-referenced project site and state that the information is correct. I hereby agree to comply with all City and County of Honolulu ordinances and state laws regulating development and building construction and authorize HCDA to inspect the property or construction upon notification of the undersigned for compliance with the respective Permit.

Signature (applicant or agent): Kevin McCaskill

Date: 10/20/17

Print Name: Kevin McCaskill

Telephone No.: (808) 486-3707

FOR HCDA USE ONLY:

Permit Fee: 6400

Paid by: anck

Landowner's Consent (if applicable): provided

Section 206E-5.6 (if applicable): _____

Reviewed
By HCDA: SWANTAN

Date: _____

Date: _____

HCDA Approved



PROJECT AUTHORIZATION

Mauka & Makai Areas



Application No. KAL 17-017

PROPERTY INFORMATION:

Site Address: Intersection of Coral Sea Road and Tripoli Street

Tax Map Key: TMK: (1) 9-1-013:070

Lot Size: 44.28 acres

Neighborhood Zone: T2 - Rural/Open Space

Present Use of Property and/or Buildings: Vacant Lot

LANDOWNER:

Name: Hawai'i Community Development Authority

Mailing Address: 547 Queen Street

Honolulu, HI 96813

Telephone: (808) 594-0300

Email: dbedt.hcda.contact@hawaii.gov

APPLICANT:

Name: Aloha Solar Energy Fund II, LLC

Mailing Address: 2969 Mapunapuna Place, Suite 220

Honolulu, HI 96813

Telephone: (808) 486-3707

Email: KMmccaskill@ecc.net

AGENT:

Name: G70

Mailing Address: 925 Bethel Street

Honolulu, HI 96813

Telephone: (808) 523-5866

Email: ASEF@g70.design

SIGNATURE:

Landowner: (Print & Sign)

Kevin McCaskill

Applicant: (Print & Sign)

Date

11/27/17
10/20/17

Date



925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

October 30, 2017

Executive Director Jesse K. Souki
Hawai'i Community Development Authority (HCDA)
547 Queen Street
Honolulu, Hawai'i 96813

**Subject: HCDA Kalaeloa Development Permit Application
Aloha Solar Energy Fund II (ASEF II)
Kalaeloa, O'ahu, Hawai'i
TMK: (1) 9-1-013:070**

Dear Director Souki:

On behalf of the Aloha Solar Energy Fund II, LLC (ASEF II), G70 submits this Development Permit Application (DPA) for the proposed ASEF II Kalaeloa photovoltaic system project located on TMK (1) 9-1-013:070 for review and approval. This submittal complies with the requirements of Hawaii Administrative Rules (HAR), Chapter 15-215 ("Kalaeloa Community Development District (KCDD) Rules").

I. PROJECT DESCRIPTION

With the Hawai'i Clean Energy Initiative (HCEI), the State of Hawai'i set a bold vision in 2009 to initially achieve a renewable portfolio standard (RPS) of 40% by 2030. In 2015, Hawai'i furthered its goals through legislative action to become the only state with an RPS goal of 100% by 2045. According to the 2016 State of Hawai'i Energy Resources Coordinator's Annual Report, the statewide RPS level in 2015 was 23.4%. The goal towards energy independence and security still has its challenges with more than 80% of Hawai'i's energy system-wide coming from petroleum. However, the transformation towards Hawai'i's clean energy production capability is being led by supporting the expansion and growth of various contributors to the renewable energy sector.

The purpose of the ASEF II project is to be a contributor of renewable energy in the form of solar electric power to the Hawaiian Electric Company (HECO) power grid. Anticipated to generate up to 5 megawatts (MWac), the development of the ASEF II project would help the State in achieving its RPS goal while also improving the environment by reducing greenhouse gas emissions, dependency on imports of fossil fuels and associated price variations, and the environmental risk of spills during the transport and storage of fossil fuel to the State. Further,

the ASEF II project provides a potential benefit as a source of renewable energy to support the power demand needs within the KCDD.

The ASEF II project is a 5-MWac, utility scale, renewable energy solar photovoltaic (PV) system with an approximately 1.78 mile-long 12 kilovolt (kV) interim electrical distribution line that would connect to the main Hawaiian Electric (HECO) grid. The ASEF II project is a part of HECO's Feed-In Tariff (FIT) Tier 3 program which was designed to encourage the addition of more renewable energy project in Hawai'i. Pre-established FIT rates and contract terms were approved for ASEF II to sell renewable energy to HECO under HECO Application #15-02.

The ASEF II project would be developed on a vacant parcel (TMK (1) 9-1-013:070) owned by the HCDA. The undeveloped parcel is comprised of approximately 44.28 acres situated within the traditional moku (district) of 'Ewa in the ahupua'a of Honouliuli and lies within the KCDD. For purposes of this DPA, the ASEF II project meets the definition of a "solar farm" under HAR §15-215-8.

The ASEF II project is designed to have a minimal development footprint, utilizing approximately 22 acres of the 44.28-acre site. The remainder of the parcel would remain as open space with a designated portion to become a permanent archaeological preserve. The ASEF II project entails the installation of approximately 23,500, 72-cell PV modules mounted on elevated galvanized steel racks, which will be mounted to posts or piers. The racking and piers provide support for both the weight of the system and wind uplift; wind uplift resistance usually is the larger of the two forces. The number and type of piers are influenced by site soil conditions which will not be known until a geotechnical survey has been completed. Pending favorable results from a future geotechnical investigation, the piers are normally expected to be driven or screwed directly into the soil to a depth ranging between 6 and 9 feet. Direct driving of piers is the preferred methodology as it will minimize time on site as well as the extent of ground disturbance. If the soils are not favorable for direct driven piers, it is expected that the piers will be mounted by a method involving drilling holes, placing back the native soil and compacting it, and then driving piers. For all subsurface work, the Archaeological Monitoring Plan, which has been approved by the State Historic Preservation Division (SHPD) will govern how this work will be carried out in consideration of protecting known and possible unknown historic resources. Details of the monitoring plan are further described in a section below.

The PV modules will be bolted to the racking at a fixed tilt of 10° facing south. Once mounted, the lowest end of the racked modules will be approximately 4 feet 10 inches above ground level with the highest end not exceeding 7 feet above ground level. Within the array layout, there will be 5 inverter/transformer concrete pads, each containing a 1 MWac Power Electronics inverter and single matching 12 KV transformer. Note that, per standard Industry practice, the final design of the DC side of the system will be more than 5 MW to account for electrical losses, inefficiencies, and long-term solar module degradation. Subject to final design by a State of Hawai'i-registered engineer, the pads are each expected to be approximately 20 feet by 30 feet.

The inverters and transformers are outdoor rated and will require no facility to house them. Electricity in the form of direct current (DC) will flow from the modules through an underground network of DC wiring to the 5 inverters where it will be converted into alternating current electricity. Ground disturbance will be kept to a minimum by placing all underground utilities in common trenches to the maximum extent possible.

From each inverter, the AC power will flow into its transformer which will step up the AC voltage to 12kV. From the transformers, power will flow through AC wiring into the switchyard. The switchyard will collect the combined power from all 5 inverter/transformer stations and place that power onto the distribution line and then into the HECO system. Besides housing the central electrical collection point and switches, the switchyard will also house the control systems required by HECO consisting of HECO SCADA (supervisory control and data acquisition), HECO meter, and Hawaiian Telecom cabinets. All electrical cabinets will be outdoor rated and placed on concrete pads; there will be no buildings required. The Switchyard is anticipated to be a gravel area approximately 75 feet wide by 75 feet deep with National Electric Code-compliant, electrically grounded, chain link fencing and gates. Access to the switchyard will only be available via the internal pathway within the array.

Access to the parcel would be provided via a single new driveway entry extending off Coral Sea Road, opposite and near an existing juncture with Eisenhower Road. The gravel driveway would lead to an internal gravel maintenance road that varies between 12' to 16' which would be used for periodic system inspections and maintenance. Native soil lanes between the array racks are expected to be between 5 and 6 feet. The remaining parcel acreage would remain undisturbed. The entire parcel will be enclosed by a 6-foot high perimeter security chain link fence. Per the requirements of the KCDD design standards, the ASEF II project will require the submittal of a Request for Variance (Major) application to allow the portion of the fence facing Coral Sea Road to be built to 6 feet, along with other variance requests along the front yard. See section III (p) of this letter for more details.

The ASEF II project also includes the installation of a 12-kV interim distribution line that would be routed from the new electrical switchyard crossing over to the east side of Coral Sea Road as an overhead line and eventually connecting to the "Kapolei Circuit" at a HECO manhole on the mauka side of Franklin D. Roosevelt Avenue. The proposed 12-kV interim distribution line would be installed within an existing State Department of Transportation (DOT), Highways Division (HD) Right-of-Way (ROW) that runs parallel along the eastern side of Coral Sea Road. The DOT-HD ROW extends approximately 30 feet from the edge of Coral Sea Road on the eastern side. The proposed line corridor would be a combination of an overhead line on poles with a portion that runs underground due to Federal Aviation Administration (FAA) restrictions. The overhead portion of the 12-kV interim distribution line would be approximately 5,600 feet in length with the underground portion approximately 3,800 feet. The underground segment is required due to FAA height restrictions that are in place for an aviation approach for Runway 22L and 22R at the adjacent Kalaeloa Airport (aka John Rodgers Field).

This portion of the avigation easement extends easts over a portion of Coral Sea Road. However, the portion of the 12-kV interim distribution line that lies outside of the :070 parcel is not under review in this DPA but stated for full project disclosure.

II. FINDINGS OF FACT

Pursuant to HAR 15-215-78(E) (Required Findings), the approval of a development permit shall require three (3) findings of fact: 1) consistency with the Kalaeloa Master Plan; 2) compliance with the KCDD rules; and 3) compatibility with the existing and planned land use character of the surrounding area. Below is a succinct discussion on the proposed ASEF II's project's findings of fact:

- 1) **Kalaeloa Master Plan (KMP) Consistency:** The ASEF II project meets the objectives of the KMP by providing an environmentally compatible development that protects open space and provides a source of alternative energy for O'ahu and the KCDD. Section 3.2.2 of the KMP cites renewable energy, including solar energy generation as an alternative to continuing escalating fossil fuel energy prices and as potential development opportunities for Kalaeloa increase. The KMP zones the area inclusive of the parcel and surrounding area as Open Space/Recreation. The project's protection of historical, archaeological, and cultural resources along with its lack of tall structures that obscure view planes and open space complies with the intent of this zoning.
- 2) **Kalaeloa CDD Rules Compliance:** The ASEF II project is also consistent with allowable uses in the KCDD Regulating Plan (Figure 1.2, HAR §15-215), as the parcel is located in the T2 – Rural/Open Space transect zone. Within this zone, solar farms are an allowable use under the Sustainability category of the KCDD's land use classification with an approved HCDA DPA. Refer to *Table 1: Development Permit Requirements* in this DPA for further details to project compliance.
- 3) **Compatibility:** The ASEF II project will not have a substantial adverse effect on surrounding land uses which currently include the adjacent operations of the Kalaeloa Airport, the Kalaeloa Heritage Park, an undeveloped parcel of the Department of Hawaiian Home Lands; and the beach area opposite of Coral Sea Road. Further, a Finding of No Significant (FONSI) was issued by the HCDA Authority in its review and approval of Final Environmental Assessment (FEA) for the project which evaluated proposed project impacts and identified appropriate construction-related and operational mitigation commitments to be implemented. The FEA/FONSI fulfilled the requirements of the state's environmental review process, pursuant to Hawai'i Revised Statutes (HRS) Chapter 343 ("Environmental Impact Statements"). The FEA was published by the State Office of Environmental Quality Control on October 23, 2017.

III. AUTHORIZATION FROM THE LANDOWNER

HCDA is the landowner of parcel :070. Attached is a Project Authorization form with the signature of the HCDA Executive Director representing the landowner and the ASEF II Project Manager as the applicant.

IV. SUBMITTAL OF PLANS

This application includes the provision of specific plans and is appended as a set listed as Sheets 001 to 012. A summarized reference of submitted plans and those determined as non-applicable is provided below.

a. Location Map – reference Sheet 001

b. Site Plan- reference Sheet 002 and Sheet 012

This submittal includes the identification of the array installation; easement boundaries for the overhead line; the proposed archaeological preserve areas with delineated 10-foot permanent and interim 10-foot construction buffers; roadway access and interior circulation; and perimeter fencing. Per consultation with HCDA, there are no parking or loading requirements on-site.

c. Building Type, Frontage Type, and Building Massing

Per consultation with HCDA, this requirement was determined as non-applicable.

d. Floor Plans and Floor Area Calculations

Per consultation with HCDA, this requirement was determined as non-applicable.

e. Exterior Elevations and Sections – reference Sheets 003, 004, 005, 006

Submittal includes elevations and sections of PV system and associated structures as well as access road and fencing requirements.

f. Plot Plan – see Sheet 007

Submittal includes an array plan of the PV system and associated structures.

g. Pedestrian Zone Plan

Per consultation and early review by HCDA, this requirement is non-applicable.

h. Landscape and Recreation Space – reference Sheet 008

Per HAR §15-215-44, the standards for landscaping for T2 – Rural/Open Space transect zone include that all required yards shall be landscaped. The only required setback in the T2 – Rural/Open Space transect zone is a front yard with a setback of 5 to 15 feet. However, for the ASEF II project, a Request for Variance (Major) application is to be filed separately with a proposed condition that a front yard is not required for this project. Accordingly, the landscape

plan for the ASEF II project is limited to just the selective removal of kiawe trees and other invasive trees, shrubs, and grasses for the development of the solar farm.

i. Location and Size of Open Space – reference Sheet 009

Per HAR §15-215-46, all projects in the KCDD require a minimum of 20% open space per each lot. The project provides approximately 62.7% open space.

j. Documentation on the Project's Compliance with Green Building Standards

Per consultation by HCDA, this requirement is non-applicable.

k. Fulfillment on Public Facilities Dedication Requirement

Per consultation by HCDA, this requirement is non-applicable.

l. Fulfillment on the Reserved Housing Requirement

Per consultation by HCDA, this requirement is non-applicable.

m. Relocation Analysis of Businesses Displaced

The project site is currently a vacant undeveloped lot. No tenant relocation is necessary as a part of this project.

n. Development Schedule and Phasing – reference Sheet 010

For a detailed project schedule, please see Sheet 10. Currently, the project is scheduled to obtain necessary approvals and start construction in April 2018, with the project scheduled to begin operations in December 2018.

o. Digital Site Plans & Electronic Documents

A CD has been included with this submittal that contains an electronic PDF copy of the permit application as well as a digital copy of the plan set.

p. Any Other Pertinent Information Related to Compliance with KCDD Rules

i. HCDA Request for Variance Application (RfVA)

The project requires the submittal and approval by the HCDA of a RfVA, as the proposed height of a required perimeter fence will exceed the allowable development standard for front yards. Pursuant to HAR §15-215-43(c), Architectural Standards, fences may be constructed to a height of six feet in any side or rear yard and to a height of only three feet in any portion of a front yard. The portion of the :070 parcel along Coral Sea Road is defined as the front yard. Due to security and public safety requirements for both the operation of the ASEF II project as a power generation facility and the requirement for the long-term preservation of twenty-three identified historic sites, a 6-foot tall perimeter fence is being proposed along the front yard. Additionally,

the RfVA will also include a request to allow the fence to be constructed along the property line and exclude the provisions of landscaping and irrigation typical in a front yard setback.

A separate RfVA will be filed concurrently with this DPA.

ii. FAA Form 6460-1 Notice of Proposed Construction or Alteration

In June 2017, a FAA Form 7460-1 (2-12) Notice of Proposed Construction or Alteration along with supporting attachments was submitted to the FAA for its review of each of the proposed structures to ensure that the project does not physically interfere with protected airspace around Kalaeloa Airport, or interfere with its radar operations, or create a potential glare hazard. Building height restrictions within aviation easement requirements were also fully considered. The design of the ASEF II project includes portions of the distribution line placed underground on Coral Sea Road as required to meet FAA requirements of no development within the aviation easement that extends horizontally as an imaginary line across a portion of the road. No buildings or utility poles within the :070 parcel lie within any portion of the aviation easement.

The FAA Southwest Regional Office issued a Determination of No Hazard to Air Navigation in August 2017 for all proposed structures identified in submitted project plans.

iii. Historic Preservation Review Process, Hawai'i Revised Statute 6E

Pursuant to HRS §6E-42 and HAR §13-275-3(b)(1-5), the ASEF II project has completed five of the six historic preservation review procedural steps. An Archaeological Inventory Survey (AIS) report for :070 parcel was reviewed and approved by the SHPD on February 25, 2014. The AIS identified 23 historic sites comprised of 146 features, of which two were previously identified in past studies (Sites 5119 and 5120). The 2014 AIS recommended four mitigation commitments including an archaeological preservation plan; an archaeological data recovery plan that would have allowed the possible removal of two features; a burial treatment plan for two burials; and an archaeological monitoring plan. However, after consulting with various cultural and community stakeholders, the ASEF II project team made a recommendation to HCDA to request SHPD to reconsider the complete preservation of all 23 historic sites. Accordingly, an archaeological data recovery plan will not be required. SHPD concurred with this strategy in a letter dated October 12, 2017. A summary of the archaeological preservation plan, burial treatment plan, and archaeological monitoring plan is provided below.

Interim and Final Archaeological Preservation Plan

The layout of the ASEF II project is purposefully designed to avoid all 23 historic sites and 146 site features. As part of the long-term preservation strategy, all 23 historic sites identified in the :070 parcel will have a minimum permanent buffer zone of 10 feet from the edge of each feature's perimeter. An additional 10-foot interim buffer will also be delineated for all construction

activities. Pursuant to HAR §13-284 and HAR §13-277, an Interim Preservation Plan (IPP) was prepared and submitted to SHPD for its review and approval on October 25, 2017. The IPP is part of a two-step verification process outlined in HAR §13-284-9(d) and contains 14 specific measures to be implemented prior to and during construction. It is anticipated that the IPP will be approved by early December 2017 (See attached IPP). A final archaeological preservation plan will be submitted at the completion of project construction per the requirements of SHPD. All 23 historic sites and the permanent 10-foot buffer will then be recorded with the Bureau of Conveyances as a preservation easement in perpetuity.

Archaeological Monitoring Plan (AMP)

An AMP was submitted and accepted by SHPD on October 6, 2017. SHPD has requested that it be notified at the start of actual archaeological monitoring. The AMP stipulates the following:

- A pre-construction coordination briefing shall be conducted prior to construction activities to discuss the monitoring program provisions, project plans, and any interim measures;
- On-site archaeological monitoring for all project related ground disturbance;
- The archaeological monitor shall ensure that the interim protection measures are in place prior to project work and remain intact for the duration of project work;
- The archaeological monitor shall have the authority to temporarily halt all activity in the immediate area in the event of a potential historic property being identified, or to record archaeological information for cultural deposits or features;
- In the event that non-burial historic properties are identified, the provisions outlined in HAR §13-279 will be followed and SHPD shall be notified of the find and consulted with regarding the treatment and documentation; and
- If human remains are identified, work will cease in the vicinity, SHPD will be notified, and compliance with procedures outlined in HAR §13-300-40 and SHPD directives shall be followed.

At the conclusion of project construction, an archaeological monitoring report will be prepared and submitted to SHPD per the requirements of HAR §13-279-5.

Burial Treatment Plan (BTP)

A BTP for Two Burial Locations within a Proposed Archaeological Preservation Preserve was prepared and submitted to SHPD on September 27, 2017. The BTP was also submitted to the O'ahu Island Burial Council (OIBC) for determination at its October 25, 2017. The OIBC voted 5-0 (1 absent) in favor of a determination for preservation along with adopting the recommended interim and long-term measures to ensure the protection of the two burials.

iv. Special Management Area (SMA) Use (Minor) Permit Application

Planned site improvements for the ASEF II project within the SMA portion of the parcel are limited to approximately 400-feet of perimeter fencing to be built as a security measure around

the facility. An SMA Use Permit (Minor) will be submitted to the Office of State Planning, who has jurisdiction of activities in the SMA within the KCDD. No part of the planned PV array or the distribution line area work along Coral Sea Road is located within the SMA. The SMA Use Permit application will be submitted once the DPA is approved.

v. Consultation and Community Input

The ASEF II project team has conducted several meetings with key community stakeholders inclusive of agencies, organizations, elected officials, and individuals during the state environmental review process since the inception of the project in 2012. Additionally, 78 representing parties were provided an opportunity to comment under the HRS 343 state environmental review process with 17 formal comment letters received during the public review period. Further, under the HRS 6E historic preservation consultation requirements, the ASEF II project team conducted and completed several consultation meetings and presentations with key agencies, organizations, community groups, and individuals.

As part of the DPA submittal, the ASEF II project team further availed an opportunity for members from four HCDA agency advisory groups to participate in an informational meeting on August 24, 2017 at the Kalaeloa Heritage Center and again on November 16, 2017. The ASEF II project team also gave a presentation at the Makakilo Kapolei Honokai Hale Neighborhood Board No. 34 at its October 25, 2017 meeting. Finally, the ASEF II team also provided courtesy updates in the form of in-person briefings, emails, and phone conversations with the offices of Senator Mike Gabbard (Senatorial District 20) and Councilmember Kymberly Marcos Pine (Honolulu City Council, District 1).

Between 2013 and 2016, the following agencies, organizations, community groups, and individuals have been part of ongoing consultation for the project. In most cases, there has been multiple engagements of formal and informal consultation with these entities through meetings, telephone conversations, emails and written correspondence:

- SHPD
- OIBC
- Kalaeloa Heritage Park/Kalaeloa Heritage and Cultural Foundation
- Kalaeloa Advisory Team
- Kalaeloa Community Network
- Kalaeloa Public Safety Group
- Hoakalei Cultural Foundation
- 'Ahahui Siwila Hawai'i o Kapolei
- Kanehili Cultural Hui
- Naval Air Museum, Barbers Point
- (27) State Recognized Cultural Descendants to two burials
- Makakilo/Kapolei/Honokai Hale Neighborhood Board No. 34

- Federal Aviation Administration
- Hawai'i Air National Guard
- Naval Facilities Engineering Command
- US Coast Guard, 14th Coast Guard District
- US Fish and Wildlife, Pacific Islands Fish and Wildlife Office
- US Geological Survey
- State of Hawai'i, Department of Hawaiian Home Lands
- State of Hawai'i, Department of Transportation, Highways Division
- State of Hawai'i, Department of Transportation, Airports Division
- State of Hawai'i, Department of Land and Natural Resources (multiple divisions)
- State of Hawai'i, Department of Health (multiple divisions)
- State of Hawai'i, Office of Hawaiian Affairs
- State of Hawai'i, Office of Planning, Coastal Zone Management Program
- Office of State Senator Mike Gabbard, 20th Senatorial District
- City and County of Honolulu, Department of Planning and Permitting
- Councilmember Kymberly Marcos Pine, Honolulu City Council, District 1
- HECO
- Gas Company
- Hawaiian Telcom
- Pural Water Specialties Co, Inc.

V. FEES

Pursuant to HAR §15-215-91, the fee schedule for this development permit submittal is \$6,400. Enclosed is a check for the permit fee. We understand that additional fees will be imposed as part of the public hearing process and that remittance to HCDA for these fees is required once the hearings have been completed. Please contact us if you have any questions or require additional information. Mahalo for your consideration.

Sincerely,

Group 70 International Inc.
dba G70



Jeffrey H. Overton, AICP, LEED AP
Principal Planner

TABLE 1
Aloha Solar Energy Farm II
Development Permit Requirements

Conformance to Hawaii Administrative Rules Chapter (“HAR”) 215, Kalaeloa Community Development District Rules (“Kalaeloa Rules”):

CATEGORY	KALAELOA RULES Title 15, Chapter 215, HAR	REQUIREMENTS (ALLOWABLE)	PROPOSED	COMMENTS
SITE AREA			44.28 acres	Project site is greater than 40,000 square feet and considered a ‘Development Project’.
PROJECT TYPE	HAR § 15-215-78 Improvement and Development Permits	Development Permit	Development permit	Project conforms to Kalaeloa Rules.
DENSITY	Figure 1.3, Development Standards Summary		No density proposed	Not applicable
BUILDING HEIGHT	Figure 1.3, Development Standards Summary	Maximum Height: 28’	Height of proposed arrays: 6 feet.	Array height conforms to Kalaeloa Rules. Request for variance to allow fence to be 6’ in height.
BUILDING TYPE	Figure 1.3, Development Standards Summary & BT		No building type; only solar arrays.	Not applicable
LAND USE	HAR § 15-215-40, Land Use and Figure 1.7 Land Use	Solar Farm	Solar Farm	Project conforms to Kalaeloa Rules.
SETBACKS	Figure 1.3C Setback	T2 Rural/Open Space Setback requirement: Front Yard: 5’-15’ Side Yard: 0’ Rear Yard: 0’	Fence along Coral Sea Road is proposed to be located on the property line.	Request for variance to allow fence to be located on property line.
BUILDING FORM	HAR § 15-215-42, Building Form		No building proposed.	Not applicable

CATEGORY	KALAELOA RULES Title 15, Chapter 215, HAR	REQUIREMENTS (ALLOWABLE)	PROPOSED	COMMENTS
LANDSCAPE	HAR § 15-215-44, Landscape	All required yards shall be landscaped; New plantings shall be selected from the preferred plant species list;	Front yard: Predominant native landscape buffer, with species such as 'ilima, maiapilo. Firebreak along northern panels with a vegetation free zone. Select kiawe and invasive species to be removed or stumped. Remaining kiawe to be kept in place.	Request for variance on landscape and irrigation requirements within front yard.
RECREATION SPACE	HAR § 15-215-45 Recreation Space	25 ft ² per each 1,000 ft ² of industrial use; 37.5 ft ² per each 1,000 ft ² of commercial, office, and goods and services use; 55 ft ² of recreation space per dwelling unit.	No industrial, commercial, office, or goods and services use	Not applicable
OPEN SPACE	HAR § 15-215-46, Open Space	For any project in the Kalaeloa CDD, a minimum of 20% of each lot shall be provided as open space.	27.4 acres of open space is proposed; open space comprises 62% of the project site.	Project conforms to Kalaeloa Rules.
PARKING	HAR § 15-215-47, Parking and Loading		No on-site uses, no parking required.	Not applicable
LOADING	HAR § 15-215-47(l), Loading	Loading space requirements shall be provided within a building, lot, or alley.	No on-site uses, no loading required.	Not applicable

CATEGORY	KALAELOA RULES Title 15, Chapter 215, HAR	REQUIREMENTS (ALLOWABLE)	PROPOSED	COMMENTS
HISTORIC AND CULTURAL SITES	HAR § 15-215-63, Historic and Cultural Sites	Developer shall obtain a letter from SHPD which confirms that the developer has complied with all SHPD requirements.	Provided as Exhibit 11, in the Development Permit Application.	Project conforms to Kalaeloa Rules.
DEDICATION OF PUBLIC FACILITIES	HAR § 15-215-64(a) Public Facilities Dedication	No public facilities dedication requirement for Sustainability Uses.	Solar Farm Use	Not applicable
REQUIREMENT OF PROVIDING RESERVED HOUSING UNITS	HAR § 15-216-17 Requirement for Reserved Housing	15% of the Total Residential Floor Area as Reserved Housing	Solar Farm	Not applicable

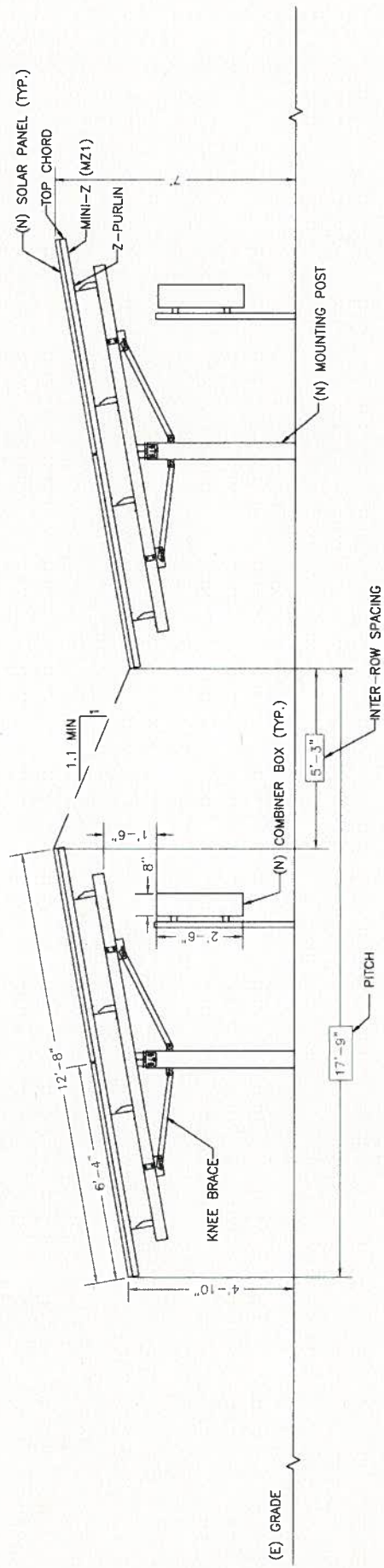


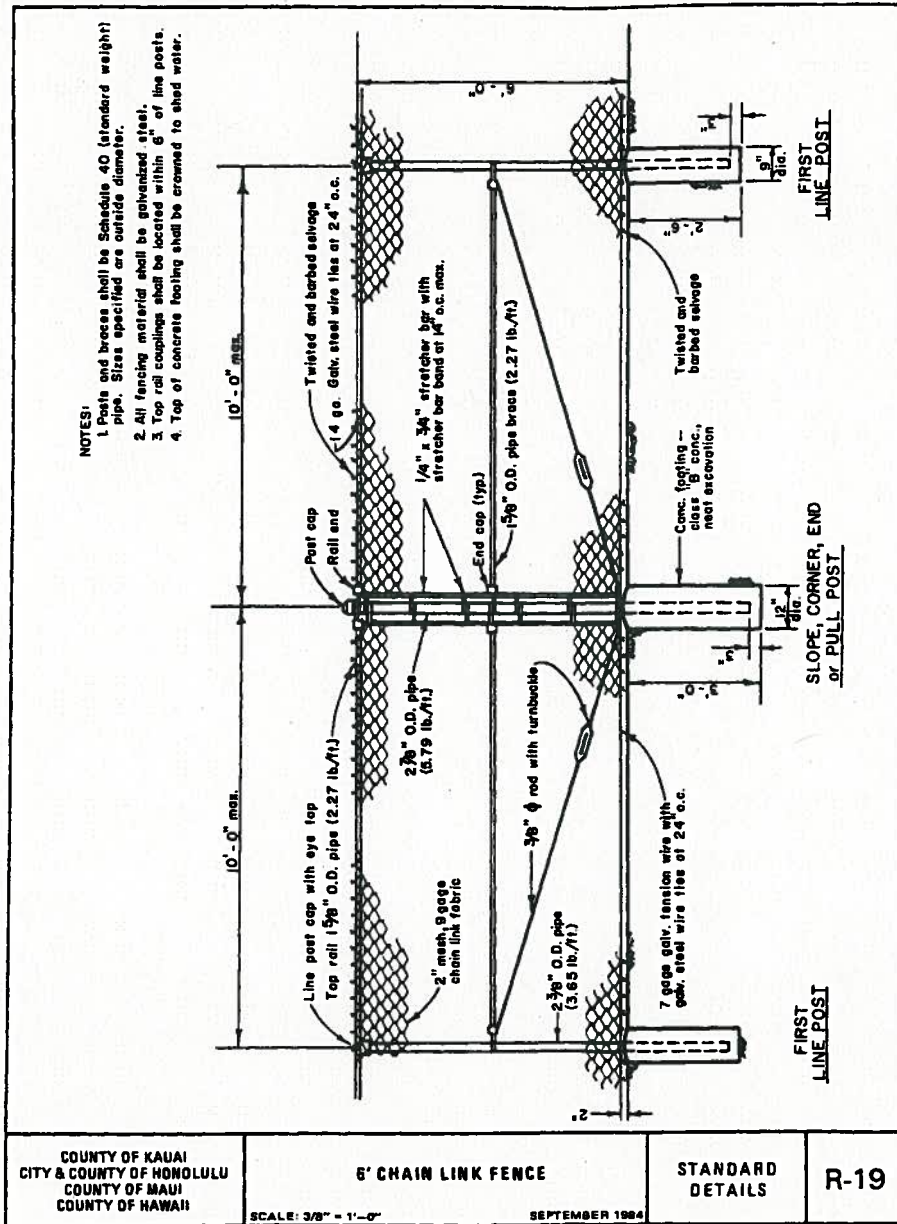
GTO

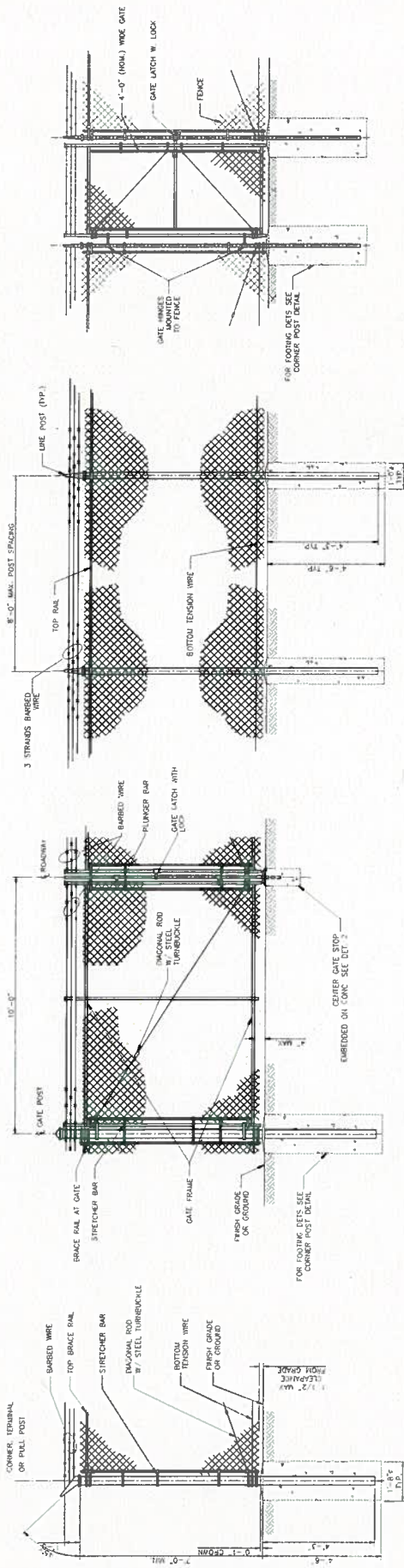
1 LOCATION MAP

ASEF II KALAHEO DEVELOPMENT PERMIT SET

11.22.17







WOVEN WIRE CORNER, GATE, TERMINAL OR PULL POST

WOVEN WIRE 4'-0" DOUBLE SWING GATE

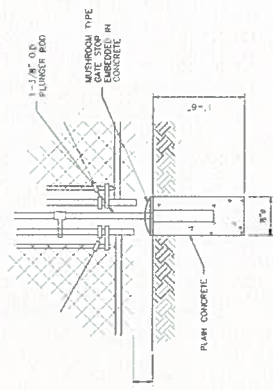
LINE POST TYPICAL ELEVATION

WOVEN WIRE 4'-0" SWING GATE

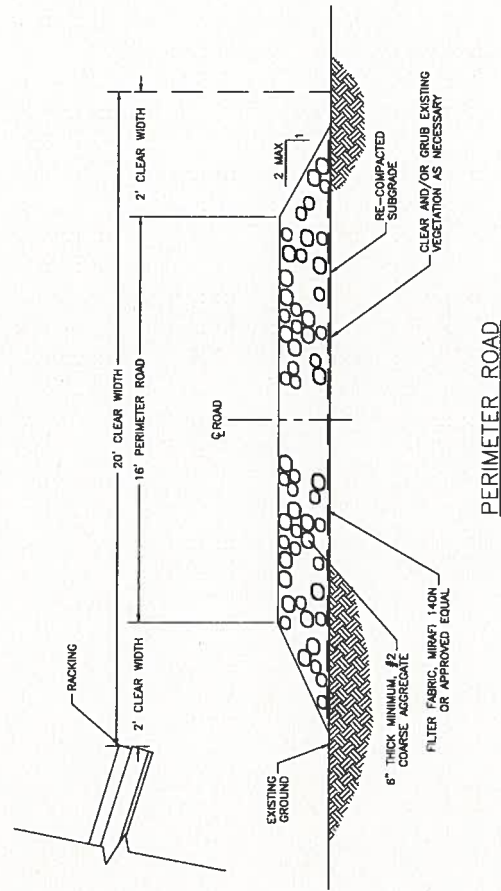
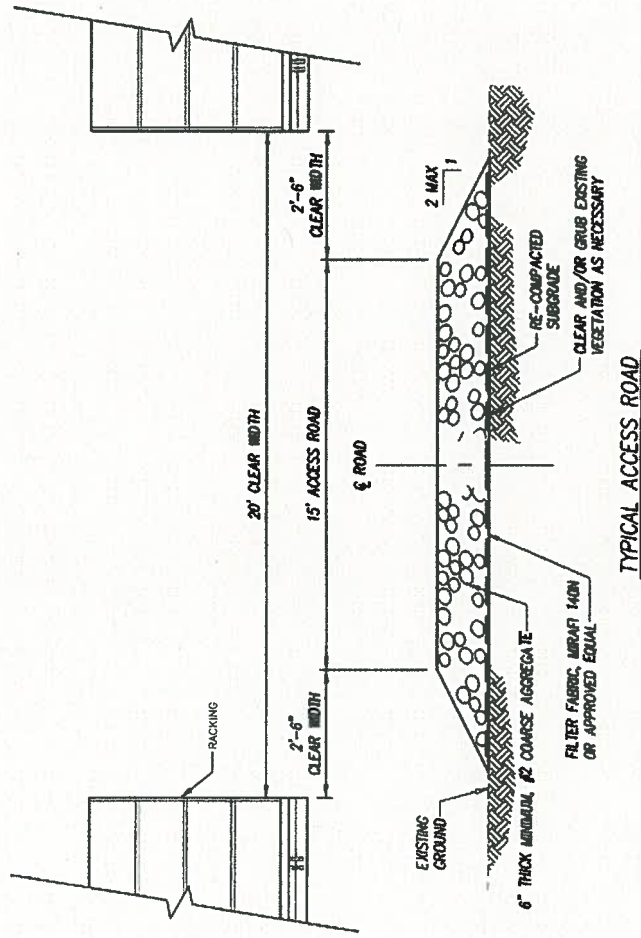
FENCING NOTES:

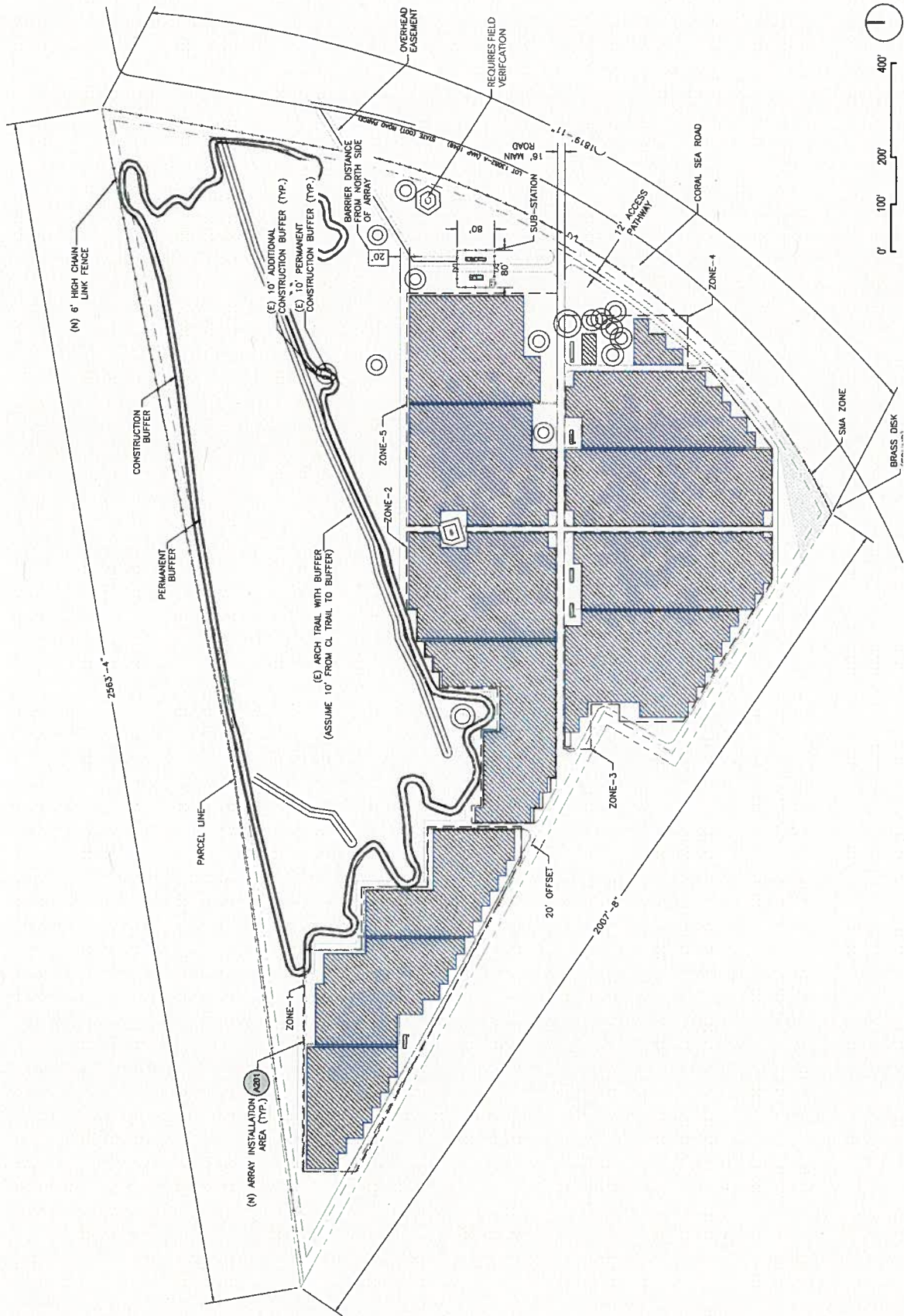
1. INSTALL CHAIN LINK FENCING IN ACCORDANCE WITH SPECIFICATIONS GIVEN BELOW AND ASTM-567
2. ALL FRAMEWORK, POSTS, RAILS AND PIPES FOR GATES, SHALL BE REGULAR STRENGTH 10000 GRADE ASTM F1083 SCH. 40 PIPE
3. ALL FENCING AND RELATED ASSEMBLIES SHALL BE HOT DIP GALVANIZED ZINC FINISH BARB WIRE-ASTM A121, FABRIC-ASTM A392, FRAME WORK-ASTM F1043.
4. END CORNER, AND PULL POSTS, 3-1/2" O.D PIPE, WEIGHT 7.58 LB/FT
5. GATE POSTS* 4 1/2" O.D PIPE, WEIGHT 10.50 LB/FT
6. LINE POST, 2 7/8" O.D PIPE, WEIGHT 5.8 LB/FT.
7. GATE FRAME: 1 7/8" O.D PIPE, WEIGHT 2.72 LB/FT.
8. TOP RAIL, 1 5/8" O.D PIPE, WEIGHT 2.27 LB/FT.
9. FABRIC: HEAVY GALVANIZED CHAIN LINK FENCE, CONFORMING TO ASTM A392, CLASS 2, OF 2" MESH 6-GAUGE WIRE, WITH THE TOP AND BOTTOM EDGES TWISTED AND BARBED
10. FABRIC TIES, CLASS 1 GALVANIZED STEEL WIRE NO LESS THAN 9 GAUGE.
11. TENSION WIRE, T 5A GALVANIZED STEEL COUPLING WITH ASTM A82-1, TYPE II ZINC-COATED CLASS 5 TENSION WIRE, SHALL BE STRETCHED NEAR THE BOTTOM OF THE FENCE AND ATTACHED AT 2-FOOT INTERVALS. IF TOP RAIL IS NOT USED, THE TENSION WIRE SHALL BE STRETCHED AT THE TOP ALSO

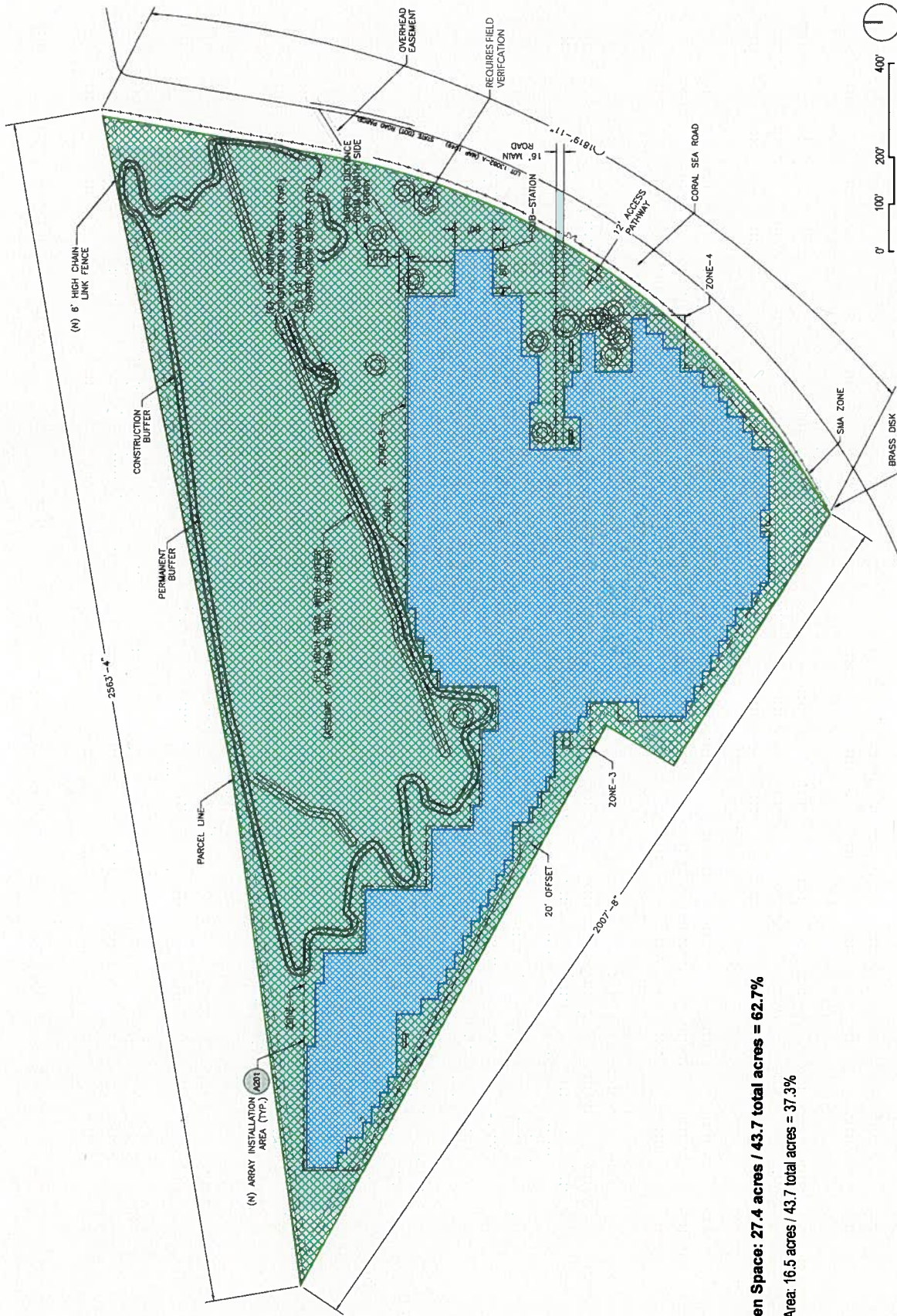
12. BARBED WIRE, COMPLY WITH ASTM A121, DESIGN NUMBER 12-4-4-5-1-1/2, DOUBLE 12-1/2 GAUGE TWISTED STRAND WIRE WITH POINT 1 1/4" LONG, ROUNDS BARS SPACING 5" TO 6" ON CENTER. TOP 1 FOOT OF THE FENCE SHALL CONSIST OF 3 STANDS OF BARBED WIRE ATTACHED TO 45-DEGREE ANGLE HEAVY PRESSED ARMS CAPABLE OF WITHSTANDING WITHOUT FAILURE 250 POUNDS DOWNWARD PULL AT THE OUTERMOST END OF THE ARM
13. GATE LATCH: 1-3/8" O.D. PLUNGER ROD W/ MUSHROOM TYPE CATCH AND LOCK.
14. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED WITH, IF REQUIRED.
15. HEIGHT = 7' VERTICAL + 1' BARBED WIRE VERTICAL DIMENSION.
16. BRACE BANDS AND TENSION BUNDLES: 1/8", 7/8", GALVANIZED PRESSED STEEL COMPLYING WITH ASTM F825. BANDS SUPPLIED WITH 3/8" GALVANIZED STEEL CARRIAGE BOLTS AND NUTS IN ACCORDANCE WITH ASTM A123. TENSION BARS SHALL BE 3/16", 3/4" GALVANIZED STEEL BAR IN ACCORDANCE WITH ASTM A153
17. RAIL COUPLINGS: SLEEVE TYPE, 6" LONG EXPANSION SPRING IN EVERY FIFTH COUPLING.
18. BRACING PIPE BRACE SAME AS TOP RAIL WITH 3/8" STEEL ROD TRUSS AND TIGHTENER.
19. POST TOPS: ONE POST TOP SHALL BE PROVIDED FOR EACH POST, WITH OPENINGS TO PERMIT THROUGH PASSAGE OF TOP RAIL. MATERIALS SHALL BE PRESSED STEEL OR MALLEABLE IRON THAT IS ASSIGNED AS WATERGATE CLOSURE CAP FOR TUBULAR POSTS AND SHALL BE GALVANIZED PER ASTM A153.
20. ALL CONCRETE FOOTING SHALL HAVE MIN. 28-DAY COMPRESSIVE STRENGTH OF 2500 PSI.
21. THE SOIL SHALL BE FREE OF ORGANIC MATERIALS AND HAVE MIN. BEARING CAPACITY OF 2000 PSF



GATE STOP DETAIL







LEGEND

Open Space: 27.4 acres / 43.7 total acres = 62.7%

PV Area: 16.5 acres / 43.7 total acres = 37.3%



GTO















11 11.22.17

**ELECTRICAL SITE AND
DISTRIBUTION PLAN
SHEET 12**

THE HAWAIIAN ELECTRIC CO. (HECO), TRANSFORMER PAD LOTS & SWITCHING EQUIPMENT PAD LOTS SHALL BE CONSTRUCTED BY THE CONTRACTOR AS SHOWN IN THESE DRAWINGS & IN ACCORDANCE WITH THE FOLLOWING STANDARD DRAWINGS:

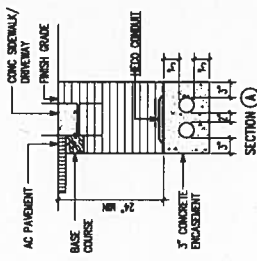
4' X 6' HECO MANHOLE
JRTD RATED
4' X 6' REINFORCED CONCRETE MANHOLE WITH REINFORCED CONCRETE
TRAFFIC RATED FRAME AND COVER, PROVIDED IN ACCORDANCE WITH
HECO STANDARD DRAINING NO. 100218

ELECTRICAL SYMBOL LIST

SYMBOL		DESCRIPTION
EXT	INT	
		NEED 4' X 6' HANDBOLE
		NEED HANDBOLE
		NEED HANDBOLE
		CUTY HANDBOLE
		NEED SWITCHPAD
		UTILITY POLE BY UTILITY COMPANY UNLESS STATED OTHERWISE.
		60V WIRE, BY UTILITY COMPANY UNLESS STATED OTHERWISE.
		UNDERGROUND ELECTRICAL OUTLINE
		OVERHEAD NEED 12W CABLE (FURNISHED AND INSTALLED BY NEED)
		ELECTRIC/SIGNAL OUTLINE WITH DESIGNATORS, INDICATES TYPE "A"
		DUCT SECTION WITH "2"-56" DUCTS. SEE THIS SHEET FOR DUCT SECTIONS AND CONDUIT SCHEDULES. DASH LINES INDICATE EXISTING.
		X ON SYMBOL DENOTES DEMOLISH/REMOVE

CONDUIT SCHEDULÉ

ITEM	DESCRIPTION
2-5	MECO 2-5°C, WITH PULL LINE



BACKFILL NOTES:

- TYPE "A" BACKFILL - EARTH & GRAVEL.**
ROCK SIZE TO BE 1" MAX. & THE MIXTURE
TO CONTAIN NOT MORE THAN 20% BY VOLUME
OF ROCK PARTICLES. THE MATERIAL SHALL
BE NONEXPANSIVE. SEE COMPACTION.
- TYPE "B" BACKFILL - EARTH & GRAVEL.**
MIXTURE MUST PASS A 1/2" MESH SCREEN
& CONTAIN NOT MORE THAN 20% BY VOLUME
OF ROCK PARTICLES. SEE COMPACTION.
- NOTE -** IF NORMAL MATERIAL AT BOTTOM
OF TRENCH IS NOT TYPE "B", AN ADDITIONAL
3" SHALL BE EXCAVATED & TYPE "B" BACKFILL
PROVIDED.

CONCRETE - 3" ENCASEMENT, 3000 PSI
COMPRESSIVE STRENGTH @ 28 DAYS.

TYPICAL DUCT SECTIONS

NOT TO SCALE

THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.

Signature _____
04.10.2018 _____
Examination Date of the License _____

RONALD W. S. HO & ASSOCIATES, INC.
Electrical Engineers

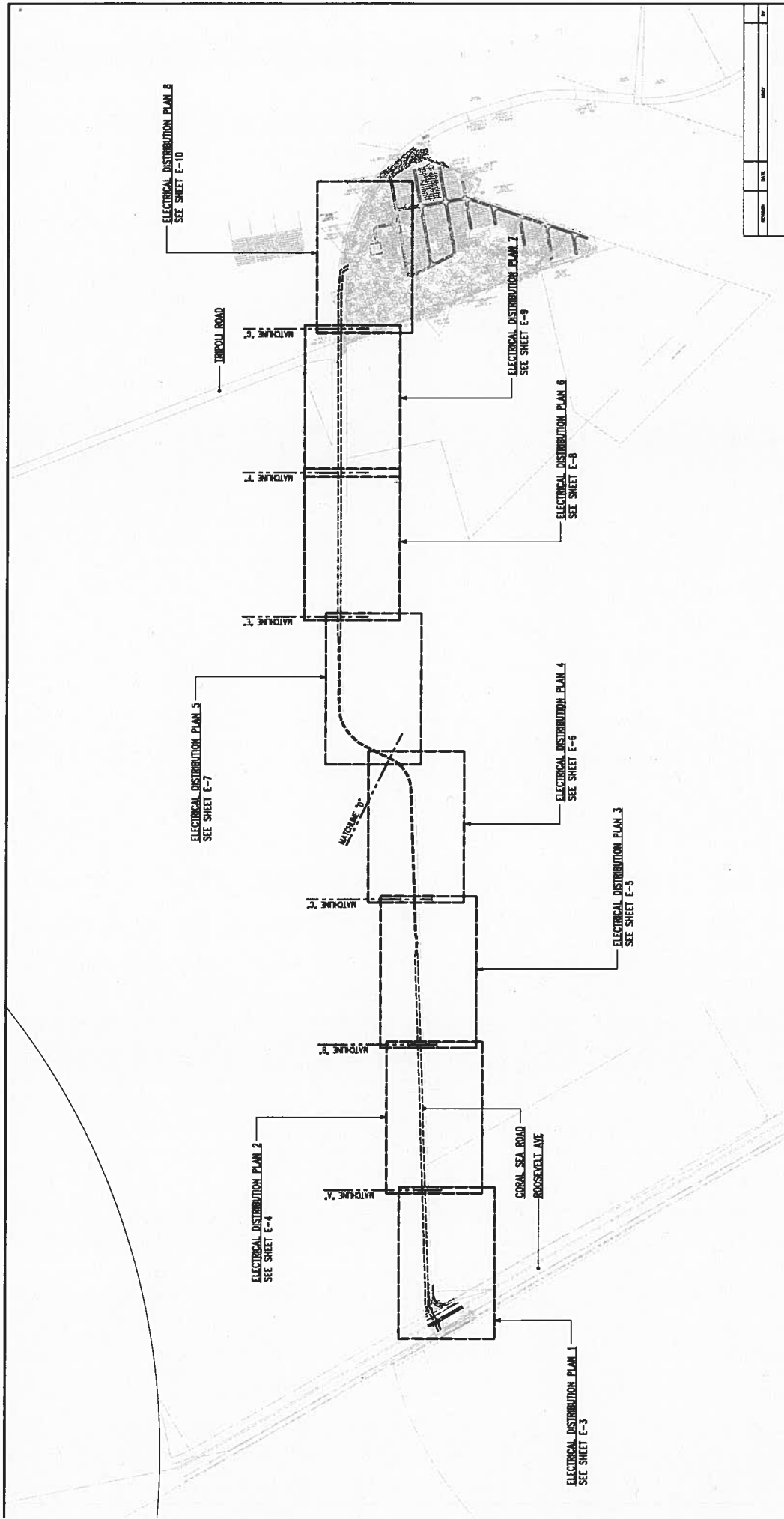
KALAELOA
DEVELOPMENT DISTRICT
KALAELOA ENERGY
CORRIDOR
SYMBOL LIST

DATE 6-17 2017

FOR THE RECORD, NAME COMPANY SECURITY AGENCY

Abstract

04.30.2018
Federation Bank of the Ukraine



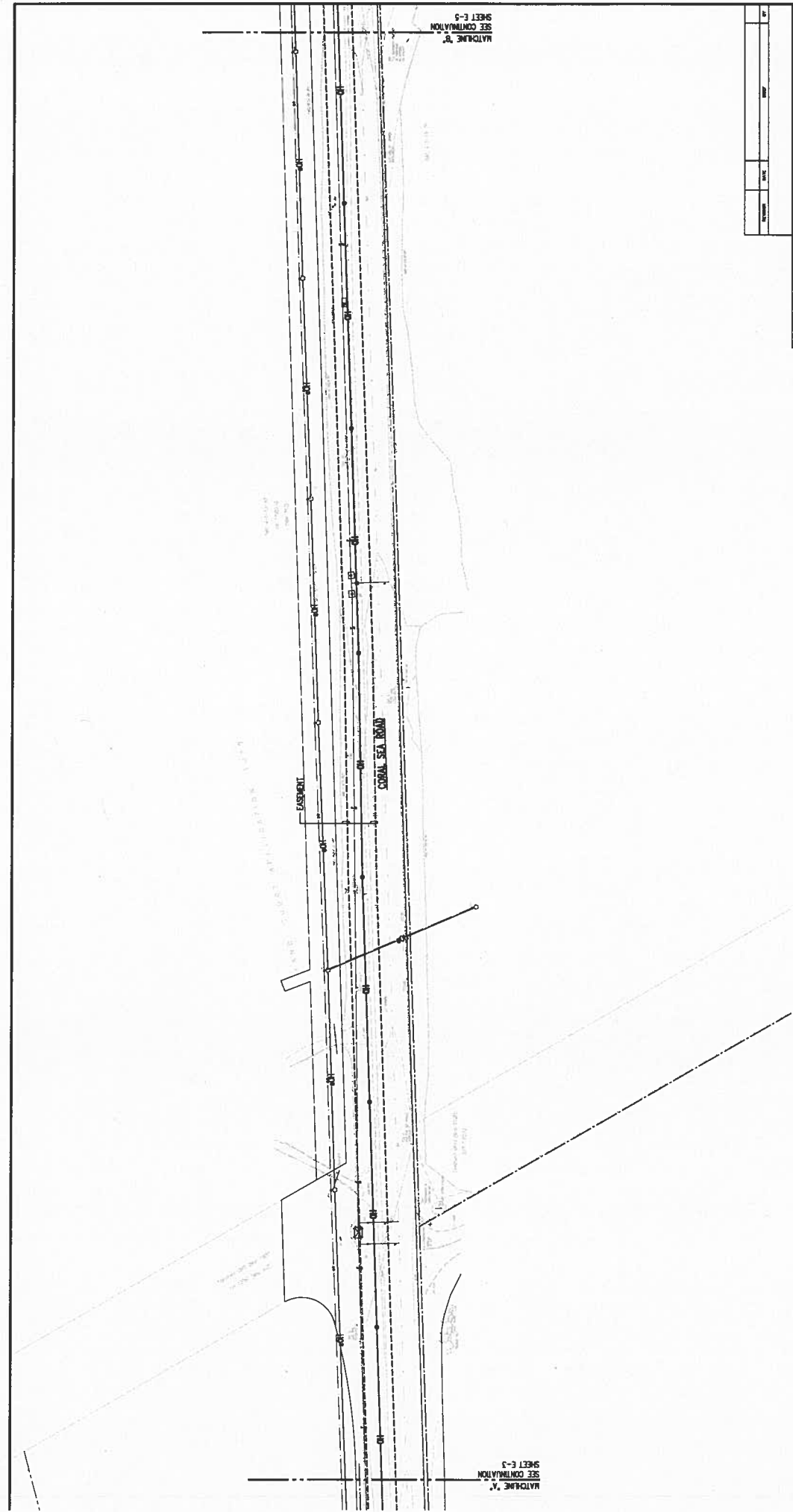
ELECTRICAL SITE PLAN
SCALE: 1"=400'



REVISION	DATE	BY

RONALD L. LEE & ASSOCIATES, INC. District Engineers	HAWAII COMMUNITY DEVELOPMENT AUTHORITY DISTRICT OF HAWAII KALAELOA DISTRICT DEVELOPMENT ENERGY CORRIDOR ELECTRICAL SITE PLAN
--	---

DATE: 04.10.2018 DRAWN BY: [Signature] CHECKED BY: [Signature] SCALE: AS SHOWN SHEET NO.: 001 TOTAL SHEETS: 10	PROJECT NO.: 17-001 DATE: 04.10.2017 DRAWN BY: [Signature] CHECKED BY: [Signature]
---	---



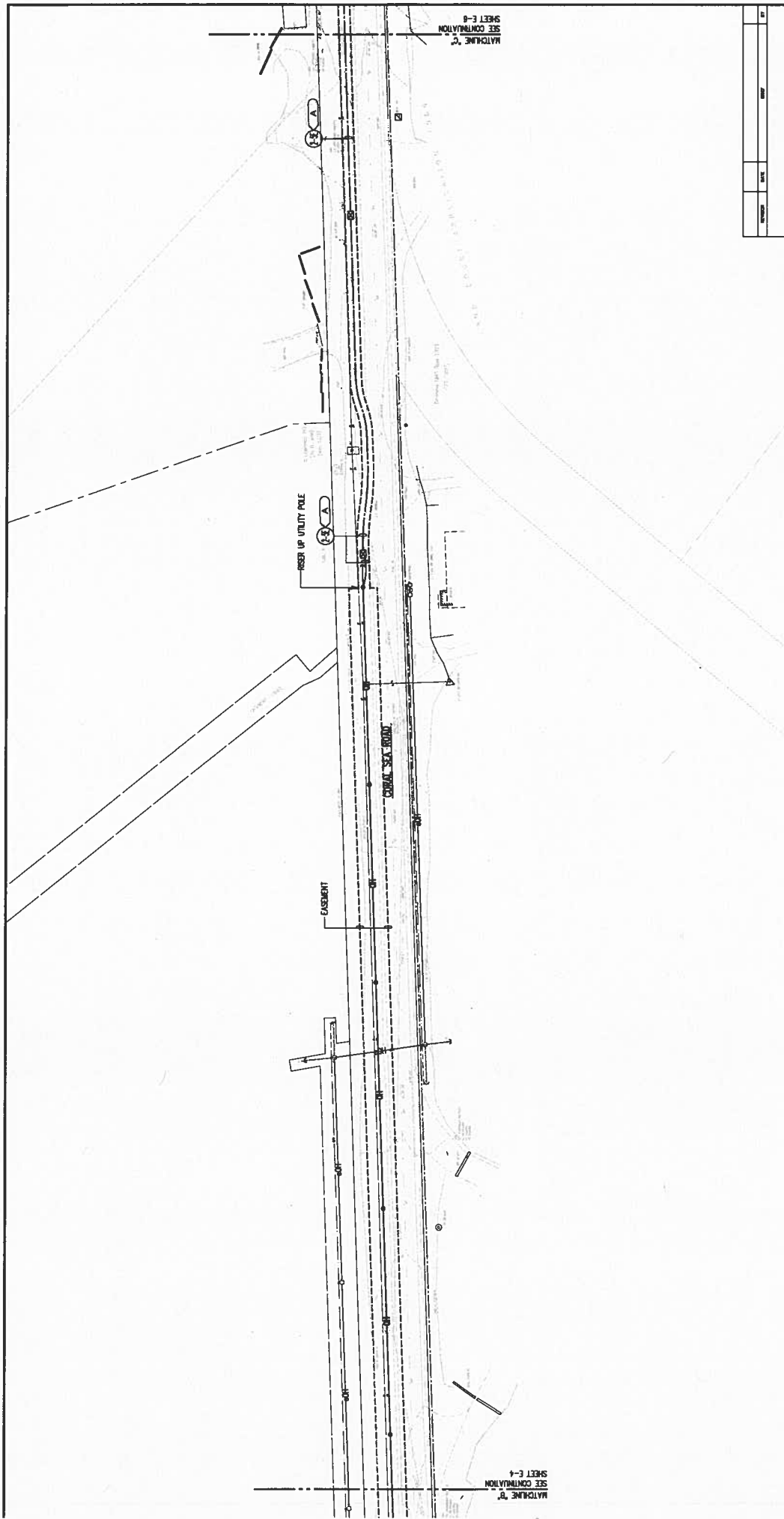
SEE CONTINUATION
SHEET E-3
MATCHLINE "B"

SEE CONTINUATION
SHEET E-3
MATCHLINE "A"

ELECTRICAL DISTRIBUTION PLAN 2
SCALE: 1"=40'



HAWAII COMMUNITY DEVELOPMENT AUTHORITY STATE OF HAWAII KALAELOA DISTRICT DEVELOPMENT ENERGY KALAELOA CORRIDOR ELECTRICAL DISTRIBUTION PLAN 2		DESIGNED BY: [Signature] CHECKED BY: [Signature] DATE: APRIL 2017 SCALE: 1"=40'
RONALD E. S. & ASSOCIATES, INC. Electrical Engineers		THIS PLAN WAS PREPARED BY ME OR UNDER MY SUPERVISION DATE: 4/10/2017 SIGNATURE: [Signature] EXPIRATION DATE OF THE LICENSE:



ELECTRICAL DISTRIBUTION PLAN 3

SCALE 1"=40'



FORWARD S. S. & ASSOCIATES, INC.
Electrical Engineers

HAWAII COMMUNITY DEVELOPMENT AUTHORITY
STATE OF HAWAII

KALAELOA DISTRICT
DEVELOPMENT ENERGY
KALAELOA ENERGY
CORRIDOR
ELECTRICAL DISTRIBUTION PLAN 3

THIS PLAN WAS PREPARED BY
ME OR UNDER MY SUPERVISION
DATE: 08/01/2017
SIGNATURE: [Signature]
KALAELOA DISTRICT, HAWAII COMMUNITY DEVELOPMENT AUTHORITY

DATE: 08/01/2017
BY: [Signature]
KALAELOA DISTRICT, HAWAII COMMUNITY DEVELOPMENT AUTHORITY

MATCHLINE "D"
SEE CONTINUATION
SHEET E-4

MATCHLINE "C"
SEE CONTINUATION
SHEET E-8



RONALD H. S. HO & ASSOCIATES, INC.
Electrical Engineers

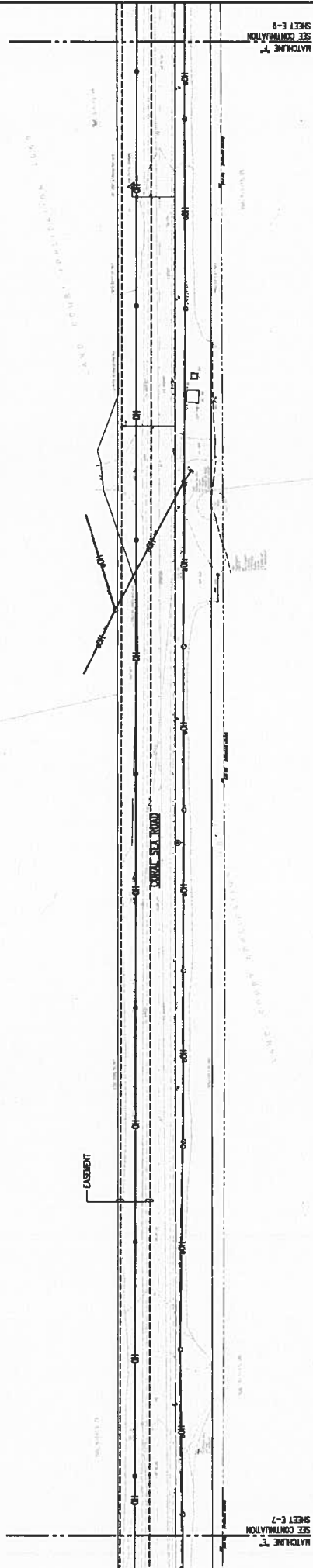
THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.

Signature

04-30-2015

ELECTRICAL DISTRIBUTION PLAN 5
SCALE: 1"=40'





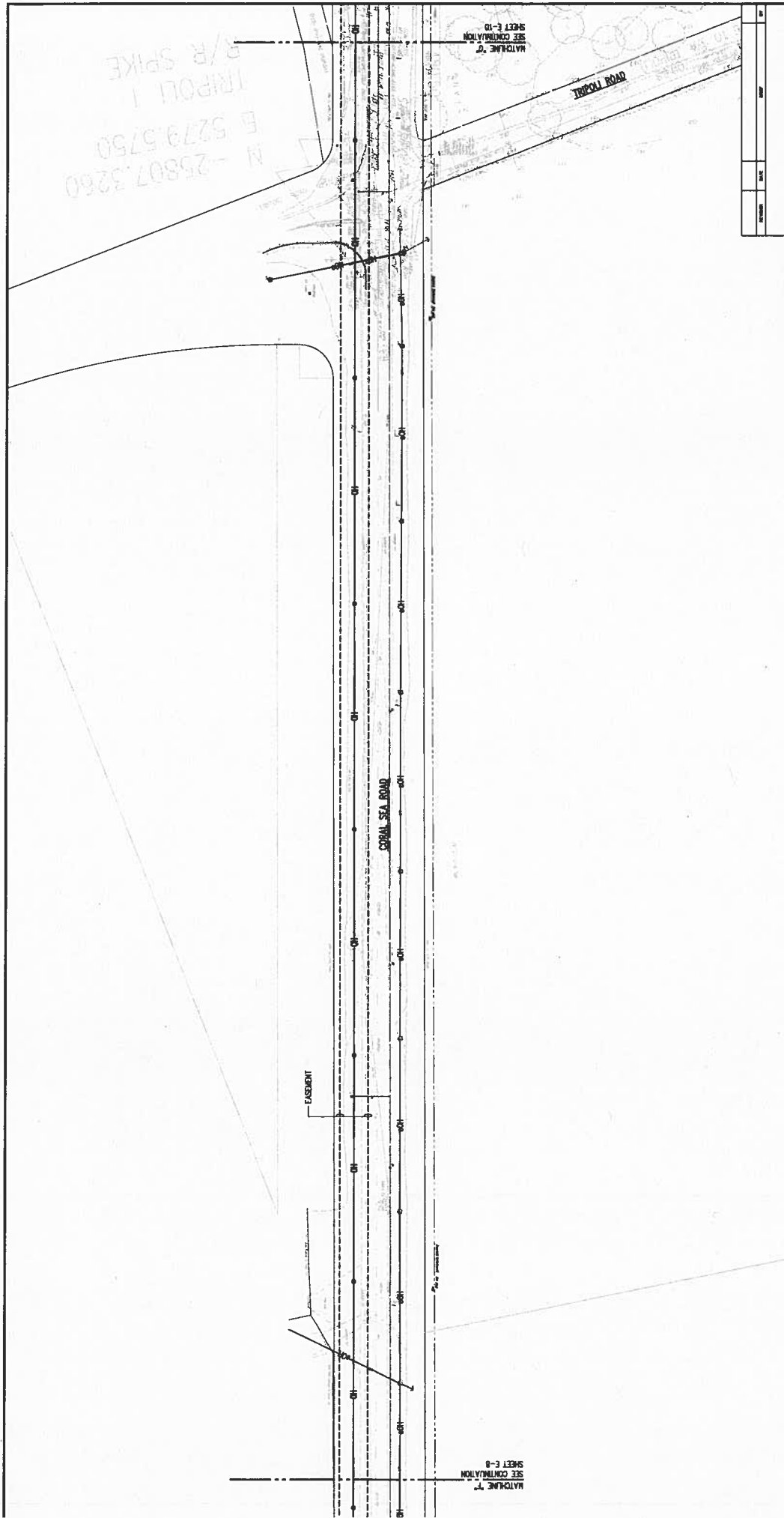
ELECTRICAL DISTRIBUTION PLAN 6
SCALE 1"=40'



HAWAII COMMUNITY DEVELOPMENT AUTHORITY STATE OF HAWAII KALAELOA DEVELOPMENT DISTRICT KALAELOA ENERGY CORRIDOR ELECTRICAL DISTRIBUTION PLAN 6		SHEET NO. 001 SHEET TOTAL 001 DATE: 08/01/2017
RONALD S. LEE & ASSOCIATES, INC. Electrical Engineers		PREPARED BY: [Signature] DATE: 04/10/2018 CHECKED BY: [Signature] DATE: 04/10/2018

SEE CONTINUATION
SHEET E-9
MATCHLINE 1"

SEE CONTINUATION
SHEET E-7
MATCHLINE 1"



N - 25807.3260
 E 5279.5750
 R/R SPIKE

MATCHLINE 1"
 SEE CONTINUATION
 SHEET E-8

MATCHLINE 0"
 SEE CONTINUATION
 SHEET E-10



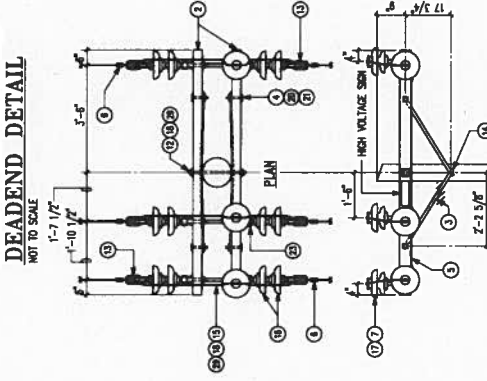
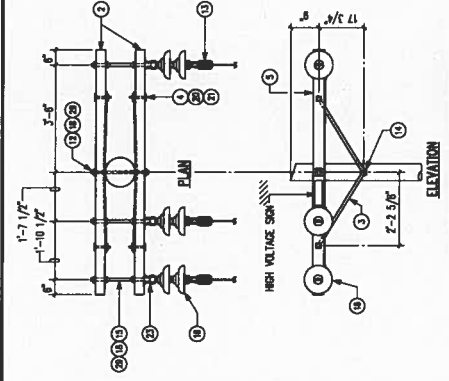
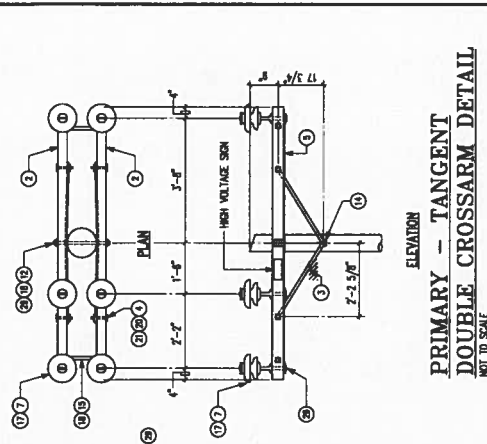
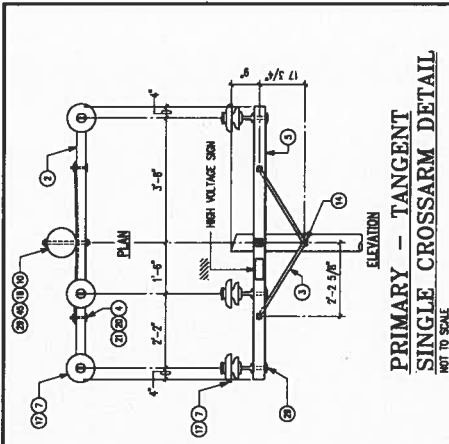
ELECTRICAL DISTRIBUTION PLAN 7
 SCALE 1"=40'



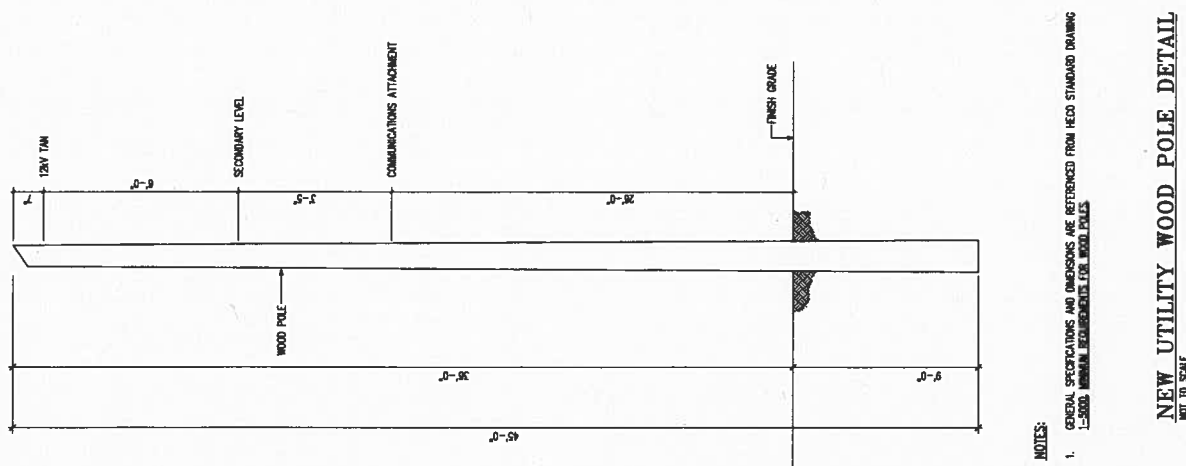
REVISION	DATE	BY

RONALD K. S. INC. & ASSOCIATES, INC. Electrical Engineers	HAWAII COMMUNITY DEVELOPMENT AUTHORITY STATE OF HAWAII KALAELOA DEVELOPMENT DISTRICT KALAELOA ENERGY CORRIDOR ELECTRICAL DISTRIBUTION PLAN 7
--	--

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION DATE: 04/25/2018 Signature: _____ License No.: _____	I HAVE REVIEWED THIS DOCUMENT FOR ACCURACY DATE: 05/01/2018 Signature: _____ License No.: _____
---	--



LIST OF MATERIALS	
PART NO.	DESCRIPTION
1	WOOD POLE, CLASS AS SPECIFIED, HEIGHT AS SPECIFIED
1A	WOOD POLE, CLASS AS SPECIFIED, HEIGHT AS SPECIFIED
1B	WOOD POLE, CLASS AS SPECIFIED, HEIGHT AS SPECIFIED
2	CROSSHAIR, DOUBLES PER 3 1/2" X 1 1/2" X 10'-0"
2A	CROSSHAIR, DOUBLES PER 3 1/2" X 5-3/4" X 8'-0"
3	BRACE, FLAT CORUSHAIR, 1 1/4" X 1/4" X 4", STRUCTURAL GRADE STEEL, 10,000 LBS. BREAKING STRENGTH
4	CARRIAGE BOLT, 3/8" X 1 1/2", ED. SPEC. TD-1
5	#4 W/40 BARE COPPER, BOND TO INSULATOR TYPE OR BOLTS & WOOD HOLDING
6	INSULATOR PIN, FORGED STEEL, HIGH TENSION, 1 3/8" LEAD THRS, ED. SPEC. TD-17-17.
7	#4 SOFT DRAWN BARE COPPER GROUND WIRE
8	MACHINE BOLT, 5/8" X 1 1/4"
10	MACHINE BOLT, 5/8" X 1"
12	MACHINE BOLT, 3/4" X 1"
13	STEAM CLAMP, ENVELOPE TYPE, ULTIMATE STRENGTH 1,000 LBS.
14	LAS SPEC, 1/2" X 4", EITHER DOME
15	DOUBLE ANCHOR BOLT 5/8" X 10" WITH 4 NUTS
15A	DOUBLE ANCHOR BOLT 5/8" X 14" WITH 4 NUTS
16	SUSPENSION INSULATOR, 10" DIA. CLEVIS TYPE, ED-HEAVY CLASS 55-2
17	PM TYPE INSULATOR, 1 3/8" DIA. PHENOLIC ED-HEAVY CLASS 55-5
17A	INSULATED CLEVIS (SECONDARY RACK)
17B	3-CMNG INSULATED CLEVIS (SECONDARY RACK)
17C	PRIMARY INSULATED CLEVIS
18	SOURCE WASHER, FLAT, 2 1/4" X 1 3/4" X 3/16", 1 1/8" DIA. HOLE
19	SOURCE WASHER, CURVED, 2 1/4" X 2 1/4" X 3/16", 1 1/8" DIA. HOLE
20	ROUND WASHER, 1" DIA. 7 1/8" DIA. HOLE
20A	ROUND WASHER, 1 1/4" DIA. 9/16" DIA. HOLE, USE UNDER HEAD OF CARRIAGE BOLT.
22	THIMBLE BUSHING ASSEMBLY, ALUMINUM, WITH GALVANIZED CUTTER BOLT AND STAINLESS STEEL PIN
23	ENDWIT, 5/8" BOLT SIZE
28	M-F LOCKWIT, SQUARE 5/8" BOLT SIZE
30	M-F LOCKWIT, SQUARE 3/4" BOLT SIZE
32	FUSE CUTOUT, 100 AMP, OPEN TYPE, LOAD BREAK, 15KV, HOOK STOCK OPERATED
33	POST INSULATOR & POST
34	SABRE ARRESTER, ZINC OXIDE, 15KV
35	MACHINE BOLT, 3/4" X 10"
36	SHAKOLE, ULTIMATE STRENGTH - 1,000 LBS.
37	EXTENSION LINK, 1 3/4" X 3/8" X 24"
43	THIMBLE BOLT, 5/8" X 10"
45	SOURCE WASHERS, CURVED, 2 1/4" X 2 1/4" X 3/16", 1 1/8" DIA. HOLE
46	CONCRETE ANCHOR, 18" DEEP
47	GALVANIZED GUT THREADED THIMBLE 5/8" X 8'-0"
49	ANCHOR ROD, THREADED THIMBLE 5/8" X 8'-0"
52	#10 CU 15KV CABLE, 3-1/C
53	GUY PROTECTOR, 8 FEET, 16 GAUGE STEEL
55	LEFT PLATE, 3-HOLE, 1/4" STEEL PLATE
56	GUY STATION INSULATOR
58	GUY CLAMP, # 3-BOLT, 5/8" BOLT
61	#10 CU 15KV CABLE, 3-1/C
62	CORRECTOR, SHUT BOLT, COPPER ALLOY
62A	CORP CONNECTOR
63	TERMINATOR, SINGLE CONDUCTOR, SUP-ON TYPE, 15KV
64	TRANSFORMER, OR FILLED, NON-POL, STAINLESS STEEL, YAW. SIZE AS NOTED
65	WOOD HOLDING, HALF ROUND, STAPLE EVERY 12" WITH COPPER CLAMP STAPLES
66	300 MCM COPPER CABLE
67A	#4 W/40 BARE COPPER WIRE
68	3" PVC CONDUIT RISER, SCHEDULE 80, DUCT SEAL AT TOP
70	3" PVC SCHEDULE 80 SLEEVE
73	GROUND ROD, 5/8" DIA. X 10'-0" COPPER CLAD STEEL
74	CLAMP, 5/8" DIA GROUND ROD

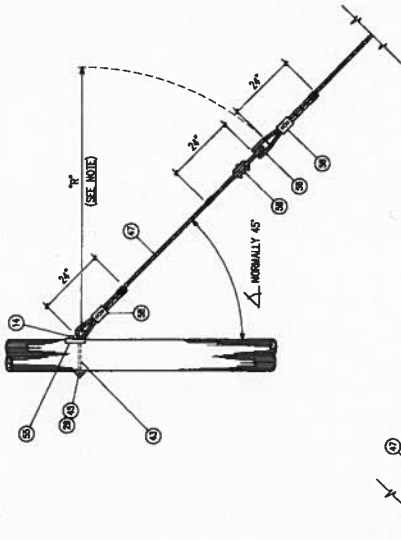


NOTES:

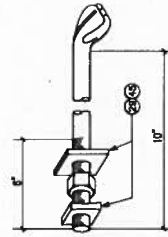
1. GENERAL SPECIFICATIONS AND DIMENSIONS ARE REFERENCED FROM HECO STANDARD DRAWING 1-5000, MINIMUM REQUIREMENTS FOR WOOD POLES.

NEW UTILITY WOOD POLE DETAIL
NOT TO SCALE

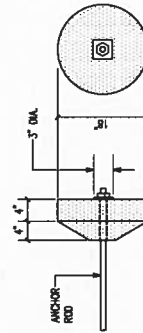
[illegible]



SQUARE M-F LOCKNUT DETAIL
NOT TO SCALE



THIMBLE EYE BOLT DETAIL
NOT TO SCALE

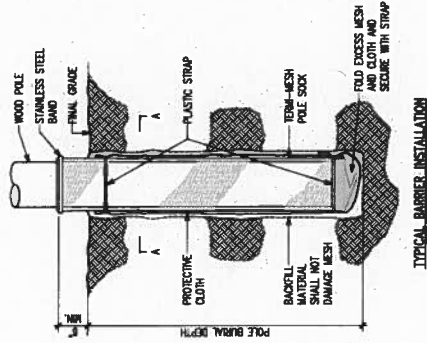


CONCRETE ANCHOR DETAIL
NOT TO SCALE

TYPICAL GUY & ANCHOR ASSEMBLY DETAIL
NOT TO SCALE

NOTES:

1. RADIUS "R" SHALL BE LENGTH REQUIRED TO LOCATE GUY INSULATOR 4 FEET BELOW COMMUNICATION CONDUCTOR LEVEL, MINIMUM "R" EQUAL TO 6 FEET.
2. ALL HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION A-153.
3. GUYES FOR DOWN GUY OF EQUIVALENT STRENGTH MAY BE USED IN LIEU OF THE TYPE AS SHOWN.

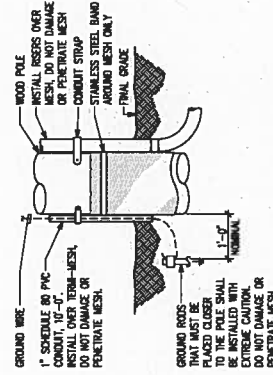


GROUND WIRE/RISER DETAIL
NOT TO SCALE

SECTION A-A

SEE GROUND WIRE/RISER DETAIL AND NOTES

TERMI-MESH TERMITE BARRIER FOR WOOD POLES DETAIL
NOT TO SCALE

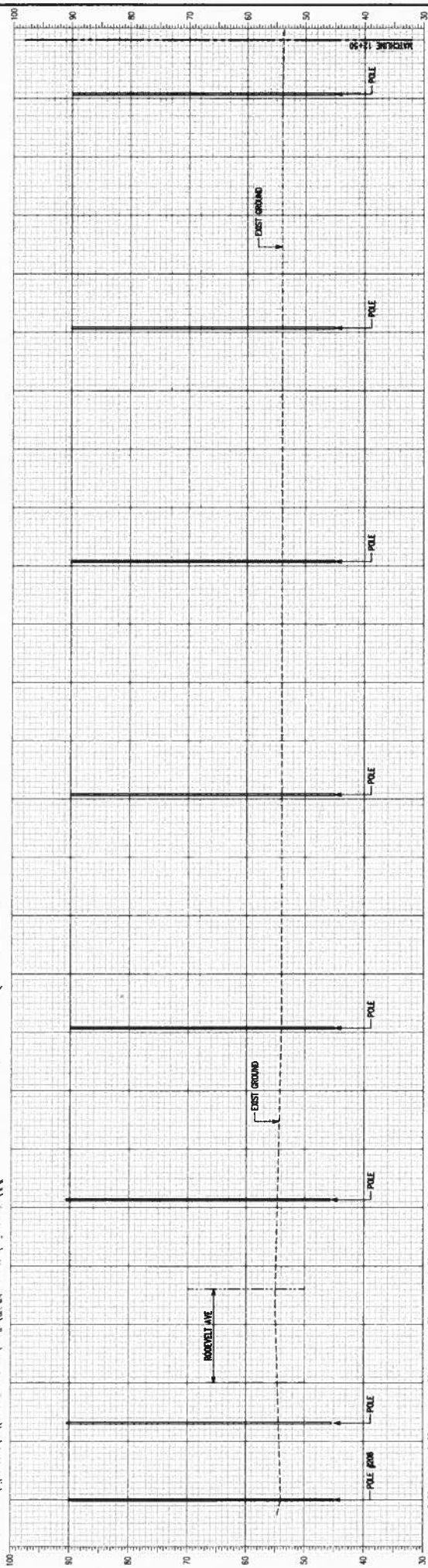
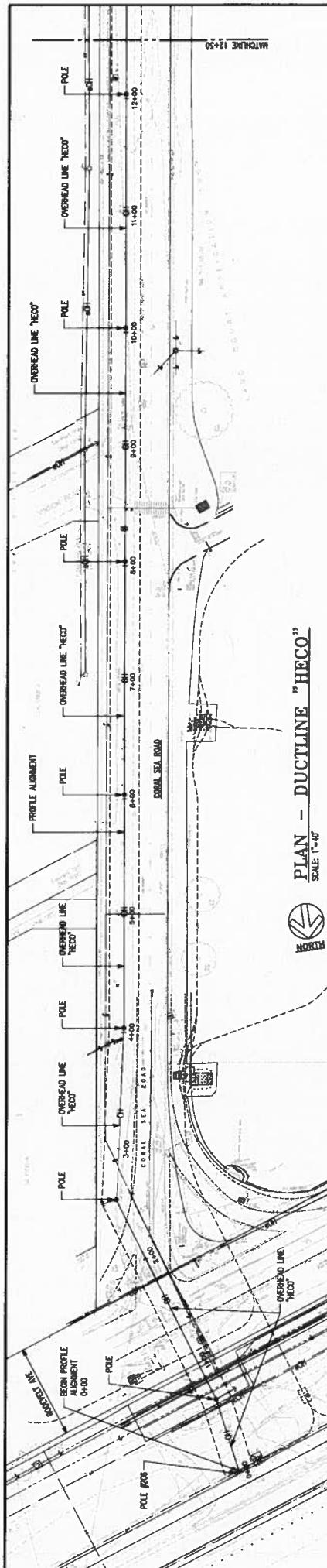


REVISION	DATE	BY

HAWAII COMMUNITY DEVELOPMENT AUTHORITY
 STATE OF HAWAII
 KALAELOA
 DEVELOPMENT DISTRICT
 KALAELOA ENERGY
 CORRIDOR
 OVERHEAD DETAIL 3

DESIGNED BY:
 CHECKED BY:
 DATE:
 SCALE:
 PROJECT NO.:
 SHEET NO.: OF

THIS WORK WAS PREPARED BY
 AS AN AID TO THE
 HAWAIIAN PEOPLE
 AND IS NOT TO BE USED FOR ANY OTHER PURPOSES
 WITHOUT THE WRITTEN PERMISSION OF THE HAWAIIAN PEOPLE



PROFILE - DUCTLINE "HECO"

SCALE: 1"=40'

VERT. SCALE: 1"=40'

HORIZ. SCALE: 1"=40'



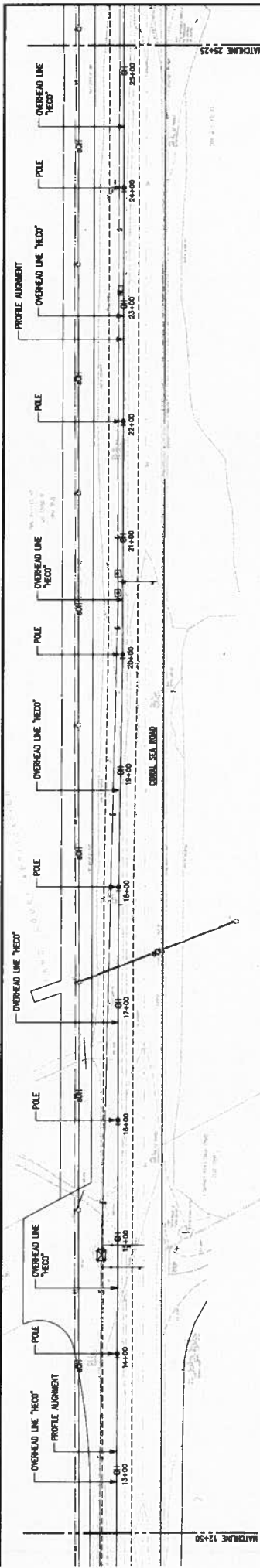
RONALD E. & ASSOCIATES, INC.
Electrical Engineers

HAWAII COMMUNITY DEVELOPMENT AUTHORITY
STATE OF HAWAII

KALAELOA
DEVELOPMENT DISTRICT
KALAELOA ENERGY
CORRIDOR
PROFILE - DUCTLINE "HECO"

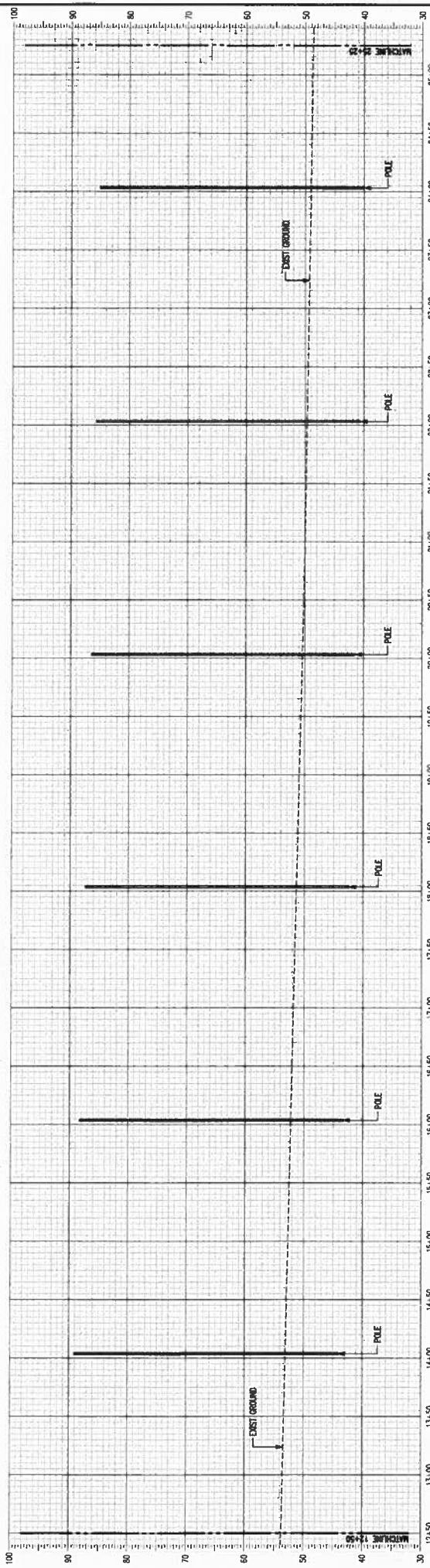
DATE: 07/01/00
BY: [Signature]
CHECKED BY: [Signature]
APPROVED BY: [Signature]

REVISIONS: [Table with 3 columns: No., Description, Date]



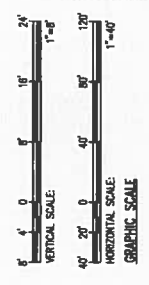
PLAN - DUCTLINE "HECO"

SCALE: 1"=40'

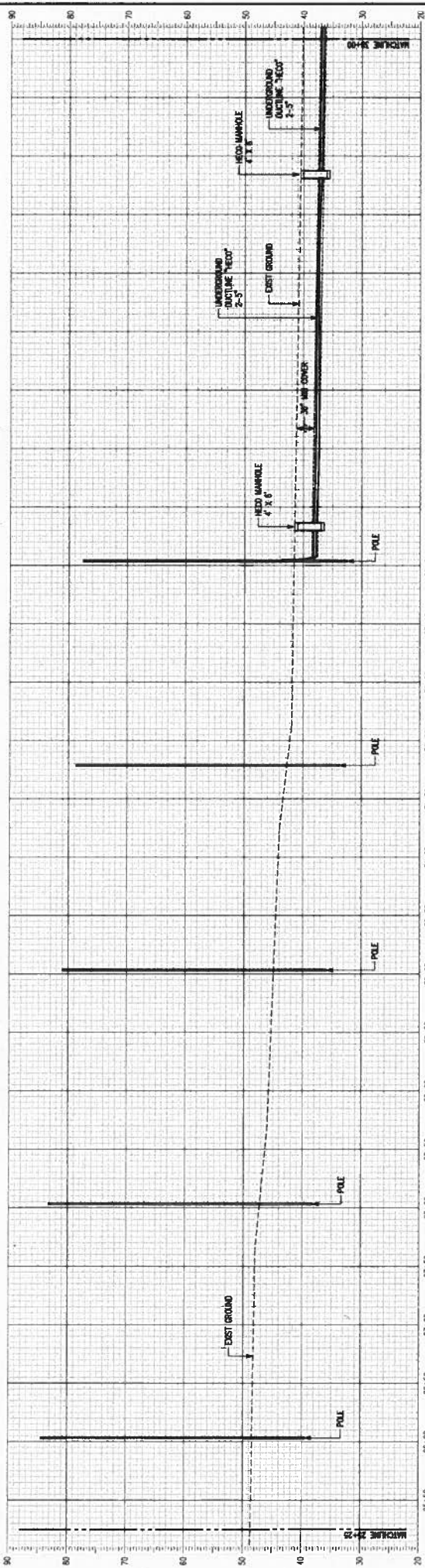
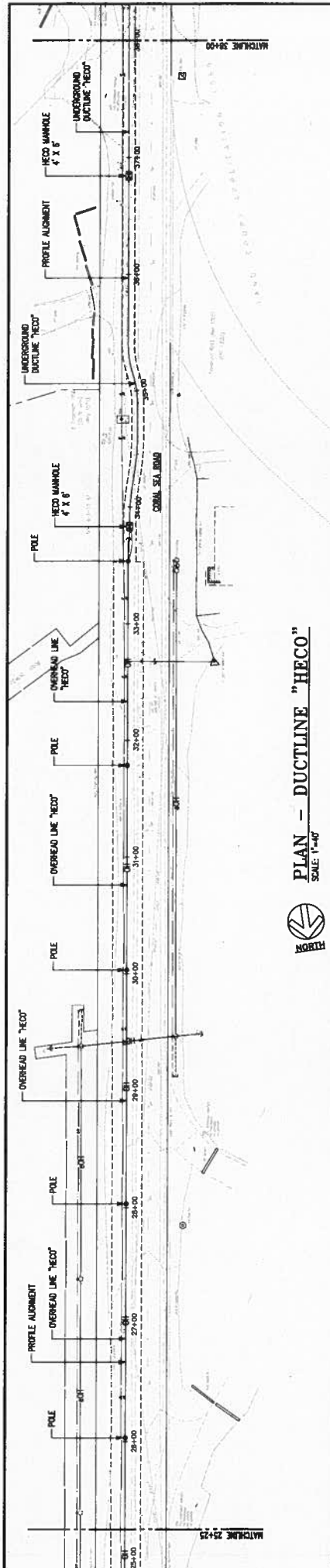


PROFILE - DUCTLINE "HECO"

SCALE: 1"=40'



HAWAII COMMUNITY DEVELOPMENT AUTHORITY	
STATE OF HAWAII	
KALAELOA	
DEVELOPMENT DISTRICT	
KALAELOA ENERGY	
CORRIDOR	
PROFILE - DUCTLINE "HECO"	
DESIGNED BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE
THIS DRAWING WAS PREPARED BY AN ENGINEER OR ARCHITECT REGISTERED IN THE STATE OF HAWAII	
DATE	BY
24.10.2018	10/24/2018
EXPIRATION DATE OF THE LICENSE	
10/24/2021	



PROFILE - DUCTLINE "HECO"
SCALE: HORIZ. 1"=40' VERT. 1"=8'



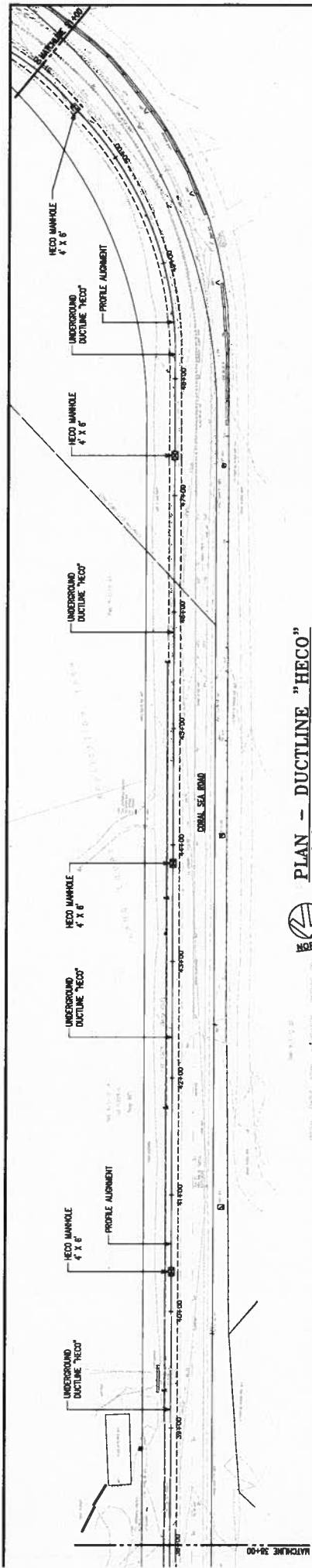
HOWARD B. S. & ASSOCIATES, INC.
Electrical Engineers

HAWAII COMMUNITY DEVELOPMENT AUTHORITY
STATE OF HAWAII

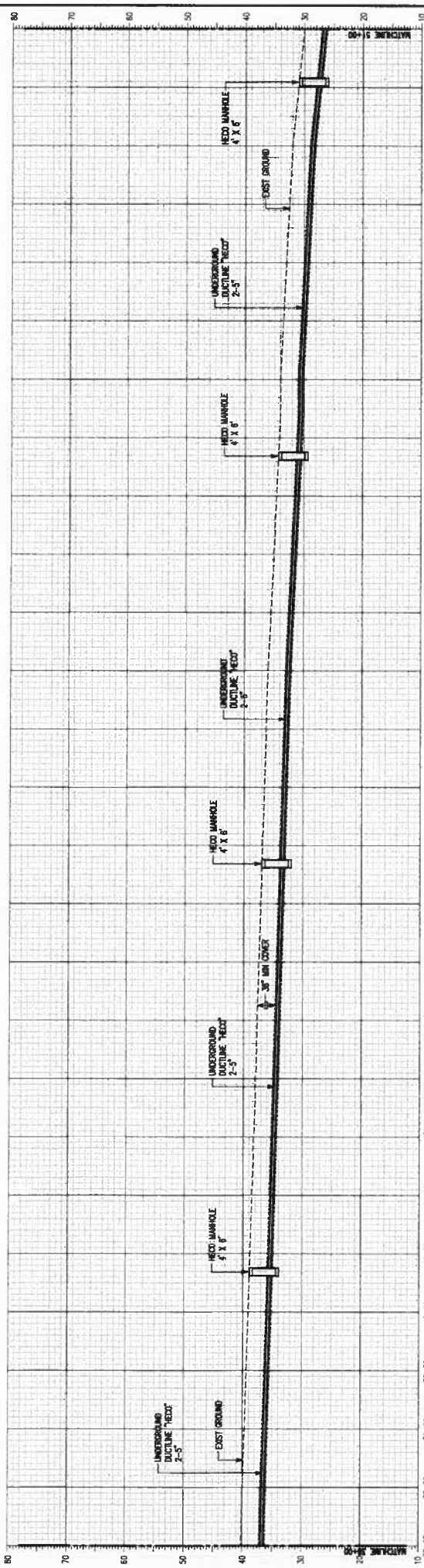
KALAELOA
DEVELOPMENT DISTRICT
KALAELOA ENERGY
CORRIDOR
PROFILE - DUCTLINE "HECO"

DATE: 08/01/2018
DRAWN BY: [Signature]
CHECKED BY: [Signature]
PROJECT NO.: 2017

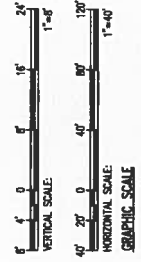
THIS DRAWING WAS PREPARED BY
HOWARD B. S. & ASSOCIATES, INC.
FOR THE HAWAIIAN ELECTRIC COMPANY
DATE: 08/01/2018
PROJECT NO.: 2017



PLAN - DUCTLINE "HECO"
SCALE 1"=40'



PROFILE - DUCTLINE "HECO"
SCALE Horiz: 1"=40'
Vert: 1"=8'



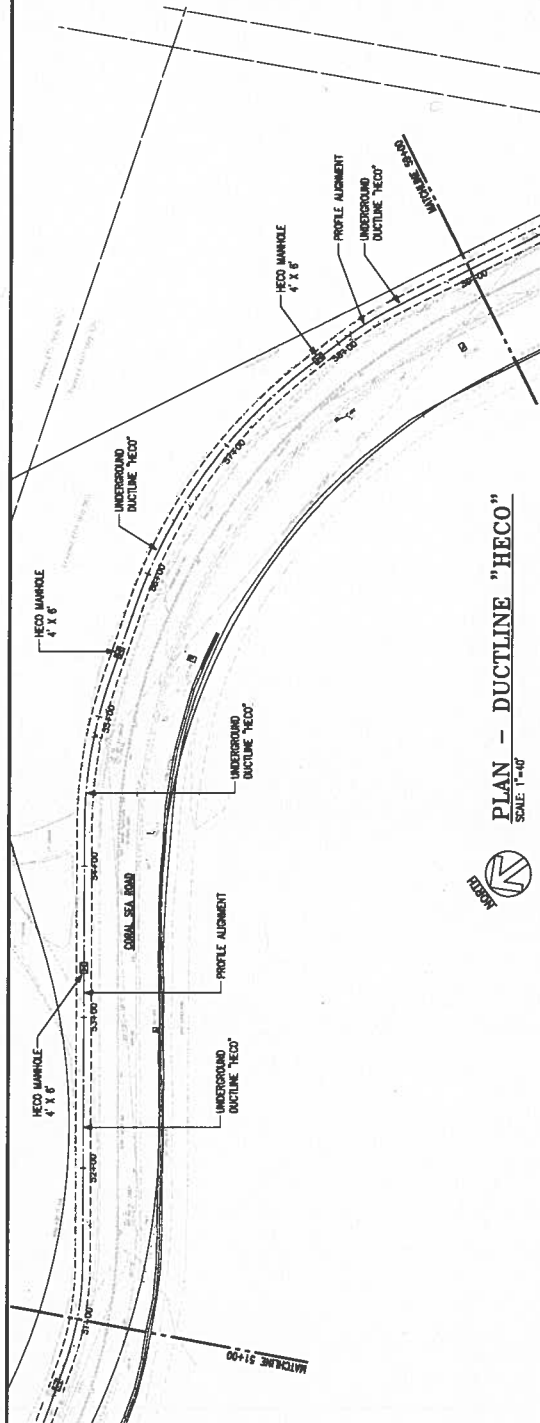
RONALD B. JUNG & ASSOCIATES, INC.
Electrical Engineers

HAWAII COMMUNITY DEVELOPMENT AUTHORITY
STATE OF HAWAII

KALAELOA
DEVELOPMENT DISTRICT
KALAELOA ENERGY
CORRIDOR
PROFILE - DUCTLINE "HECO"

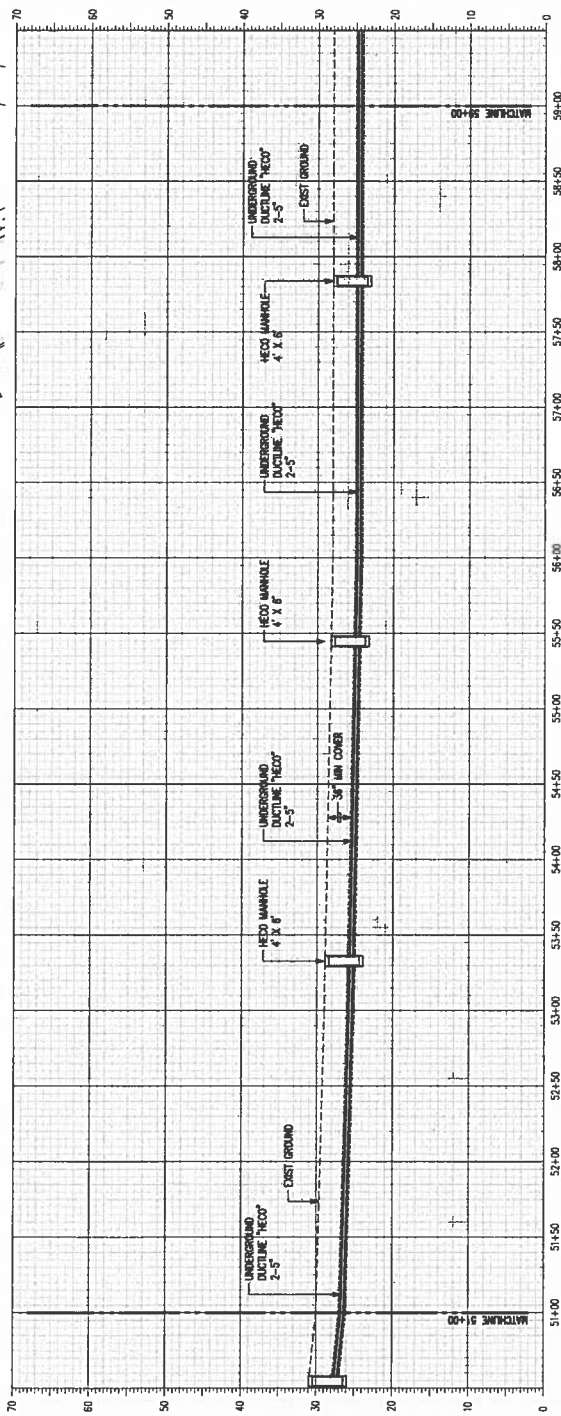
DESIGNED BY: BJ CHECKED BY: JS
DATE: 02/28/2017

DATE: 02/28/2017
SCALE: AS SHOWN



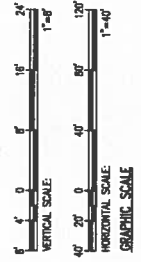
PLAN - DUCTLINE "HECO"

SCALE: 1"=40'



PROFILE - DUCTLINE "HECO"

SCALE: HORIZ. 1"=40'
VERT. 1"=4'

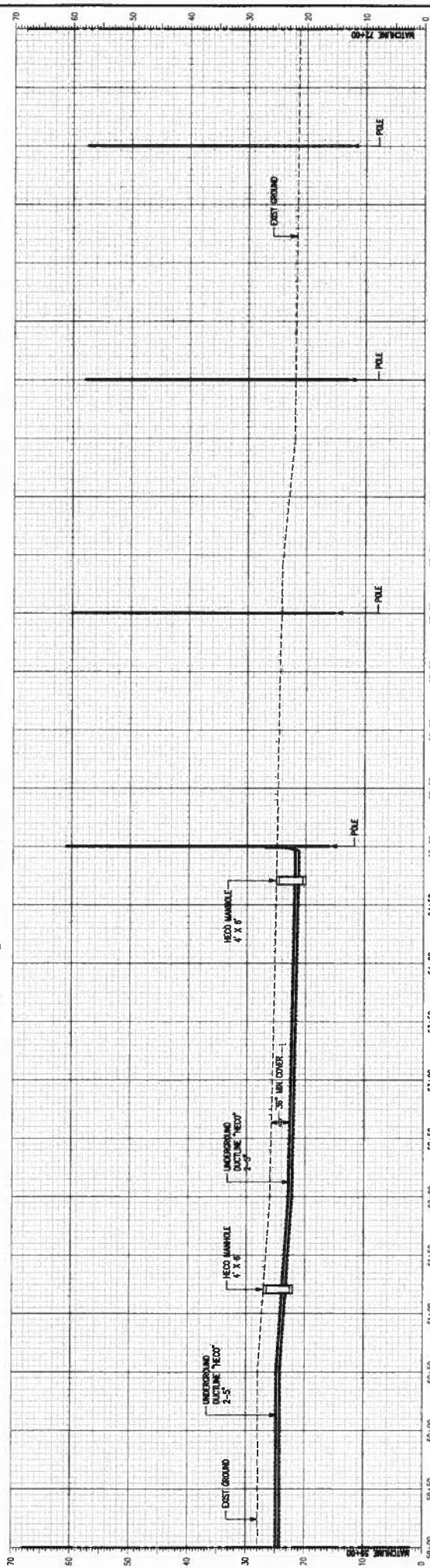


DESIGNED BY	CHECKED BY	DATE	BY

HAWAII COMMUNITY DEVELOPMENT AUTHORITY	
STATE OF HAWAII	
DEVELOPMENT DISTRICT	
KALAELOA DISTRICT	
KALAELOA ENERGY	
CORRIDOR "HECO"	
PROFILE - DUCTLINE "HECO"	

PROJECT NO.	DATE
007	08/01/2017

THIS DRAWING WAS PREPARED BY	
ME IN ACCORDANCE WITH HAWAIIAN	
REGULATIONS	
DATE	BY
04/03/2015	
CAPTIONED ABOVE IS THE LOCATION	



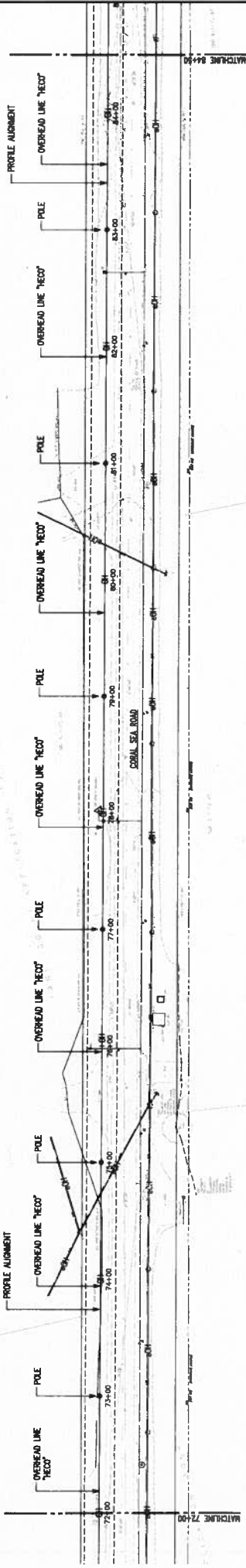
SCALE: Horiz.: 1"=40'
Vert.: 1"=15'



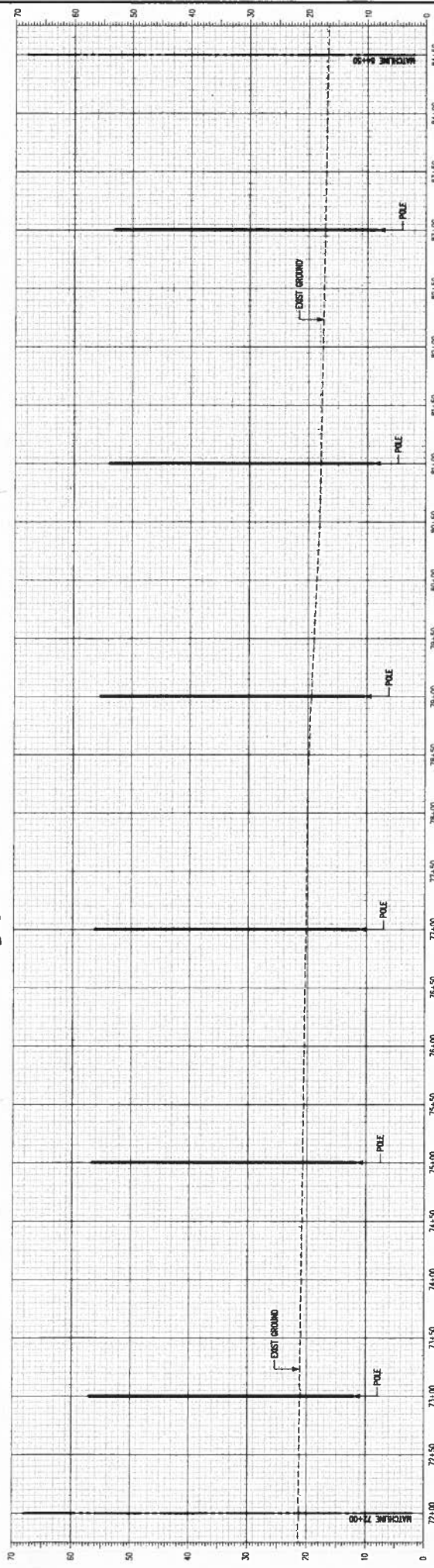
KALAELOA
DEVELOPMENT DISTRICT
KALAELOA ENERGY
CORRIDOR
PROFILE - DUCTLINE "HECO"

THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.

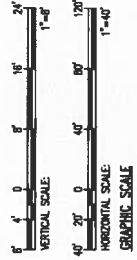
[illegible]



PLAN - DUCTLINE "HECO"
SCALE: 1"=40'



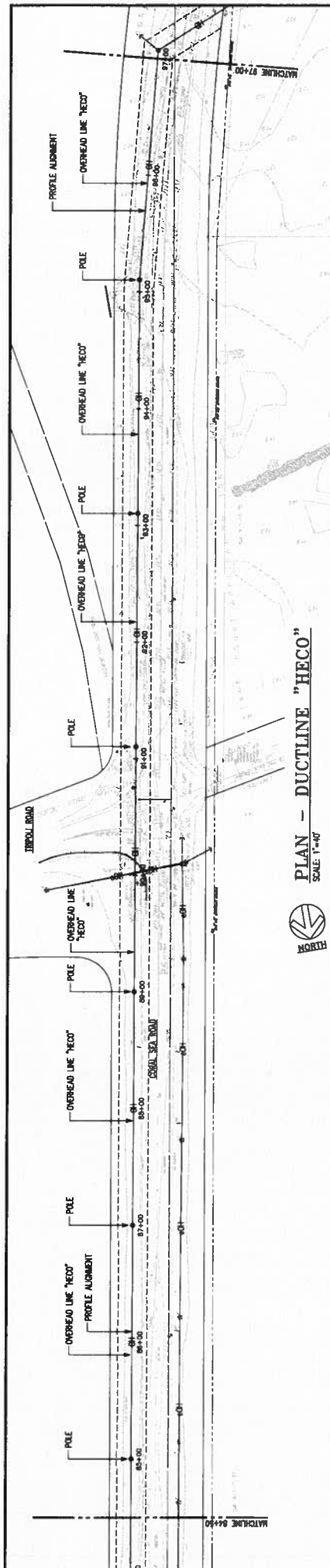
PROFILE - DUCTLINE "HECO"
SCALE: Horiz: 1"=40'
Vert: 1"=40'



HAWAII COMMUNITY DEVELOPMENT AUTHORITY
STATE OF HAWAII
KALAELOA
DEVELOPMENT DISTRICT
KALAELOA ENERGY
CORRIDOR
PROFILE - DUCTLINE "HECO"

DESIGNED BY: CHT DATE: APRIL 2017
CHECKED BY: CS
APPROVED BY: CS

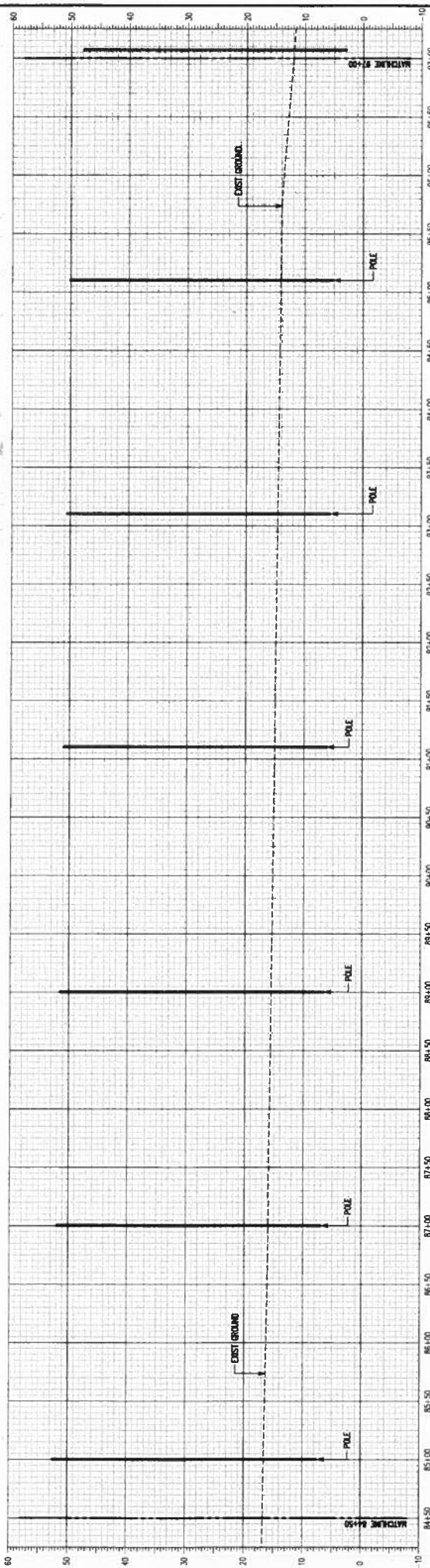
THIS DRAWING WAS PREPARED BY
ME OR UNDER MY SUPERVISION
DATE: 04/20/2017
EXPIRATION DATE OF MY LICENSE



PLAN - DUCTLINE "HECO"

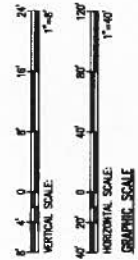


SCALE: 1"=40'



PROFILE - DUCTLINE "HECO"

SCALE: HORIZ. 1"=40'
VERT. 1"=5'



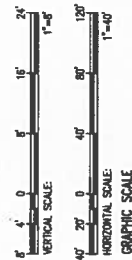
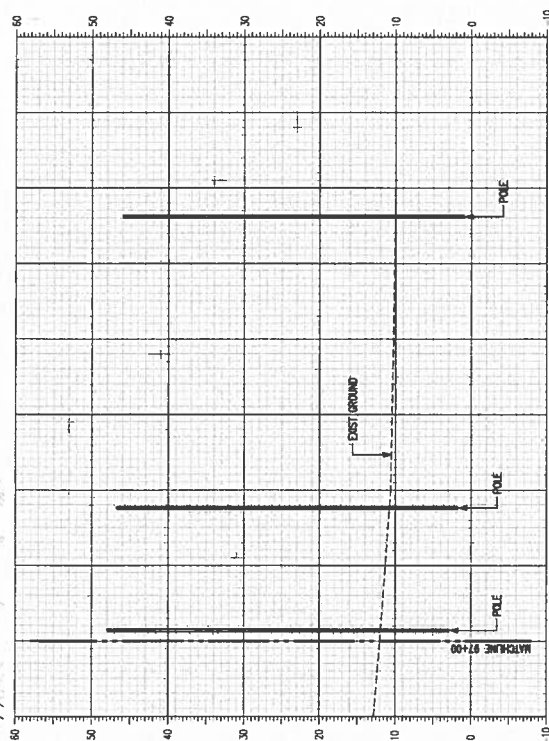
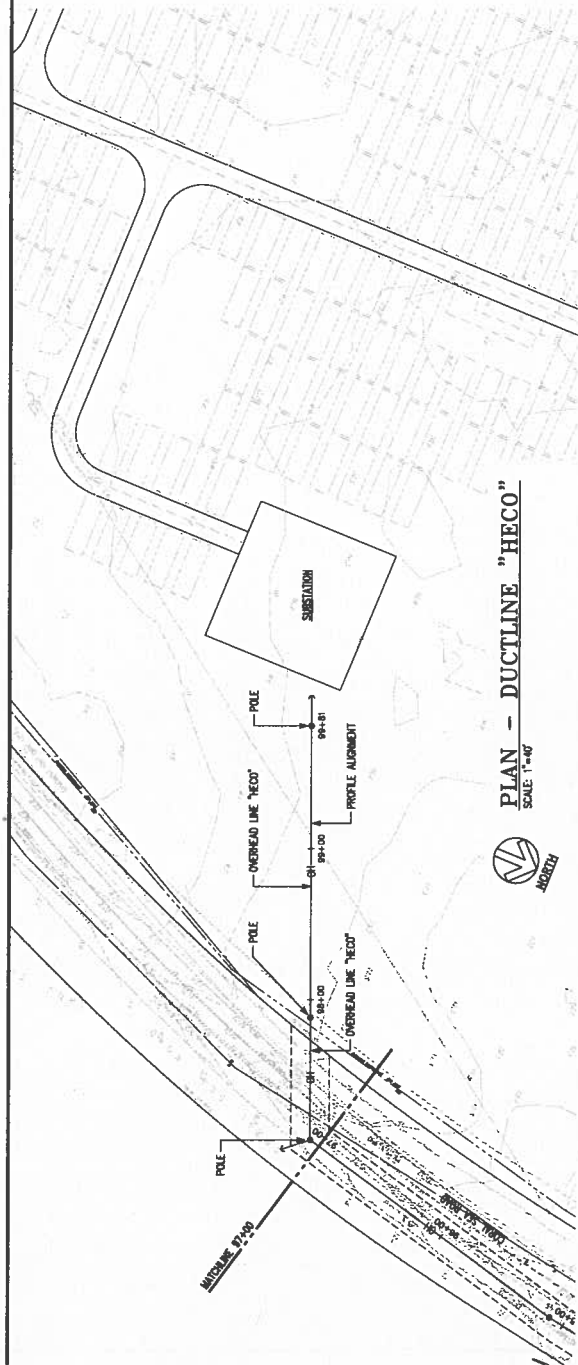
RONALD B. L. & ASSOCIATES, INC.
Civil Engineers

HAWAII COMMUNITY DEVELOPMENT AUTHORITY
STATE OF HAWAII

KALAELOA
DEVELOPMENT DISTRICT
KALAELOA ENERGY
CORRIDOR
PROFILE - DUCTLINE "HECO"

DATE: 04/13/2018
BY: [Signature]
CHECKED BY: [Signature]
APPROVED BY: [Signature]

DATE: 04/13/2018
BY: [Signature]
CHECKED BY: [Signature]
APPROVED BY: [Signature]



REVISION	DATE	BY	CHK

DONALD H. & ASSOCIATES, INC.
 Electrical Engineers

HAWAII COMMUNITY DEVELOPMENT AUTHORITY
 STATE OF HAWAII
 KALAELOA DISTRICT
 DEVELOPMENT ENERGY
 KALAELOA CORRIDOR "HECO"
 PROFILE - DUCTLINE "HECO"

DRAWN BY: CH CHECKED BY: SS
 DATE: 02/28/2017

SCALE: 1"=8' (VERTICAL)
 SCALE: 1"=40' (HORIZONTAL)

DATE: 02/28/2017
 DRAWN BY: CH CHECKED BY: SS