State of Hawaii, Department of Health, Clean Water Branch
NOI Form C
NOI for HAR, Chapter 11-55, Appendix C - NPDES General Permit Authorizing Discharges of Storm Water Associated With Construction Activities (as defined in 40 CFR §§122.26(b)(14)(x) and 122.26(b)(15)(i))

All sections of this form MUST be completed for National Pollutant Discharge Elimination System (NPDES) General Permit compliance.

C.1 – General Information

You are required to fulfill all requirements and check the box below. If you do not check the box, your NOI will be considered incomplete, and the CWB may deny your request for NPDES permit coverage with prejudice.

☒ *I certify that:*

- *I prepared a Storm Water Pollution Prevention Plan (SWPPP) in accordance with HAR, Chapter 11-55, Appendix C, Section 7 prior to submitting this NOI.*
- *I will comply with all terms, conditions, and requirements in HAR Chapter 11-55, Appendix C.*
- *I will implement, operate, and maintain my SWPPP to ensure that storm water discharges associated with construction activities will not violate HAR, Chapter 11-54; HAR, Chapter 11-55; and HAR, Chapter 11-55, Appendix C.*

C.2 - Existing Pollution Sources/ History of Land Use

Describe the history of land use at the existing Facility/Project site:

The existing project site is currently owned and managed by the State of Hawaii, Hawaii Community Development Authority (HCDA) as part of the Kalaeloa Community Development District (KCDD). The parcel (TMK (1) 9-1-013:070) is bordered by Tripoli Street alignment, which runs along the northern edge boundary with its immediate mauka neighbor being the Kalaeloa Heritage Park under Kalaeloa Heritage and Legacy Foundation. Coral Sea Road runs along the southern and eastern borders of the property. Elevations range from approximately 4 feet above mean sea level (MSL) to 16 feet above MSL.

Determine if the existing Facility/Project site may contain any existing pollution source(s) by using the following references. Place a check next to all references you utilized to determine existing pollution source(s). You are required to check at least one reference.

- ☒ a. *DOH, Solid and Hazardous Waste Branch-Hawaii Underground Storage Tank- Leaking Underground Storage Tank database*
- ☐ b. *DOH, Hazard Evaluation and Emergency Response Office records*
- ☐ c. *Phase I and/or Phase II Environmental Site Assessments, as applicable*
- ☐ d. *Recent site inspections*
- ☐ e. *Past land use history*
- ☐ f. *Soil sampling data, if available*
- ☐ g. *Other (specify):* _____

Describe any existing pollution source(s) identified in the references you checked above: None

Describe any corrective measures that have been undertaken for any existing pollution source(s): None

C.3 - Construction Site Estimates

Please provide the following estimates for the construction site.

Total project area including areas to be left undisturbed: 46.32 *acres*

Construction site area to be disturbed including storage and staging areas: 15.36 *acres*

Impervious area before construction: 2.04 *acres*

Impervious area after construction:

2.41 *acres*

C.4 - Quantity of Storm Water Runoff

Estimate the quantity of storm water runoff during construction when the greatest and/or maximum area of disturbance occurs. Provide the supporting calculations in an attachment or insert in this section.

_____ *Millions of Gallons per Day (MGD)*

or

27.10 *Cubic Feet per Second (CFS)*

C.5 - Soil Characterization

Describe the nature of the soil on the project site (including the potential to encounter contaminated soil) and the nature of the fill material to be used:
Existing soil characteristics are summarized below:

Soil Classification	***Soil Classification***	***Slope Range (%)***	***Hydrologic Soils Group***	***Drainage Class***	***Depth to Water table (inches)***	***Capacity to transmit water (Ksat-in/hr)***	***Typical Soil Profile – Layer 1 (depth from surface)***	***Typical Soil Profile – Layer 2 (depth from surface)***	***Typical Soil Profile – Layer 3 (depth from surface)***	***Typical Soil Profile – Layer 4 (depth from surface)***
Coral Outcrop	*CR*	*0-25%*	*N/A*	*Excessively drained*	*N/A*	*0.2-5.95 in/hr*	*0-60" bedrock*	*--*	*--*	*--*

The soil information listed for the site was obtained through interpretation of soil classification maps created by the United States Department of Agriculture "Web Soil Survey". The potential to encounter contaminated soil is limited.

C.6 - Nature and Sequence of Construction Activity

What is the function of the construction activity (Please check all applicable activity(ies))?
☐ Residential ☒ Commercial ☐ Industrial ☐ Road Construction ☐ Linear Utility
☐ Other (please specify):_____

What is being constructed?
The proposed project is a 5 Megawatt (MW) photovoltaic (PV) solar farm in Kalaeloa, O'ahu. The project includes an electrical substation, solar panels mounted on ground posts, access roads throughout the site, electrical lines and equipment pads.

Describe the scope of work and major construction activities you wish to be covered in this NOI, including baseyards and staging areas. You may only include project areas where the locations of impervious structures are known; project areas where the final grades are known; and work areas that will be performed by one (1) general contractor. A separate NOI will be required for all other project areas.
Clearing and grubbing of site, grading for access roads and installation of substation and equipment pads, solar panels mounted on ground posts on existing grade, trenching for and installation of overhead and underground utility lines.

C.7 - Existing or Pending Permits, Licenses, or Approvals

Place a check next to all applicable Federal, State, or County permits, Licenses, or approvals for the project and specify the permit number.

☐ *Other NPDES Permit or NGPC File No.:* _____

☐ *Department of the Army Permit (Section 404):* _____

If your project requires work in, above, under or adjacent to State waters, please contact the Army Corps of Engineers (COE) Regulatory Branch at (808) 438-9258 regarding their permitting requirements. Provide a copy of the COE permitting jurisdictional determination (JD) or the JD with COE Person's Name, Phone Number, and Date Contacted.

☐ *Facility on SARA 313 List (identify SARA 313 chemicals on project site:* _____

☐ *RCRA Permit (Hazardous Wastes):* _____

☐ *Section 401 Water Quality Certification:* _____

☐ *Other (Specify):* _____

County-approved Erosion and Sediment Control Plan and/or Grading Permit

a. *Is a County-approved Erosion and Sediment Control Plan and/or Grading Permit, where applicable for the activity and schedule for implementing each control, required?*
   ☒ *Yes. Please complete Section C.7.b below and skip Section C.7.c.*
   ☐ *No. Please complete Section C.7.c below and skip Section C.7.b.*

b. *Is a copy County-approved Erosion and Sediment Control Plan and/or Grading Permit, as appropriate for the activity and schedule for implementing each control, attached?*
   ☐ *Yes, see Attachment* _____
   ☒ *No, the County-approved Erosion and Sediment Control Plan and/or Grading Permit, as appropriate for the activity and schedule for implementing each control, will be submitted at least 30 calendar days before the start of construction activities.*

c. *Please select and complete at least one (1) of the following items to demonstrate that a County-approved Erosion and Sediment Control Plan and/or Grading Permit, as appropriate for the activity and schedule for implementing each control, is not required.*
   - ☐ *See Attachment _____ for the County written determination.*
   - ☐ *Provide the County contact person information (Name, Department, Phone Number, and Date Contacted):_____*
   - ☐ *The project is a Federal Project and does not require County approval.*
   - ☐ *Other (specify):_____*

C.8 - Project Site Maps and Construction Plans/Drawings

Attach, title, and identify all maps (pdf - minimum 300 dpi) listed below, in Attachment A.

Please reference which maps account for the features listed below.

a. *Island on which the project is located. Oahu, see Attachment A, Figure 1*
b. *Vicinity of the project on the island. Ewa Beach, see Attachment A, Figure 1*
c. *Legal boundaries of the project. See Attachment A, Figure 1*
d. *Receiving State water(s) from Section 6 of e-Permitting form and receiving separate drainage system(s) from Section 7 of e-Permitting form, identified and labeled. See Attachment A, Figure 2*
e. *Location of ALL discharge points from Section 6 of e-Permitting form with identification numbers. See Attachment A, Figure 2*
f. *Boundaries of 100-Year flood plans. See Attachment A, Figure 3*
g. *Areas of soil disturbance. See Attachment A, Figure 4*
h. *Location(s) of impervious structures (including buildings, roads, parking lots, etc.) after construction is completed. See Attachment A, Figure 5*
i. *Pre-Construction Topography including approximate slopes and drainage patterns for the entire Facility/Project site to the receiving storm water drainage system (if applicable) or to the receiving State water(s) (with flow arrows). See Attachment A, Figure 4*
j. *During-Construction Topography (after major grading activities) including approximate slopes and drainage patterns for the entire Facility/Project site to the receiving storm water drainage system (if applicable) or to the receiving State water(s) (with flow arrows). See Attachment A, Figure 5*
k. *Post-Construction Topography including approximate slopes and drainage patterns for the entire Facility/Project site to the receiving storm water drainage system (if applicable) or to the receiving State water(s) (with flow arrows). Attachment A, Figure 5*

C.9 - Construction Schedule

Provide the following estimated dates:

The date when construction activity will begin: April 1, 2018

The date when each major construction activity begins:

Install BMPs April 1, 2018

Clear & grub – April 2, 2018

Grading – May 1, 2018

Utility Installation – June 1, 2018

Construction of equipment pads and substation December 1, 2018

Construction complete – December 31, 2018

The date when the Notice of Cessation form will be submitted: June 30, 2020

Site Specific BMPs Plan Attachments

Attachment A - Project Site Maps and Construction Plans/Drawings (Section C.8)

PROJECT SITE MAPS, CONSTRUCTION PLANS/DRAWINGS

Attachment A – Figures and Plans

Figure 1 – Location Map

Figure 2 – Discharge Points & Receiving Waters

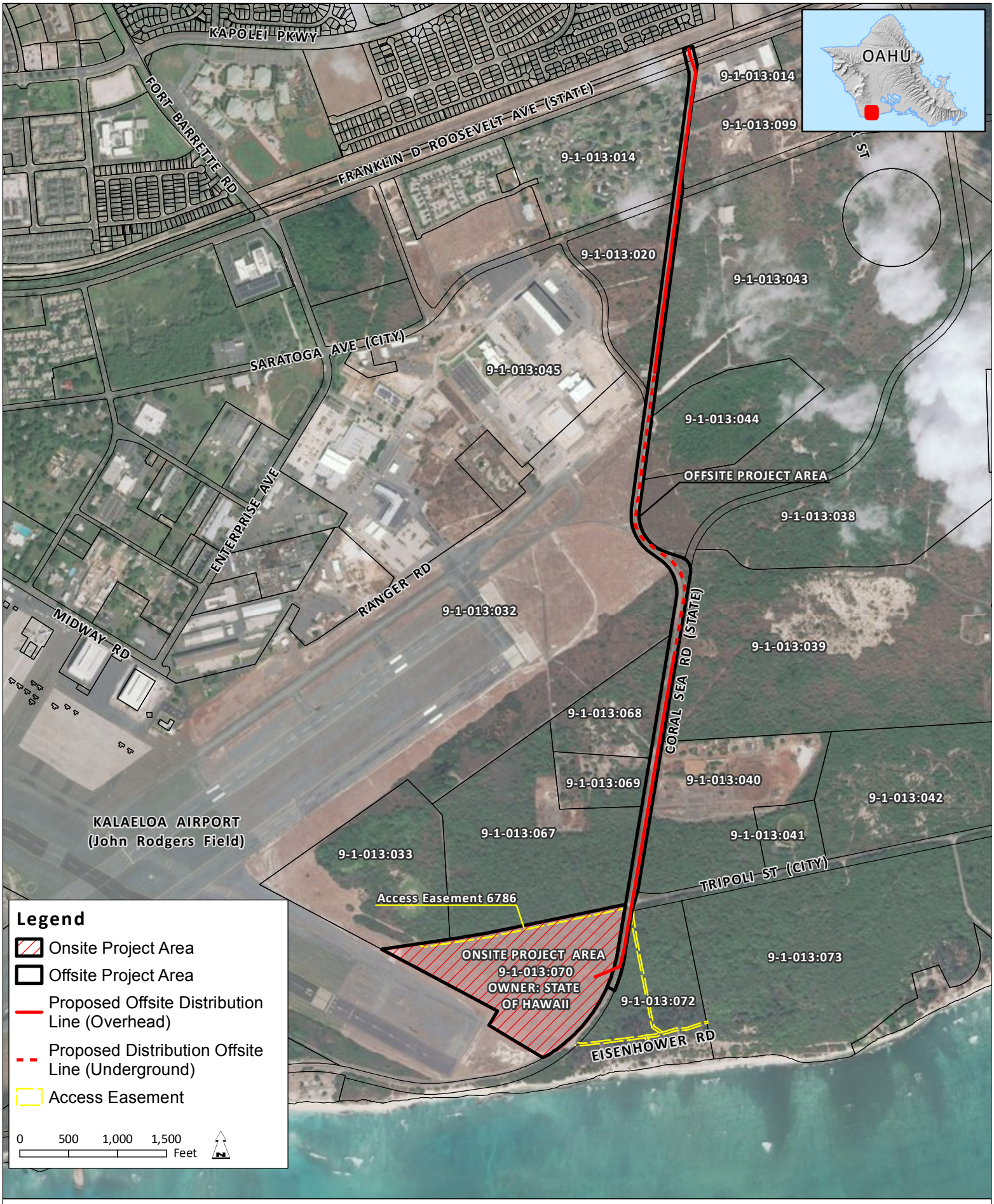
Figure 3 – FEMA Flood Zone Map

Figure 4 – Existing Conditions, Topography, and Hydrology

Figure 5 – Proposed Conditions and Hydrology

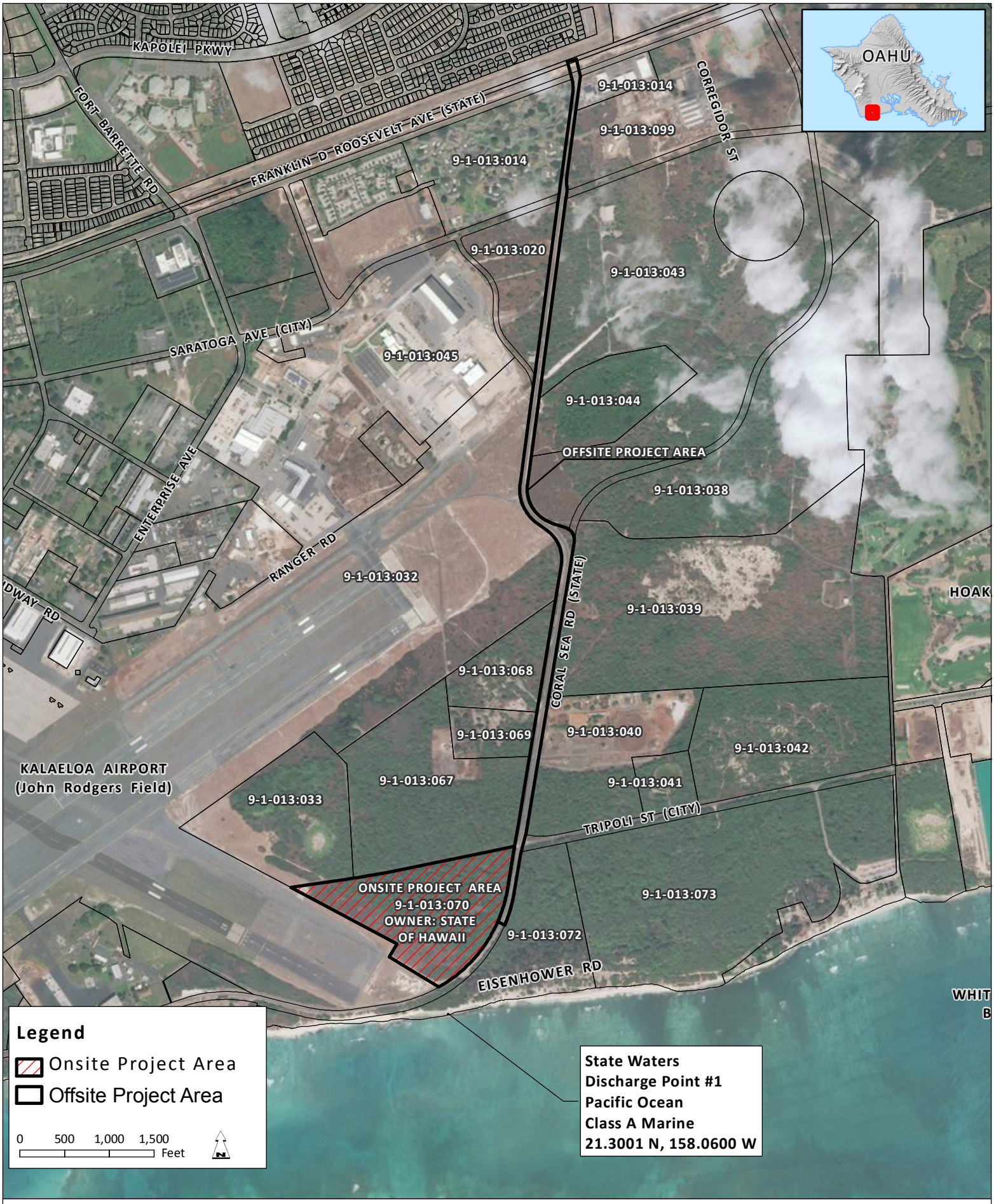
Figure 6 – Stormwater Flow Chart

Figure 7 – Drainage Area Calculations (Prior To & During Construction & Following Construction)



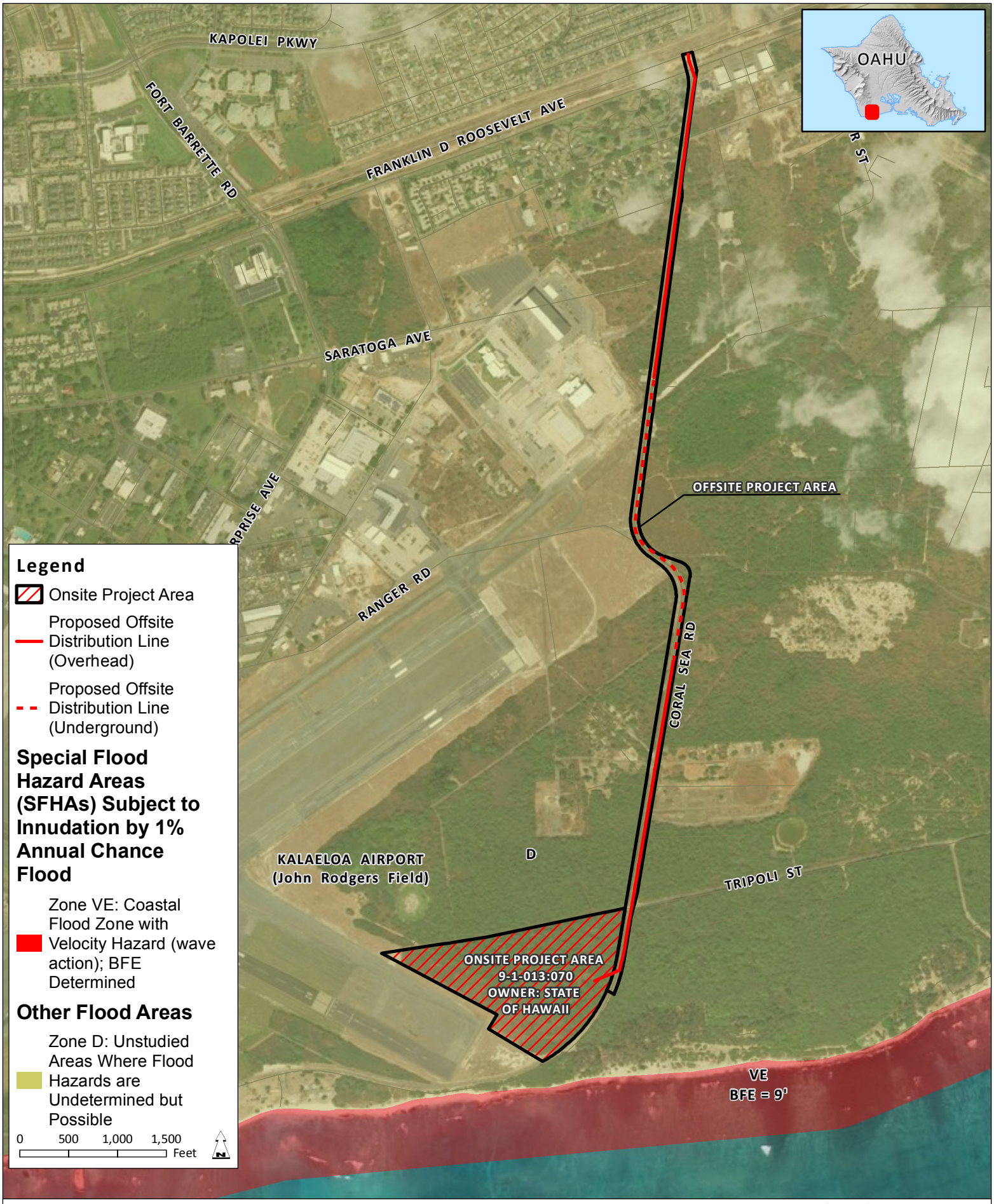
Kalaeloa Solar Farm
Location Map

Figure 1



Kalaeloa Solar Farm
Discharge Points & Recieving Waters

Figure 2



215073-01

Kalaeloa Solar Farm

Prepared For: NPDES

Figure 3: FEMA Flood Zone Map

NORTH

TMK (1) 9-1-013:033
LOT 13073-A
(MAP 971)
STATE OF HAWAII

TMK (1) 9-1-013:067
LOT 13073-B
(MAP 971)
HAWAII COMMUNITY DEVELOPMENT AUTHORITY

ACCESS EASEMENT 6786

PROJECT SITE
TMK (1) 9-1-013:070
HAWAII COMMUNITY
DEVELOPMENT AUTHORITY

1% average
existing slopes

TMK (1) 9-1-013:072
LOT 13074-C
(MAP 972)
UNITED STATE OF AMERICA

TMK (1) 9-1-013:023
LOT 13072-A
(MAP 975)
HAWAII DOT AIRPORTS DIVISION

CORAL SEA ROAD (STATE)

EISENHOWER ROAD

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- 10 EXISTING CONTOURS
- EXISTING EASEMENT
- ONSITE PROJECT LIMITS
- EXISTING FLOW

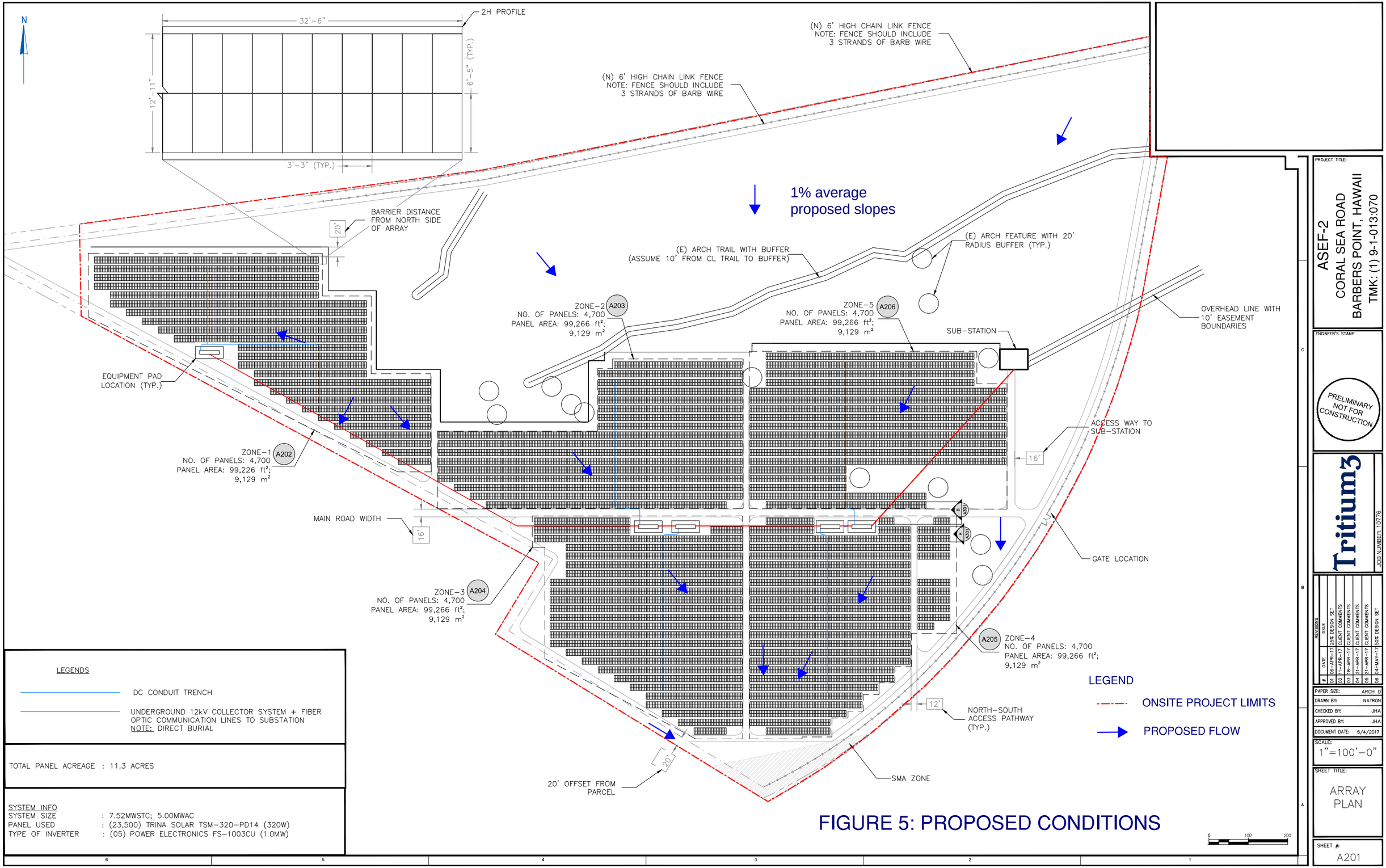
FIGURE 4: EXISTING CONDITIONS

GROUP 70 INTERNATIONAL, INC.
925 BETHEL STREET, 5TH FLOOR
HONOLULU, HAWAII 96813-4398
808-523-5866
WWW.G70.DESIGN

ASEF KALAELOA SOLAR FARM
EXISTING ONSITE PROJECT AREA
TMK (1) 9-1-013:070

CAD DRAWING: EXISTING CONDITIONS
SCALE: 1" = 200'
DATE: 11/2017
PROJECT #: 215073-01

FIGURE
4



LEGENDS

DC CONDUIT TRENCH

UNDERGROUND 12kV COLLECTOR SYSTEM + FIBER OPTIC COMMUNICATION LINES TO SUBSTATION
NOTE: DIRECT BURIAL

TOTAL PANEL ACREAGE : 11.3 ACRES

SYSTEM INFO
SYSTEM SIZE : 7.52MWSTC; 5.00MWAC
PANEL USED : (23,500) TRINA SOLAR TSM-320-PD14 (320W)
TYPE OF INVERTER : (05) POWER ELECTRONICS FS-1003CU (1.0MW)

FIGURE 5: PROPOSED CONDITIONS

PROJECT TITLE:
ASEF-2
CORAL SEA ROAD
BARBERS POINT, HAWAII
TMK: (1) 9-1-013:070

ENGINEER'S STAMP
PRELIMINARY
NOT FOR
CONSTRUCTION

Tritium3

JOB NUMBER: 10776

#	DATE	ISSUE
01	06-APR-17	25% DESIGN SET
02	11-APR-17	CLIENT COMMENTS
03	18-APR-17	CLIENT COMMENTS
04	21-APR-17	CLIENT COMMENTS
05	21-APR-17	CLIENT COMMENTS
06	04-MAY-17	50% DESIGN SET

REVISIONS

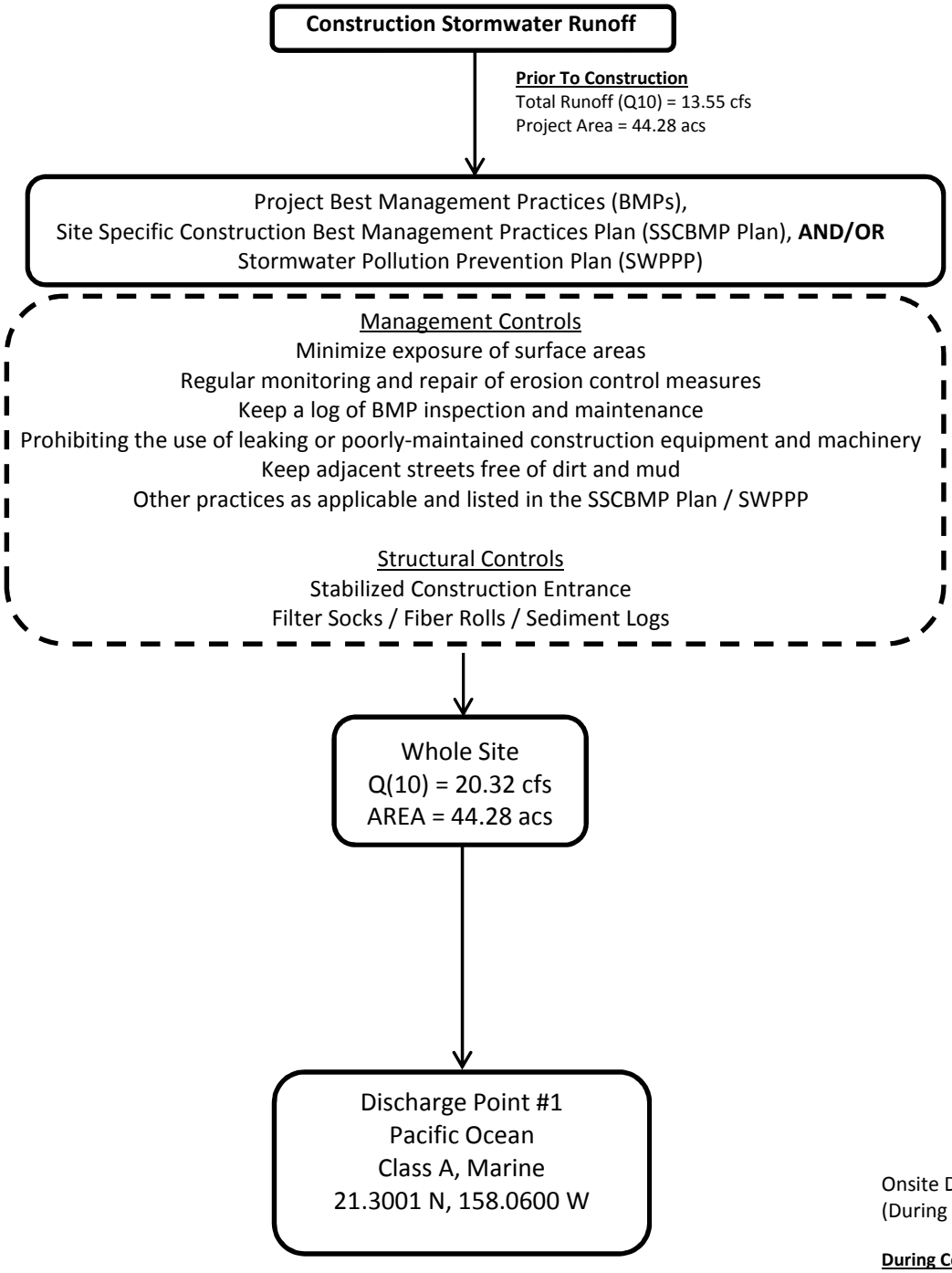
PAPER SIZE: ARCH D
DRAWN BY: NATRON
CHECKED BY: JHA
APPROVED BY: JHA
DOCUMENT DATE: 5/4/2017

SCALE: 1"=100'-0"

SHEET TITLE:
ARRAY
PLAN

SHEET #:
A201

FIGURE 6 – STORMWATER FLOW CHART



Onsite Drainage Areas
(During and Post Construction)

During Construction
Total Runoff (Q10) = 27.10 cfs
Area = 44.28 acs

Post Construction
Total Runoff (Q10) = 20.32 cfs
Area = 44.28 acs

Overflow / subsurface flow in inundation event

Group 70 International, Inc.
925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813
Phone: 523-5866 Fax: 523-5874

ASEF Kalaeloa Solar Farm
Job No.: 215073-01
Prepared by: MZ
Date: November 2017

TMK: (1) 9-1-013:070

FIGURE 7a - DRAINAGE AREA CALCULATIONS (Prior To Construction)

Runoff Flow rate (Rational Method) - Q = CIA:
Q = Flowrate, cfs
C = Runoff Coefficient
I = Rainfall Intensity, in/hr for a duration equal to the time of concentration
T(c) = Time of Concentration
A = Drainage Area, acres

Assumptions:
C = 0.1 Flat pervious surface

10-yr 1-hr rainfall in inches (Plate 1) = **1.75**

*** Total On-Site Generated Flow ***
Total Q(10) = 13.55 CFS

Q(10) Value for Designated Areas

Area	*Q(10) (cfs)*	C	Tc *(min.)*	I(10) *(in./hr.)*	A *(acres)*	Description	Sht. Ref. No.	Direct Connect.	Discharges to:	Allowed
Whole Site	13.55	0.1	36.5	3.06	44.28	1% Slope, average grass	Figure 4	no	Sheet flow toward south of project site toward Kalaeloa Beach Park	yes

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925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813
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TMK: (1) 9-1-013:070

FIGURE 7b - DRAINAGE AREA CALCULATIONS (During Construction)

Runoff Flow rate (Rational Method) - Q = CIA:
Q = Flowrate, cfs
C = Runoff Coefficient
I = Rainfall Intensity, in/hr for a duration equal to the time of concentration
T(c) = Time of Concentration
A = Drainage Area, acres

Assumptions:
C = 0.2 *Flat pervious surface, exposed soil*

10-yr 1-hr rainfall in inches (Plate 1) = **1.75**

*** Total On-Site Generated Flow ***
Total Q(10) = 27.10 CFS

Q(10) Value for Designated Areas

Area	*Q(10) (cfs)*	C	Tc *(min.)*	I(10) *(in./hr.)*	A *(acres)*	Description	Sht. Ref. No.	Direct Connect.	Discharges to:	Allowed
Whole Site	27.10	0.2	36.5	3.06	44.28	1% Slope, average grass	Figure 4	no	Sheet flow toward south of project site toward Kalaeloa Beach Park	yes

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ASEF Kalaeloa Solar Farm
Job No.: 215073-01
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Date: November 2017
Sheet 3 of 3

TMK: (1) 9-1-013:070

FIGURE 7c - DRAINAGE AREA CALCULATIONS (Following Construction)

Runoff Flow rate (Rational Method) - Q = CIA:
Q = Flowrate, cfs
C = Runoff Coefficient
I = Rainfall Intensity, in/hr for a duration equal to the time of concentration
T(c) = Time of Concentration
A = Drainage Area, acres

Assumptions:
C = 0.15 *Flat pervious surface*

10-yr 1-hr rainfall in inches (Plate 1) = **1.75**

*** Total On-Site Generated Flow ***
Total Q(10) = 20.32 CFS

Q(10) Value for Designated Areas

Area	*Q(10) (cfs)*	C	Tc *(min.)*	I(10) *(in./hr.)*	A *(acres)*	Description	Sht. Ref. No.	Direct Connect.	Discharges to:	Allowed
Whole Site	20.32	0.15	36.5	3.06	44.28	1% Slope, average grass	Figure 5	no	Sheet flow toward south of project site toward Kalaeloa Beach Park	yes