CONSERVATION DISTRICT USE APPLICATION (CDUA)

All permit applications shall be prepared pursuant to HAR 13-5-31

File No.:

Acceptance Date: 180-Day Expiration Date:

Assigned Planner:

for DLNR Use

PROJECT NAME Ahuwale Ditch Storm Drainage Improvements, Phase 1

Conservation District Subzone: General

Identified Land Use: Sec. 13-5-22, P-8, Structures and Land Uses, Existing (C-1)
(Identified Land Uses are found in Hawai'i Administrative Rules (HAR) §13-5-22 through §13-5-25)

Project Address: No street address; the storm drainage ditch is located upslope of residential properties on Ahuwale and Aipuni Streets

Tax Map Key(s): [1] 3-6-004:018 (por.)

Ahupua'a: Wailupe

District: Honolulu

County: Honolulu

Island: Oahu

Proposed Commencement Date: December 2023

Proposed Completion Date: January 2025

Estimated Project Cost: $8.1 million

TYPE OF PERMIT SOUGHT ☐ **Board Permit** ☒ **Departmental Permit**

ATTACHMENTS

$ 250.00 Application Fee. 2.5% of project cost for Board Permits, but no less than $250, up to a maximum of $2500; $250 for Departmental Permits (*ref §13-5-32 through 34).*

$ _____ Public Hearing Fee *($250 plus publication costs; ref §13-5-40)*

☒ 20 copies of CDUA (*5 hard + 15 hard or digital copies)*

☒ Draft / Final Environmental Assessment (EA) *or* Draft / Final Environmental Impact Statement (EIS) *or* Statement of Exemption

☐ State Historic Preservation Division HRS 6E Submittal Form (dlnr.hawaii.gov/shpd/review-compliance/forms)

☐ Management Plan *or* Comprehensive Management Plan (*ref §13-5-39)* if required

☐ Special Management Area Determination *(ref Hawai'i Revised Statutes 205A)*

☐ Shoreline Certification (*ref §13-5-31(a)(8))* if land use is subject to coastal hazards.

☐ Kuleana documentation (*ref §13-5-31(f))* if applying for a non-conforming kuleana use.

☐ Boundary Determination *(ref §13-5-17)* if land use lies within 50 feet of a subzone boundary.

Taishan

REQUIRED SIGNATURES

Applicant

Name: Haku Milles, P.E., LEED AP
Title; Agency: Director, City and County of Honolulu, Department of Design and Construction
Mailing Address: 650 South King Street, 11th Floor
Honolulu, HI 96813
Contact Person & Title: Same as above
Phone: 808-768-8481
Email: dominic.milles@honolulu.gov
Interest in Property: Design and construction of facility improvements

Signature: ______________________ **Date:** 6/20/23
FOR *Signed by an authorized officer if for a Corporation, Partnership, Agency or Organization*

Landowner (if different than the applicant)

Name: Tai Shan Shi Ye, LLC (fee owner); City and County of Honolulu has jurisdiction of Easement 80 for storm drainage purpose as depicted in Map 86, Land Court Application 656, October 1956 (see Attachment A)
Title; Agency:
Mailing Address: PO Box 11927 Honolulu, HI 96828
Phone: 808-753-2323
Email:

Signature: ______________________ **Date:** 05/22/2023
For State and public lands, the State of Hawai`i or government entity with management control over the parcel shall sign as landowner.

Agent or Consultant

Agency: Jacobs Engineering Group, Inc.
Contact Person & Title: Miya Akiba
Mailing Address: 1003 Bishop Street, Suite 1340
Honolulu, HI 96813
Phone: 808-754-0624
Email: Miya.Akiba@jacobs.com

Signature: ______________________ **Date:** __________

For DLNR Managed Lands

State of Hawai`i
Chairperson, Board of Land and Natural Resources
State of Hawaiʻi

Tai Shan

Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawai'i 96809-0621

Signature: _____ **Date:** _____

Tai Shan

PROPOSED USE

Total size/area of proposed use (indicate in acres or sq. ft.): 101 AC

Please provide a detailed description of the proposed land use(s) in its entirety. Information should describe what the proposed use is; the need and purpose for the proposed use; the size of the proposed use (provide dimensions and quantities of materials); and how the work for the proposed use will be done (methodology). If there are multiple components to a project, please answer the above for each component. Also include information regarding secondary improvements including, but not limited to, grading and grubbing, placement of accessory equipment, installation of utilities, roads, driveways, fences, landscaping, etc.

Attach any and all associated plans such as a location map, site plan, floor plan, elevations, and landscaping plans drawn to scale *(ref §13-5-31)*.

Ahuwale Ditch Storm Drainage Improvements

The City and County of Honolulu (CCH) proposes improvements to an existing stormwater interceptor ditch that is approximately 1,900 feet long and located upslope of residential properties on Ahuwale and Aipuni Streets in Wailupe Valley on Oahu. All permanent improvements to the interceptor ditch would be located within the established easement (Easement 80) in favor of CCH for storm drainage. Additional activities, such as vegetation clearance, may be required outside of the existing easement for site access; however, such activities are not anticipated to significantly change existing conditions within the Conservation District.

The Ahuwale interceptor ditch project is intended to be one phase of a larger storm drain modernization program, where future phases would improve the underground pipe system.

Project Location

The project site is located upslope of Ahuwale and Aipuni Streets, within the residential neighborhood of Aina Hina. The site is situated on the westerly side of Wailupe Valley, approximately one mile inland from Kalanianaole Highway. It is part of the Wailupe Stream basin which is bounded by Wiliwilinui Ridge (Waialae-Iki) to the west and Hawaii Loa Ridge to the east. See Location Map (Attachment B).

Project Background and Purpose

The existing drainage system consists of the aboveground Ahuwale stormwater interceptor ditch and associated underground drainline systems that carry runoff flows down steep terrain, between residential properties, to eventual outlets into Wailupe Stream. This drainage network is currently unable to contain and convey the 50-year design peak discharge.

There have been multiple incidents of stormwater overtopping the existing interceptor ditch. Measures to mitigate these problems have been undertaken by the City and individual property owners; however, these measures have been temporary. A permanent solution is needed to restore the drainage system capacity, prevent further damages to existing properties within the affected area, and provide residents a safer environment during future heavy storm events.

Existing Conditions

The channel of the existing interceptor ditch varies in shape and construction material (see Site Photographs, Attachment C). The channel is either trapezoidal or triangular and consists of a combination of natural rock and vegetation with some sections lined in concrete. Channel depths range from 1 to 4 feet. The ditch alternates between sections bounded by an earth berm and sections bounded by a concrete rubble masonry (CRM) wall. Of the ditch's 1,900-foot length, approximately 630 linear feet are

bounded by a CRM wall, with the remainder bounded by an earth berm.

Proposed Improvements

This project involves improvements to the existing interceptor ditch by reinforcing the channel with new concrete channels and a grouted rubble paving (GRP)-lined channel segment. While the project involves a single ditch, the attached site plan show four segments, reflecting different types of design. The 6 types are shown in Attachment D, Ditch Section Details, Sheets C-21 and C-22. The four segments are designated Ditch A through Ditch D, starting at the makai (oceanward) end of the project area.

Ditch A is located on the makai side of a drain intake which conveys stormwater flows to the underground pipe system. Improvements to Ditch A will result in a new concrete channel (Type 1) with shotcrete slope lining. The existing CRM wall and concrete lining will be removed to install the new concrete ditch.

Ditch B will involve the installation of a GRP-lined channel (Type 2) along the earth berm section at the lower reach and new concrete channel (Types 3 and 6) for the remaining sections. The existing CRM wall and concrete lining will be removed as necessary to install the new concrete ditch. The upper most reach will require GRP lining (Types 4 and 5) to extend slightly beyond the existing ditch footprint for reinforced downslope protection.

Ditch C will consist of a new concrete channel (Types 3 and 6). The existing CRM wall and concrete lining will be removed as necessary to install the new concrete ditch. A short section at the upper end of the ditch will require GRP lining (Type 4) extending slightly beyond the existing ditch footprint for reinforced downslope protection.

Ditch D will be a new concrete channel (Type 3) along the existing earth berm.

The improvements are intended to restore the original design capacity of the interceptor ditch to contain and convey the 50-year design peak discharge. The height of the new concrete channel walls would be increased slightly as compared to the height of the existing CRM wall and earth berm to prevent overtopping; however,the overall function of the existing interceptor ditch would remain unchanged.

Construction Access

The existing CCH access parcel (TMK: 3-6-20:021), located between residential properties on Ahuwale Street, will be used for access to the interceptor ditch and for staging and laydown (see Attachment D, Site Plan).

Tai Shan

EXISTING CONDITIONS

Please describe the following, and attach maps, site plans, topo maps, colored photos, and biological or archaeological surveys as appropriate:

Existing access to site:

CCH access parcel TMK: 3-6-20:021

Existing buildings/structures:

Interceptor storm drainage ditch and two drain intake structures (shown in the General Site Plan, see Attachment D, Sheet C-5)

Existing utilities (electrical, communication, gas, drainage, water & wastewater):

Ahuwale Ditch is a component of a local storm drainage system

Physiography (geology, topography, & soils):

The project site is located on the southwestern flank of the Koolau Mountain Range. The drainage ditch is located along a cliff face at elevations ranging from approximately +185 to +307 feet Mean Sea Level. The bottom of the ditch and the existing slope face are generally comprised of exposed medium hard basalt rock formation and consolidated colluvium.

Hydrology (surface water, groundwater, coastal waters, & wetlands):

Wailupe Stream is the drainage channel for Wailupe Valley

Flora & fauna (indicate if rare or endangered plants and/or animals are present):

None

Natural hazards (erosion, flooding, tsunami, seismic, etc.):

Occasional high rainfall events

Historic & cultural resources:

None. Based on a literature review and field inspection of the project area, archaeological and cultural specialists with Cultural Surveys Hawaii recommended a determination of "no historic properties affected" (per HAR Sec 13-275-7). By letter dated May 11, 2023, SHPD concurred with the project effect determination of "no historic properties affected" (see Attachment E).

Tai Shan

EVALUATION CRITERIA

The Department or Board will evaluate the merits of a proposed land use based upon the following eight criteria *(ref §13-5-30(c))*

1. The purpose of the Conservation District is to conserve, protect, and preserve the important natural and cultural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety, and welfare. *(ref §13-5-1)* How is the proposed land use consistent with the purpose of the conservation district?

   This project seeks to implement moderate alteration of an existing drainage structure that is needed to protect downslope residents from large rain events by safely conveying stormwater flows to an underground urban drain system and ultimately discharging to the natural waterway. The improvements would be confined to the established drainage easement without encroaching into the Conservation District.

2. How is the proposed use consistent with the objectives of the subzone of the land on which the land use will occur? *(ref §13-5-11 through §13-5-15)*

   The General Subzone designates open space areas where specific conservation uses may not be defined, but where urban use would be premature. The interceptor ditch is located in a steeply sloped area where urban development is infeasible. The drainage structure lies just above residences that back up against Wiliwilinui Ridge. The easement forms the interface between undeveloped Conservation land and residential development, running along the lowest part of the ridge where runoff from the cliff face can be intercepted and directed away from private prooperties.

3. Describe how the proposed land use complies with the provisions and guidelines contained in chapter 205A, HRS, entitled "Coastal Zone Management" *(see 205A objectives on p. 9).*

   The Ahuwale storm drain ditch is not located in a coastal area and would not affect coastal ecosystems, recreational resources, coastal hazards, beach and shoreline resources, and marine resources. Storm runoff from upland areas is intercepted by the ditch and conveyed to underground pipes that outlet to Wailupe Stream, whereby the runoff eventually outlets to the ocean. Restoring the capacity of the ditch would reduce overtopping of the existing drainage channel, but is not expected to significantly affect the quantity or quality of flows into the stream.

4. Describe how the proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community or region.

   The proposed land use will improve a storm drainage facility that has been in existence since the 1950s. Improvements will not extend beyond the existing limits of the drainage easement.

5. Describe how the proposed land use, including buildings, structures and facilities, is compatible with the locality and surrounding areas, appropriate to the physical conditions and capabilities of the specific parcel or parcels.

   The interceptor ditch is a critical part of the storm drainage system serving the Ahuwale Street urban drainage area and is needed to protect life and property of the surrounding area.

Tai Shan

6. Describe how the existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved or improved upon.

   Ahuwale Ditch is virtually undetectable from local streets as its vertical profile is negliglble and obscured by vegetation. The dominant feature of the landscape is the Not ridge line which serves as a backdrop to urban develoopment in the valley. The proposed improvements will not change the visual character of this view.

7. If applicable, describe how subdivision of land will not be utilized to increase the intensity of land uses in the Conservation District.

   Not applicable

8. Describe how the proposed land use will not be materially detrimental to the public health, safety and welfare.

   Because the existing interceptor ditch is unable to handle peak design storrmwater flows, the improvements to restore capacity will be beneficial to public health and safety.

Tai Shan

CULTURAL IMPACTS

Articles IX and XII of the State Constitution, other state laws, and the courts of the State, require government agencies to promote and preserve cultural beliefs, practices, and resources of Native Hawaiians and other ethnic groups.

Please provide the identity and scope of cultural, historical, and natural resources in which traditional and customary native Hawaiian rights are exercised in the area.

There are no known traditional and customary native Hawaiian practices in and immediately around the Ahuwale stormwater interceptor ditch.

Identify the extent to which those resources, including traditional and customary Native Hawaiian rights, will be affected or impaired by the proposed action.

The proposed improvements will not affect resources outside the drainage easement.

What feasible action, if any, could be taken by the Board of Land and Natural Resources in regards to your application to reasonably protect Native Hawai'i rights?

No action is needed or proposed.

Tai Shan

OTHER IMPACTS

Does the proposed land use have an effect (positive/negative) on public access to and along the shoreline or along any public trail?

No

Does the proposed use have an effect (positive/negative) on beach processes?

No

Will the proposed use cause increased sedimentation?

No

Will the proposed use cause any visual impact on any individual or community?

No

Please describe any sustainable design elements that will be incorporated into the proposed land use (*e.g. the use of efficient ventilation and cooling systems; renewable energy generation; sustainable building materials; permeable paving materials; efficient energy and water systems; efficient waste management systems; etc.).*

The primary purpose of this project is to restore the capacity of an existing stormwater interceptor ditch. An auxiliary issue is reducing vegetation growth and vegetative debris in the ditch which diminishes flow capacity and increases maintenance needs. To achieve this objective, the channel floor has been designed with a compacted base course and concrete lining to form a root barrier.

If the project involves landscaping, please describe how the landscaping is appropriate to the Conservation District (*e.g. use of indigenous and endemic species; xeriscaping in dry areas; minimizing ground disturbance; maintenance or restoration of the canopy; removal of invasive species; habitat preservation and restoration; etc.)*

No landscaping is included in the scope of this project

Please describe Best Management Practices that will be used during construction and implementation of the proposed land use.

An Erosion and Sediment Control Plan has been prepared and is included in the design package (Attachment F, Sheets C-7 through C-10). BMPs include slope protection, temporary and permanent stabilization, perimeter controls, inlet protecting, sediment tracking control, dust control, and various good housekeeping for the work site, stockpiling areas, and adjacent streets. Other requirements include a Materials Pollution/Spill Prevention Plan and Rain Response Plan.

Please describe the measures that will be taken to mitigate the proposed land use's environmental and cultural impacts.

BMPs will be established prior to construction and implemented during the construction period to mitigate temporary impacts. Areas disturbed by construction will be restored to pre-existing conditions or better.

Tai Shan

SINGLE FAMILY RESIDENTIAL STANDARDS

Single Family Residences must comply with the standards outlined in HAR Chapter 13-5, Exhibit 4. Please provide preliminary architectural renderings (e.g. building foot print, exterior plan view, elevation drawings; floor plan, etc.) drawn to scale.

SIZE OF LOT

	Existing	Proposed	Total
Proposed building footprint			
Paved areas/ impermeable surfaces			
Landscaped areas			
Unimproved areas			

SETBACKS Front: Side: Back:

SHORELINE PROPERTIES

Average Lot Depth (ALD): Average annual coastal erosion rate:

Minimum shoreline setback based on Exhibit 4:

Actual shoreline setback or proposed structure:

MAXIMUM DEVELOPABLE AREA

The Maximum Developable Area includes all floor areas under roof, including first, second, and third stories, decks, pools, saunas, garage or carport, and other above ground structures.

Maximum Developable Area based on Exhibit 4:

Actual Developable Area of proposed residence:

Actual height of the proposed building envelope as defined in Exhibit 4:

COMPATIBILITY

Provide justification for any propose deviation from the established residential standards.

How is the design of the residence compatible with the surrounding area?

If grading is proposed, include a grading plan which provides the amount of cut and fill. Has grading or contouring been kept to a minimum?

Tai Shan

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CHAPTER 205A – COASTAL ZONE MANAGEMENT

Land uses are required to comply with the provisions and guidelines contained in Chapter 205A, Hawai'i Revised Statutes (HRS), entitled "Coastal Zone Management," as described below:

- **Recreational resources:** Provide coastal recreational opportunities accessible to the public.
- **Historic resources:** Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.
- **Scenic and open space resources:** Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.
- **Coastal ecosystems:** Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.
- **Economic uses:** Provide public or private facilities and improvements important to the State's economy in suitable locations.
- **Coastal hazards:** Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.
- **Managing development:** Improve the development review process, communication, and public participation in the management of coastal resources and hazards.
- **Public participation:** Stimulate public awareness, education, and participation in coastal management.
- **Beach protection:** Protect beaches for public use and recreation.
- **Marine resources:** Promote the protection, use, and development of marine and coastal resources to assure their sustainability.

Tai Shan

Certification

I hereby certify that I have read this completed application and that, to the best of my knowledge, the information in this application and all attachments and exhibits is complete and correct. I understand that the failure to provide any requested information or misstatements submitted in support of the application shall be grounds for either refusing to accept this application, for denying the permit, or for suspending or revoking a permit issued on the basis of such misrepresentations, or for seeking of such further relief as may seem proper to the Land Board.

I hereby authorize representatives of the Department of Land and Natural Resources to conduct site inspections on my property. Unless arranged otherwise, these site inspections shall take place between the hours of 8:00 a.m. and 4:30 p.m.

____

Signature of authorized agent(s) or if no agent, signature of applicant

Authorization of Agent

I hereby authorize_______Miya Akiba_______to act as my representative and to bind me in all matters concerning this application.

____

FOR ____

Signature of applicant(s)

Ahuwale Ditch Storm Drainage Improvements, Phase 1

Por. Wailupe & Honolulu Watershed Forest Reserve, Wailupe, Oahu

TMKs: 3-6-004:018 (Conservation District) & 3-6-020:021 (CCH Access Parcel)

City and County of Honolulu
Department of Design and Construction, Civil Division

ATTACHMENTS

A. Storm Drain Easement
B. Location Map
C. Site Photographs
D. Site Plan and Details
E. SHPD Concurrence Letter
F. Construction BMPs

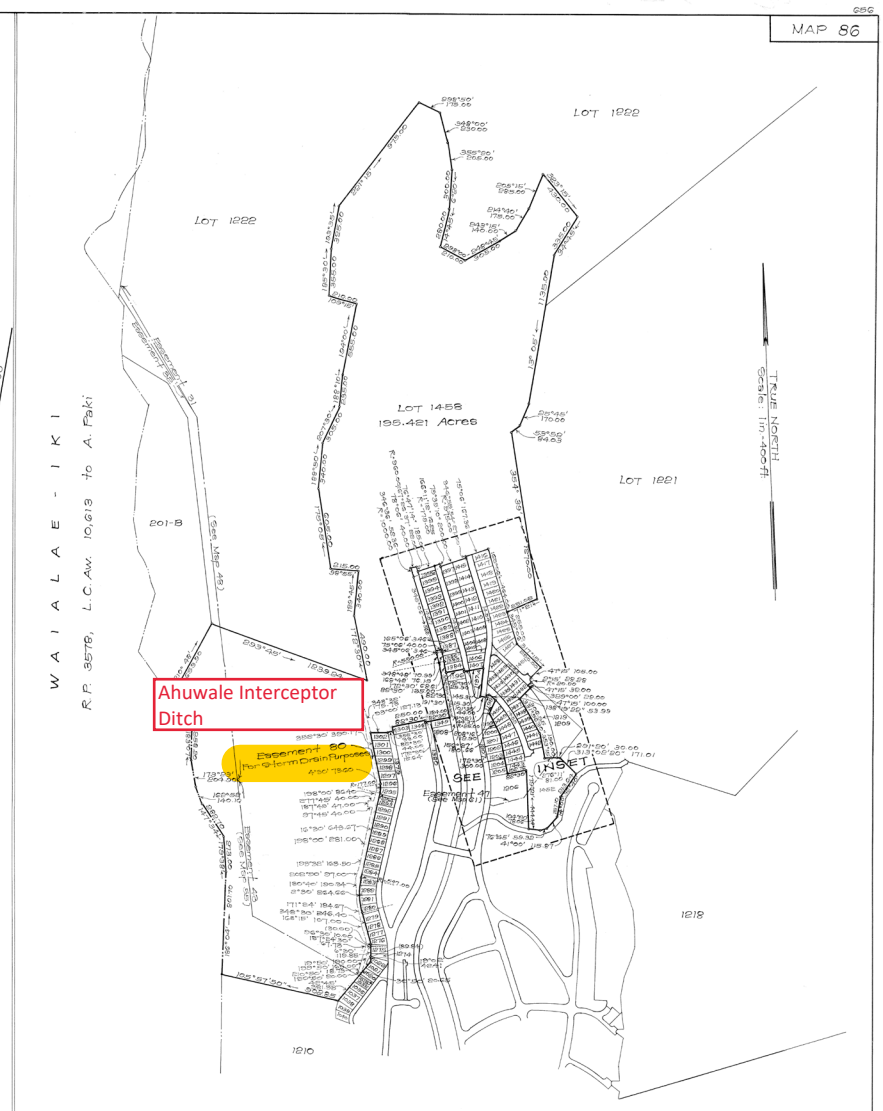
APPENDIXES

1. Declaration of Exemption
   From the preparation of an environmental assessment under the authority of Chapter 343, HRS, and Chapter 11-200.1, HAR

ATTACHMENT A

STORM DRAIN EASEMENT

Attachment A: Storm Drain Easement



LAND COURT

TERRITORY OF HAWAII

LAND COURT APPLICATION 656

SUBDIVISION OF LOT 1381 AS SHOWN ON MAP 75
INTO LOTS 1384 TO 1458 INCLUSIVE
AND DESIGNATION OF EASEMENTS 70 TO 80 INCLUSIVE
ALSO DESIGNATION OF EASEMENT 81 OVER AND ACROSS LOT 1206
AS SHOWN ON MAP 61

AT WAILUPE, HONOLULU, OAHU, T.H.

833 Merchant Street
Honolulu, T.H.
September 5, 1956

R. M. TOWILL CORPORATION, LIMITED
By: Richard M. Towill
Registered Professional Surveyor
Certificate No. 501

OWNER: ROBERT HIND LIMITED
Owner's Certificate of Title: 44,200

AUTHORIZED AND APPROVED BY ORDER OF THE JUDGE
OF THE LAND COURT DATED: OCTOBER 18, 1956.
BY ORDER OF THE COURT

REGISTRAR OF THE LAND COURT

Filed Oct. 6, 1956
Registrar

36" X 48" = 10.80 Sq. Ft.

Tax Map Key: 3-6-04
1-1857-5-6

ATTACHMENT B

LOCATION MAP

LEGEND

Project Area

Wailupe Stream

Note: Locations are approximate.

N

0 250 500

Approximate Scale in Feet

FIGURE 1

Project Location Map

Ahuwale Ditch Drainage System Improvements

Aina Haina, Oahu, Hawaii

JACOBS

ATTACHMENT C

SITE PHOTOGRAPHS

Photo 1: Ditch A – section with CRM retaining wall and concrete lining

Photo 3: Intake structure #1 facing south

Photo 4: Ditch B – lowest most section with earth berm and vegetative/rock cover

Photo 5: Ditch B – section with CRM retainng wall

Photo 6: Ditch C – section with CRM retainng wall

Photo 7: Ditch C – section with earth berm and vegetative/rock cover

Photo 8: Intake structure #2 facing south

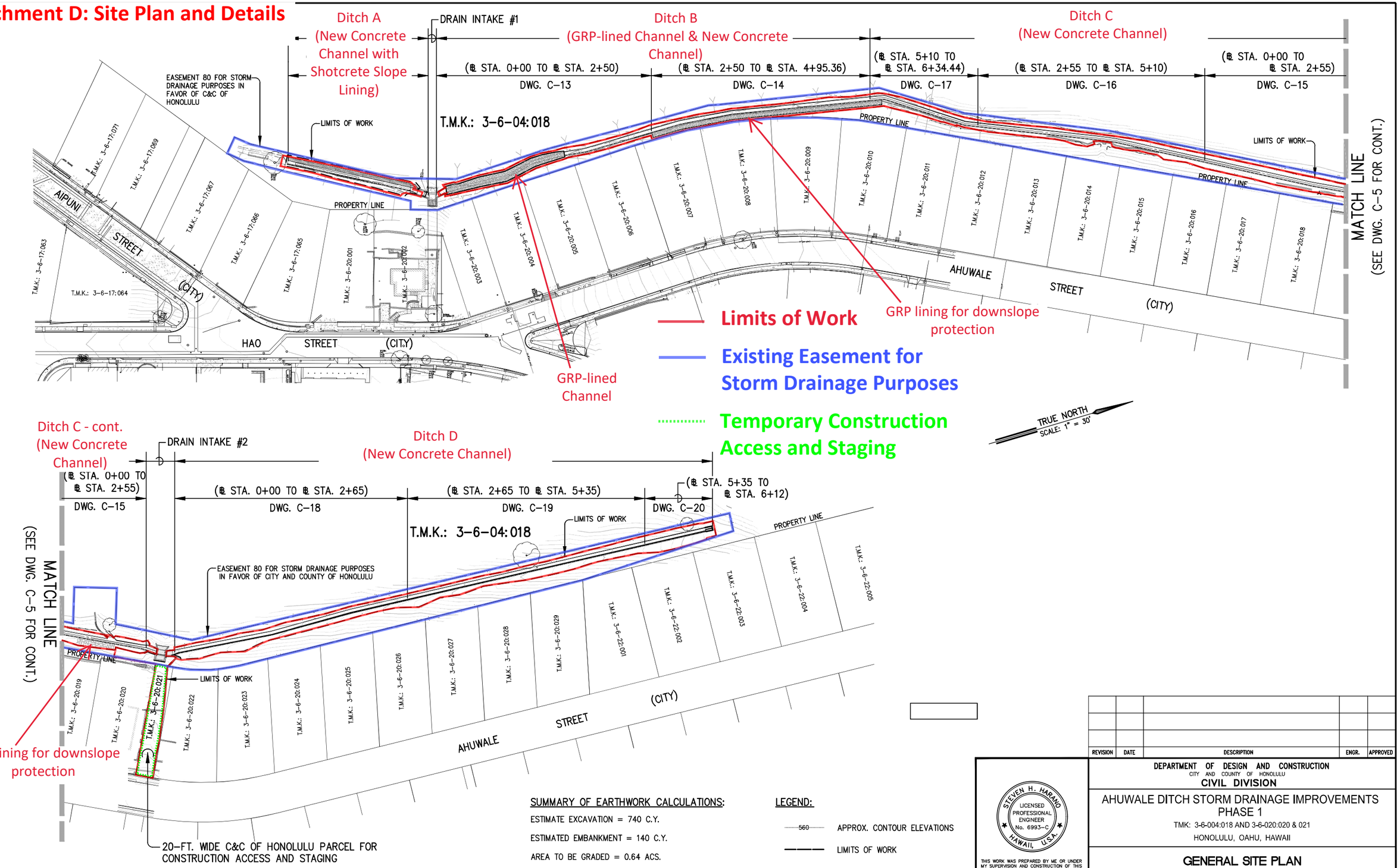
Photo 9: City access parcel facing west

Photo 10: Ditch D bounded by earth berm and vegetative/rock cover

ATTACHMENT D

SITE PLAN AND DETAILS

Attachment D: Site Plan and Details



SUMMARY OF EARTHWORK CALCULATIONS:

ESTIMATE EXCAVATION = 740 C.Y.

ESTIMATED EMBANKMENT = 140 C.Y.

AREA TO BE GRADED = 0.64 ACS.

AREA TO BE DISTURBED = 0.69 ACS.

LEGEND:

560 APPROX. CONTOUR ELEVATIONS

LIMITS OF WORK

GRAPHIC SCALE

SCALE: 1"= 50'

50 25 0 50 100

GENERAL SITE PLAN

SCALE: 1"=50'

REVISION	DATE	DESCRIPTION	ENGR.	APPROVED

STEVEN H. HARANO LICENSED PROFESSIONAL ENGINEER No. 6993–C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16–115–2, DEFINITIONS).

ParEn, Inc.
dba PARK ENGINEERING
LICENSE EXPIRES 4–30–22

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
CIVIL DIVISION

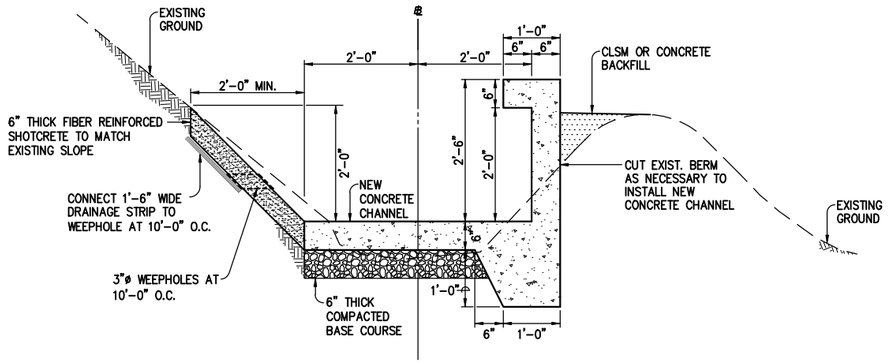
AHUWALE DITCH STORM DRAINAGE IMPROVEMENTS PHASE 1

TMK: 3-6-004:018 AND 3-6-020:020 & 021

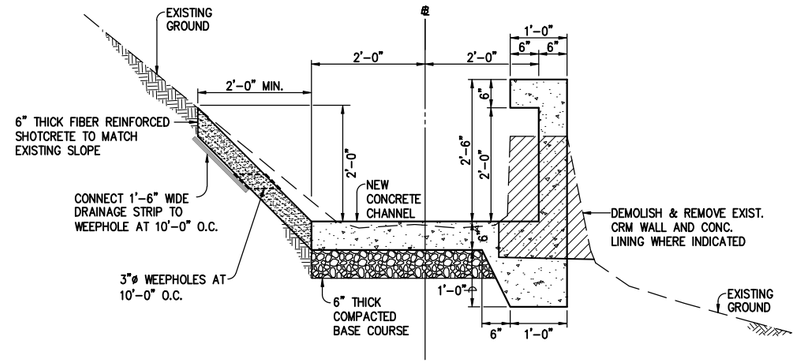
HONOLULU, OAHU, HAWAII

GENERAL SITE PLAN

DESIGN:	SHH, EHV	APPROVED:	DRAWING NO. C-5
DRAWN:	EHV		SHEET 6
CHECKED:	SHH	CHIEF, CIVIL DIVISION, DDC DATE	OF 49 SHEETS
DATE:	DECEMBER 2021		
JOB NO.	11-21	FILE ___ DRAW ___ FOLDER ___ NUMBER ___	



AT EXIST. BERM TO BE REMAIN



AT EXIST. WALL TO BE REMOVED

TYPE 1 – CONCRETE DITCH WITH SHOTCRETE SLOPE LINING (DITCH A)

SCALE: 3/4" = 1'-0"

TYPE 2 – GRP DITCH (DITCH B)

SCALE: 3/4" = 1'-0"

TYPE 3 – CONCRETE DITCH (DITCH B, C, & D)

SCALE: 3/4" = 1'-0"

DITCH	TYPE	℄ STA. TO ℄ STA.	DESIGN	DWG. NO.
A	1	0+21 TO 0+79	CONCRETE DITCH WITH SHOTCRETE SLOPE LINING (EXIST. BERM TO REMAIN)	C-21
A	1	0+79 TO 1+60	CONCRETE DITCH WITH SHOTCRETE SLOPE LINING (EXIST. WALL TO BE REMOVED)	C-21
A	T-1	0+12.50 TO 0+21	TRANSITION 1 – EXIST. CONC. APRON TO TYPE 1 DITCH	C-23
B	2	0+22 TO 1+40	GRP DITCH	C-21
B	3	1+50 TO 2+23	CONCRTE DITCH	C-21
B	4	2+50 TO 3+50	CONCRETE DITCH WITH GRP SLOPE LINING PROTECTION	C-22
B	5	3+55 TO 4+95.36	CONCRETE DITCH WITH GRP SLOPE LINING PROTECTION	C-22
B	6	2+23 TO 2+50	CONCRETE DITCH (EXIST. WALL TO BE REMOVED)	C-22
B	T-2	0+12 TO 0+22	TRANSITION 2 – GRP APRON TO TYPE 2 DITCH	C-24
B	T-3	1+40 TO 1+50	TRANSITION 3 – TYPE 2 DITCH TO TYPE 3 DITCH	C-25
B	T-4	3+50 TO 3+55	TRANSITION 4 – TYPE 4 DITCH TO TYPE 5 DITCH	C-26
C	3	0+00 TO 0+34 0+44 TO 1+06 1+23 TO 1+33 1+72 TO 3+07 4+33 TO 5+33	CONCRETE DITCH	C-21
C	4	6+22 TO 6+29.44	CONCRETE DITCH WITH GRP SLOPE LINING PROTECTION	C-22
C	6	1+06 TO 1+23 1+33 TO 1+72 3+07 TO 3+58 3+81 TO 4+33 5+33 TO 6+22	CONCRETE DITCH (EXIST. WALL TO BE REMOVED)	C-22
C	6	3+58 TO 3+81	CONCRETE DITCH (EXIST. WALL TO REMAIN)	C-22
C	T-5	0+34 TO 0+44	TRANSITION 5 – HILLSIDE SWALE CONNECTION	C-27
C	T-6	6+29.44 TO 6+34.44	TRANSITION 6 – TYPE 4 DITCH TO TYPE 5 DITCH	C-28
D	3	0+00 TO 6+04.54	CONCRETE DITCH	C-21

Ditch Section Details (Types 1, 2, and 3)

GRAPHIC SCALE

SCALE: 3/4" = 1'-0"

1' 9" 6" 3" 0 1 2 3

REVISION	DATE	DESCRIPTION	ENGR.	APPROVED

STEVEN H. HARANO LICENSED PROFESSIONAL ENGINEER No. 6993-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS).

ParEn, Inc.
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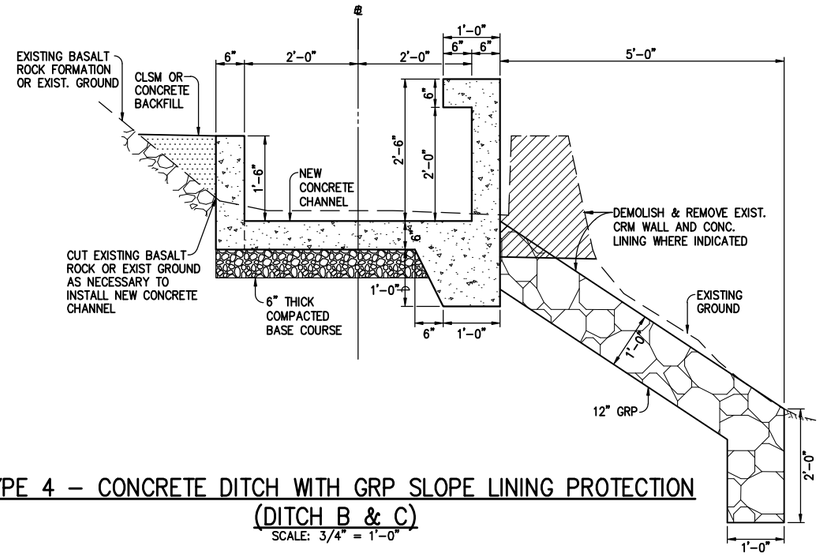
LICENSE EXPIRES 4-30-24

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
CIVIL DIVISION

AHUWALE DITCH STORM DRAINAGE IMPROVEMENTS
PHASE 1
TMK: 3-6-004:018 AND 3-6-020:020 & 021
HONOLULU, OAHU, HAWAII

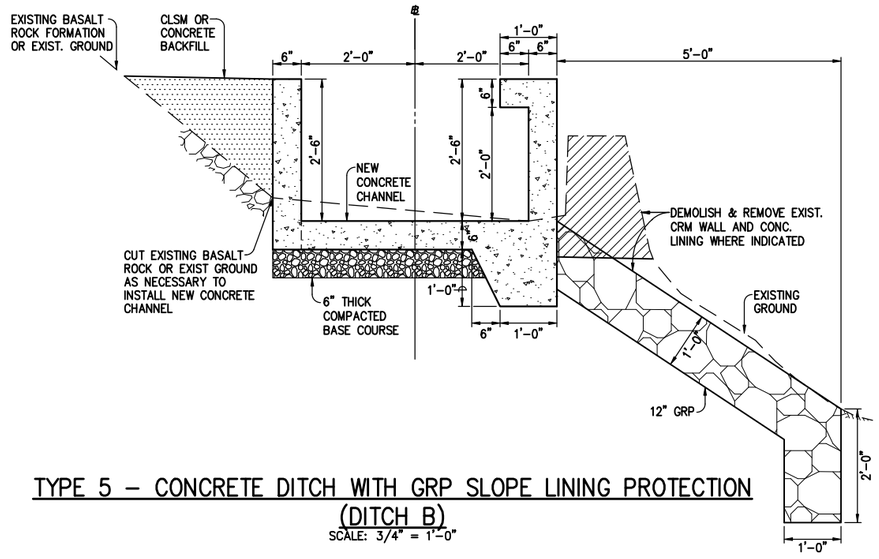
DITCH SECTION DETAILS - 1

DESIGN: SHH, EHV	APPROVED:	DRAWING NO.	C-21
DRAWN: EHV			
CHECKED: SHH	CHIEF, CIVIL DIVISION, DDC DATE	SHEET	22
DATE: AUGUST 2022		OF	50 SHEETS
JOB NO. 11-21	FILE ___ DRAW ___ FOLDER ___ NUMBER ___		



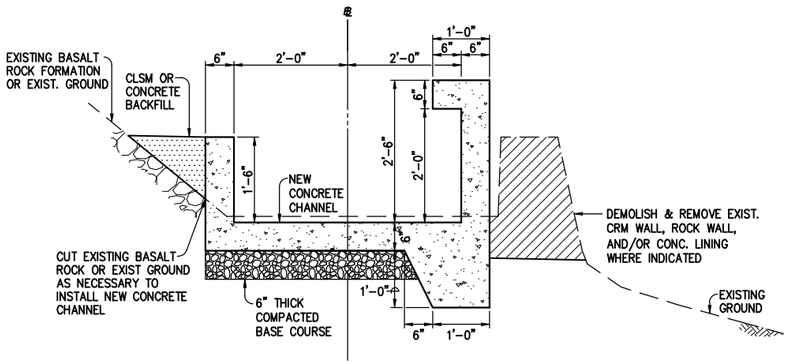
TYPE 4 – CONCRETE DITCH WITH GRP SLOPE LINING PROTECTION (DITCH B & C)

SCALE: 3/4" = 1'-0"

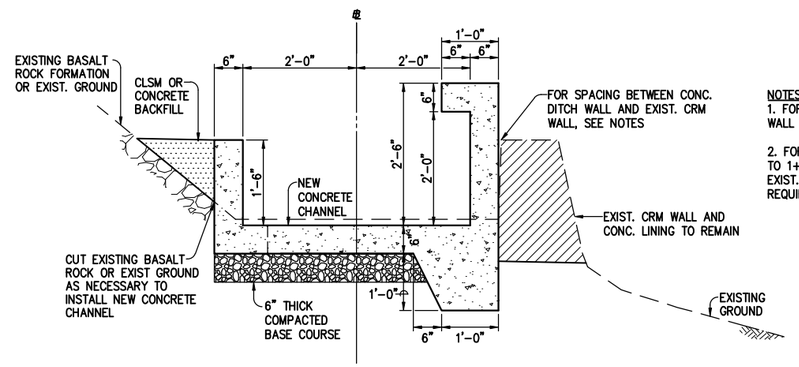


TYPE 5 – CONCRETE DITCH WITH GRP SLOPE LINING PROTECTION (DITCH B)

SCALE: 3/4" = 1'-0"



AT EXIST. WALL TO BE REMOVED



AT EXIST. WALL TO REMAIN

NOTES:
1. FOR DITCH C STA. 3+58 TO 3+81, CONC. DITCH WALL TO ABUT EXIST. CRM WALL.

2. FOR DITCH C STA. 1+06 TO 1+23 AND 1+33 TO 1+72, GAP BETWEEN CONC. DITCH WALL AND EXIST. CRM WALL VARIES WITH NO BACKFILL REQUIREMENT FOR GAP AREA.

TYPE 6 – CONCRETE DITCH (DITCH B & C)

SCALE: 3/4" = 1'-0"

Ditch Section Details (Types 4, 5, and 6)

GRAPHIC SCALE

SCALE: 3/4" = 1'-0"

1' 9" 6" 3" 0 1 2 3

REVISION	DATE	DESCRIPTION	ENGR.	APPROVED

STEVEN H. HARANO
LICENSED PROFESSIONAL ENGINEER
No. 6993-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS).

ParEn, Inc.
dba PARK ENGINEERING
LICENSE EXPIRES 4-30-24

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
CIVIL DIVISION

AHUWALE DITCH STORM DRAINAGE IMPROVEMENTS PHASE 1
TMK: 3-6-004:018 AND 3-6-020:020 & 021
HONOLULU, OAHU, HAWAII

DITCH SECTION DETAILS - 2

DESIGN: SHH, EHV	APPROVED:	DRAWING NO.	C-22
DRAWN: EHV		SHEET	23
CHECKED: SHH	CHIEF, CIVIL DIVISION, DDC DATE	OF	50 SHEETS
DATE: AUGUST 2022			
JOB NO. 11-21	FILE ___ DRAW ___ FOLDER ___ NUMBER ___		

ATTACHMENT E

SHPD CONCURRENCE LETTER

Attachment E: SHPD Concurrence Letter

STATE OF HAWAII | KA MOKUʻĀINA ʻO HAWAIʻI
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA ʻOIHANA KUMUWAIWAI ʻĀINA

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD, STE 555
KAPOLEI, HAWAII 96707

May 11, 2023

IN REPLY REFER TO:
Proj. No: 2017PR25475
Doc. No: 2305MK01
Architecture, Archaeology

Haku Milles, P.E., LEED AP, Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, HI 96813
c/o Ed Visaya
Evisaya@honolulu.gov

Dear Mr. Milles:

RE: **Hawaii Revised Statues (HRS) § 6E-8 Historic Preservation Review**
Ditch Storm Drainage Improvements Project
In Reply to: CDD-A 22-882063
Reconnaissance Level Survey
Wailupe Ahupuaʻa, Honolulu (Kona) District, Island of Oʻahu
TMK: (1) 3-6-004:018 por; (1) 3-6-017:065-067; (1) 3-6-020:001-010, 020-021; (1) 3-6-022:006

This letter provides the State Historic Preservation Division's (SHPD's) review of the architectural Reconnaissance Level Survey (RLS) Report titled, *Reconnaissance Level Survey, Ahuwale Storm Drain Ditch, ʻĀina Haina, Oʻahu, [1] 3-6-004: 018, portion consisting of Easement 80 & 82 for storm drain purposes [1] 3-6-020: 021* (MASON, March 2023). SHPD previously reviewed the project and determined that SHPD had insufficient information for providing a project effect determination for the proposed project and requested an RLS report (Project No. 2017PR25475, Doc. No. 2207SCH07). The initial submittal also included a supporting document titled, *Archaeological Literature Review and Field Inspection Report to Support Consultation with SHPD for the Ahuwale Ditch Storm Drainage Improvements Project, Wailupe Ahupuaʻa, Honolulu (Kona) District, Island of Oʻahu, TMK: (1) 3-6-004:008 Easement 80 and Easement 82 and 3-6-020:020 por., 3-6-020:021, 3-6-022:006* (Shideler and Hammatt, October 2020). SHPD received the RLS report on March 15, 2023, and a revised RLS report on May 8, 2023.

The proposed project is located within the Ahuwale Ditch and is approximately 1.17 acres. SHPD reviewed the project in a letter dated March 9, 2018 (Log No. 2017.02136, Doc. No. 1803KM11), and concurred with a determination of no historic properties affected. Subsequently, SHPD was notified that the proposed project has been expanded significantly along the ditch easements to the north [TMK: (1) 3-6-004:018 Easement 80 and Easement 82] and now also includes three additional access parcels [TMK: (1) 3-6-020:020 por., (1) 3-6-020:021 and (1) 3-6-022:006]. The existing Ahuwale Ditch will be reconstructed which may include excavation deepening the ditch and improvements to the downslope (east) side. Improvements will occur within the two 20-ft-wide access lots [TMK: (1) 3-6-020:021 and (1) 3-6-022:006] and to an existing wall on the upslope side of TMK: (1) 3-6-020:020.

The LRFI (Shideler and Hammatt, October 2022) includes an overview of the environmental setting and previous archaeology for the project area. The LRFI indicates that at least 33 archaeological studies have been conducted in the vicinity of the project area. These archaeological studies have identified historic properties including a fishpond, WWII bunker, heiau, burials, and burial caves. The closest documented historic properties include two mid-twentieth century properties, SIHP Site 50-80-15-7764, a Board of Water Supply facility, and SIHP Site 50-80-15-7936, Wailupe Valley Elementary, which is approximately 300 meters east of the project area. The Bishop Museum reported a cave, SIHP Site 50-80-15-2287, possibly a burial cave, that is approximately 400 meters south of the project area.

The project area has not been previously surveyed, and no known historic properties are within the project area. The field inspection did not record any surface historic properties with the possible exception of the ditch. The USDA soil survey(Foote et. al 1972) identifies the soils as Lualualei extremely stone clay, 3 to 35% slopes (LPE) with small areas of Rockland (rRK). The LRFI report indicates the potential for historic properties, surface and subsurface, is low and recommends an effect determination of no historic properties affected for the proposed project and revised scope of work.

The Ahuwale Storm Drainage Ditch (ca. 1956) is an unlined, earthen ditch about 1950 feet long that extends transversely across the east slope of Wiliwilinui ridge and was built to divert stormwater around the newly built homes on Ahuwale Street in ʻĀina Haina. MASON determined that the Ahuwale Storm Drainage Ditch and associated sumps lack historic integrity and evaluated these resources as not significant pursuant to HAR §13-275-6.

SHPD agrees with MASONʻs significance evaluation. The RLS Report meets the minimum requirements of HAR § 13-275-5. **It is accepted**. Please upload a copy of the final RLS report to HICRIS Project 2017PR25475 using the Project Supplement option. Additionally, please send one hard copy of the RLS Report, clearly marked FINAL, and a copy of this review letter to the Kapolei SHPD office, attention SHPD Library and submit a digital copy to the SHPD Library at dlnr.hp.library@hawaii.gov. Additionally, please send one hard copy of the LRFI report labeled Library Copy, to the SHPD office, attention SHPD Library and a pdf copy to dlnr.hp.libary@hawaii.gov and lehua.k.soares@hawaii.gov.

Per HAR § 13-275-7, the SHPD has determined that the project will have no effect on significant historic properties and therefore **SHPD concurs** with DDC's project effect determination of "no historic properties affected" pursuant to HAR §13-275-7(a)(1) for the current project. Further, pursuant to HAR §13-275-7(e), when SHPD comments that the proposed project shall not affect any significant historic properties, the HRS 6E historic preservation review process ends.

SHPD hereby notifies DDC that the HRS 6E historic preservation review process is ended. The project may proceed.

Please contact Mary Kodama, Historic Architect at Mary.Kodama@hawaii.gov or (808) 692-8032 for any matters regarding architectural resources or this letter or Samantha Hemenway, O'ahu Island Archaeologist, at (808) 692-8011 or at Samantha.Hemenway@hawaii.gov for any questions regarding archaeological resources.

Aloha,

Alan Downer

Alan S. Downer, PhD
Administrator, State Historic Preservation Division
Deputy State Historic Preservation Officer

In the event that historic resources, including human skeletal remains, cultural layers, cultural deposits, features, artifacts, or sinkholes, lava tubes or lava blisters/bubbles are identified during construction activities, all work should cease in the immediate vicinity of the find, the find should be protected from additional disturbance, and the State Historic Preservation Division should be contacted immediately at (808) 692-8015.

cc: Kristie Ching, kching1@honolulu.gov
Lois Chong, lchong1@honolulu.gov
CSH, submittals@culturalsurveys.com
David Shideler, dshideler@culturalsurveys.com
Polly Tice, pt@masonarch.com
Dee Ruzicka, dr@masonarch.com
Andrea Hall, ahall@culturalsurveys.com
Howard Koza, hkoza@honolulu.gov
Megan Ueno, megan@tlcghawaii.com

ATTACHMENT F

CONSTRUCTION BMPS

EROSION PREVENTION/SEDIMENT CONTROL NOTES:

THE CONTRACTOR SHALL PERFORM THE FOLLOWING WORK FOR THIS CATEGORY 4 PROJECT:

1. THE CONTRACTOR SHALL FOLLOW THE GUIDELINES IN THE CITY AND COUNTY OF HONOLULU'S "RULES RELATING TO WATER QUALITY".
2. MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY EARTHWORK IS INITIATED.
3. SLOPE PROTECTION

   SLOPE PROTECTION IS REQUIRED ON AREAS WITH SLOPES GREATER THAN 15% AND ON AREAS OF MODERATE SLOPE THAT ARE PRONE TO EROSION UNLESS THEY ARE BEING ACTIVELY WORKED. USE DIVERSION UPSTREAM OF SLOPE (DIKES, SWALES, SLOPE DRAINS) TO DIVERT WATER AROUND THE SLOPE. PROVIDE A 10-FT BUFFER ZONE AT THE TOE OF SLOPE. ONLY 5 ACRES MAY BE DISTURBED AT ANYTIME ON SLOPES GREATER THAN 15%.
4. TEMPORARY STABILIZATION

   TEMPORARY STABILIZATION IS REQUIRED ON DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHEN THE DISTURBED AREA WILL NOT BE WORKED FOR 7 CONSECUTIVE DAYS OR MORE.
5. PERMANENT STABILIZATION

   ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED USING VEGETATIVE COVERING, PAVEMENT, OR EQUIVALENT, PRIOR TO REMOVING EROSION AND SEDIMENT MEASURES. TRAPPED SEDIMENT AND AREAS OF DISTURBED SOIL WHICH RESULT FROM THE REMOVAL OF THE TEMPORARY MEASURES SHALL BE IMMEDIATELY AND PERMANENTLY STABILIZED.
6. PRESERVE EXISTING VEGETATION
7. CLEARLY MARK THE AREAS TO BE PRESERVED WITH FLAGS OR TEMPORARY FENCING. WHERE TEMPORARY FENCING IS USED, FENCING MUST BE ADEQUATELY SUPPORTED BY POSTS AND MAINTAINED IN AN UPRIGHT POSITION.
8. MINIMIZE SOIL COMPACTION

   AREAS WHERE FINAL STABILIZATION OR INFILTRATION PRACTICES WILL BE INSTALLED SHALL BE PROTECTED FROM EXCESSIVE COMPACTION DURING CONSTRUCTION. VEHICLE AND EQUIPMENT USE SHALL BE RESTRICTED OR TECHNIQUES TO CONDITION THE SOILS TO SUPPORT VEGETATION SHALL BE IMPLEMENTED IN THE AREAS THAT HAVE BEEN COMPACTED AND ARE DESIGNATED TO REMAIN VEGETATIVE OR POST-CONSTRUCTION INFILTRATION AREAS. CLEARLY MARK THE AREAS TO BE AVOIDED WITH FLAGS OR TEMPORARY FENCING. WHERE TEMPORARY FENCING IS USED, FENCING MUST BE ADEQUATELY SUPPORTED BY POSTS AND MAINTAINED IN AN UPRIGHT POSITION.
9. PERIMETER CONTROLS

   PERIMETER CONTROLS ARE REQUIRED DOWNSLOPE OF ALL DISTURBED AREAS. MAINTAIN DOWNSTREAM VEGETATED BUFFER AREA.
10. INLET PROTECTION
    - ALL STORM DRAIN INLETS ONSITE AND THOSE OFFSITE WHICH MAY RECEIVE RUNOFF FROM THE SITE SHALL USE AN INLET PROTECTION DEVICE UNLESS THEY ARE DIRECTED TO A SEDIMENT BASIN.
    - SEDIMENT LEVELS MAY NOT EXCEED ONE THIRD OF THE HEIGHT OF A SEDIMENT BARRIER OR INLET PROTECTION DEVICE AT ANY POINT ALONG THE LENGTH OF THE SEDIMENT BARRIER OR THE INLET PROTECTION DEVICE.
    - SEDIMENT BARRIERS AND INLET PROTECTION DEVICES MUST BE UNCLOGGED AND CLEANED WHEN PERFORMANCE IS COMPROMISED.
    - TORN, WEATHERED OR SAGGING SEDIMENT BARRIERS OR INLET PROTECTION DEVICES MUST BE REPAIRED OR REPLACED IMMEDIATELY.
11. TRACKING CONTROL
    - MINIMIZE SEDIMENT TRACK-OUT ONTO OFF-SITE STREETS, OTHER PAVED AREAS, AND SIDEWALKS FROM VEHICLES EXITING THE CONSTRUCTION SITE BY RESTRICTING VEHICLE TRAFFIC TO PROPERLY DESIGNATED AREAS AND USING ADDITIONAL CONTROLS TO REMOVE SEDIMENT FROM VEHICLE TIRES PRIOR TO EXITING THE SITE.
    - VEHICULAR PARKING AND MOVEMENTS ON PROJECT SITES MUST BE CONFINED TO PAVED SURFACES OR PREDEFINED PARKING AREAS AND VEHICLE PATHS, WHICH SHALL BE MARKED WITH FLAGS OR BOUNDARY FENCING.
    - ALL POLLUTANTS AND MATERIALS THAT ARE DROPPED, WASHED, TRACKED, SPILLED, OR OTHERWISE DISCHARGED FROM A PROJECT SITE TO OFF-SITE STREETS, OTHER PAVED AREAS, SIDEWALKS OR THE MS4 MUST BE CLEANED USING DRY METHODS SUCH AS SWEEPING OR VACUUMING.
    - WASHING POLLUTANTS AND MATERIALS THAT ARE DISCHARGED FROM THE PROJECT SITE TO THE MS4 INTO DRAIN INLETS OR CATCH BASINS IS PROHIBITED UNLESS THE MATERIAL IS SEDIMENT AND THE INLETS ARE DIRECTED TO A SEDIMENT BASIN OR SEDIMENT TRAP.
12. BEST MANAGEMENT PRACTICES (BMPS) SHALL NOT BE REMOVED UNTIL FINAL STABILIZATION IS COMPLETE FOR THAT PHASE.
13. REFER TO CITY AND COUNTY OF HONOLULU BEST MANAGEMENT PRACTICES MANUAL- CONSTRUCTION, FOR MORE INFORMATION ON BMPS.
14. THE FOLLOWING BMPS WERE DETERMINED TO BE NOT APPLICABLE BASED ON THE SPECIFIC SITE CONDITIONS. AS CONSTRUCTION PROGRESSES, REVISIONS MAY BE NECESSARY AND WILL BE PROVIDED TO DPP INSPECTORS.
    - DEWATERING PRACTICES
    - DIVERSION BMPS TO PREVENT RUNOFF FROM UPSTREAM AREAS AROUND DISTURBED AREAS OF THE SITE
    - SEDIMENT BARRIERS
    - VELOCITY DISSIPATION DEVICES
    - CONSTRUCTION INGRESS/EGRESS
15. THE OWNER OF THE PROPERTY OR THEIR AUTHORIZED AGENT MUST DESIGNATE A PERSON RESPONSIBLE FOR IMPLEMENTING THE ESCP AT THE PROJECT SITE ("ESCP COORDINATOR") PRIOR TO PERMIT ISSUANCE USING THE FORM PROVIDED AS APPENDIX A TO THE RULES RELATING TO WATER QUALITY.
16. SEE LOCATION MAP ON DRAWING NO. T-1 FOR THE NAME, COORDINATES AND CLASSIFICATION OF RECEIVING WATERS AS IDENTIFIED ON THE STATE OF HAWAII, DEPARTMENT OF HEALTH, STATE WATER QUALITY MAP.
17. SEE EROSION AND SEDIMENT CONTROL PLAN ON DRAWING NO. C-9 AND C-10 FOR THE LOCATIONS OF DISCHARGE POINTS TO THE CITY'S MS4, WHICH ARE EXISTING DRAIN INTAKES IN THE VICINITY OF T.M.K.: 3-6-004:018.
18. THE PROJECT SITE IS LOCATED WITHIN ZONE X, WHICH IS DEFINED AS AREAS OF MINIMAL FLOOD HAZARD. REFERENCE: FEMA FIRM COMMUNITY PANEL NUMBER 15003C0386G, REVISED JANUARY 19, 2011.
19. | PRE-CONSTRUCTION BMP | DURING CONSTRUCTION BMP | POST-CONSTRUCTION BMPS |
    |---|---|---|
    | • PROJECT PLANNING AND DESIGN
• PROJECT SCHEDULING
• COMPOST FILTER SOCK FOR PERIMETER CONTROL
• INLET AND CATCH BASIN PROTECTION | • GOOD HOUSEKEEPING PRACTICES
• INSPECTION, MAINTENANCE AND REPAIR OF TEMPORARY BMPS
• TEMPORARY STABILIZATION (HYDROMULCH) | • PERMANENT SLOPE STABILIZATION (GRASS AND CRM LINING)
• NEW CONCRETE DRAINAGE DITCH
• INSPECTION, MAINTENANCE AND REPAIR OF POST-CONSTRUCTION BMPS |
20. PROJECT SCHEDULING
    - THE CONTRACTOR SHALL COMPLY WITH THE PROJECT SCHEDULING REQUIREMENTS OF THE CITY'S RULES RELATING TO WATER QUALITY.

GOOD HOUSEKEEPING BMPS:

THE CONTRACTOR SHALL PERFORM THE FOLLOWING WORK:

1. STREET SWEEPING AND VACUUMING: ALL POLLUTANTS DISCHARGED FROM CONSTRUCTION SITE TO OFF-SITE AREAS MUST BE SWEPT OR VACUUMED EACH DAY BEFORE LEAVING THE JOB SITE.
2. MATERIALS DELIVERY, STORAGE AND USE MANAGEMENT: PREVENT, REDUCE, OR ELIMINATE THE DISCHARGE OF POLLUTANTS FROM MATERIAL DELIVERY, STORAGE, AND USE TO THE STORM WATER SYSTEM OR WATERCOURSES BY MINIMIZING THE STORAGE OF HAZARDOUS MATERIALS ONSITE, STORING MATERIALS IN A DESIGNATED AREA, INSTALLING SECONDARY CONTAINMENT. CONSTRUCTION MATERIALS, WASTE, TOXIC AND HAZARDOUS SUBSTANCES, STOCKPILES AND OTHER SOURCES OF POLLUTION SHALL NOT BE STORED IN BUFFER AREAS, NEAR AREAS OF CONCENTRATED FLOW, OR AREAS ABUTTING THE MS4, RECEIVING WATERS, OR DRAINAGE IMPROVEMENTS THAT DISCHARGE OFF-SITE. PRIMARY AND SECONDARY CONTAINMENT CONTROLS AND COVERS SHALL BE IMPLEMENTED TO THE MAXIMUM EXTENT PRACTICABLE (MEP).
3. SPILL PREVENTION AND CONTROL: CREATE AND IMPLEMENT SPILL PREVENTION AND RESPONSE PLANS TO ELIMINATE AND MINIMIZE THE DISCHARGE OF POLLUTANTS TO THE MS4 AND RECEIVING WATERS FROM LEAKS AND SPILLS BY REDUCING THE CHANCE FOR SPILLS, ABSORBING, CONTAINING, AND CLEANING UP SPILLS AND PROPERLY DISPOSING OF SPILL MATERIALS. AT A MINIMUM, ALL PROJECTS SHALL CLEANUP ALL LEAKS AND SPILLS IMMEDIATELY.
4. HAZARDOUS MATERIALS: PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM HAZARDOUS WASTE THROUGH PROPER MATERIAL USE AND WASTE DISPOSAL. IN THE EVENT THAT HAZARDOUS MATERIALS ARE DISCHARGED TO THE MS4, THE PROPERTY OWNER OR ESCP COORDINATOR SHALL IMMEDIATELY NOTIFY THE DEPARTMENT OF FACILITIES MAINTENANCE, HONOLULU FIRE DEPARTMENT, AND HONOLULU POLICE DEPARTMENT OF THE DISCHARGE BY TELEPHONE. A WRITTEN REPORT DESCRIBING THE POLLUTANTS THAT WERE DISCHARGED, THE REASONS FOR THE DISCHARGE, AND THE MEASURES THAT HAVE BEEN TAKEN OR WILL BE TAKEN TO PREVENT A REOCCURRENCE OF THE DISCHARGE SHALL BE SUBMITTED TO THE DIRECTOR NO LESS THAN 3 DAYS AFTER NOTIFICATION BY PHONE.
5. NONHAZARDOUS MATERIALS: IN THE EVENT THAT NONHAZARDOUS MATERIALS ARE DISCHARGED TO THE MS4, THE PROPERTY OWNER OR ESCP COORDINATOR SHALL NOTIFY THE CITY DEPARTMENT OF FACILITIES MAINTENANCE BY TELEPHONE NO LATER THAN THE NEXT BUSINESS DAY. A WRITTEN REPORT DESCRIBING THE POLLUTANTS THAT WERE DISCHARGED, THE REASONS FOR THE DISCHARGE, AND THE MEASURES THAT HAVE BEEN TAKEN OR WILL BE TAKEN TO PREVENT A REOCCURRENCE OF THE DISCHARGE SHALL BE SUBMITTED TO THE DIRECTOR NO LESS THAN 3 DAYS AFTER NOTIFICATION BY PHONE.
6. VEHICLE AND EQUIPMENT CLEANING: ELIMINATE AND MINIMIZE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM VEHICLE AND EQUIPMENT CLEANING OPERATIONS BY USING OFF-SITE FACILITIES WHEN FEASIBLE, WASHING IN DESIGNATED, CONTAINED AREAS ONLY, AND ELIMINATING DISCHARGES TO THE STORM DRAIN SYSTEM BY EVAPORATING AND/OR TREATING WASH WATER, AS APPROPRIATE OR INFILTRATING WASH WATER FOR EXTERIOR CLEANING ACTIVITIES THAT USE WATER ONLY.
7. VEHICLE AND EQUIPMENT FUELING: PREVENT FUEL SPILLS AND LEAKS BY USING OFF-SITE FACILITIES, FUELING ONLY IN DESIGNATED AREAS, ENCLOSING OR COVERING STORED FUEL, AND IMPLEMENTING SPILL CONTROLS SUCH AS SECONDARY CONTAINMENT AND ACTIVE MEASURES USING SPILL RESPONSE KITS.
8. VEHICLE AND EQUIPMENT MAINTENANCE: ELIMINATE AND MINIMIZE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM VEHICLE AND EQUIPMENT MAINTENANCE OPERATIONS BY USING OFF-SITE FACILITIES WHEN FEASIBLE, PERFORMING WORK IN DESIGNATED AREAS ONLY, USING SPILL PADS UNDER VEHICLES AND EQUIPMENT, CHECKING FOR LEAKS AND SPILLS, AND CONTAINING AND CLEANING UP SPILLS IMMEDIATELY.
9. SOLID WASTE MANAGEMENT: PREVENT OR REDUCE DISCHARGE OF POLLUTANTS TO THE LAND, GROUNDWATER, AND IN STORM WATER FROM SOLID WASTE OR CONSTRUCTION AND DEMOLITION WASTE BY PROVIDING DESIGNATED WASTE COLLECTION AREAS, COLLECT SITE TRASH DAILY, AND ENSURING THAT CONSTRUCTION WASTE IS COLLECTED, REMOVED, AND DISPOSED OF ONLY AT AUTHORIZED DISPOSAL AREAS.
10. SANITARY/SEPTIC WASTE MANAGEMENT: TEMPORARY AND PORTABLE SANITARY AND SEPTIC WASTE SYSTEMS SHALL BE MOUNTED OR STAKED IN, WELL-MAINTAINED AND SCHEDULED FOR REGULAR WASTE DISPOSAL AND SERVICING. SOURCES OF SANITARY AND/OR SEPTIC WASTE SHALL NOT BE STORED NEAR THE MS4 OR RECEIVING WATERS.
11. STOCKPILE MANAGEMENT: STOCKPILES SHALL NOT BE LOCATED IN DRAINAGE WAYS, WITHIN 50 FEET FROM AREAS OF CONCENTRATED FLOWS, AND ARE NOT ALLOWED IN THE CITY RIGHT-OF-WAY. SEDIMENT BARRIERS OR SILT FENCES SHALL BE USED AROUND THE BASE OF ALL STOCKPILES. STOCKPILES SHALL NOT EXCEED 15 FEET IN HEIGHT. STOCKPILES GREATER THAN 15 FEET IN HEIGHT SHALL REQUIRE 8 FOOT WIDE BENCHING IN ACCORDANCE WITH REVISED ORDINANCES OF HONOLULU (ROH) CHAPTER 14, ARTICLE 15. STOCKPILES MUST BE COVERED WITH PLASTIC SHEETING OR A COMPARABLE MATERIAL IF THEY WILL NOT BE ACTIVELY USED WITHIN 7 DAYS.
12. LIQUID WASTE MANAGEMENT: LIQUID WASTE SHALL BE CONTAINED IN A CONTROLLED AREA SUCH AS A HOLDING PIT, SEDIMENT BASIN, ROLL-OFF BIN, OR PORTABLE TANK OF SUFFICIENT VOLUME AND TO CONTAIN THE LIQUID WASTES GENERATED. CONTAINMENT AREAS OR DEVICES MUST BE IMPERMEABLE AND LEAK FREE AND SHOULD NOT BE LOCATED WHERE ACCIDENTAL RELEASE OF THE CONTAINED LIQUID CAN DISCHARGE TO WATER BODIES, CHANNELS, OR STORM DRAINS.
13. CONCRETE WASTE MANAGEMENT: PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM CONCRETE WASTE BY CONDUCTING WASHOUT OFFSITE OR PERFORMING ONSITE WASHOUT IN A DESIGNATED AREA CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MILLIMETER POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL. CONTAINMENT AREAS OR DEVICES SHOULD NOT BE LOCATED WHERE ACCIDENTAL RELEASE OF THE CONTAINED LIQUID CAN DISCHARGE TO WATER BODIES, CHANNELS, OR STORM DRAINS. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75 PERCENT FULL. ONCE CONCRETE WASTES ARE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARDEN, THE CONCRETE SHOULD BE BROKEN UP, REMOVED, AND DISPOSED OF AS SOLID WASTES.
14. CONTAMINATED SOIL MANAGEMENT: AT MINIMUM CONTAIN CONTAMINATED MATERIAL SOIL BY SURROUNDING WITH IMPERMEABLE LINED BERMS OR COVER EXPOSED CONTAMINATED MATERIAL WITH PLASTIC SHEETING. CONTAMINATED SOIL SHOULD BE DISPOSED OF PROPERLY IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

APPROVAL:

CHIEF, CIVIL ENGINEERING BRANCH, DPP — DATE

15. DUST CONTROL: DUST FROM THE PROJECT SITE SHALL NOT BE TRANSPORTED OR DISCHARGE TO OFFSITE AREAS. THE WORK MUST BE IN CONFORMANCE AIR POLLUTION CONTROL STANDARDS CONTAINED IN THE HAWAII ADMINISTRATIVE RULES: TITLE 11, CHAPTER 60.1, "AIR POLLUTION CONTROL". ALL ESCPS SHALL PROVIDE FOR THE CONTROL OF DUST BY ONE OR MORE OF THE FOLLOWING:
    - MULCHING TO A DEPTH OF NO LESS THAN 1 INCH,
    - SPRINKLING EXPOSED SOIL WITH WATER TO MAINTAIN MOISTNESS AT A DEPTH OF 2 – 3 INCHES DURING WORKING HOURS AND NOT TO GENERATE ANY RUNOFF,
    - VERTICAL DUST BARRIERS NO LESS THAN 6 FEET IN HEIGHT, CONSTRUCTED OF MATERIALS CAPABLE OF EFFECTIVELY PREVENTING THE SPREAD OF DUST PARTICLES.
16. BMP AND SITE MAINTENANCE: ALL ESCP BMPS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. ADDITIONAL BMPS SHALL BE IMPLEMENTED AS NECESSARY TO ADDRESS EROSION AND SEDIMENT CONTROL AT THE PROJECT SITE

MATERIALS POLLUTION PREVENTION PLAN:

A. APPLICABLE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION. OTHER MATERIALS AND SUBSTANCES NOT LISTED SHALL BE ADDED TO THE INVENTORY:

CONCRETE	FERTILIZERS	PETROLEUM BASED PRODUCTS
DETERGENTS	CLEANING SOLVENTS	ADHESIVES
PAINT	MASONRY BLOCKS	WOOD

B. MATERIAL MANAGEMENT PRACTICES SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORMWATER RUNOFF. AN EFFORT SHALL BE MADE TO STORE ONLY ENOUGH PRODUCT AS REQUIRED TO DO THE JOB.

C. ALL MATERIALS STORED ONSITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND IF POSSIBLE UNDER A ROOF OR OTHER ENCLOSURE.

D. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURE'S LABEL.

E. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURE.

F. WHENEVER POSSIBLE, A PRODUCT SHALL BE USED UP COMPLETELY BEFORE DISPOSING OF THE CONTAINER.

G. MANUFACTURE'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED.

H. THE CONTRACTOR SHALL CONDUCT A DAILY INSPECTION TO ENSURE PROPER USE, STORAGE AND DISPOSAL OF MATERIALS ONSITE.

ONSITE AND OFFSITE PRODUCT SPECIFIC PLAN:

A. THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ONSITE;

I. PETROLEUM BASED PRODUCTS: ALL ONSITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCT SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURE'S RECOMMENDATIONS.

II. FERTILIZERS: FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURE. ONCE APPLIED, FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER RUNOFF. STORAGE SHALL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN WITH A LID TO AVOID SPILLS.

III. PAINTS: ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT SHALL NOT BE DISCHARGED TO THE CITY DRAINAGE SYSTEM BUT SHALL BE PROPERLY DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

IV. CONCRETE TRUCKS: CONCRETE TRUCKS SHALL BE ALLOWED TO WASH OUT OR DRUM WASH WATER ONLY AT A DESIGNATED SITE. WATER SHALL NOT BE DISCHARGED TO THE CITY DRAINAGE SYSTEM OR WATERS OF THE UNITED STATES. THE CONTRACTOR SHALL CONTACT THE DRINKING WATER BRANCH, DEPARTMENT OF HEALTH AT 586-4258 TO RECEIVE PERMISSION TO DESIGNATE A DISPOSAL SITE. THE CONTRACTOR SHALL CLEAN THE DISPOSAL SITE AS REQUIRED OR AS REQUESTED BY THE OFFICER-IN-CHARGE.

REVISION	DATE	DESCRIPTION	ENGR.	APPROVED

STEVEN H. HARANO
LICENSED PROFESSIONAL ENGINEER
No. 6993-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS).

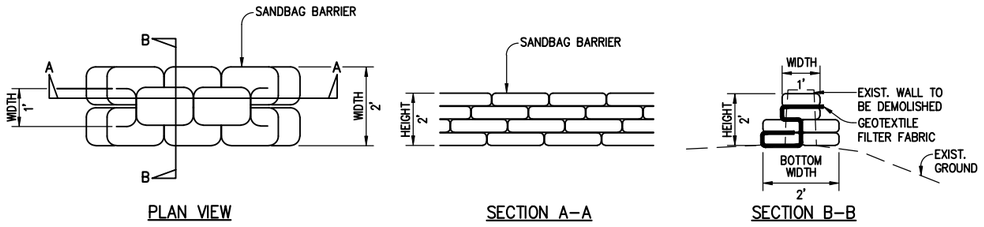
PorEx, Inc.
dba PARK ENGINEERING
LICENSE EXPIRES 4-30-24

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
CIVIL DIVISION

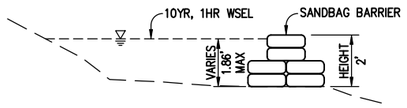
AHUWALE DITCH STORM DRAINAGE IMPROVEMENTS
PHASE 1
TMK: 3-6-004:018 AND 3-6-020:020 & 021
HONOLULU, OAHU, HAWAII

EROSION AND SEDIMENT CONTROL NOTES

DESIGN: SHH, EHV	APPROVED:	DRAWING NO.	C-7
DRAWN: EHV		SHEET	8
CHECKED: SHH	CHIEF, CIVIL DIVISION, DDC — DATE	OF	50 SHEETS
DATE: AUGUST 2022			
JOB NO. 11-21	FILE ___ DRAW ___ FOLDER ___ NUMBER ___		



PLAN VIEW | SECTION A–A | SECTION B–B



DITCH CHANNEL SECTION

TYPICAL SANDBAG DIMENSIONS

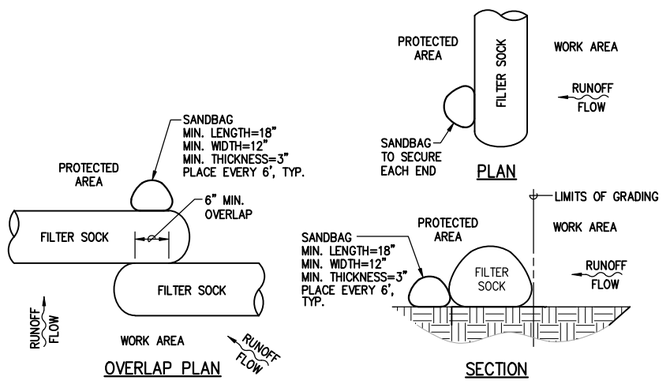
THICKNESS: 6"
WIDTH: 12"
LENGTH: 18"

SANDBAG NOTES:

1. SANDBAGS SHALL BE COMPOSED OF POLYPROPYLENE OR POLYAMIDE WOVEN FABRIC, WITH MINIMUM UNIT WEIGHT 4 OUNCES PER SQ. YD., MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70 PERCENT.
2. DOUBLE BAG EACH SAND BAG.
3. SANDBAGS SHALL BE FILLED WITH COARSE SAND OR GRAVEL.
4. SANDBAGS SHALL BE FILLED ONE–HALF TO TWO–THIRDS FULL.
5. STACK AND STAGGER SANDBAGS.

TEMPORARY SANDBAG BARRIER DETAIL

NOT TO SCALE

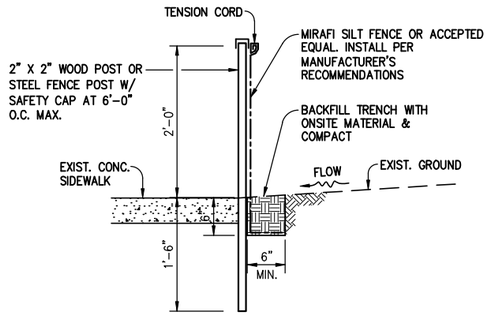


COMPOST SOCK NOTES:

1. COMPOST SHALL NOT CONTAIN BIOSOLIDS AND SHOULD BE CONSISTENT WITH EPA GUIDELINES.
2. STAKING OF COMPOST SOCK IS NOT REQUIRED. PROVIDE SANDBAGS AS INDICATED.
3. REMOVE ACCUMULATED SEDIMENT WHEN DEPTH REACHES 1/3 THE BARRIER HEIGHT.
4. AT THE COMPLETION OF PROJECT, FILTER SOCKS MATERIAL INCLUDING THE COMPOST SHALL BE REMOVED FROM SITE AND DISPOSED OF PROPERLY.
5. FILTER SOCK SHALL BE 10" NOMINAL DIAMETER MINIMUM.

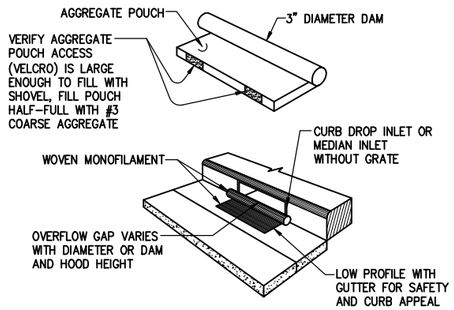
COMPOST FILTER SOCK DETAIL

NOT TO SCALE



TYPICAL SILT FENCE DETAIL

NOT TO SCALE



NOTES:

1. CATCH BASIN FILTERS SHALL BE INSTALLED AT ALL EXISTING AND PROPOSED CATCH BASINS UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
2. CONTRACTOR SHALL REMOVE THE INSTALLED FILTER DURING TIMES OF ABOVE–NORMAL RAINFALL EVENTS. REPLACE THE FILTER AFTER THE EVENT HAS PASSED.

SEDIMENT FILTER FOR CATCH BASIN

NOT TO SCALE

EROSION & SEDIMENT CONTROL PLAN SCHEDULE AND RAIN RESPONSE PLAN:

PROJECT SEQUENCE:

1. INSTALL PERIMETER CONTROLS AND PROTECTION AT EXISTING CATCH BASINS AS PER THE EROSION AND SEDIMENT CONTROL NOTES AND GOOD HOUSEKEEPING NOTES. CLEAR AND GRUB AS NECESSARY FOR THE INSTALLATION OF THESE BMPS. MAINTAIN EXISTING BERMS ALONG DITCHES.
2. CLEAR, GRUB, GRADE AND DEMOLISH EXISTING ITEMS AS INDICATED ON PLANS. CONSTRUCT NEW CONCRETE DITCH, GRP LINING AND SHOTCRETE.
3. PROCEED WITH CONSTRUCTION WITH LEAST POSSIBLE DISTURBANCE OF VEGETATIVE AREAS AND TEMPORARY STRUCTURES.
4. RELOCATE, RECONSTRUCT AND MAINTAIN BMPS AS NEEDED TO KEEP THEM EFFECTIVE AT ALL TIMES.
5. PERMANENTLY STABILIZE DISTURBED AREAS WITH GRASSING.
6. REMOVE TEMPORARY EROSION CONTROL MEASURES, INCLUDING EXIST. TEMP. WRAPPED SANDBAG BERM ALONG AHUWALE DITCH, AFTER FULL ESTABLISHMENT OF PERMANENT VEGETATIVE COVER OR PERMANENT STRUCTURES HAVE BEEN INSTALLED. TEMP. WRAPPED SANDBAG BERM ALONG ACCESS PARCEL T.M.K. 3–6–020:021 SHALL REMAIN.
7. PRACTICE GOOD HOUSEKEEPING MEASURES THROUGHOUT THE DURATION OF CONSTRUCTION.
8. INSPECTIONS WILL BE PERFORMED WEEKLY.

RAIN RESPONSE PLAN:

THE FOLLOWING WILL BE PERFORMED WHEN HEAVY RAINS, TROPICAL STORM OR HURRICANE IS IMMINENT OR IS FORECASTED IN THE NEXT 48 HOURS:

1. TEMPORARY SUSPENSION OF ACTIVE GRADING.
2. INSPECT ALL BMPS, INCLUDING PERIMETER CONTROLS AND INLET PROTECTION DEVICES, AND MAINTAIN AS NEEDED. REINSTALL ANY PERIMETER CONTROLS THAT WERE REMOVED DUE TO ACTIVE WORK IN THE AREA. IF A SEVERE STORM IS EXPECTED, REMOVE INLET PROTECTION DEVICE TO PREVENT FLOODING ON SURROUNDING STREETS.
3. COVER OR RELOCATE MATERIAL STOCKPILES AND LIQUID MATERIAL CONTAINERS TO AVOID CONTACT WITH RAINWATER.
4. PLACE SPILL PANS OR OIL–ONLY SPILL PADS UNDER CONSTRUCTION VEHICLES TO PREVENT RUNOFF FROM CONTACTING ANY SPILLED PETROLEUM PRODUCTS. PROPERLY DISPOSE OF ANY ACCUMULATED OILY WATER AFTER THE RAIN EVENT.
5. RE–INSPECT AFTER THE APPROACHING HEAVY RAINS, TROPICAL STORM OR HURRICANE AND REPLACE OR MAINTAIN BMP AS NEEDED.

APPROVAL:

CHIEF, CIVIL ENGINEERING BRANCH, DPP DATE

REVISION	DATE	DESCRIPTION	ENGR.	APPROVED

STEVEN H. HARANO
LICENSED PROFESSIONAL ENGINEER
No. 6993–C
HAWAII, U.S.A.

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ParEn, Inc.
dba PARK ENGINEERING
LICENSE EXPIRES 4–30–24

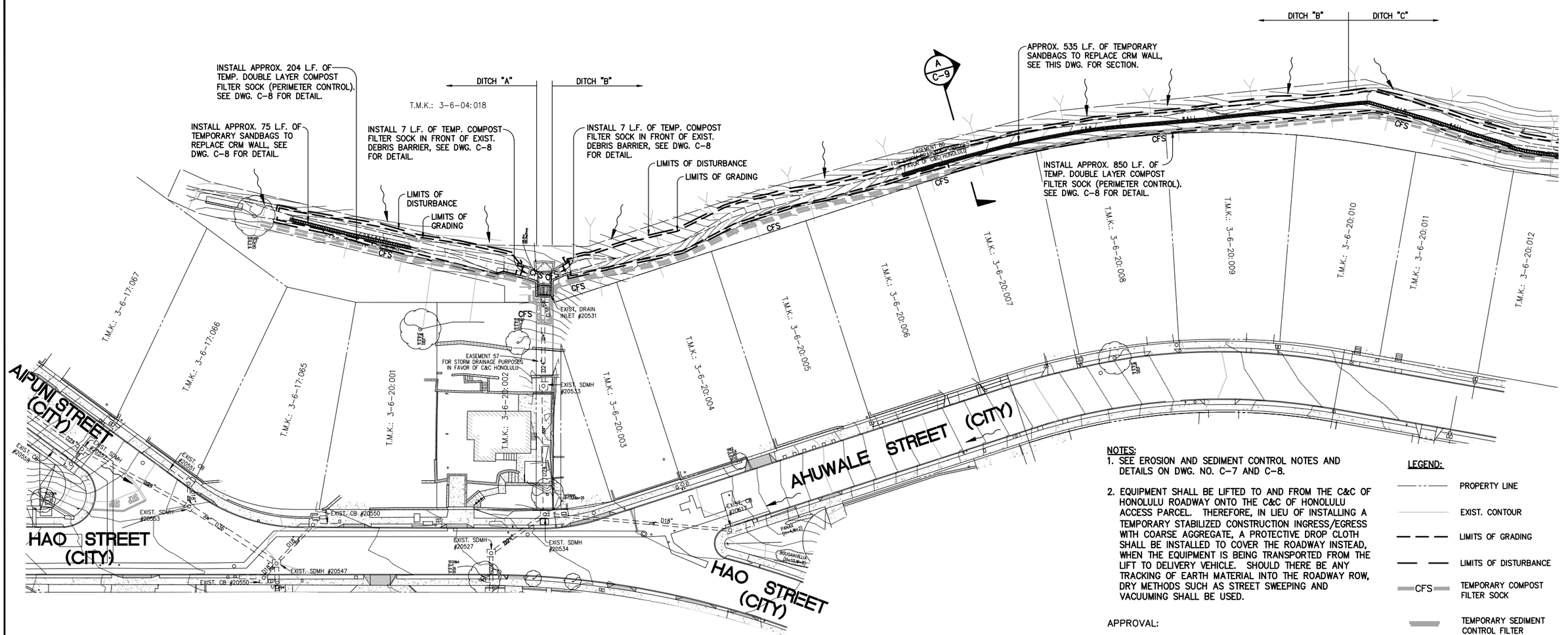
DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
CIVIL DIVISION

AHUWALE DITCH STORM DRAINAGE IMPROVEMENTS PHASE 1
TMK: 3-6-004:018 AND 3-6-020:020 & 021
HONOLULU, OAHU, HAWAII

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

DESIGN: SHH, EHV	APPROVED:	DRAWING NO. C-8
DRAWN: EHV		SHEET 9
CHECKED: SHH	CHIEF, CIVIL DIVISION, DDC DATE	OF 50 SHEETS
DATE: AUGUST 2022		
JOB NO. 11-21	FILE ___ DRAW ___ FOLDER ___ NUMBER ___	

TRUE NORTH
SCALE: 1" = 30'



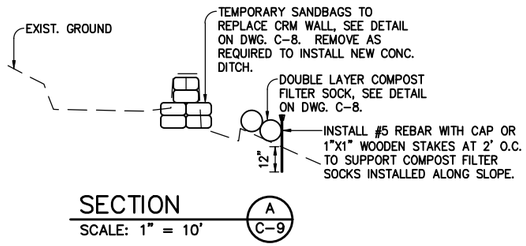
EROSION AND SEDIMENT CONTROL PLAN – 1 (CATEGORY 4 PROJECT)
SCALE: 1" = 30'

NOTES:
1. SEE EROSION AND SEDIMENT CONTROL NOTES AND DETAILS ON DWG. NO. C-7 AND C-8.
2. EQUIPMENT SHALL BE LIFTED TO AND FROM THE C&C OF HONOLULU ROADWAY ONTO THE C&C OF HONOLULU ACCESS PARCEL. THEREFORE, IN LIEU OF INSTALLING A TEMPORARY STABILIZED CONSTRUCTION INGRESS/EGRESS WITH COARSE AGGREGATE, A PROTECTIVE DROP CLOTH SHALL BE INSTALLED TO COVER THE ROADWAY INSTEAD, WHEN THE EQUIPMENT IS BEING TRANSPORTED FROM THE LIFT TO DELIVERY VEHICLE. SHOULD THERE BE ANY TRACKING OF EARTH MATERIAL INTO THE ROADWAY ROW, DRY METHODS SUCH AS STREET SWEEPING AND VACUUMING SHALL BE USED.

APPROVAL:

CHIEF, CIVIL ENGINEERING BRANCH, DPP DATE

LEGEND:
- PROPERTY LINE
- EXIST. CONTOUR
- LIMITS OF GRADING
- LIMITS OF DISTURBANCE
- CFS — TEMPORARY COMPOST FILTER SOCK
- TEMPORARY SEDIMENT CONTROL FILTER
- SEDIMENT FILTRATION ROLL
- SURFACE FLOW DIRECTION



SECTION A C-9
SCALE: 1" = 10'

GRAPHIC SCALE
SCALE: 1"= 30'
30 20 10 0 30 60

REVISION	DATE	DESCRIPTION	ENGR.	APPROVED

STEVEN H. HARANO
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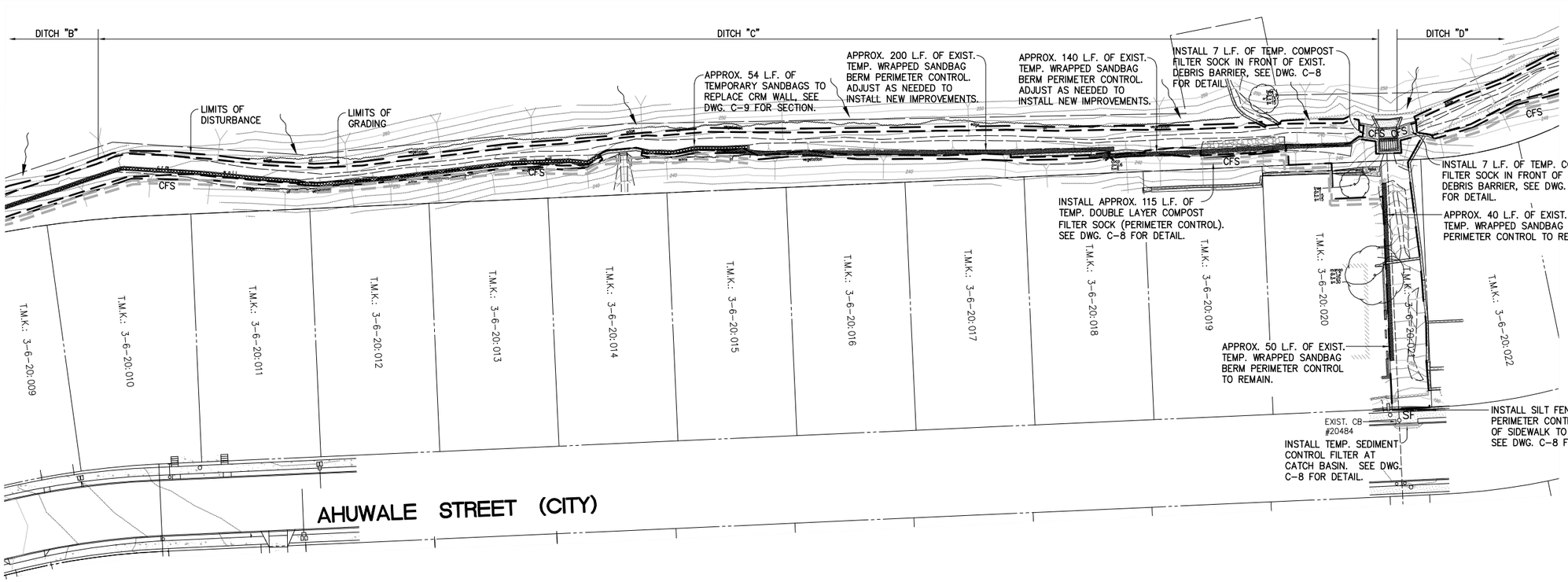
DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
CIVIL DIVISION

AHUWALE DITCH STORM DRAINAGE IMPROVEMENTS PHASE 1
TMK: 3-6-004:018 AND 3-6-020:020 & 021
HONOLULU, OAHU, HAWAII

EROSION AND SEDIMENT CONTROL PLAN - 1

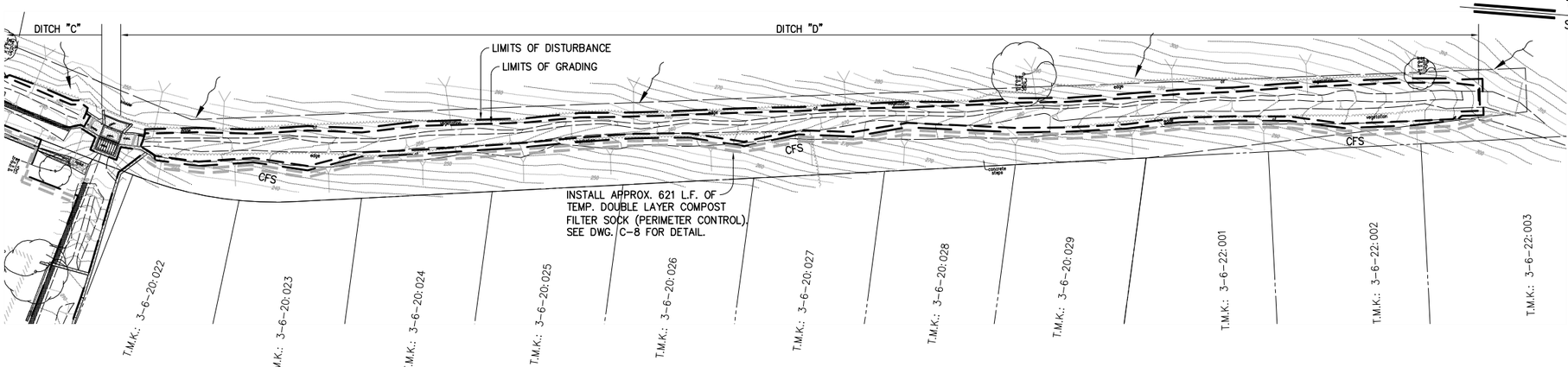
DESIGN: SHH, EHV	APPROVED:	DRAWING NO.	C-9
DRAWN: EHV		SHEET	10
CHECKED: SHH	CHIEF, CIVIL DIVISION, DDC DATE	OF	50 SHEETS
DATE: AUGUST 2022			
JOB NO. 11-21	FILE ___ DRAW ___ FOLDER ___ NUMBER ___		



TRUE NORTH
SCALE: 1" = 30'

NOTES:

1. SEE EROSION AND SEDIMENT CONTROL NOTES AND DETAILS ON DWG. NO. C-7 AND C-8.
2. EQUIPMENT SHALL BE LIFTED TO AND FROM THE C&C OF HONOLULU ROADWAY ONTO THE C&C OF HONOLULU ACCESS PARCEL. THEREFORE, IN LIEU OF INSTALLING A TEMPORARY STABILIZED CONSTRUCTION INGRESS/EGRESS WITH COARSE AGGREGATE, A PROTECTIVE DROP CLOTH SHALL BE INSTALLED TO COVER THE ROADWAY INSTEAD, WHEN THE EQUIPMENT IS BEING TRANSPORTED FROM THE LIFT TO DELIVERY VEHICLE. SHOULD THERE BE ANY TRACKING OF EARTH MATERIAL INTO THE ROADWAY ROW, DRY METHODS SUCH AS STREET SWEEPING AND VACUUMING SHALL BE USED.



TRUE NORTH
SCALE: 1" = 30'

LEGEND:

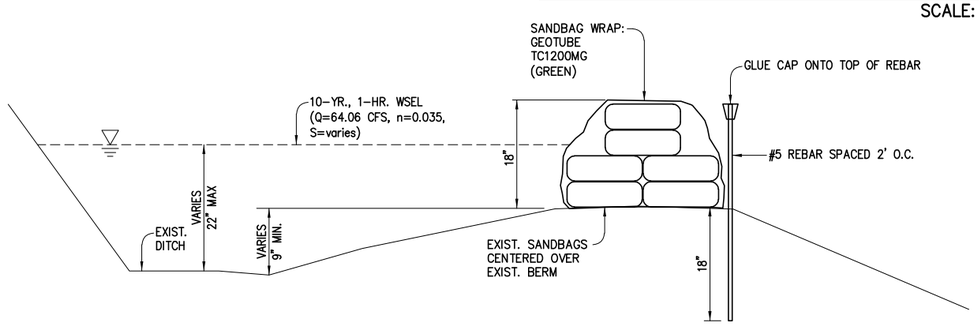
- PROPERTY LINE
- EXIST. CONTOUR
- LIMITS OF GRADING
- LIMITS OF DISTURBANCE
- CFS — TEMPORARY COMPOST FILTER SOCK
- TEMPORARY SEDIMENT CONTROL FILTER
- SF — SILT FENCE
- SURFACE FLOW DIRECTION

APPROVAL:

CHIEF, CIVIL ENGINEERING BRANCH, DPP DATE

EROSION AND SEDIMENT CONTROL PLAN – 2 (CATEGORY 4 PROJECT)

SCALE: 1" = 30'



EXIST. TEMPORARY WRAPPED SANDBAG BERM DETAIL – ALONG AHUWALE DITCH

NOT TO SCALE

GRAPHIC SCALE

SCALE: 1"= 30'

30 20 10 0 30 60

REVISION	DATE	DESCRIPTION	ENGR.	APPROVED

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
CIVIL DIVISION

STEVEN H. HARANO — LICENSED PROFESSIONAL ENGINEER — No. 6993-C — HAWAII, U.S.A.

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AHUWALE DITCH STORM DRAINAGE IMPROVEMENTS
PHASE 1
TMK: 3-6-004:018 AND 3-6-020:020 & 021
HONOLULU, OAHU, HAWAII

EROSION AND SEDIMENT CONTROL PLAN - 2

DESIGN: SHH, EHV	APPROVED:	DRAWING NO.	C-10
DRAWN: EHV		SHEET	11
CHECKED: SHH	CHIEF, CIVIL DIVISION, DDC DATE	OF	50 SHEETS
DATE: AUGUST 2022			
JOB NO. 11-21	FILE ___ DRAW ___ FOLDER ___ NUMBER ___		

APPENDIX 1

HRS 343 EXEMPTION

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8480 • Fax: (808) 768-4567
Web site: www.honolulu.gov

RICK BLANGIARDI
MAYOR

ALEX KOZLOV, P.E.
DIRECTOR

HAKU MILLES, P.E.
DEPUTY DIRECTOR

CDD-A 22-872879

February 4, 2022

DECLARATION OF EXEMPTION
from the preparation of an environmental assessment under the authority of Chapter 343, HRS, and Chapter 11-200.1, HAR

Project Title: *Ahuwale Ditch Storm Drainage Improvements*

Job Number: *11-21*

Project Description: *Drainage improvements to the existing Ahuwale Ditch drainage system in the vicinity of Ahuwale Street and Aipuni Street, within a City Drain Easement. The drainage ditch improvements will include, but not limited to, construction of new grouted rubble masonry (GRP) ditch, concrete ditch, shotcrete slope lining, GRP slope protection, concrete aprons, drainage flow bypass measures (if necessary).*

Reference: *DDC Exemption List dated September 1, 2020*

Exemption Class: *Part 1 Exemptions, General Type of Action 2*

Exempt Item Number: *23*

Exempt Item Description: *Earth berms and drainage swales.*

Exemption Class: *Part 1 Exemptions, General Type of Action 2*

Exempt Item Number: *25*

Exempt Item Description: *Essential utilities, including but not limited to wastewater systems, drainage systems, water systems, electrical systems, communication systems, irrigation systems, and fuel systems, except where a State Department of Health permit is required.*

I have considered the potential effects of the above listed project as provided by Chapter 343, HRS, and Chapter 11-200.1 HAR. I declare that this project will probably have minimal or no significant effect on the environment and is therefore exempt from the preparation of an environmental assessment.

For Alex Kozlov, P.E.
Director

Date: FEB - 2 2022

EV:KC:pto

Original: CDD–Environmental Documentation
Copy: CDD–Project Manager
CDD–Central File (Project)