DAVID Y. IGE
GOVERNOR

KEITH T. HAYASHI
SUPERINTENDENT

STATE OF HAWAI`I

DEPARTMENT OF EDUCATION

P.O. BOX 2360

HONOLULU, HAWAI`I 96804

OFFICE OF FACILITIES AND OPERATIONS

July 28, 2022

TO: Mr. Keith E. Kawaoka, Acting Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, HI 96813

FROM: Edward S. Ige
Facilities Director, Facilities Development Branch

SUBJECT: **Haaheo Elementary School - Multi-Purpose Building**
Job No.: Q11200-18
121 Haaheo Road, Hilo, Hawaii 96720
Tax Map Key: (3) 2-6-020:038

The Hawaii State Department of Education has reviewed the Draft Environmental Assessment for the subject project and anticipates a Finding of No Significant Impact determination. Please publish the determination in the next Environmental Notice.

The Draft Environmental Assessment and the Environmental Notice publication form will be uploaded to the Office of Environmental Quality Control website. publication form will be uploaded to the OEQC website. One printed copy of the document will be forwarded to the Hawaii Documents Center.

Should you have any questions, please contact Richard Bass, Project Coordinator of the Facilities Development Branch, Project Management Section, at (808) 784-5135 or via email at rbass@bowersandkubota.com

ESI:rb

c: Facilities Development Branch

From: webmaster@hawaii.gov
To: DBEDT OPSD Environmental Review Program
Subject: New online submission for The Environmental Notice
Date: Friday, July 29, 2022 11:51:51 AM

Action Name

Haʻaheo Elementary School Multi-Purpose Building

Type of Document/Determination

Draft environmental assessment and anticipated finding of no significant impact (DEA-AFNSI)

HRS §343-5(a) Trigger(s)

- (1) Propose the use of state or county lands or the use of state or county funds

Judicial district

South Hilo, Hawaiʻi

Tax Map Key(s) (TMK(s))

[3]2-6-020: 038

Action type

Agency

Other required permits and approvals

Variance from Pollution Control, Disability and Communication Access Board, Chapter 6E Review, Plan Approval, Building Electrical, Plumbing and Demolition Permit, Grubbing Grading and Stockpiling Permit, DWS Construction Plan Review, HFD Fire Plan Review

Proposing/determining agency

Department of Education, State of Hawaiʻi

Agency contact name

Richard Bass

Agency contact email (for info about the action)

rbass@bowersandkubota.com

Email address or URL for receiving comments

rbass@bowersandkubota.com

Agency contact phone

(808) 784-5135

Agency address

3633 Waialae Avenue
Honolulu, HI 96816
United States
Map It

Was this submittal prepared by a consultant?

Yes

Consultant

Gerald Park Urban Planner

Consultant contact name

Gerald Park

Consultant contact email

gpark@gpup.biz

Consultant contact phone

(808) 625-9626

Consultant address

95-595 Kanamee Street #324
Mililani, HI 96789
United States
Map It

Action summary

The project will replace facilities that are aged, small, in substandard condition, and do not meet current Department of Education space standards. The improvements will provide permanent structures for a new cafeteria, library and computer lab, and classrooms. The sum of the improvements would provide modern facilities for transitioning Ha‘aheo Elementary School into a 21st century school.

Reasons supporting determination

See Section 7 Determination of Significance

Attached documents (signed agency letter & EA/EIS)

- 2022-07-28-FONSI-EA-Haaheo-SIGNED.pdf
- Haaheo-Elem.-School-Multi-Purpose-Building.pdf

Action location map

- Haaheo-Elementary-School-Figure-1-Vicinity-Map-1.zip

Authorized individual

Gerald Park

Authorization

- The above named authorized individual hereby certifies that he/she has the authority to make this submission.

DRAFT ENVIRONMENTAL ASSESSMENT

HA'AHEO ELEMENTARY SCHOOL MULTI-PURPOSE BUILDING

Halepuna Ahupua'a, South Hilo District, Hawai'i Island, Hawai'i

Prepared for

Department of Education, State of Hawai'i
Office of School Facilities and Support Services
3633 Waialae Avenue
Honolulu, Hawai'i 96816

June 2022

DRAFT ENVIRONMENTAL ASSESSMENT

HA'AHEO ELEMENTARY SCHOOL MULTI-PURPOSE BUILDING

Halepuna Ahupua'a, South Hilo District, Hawai'i Island

Prepared in Partial Fulfillment of the Requirements of Chapter 343, Hawai'i Revised Statutes and Hawai'i Administrative Rules, Title 11, Chapter 200

Prepared For
Department of Education
Office of School Facilities and Support Services
3633 Waialae Avenue
Honolulu, Hawai'i 96816

Prepared By

Gerald Park Urban Planner
95-595 Kaname'e Street #324
Mililani, Hawai'i 96789

and

Franklin Wong & Associates, LTD.
700 Richards Street, Suite 2604
Honolulu, Hawai'i 96813-4605

June 2022

PROJECT PROFILE

Project:	Ha'aheo Elementary School Multi-Purpose Building DOE Job No. Q11200-18
Street / Mailing Address:	Ha'aheo Elementary School 121 Ha'aheo Road Hilo, Hawai'i 96720
Proposing/Determining Agency:	Department of Education, State of Hawai'i Office of Facilities & Operations Facilities Development Branch 3633 Waialae Avenue Honolulu, Hawai'i 96816
Tax Map Key:	[3] 2-6-020: 038
Land Area:	7.362 acres or 320,688 SF
Land Owner:	State of Hawai'i
State Land Use Designation:	Urban and Agricultural
General Plan LUPAG Map:	Low Density Urban / Productive Agriculture / Rural
Zoning:	RS-7.5 (Residential District 7,500 sf Minimum) A-20a (Agricultural District 20 acre Minimum)
Special Management Area	Outside Special Management Area
Existing Use:	Public Elementary School
Need for Environmental Assessment:	Chapter 343, Hawai'i Revised Statutes §343-5(a)(1) Propose the use of state or county lands or state or county funds
Anticipated Determination:	Finding of No Significant Impact
Project Contact:	Richard Bass, Project Coordinator Department of Education, State of Hawai'i Office of Facilities & Operations Facilities Development Branch 3633 Waialae Avenue Honolulu, Hawai'i 96816 T: 784-5135 E: rbass@bowersandkubota.com

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SECTION 1
DESCRIPTION OF THE PROPOSED ACTION

The Department of Education, State of Hawai'i, proposes to construct three permanent buildings and associated improvements at Ha'aheo Elementary School, located near the town of Wainaku, District of South Hilo, County and State of Hawai'i. Ha'aheo Elementary School is "wedged" between residential uses to the east and south and agricultural uses on the north, south, and west. Nearby streets include Kulana Kea Drive and Ha'aheo Road on the north and Wainaku Street on the east.

The square-shaped lot bears Tax Map Key [3] 2-6-020: 038 with an area of 7.362 acres. The lot is owned by the State of Hawai'i and under operational control of the State Department of Education. A Vicinity Map and Tax Map are shown as Figures 1 and 2.

A. Purpose of the Proposed Action

The project will replace facilities that are aged, small, in substandard condition, and do not meet current Department of Education space standards. The improvements will provide permanent structures for a new cafeteria, library and computer lab, and classrooms. In addition, the existing parking area will be enlarged to accommodate required parking at one location.

The proposed improvements will also allow the repurposing of existing buildings for new educational programs and providing space for support staff. As shown on Table 2 in Section 2 of this assessment, the permanent structures at the school are all 50+ years or older.

B. Technical Characteristics

The improvements are proposed on a grass lawn on the western side of the campus. The "building site" is bounded by a parking area on the north, school buildings on the east, portable classroom buildings on the south, and a continuation of the lawn on the west.

1. Demolition

Demolition is proposed in two phases to coincide with and precede a two phase construction schedule. Phase 1a demolition would remove the existing garden, garden shed, and fencing. Water lines will be cut and capped or removed. Seven parking stalls in the parking area and associated wheel stops will be removed.

Phase 1b would further remove water and sewer piping to the lawn area. The parking area will be demolished and a retaining wall removed, a water meter relocated, and a drain sump and lines demolished.

Phase 2 demolition would remove the five portable buildings (P-1 through P-5) on the south and a Toilet Building on the east side of the building site. Walkways and remaining water and sewer piping will be demolished.

2. New Construction

A new Cafetorium (Building F) and a Library / Computer Lab (Building G) will be constructed first as Phase 1a. In addition to building construction, this phase includes grading and installation of water, sewer, drainage, fire service, electrical, and mechanical systems.

A construction staging area with a temporary access driveway will be set aside in the southwest corner of the building site. Access will be through the existing and to be improved parking area. The staging area will be built during Phase 1a.

Parking lot improvements are scheduled for Phase 1b. The improvements will be constructed over the summer months when summer school is not in session.

The Classroom Building will be built as Phase 2.

a. Cafetorium

Building F is the largest of the three buildings. To be constructed on the west side of the building site it will replace the existing cafeteria that was built in 1964. The one-story, 6,240 square foot structure will provide a serving kitchen, space for back of house functions, dining area, and restrooms. The dining area can be rearranged for multi-purpose uses such as school assemblies, passive recreation, and parent meetings.

The dining area has a capacity of approximately 250 persons.

The structure will be erected on poured in place concrete slabs and foundations and concrete columns. The exterior will be faced with split face infill CMU walls. Wood trusses will support structural decking. Thermal insulation and deep corrugated prefinished metal roofing will top the structural decking.

The height of the structure is 23'-7" measured from existing grade to top of roof and does not exceed the 35-foot building height for the residential zoning district. The finish floor elevation is at 225.5 feet.

The structure will be naturally ventilated. Large ceiling fans will facilitate air circulation.

The building will not be fire sprinkled.

b. Library and Computer Lab (Building G)

A single-story, 2,740 square foot building housing the relocated Library and Computer Lab will be sited to the south of the Cafetorium and adjacent to Building D. The structure will be constructed in the same manner and use the same building materials as the Cafetorium.

The building is 19'7" tall with a finish floor elevation of 224.0 feet.

The building will not be fire sprinkled.

The Library and Computer Room will be air conditioned.

Site Plans, Floor Plans, Exterior Elevations, and Sections for the Cafetorium, Library, and Computer Lab are shown as Sheets C11.1, A11.1, A12.1, A12.3, and A13.1.

c. Classroom Building (Building D)

A permanent Classroom Building will be constructed on the site of the demolished portable buildings. A single-story, 4,200 square foot structure (150' X 28') will provide three separate classrooms for Special Education (1,184 sf), Kindergarten (971 sf), and Pre-Kindergarten (1,184 sf). Staff and student restrooms will replace the demolished Toilet Building.

The structure will be erected on poured in place concrete floor slabs and foundations. CMU columns and split face exterior walls will support the roof consisting of pre-engineered wood trusses, structural acoustical decking, and plywood sheathing. The decking will be topped with a waterproof membrane, thermal insulation, and a deep corrugated metal roof system.

The Building height is 19'-7" measured from existing grade to top of roof. The finish floor elevation is at 222 feet.

A Site Plan, Floor Plan, Elevations, and Cross Section for the Classroom Building is shown as Sheets C21.1, A 21.1, A22.1, and A23.1.

Floor area tabulations for the three buildings are listed on Table 1.

Table 1. Proposed Buildings and Floor Area

Building D (Classrooms)		**Building F (Cafetorium)**		**Building G (Library)**	
Space	**Area (sf)**	**Space**	**Area (sf)**	**Space**	**Area (sf)**
SPED Classroom	1,184	Dining / Assembly	3,380	Library	1,157
PreK Classroom	1,184	General Storage	336	Computer Lab	1,229
Kindergarten	971	Staff Restroom	88	Staff Restroom (2)	128
Restroom (B&G)	440	Custodian Office	180	Storage Room	155
PreK Restroom	59	Elec. /Amplifier Room	106	Telecom	69
Staff Restroom	56	Serving Kitchen	1,271	**Total SF**	**2,738**
Custodian Room	43	Dry Storage	60		
Storage Room	68	Restrooms (B&G)	410		
Electrical Room	68	Storage	153		
Total SF	**4,073**	Custodian Closet	80		
		Trash Enclosure	180		
		Total SF	**6,244**		

Source: Franklin Wong & Associates, Ltd., 2022.

3. Circulation and Parking

Major changes to on-campus vehicle circulation are not proposed. The existing parking area and driveway to the north, however, will be reconstructed. The plan is to provide two

parking levels at different grades. The existing driveway and parking area will be extended westward, transition to a parking area at a lower grade, and return to the driveway entry. The transition grade is an approximately 7+feet difference in elevation between upper and lower parking levels. Retaining walls will be constructed between both levels for ground stabilization. The reconstructed parking area will provide parking for 49 vehicles at one location.

Improvements to the parking area will be scheduled over the summer months when summer school is not in session.

Two existing accessible parking stalls and a loading zone fronting Building A will be upgraded and restriped.

4. Infrastructure and Utilities

Existing water, wastewater, and drainage facilities lines within the building site will be cut and capped or removed entirely. New water lines will connect to the on-site water system and wastewater will discharge into the existing on-site IWS system.

5. Grading and Drainage

The area to be graded is estimated at 2.29 acres which is almost one-third of the school campus. Grading will reshape the sloping terrain to site the improvements and provide accessibility to all new structures. Because of the sloping terrain, the buildings will "step" down the slope as measured by the finish floor elevations. The finish floor of the Cafetorium is elevation 225.5 feet, the Library 224.0 feet, and the Classroom Building 222.0 feet. Accessible steps and covered transitional walkways will negotiate elevation changes between buildings.

Grading will be most pronounced in the areas proposed for Phase 1a and 1b construction and minimal for Phase 2 construction. Earthwork quantities are estimated at unclassified excavation, 13,424 C.Y.; structural excavation, 8,773 C.Y., total excavation, 22,197 C.Y, and 502 C.Y of embankment.

Grated drain inlets and new drain lines will be installed to collect and convey runoff into new drywells. Drainage infrastructure will be strategically placed at locations around the respective buildings and in the reconstructed parking area. An Erosion and Sediment Control Plan is shown as Sheet C01.3.

C. Economic Characteristics

A third construction phase would renovate existing Buildings by providing new offices, health room, and meeting room. Building B also would be renovated by adding a principal's office and conference room.

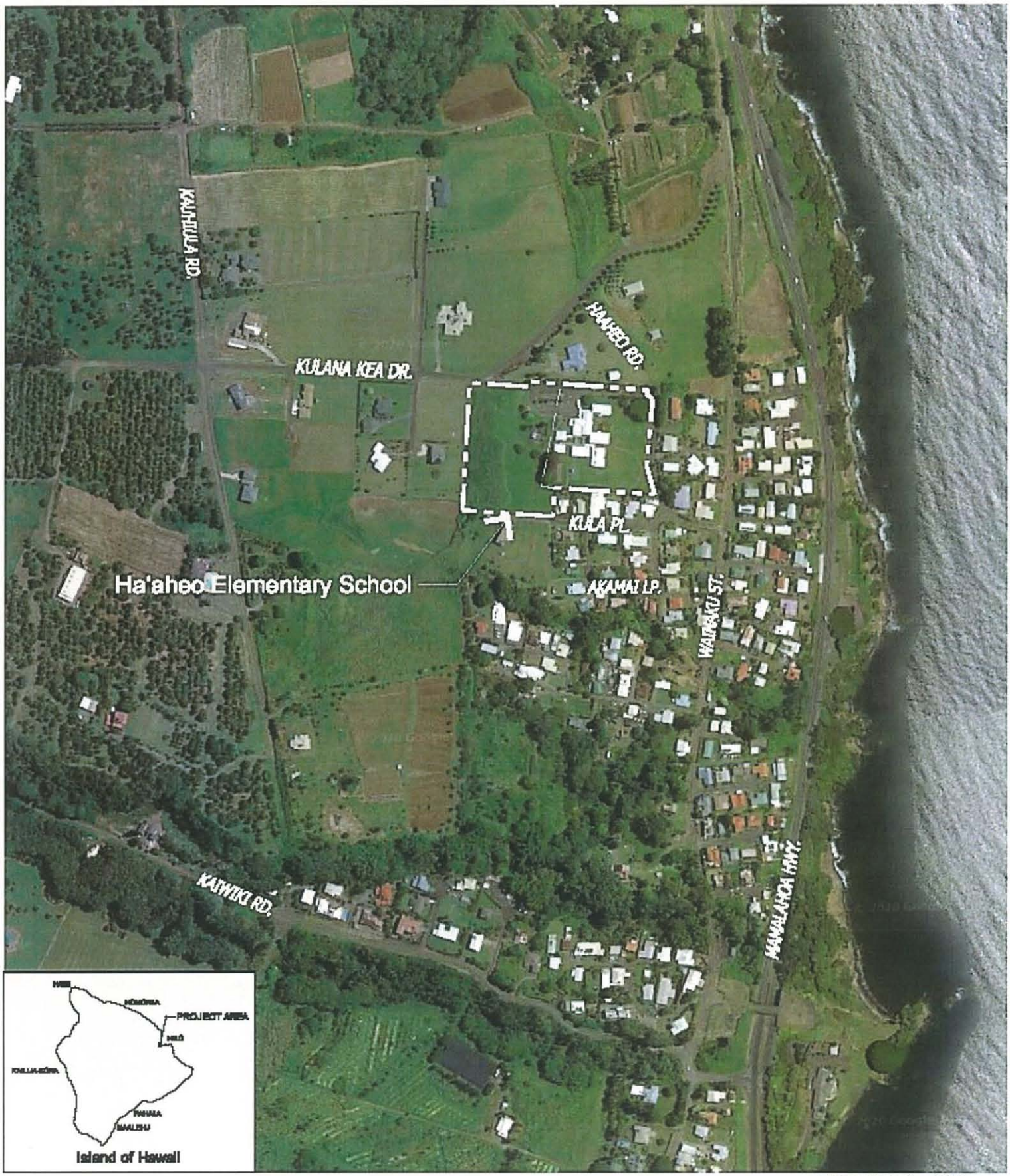
.

The estimated construction cost is $17.0 million and will be funded by the State of Hawai'i. Work will commence after all permits and approvals have been received. Construction is projected to commence during Summer 2023 and should be completed in two years.

D. Social Characteristics

The School's garden will be relocated to another site on campus. The new buildings will allow the school to repurpose existing structures to accommodate other school curricula, offices, and staff activities.

Access to all new buildings will comply with the Americans with Disabilities Act (ADA).



Source: Google Maps 2020 Imagery

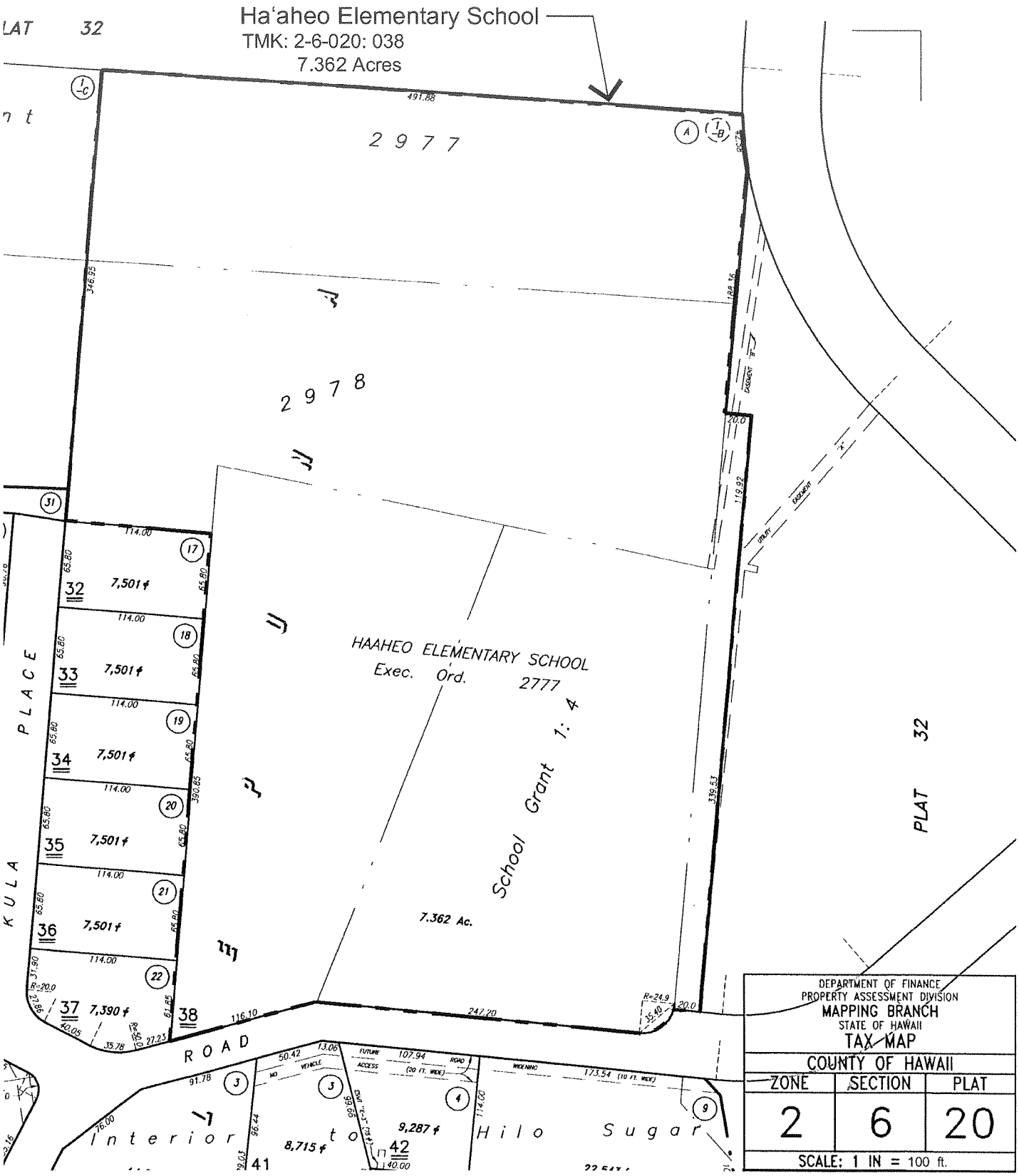
Figure 1
Vicinity Map

Ha'aheo Elementary School Multi-Purpose Building

LINEAL SCALE (FEET)
250 125 0 125 250 500

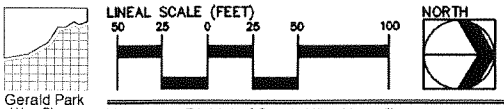
NORTH

Gerald Park Urban Planner
October 2020

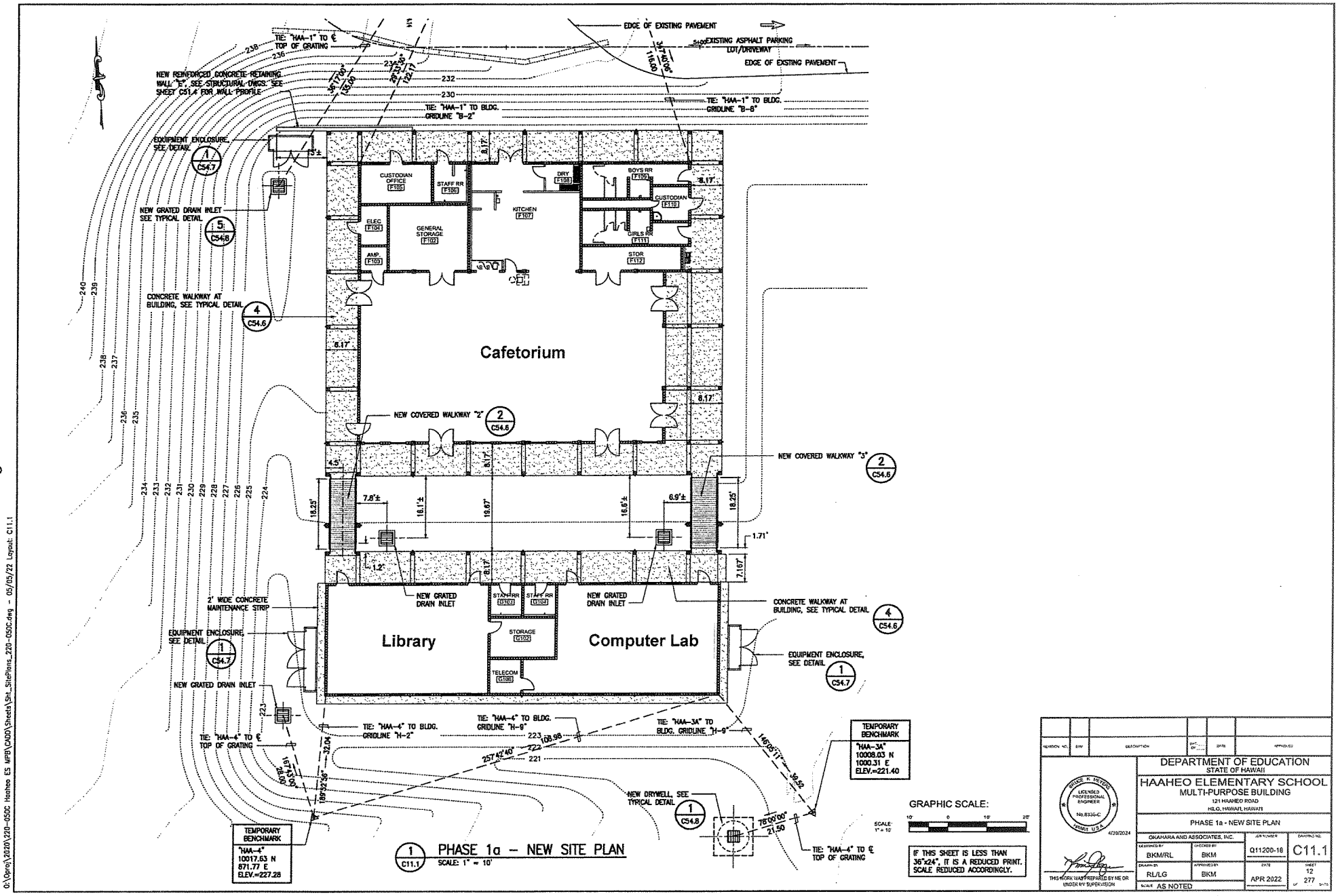


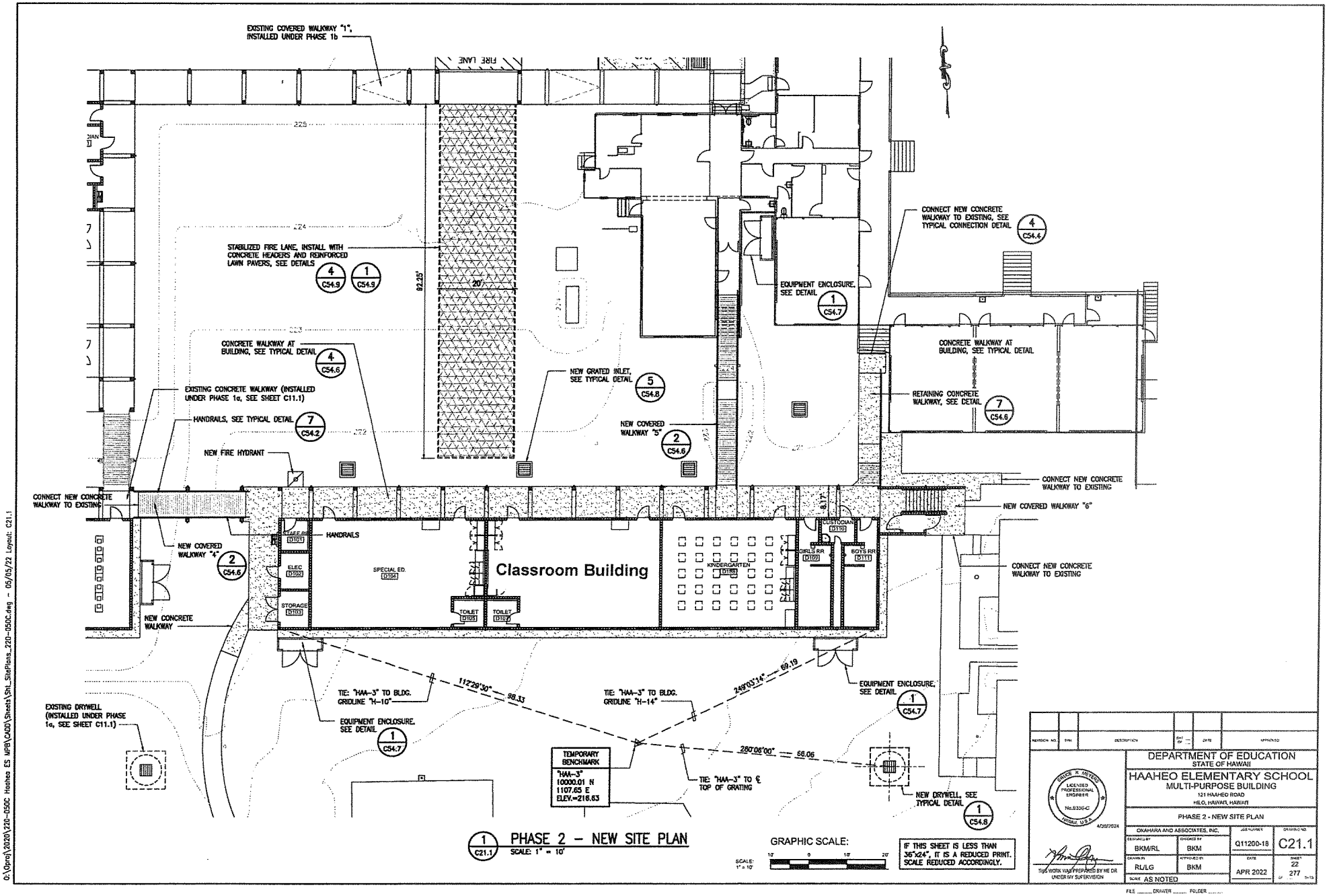
Source: County of Hawaii, Tax Map Online, https://www.planning.hawaiicounty.gov/resources/tax-maps-tmk-maps/

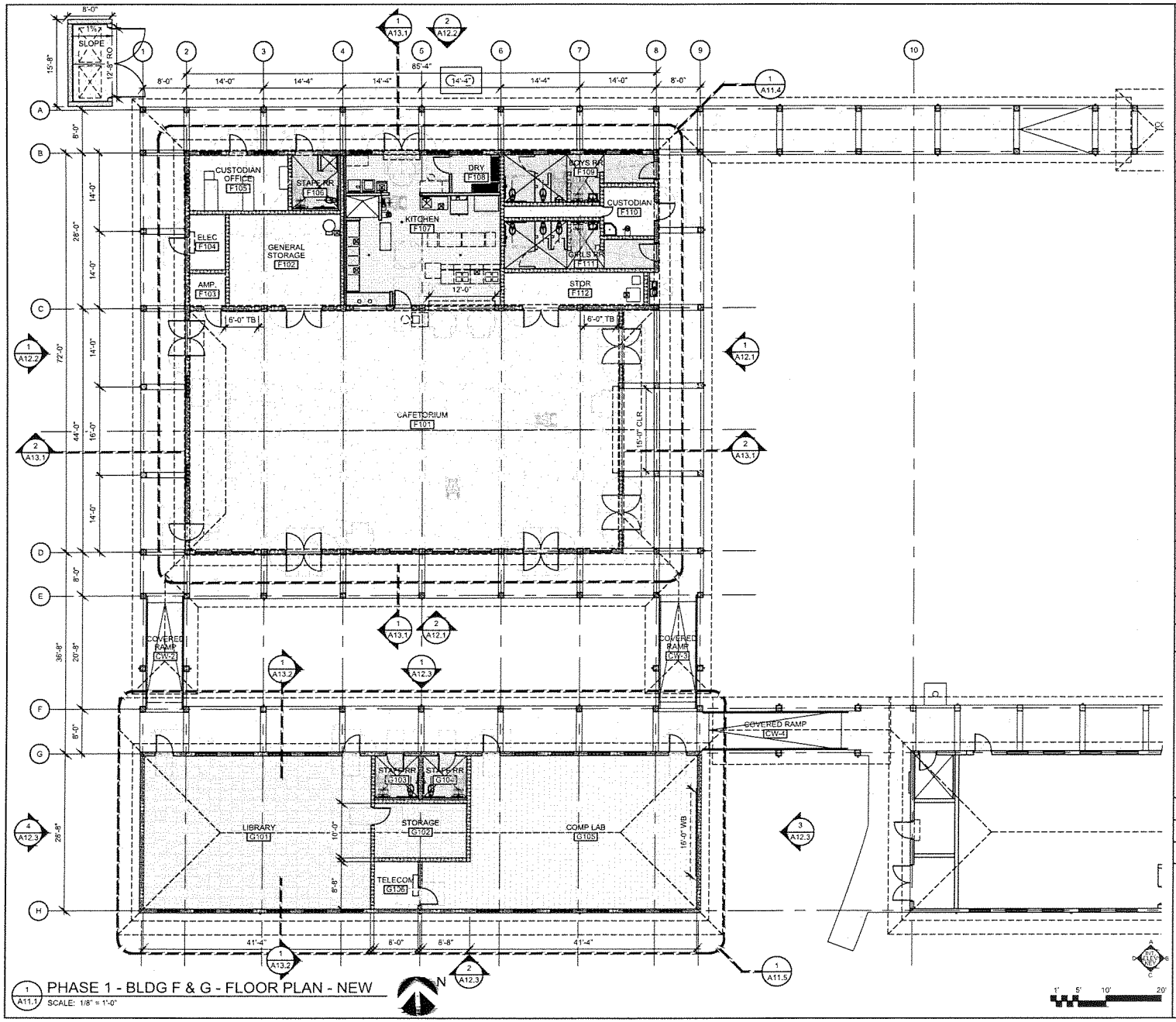
Figure 2
Tax Map
Ha'aheo Elementary School
Multi-Purpose Building



Gerald Park
Urban Planner
October 2020


EDGE OF EXISTING PAVEMENT
EXISTING ASPHALT PARKING LOT/DRIVEWAY
TIE: "HAA-1" TO ℄ TOP OF GRATING
NEW REINFORCED CONCRETE RETAINING WALL "E", SEE STRUCTURAL DWGS. SEE SHEET C51.4 FOR WALL PROFILE
TIE: "HAA-1" TO BLDG. GRIDLINE "B-2"
TIE: "HAA-1" TO BLDG. GRIDLINE "B-8"
EQUIPMENT ENCLOSURE, SEE DETAIL 1/C54.7
NEW GRATED DRAIN INLET SEE TYPICAL DETAIL 5/C54.8
CONCRETE WALKWAY AT BUILDING, SEE TYPICAL DETAIL 4/C54.6
CUSTODIAN OFFICE F105
STAFF RR F106
DRY F108
BOYS RR F109
CUSTODIAN F110
KITCHEN F107
ELEC F104
GENERAL STORAGE F102
GIRLS RR F111
AMP F103
STOR F112
Cafetorium
NEW COVERED WALKWAY "2" 2/C54.6
NEW COVERED WALKWAY "3" 2/C54.6
NEW GRATED DRAIN INLET
STAFF RR G107
STAFF RR G104
STORAGE G102
TELECOM G108
Library
Computer Lab
2' WIDE CONCRETE MAINTENANCE STRIP
EQUIPMENT ENCLOSURE, SEE DETAIL 1/C54.7
NEW GRATED DRAIN INLET
TIE: "HAA-4" TO BLDG. GRIDLINE "H-2"
TIE: "HAA-4" TO ℄ TOP OF GRATING
TIE: "HAA-4" TO BLDG. GRIDLINE "H-9"
TIE: "HAA-3A" TO BLDG. GRIDLINE "H-9"
NEW DRYWELL, SEE TYPICAL DETAIL 1/C54.8
TIE: "HAA-4" TO ℄ TOP OF GRATING
TEMPORARY BENCHMARK "HAA-4" 10017.63 N 871.77 E ELEV.=227.28
TEMPORARY BENCHMARK "HAA-3A" 10008.03 N 1000.31 E ELEV.=221.40
GRAPHIC SCALE:
SCALE: 1" = 10'
IF THIS SHEET IS LESS THAN 36"x24", IT IS A REDUCED PRINT. SCALE REDUCED ACCORDINGLY.
1/C11.1 PHASE 1a – NEW SITE PLAN
SCALE: 1" = 10'
DEPARTMENT OF EDUCATION
STATE OF HAWAII
HAAHEO ELEMENTARY SCHOOL
MULTI-PURPOSE BUILDING
121 HAAHEO ROAD
HILO, HAWAII, HAWAII
PHASE 1a - NEW SITE PLAN
OKAHARA AND ASSOCIATES, INC.
BKM/RL
BKM
Q11200-18
C11.1
RL/LG
BKM
APR 2022
AS NOTED
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
4/28/2024
G:\Proj\2020\220-050C Haahee ES MPB\CADD\Sheets\SH_SitePlans_220-050C.dwg - 03/05/22 Layout: C11.1


EXISTING COVERED WALKWAY "1", INSTALLED UNDER PHASE 1b
FIRE LANE
STABILIZED FIRE LANE, INSTALL WITH CONCRETE HEADERS AND REINFORCED LAWN PAVERS, SEE DETAILS
4 C54.9
1 C54.9
82.25'
20'
CONCRETE WALKWAY AT BUILDING, SEE TYPICAL DETAIL
4 C54.6
EXISTING CONCRETE WALKWAY (INSTALLED UNDER PHASE 1a, SEE SHEET C11.1)
HANDRAILS, SEE TYPICAL DETAIL
7 C54.2
NEW FIRE HYDRANT
NEW GRATED INLET, SEE TYPICAL DETAIL
5 C54.8
NEW COVERED WALKWAY "5"
2 C54.6
EQUIPMENT ENCLOSURE, SEE DETAIL
1 C54.7
CONNECT NEW CONCRETE WALKWAY TO EXISTING, SEE TYPICAL CONNECTION DETAIL
4 C54.4
CONCRETE WALKWAY AT BUILDING, SEE TYPICAL DETAIL
RETAINING CONCRETE WALKWAY, SEE DETAIL
7 C54.6
CONNECT NEW CONCRETE WALKWAY TO EXISTING
NEW COVERED WALKWAY "6"
CONNECT NEW CONCRETE WALKWAY TO EXISTING
CONNECT NEW CONCRETE WALKWAY TO EXISTING
HANDRAILS
NEW COVERED WALKWAY "4"
2 C54.6
STAFF RR D101
ELEC D102
STORAGE D103
SPECIAL ED. D104
Classroom Building
TOILET D105
TOILET D106
KINDERGARTEN D108
CUSTODIAN D110
GIRLS RR D109
BOYS RR D111
NEW CONCRETE WALKWAY
EXISTING DRYWELL (INSTALLED UNDER PHASE 1a, SEE SHEET C11.1)
TIE: "HAA-3" TO BLDG. GRIDLINE "H-10"
112°29'30" 98.33
EQUIPMENT ENCLOSURE, SEE DETAIL
1 C54.7
TIE: "HAA-3" TO BLDG. GRIDLINE "H-14"
249°03'14" 69.19
EQUIPMENT ENCLOSURE, SEE DETAIL
1 C54.7
TEMPORARY BENCHMARK
"HAA-3"
10000.01 N
1107.65 E
ELEV.=216.63
250°06'00" 66.06
TIE: "HAA-3" TO ℄ TOP OF GRATING
NEW DRYWELL, SEE TYPICAL DETAIL
1 C54.8
1 C21.1 PHASE 2 – NEW SITE PLAN
SCALE: 1" = 10'
GRAPHIC SCALE:
SCALE: 1" = 10'
IF THIS SHEET IS LESS THAN 36"x24", IT IS A REDUCED PRINT. SCALE REDUCED ACCORDINGLY.
REVISION NO. SYM DESCRIPTION DATE APPROVED
DEPARTMENT OF EDUCATION
STATE OF HAWAII
HAAHEO ELEMENTARY SCHOOL
MULTI-PURPOSE BUILDING
121 HAAHEO ROAD
HILO, HAWAII, HAWAII
PHASE 2 - NEW SITE PLAN
LICENSED PROFESSIONAL ENGINEER No.8336-C HAWAII, U.S.A.
4/29/2024
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
OKAHARA AND ASSOCIATES, INC.
JOB NUMBER Q11200-18
DRAWING NO. C21.1
DESIGNED BY BKM/RL
CHECKED BY BKM
DRAWN BY RL/LG
APPROVED BY BKM
DATE APR 2022
SHEET 22 OF 277
SCALE AS NOTED
FILE ____ DRAWER ____ FOLDER ____
O:\Oproj\2020\220-050C Haahea ES MPB\CADD\Sheets\Sht_SitePlans_220-050C.dwg - 05/05/22 Layout: C21.1



1 PHASE 1 - BLDG F & G - FLOOR PLAN - NEW
SCALE: 1/8" = 1'-0"

BUILDING F & G - KEYNOTES

NOTE #	REMARKS	DETAIL REF.
F1	FOR GENERAL PHASE 1 SCOPE OF WORK, SEE PHASING PLAN.	- A02.0
F2	SEE CIVIL PLANS FOR PHASE 1 SITE DEMOLITION AND UTILITY LAYOUTS. SEE ENVIRONMENTAL REQUIREMENTS FOR EXCESS SOIL TO BE REMOVED OFF SITE.	-
F3	ESTABLISH NEW BUILDING FINISH FLOOR ELEVATIONS (DEPRESS AREAS INTENDED FOR DRAINAGE), WALKWAY ELEVATIONS, AND RAMP ELEVATIONS AS REQUIRED.	-
F4	CONSTRUCT CONCRETE FLOOR SLABS / FOUNDATIONS, CONCRETE COLUMNS, SPLIT FACE INFILL CMU WALLS, WOOD TRUSSES AND STRUCTURAL DECKING. SEE STRUCTURAL.	-
F5	INSTALL DEEP CORROGATED PREFINISHED METAL ROOFING AND THERMAL INSULATION OVER STRUCTURAL DECK. SEE SPECS FOR SPECIAL STRUCTURAL / ACOUSTIC DECK AT BUILDING F ASSEMBLY.	- A55.7
F6	PROVIDE PREFINISHED METAL GUTTER SYSTEM WITH ROUND PVC PAINTED DOWNSPOUTS TO MATCH ROOFING. DISCHARGE RAINWATER INTO SUBGRADE DRAINAGE SYSTEM. SEE CIVIL.	- A55.7
F7	INSTALL FULL SURROUND PVC JALOUSIE LOUVERS AND ALUMINUM WINDOWS AS INDICATED WITH PROTECTIVE METAL SCREENS.	- A56.6
F8	PROVIDE DOORS AS SCHEDULED. ADDITIONAL DOUBLE ACTING FRP SCREEN DOORS SCHEDULED AT THE CAFETORIUM.	- A56.7
F9	PROVIDE CEILING FANS, LIGHTING, AND AV SYSTEM, ETC. SEE MECHANICAL, ELECTRICAL, STRUCTURAL, AND AUDIO VISUAL DWGS.	3-5 S14.4
F10	PROVIDE NEW MOISTURE RESISTANT LAY-IN OR GYP BOARD CEILINGS AS SCHEDULED. INSTALL SUSPENDED CEILING SYSTEM WITH SEISMIC BRACING PER CODE.	- A55.7
F11	INSTALL MANUAL OVERHEAD COILING DOORS AS SCHEDULED.	- A56.7
F12	PROVIDE PEEL & STICK BELOW GRADE VERTICAL WATERPROOF MEMBRANE ON CONCRETE STEM WALLS TYPICAL. PROVIDE VAPOR RETARDERS BELOW FLOOR SLABS. SEE STRUCTURAL SPECS.	- -
F13	INSTALL SEMI-RECESSED FIRE EXTINGUISHERS AND DEFIBRILLATOR AS SCHEDULED.	7,8 A55.6
F14	CONTRACTOR TO GRADE FOR REVISED PARKING LOT AND NEW RETAINING WALLS. SEE CIVIL AND STRUCTURAL.	- A13.6
F15	SEE FURNITURE AND EQUIPMENT SCHEDULES. FOR AUDIO VISUAL EQUIPMENT CONNECTIONS, SEE ELECTRICAL AND AV SHEETS FOR EQUIPMENT LOCATIONS.	- A58.7
F16	CONSTRUCT COVERED WALKWAYS. DEPRESS WALKWAY SLABS 1/4" AT FINISH FLOORS. PROVIDE TYPICAL 1.5% CROSS SLOPES FOR DRAINAGE. SEE CIVIL.	- C54.6
F17	CONSTRUCT GARDEN SHED BUILDING H.	- A11.6

REVISION NO.	S/M	DESCRIPTION	SHT. OF	DATE	APPROVED

PATRICK F. WONG LICENSED PROFESSIONAL ARCHITECT NO. 16147-4 HAWAII, U.S.A. 4/30/2024

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

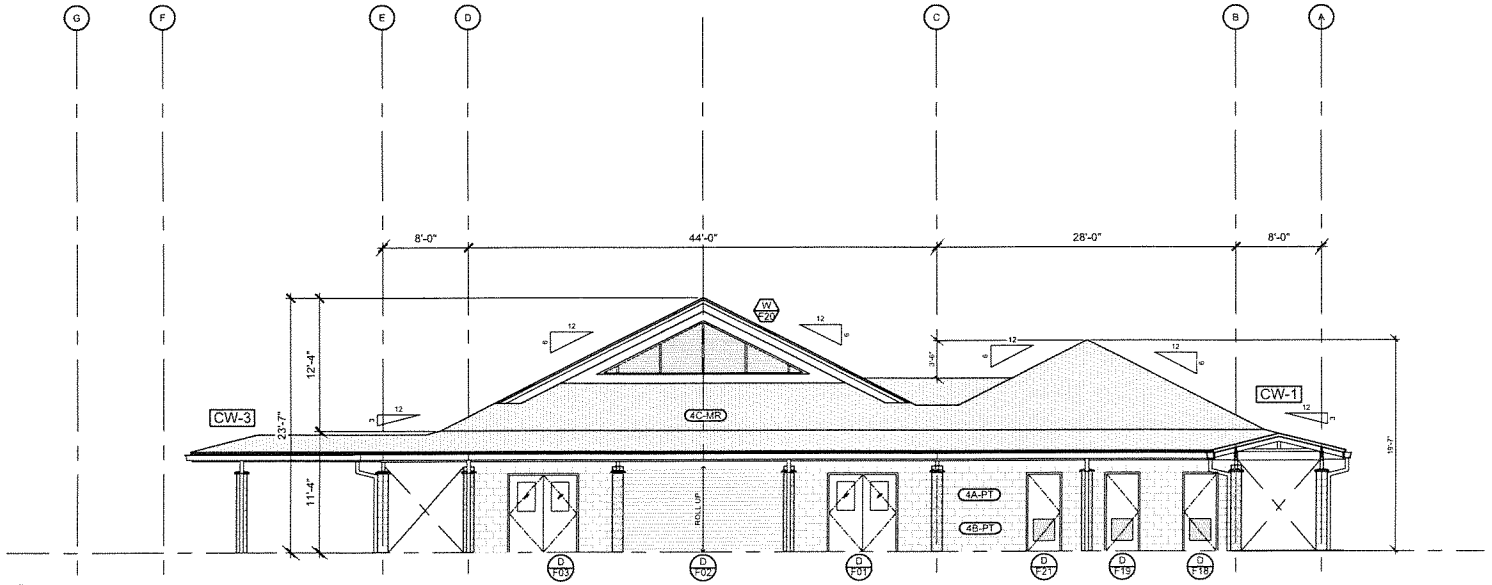
DEPARTMENT OF EDUCATION
STATE OF HAWAII

HAAHEO ELEMENTARY SCHOOL
MULTI-PURPOSE BUILDING
121 HAAHEO ROAD
HILO, HAWAII, HAWAII

PHASE 1 - BLDG F & G - FLOOR PLAN - NEW

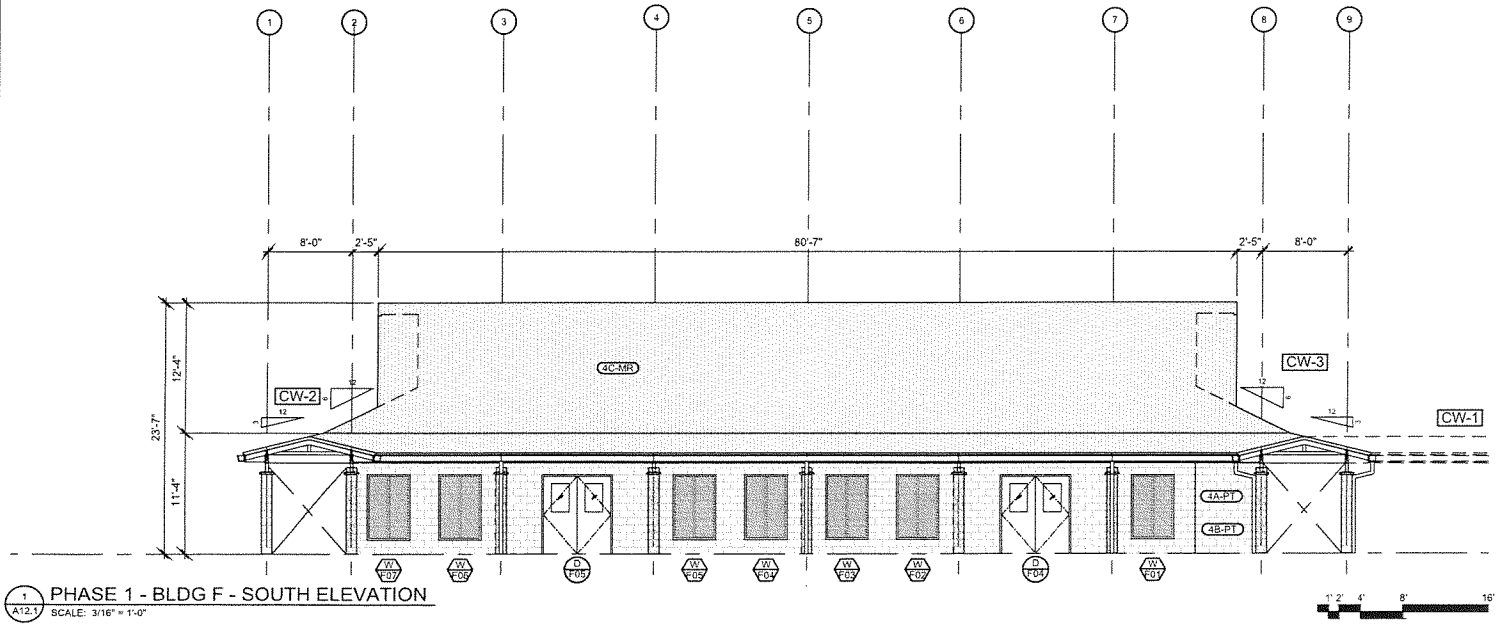
FRANKLIN WONG & ASSOCIATES		PROJ. NO.	DRAWING NUMBER
DESIGNED BY FW/PW	CHECKED BY PW	Q11200-18	A11.1
DRAWN BY PW	APPROVED BY PW	DATE APR 2022	SHEET 52 OF 277 SHTS
SCALE AS NOTED			

FILE ____ DRAWER ____ FOLDER ____



1 A12.1 PHASE 1 - BLDG F - EAST ELEVATION

SCALE: 3/16" = 1'-0"



1 A12.1 PHASE 1 - BLDG F - SOUTH ELEVATION

SCALE: 3/16" = 1'-0"

BUILDING F & G - KEYNOTES

NOTE #	REMARKS	DETAIL REF.
F1	FOR GENERAL PHASE 1 SCOPE OF WORK, SEE PHASING PLAN.	- A02.0
F2	SEE CIVIL PLANS FOR PHASE 1 SITE DEMOLITION AND UTILITY LAYOUTS. SEE ENVIRONMENTAL REQUIREMENTS FOR EXCESS SOIL TO BE REMOVED OFF SITE.	-
F3	ESTABLISH NEW BUILDING FINISH FLOOR ELEVATIONS (DEPRESS AREAS INTENDED FOR DRAINAGE), WALKWAY ELEVATIONS, AND RAMP ELEVATIONS AS REQUIRED.	-
F4	CONSTRUCT CONCRETE FLOOR SLABS / FOUNDATIONS, CONCRETE COLUMNS, SPLIT FACE INFILL CMU WALLS, WOOD TRUSSES AND STRUCTURAL DECKING. SEE STRUCTURAL.	-
F5	INSTALL DEEP CORROGATED PREFINISHED METAL ROOFING AND THERMAL INSULATION OVER STRUCTURAL DECK. SEE SPECS FOR SPECIAL STRUCTURAL / ACOUSTIC DECK AT BUILDING F ASSEMBLY.	- A55.1
F6	PROVIDE PREFINISHED METAL GUTTER SYSTEM WITH ROUND PVC PAINTED DOWNSPOUTS TO MATCH ROOFING. DISCHARGE RAINWATER INTO SUBGRADE DRAINAGE SYSTEM. SEE CIVIL.	- A55.1
F7	INSTALL FULL SURROUND PVC JALOUSIE LOUVERS AND ALUMINUM WINDOWS AS INDICATED WITH PROTECTIVE METAL SCREENS.	- A56.6
F8	PROVIDE DOORS AS SCHEDULED. ADDITIONAL DOUBLE ACTING FRP SCREEN DOORS SCHEDULED AT THE CAFETORIUM.	- A56.1
F9	PROVIDE CEILING FANS, LIGHTING, AND AV SYSTEM, ETC. SEE MECHANICAL, ELECTRICAL, STRUCTURAL, AND AUDIO VISUAL DWGS.	3-6 S14.4
F10	PROVIDE NEW MOISTURE RESISTANT LAY-IN OR GYP BOARD CEILINGS AS SCHEDULED. INSTALL SUSPENDED CEILING SYSTEM WITH SEISMIC BRACING PER CODE.	- A55.7
F11	INSTALL MANUAL OVERHEAD COILING DOORS AS SCHEDULED.	- A56.1
F12	PROVIDE PEEL & STICK BELOW GRADE VERTICAL WATERPROOF MEMBRANE ON CONCRETE STEM WALLS TYPICAL. PROVIDE VAPOR RETARDERS BELOW FLOOR SLABS. SEE STRUCTURAL SPECS.	- -
F13	INSTALL SEMI-RECESSED FIRE EXTINGUISHERS AND DEFIBRILLATOR AS SCHEDULED.	7,8 A55.6
F14	CONTRACTOR TO GRADE FOR REVISED PARKING LOT AND NEW RETAINING WALLS. SEE CIVIL AND STRUCTURAL.	- A13.6
F15	SEE FURNITURE AND EQUIPMENT SCHEDULES. FOR AUDIO VISUAL EQUIPMENT CONNECTIONS, SEE ELECTRICAL AND AV SHEETS FOR EQUIPMENT LOCATIONS.	- A58.1
F16	CONSTRUCT COVERED WALKWAYS. DEPRESS WALKWAY SLABS 1/4" AT FINISH FLOORS. PROVIDE TYPICAL 1.5% CROSS SLOPES FOR DRAINAGE. SEE CIVIL.	- C54.6
F17	CONSTRUCT GARDEN SHED BUILDING H.	- A11.6

REVISION NO.	SYM.	DESCRIPTION	DUE BY	DATE	APPROVED
	△				
	△				

PATRICK F. WONG LICENSED PROFESSIONAL ARCHITECT No. 10187-9 HAWAII, U.S.A. 4/30/2024

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

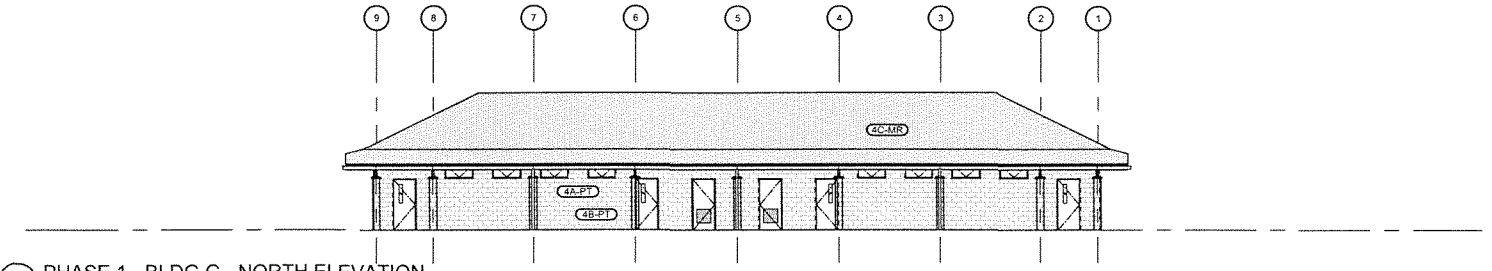
DEPARTMENT OF EDUCATION
STATE OF HAWAII

HAAHEO ELEMENTARY SCHOOL
MULTI-PURPOSE BUILDING
121 HAAHEO ROAD
HILO, HAWAII, HAWAII

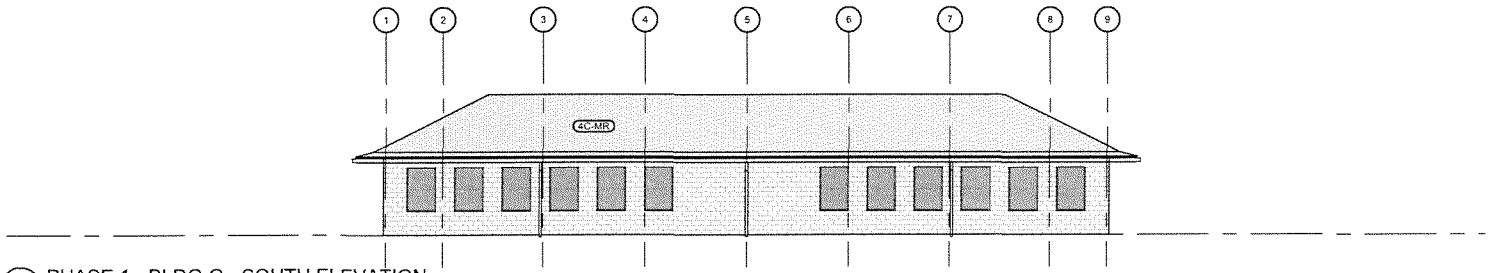
PHASE 1 - BLDG F - EXTERIOR ELEVATIONS

FRANKLIN WONG & ASSOCIATES		DWG SIZE NUMBER	DRAWING NUMBER
DESIGNED BY FW/PW	CHECKED BY PW	Q11200-18	A12.1
DRAWN BY PW	APPROVED BY PW	DATE APR 2022	SHEET 61 OF 277
SCALE AS NOTED			

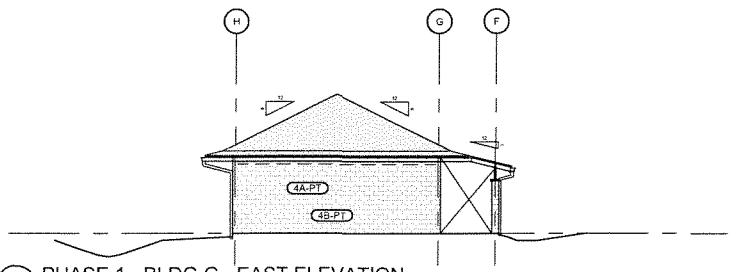
FILE ____ DRAWER ____ FOLDER ____



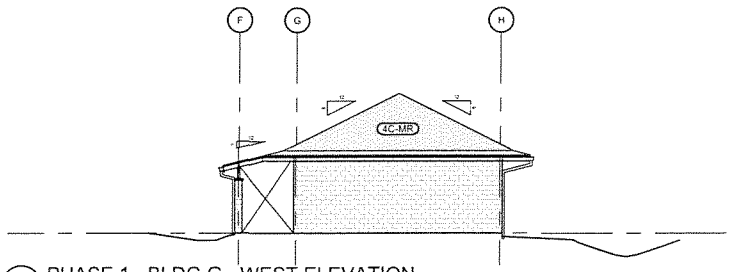
1 A12.3 PHASE 1 - BLDG G - NORTH ELEVATION
SCALE: 1/8" = 1'-0"



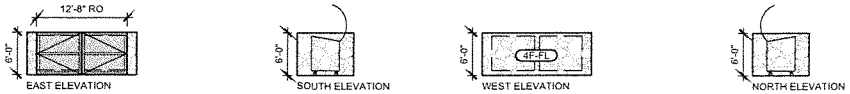
2 A12.3 PHASE 1 - BLDG G - SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



3 A12.3 PHASE 1 - BLDG G - EAST ELEVATION
SCALE: 1/8" = 1'-0"



4 A12.3 PHASE 1 - BLDG G - WEST ELEVATION
SCALE: 1/8" = 1'-0"



5 A12.3 TRASH ENCLOSURE - EXTERIOR ELEVATIONS
SCALE: 1/8" = 1'-0"

BUILDING F & G - KEYNOTES

NOTE #	REMARKS	DETAIL REF.
F1	FOR GENERAL PHASE 1 SCOPE OF WORK, SEE PHASING PLAN.	- / A02.0
F2	SEE CIVIL PLANS FOR PHASE 1 SITE DEMOLITION AND UTILITY LAYOUTS. SEE ENVIRONMENTAL REQUIREMENTS FOR EXCESS SOIL TO BE REMOVED OFF SITE.	- / -
F3	ESTABLISH NEW BUILDING FINISH FLOOR ELEVATIONS (DEPRESS AREAS INTENDED FOR DRAINAGE), WALKWAY ELEVATIONS, AND RAMP ELEVATIONS AS REQUIRED.	- / -
F4	CONSTRUCT CONCRETE FLOOR SLABS / FOUNDATIONS, CONCRETE COLUMNS, SPLIT FACE INFILL CMU WALLS, WOOD TRUSSES AND STRUCTURAL DECKING. SEE STRUCTURAL.	- / -
F5	INSTALL DEEP CORROGATED PREFINISHED METAL ROOFING AND THERMAL INSULATION OVER STRUCTURAL DECK. SEE SPECS FOR SPECIAL STRUCTURAL / ACOUSTIC DECK AT BUILDING F ASSEMBLY.	- / A55.1
F6	PROVIDE PREFINISHED METAL GUTTER SYSTEM WITH ROUND PVC PAINTED DOWNSPOUTS TO MATCH ROOFING. DISCHARGE RAINWATER INTO SUBGRADE DRAINAGE SYSTEM. SEE CIVIL.	- / A55.1
F7	INSTALL FULL SURROUND PVC JALOUSIE LOUVERS AND ALUMINUM WINDOWS AS INDICATED WITH PROTECTIVE METAL SCREENS.	- / A56.6
F8	PROVIDE DOORS AS SCHEDULED. ADDITIONAL DOUBLE ACTING FRP SCREEN DOORS SCHEDULED AT THE CAFETORIUM.	- / A56.1
F9	PROVIDE CEILING FANS, LIGHTING, AND AV SYSTEM, ETC. SEE MECHANICAL, ELECTRICAL, STRUCTURAL, AND AUDIO VISUAL DWGS.	3-5 / S14.4
F10	PROVIDE NEW MOISTURE RESISTANT LAY-IN OR GYP BOARD CEILINGS AS SCHEDULED. INSTALL SUSPENDED CEILING SYSTEM WITH SEISMIC BRACING PER CODE.	- / A55.7
F11	INSTALL MANUAL OVERHEAD COILING DOORS AS SCHEDULED.	- / A56.1
F12	PROVIDE PEEL & STICK BELOW GRADE VERTICAL WATERPROOF MEMBRANE ON CONCRETE STEM WALLS TYPICAL. PROVIDE VAPOR RETARDERS BELOW FLOOR SLABS. SEE STRUCTURAL SPECS.	- / -
F13	INSTALL SEMI-RECESSED FIRE EXTINGUISHERS AND DEFIBRILLATOR AS SCHEDULED.	7.8 / A55.6
F14	CONTRACTOR TO GRADE FOR REVISED PARKING LOT AND NEW RETAINING WALLS. SEE CIVIL AND STRUCTURAL.	- / A13.6
F15	SEE FURNITURE AND EQUIPMENT SCHEDULES. FOR AUDIO VISUAL EQUIPMENT CONNECTIONS, SEE ELECTRICAL AND AV SHEETS FOR EQUIPMENT LOCATIONS.	- / A58.1
F16	CONSTRUCT COVERED WALKWAYS. DEPRESS WALKWAY SLABS 1/4" AT FINISH FLOORS. PROVIDE TYPICAL 1.5% CROSS SLOPES FOR DRAINAGE. SEE CIVIL.	- / C54.6
F17	CONSTRUCT GARDEN SHED BUILDING H.	- / A11.6

REVISION NO.	SYM	DESCRIPTION	DAY	DATE	APPROVED
	△				
	△				

PATRICK F. WONG LICENSED PROFESSIONAL ARCHITECT NO. 18187-4 HAWAII, U.S.A. 4/30/2024

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DEPARTMENT OF EDUCATION
STATE OF HAWAII

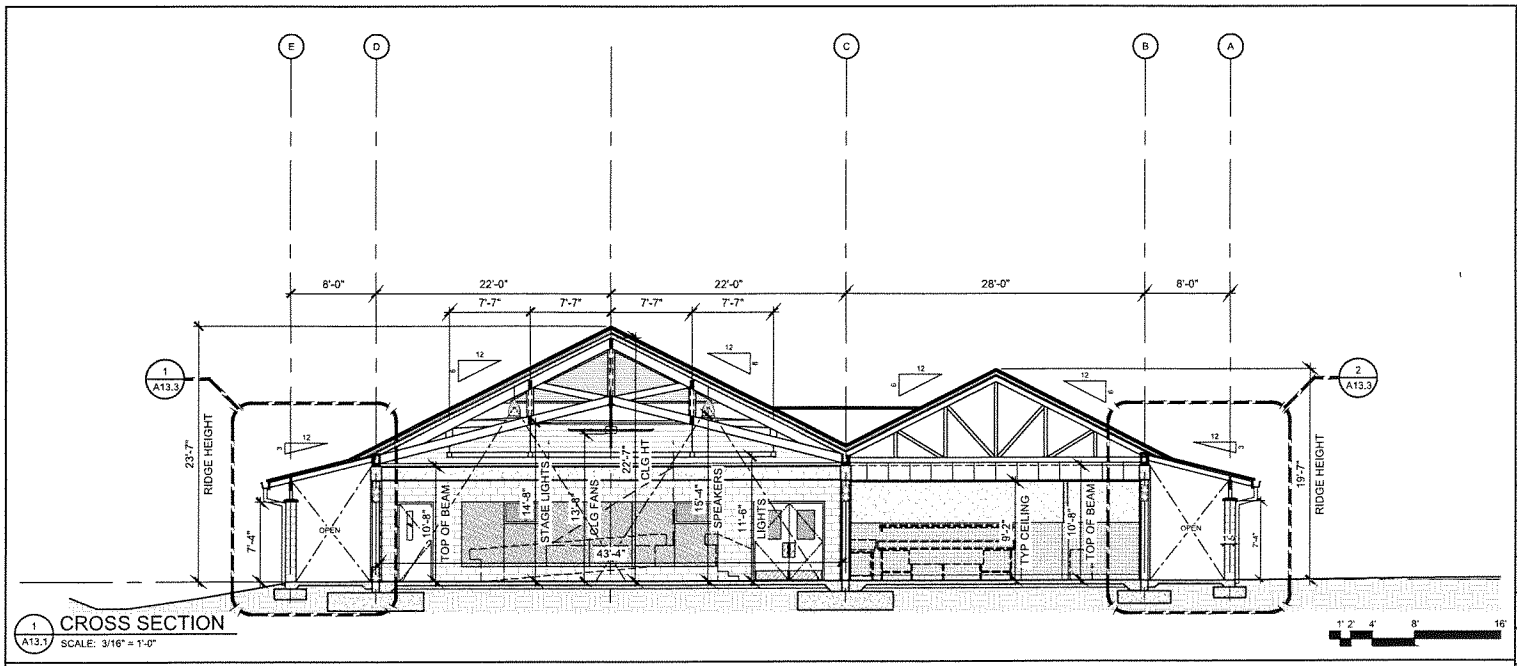
HAAHEO ELEMENTARY SCHOOL
MULTI-PURPOSE BUILDING
121 HAAHEO ROAD
HILO, HAWAII, HAWAII

PHASE 1 - BLDG G - EXTERIOR ELEVATIONS

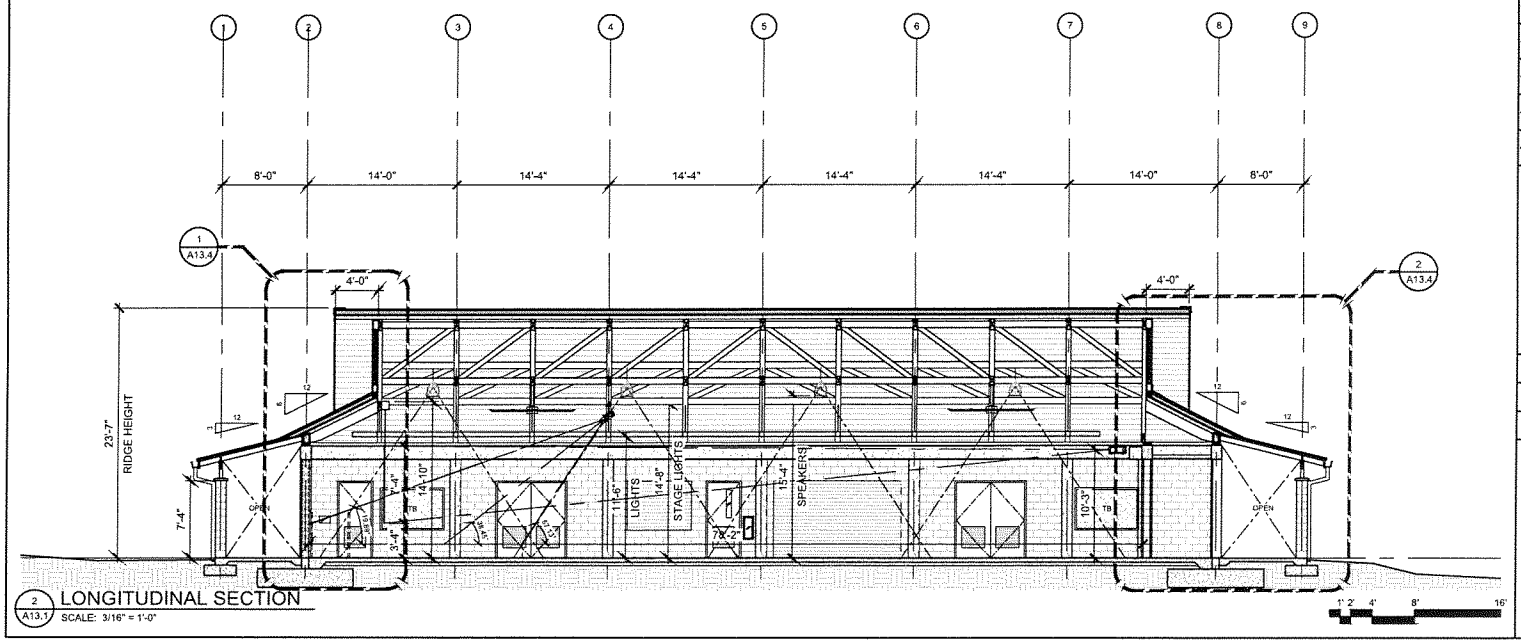
FRANKLIN WONG & ASSOCIATES

DESIGNED BY	CHECKED BY	DOC. CONTROL NO.	DRAWING NUMBER
FW/PW	PW	Q11200-18	A12.3
DRAWN BY	APPROVED BY	DATE	SHEET
PW	PW	APR 2022	63 OF 277
SCALE AS NOTED			

FILE ____ DRAWER ____ FOLDER ____



1 A13.1 CROSS SECTION
SCALE: 3/16" = 1'-0"



2 A13.1 LONGITUDINAL SECTION
SCALE: 3/16" = 1'-0"

BUILDING F & G - KEYNOTES

NOTE #	REMARKS	DETAIL REF.
F1	FOR GENERAL PHASE 1 SCOPE OF WORK, SEE PHASING PLAN.	- A02.0
F2	SEE CIVIL PLANS FOR PHASE 1 SITE DEMOLITION AND UTILITY LAYOUTS. SEE ENVIRONMENTAL REQUIREMENTS FOR EXCESS SOIL TO BE REMOVED OFF SITE.	- -
F3	ESTABLISH NEW BUILDING FINISH FLOOR ELEVATIONS (DEPRESS AREAS INTENDED FOR DRAINAGE), WALKWAY ELEVATIONS, AND RAMP ELEVATIONS AS REQUIRED.	- -
F4	CONSTRUCT CONCRETE FLOOR SLABS / FOUNDATIONS, CONCRETE COLUMNS, SPLIT FACE INFILL CMU WALLS, WOOD TRUSSES AND STRUCTURAL DECKING. SEE STRUCTURAL.	- -
F5	INSTALL DEEP CORROGATED PREFINISHED METAL ROOFING AND THERMAL INSULATION OVER STRUCTURAL DECK. SEE SPECS FOR SPECIAL STRUCTURAL / ACOUSTIC DECK AT BUILDING F ASSEMBLY.	- A55.1
F6	PROVIDE PREFINISHED METAL GUTTER SYSTEM WITH ROUND PVC PAINTED DOWNSPOUTS TO MATCH ROOFING. DISCHARGE RAINWATER INTO SUBGRADE DRAINAGE SYSTEM. SEE CIVIL.	- A55.1
F7	INSTALL FULL SURROUND PVC JALOUSIE LOUVERS AND ALUMINUM WINDOWS AS INDICATED WITH PROTECTIVE METAL SCREENS.	- A56.6
F8	PROVIDE DOORS AS SCHEDULED. ADDITIONAL DOUBLE ACTING FRP SCREEN DOORS SCHEDULED AT THE CAFETORIUM.	- A56.1
F9	PROVIDE CEILING FANS, LIGHTING, AND AV SYSTEM, ETC. SEE MECHANICAL, ELECTRICAL, STRUCTURAL, AND AUDIO VISUAL DWGS.	3-5 S14.4
F10	PROVIDE NEW MOISTURE RESISTANT LAY-IN OR GYP BOARD CEILINGS AS SCHEDULED. INSTALL SUSPENDED CEILING SYSTEM WITH SEISMIC BRACING PER CODE.	- A55.7
F11	INSTALL MANUAL OVERHEAD COILING DOORS AS SCHEDULED.	- A56.1
F12	PROVIDE PEEL & STICK BELOW GRADE VERTICAL WATERPROOF MEMBRANE ON CONCRETE STEM WALLS TYPICAL. PROVIDE VAPOR RETARDERS BELOW FLOOR SLABS. SEE STRUCTURAL SPECS.	- -
F13	INSTALL SEMI-RECESSED FIRE EXTINGUISHERS AND DEFIBRILLATOR AS SCHEDULED.	7,8 A55.6
F14	CONTRACTOR TO GRADE FOR REVISED PARKING LOT AND NEW RETAINING WALLS. SEE CIVIL AND STRUCTURAL.	- A13.6
F15	SEE FURNITURE AND EQUIPMENT SCHEDULES. FOR AUDIO VISUAL EQUIPMENT CONNECTIONS, SEE ELECTRICAL AND AV SHEETS FOR EQUIPMENT LOCATIONS.	- A58.1
F16	CONSTRUCT COVERED WALKWAYS. DEPRESS WALKWAY SLABS 1/4" AT FINISH FLOORS. PROVIDE TYPICAL 1.5% CROSS SLOPES FOR DRAINAGE. SEE CIVIL.	- C54.6
F17	CONSTRUCT GARDEN SHED BUILDING H.	- A11.6

REVISION NO.	SYM	DESCRIPTION	SHT OF	DATE	APPROVED
	△				
	△				

PATRICK F. WONG LICENSED PROFESSIONAL ARCHITECT No. 18187-4 HAWAII, U.S.A.
4/30/2024

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

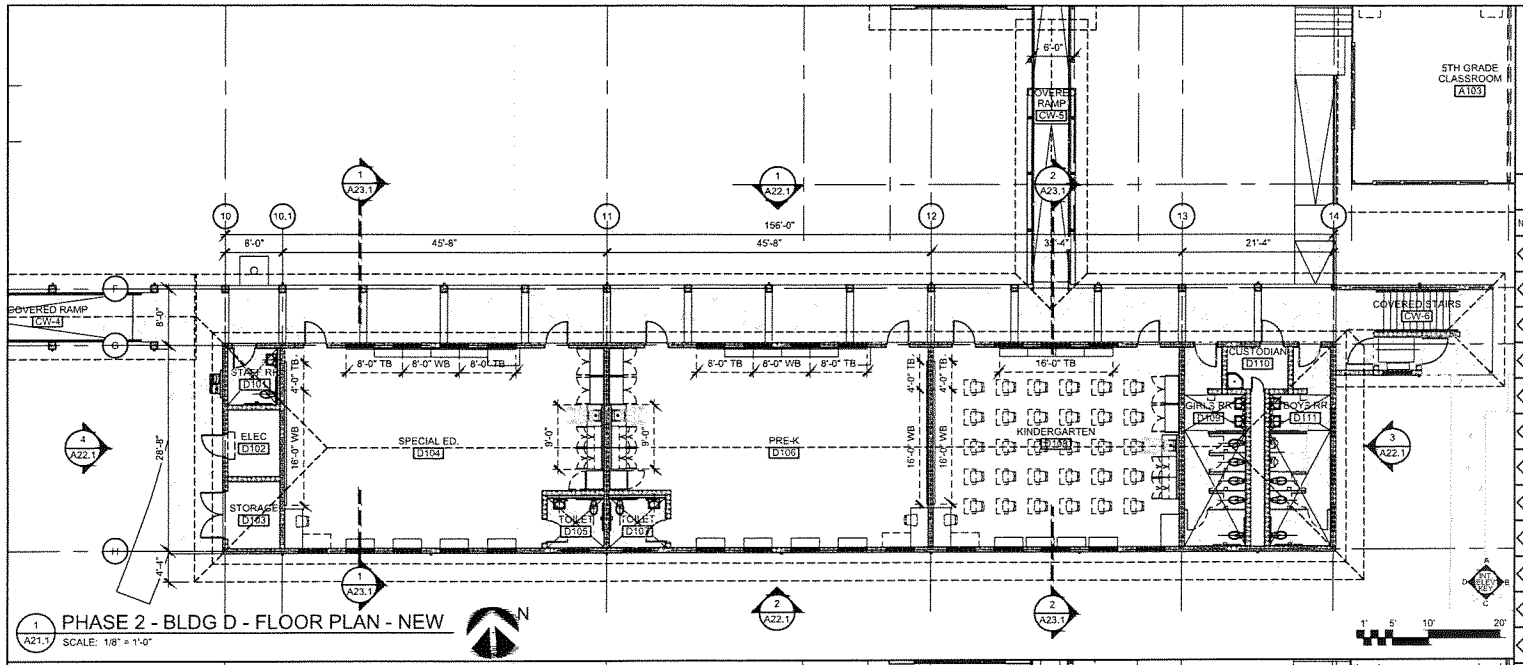
DEPARTMENT OF EDUCATION
STATE OF HAWAII

HAAHEO ELEMENTARY SCHOOL
MULTI-PURPOSE BUILDING
121 HAAHEO ROAD
HILO, HAWAII, HAWAII

PHASE 1 - BLDG F - BUILDING SECTIONS

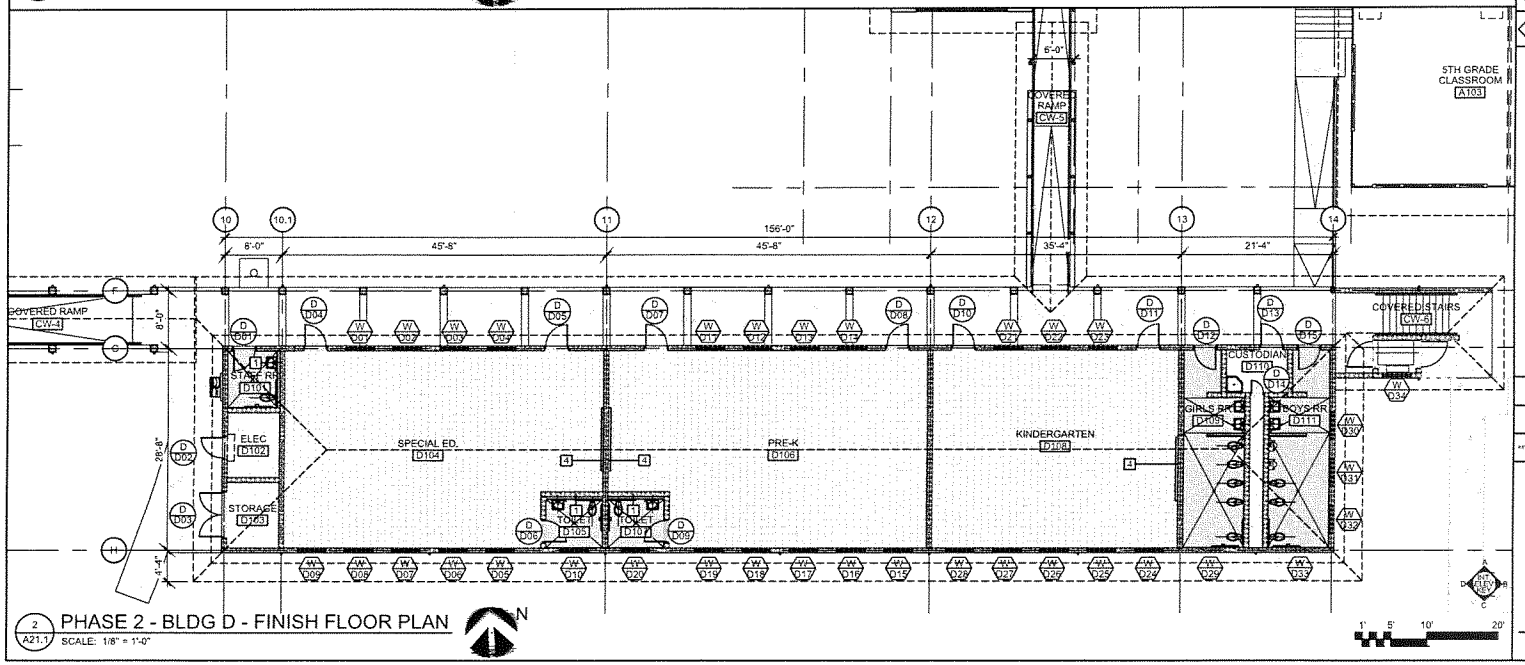
FRANKLIN WONG & ASSOCIATES		DOE JOB NUMBER	DRAWING NUMBER
DESIGNED BY FW/PW	CHECKED BY PW	Q11200-18	A13.1
DRAWN BY PW	APPROVED BY PW	DATE APR 2022	SHEET 70 of 277
SCALE AS NOTED			

FILE ____ DRAWER ____ FOLDER ____



1 A21.1 PHASE 2 - BLDG D - FLOOR PLAN - NEW

SCALE: 1/8" = 1'-0"



2 A21.1 PHASE 2 - BLDG D - FINISH FLOOR PLAN

SCALE: 1/8" = 1'-0"

BUILDING D - KEYNOTES

NOTE #	REMARKS	DETAIL REF.
D1	FOR GENERAL PHASE 2 SCOPE OF WORK, SEE PHASING PLAN.	A02.0
D2	SEE CIVIL PLANS FOR PHASE 2 SITE DEMOLITION AND UTILITY LAYOUTS. SEE ENVIRONMENTAL REQUIREMENTS FOR EXCESS SOIL TO BE REMOVED OFF SITE.	-
D3	ESTABLISH NEW BUILDING FINISH FLOOR ELEVATIONS (DEPRESS AREAS INTENDED FOR SLOPES TO DRAINAGE). RAMP ELEVATIONS / STAIR ELEVATIONS AS REQUIRED.	-
D4	CONSTRUCT CONCRETE FLOOR SLABS / FOUNDATIONS, CMU COLUMNS, SPLIT FACE CMU WALLS, PRE ENGINEERED WOOD TRUSSES AND PLYWOOD ROOF DECKING. SEE STRUCTURAL.	-
D5	INSTALL DEEP CORRUGATED METAL ROOFING SYSTEM OVER WATERPROOF MEMBRANE, THERMAL INSULATION AND PLYWOOD DECK.	A55.1
D6	PROVIDE PREFINISHED METAL GUTTER SYSTEM WITH ROUND PVC PAINTED DOWNSPOUTS TO MATCH ROOFING. DISCHARGE RAINWATER INTO SUBGRADE DRAINAGE SYSTEM. SEE CIVIL.	A55.1
D7	INSTALL ALUMINUM WINDOWS WITH PROTECTIVE METAL SCREENS OR STORMPROOF METAL LOUVERS.	A56.1
D8	PROVIDE NEW MOISTURE RESISTANT LAY-IN OR GYP BOARD CEILINGS AS SCHEDULED. INSTALL SUSPENDED CEILING SYSTEM WITH SEISMIC BRACING PER CODE.	A55.7
D9	PROVIDE RATED INTERIOR WALLS AS SCHEDULED.	A55.6
D10	CONSTRUCT COVERED WALKWAYS. PROVIDE CHAIR LIFT AS INDICATED. DEPRESS WALKWAY SLABS 1/4" AT FINISH FLOOR. TYPICAL 1.5% CROSS SLOPES FOR DRAINAGE. SEE CIVIL & STRUCT.	A54.6
D11	SEE CIVIL FOR NEW SIDEWALKS TO CONNECT BUILDING D.	-
D12	PROVIDE PEEL & STICK BELOW GRADE VERTICAL WATERPROOF MEMBRANE ON CONCRETE STEM WALLS TYPICAL. PROVIDE VAPOR RETARDERS BELOW FLOOR SLABS TYPICAL. SEE STRUCTURAL.	-
D13	PROVIDE DOORS AS SCHEDULED.	A56.0

REVISION NO.	SYM.	DESCRIPTION	BY/CK	DATE	APPROVED

PATRICK F. WONG LICENSED PROFESSIONAL ARCHITECT No. 16187-4 HAWAII, U.S.A. 4/30/2024

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DEPARTMENT OF EDUCATION
STATE OF HAWAII

HAAHEO ELEMENTARY SCHOOL
MULTI-PURPOSE BUILDING
121 HAAHEO ROAD
HILO, HAWAII, HAWAII

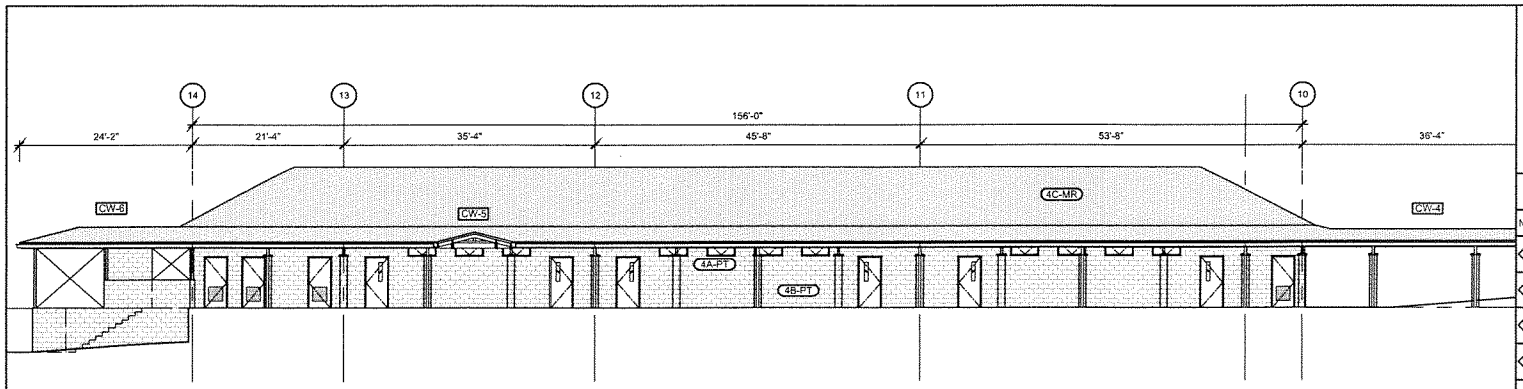
PHASE 2 - BLDG D - FLOOR PLAN - NEW

FRANKLIN WONG & ASSOCIATES

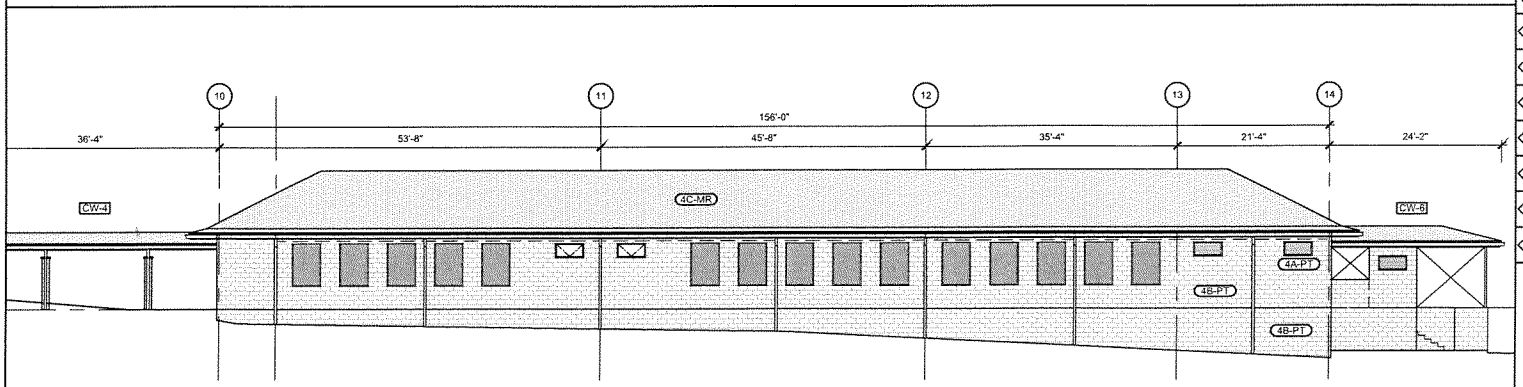
DESIGNED BY	CHECKED BY	DOE JOB NUMBER	DRAWING NUMBER
FW/PW	PW	Q11200-18	A21.1
DRAWN BY	APPROVED BY	DATE	SHEET
PW	PW	APR 2022	80 OF 277 SHTS

SCALE AS NOTED

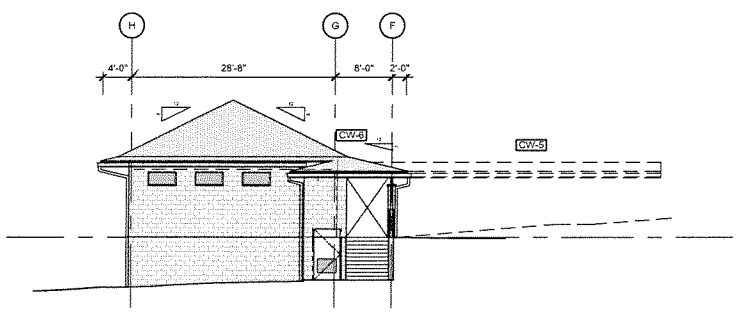
FILE ____ DRAWER ____ FOLDER ____



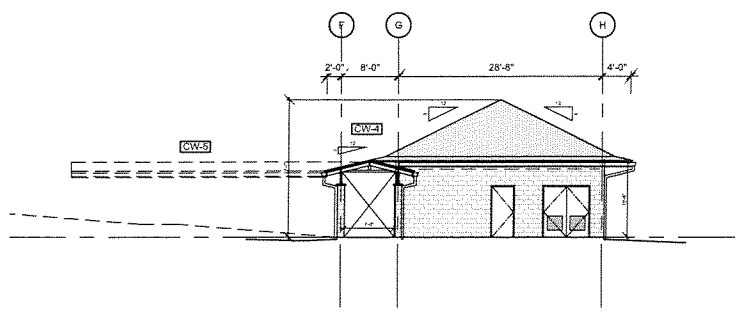
1 A22.1 PHASE 2 - BLDG D - NORTH ELEVATION
SCALE: 1/8" = 1'-0"



2 A22.1 PHASE 2 - BLDG D - SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



3 A22.1 PHASE 2 - BLDG D - EAST ELEVATION
SCALE: 1/8" = 1'-0"



4 A22.1 PHASE 2 - BLDG D - WEST ELEVATION
SCALE: 1/8" = 1'-0"

BUILDING D - KEYNOTES

NOTE #	REMARKS	DETAIL REF.
D1	FOR GENERAL PHASE 2 SCOPE OF WORK, SEE PHASING PLAN.	- A02.0
D2	SEE CIVIL PLANS FOR PHASE 2 SITE DEMOLITION AND UTILITY LAYOUTS. SEE ENVIRONMENTAL REQUIREMENTS FOR EXCESS SOIL TO BE REMOVED OFF SITE.	- -
D3	ESTABLISH NEW BUILDING FINISH FLOOR ELEVATIONS (DEPRESS AREAS INTENDED FOR SLOPES TO DRAINAGE), RAMP ELEVATIONS / STAIR ELEVATIONS AS REQUIRED.	- -
D4	CONSTRUCT CONCRETE FLOOR SLABS / FOUNDATIONS, CMU COLUMNS, SPLIT FACE CMU WALLS, PRE ENGINEERED WOOD TRUSSES AND PLYWOOD ROOF DECKING. SEE STRUCTURAL.	- -
D5	INSTALL DEEP CORRUGATED METAL ROOFING SYSTEM OVER WATERPROOF MEMBRANE, THERMAL INSULATION AND PLYWOOD DECK.	- A55.7
D6	PROVIDE PREFINISHED METAL GUTTER SYSTEM WITH ROUND PVC PAINTED DOWNSPOUTS TO MATCH ROOFING. DISCHARGE RAINWATER INTO SUBGRADE DRAINAGE SYSTEM. SEE CIVIL.	- A55.7
D7	INSTALL ALUMINUM WINDOWS WITH PROTECTIVE METAL SCREENS OR STORMPROOF METAL LOUVERS.	- A56.7
D8	PROVIDE NEW MOISTURE RESISTANT LAY-IN OR GYP BOARD CEILINGS AS SCHEDULED. INSTALL SUSPENDED CEILING SYSTEM WITH SEISMIC BRACING PER CODE.	- A55.7
D9	PROVIDE RATED INTERIOR WALLS AS SCHEDULED.	- A55.8
D10	CONSTRUCT COVERED WALKWAYS. PROVIDE CHAIR LIFT AS INDICATED. DEPRESS WALKWAY SLABS 1/4" AT FINISH FLOOR. TYPICAL 1.5% CROSS SLOPES FOR DRAINAGE. SEE CIVIL & STRUCT.	- C54.6
D11	SEE CIVIL FOR NEW SIDEWALKS TO CONNECT BUILDING D.	- -
D12	PROVIDE PEEL & STICK BELOW GRADE VERTICAL WATERPROOF MEMBRANE ON CONCRETE STEM WALLS TYPICAL. PROVIDE VAPOR RETARDERS BELOW FLOOR SLABS TYPICAL. SEE STRUCTURAL.	- -
D13	PROVIDE DOORS AS SCHEDULED.	- A56.2

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
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PATRICK F. WONG LICENSED PROFESSIONAL ARCHITECT No. 16107-4 HAWAII, U.S.A. 4/30/2024

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DEPARTMENT OF EDUCATION
STATE OF HAWAII

HAAHEO ELEMENTARY SCHOOL
MULTI-PURPOSE BUILDING
121 HAAHEO ROAD
HILO, HAWAII, HAWAII

PHASE 2 - BLDG D - EXTERIOR ELEVATIONS

FRANKLIN WONG & ASSOCIATES		DOC. JOB NUMBER	DRAWING NUMBER
DESIGNED BY FW/PW	CHECKED BY PW	Q11200-18	A22.1
DRAWN BY PW	APPROVED BY PW	DATE APR 2022	SHEET 85 OF 277 SHTS.
SCALE AS NOTED			

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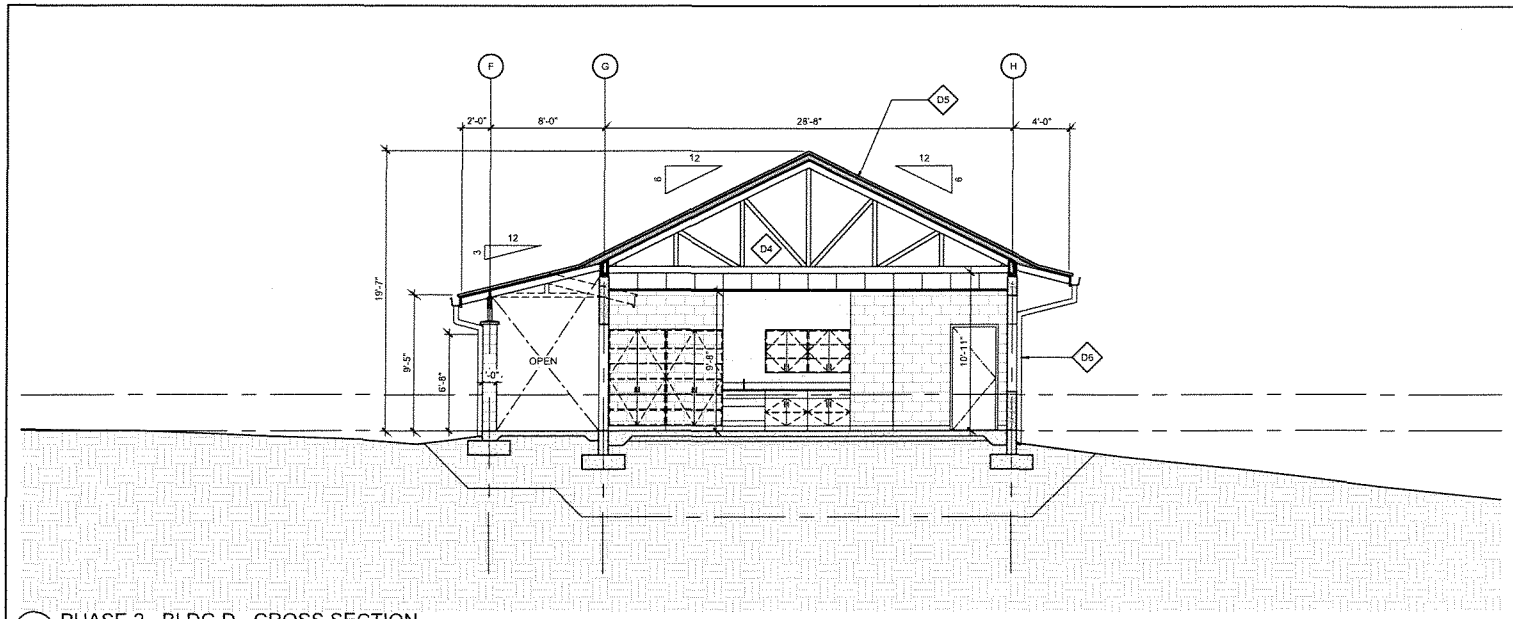

1 A23.1 PHASE 2 - BLDG D - CROSS SECTION
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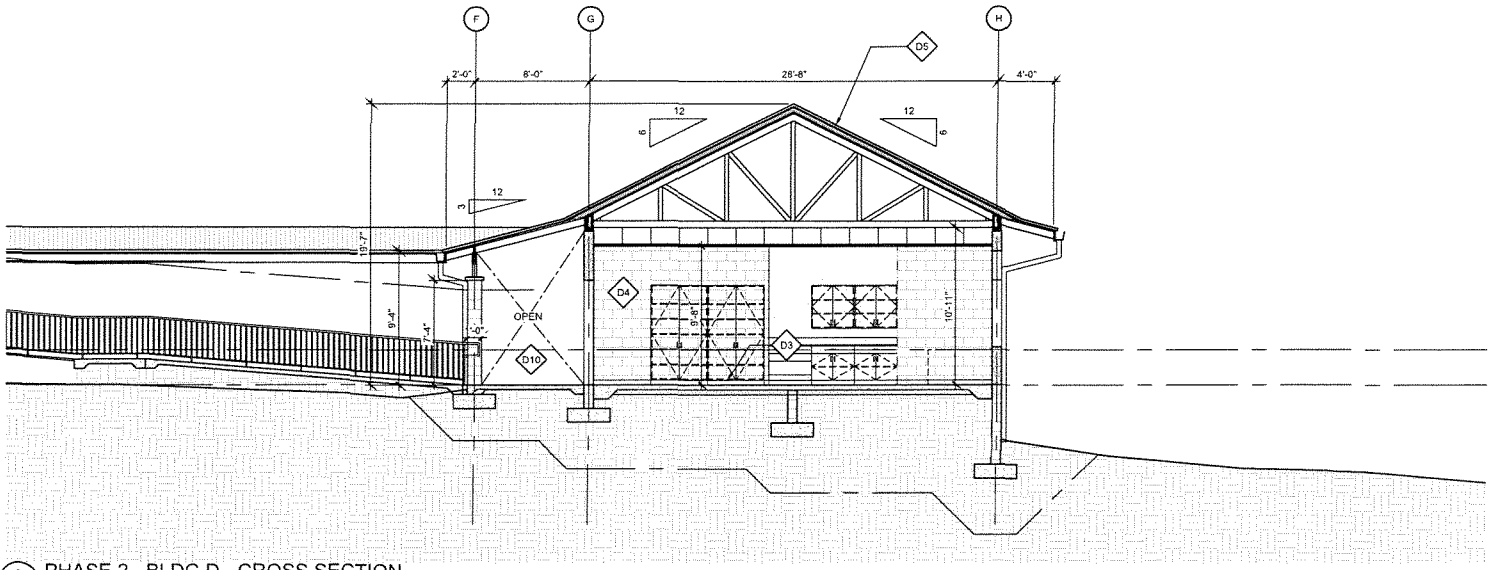

2 A23.1 PHASE 2 - BLDG D - CROSS SECTION
SCALE: 1/4" = 1'-0"

BUILDING D - KEYNOTES

NOTE #	REMARKS	DETAIL REF.
D1	FOR GENERAL PHASE 2 SCOPE OF WORK, SEE PHASING PLAN.	- A02.0
D2	SEE CIVIL PLANS FOR PHASE 2 SITE DEMOLITION AND UTILITY LAYOUTS. SEE ENVIRONMENTAL REQUIREMENTS FOR EXCESS SOIL TO BE REMOVED OFF SITE.	-
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D5	INSTALL DEEP CORRUGATED METAL ROOFING SYSTEM OVER WATERPROOF MEMBRANE, THERMAL INSULATION AND PLYWOOD DECK.	- A55.1
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D13	PROVIDE DOORS AS SCHEDULED.	- A56.3

REVISION NO.	SYM.	DESCRIPTION	SHT OF	DATE	APPROVED

PATRICK F. WONG LICENSED PROFESSIONAL ARCHITECT No. 16107-4 HAWAII, U.S.A. 4/30/2024

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DEPARTMENT OF EDUCATION
STATE OF HAWAII

HAAHEO ELEMENTARY SCHOOL
MULTI-PURPOSE BUILDING
121 HAAHEO ROAD
HILO, HAWAII, HAWAII

PHASE 2 - BLDG D - BUILDING SECTIONS

FRANKLIN WONG & ASSOCIATES

DESIGNED BY	CHECKED BY	INDEX JOB NUMBER	DRAWING NUMBER
FW/PW	PW	Q11200-18	A23.1
DRAWN BY	APPROVED BY	DATE	SHEET
PW	PW	APR 2022	90 OF 277

SCALE: AS NOTED

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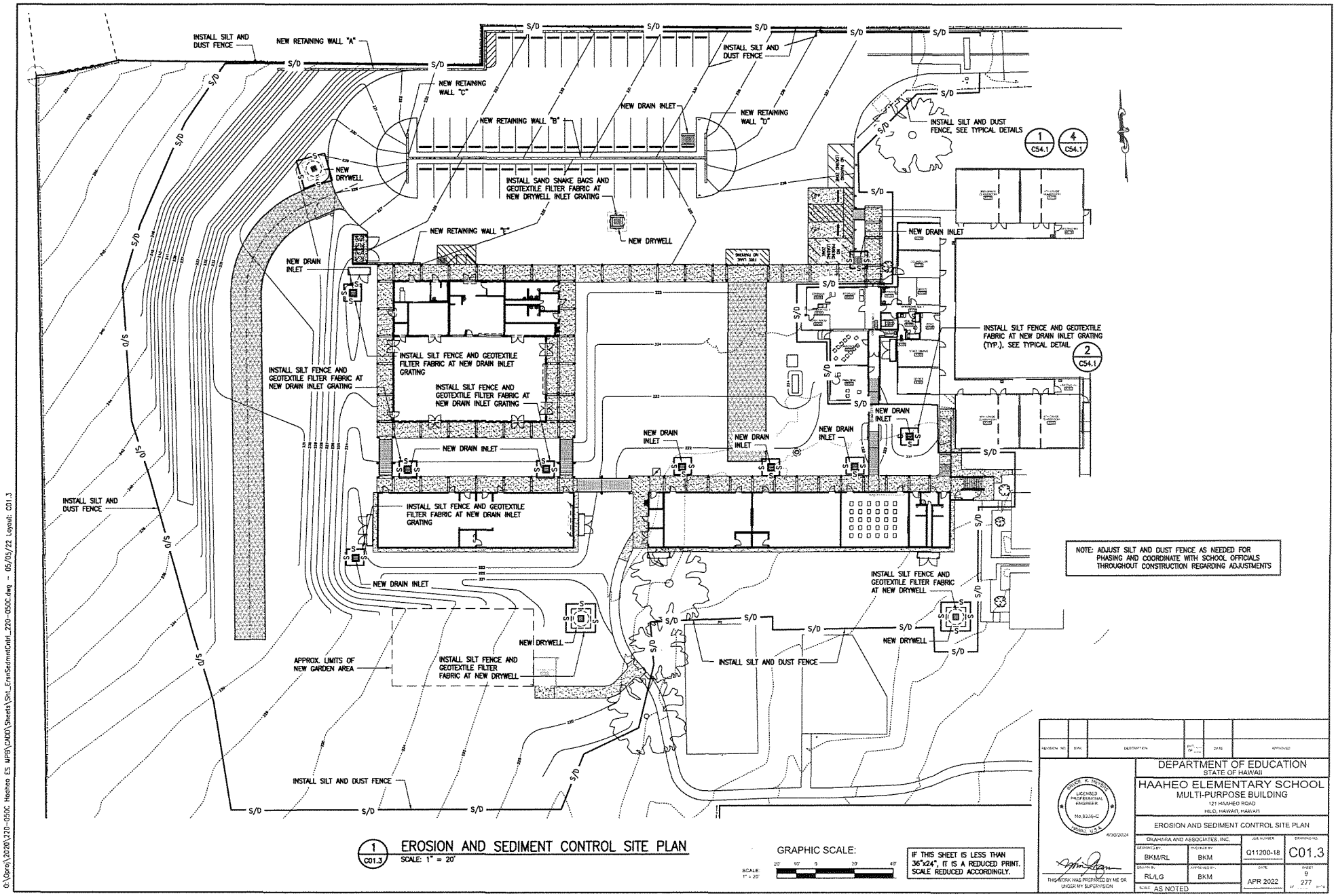

1 C01.3 EROSION AND SEDIMENT CONTROL SITE PLAN
SCALE: 1" = 20'

GRAPHIC SCALE:
SCALE: 1" = 20'
20' 10' 0 20' 40'

IF THIS SHEET IS LESS THAN 36"x24", IT IS A REDUCED PRINT. SCALE REDUCED ACCORDINGLY.

REVISION NO.	SYM.	DESCRIPTION	DATE	APPROVED

DAVID K. OKAHARA LICENSED PROFESSIONAL ENGINEER No. 8336-C HAWAII, U.S.A.
4/30/2024
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DEPARTMENT OF EDUCATION
STATE OF HAWAII

HAAHEO ELEMENTARY SCHOOL
MULTI-PURPOSE BUILDING
121 HAAHEO ROAD
HILO, HAWAII, HAWAII

EROSION AND SEDIMENT CONTROL SITE PLAN

OKAHARA AND ASSOCIATES, INC.

DRAWING BY	CHECKED BY	JOB NUMBER	DRAWING NO.
BKM/RL	BKM	Q11200-18	C01.3
DRAWN BY	APPROVED BY	DATE	SHEET
RL/LG	BKM	APR 2022	9 OF 277
SCALE AS NOTED			

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SECTION 2
DESCRIPTION OF THE AFFECTED ENVIRONMENT

A. Existing Conditions

Two on-campus sites were examined and evaluated for the Multi-Purpose Building. The location described in this environmental assessment was selected as the preferred location and the description of existing conditions is based on this location. It is identified by the term "building site". The alternative site is described in Section 4 of this assessment.

Four permanent and five portable buildings comprise the school's physical plant (See Table 2). Buildings A and B were constructed in 1931 and the last permanent structure (Building C) was built in 1973. A Campus Map is shown as Figure 3.

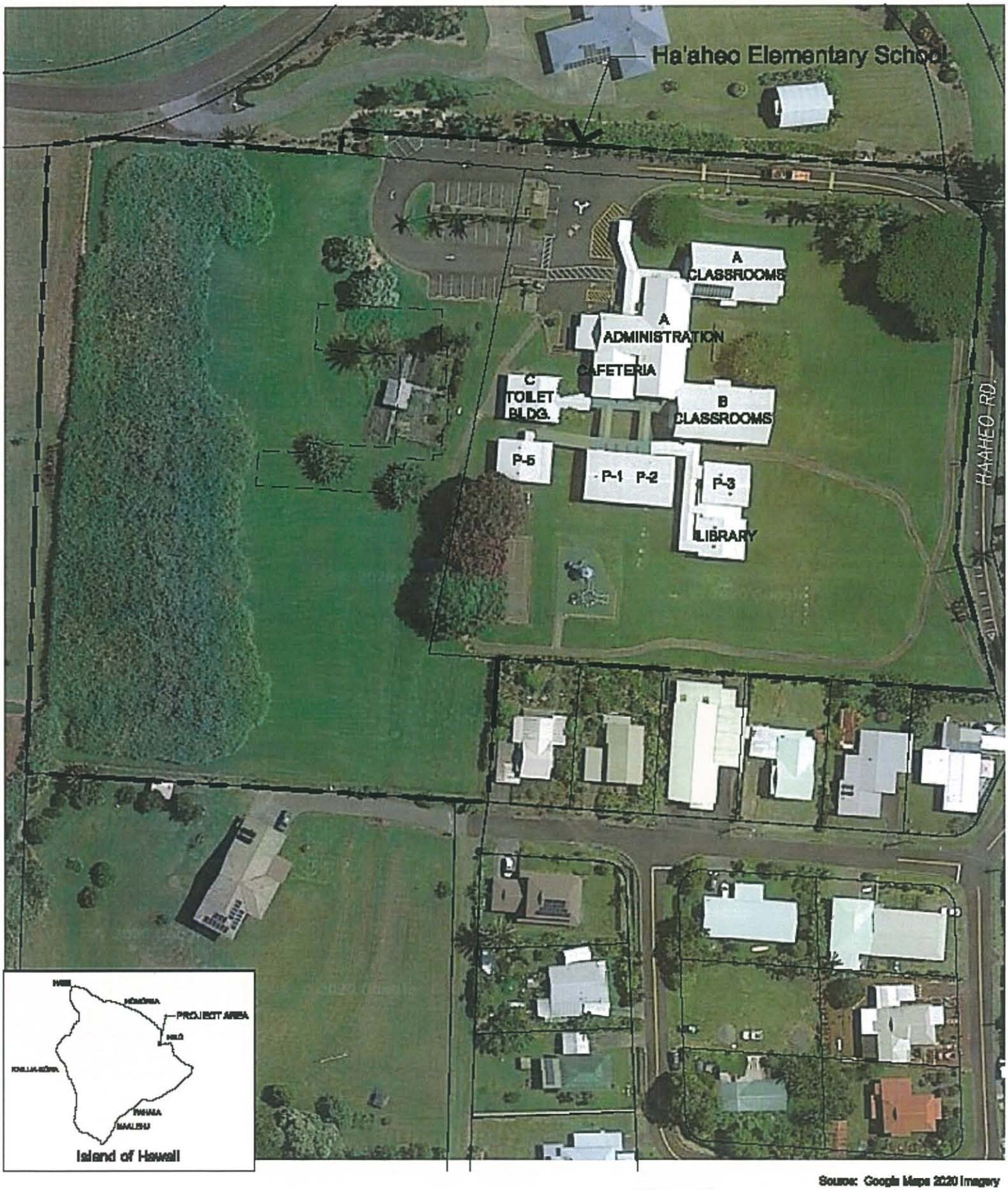
Table 2. Existing Buildings at Ha'aheo Elementary School

Building	Use	Area	# Floors	Year Built
A	Classroom	6,168	2	1931
B	Serving Kitchen	2,044	1	1931
C	Toilet	552	1	1973
E	Maintenance Rm.	120	1	1960
PO1	Port. Classroom	486	1	1971
P02	Port. Classroom	1,344	1	1968
PO3	Port. Classroom	812	1	1991
PO4	Classroom	896	1	1995
PO5	Port. Classroom	812	1	1996

Source: DOE Facilities Inventory System Comprehensive Report, 2006.

For school year 2020-2021 student enrollment reached 182 students in Kindergarten through Grade 6. The school is staffed by 20 including administrators, regular and special education teachers, specialty positions (Librarian and computer lab) community coordinators, counselors, office assistants, health aide, and custodians.

Ha'aheo Elementary School is part of the Hilo Complex of the Hilo-Waiakea Complex Area of the Hawaii Island School District. Public schools in the Hilo Complex include De Silva, Ha'aheo, Hilo Union, Kalaniana'ole, Kapi'olani, Kaūmana, and Keaukaha Elementary Schools. There are two intermediate and one high school---Hilo Intermediate and Kalaniana'ole Intermediate and Hilo High School, respectively. Kalaniana'ole School accommodates Elementary and Intermediate School students. Elementary schools 'funnel' students to intermediate schools which in turn 'funnel' students to high schools.



Source: Google Maps 2020 Imagery

Figure 3
Campus Map
Ha'aheo Elementary School
Multi-Purpose Building

LINEAL SCALE (FEET)
50 25 0 25 50 100

NORTH

Gerald Park
Urban Planner
October 2020

B. Environmental Characteristics

1. Climate

Rainfall for this section of the South Hilo District averages about 160 inches annually. The entire district receives almost daily rainfall contributing to the greenery and lush vegetation. Orographic influence of the mountains and trade winds are the principal reasons for the heavy rainfall. The prevailing wind is the trade wind that blows from the north-northeast direction. September is the warmest month (81.4^0 F) and January / February the coolest (61.2^0 F). April, May, and December are the most comfortable months.

2. Topography

With respect to topography, the building site resembles a bowl-shaped container tilted on one side. The grass covered lawn slopes from in an arc from upper elevations on the north and west to lower elevations on the south and east. Ground elevation falls from a high of 246 feet on the west to a low of 216 feet in the vicinity of Portables 1 and 2 on the east. Aside from the sloping terrain and ground undulations there are no significant physiographical features present.

3. Soils

The Soil Conservation Service (1973) soils map for the area indicates that the area of Ha'aheo is underlain by Hilo Silty Clay Loam, 0 to 10 percent slopes (HoC). This is a well-drained loam formed in a series of volcanic ash. The soil is rapidly permeable, runoff is slow, and the erosion hazard is slight.

At the School, the sloping building site suggests the HoC soil horizon was disturbed by grubbing and grading to construct the lawn area, parking area, and buildings. The grass lawn suggests that imported fill and topsoil were probably deposited further blurring the separation of surface and subsurface soil layers.

4. Drainage

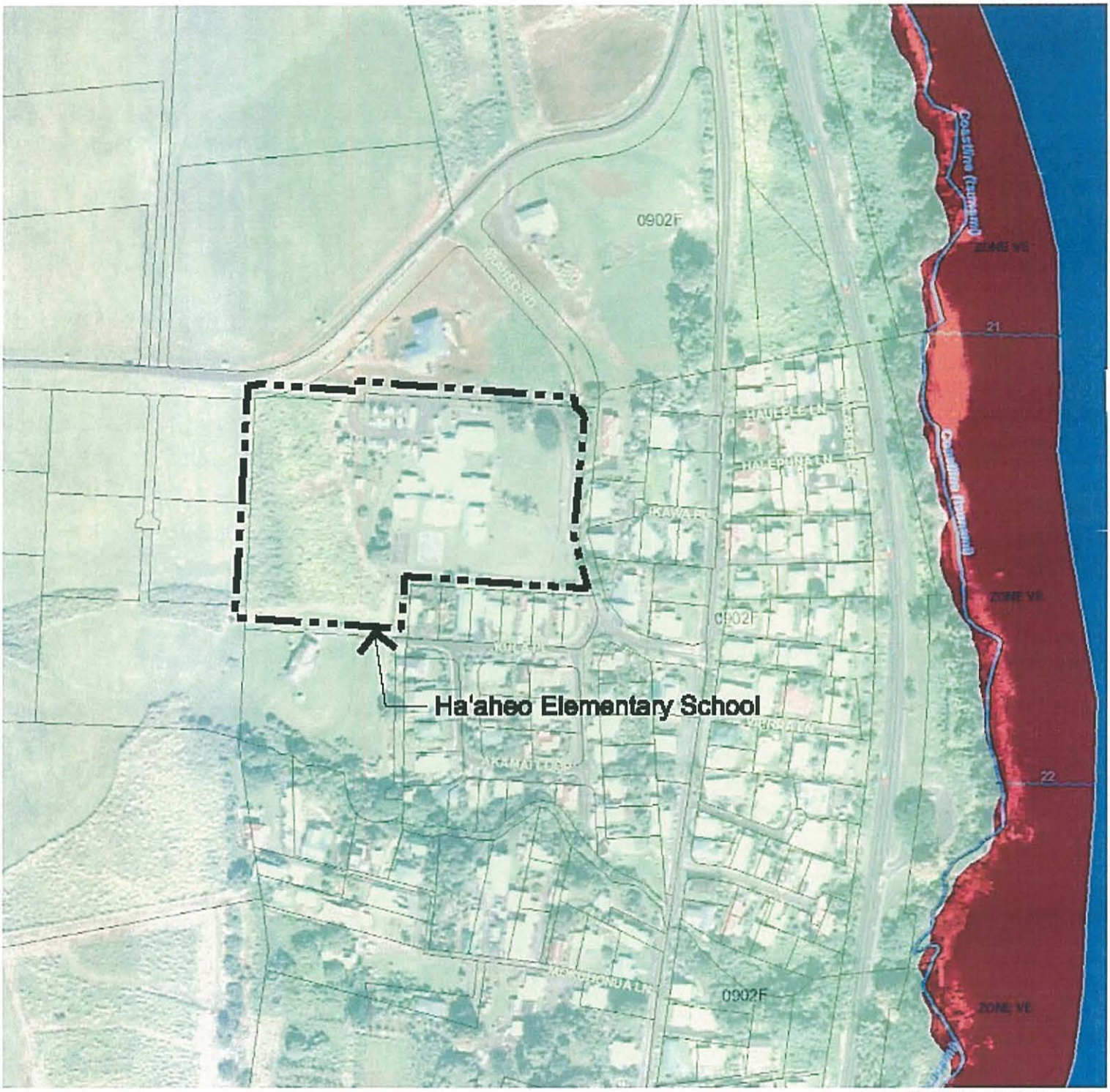
Permanent structures do not occur on the building site hence there are no drainage improvements *per se.* Surface runoff flows north to south over the grass lawn following the sloping gradient or infiltrates into the ground.

5. Water Resources

Streams, ponds, wetlands, and surface water bodies are not found on the campus.

6. Flood Hazard

The Flood Insurance Rate Map for this section of Papaikou (See Figure 4) places the School in Flood Zone X which is defined as "Area determined to be outside the 0.2% annual chance flood" (FEMA, 2014). The 0.2% annual chance flood is the 500-year flood event.

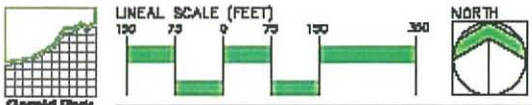


Source: dlnr flood hazard tool online website, http://gis.hawaiinfo.org/fhat/

Effective DFIRM

- Zone XS (X shaded)
- Zone A
- Zone AE
- Zone AEF
- Zone AH
- Zone AO
- Zone D
- Zone VE
- Zone X
- Zone X Protected by Levee

Figure 4
Flood Hazard Map
Ha'aheo Elementary School Multi-Purpose Building



Gerald Park Urban Planner
October 2020

7. Volcanic and Seismic Hazards

The U.S. Department of the Interior, Geological Survey has prepared a Lava Flow Hazard Map for Hawai'i island. The map shows volcanic hazard zones which divides the island into zones depicting the risk of lava flow. Risk is rated on scale of 1 to 9 with 1 the most severe indicating areas most susceptible to lava flow.

The districts of North and South Hilo and North and South Kohala are in Zone 8 where the risk of lava flow is very low. Only a small percentage of the four districts have been covered by lava in the last 10,000 years (Helker, No Date).

8. Biological Resources

The building site is sparsely vegetated and lacking in plant diversity. Lemon tree, coconut, palm, aloe, and banana are spot planted on and around the building site. *Kalo* is grown in the garden.

Domesticated and feral animals have not been documented.

9. Archaeological Resources

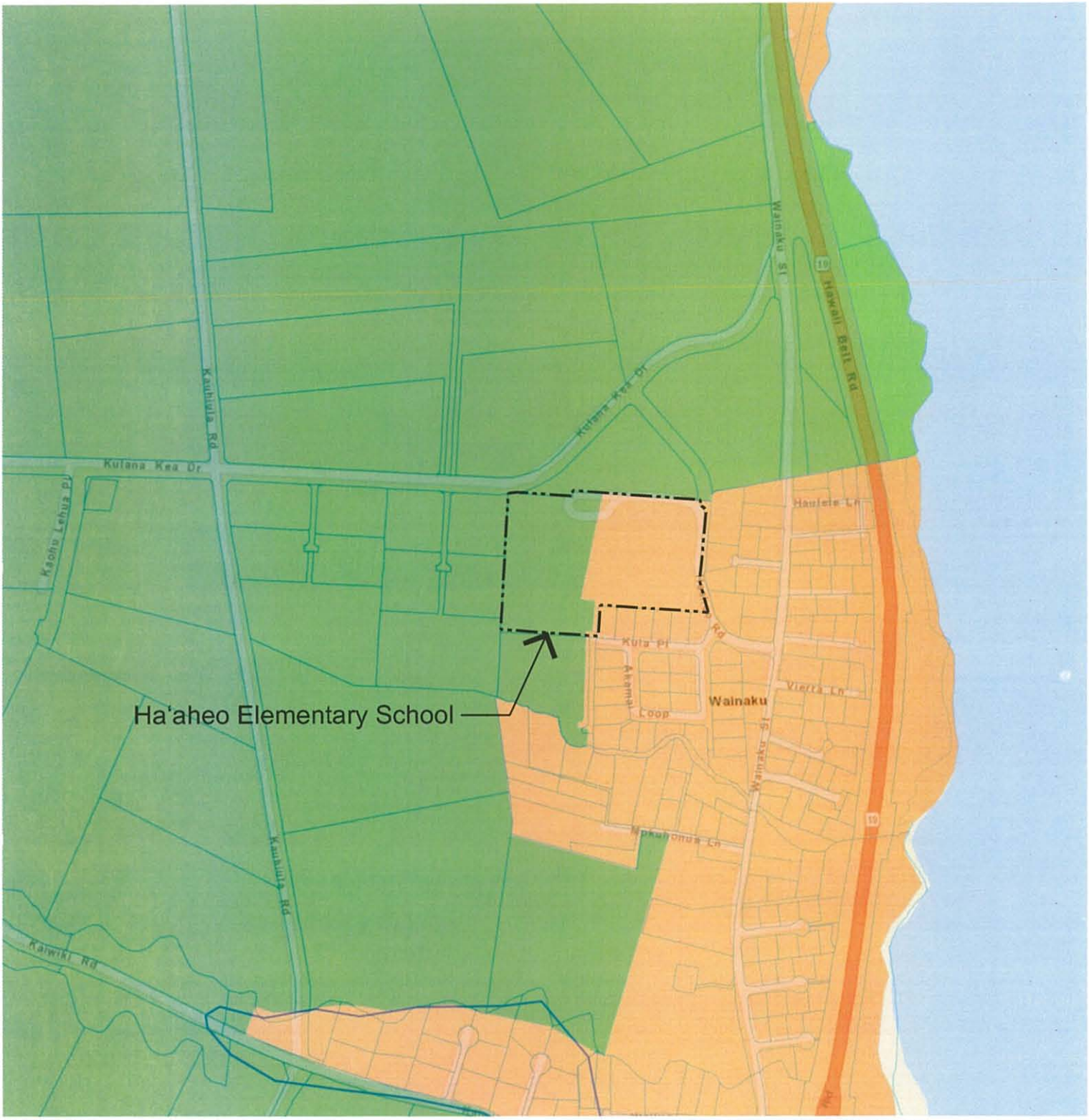
Cultural Surveys Hawaii (2021) conducted an archaeological field inspection of the improvement area for this environmental assessment. Excerpts of their report are presented below.

The field inspection confirmed the ground surface throughout the project area has been extensively altered by prior school development. One potential archaeological feature (CSH-1) was identified during the field inspection. CSH-1 is a shallow, linear earthen ditch approximately 2.5 m wide oriented north-south. It is approximately 75 m long through the maintained grassy lawn in the western portion of the project area The ditch serves as a drainage to channel runoff to a gulch located beyond the adjacent property to the south. It is unknown whether this feature was initially associated with the sugar plantation or development of the school.

The field crew spoke with Mrs. Jennifer Sueoka (school principal) on the day of the field inspection, and she provided CSH with a brochure discussing the school's history. School staff relayed accounts of remnants of a cemetery beneath Building A, which is situated outside the area of projected ground disturbance. The field inspection included accessing the crawl space beneath Building A. No headstones or other evidence of a cemetery were observed during this inspection. The field inspection found no evidence of the old church or possible associated cemetery within the project area

C. Land Use Controls

State Land Use District:	Urban and Agricultural (See Figure 5)
Land Use Pattern Allocation Guide Map:	Low Density Residential
Land Use Map (Papaikou-Onomea):	Low Density Residential
Zoning:	RS-7.5 Residential District (See Figure 6) A-20a Agricultural
Special Management Area:	Outside the Special Management Area



LEGEND

U	URBAN
A	AGRICULTURAL
C	CONSERVATION

Source: State of Hawaii GIS Website, https://histategis.maps.arcgis.com/apps/webappviewer/index.html?id=b843c728b4cb4333b1df015fdaa84104

LINEAL SCALE (FEET) 250 125 0 125 250 500

NORTH

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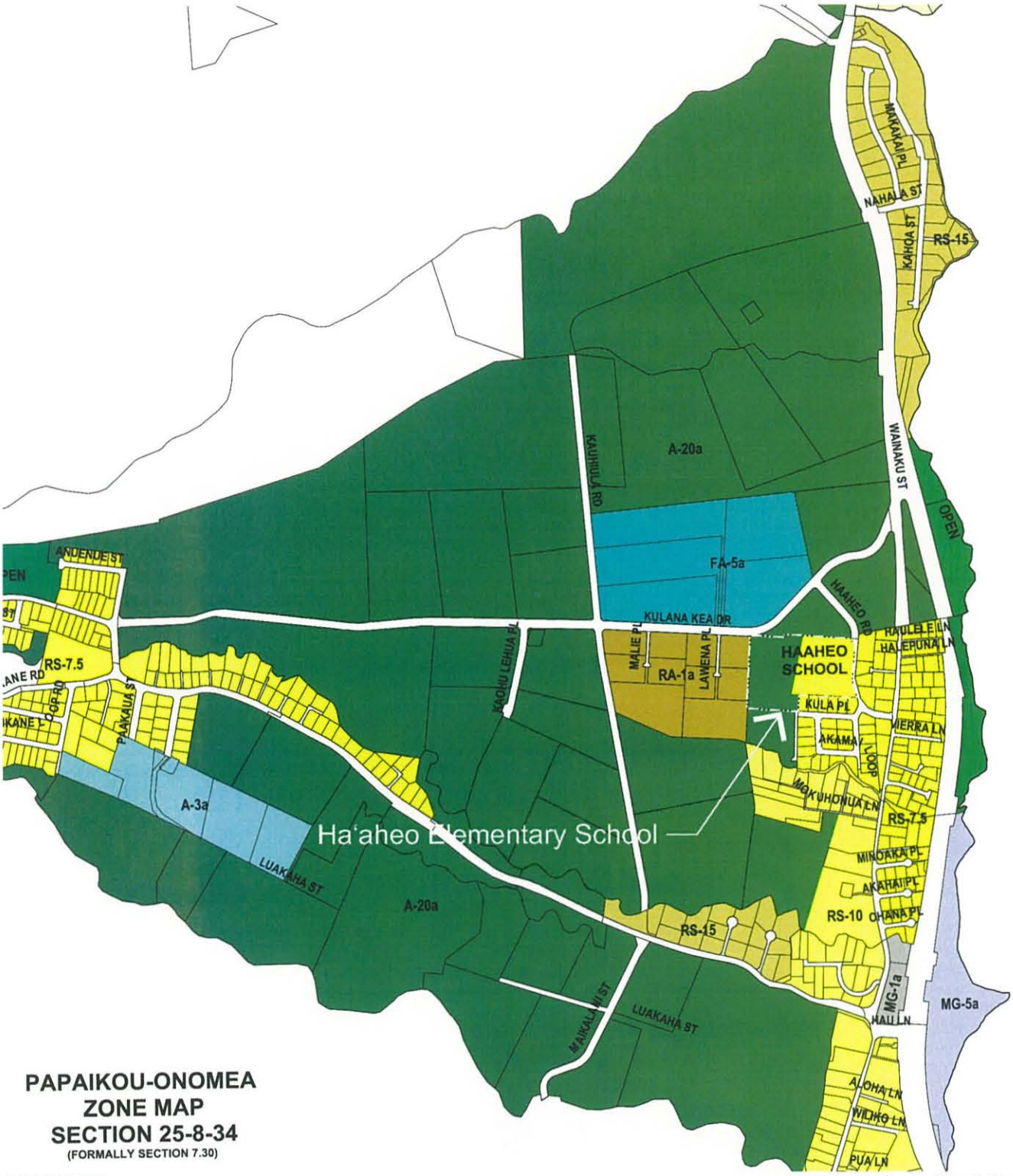
Urban Planner
October 2020

Figure 5
State Land Use Districts
Ha'aheo Elementary School
Multi-Purpose Building



PAPAIKOU-ONOMEA
ZONE MAP
SECTION 25-8-34
(FORMALLY SECTION 7.30)

Source: County of Hawaii, Planning Department Website, https://www.planning.hawaiicounty.gov/resources/zone-maps/-folder-3089

LEGEND

RA-1a	RESIDENTIAL & AGRICULTURE DISTRICT (1 ACRE MIN.)	A-3a	AGRICULTURAL DISTRICT (3 AC. MIN.)
RS-7.5	SINGLE-FAMILY RESIDENTIAL DISTRICT (7,500 SQ.FT. MIN.)	A-20a	AGRICULTURAL DISTRICT (20 AC. MIN.)
RS-10	SINGLE-FAMILY RESIDENTIAL (10,000 LOT MIN.)	FA-5a	FAMILY AGRICULTURAL DISTRICT (5 AC. MIN.)
RS-15	SINGLE-FAMILY RESIDENTIAL (15,000 LOT MIN.)	MG-1a	GENERAL INDUSTRIAL DISTRICT (1 AC. MIN.)
OPEN	OPEN DISTRICT	MG-5a	GENERAL INDUSTRIAL DISTRICT (5 AC. MIN.)

Figure 6
Zoning
Ha'aheo Elementary School
Multi-Purpose Building

LINEAL SCALE (FEET)
500 250 0 250 500 1000

NORTH

Gerald Park
Urban Planner
October 2020

The State Land Use Commission under the authority of Chapter 205, Hawai'i Revised Statutes classifies all land in the State of Hawai'i as Agricultural, Conservation, Rural, and Urban. Uses in the Agricultural District are regulated by the Land Use Commission; uses in the Conservation District by the Board of Land and Natural Resources, uses in the Rural District by the Land Use Commission, and uses in the Urban District by the respective county government. The zoning powers of the respective counties also govern uses in other than the Conservation District.

The County of Hawaii General Plan is the policy document for the long range comprehensive development of the Island of Hawaii (General Plan, 2005). It articulates the long range goals, objectives, and policies for thirteen elements (or functional areas) to include but not limited to Economic, Historic Sites, Environmental Quality, Public Facilities, and Land Use.

Each functional area has a set of goals, policies, and standards. The functional area is further broken down by each of the island's nine judicial districts. A profile of each district relative to the functional area is presented and courses of action recommended.

As stated in the Plan, educational policies relate to the provision of facilities rather than programs, which are the province of the State. It is nonetheless recognized that the facilities and programs are the tools necessary to improve total educational service (General Plan, 2005). For this reason policies for education are treated under Public Facilities. The goal of this functional area is:

> "Encourage the provision of public facilities that effectively serve community and visitor needs and seek ways of improving public service through better and more functional facilities in keeping with the environmental and aesthetic concerns of the community."

For this project, the appropriate policy and standard is:

> "Encourage implementation of the Department of Education's 'Educational Specifications and Standards for Facilities".

The Course of Action (10.2.4.2.2) for the District of South Hilo is:

> "e) Encourage continual improvements to existing educational facilities."

The Land Use Pattern Allocation Guide (LUPAG) component of the General Plan designates the property Low Density Urban.

The School site is zoned RS-7.5 and AG-20a on the Pāpa'ikou-Onomea Zone Map. Public uses such as a public school are a permitted use in both zoning districts.

D. Public Facilities and Services

Potable water is provided by the Department of Water, County of Hawai'i.

Electrical and communication services are provided from overhead systems on Ha'aheo Road. Electrical distribution lines into the school grounds also are overhead.

Police and fire facilities are located in Hilo about 1.5 miles to the south of Wainaku.

SECTION 3
SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS AND MEASURES TO MITIGATE ADVERSE EFFECTS

A. Assessment Process

The scope of the project was discussed with the Project Manager for the Department of Education and the consulting architect. State and County agencies were contacted for information relative to their jurisdiction, expertise, and areas of concern. From the discussions and field investigations, existing conditions and features that could be affected by or affect the project were identified. These influencing conditions are:

- Existing permanent buildings date back to 1931;
- Structures that are 50+ years or older are eligible for historic property status;
- There are no archaeological features on or near the building site;
- There are no rare, threatened, or endangered flora on the building site;
- There are no surface water bodies on the campus;
- The School is not in a flood hazard zone;
- Existing infrastructure and utilities appear adequate and will be confirmed during building permit review;
- Public uses and structures (such as a public school) are a permitted use in the Residential zoning district;
- Recreational and passive uses of the building site will be permanently displaced; and
- Impacts resulting from Phase 1 construction will be repeated in Phase 2.
- There has been no major construction at Ha'aheo Elementary School since 1931.

B. Short-term Impacts

1. Air Quality

Construction will temporarily affect air quality and the acoustical environment. Demolition, grubbing, grading, stockpiling, backfilling and other soil (or earth) moving activities will raise fugitive dust that can settle in adjoining areas. Windy conditions coupled with exposed soil can create severe dust problems. The general contractor will employ dust control measures to prevent the work site and construction equipment and activities from becoming significant dust generators. Control measures shall comply with Chapter 60.1, Air Pollution Control, Title 11, Department of Health, State of Hawai'i (and revisions thereto). The site work contractor may implement alternative methods such as erecting temporary fencing or dust curtains adaptable to the scope of the improvements and features of the site and adjoining areas.

Most construction equipment and vehicles are diesel powered and emit exhaust emissions typically high in nitrogen dioxide and low in carbon monoxide. The Federal and State nitrogen dioxide standard ---100mg/m^3 per annum---is not likely to be exceeded during construction. Carbon dioxide emissions should be less than that generated by automobile traffic on adjoining streets. Aldehyde odors from diesel equipment may be detected but should be dispersed by the prevailing winds.

2. Noise

Construction noise, like fugitive dust, cannot be avoided. Exposure to noise will vary by construction phase, the duration of each phase, and the type of equipment used during the different phases. Maximum sound levels in the range of 82-96 db(A) measured at 50 feet from the source will be generated by heavy machinery during site work. After site work and demolition are completed, reductions in sound levels, frequency, and duration can be expected as the foundation is formed, concrete footings and matting poured, and the building erected. Completed exterior walls will aid in attenuating noise from interior work.

Noise will be audible in the residential area to the north for the duration of construction. There are no man-made or natural features in the area that can block or attenuate noise. Fencing the building site can provide some relief. Generally, acoustical impacts cannot be avoided but can be managed by regulatory measures. Fencing erected around the building site for dust control and safety can aid in noise attenuation.

Community Noise Control regulations establish maximum permissible sound levels for construction activities occurring within "acoustical" zoning districts. Based on the residential zoning for the site, the site is considered to be located in the Class A zoning district for noise control purposes. The maximum permissible daytime sound level in the district attributable to stationary noise sources and equipment related to construction activities is 55 dBA during daytime (7:00 AM to 10:00 PM) and 45 dBA during nighttime (10:00 PM to 7:00 AM) (Chapter 46, Community Noise Control, 1996). Construction noise occasionally will exceed the 55 dBA threshold.

In general, construction activities cannot exceed the permissible noise except by permit or variance. Any noise source that emits noise levels in excess of the maximum permissible sound levels cannot be operated without first obtaining a noise permit from the State Department of Health. Although the permit does not attenuate noise per se it regulates the hours during which excessive noise is allowed.

The general contractor will obtain and comply with conditions attached to the permit. Work will be scheduled between the hours of 7:00 AM to 3:30 PM Mondays through Fridays. The contractor will also ensure that construction equipment with motors is equipped with mufflers in proper operating condition.

3. Erosion

Site work will expose soil thus creating opportunities for erosion (fugitive dust and suspended sediment in construction related runoff). An estimated 2.29 acres will be graded and is the most significant environmental impact resulting from this project. The sloping terrain to the north and east of the Cafetorium has been contoured to fit the building thus creating steeper than existing slopes on both sides. Site work will be performed in accordance with Chapter 10 Erosion and Sediment Control of the Hawaii County Code. Grading plans will be submitted to the Department of Public Works for review and approval.

Best Management Practices (BMPS) for erosion and drainage control during construction will be incorporated into grading plans. BMPS will include erecting silt fences around the project limits, grassing exposed areas after grading work is completed, placing absorbent filter socks around drain inlets to minimize sediment discharge into the drainage system, and constructing stabilized construction access pads at the entrances to the building site.

The contractor may implement other BMPS based on field conditions and their experience in working with similar work sites.

Site work exceeds one (1) acre thus a National Pollutant Discharge Elimination System (NPDES) General Permit Authorizing Discharges of Storm Water Associated with Construction Activity will be required from the State Department of Health.

The intent of the BMPs and NPDES permit is to retain development generated runoff to the school grounds and not directed toward adjacent properties.

If required, a drainage study shall be prepared by a licensed civil engineer and submitted to the Department of Public Works, County of Hawaii for review and approval.

4. Flora

Vegetation is primarily grass, trees, palms, and ornamental species common to the Island of Hawai'i and the State of Hawai'i. Demolition of plant material is not a significant impact.

5. Fauna

Fauna was not recorded during field inspections.

6. Archaeological Resources

Extensive project-related ground disturbance is indicated. Despite high levels of prior ground disturbance within the project area and greater HES campus, the potential for encountering subsurface archaeological features is fair. This assessment is made based on the known preContact and historic land use and information provided by school staff during the present study and presented in the Hammatt and Uyeoka (2007) monitoring report. Hammatt and Uyeoka (2007:19) recommended monitoring of any future subsurface activities at the school based on this potential, and the proposed improvements are not located within the specific areas previously disturbed by the 2007 DOE Cesspool project. Therefore, archaeological monitoring of ground disturbing activities associated with the Ha'aheo Elementary School improvements project is recommended.

Consultation with the SHPD should be sought out for concurrence with this recommendation, and to obtain any further determinations of historic preservation requirements for the project.

In the event subsurface features are unearthed, work in the immediate area will cease and the proper authorities (both historical and police) notified of the finds. Treatment and disposition of the finds will adhere to established protocols of the State Historic Preservation Division and/or the County of Hawai'i Police Department.

7. Traffic

Construction vehicles hauling workers and material will contribute to traffic on Ha'aheo Road, Wainaku Street, and Hawaii Belt Road. Ha'aheo Road is the only vehicle access onto the school grounds. The student drop off and School parking area are on Haaheo Road. Movement of construction equipment and vehicles may, at times, temporarily conflict with traffic circulation.

Building material deliveries will be scheduled to minimize impacts to local and on-campus traffic circulation to the extent possible. Off-loading of materials (and loading for disposal) will occur at or near work sites or at the base yard.

To minimize traffic impacts during construction, the contractor will:

- Post notices alerting drivers of scheduled road work;
- Post flagmen for traffic control;
- Schedule deliveries to avoid student drop-off and pick- up times; and
- Coordinate construction work and traffic movement/mitigation with School administrators.

8. Economic

Funds committed to the project will support the local economy via direct and indirect construction related employment and purchase of construction materials and building-related services. Government will benefit from general excise tax revenue on goods and services and payroll taxes.

9. Safety

All work areas will be fenced. Fencing also will be erected along walkways adjoining work areas for safe access by students and staff. Additional safety measures may be implemented by the contractor in consultation with the DOE and school staff.

C. Long-term Impacts

Anticipated long-term impacts resulting from the project include but are not limited to:

- Fulfilling School needs for a Cafetorium, Library, Computer Lab, and Classrooms.

- The grass lawn will be demolished and replaced by buildings of a form and scale where none now exist (except for a toilet building).

- The Site Plan fosters a compact campus layout wherein the proposed improvements are on the western side of the campus, existing structures on the eastern side, and areas to the south retained as open space.

- Substantially transforms the School's physical plant from structures built as far back as 1931to structures built for a 21st century school. Improvements to the School do not end with the proposed project. At some future time, the aged existing structures will have to be replaced.

- Provide facilities, physical space, and technological infrastructure for a 21st Century school consistent with DOE standards. Flexible classroom arrangements will support the teaching curricula and program setting established by Administrators and educators

- At approximately 4 times larger than the existing cafeteria, the new Cafetorium upgrades a facility for communal dining and kitchen facilities for meal service. The

building also is designed to accommodate School assemblies, student performances, displays / presentations, and a meeting place.

- An enhanced Computer Lab will foster Science, Technology, Engineering and Math (STEM) programs where students learn and enhance skills in these disciplines that carry over to middle and high school.

- Re-purpose vacated buildings.

- Elementary schools are not significant noise generators. Noise associated with classroom use can be expected and confined to interior spaces by walls and doors. Sounds of students playing, talking, and laughing outside of the classroom are typical of elementary schools and should not be constantly audible. Given the school's location in an agricultural area, there is a paucity of residences to be affected by noise.

- The structures will present new objects to be seen on campus. At a height of approximately 27-feet the Cafetorium would be about as tall as Building A. The other two buildings are under 20-feet in height. All structures are within the allowable building height for the residential zoning district.

- The project is consistent with education policies of the County of Hawaii General Plan (2005) and supports the course of action for the District of South Hilo.

- The project does not propose the construction of any structure affecting the use for which the property is zoned. Public uses and structures such as public schools are a permitted use in the residential zoning district. The project will provide Ha'aheo Elementary School with needed facilities common to other public schools. The proposed action neither introduces new uses to the school campus nor calls into question the zoning for area.

- Fire protection will be provided from an existing fire hydrant near Building A.

- Regularly scheduled maintenance will sustain the useful life of the buildings, its components, equipment, and operational systems.

- Repair, renovation, painting, and replacement of building elements and systems can be expected over the building life cycle.

- Long-term costs for sustaining the buildings will be funded by State of Hawai'i appropriations to the Department of Education.

SECTION 4
ALTERNATIVES TO THE PROPOSED ACTION

A. No Action / Delay the Action

A No Action / Delay the Action alternative will maintain the status quo of the physical environment and preclude the occurrence of all impacts, short and long term, beneficial and adverse disclosed in this Assessment. A No Action alternative will not achieve the stated objectives of the project. Delaying the Action only suspends the project until such time that it can be constructed.

B. Alternative Location

Alternative Locations were not considered.

SECTION 5
AGENCIES AND ORGANIZATIONS TO BE CONSULTED IN THE ENVIRONMENTAL ASSESSMENT PROCESS

State of Hawai'i

Department of Land and Natural Resources
Historic Preservation Division

County of Hawai'i

Department of Water
Planning Department
Department of Public Works
Hawaii Fire Department

Other

Hawai'i Electric Light Company
Hilo Public Library (Placement)

SECTION 6
PERMITS AND APPROVALS

Permits and approvals required for the project and approving authorities are listed below. Additional permits, approvals, and agency reviews may be required pending final construction plans.

State of Hawai'i

Department of Health

Variance from Pollution Control (Noise Permit)
Disability and Communication Access Board

Department of Land and Natural Resources

State Historic Preservation Division---HRS 6E Historic Site Review

County of Hawai'i

Planning Department

Plan Approval
Building Permit for Building, Electrical, Plumbing, Sidewalk/Driveway and Demolition Work
Certificate of Occupancy

Department of Public Works

Grubbing, Grading, and Stockpiling Permit

Department of Water Supply

Construction Plan Review

Hawai'i Fire Department

Fire Plan Review

SECTION 7
DETERMINATION OF SIGNIFICANCE

Hawai'i Administrative Rules, Title 11, Department of Health, Chapter 200.1 (Environmental Impact Statement Rules) establishes criteria for determining whether an action may have significant effects on the environment (§11-200.1-13). The relationship of the proposed project to these criteria is discussed below.

1) Irrevocably commit a natural, cultural, or historic resource;

   Natural, cultural, and historic resources were not observed on the building site. Should site work encounter subsurface deposits work in the immediate area will cease and authorities notified of the finds.

2) Curtail the range of beneficial uses of the environment;

   The proposed improvements are considered a beneficial use of the open grass lawn.

3) Conflict with the State's environmental policies or long-term environmental goals established by law;

   The project does not conflict with State environmental policies or goals.

4) Have a substantial adverse effect on the economic welfare, social welfare, or cultural practices of the community and State;

   Substantial adverse effects on the economic and social welfare and cultural practices of the community are not anticipated.

5) Have a substantial adverse effect on public health;

   Public health will not be adversely affected.

6) Involve adverse secondary impacts, such as population changes or effects on public facilities;

   Adverse effects such as population changes and additional demands on public facilities are not anticipated.

7) Involve a substantial degradation of environmental quality;

   Substantial degradation of environmental quality is not anticipated.

8) Be individually limited but cumulatively have substantial adverse effect upon the environment or involves a commitment for larger actions;

   The proposed project does not involve a commitment for larger actions that would affect the environment.

9) Have a substantial adverse effect on a rare, threatened or endangered species, or its habitat;

Rare, threatened, or endangered flora and fauna were not observed at the School. No impact anticipated.

10) Have a substantial adverse effect on air or water quality or ambient noise levels;

Construction will impact air quality, noise levels, and water quality. Mitigating measures and Best Management Practices disclosed in this assessment and other measures implemented by the contractor can minimize construction related impacts.

11) Have a substantial adverse effect on or be likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, sea level rise exposure area, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters;

Ha'aheo Elementary School is not located in an environmentally sensitive area. The District of South Hilo is identified as a zone where the lava flow risk is very low.

12) Have a substantial adverse effect on scenic vistas and view planes, day or night, identified in county or state plans or studies, or,

The low-rise structures will not adversely affect scenic vistas or view planes.

13) Require substantial energy consumption or emit substantial greenhouse gases.

Energy consumption will be required. Consumption can be reduced by use of energy efficient light fixtures, natural lighting of Interior areas, and installing double-glazed windows.

REFERENCES

County of Hawaii. February 2005. *County of Hawaii General Plan.* Ordinance 05-25.

County of Hawaii. No Date. *Papaikou-Onomea Zone Map.* Section 25-8-34.

Cultural Surveys Hawai'i. September 2021. *Draft Archaeological Literature Review and Field Inspection for the Ha'aheo Elementary School Improvements Project, Halepuna Ahupua'a, South Hilo District, Hawai'i Island TMK: [3] 2-6-020:038 por. Prepared for Gerald Park Urban Planner on behalf of Hawai'i Department of Education*

Department of Education, State of Hawai'i. 2006. *Facilities Inventory System Comprehensive Report – Ha'aheo Elementary School.*

Department of Land and Natural Resources, State of Hawai'i, Engineering Division. *Flood Hazard Mapping Tool.*

Helker, Christina, U.S. Geological Survey. No Date. *Volcanic and Seismic Hazards on the Island of Hawaii.*

U.S. Department of Agriculture, Soil Conservation Service. 1972. *Soil Survey Report for Islands of Hawaii, State of Hawaii.* In Cooperation with the University of Hawaii Agricultural Experiment Station.

Wong, Franklin and Associates Limited. 2022. Project Plans.

EXHIBIT A

Draft Archaeological Literature Review and Field Inspection for the Ha'aheo Elementary School Improvements Project, Halepuna Ahupua'a, South Hilo District, Hawai'i Island TMK: [3] 2-6-020:038 por.

Draft

Archaeological Literature Review and Field Inspection for the Ha‘aheo Elementary School Improvements Project, Halepuna Ahupua‘a, South Hilo District, Hawai‘i Island TMK: [3] 2-6-020:038 por.

Prepared for
Gerald Park Urban Planner
on behalf of
Hawai‘i Department of Education

Prepared by
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and
Hallett H. Hammatt, Ph.D.

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Management Summary

Reference	Archaeological Literature Review and Field Inspection for the Ha'aheo Elementary School Improvements Project, Halepuna Ahupua'a, South Hilo District, Hawai'i Island, TMK: [3] 2-6-020:038 por. (Bautista and Hammatt 2021)
Date	September 2021
Project Number(s)	Cultural Surveys Hawai'i, Inc. (CSH) Job Code: HALEPUNA 2 State of Hawai'i Department of Education (DOE) Job Number: Q11200-18
Investigation Permit Number	CSH completed the field inspection under archaeological fieldwork permit number 21-10, issued by the Hawai'i State Historic Preservation Division (SHPD) per Hawai'i Administrative Rules (HAR) §13-13-282.
Agencies	DOE; SHPD
Land Jurisdiction	DOE
Project Proponent	DOE Edward S. Ige, Facilities Director Facilities Development Branch Office of Facilities and Operations 3663 Waialae Avenue Honolulu, HI 96816
Planning Consultant for the Project	Gerald Park Urban Planner 95-959 Kanamee Street Mililani, HI 96789 Office Phone: (808) 625-9626 Email: gpark@gpup.biz
Project Location	The project area is within the central portion of the Ha'aheo Elementary School (HES) campus, located at 121 Ha'aheo Road in the town of Hilo on Hawai'i Island. It is depicted within the greater school campus at TMK: [3] 2-6-020:038 on portions of the 1995 Hilo U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle on Hawai'i Island (Figure 1), a tax map plat (Figure 2), and a 2016 aerial photograph (Figure 3).
Project Description	The DOE is proposing to construct a multi-purpose building combining a play court, four classrooms, and a library on the Hilo side of the existing school parking lot (Figure 5). This work will require demolition of an existing restroom and some portable buildings, and excavation for new footings and utility lines.
Project Acreage	The HES Improvements project area comprises a 3.26-acre (1.32-hectare) portion of the overall 7.362-acre (2.979-hectare) campus at TMK: [3] 2-6-020:038.

Historic Preservation Regulatory Context	As a government (DOE) project located on state lands, this project is subject to Hawai'i State historic preservation review legislation (Hawai'i Revised Statutes [HRS] §6E-8 and HAR §13-275).
Document Purpose	This investigation was conducted—through historical, cultural, and archaeological background research and a field inspection of the project area—to determine the likelihood that archaeological historic properties may be affected by the project. This document is intended to facilitate the project's planning and support the project's historic preservation review compliance. This investigation does not fulfill the requirements of an archaeological inventory survey (AIS) investigation, per HAR §13-276. This information may also be used to support consultation with the SHPD regarding the project's necessary historic preservation review steps pursuant to HAR §13-275.
Built Environment	The project area is located on the developed Ha'aheo Elementary School campus within the neighborhood of Wainaku (see Figure 3). The campus is entirely fenced and comprises classroom and administrative buildings, a cafeteria, play courts, covered walkways, driveways, parking areas, a school garden, and open maintained grassy lawns.
Natural Environnent	The HES campus is situated in a lush area north of Hilo's town center where waterfalls, ponds, and other water features are abundant, supporting lush and varied forest ecosystems in places development has not occurred. This area of South Hilo receives approximately 4,000 mm (157 inches) of rain per year (Giambelluca et al. 1986:34), more than enough to support non-irrigated agriculture. While no major waterways are in direct proximity to the campus, significant streams including the Mā'ili, Kawaiki, and Pūkīhae are located to the north and south. The HES campus is situated approximately 250 m back from the coast, overlooking Hilo Bay at an elevation of approximately 200 feet (ft) AMSL (above mean sea level). The topography of the project area is moderately sloped toward the coast. According to the U.S. Department of Agriculture (USDA) Soil Survey Geographic (SSURGO) database (2001) and soil survey data gathered by Sato et al. (1973), the campus overlies soils of the Hilo series, specifically Hilo silty clay loam, 0 to 10 % slopes (HoC; Figure 4). Hilo series soils are described as > [...] well-drained silty clay loams. These soils formed in a series of volcanic ash that gives them a banded appearance [...] The natural vegetation consists of hilograss, Californiagrass, guava, ohia, and tree fern [...] Hilo soils are used for sugarcane, truck crops, orchards, and pasture. [Sato et al. 1973:17]

	Vegetation within the landscaped HES campus is dominated by well-maintained lawns and ornamental trees and shrubs; a school food garden is also present within the western portion of the project area.
Background Research Methods	Background research included a review of previous archaeological studies on file at the SHPD; review of documents at Hamilton Library of the University of Hawai'i, the Hawai'i State Archives, the Hawaiian Mission Children's Society Library and Archives, the Hawai'i Public Library, and the Bishop Museum Archives; study of historic photographs at the Hawai'i State Archives and the Bishop Museum Archives; and study of historic maps at the Survey Office of the Department of Land and Natural Resources. Historic maps and photographs from the CSH library were also consulted. In addition, Māhele records were examined from the Waihona 'Aina database (Waihona 'Aina 2021). This research provided the environmental, cultural, historic, and archaeological background for the project area.
Background Research Summary	<u>Traditional Background and Land Use Patterns</u> Ha'aheo is a coastal area in the *ahupua'a* (land division) of Halepuna in the district of South Hilo. According to Pukui et al. (1976:34), the area was named Ha'aheo, meaning "pride," when Kamehameha I "ordered his people to plant a large area of taro in a single day; they did so, and he told them he was 'proud' of them." Lloyd Soehren (2019) posits Ha'aheo was once the name of an *'ili* (land unit smaller than an *ahupua'a*) of Halepuna. Pukui et al. (1976) do not provide a meaning for the place name Halepuna, though it may carry the same meaning as the word "halepuna," which is defined as "a house built of limestone or coral" (Pukui and Elbert 1986:53). Halepuna is within a region traditionally known as Hilo-Palikū, or "Hilo of the upright cliffs." Hilo-Palikū "extended from the bank of the Wailuku river [in Hilo town] to the Ka'ula Gulch, which served as the division between Hilo and Hamakua" and was by nature "treacherous to travel through because of the many *'ōlohe* (skilled fighters and thieves) who lived along the trails" (Walker and Rosendahl 1994:4). This region was described by early foreign travelers (Bird 2007, Ellis 2004, Kalākaua 1972, Menzies 1920) as a stretch of verdant plateaus truncated by steep cliffs at the coast and cut by numerous deep ravines that are difficult to traverse. The open plains or *kula* lands atop the plateaus were within Newman's (1971) "Scattered Farms" agricultural zone and McEldowney's (1979) "Upland Agricultural" zone, meaning that they supported dispersed settlement and scattered planting fields and gardens with no major agricultural field systems. Crops that would have been cultivated consisted of dryland taro, sweet potato, bananas, yams, breadfruit, sugarcane, and paper mulberry. <u>The Māhele of 1848</u>

	The Organic Acts of 1845 and 1846 initiated the process of the Māhele (the division of Hawaiian lands), which introduced private property into Hawaiian society. In 1848, the crown (Hawaiian government) and the *ali'i* (chiefly class) received their land titles, and subsequently Land Commission Awards (LCAs) for *kuleana* parcels were awarded to commoners and others who could prove residency on and use of the parcels they claimed. Interestingly, Halepuna *ahupua'a* is not mentioned in the Māhele Book, which lists Māhele awards to the *ali'i* (Soehren 2019). However, the website Waihona 'Aina (2021) lists two *kuleana* or commoner awards for this *ahupua'a*: 0.97-acre Land Commission Award (LCA) 00001I to Oupai in Kaheolono *'ili*; and 0.87-acre LCA 00001K to Pahe wahine in Haleolona *'ili*. LCA 00001I is located approximately 50 m south of the school campus, while LCA 00001K includes two discrete *'āpana* or lots located approximately 120-160 m southeast of the school (Figure 6). Records for these awards indicate the presence of a small community close the school (Waihona 'Aina 2021). A map from the ca. 1880s (Figure 7) indicates the *mauka* (inland) portion of the HES campus overlaps two land grants: Grant 2977 to Maa, and Grant 2978 to Oupai. Unfortunately, land grant records do not include significant information about past land use. Figure 7 also indicates LCA 190 to Alexander Ragsdale in Pāpa'a Ahupua'a bounding Halepuna and the HES campus to the north. According to Soehren (2019), Pāpa'a was "[n]amed among lands set apart [by the government] for support of schools, but awarded to Alexander Ragsdale by the Land Commission [...]" Ragsdale was an American plantation owner who came to Hawai'i in 1817 and married a Hawaiian chiefess, and was the father of William Ragsdale who served as superintendent of the Kalaupapa Leprosy Settlement on Moloka'i (Williams 1992). Māhele records indicate LCA 190 included a small coffee plantation (1,600 trees), *kalo* patches, victualling houses, a bowling alley, and a dwelling house (Waihona Aina 2021). <u>Late 1800s</u> Sugarcane cultivation began in this area of South Hilo in 1880. The Wainaku Plantation was in operation from 1882–1884, when it was absorbed by the Hilo Sugar Company (Dorrance and Morgan 2000:84, 103). The plantation included a sugar mill on 'Āle'ale'a Point approximately 0.6 km (0.4 mile) southeast of Ha'aheo Elementary School. Sugarcane from both the large plantations and small, independent growers was carried in flumes down to the coast and processed at the mill. A church was built in Ha'aheo in the late nineteenth century. Two maps from the 1880s (see Figure 7 and Figure 8) depict the church in the

makai (seaward) portion of the HES campus. This general area, within the lower portion of the current campus, appears to have comprised the original 2.45-acre school campus (see Figure 2), which was granted to the Board of Education in 1882. This research indicates a school may have met in the church building for a short time. According to a school history provided on the Ha'aheo Elementary School website,

> Ha'aheo School was established on March 5, 1888 to serve the children of sugar cane plantation workers in Wainaku. Reports indicate that 30 students were enrolled that first day, and they were taught by Ms. Helen Severence, Ha'aheo's first teacher and administrator. Ms. Severence commuted from Hilo every day on horseback. [Ha'aheo Elementary School n.d.]

An 1899 biennial report of the Board of Education for the Republic of Hawaii (Hawai'i Board of Education 1899:20 in Hammatt and Uyeoka 2007:6) indicates construction of a three-room school at Ha'aheo a decade after the school's establishment.

While Ha'aheo Elementary School is one of the oldest elementary schools on Hawai'i Island, it is not part of the thematic group "Public Schools on the Island of Hawai'i" (State Inventory of Historic Places [SIHP] # 50-10-35-07522), listed on the Hawai'i Register of Historic Places (HRHP). It is possible the original school buildings were replaced or altered to the degree that they were not eligible as part of the thematic group.

<u>1900s</u>

Commercial sugar cultivation continued to be the formative enterprise during the first half of the twentieth century. Plantation villages continued to expand, and improvements were made to transportation infrastructure. Portions of the 1914 Waiakea and 1930 Onemea USGS topographic map (Figure 9) show the HES campus in relation to early twentieth century developments including the Old Māmalahoa Road, the Hawaii Consolidated Railroad tracks, and multiple residences clustered along the roadway. According to the HES website (Ha'aheo Elementary School n.d.), "It wasn't until 1925 that there were enough students [at the school] to warrant one class per grade level."

In 1965, Onomea Sugar Company and Hilo Sugar Company merged into a new outfit controlled by C. Brewer and Company, called the Mauna Kea Sugar Company, which operated until 1994. The 1960s series USGS quadrangles (Figure 10) show the location of the project area just *mauka* of the main school building at that time; the HES campus is surrounded by undeveloped lands to the north, west, and east which were presumably planted in sugarcane, and residences within Wainaku to the southeast. The map also depicts the new Hawaii Belt

	Road following the former Hawaii Consolidated Railroad right-of-way just east of the Old Māmalahoa Road (see Figure 10). The mill at Wainaku closed in 1976 (Dorrance and Morgan 2000:103). A 1977 orthographic photo of the area shows the school property surrounded by sugarcane fields and a residential neighborhood to the southeast (Figure 11). After 1996 C. Brewer and Company used the old Wainaku Mill for its headquarters (Dorrance and Morgan 2000:104); county tax records indicate the property was sold in 2012.
Prior Archaeological Studies Summary	Little archaeological investigation has occurred in the immediate vicinity of Ha'aheo Elementary School, with the majority of previous studies concentrated in Hilo Town. However, one past study was completed at the campus itself (Hammatt and Uyeoka 2007), while another was completed just south and *makai* of the school in Wainaku Ahupua'a (Walker and Rosendahl 1996). The locations of these studies are depicted on Figure 12, along with the limits of two large-scale studies to the south in Kālalau and Pu'ueo Ahupua'a (Wilkinson et al. 2011 and Kennedy 1992, respectively). These four studies are summarized in Table 1. In 1996 Paul H. Rosendahl (PHRI) conducted an archaeological assessment of seven non-contiguous locations (Sites A–G) across Hilo for a proposed judiciary project (Walker and Rosendahl 1996). Of the seven study parcels, closest to Ha'aheo Elementary School was Site A or the "C. Brewer & Company, Ltd. Site" (TMKs: [3] 2-6-015:001-002 and 2-6-016:002) located at 'Āle'ale'a Point to the southeast (see Figure 12). Within Site A the remains of the Hilo Sugar Company's Wainaku Mill were documented and assigned as SIHP # 50-10-35-21133. In 2007 CSH reported the results of archaeological monitoring of DOE cesspool improvements at Ha'aheo Elementary School (Hammatt and Uyeoka 2007; see Figure 12). Ground disturbance associated with the improvements included excavations for a leach field and a septic tank trench in grassy areas in the southern portion of the campus. Excavations ranged from 12 to 17 ft deep. All excavations were completed without encountering any significant subsurface deposits. During the monitoring fieldwork, CSH was provided information about the history of the school by Kumu Ku'uhoamele, a teacher at Ha'aheo Elementary School and part of the DOE Kūpuna Program. He mentioned there had once been a church on the site of the school with a graveyard. He and many others at the school believe the school is built on the graveyard. Kumu Ku'uhoamele also stated that in 2005 or 2006 a poi pounder was unearthed during some renovation work at the school (Hammatt and Uyeoka 2007:1). Based on this information and the proximity of the school to a historic settlement (evidenced in part by

	nearby LCAs), Hammatt and Uyeoka (2007:19) recommended monitoring of any future subsurface activities. The large studies to the south of HES (Wilkinson et al. 2011 and Kennedy 1992; see Figure 12) indicated extensive disturbance associated with sugar cultivation and other development. Associated historic-era infrastructure was identified in both project areas, but not assigned SIHP numbers. Kennedy (1992) also located a possible burial mound in a conservation area within the overall 1992 study area; it was assigned as SIHP # 50-10-35-18074.
Fieldwork Effort and Findings	The field inspection was completed on 3 June 2021 by CSH Project Director Olivier M. Bautista, B.A., under the general supervision of Principal Investigator Hallett H. Hammatt, Ph.D. The field inspection required 1 person-day to complete and included 100% pedestrian sweeps of the improvements project area. Photographs were taken of the project area and greater HES campus. The field inspection confirmed the ground surface throughout the project area has been extensively altered by prior school development (Figure 13 through Figure 18). One potential archaeological feature (CSH-1) was identified during the field inspection (Figure 19). CSH-1 is a shallow, linear earthen ditch approximately 2.5 m wide oriented north-south. It is approximately 75 m long through the maintained grassy lawn in the western portion of the project area (see Figure 19 through Figure 22). The ditch serves as a drainage to channel runoff to a gulch located beyond the adjacent property to the south. It is unknown whether this feature was initially associated with the sugar plantation or development of the school. The crew spoke with Mrs. Jennifer Sueoka (school principal) on the day of the field inspection, and she provided CSH with a brochure discussing the school's history (Appendix A). School staff relayed accounts of remnants of a cemetery beneath Building A, which is situated outside the area of projected ground disturbance (Figure 23). The field inspection included accessing the crawl space beneath Building A. No headstones or other evidence of a cemetery were observed during this inspection. The field inspection found no evidence of the old church or possible associated cemetery within the project area. CSH also took photographs of the area at the northeast corner of the campus, outside the improvements project area, where historic maps (see Figure 7 and Figure 8) indicate the church was located (Figure 24 and Figure 25).
Potential for Project Effect on Historic Properties	The field inspection identified one potential archaeological historic property within the improvements project area, an earthen drainage ditch of unknown age (CSH-1). This feature may be impacted by project development.

	While the field inspection confirmed a lack of any other surface archaeological features within the project area, research indicates the project area overlaps the bounds of the historic school campus and land grants. Though the school itself is not part of the thematic group "Public Schools on the Island of Hawaii" (SIHP # 50-10-35-07522), subsurface cultural deposits associated with historic land use may be present. Any subsurface features that may be present have likely been highly disturbed by prior school development.
Recommendations	Extensive project-related ground disturbance is indicated. Despite high levels of prior ground disturbance within the project area and greater HES campus, the potential for encountering subsurface archaeological features is fair. This assessment is made based on the known pre-Contact and historic land use and information provided by school staff during the present study and presented in the Hammatt and Uyeoka (2007) monitoring report. Hammatt and Uyeoka (2007:19) recommended monitoring of any future subsurface activities at the school based on this potential, and the proposed improvements are not located within the specific areas previously disturbed by the 2007 DOE Cesspool project. Therefore, archaeological monitoring of ground disturbing activities associated with the Ha'aheo Elementary School improvements project is recommended. Consultation with the SHPD should be sought out for concurrence with this recommendation, and to obtain any further determinations of historic preservation requirements for the project. If archaeological monitoring is requested, SHPD should be consulted regarding the need for a new project-specific archaeological monitoring plan. In some cases, DOE projects have been allowed to proceed under monitoring plans written for prior projects at the same campus, but SHPD must first consent to this approach.

Figure 1. Portion of the 1995 Hilo USGS 7.5-minute topographic quadrangle showing the location of the project area within the greater Ha'aheo Elementary School campus

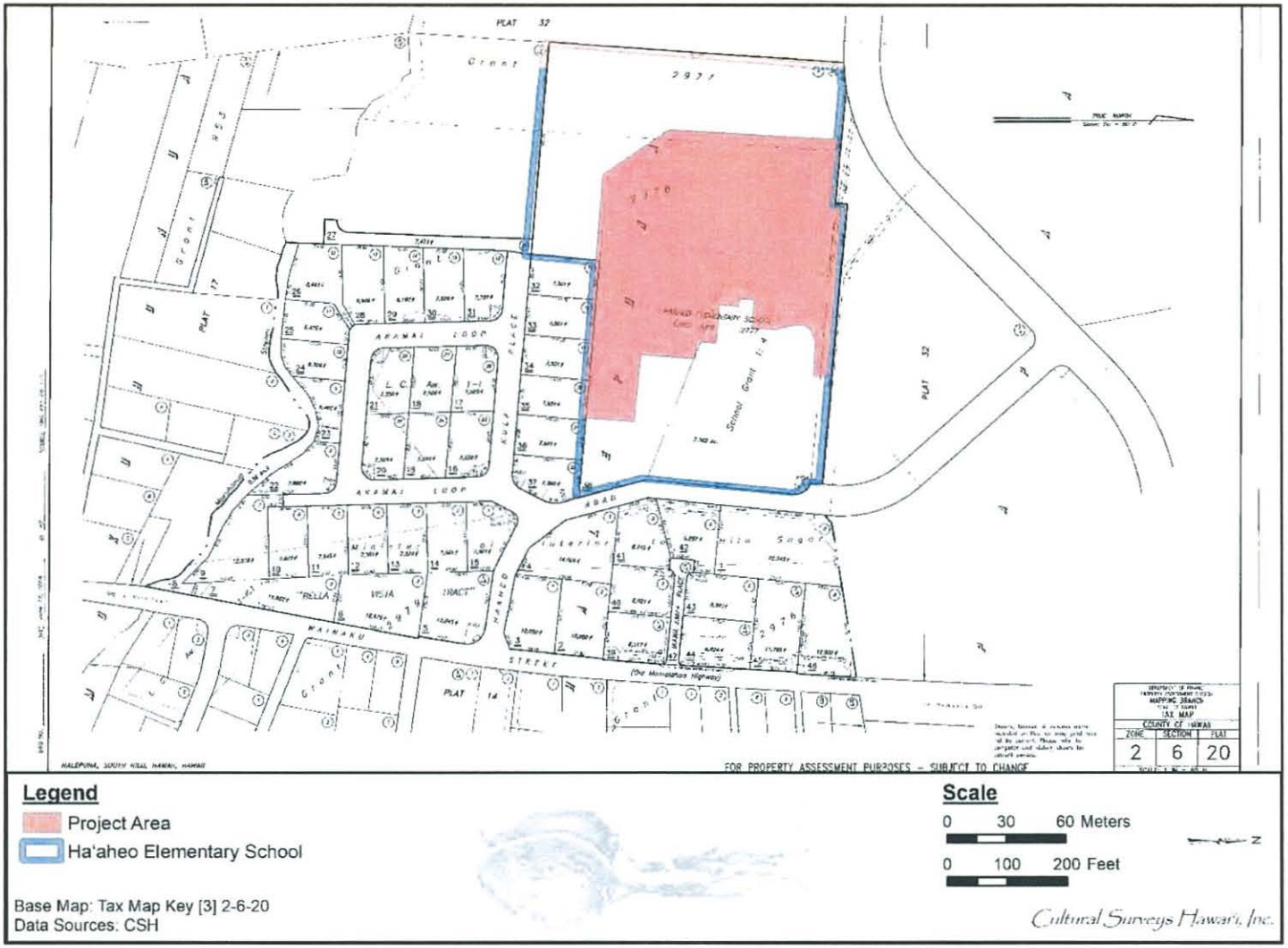


Figure 2. Tax Map Key (TMK) [3] 2-6-20 showing the project area within the Ha'aheo Elementary School campus in TMK: [3] 2-6-020:038 (Hawai'i TMK Service 2010)

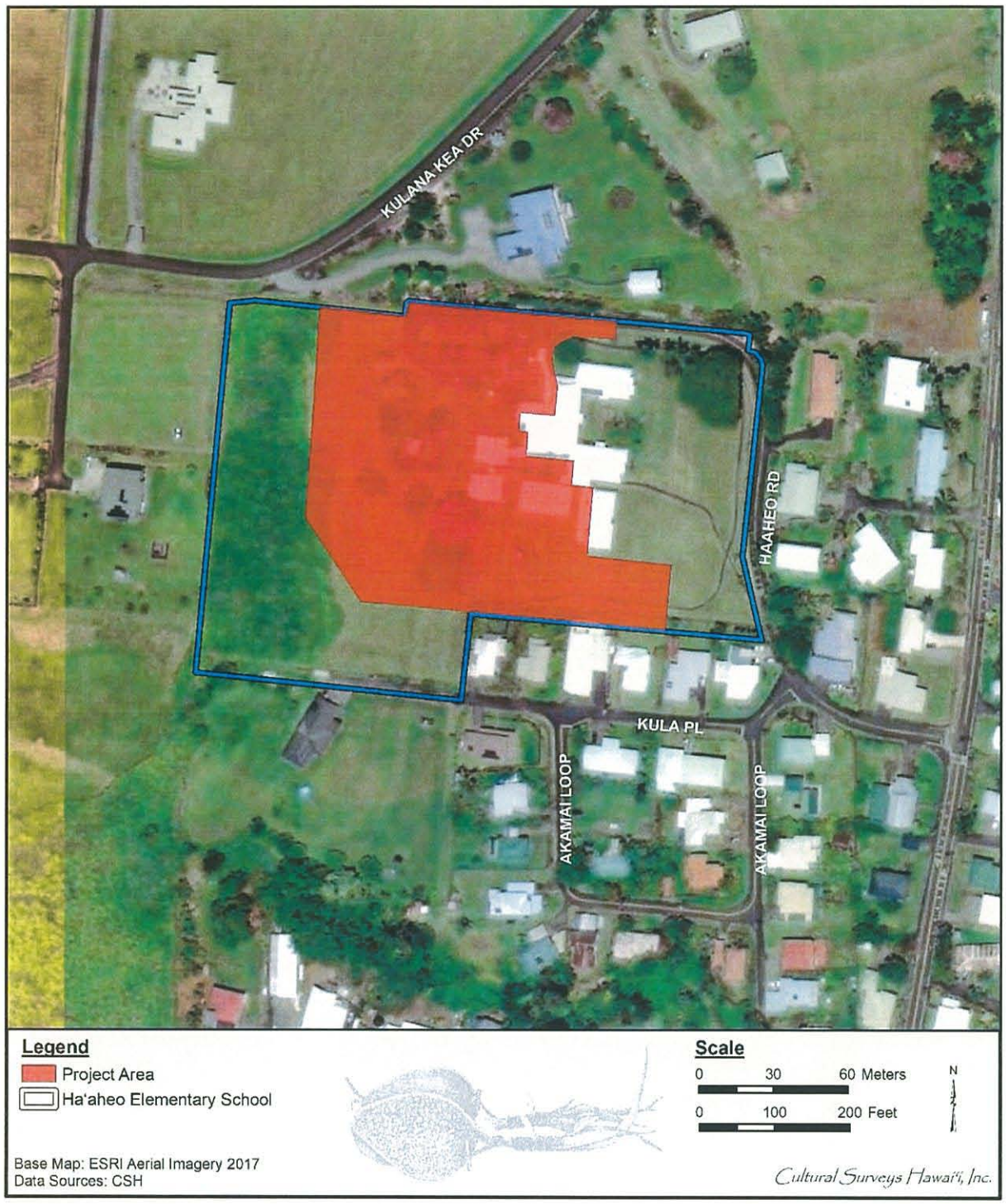


Figure 3. Aerial photograph (ESRI 2017) showing the project area within the greater Ha'aheo Elementary School campus

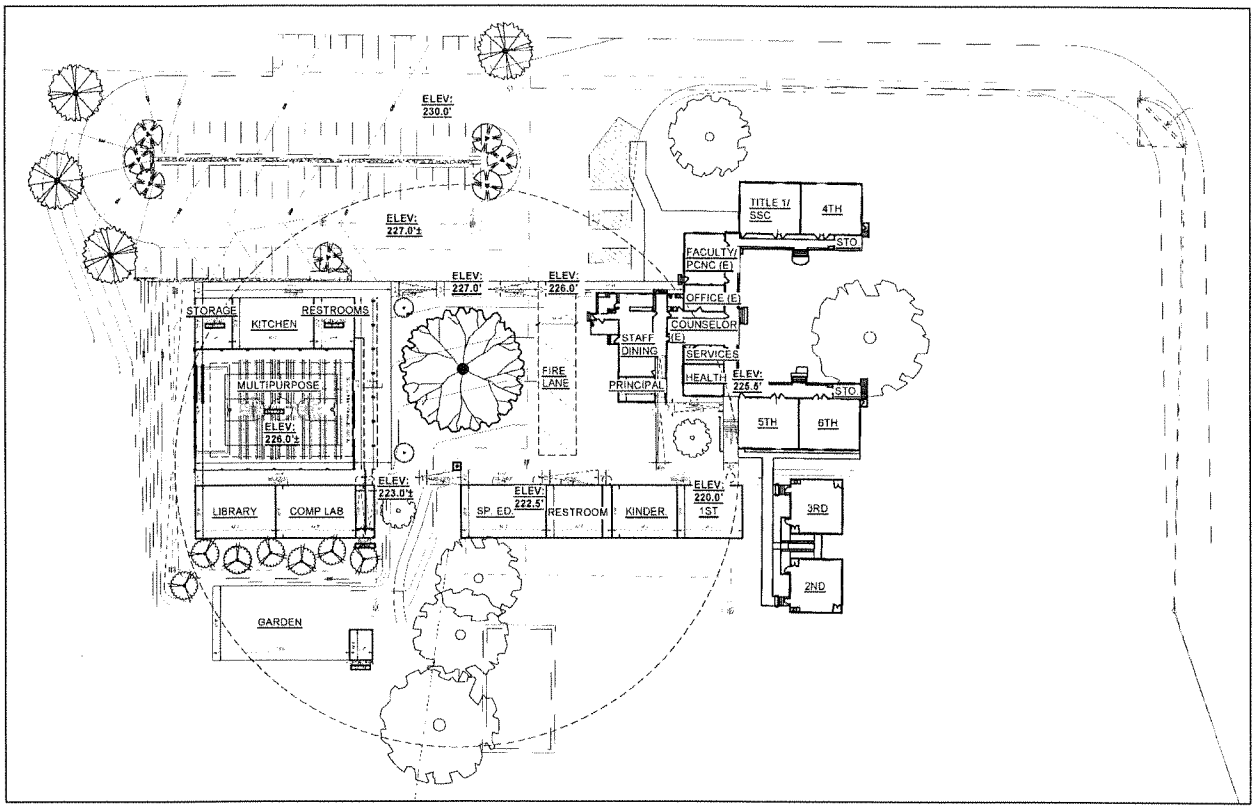


Figure 5. Portion of project site plan (courtesy of client) showing the proposed multipurpose building at Ha'aheo Elementary School

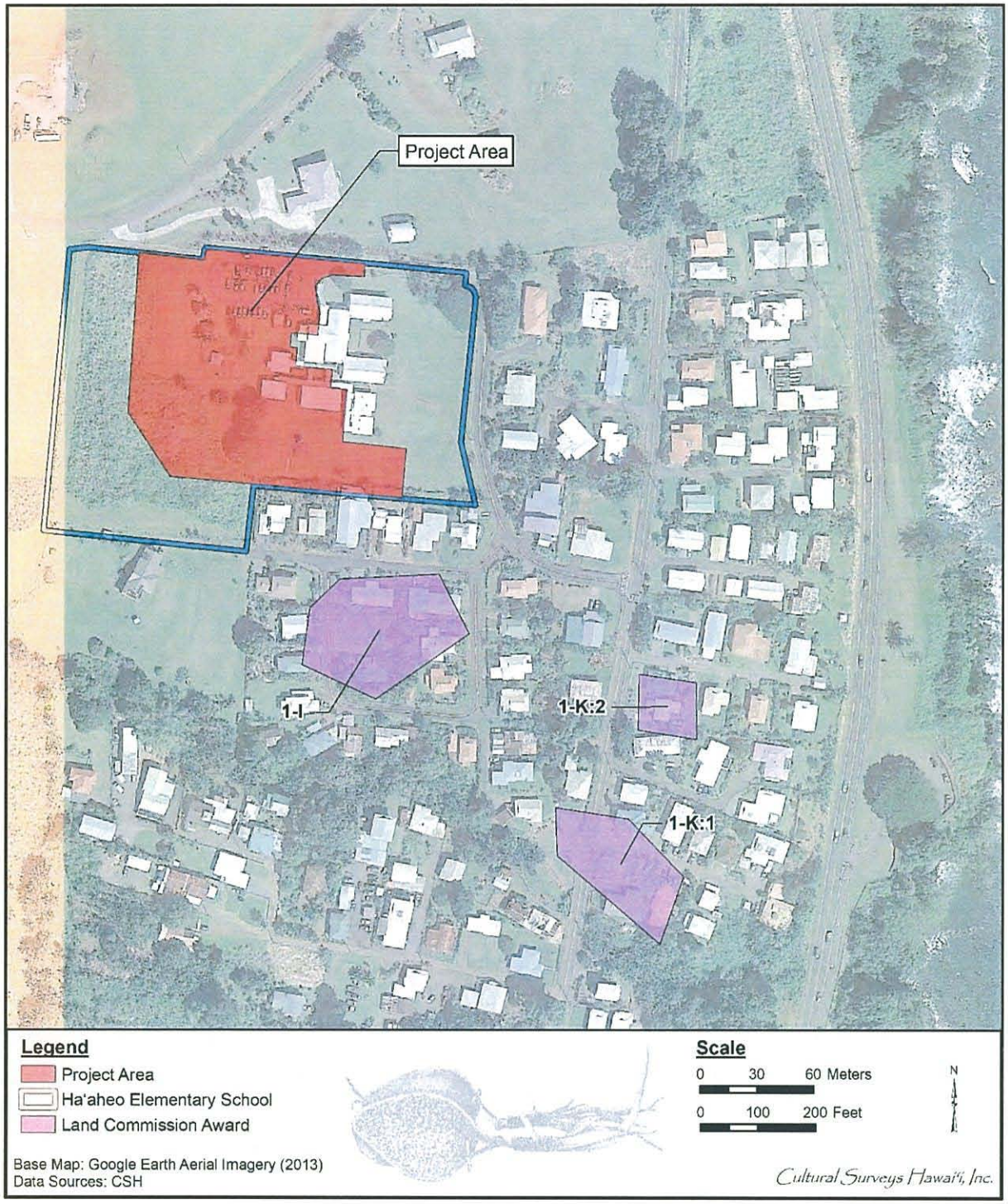


Figure 6. Aerial photograph showing the locations of nearby LCAs in relation to Ha'aheo Elementary School (Google Earth 2013)

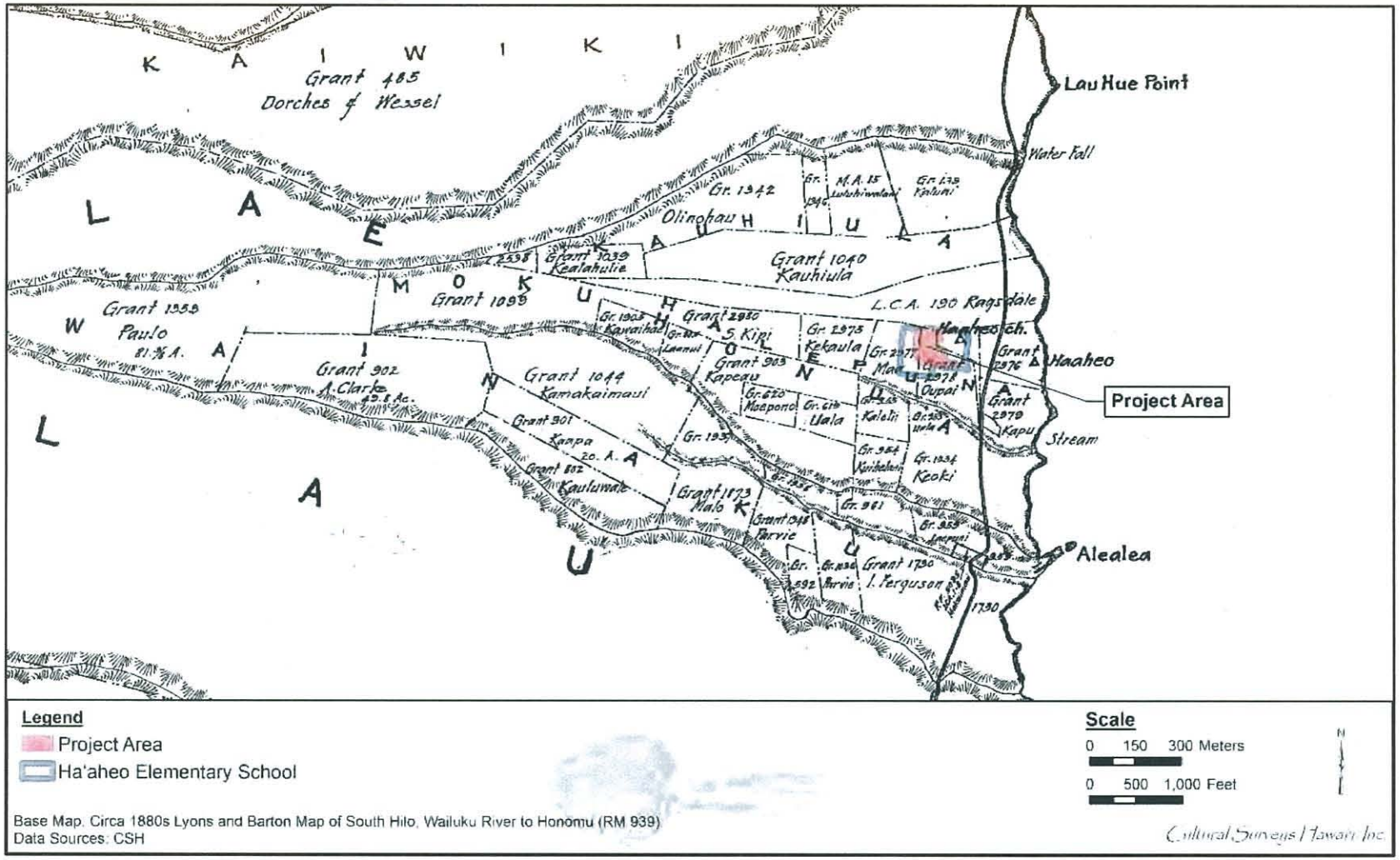


Figure 7. Portion of the 1880s Lyons and Barton map of South Hilo, Wailuku River to Honomu (RM 939) showing the location of the Ha'aheo Elementary School campus in proximity to LCAs and Land Grants

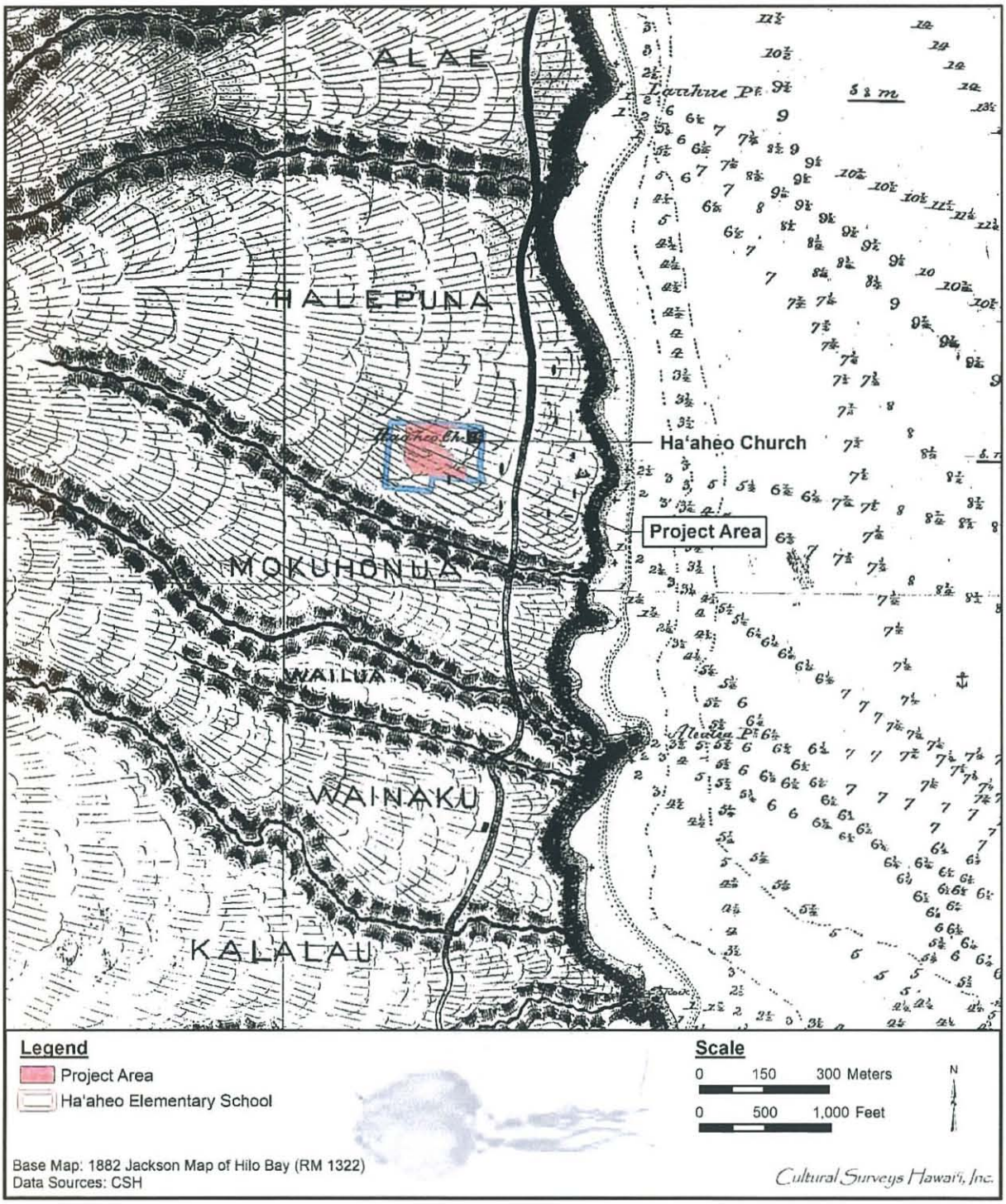


Figure 8. Portion of the 1882 Jackson map of Hilo Bay (RM 1322) showing the Ha'aheo Church in the northeastern corner of the present-day school campus outside the current project area

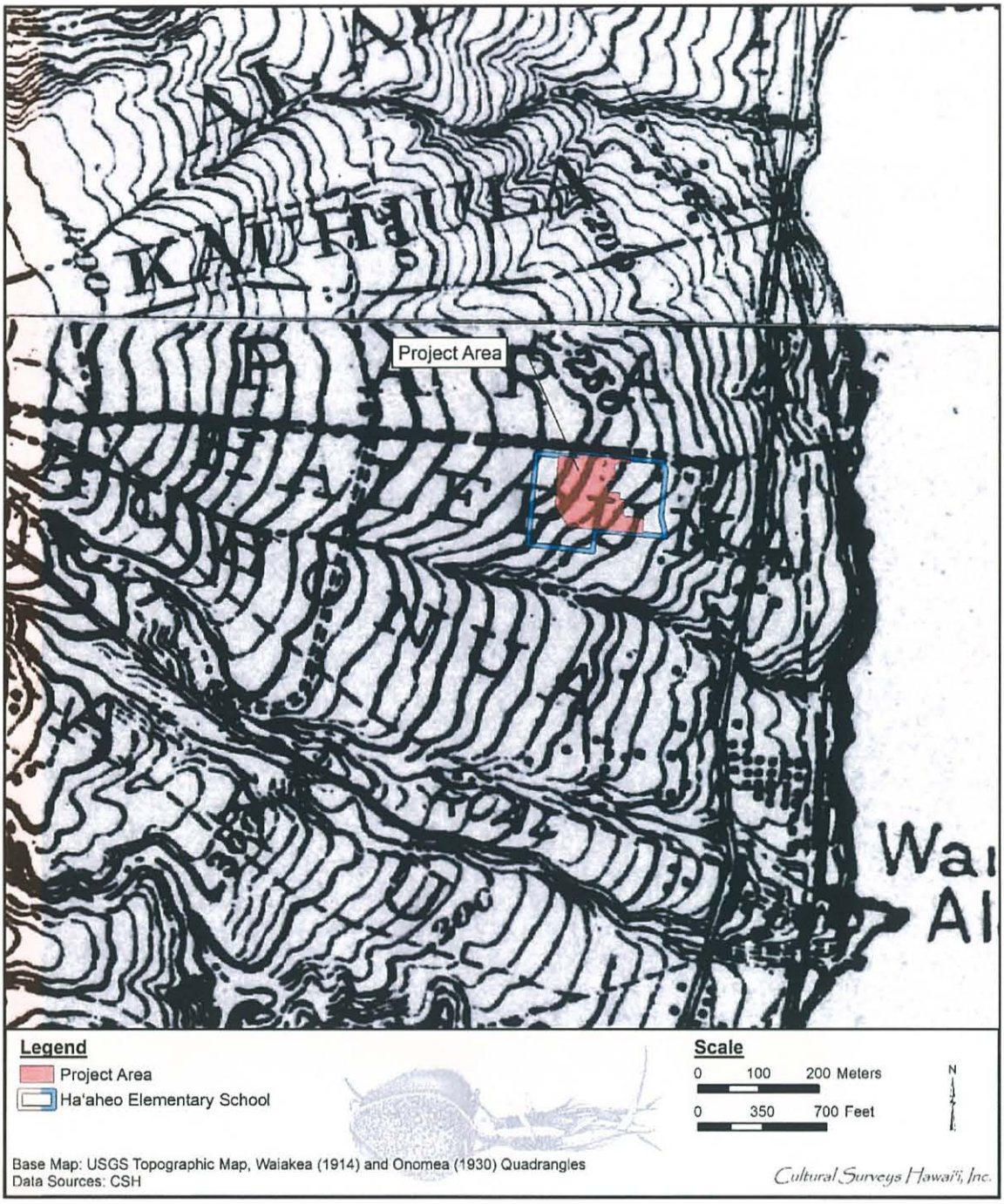


Figure 9. Portion of the 1914 Waiakea and 1930 Onemea USGS 7.5-minute topographic quadrangles showing the Ha'aheo Elementary School campus in relation to nearby developments including the Old Māmalahoa Road, the Hawaii Consolidated Railroad tracks, and multiple residences to the east and southeast

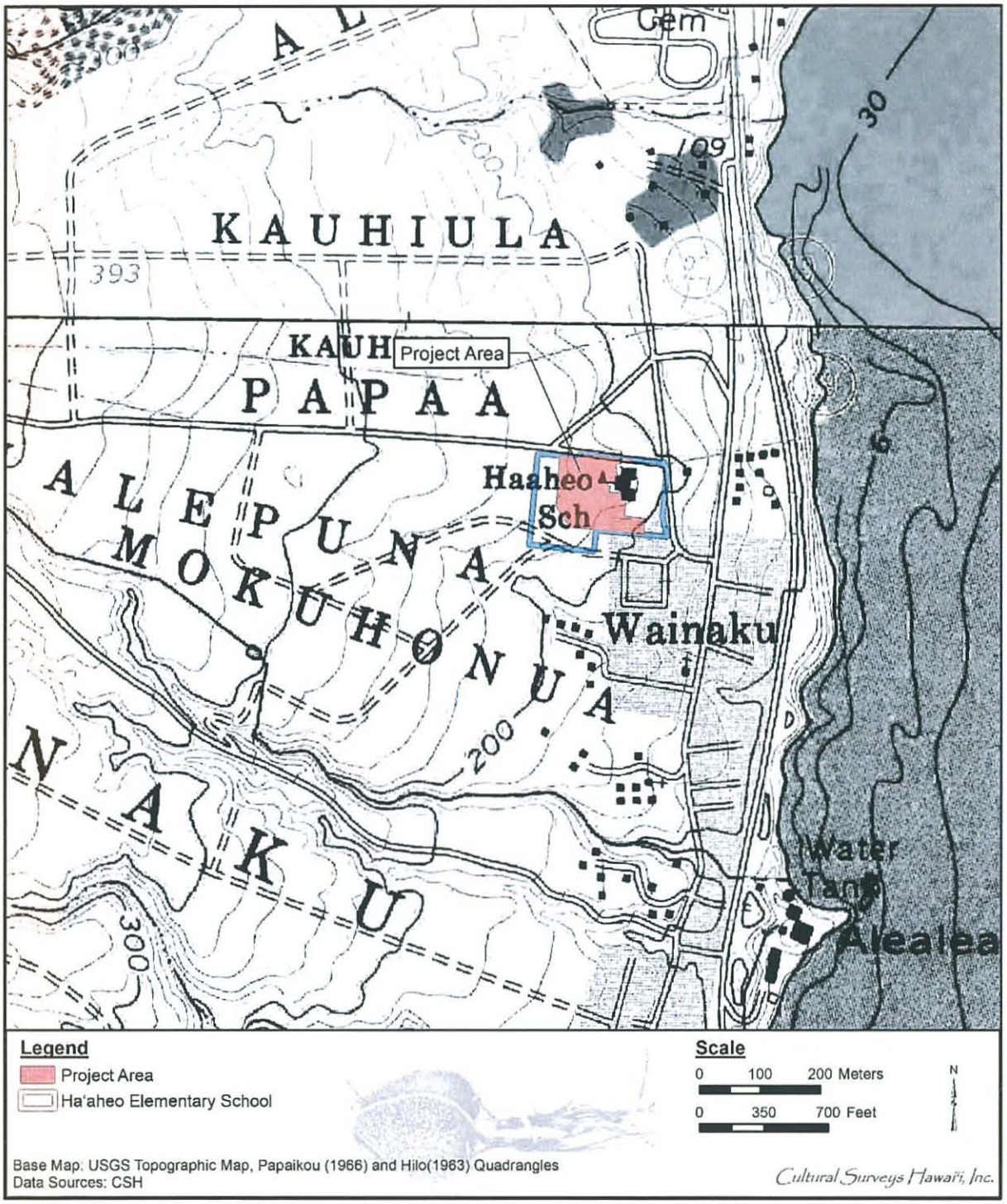


Figure 10. Portion of the 1966 Papaikou and 1963 Hilo USGS 7.5-minute topographic quadrangle showing the location of the project area within the Ha'aheo Elementary School campus

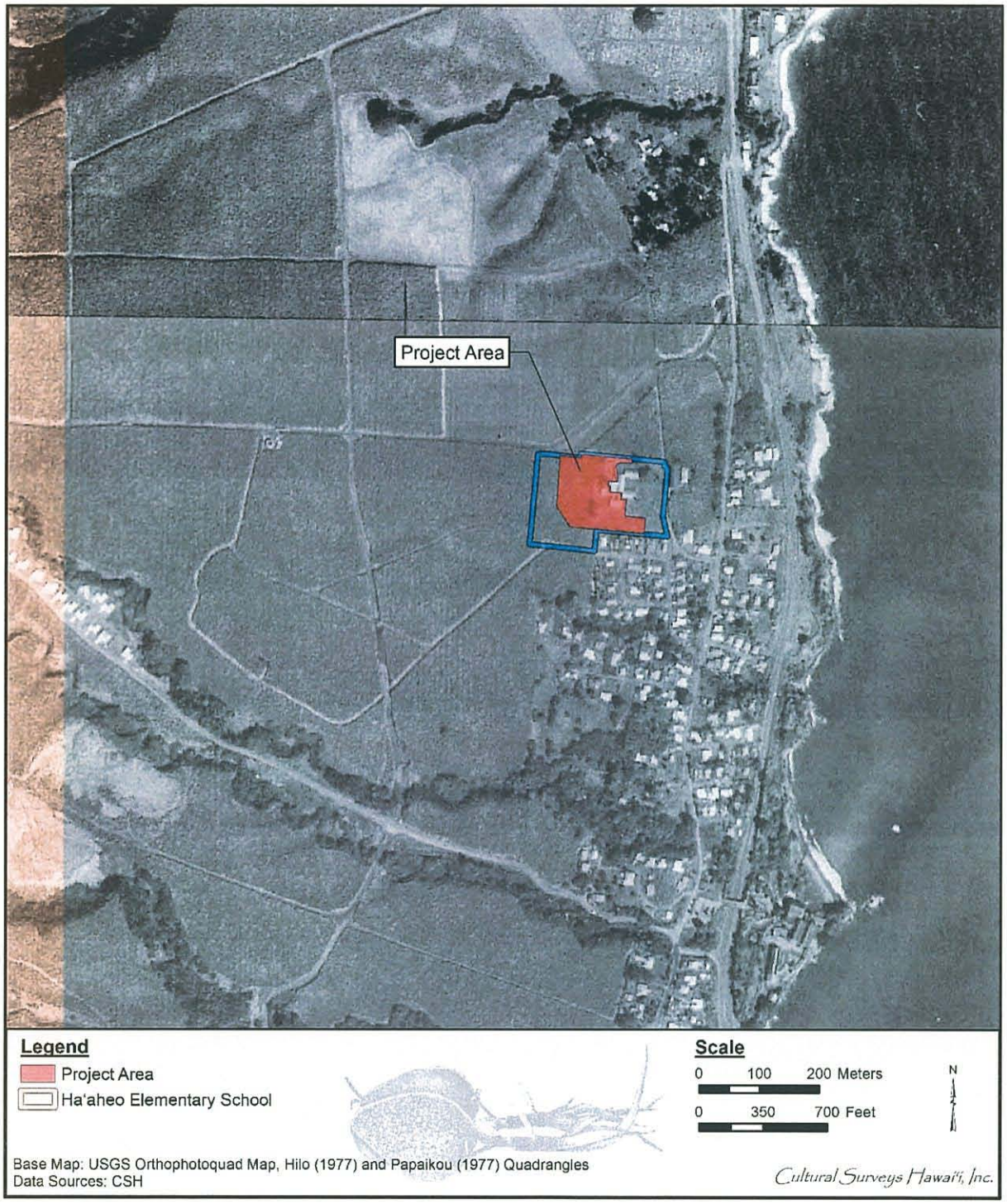


Figure 11. Portion of the 1977 USGS orthophotoquad aerial photo, Hilo and Papaikou quadrangles, showing the Ha'aheo Elementary School almost completely surrounded by sugarcane fields and the village of Wainaku to the east and south

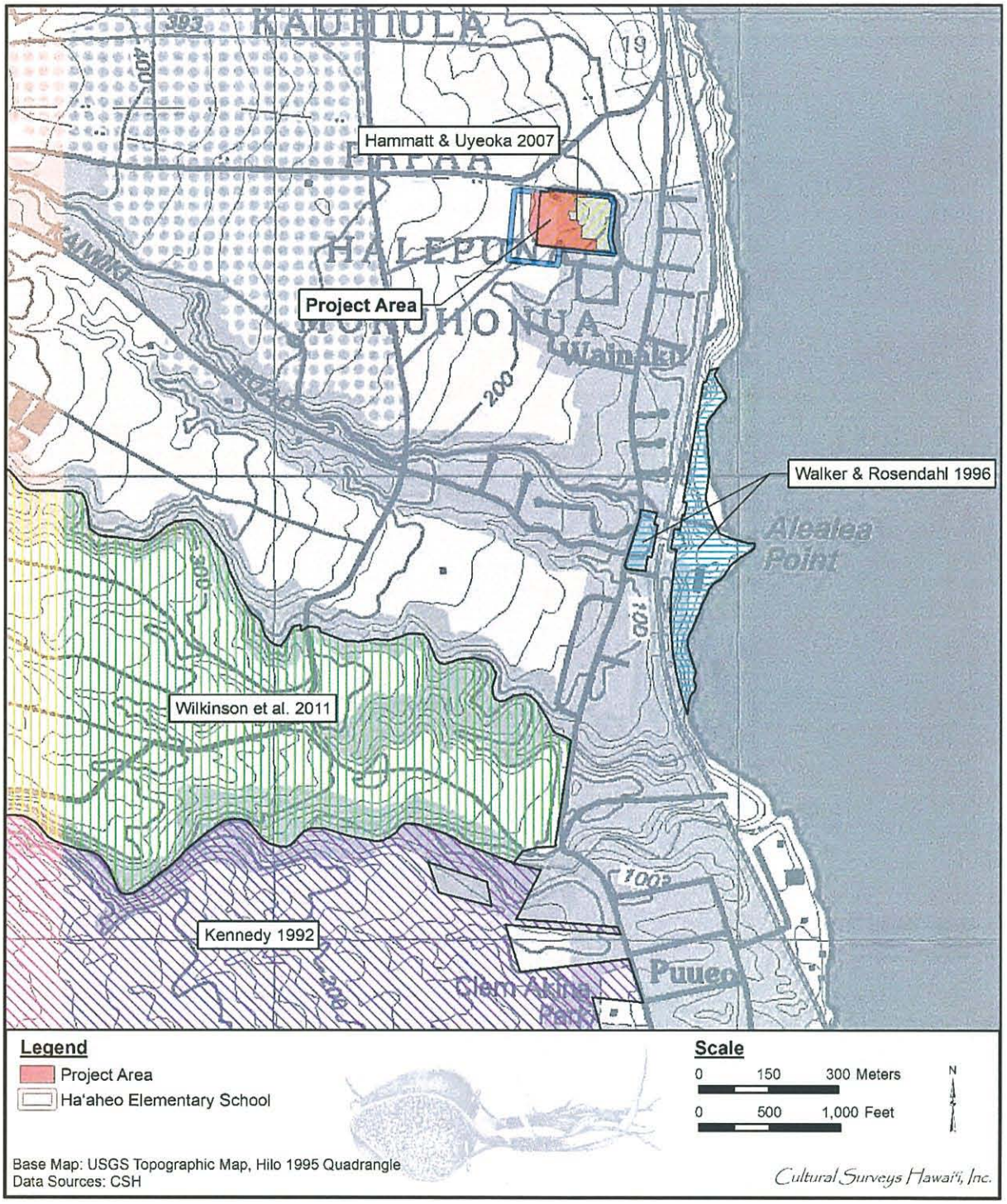


Figure 12. Portion of the 1995 Hilo USGS 7.5-minute topographic quadrangle overlain with previous archeological studies in the vicinity of the project area

Table 1. Previous archaeological studies in the vicinity of the project area

Reference	Type of Study	Location	Results (SIHP # 50-10-35****)
Kennedy 1992	Archaeological inventory survey	482.4 acres in Pu'u'eo, TMKs: [3] 2-6-008: 026, 027, 028, 029, 031, 032, 033, 035, 036, 037, 038, 039; 2-6-029:009, 010, 011, 012, 014, 015	Documented a single stone mound assessed as a possible burial (SIHP # -18074); mound not tested due to its location in a conservation zone and to avoid unnecessary disturbance
Walker and Rosendahl 1996	Archaeological assessment study	Seven discrete locations in Wainaku, Pōnahawai, Pi'ihonua, and Waiākea, TMKs: [3] 2-2-015:033; 2-3-032:001; 2-3-036:003; 2-4-001:012; 2-4-049:018, 019; 2-4-057:001; 2-6-015:001, 002; 2-6-016:002 (current project area in proximity to Site A or the "C. Brewer & Company, Ltd. Site" (TMKs: [3] 2-6-015:001-002 and 2-6-016:002) located at 'Āle'ale'a Point	Within Site A, documented remains of Hilo Sugar Company's Wainaku Mill (SIHP # -21133)
Hammatt and Uyeoka 2007	Archaeological monitoring report	Ha'aheo Elementary School, Halepuna, TMK: [3] 2-6-020:038	No historic properties identified
Wilkinson et al. 2011	Archaeological literature review and field inspection	1,015 acres in Kālalau, 'Alae, and Pāhoehoe Ahupua'a, TMKs: [3] 2-6-009:008 and 022; 2-7-002:002 por.; and 2-7-003:022, 023, 024, and 025	Documented potential for pre-Contact and historic-era historic properties within and near study area; potential for pre-Contact features within gulches and as disturbed, out of context subsurface cultural materials; a series of burial mounds said to be situated near but outside study area could not be relocated; potential historic-era features included a modified natural spring, bridge, and numerous culverts along old cane roads

Figure 13. Photo overlooking school buildings and a grassy area situated within the southern portion of the campus and the improvements project area; view to north

Figure 14. Photo overlooking the basketball and play courts within the improvements project area; view to east

Figure 15. Photo of the paved walkway and classroom buildings within the western portion of the campus and the improvements project area; view to northeast

Figure 16. Photo overlooking the western portion of the improvements project area; view to north

Figure 17. Photo showing the school garden, grassy areas, asphalt walkway, and parking lot (in background) within the central portion of the improvements project area; view to north

Figure 18. Photo overlooking the parking lot in the northwestern portion of the improvements project area; view to southeast

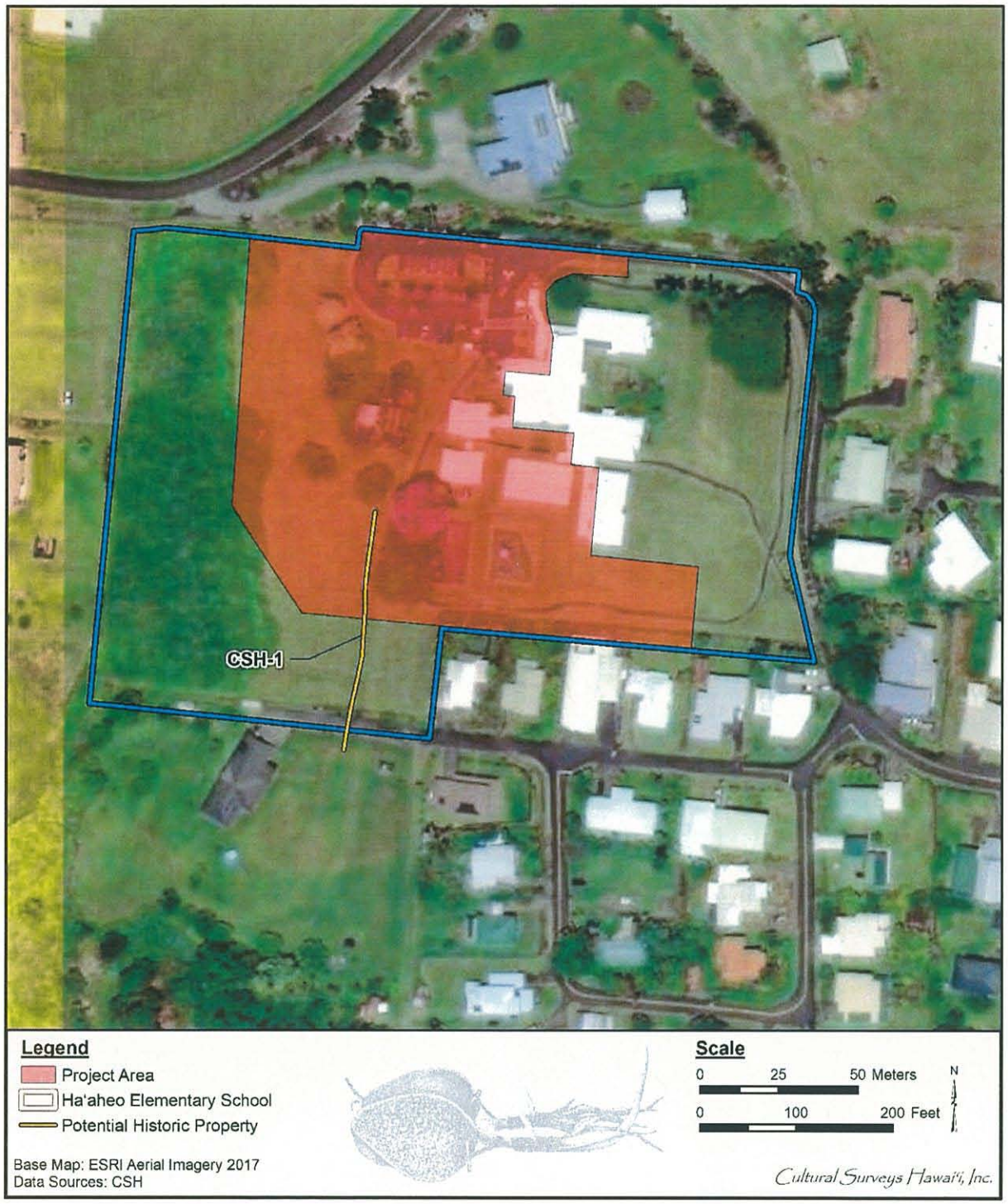


Figure 19. Aerial photograph (ESRI 2017) showing the location of CSH-1 (earthen drainage ditch) within the Ha'aheo Elementary School campus and improvements project area

Figure 20. Photo of CSH-1 (earthen drainage ditch, center frame); view to north

Figure 21. Photo of CSH-1 (earthen drainage ditch, center frame); view to north

Figure 22. Photo of CSH-1 (earthen drainage ditch, center frame) extending outside improvements project area; view to south

Figure 23. Photo overlooking the main Ha'aheo Elementary School building, situated outside the improvements project area, which houses the administrative offices; view to west

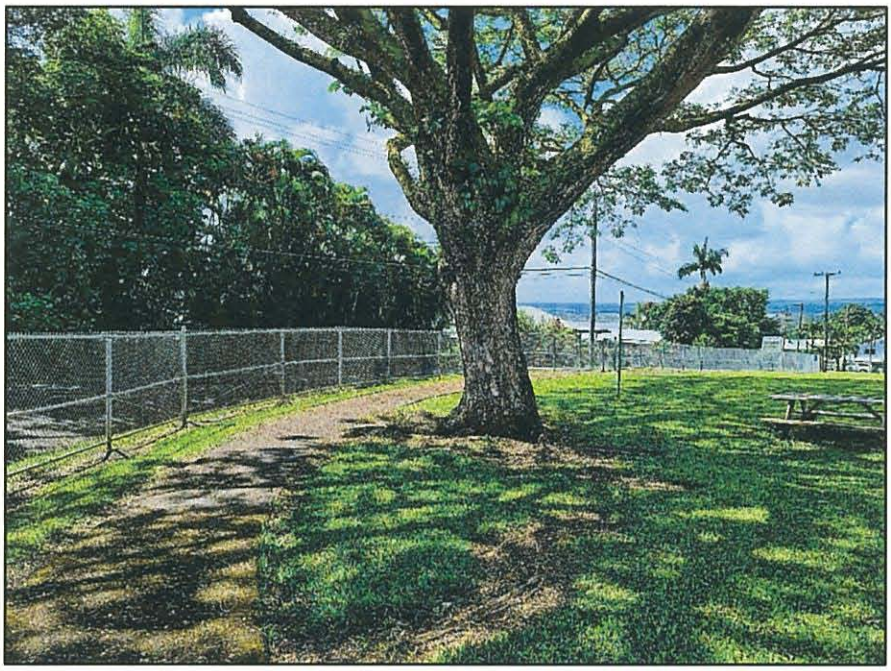


Figure 24. Photo of the large tree at the northeastern corner of the campus, outside the improvements project area; view to east

Figure 25. Photo showing the view back toward the school buildings from the large tree at the northeastern corner of the campus; the improvements project area is behind the main building in the forefront; view to east

References Cited

Bird, Isabella L.
2007 *Six Months in the Sandwich Islands: Among Hawai'i's Palm Groves, Coral Reefs, and Volcanoes*. Introduction by Glen Grant. Originally published 1881. Mutual Publishing, Honolulu.

Dorrance, William H. and Francis S. Morgan
2000 *Sugar Islands: The 165-Year Story of Sugar in Hawai'i*. Mutual Publishing, Honolulu.

Ellis, William
2004 *Journal of William Ellis: A Narrative of an 1823 Tour through Hawai'i*. Mutual Publishing, Honolulu.

ESRI
2017 World Imagery. Esri, Redlands, California. Available online at www.arcgisonline.com/maps/World_Imagery

Giambelluca, Thomas W., Michael A. Nullet, and Thomas A. Schroeder
1986 *Rainfall Atlas of Hawai'i*. Water Resources Research Center, University of Hawai'i at Mānoa. State of Hawai'i Department of Land and Natural Resources, Division of Water and Land Development.

Google Earth
2013 Aerial photographs of Hawai'i. Google Inc., Mountain View, California. Available online at www.google.com/earth.html.

Ha'aheo Elementary School
n.d. Ha'aheo Elementary School website. Available online at www.haaheo.org.

Hammatt, Hallett H. and Kelley L. Uyeoka
2007 *Archaeological Monitoring Report for Ha'aheo Elementary School, Hawai'i Inter-Island DOE Cesspool Project, Halepuna Ahupua'a, Hilo District, Hawai'i Island (TMK: 2-6-20:38)*. Cultural Surveys Hawai'i, Inc., Kailua, Hawai'i.

Hawai'i Tax Map Key (TMK) Service
2010 Tax Map Key [3] 2-6-020. Hawai'i TMK Service, Honolulu.

Jackson, G.E.G.
1882 Map of Hilo Bay. Registered Map 1322. Hawai'i Land Survey Division, State of Hawai'i, Department of Accounting and General Services, Honolulu. Available online at http://dags.hawaii.gov/survey/search.php.

Kalākaua, David
1972 *The Legends and Myths of Hawai'i*. Charles E. Tuttle Company, Rutland, Vermont and Tokyo, Japan.

Kennedy, Joseph
1992 *Archaeological Inventory Final Report for TMK 2-6-08: 26, 27, 28, 29, 31, 32, 33, 35, 36, 37, 38 & 39 and TMK 2-6-29: 09, 10, 11, 12, 14 & 15 Located at Puueo on the Island of Hawai'i*. Archaeological Consultants of Hawai'i, Hale'iwa, Hawai'i.

Lyons, C.J. and Barton

ca.1880s Map of South Hilo, Wailuku to Honomu. Registered Map 939. Tracing by J. Iao in 1928. Hawai'i Land Survey Division, State of Hawai'i, Department of Accounting and General Services, Honolulu. Available online at http://dags.hawaii.gov/survey/search.php.

McEldowney, Holly

1979 *Archaeological and Historical Literature Search and Research Design: Lava Flow Control Study, Hilo, Hawai'i.* Department of Anthropology, Bernice Pauahi Bishop Museum, Honolulu.

Menzies, Archibald

1920 *Hawaii Nei 128 Years Ago.* Unknown publisher.

Newman, T. Stell

1971 Hawaii Island Agricultural Zones, Circa A.D. 1823: An Ethnohistorical Study. *Ethnohistory* 18:355–351, Volume 18, Number 4, Fall, American Society for Ethnohistory.

Pukui, Mary Kawena and Samuel H. Elbert

1986 *Hawaiian Dictionary.* Revised and expanded edition. University of Hawaii Press, Honolulu.

Pukui, Mary Kawena, Samuel H. Elbert, and Esther Mookini

1976 *Place Names of Hawaii.* Revised and expanded edition. University of Hawaii Press, Honolulu.

Sato, H., Warren Ikeda, Robert Paeth, Richard Smythe, and Minoru Takehiro, Jr.

1973 *Soil Survey of the Island of Hawai'i.* U.S. Department of Agriculture and University of Hawai'i Agricultural Experiment Station, Honolulu.

Soehren, Lloyd

2019 *A Catalog of Hawaiian Place Names. Compiled for the Records of the Boundary Commission and The Board Commissioners to Quiet Land Titles of the Kingdom of Hawai'i.* Available online at http://ulukau.org.

USDA (U.S. Department of Agriculture)

2001 Soil Survey Geographic (SSURGO) database. U.S. Department of Agriculture, Natural Resources Conservation Service. Fort Worth, Texas. http://www.ncgc.nrcs.usda.gov/products/datasets/ssurgo/.

USGS (U.S. Geological Survey)

1914 Waiakea USGS 7.5-minute topographic quadrangle. USGS Information Services, Denver, Colorado.

1930 Onomea USGS 7.5-minute topographic quadrangle. USGS Information Services, Denver, Colorado.

1963 Hilo USGS 7.5-minute topographic quadrangle. USGS Information Services, Denver, Colorado.

1966 Papaikou USGS 7.5-minute topographic quadrangle. USGS Information Services, Denver, Colorado.

1977 Orthophoto, Hilo and Papaikou, Hawai'i. USGS Information Services, Denver.

1994 Papaikou USGS 7.5-minute topographic quadrangle. USGS Information Services, Denver, Colorado.

1995 Hilo USGS 7.5-minute topographic quadrangle. USGS Information Services, Denver, Colorado.

Waihona 'Aina

2021 *The Māhele Database*. Available online at http://waihona.com.

Walker, Alan, and Paul H. Rosendahl

1994 *Archaeological Inventory Survey, Chin Chuck Road Project Area, Land of Hakalau Nui, South Hilo District, Island of Hawaii (TMK: 2-9-02:23 and 2-9-04:56)*. Paul H. Rosendahl, Ph.D., Inc., Hilo, Hawai'i.

1996 *Archaeological Assessment Study Hilo Judiciary Complex Project*. Paul H. Rosendahl, Ph.D., Inc, Hilo, Hawai'i.

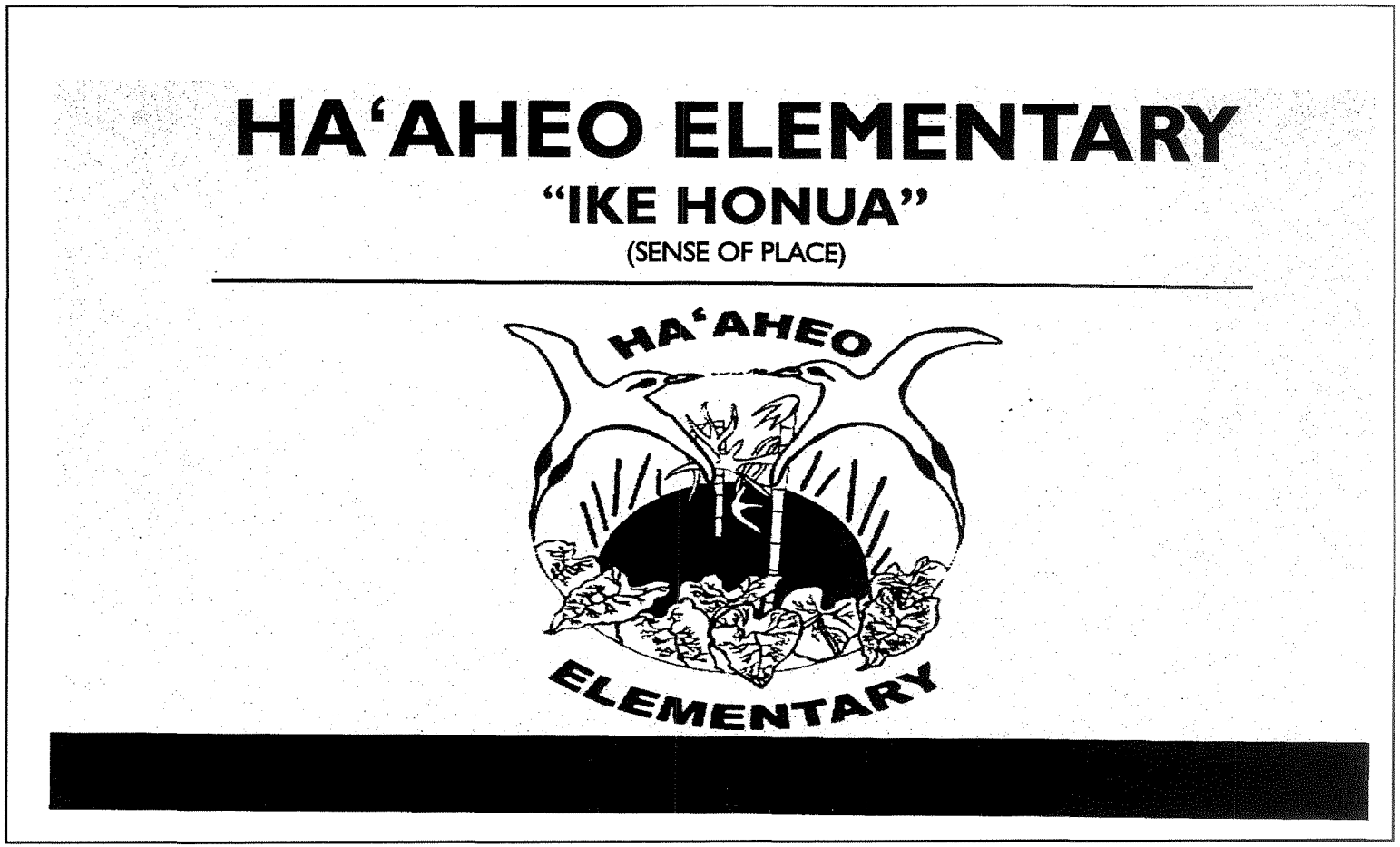
Wilkinson, Sarah, Aulii Mitchell, and Chris C. Monahan

2011 *Draft Archaeological Literature Review and Field Inspection for the Soil and Water Conservation Plan for Kamehameha Schools South Hilo Farm Lands Project, Kālalau, 'Alae, and Pāhoehoe Ahupua'a, South Hilo District, Hawai'i Island [TMKs: (3) 2-6-009:008, 2-6-009:022, (3) 2-7-002:002 por. and (3) 2-7-003:022, :023, :024, :025]*. Cultural Surveys Hawai'i, Inc., Kailua, Hawai'i.

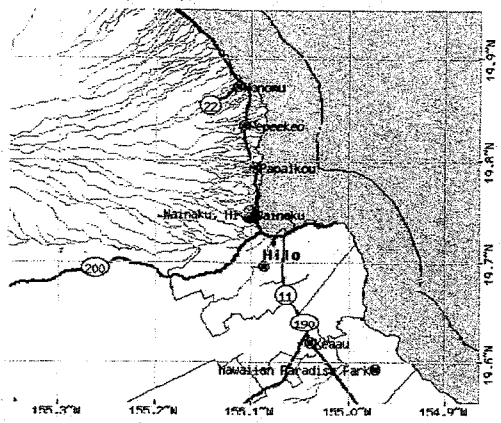
Williams, Nona

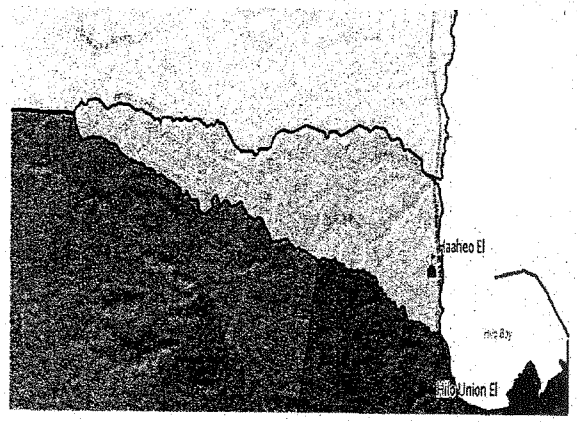
1992 *Ragsdales of America, Volumes 6-14*. University of Wisconsin, Madison.

Appendix A HES Brochure



HA'AHEO ELEMENTARY IS LOCATED RIGHT OUTSIDE OF HILO TOWN ALONG THE COAST OF HILO BAY IN WAINAKU. THE GEOGRAPHIC AREA FOR THE SCHOOL IS SHADED GREEN WHICH MAINLY GOES STRAIGHT UP KAIWIKI AND IS FLANKED BY MA'ILI AND KAIWIKI STREAMS.





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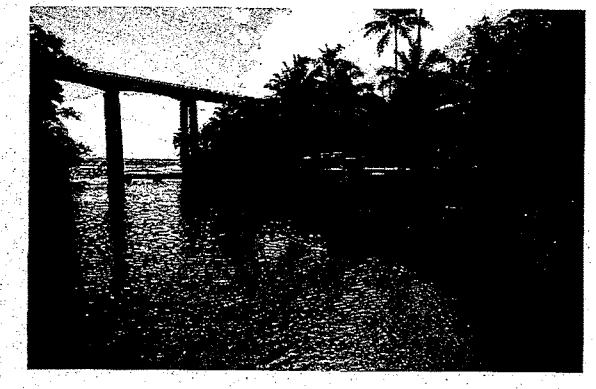
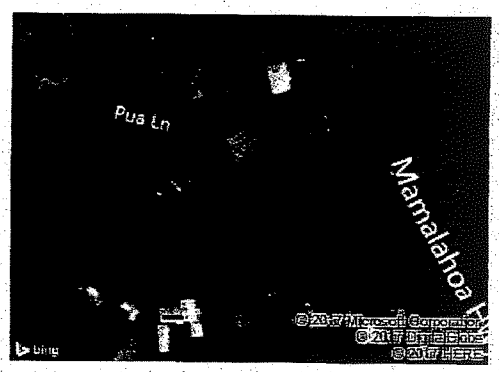
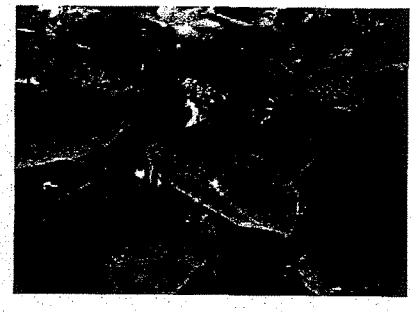
THE PERIMETER OF HA'AHEO'S GEOGRAPHIC AREA IS BETWEEN THE HILO SIDE OF THE HONOLI'I BRIDGE AND PUA LANE





HA'AHEO ELEMENTARY IS LOCATED ON THE FORMER KALO FIELD OVERLOOKING HILO BAY FOR THE PAST 129 YEARS. IN THE MID 1800'S THE KALO PATCHES BECAME SUGAR PLANTATIONS. HA'AHEO WAS FOUNDED IN 1888 TO EDUCATE THE CHILDREN OF THE SUGAR PLANTATION WORKERS OF WAINAKU.



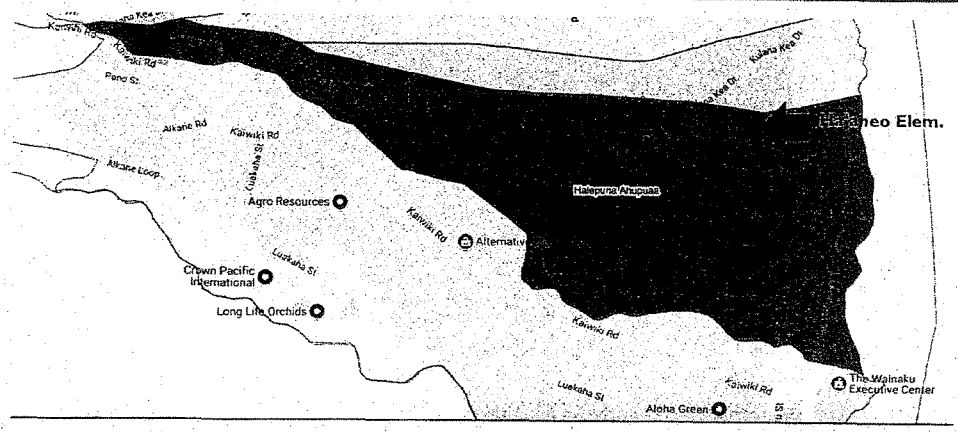
From Kalo.....

To Ko

IN THE LATE 1700'S KING KAMEHAMEHA INSTRUCTED HIS PEOPLE NEAR HILO TO PLANT KALO TO FEED HIS WARRIORS UPON THEIR ARRIVAL TO THE AREA. THE RESIDENTS CAME TOGETHER AND PLANTED A LARGE FIELD OF KALO. KAMEHAMEHA STOOD AND MARVELED OVER THE WORK OF THE PEOPLE AND NAMED THE AREA HA'AHEO, MEANING PROUD, TO HONOR THEIR HARD WORK. FROM THE LAND GROWING KALO, THEN LATER SUGAR CANE AND VARIOUS AGRICULTURE, AND NOW IT IS A RESIDENTIAL AREA THAT CONTINUES TO SUPPORT A PROUD AND HARDWORKING COMMUNITY.

"Ha'aheo wau i ka 'oukou hana, a i kapa 'ia keia wahi 'o Ha'aheo"
(I am proud of your work! This place I name Ha'aheo)"

HA'AHEO ELEMENTARY IS LOCATED IN THE HALEPUNA AHUPUA'A WHICH BECAME GOVERNMENT LAND IN 1848. HALEPUNA MEANS CORAL HOUSE. AN AHUPUA'A IS AN ANCIENT HAWAIIAN LAND DIVISION SYSTEM WHICH IS A SELF-SUSTAINING SECTION OF LAND THAT IS USUALLY WEDGE SHAPED AND RUNS FROM THE MOUNTAIN TO THE SEA. THE HALEPUNA SCHOOL LOT (2.45 ACRES) WAS GRANTED TO THE BOARD OF EDUCATION IN 1882.



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TIMELINE OF HISTORICAL EVENTS

- **1848 – 1893 Mahele to the Overthrow**
  - 1848 – Hawaiian land redistribution by Kamehameha III (Mahele)
- **1893 – 1941 Annexation to World War II**
  - 1893 – The overthrow of the Hawaiian Monarchy of Queen Lili'uokalani
- **1941 – 1959 World War II to Statehood**
  - 1941 – The start of World War II
- **1959 – present Statehood of Hawaii until present day**
  - 1959 – Hawaii became the 50th state of the United States of America

- Ha'aheo was founded in 1888, right before the overthrow of the Hawaiian Monarchy

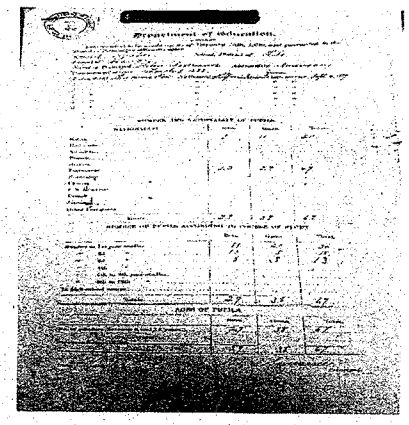
HA'AHEO CHURCH

THE CHURCH WAS LOCATED ON THE TOP LEFT CORNER OF OUR CAMPUS. THERE WAS A GRAVEYARD IN FRONT OF IT NEAR OUR BASKETBALL COURT AREA. THERE WAS ALSO A SECOND GRAVEYARD LOCATED IN THE FRONT CORNER OF OUR SCHOOL WHERE THE LARGE TREE IS LOCATED TO DETER ANYTHING BEING BUILT IN THE AREA.

THE MOUND

BUILT IN APPRECIATION FOR THE ART OF HULA IN 1999 BY THE KEOLANUI FAMILY WITH HELP FROM OTHER HA'AHEO PARENTS AND DONATIONS OF THE ROCK AND CEMENT. THE KEOLANUI'S HAD A DAUGHTER THAT THAT ATTENDED HA'AHEO ELEMENTARY AND LOVED HULA WHICH WAS THE INSPIRATION FOR OUR TRADITIONAL HULA MOUND. IT IS LOCATED AT THE PIKO (THE CENTER) OF THE SCHOOL AND SHOULD BE TREATED WITH RESPECT.

SCHOOL DATA IN 1888 (SERVERANCE) AND CURRENT SCHOOL DATA (SUEOKA). FROM PAPER AND PENCIL TO COMPUTER TECHNOLOGY.



School Enrollment

Enrollment	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Enrollment	199	197	196	188	189

School Attendance

Attendance	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Attendance	94.41%	94.87%	[illegible]	94.82%	[illegible]

Total Number of Incidents

Incidents	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Incidents	4	21	21	32	22

Total Number of Suspensions

Action	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Suspension		1	1		2

Enrollments by SES

SES	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
No	37.87%	39.57%	36.73%	40.43%	39.15%
Yes	62.13%	60.43%	63.27%	59.57%	60.85%

Enrollments by IDEA

IDEA	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
No	94.67%	93.95%	94.39%	94.15%	92.06%
Yes	5.33%	6.42%	5.61%	5.85%	7.94%

Enrollments by ELL

ELL	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
No	95.86%	97.59%	95.41%	98.40%	98.30%
Yes	4.14%	2.42%	4.59%	1.60%	1.70%

Enrollments by Gender

Gender	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Female	50.30%	48.66%	48.98%	45.21%	47.62%
Male	49.70%	51.34%	51.02%	54.79%	52.38%

Enrollments by Ethnicity

Ethnicity	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Asian	24.85%	21.83%	19.39%	13.96%	15.87%
Hispanic	13.61%	13.96%	16.33%	18.06%	20.11%
Multiple	12.43%	16.58%	16.84%	22.87%	23.28%
Pacific Islander	22.16%	21.69%	23.16%	26.60%	25.53%
White	15.48%	12.90%	13.78%	16.45%	14.81%
American Indian or Alaska Native			.51%		

[redacted]

LAND OWNERSHIP IN THE PAST

- Ha'aheo was in Crown Lands under Princess Victoria Kamamalu (sister of Kamehameha the IV and V)
- Daughter of Kekuanaoa
- She was Queen for the day and then gave the title to her brother Kamehameha the V.
- Ha'aheo falls within the 10 acres of land granted to 2 families, the Heleloa's and Kumulae's