

STATE OF HAWAII
DEPARTMENT OF EDUCATION
KA 'OIHANA HO'ONA'AUAO
P.O. BOX 2360
HONOLULU, HAWAII 96804

OFFICE OF FACILITIES AND OPERATIONS

September 27, 2023

TO: Mary Alice Evans
Director, Office of Planning and Sustainable Development
Environmental Review Program

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

SUBJECT: **Draft Environmental Assessment and Anticipated Finding of No Significant Impact**
Helemano Elementary School – New Administration/Library Building
1001 Ihiihi Avenue
District of Wahiawa, City and County of Honolulu, Hawaii
Job No.: Q72203-18
Tax Map Key: (1) 7-1-002:017

The Hawaii Department of Education has reviewed the Draft Environmental Assessment for the Helemano Elementary School New Administration / Library Building and has issued an Anticipated Finding of No Significant Impact (AFONSI) determination. Please publish this determination in the next edition of the Environmental Notice.

The proposed action will provide a new permanent building at a central location with dedicated space for an administrative center and expanded library.

The Draft Environmental Assessment and AFONSI will be uploaded to the Environmental Review Program website.

Should you have any questions, please contact Ms. Karynn Yoneshige, Project Manager, at (808) 784-5127 or email at Karynn.Yoneshige@k12.hi.us.

ESI:ky

c: Facilities Development Branch


Log # 10608 (KY) Evans, AFONSI Letter- Helemano ES- New Administration-Library Bldg #Q72203-18


Final Audit Report


2023-09-27


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To: [DBEDT OPSD Environmental Review Program](#)
Subject: New online submission for The Environmental Notice
Date: Thursday, September 28, 2023 2:14:19 PM

Action Name

Helemano Elementary School Administration/Library 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

Wahiawā, O'ahu

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

[1] 7-1-002: 017

Action type

Agency

Other required permits and approvals

Variance from Pollution Controls, Facility Access Review, Historic Site Review, Water Connection, Building, Grading and Grubbing, Excavation, Certificate of Occupancy, Street Usage, HFD Plan Check

Proposing/determining agency

Department of Education, State of Hawai'i

Agency contact name

Karynn Yoneshige

Agency contact email (for info about the action)

Karynn.Yoneshige@k12.hi.us

Email address or URL for receiving comments

Karynn.Yoneshige@k12.hi.us

Agency contact phone

(808) 784-5127

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 purpose of the action is to provide a new permanent building at a central location with dedicated space for an administrative center and expanded library.

Reasons supporting determination

See Draft Environmental Assessment, Section 7, Determination of Significance

Attached documents (signed agency letter & EA/EIS)

- [Helemano-Elem-School.pdf](#)
- [Log-10608-KY-Evans-AFONSI-Letter.pdf](#)

Action location map

- [Helemano-Elementary-School-Figure-1-Standard.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

**HELEMANO ELEMENTARY SCHOOL
ADMINISTRATION /LIBRARY BUILDING**
Kuaokalā, District of Wahiawā, O'ahu



Prepared For

Department of Education
State of Hawai'i
Facilities Development Branch
3633 Waialae Avenue
Honolulu, Hawai'i 96816

June 2023

DRAFT ENVIRONMENTAL ASSESSMENT

HELEMANO ELEMENTARY SCHOOL ADMINISTRATION /LIBRARY BUILDING

Kuaokalā, District of Wahiawā, O'ahu

Prepared in Partial Fulfillment of Chapter 343, Hawai'i Revised Statutes and Hawai'i Administrative Rules Chapter 11-200.1, Department of Health, State of Hawai'i

Prepared for

Department of Education, State of Hawai'i
Office of Facilities and Operations
Facilities Development Branch-Project Management Section
3633 Waialae Avenue
Honolulu, Hawai'i 96816

Prepared by

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

and

WhiteSpace Architects
4747 Killauea Avenue, Suite 201
Honolulu, HI 96816

June 2023

PROJECT PROFILE

Project: Helemano Elementary School
New Administration / Library Building
DOE Job No. Q72203-18

Street Address: 1001 'Ihi'ihi Avenue
Whitmore Village, Hawai'i 96786

Proposing/Determining Agency: Department of Education
Facilities Development Branch
State of Hawai'i
3633 Waialae Avenue
Honolulu, Hawai'i 96816

Tax Map Key: [1] 7-1-002: 017
Land Area: 8.0 acres
Area To Be Disturbed: c. 0.85 acres

Land Owner: City and County of Honolulu

State Land Use Designation: Urban
O'ahu General Plan: Urban Fringe
Sustainable Communities Plan: Central O'ahu
Urban Land Use Map: Residential and Low Density Apartment
Zoning: R-5 Residential
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

Determination: Anticipated Finding of No Significant Impact

Project Contact: Karynn Yoneshige, Project Manager
Hawaii Department of Education
Office of Facilities and Operations
Facilities Development Branch
Project Management Section
3633 Waialae Avenue
Honolulu, HI 96816

Phone: 808-784-5127
Email: Karynn.Yoneshige@k12.hi.us

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SECTION 1

DESCRIPTION OF THE PROPOSED ACTION

The Department of Education, State of Hawai'i, proposes to construct improvements at Helemano Elementary School located in Whitmore Village, District of Wahiawā, O'ahu, Hawai'i. Helemano Elementary School ("Helemano" or "School") is located in a small residential community bounded by an unnamed gulch or ravine to the north, Lalawai Street to the east, 'Ihi Avenue to the south, and single-family residences to the west. Lalawai Street and 'Ihi Avenue are residential streets lined with single-family residences across the School.

The 8.0 acre parcel bears Tax Map Key: [1]7-1-002: 017 and is owned by the City and County of Honolulu. A Vicinity Map and Tax Map are shown as Figures 1 and 2.

A. Purpose of the Proposed Action

The purpose of the action is to provide a new permanent building at a central location with dedicated space for an administrative center and expanded library.

B. Technical Characteristics

1. Demolition

The existing single level, 2,800 square foot Administration Building will be demolished and replaced with a new Administration / Library Building on the same site as the existing (See Photograph 1). The parking lot adjoining the Administration Building will be demolished but a section will remain intact to access a temporary student drop off / pick up area and also provide for visitor parking.



Photograph 1. West View of Administration Building

Existing water and wastewater lines will be removed and terminated at the source. Electrical wiring, panels, and conduits will be removed. Temporary power to the building site will be provided during construction.

Grubbing will remove grass and shrubs around the building. Existing trees may be demolished or relocated to another on-campus location.

A Hazmat investigation uncovered asbestos containing materials and arsenic containing materials in the building components. Lead based paint and lead containing paint were detected at or below minimum threshold levels. All hazardous materials will be removed prior to demolition following State Department of Health protocols.

Vector control procedures will be implemented as required by State and County regulations.

2. Construction Phasing Plans (See Sheet 007)

The site of the Administration Building and its adjacent environs will be fenced during construction. The fenced area includes the site of the Administration Building, a grass lawn behind the Building, part of the parking area, and the open area between the front of the Administration Building and 'Ihi Avenue.

Administrative functions and staff displaced by construction will be relocated into three portable trailers. One trailer will be placed behind the Cafeteria and Building D and two trailers near the east end of Building C. Functions assigned to each location will be determined at a later time.

Staff parking will temporarily relocate to the rear of the School.

The student drop off / pick up area on 'Ihi Avenue will be closed. A temporary area with vehicle and bus access from Lalawai Street will be set up in the parking lot adjacent to the construction area and administration office trailers near Building C (See Photograph 2).

The construction area will be fenced and safe access provided to the Cafeteria from other campus buildings and areas. A tunnel will be constructed between the Cafeteria and the building site for access to 'Ihi Avenue.

3. Administration / Library Building

A rectangular shaped, two-story building will be constructed on the site of the existing Administration Building (See Sheet A100, Site Plan). Administrative functions will locate on the approximately 6,140 square foot ground floor and the Library on the second floor. The second floor is approximately 4,970 square feet which is 2.5+ times the size of the existing Library. Based on the Floor Plans (Sheets A101 and A102) floor area is programmed for the following uses respectively:

Administration: Administrative Offices (2) and Conference Room, Counselor Offices (3), Health Room, Conference Rooms (3), Specialty Offices (3), Administration Office Space, Lounge, Utility Rooms (3), Restrooms (4), and Custodial Closet.

Library: Circulation Desk, Reading Bookstacks, Periodicals / Media, Storytelling Area, Offices Workroom/Production, Professional Staff Material, Student Conference Rooms, Utility Room, and Restrooms (2)

The structure will be constructed on a poured in place concrete slab on spread footings, framed by CMU exterior walls, and topped by a flat cast in place concrete roof over metal decking.

The building is approximately 25'-4" high measured from existing grade exceeding the 25-foot height limit. A height Waiver will be requested from the Department of Planning Permitting. Exterior Elevations are shown on Sheets A201 and A202.

4. Circulation and Parking

A reconfigured and restriped parking lot will replace the existing. The new lot will provide 37 parking stalls and improve traffic circulation.

The existing lawn fronting the Administration Building will be replaced by a 24-foot wide driveway between the parking lot and a new exit to be constructed near the Cafeteria. The one-way driveway will provide a safe student drop off/pick up area on school grounds instead of 'Ihi'ihi Avenue as is now the case. The covered drop off area will provide relief from the heat on sunny days and protection from rain during inclement weather.



Photograph 2. 'Ihi'ihi Avenue Looking East. Residences on the Right. Existing On Street Student Drop Off / Pick Up in the Foreground.

'Ihi'ihi Avenue and Lalawai Street driveways will be provided with new driveway approaches for two-way vehicle movement.

5. Drainage and Grading

The area to be disturbed is approximately 0.85 acres and area to be graded approximately 0.77 acres. The area to be graded generally would be limited to the area of the existing Administration Building, new drop off area, and parking lot. Earthwork quantities are estimated at 659 CY of excavation and 851 CY of embankment. Grading and Drainage Plans are shown as Sheets C401, 402, and 403.

During construction, runoff will be directed to a 30' X 30' sediment trap to be constructed in the southeast corner of the parking lot. Overflow will be discharged into vegetated areas around the parking area.

Post-construction runoff will surface flow to vegetated swales placed around both improvements. An existing drywell between the Administration Building and Building C will be demolished and a new, larger drywell installed in almost the same location. Runoff from an existing landscaped area between both buildings will discharge into the new drywell.

6. Infrastructure

An existing 8" main in 'Ihi'ihi Avenue supplies potable water to the on-site water distribution system.

Wastewater will be collected and conveyed into the on-site wastewater system.

7. Fire Protection

The new building will be equipped with a fire sprinkler system on both floors.

An existing fire hydrant located at the front of the existing Administration building can provide adequate fire flow. The hydrant is fed by a 6" fire flow line.

Fire apparatus access will be through the 24-foot wide parking lot driveway.

8. Sustainability

Sustainable features for creating and enhancing a comfortable, productive, healthy, and quality environment are incorporated into the building and fixture designs. Features promoting energy conservation and minimizing consumption include energy efficient lighting (LED lights) and controls (dimming switches and occupancy sensors), daylight harvesting (use of natural lighting and reduction in artificial lighting), and a high efficiency HVAC system.

Flow reducers on plumbing fixtures, low gallon flush toilets, and smart controllers will aid in water conservation in restrooms, drinking fountains, classroom sinks, and irrigation system.

C. Economic Characteristics

The construction cost budget is estimated at \$16.5 million and will be funded by the State of Hawai'i. The improvements will be built in one phase commencing on or about September 2024 and take 14-18 months to complete. Work will commence after all permits and approvals have been received.

D. Social Characteristics

Administrative functions will relocate into trailers positioned at two campus locations.

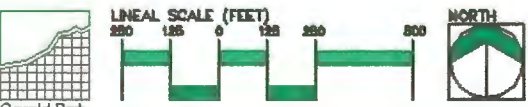
The Library, which is located in Classroom Building D, will remain in place until construction is completed. After relocating the Library, the vacant space will be repurposed for another School use.

The project will not permanently displace any classroom, playground, or School activity.



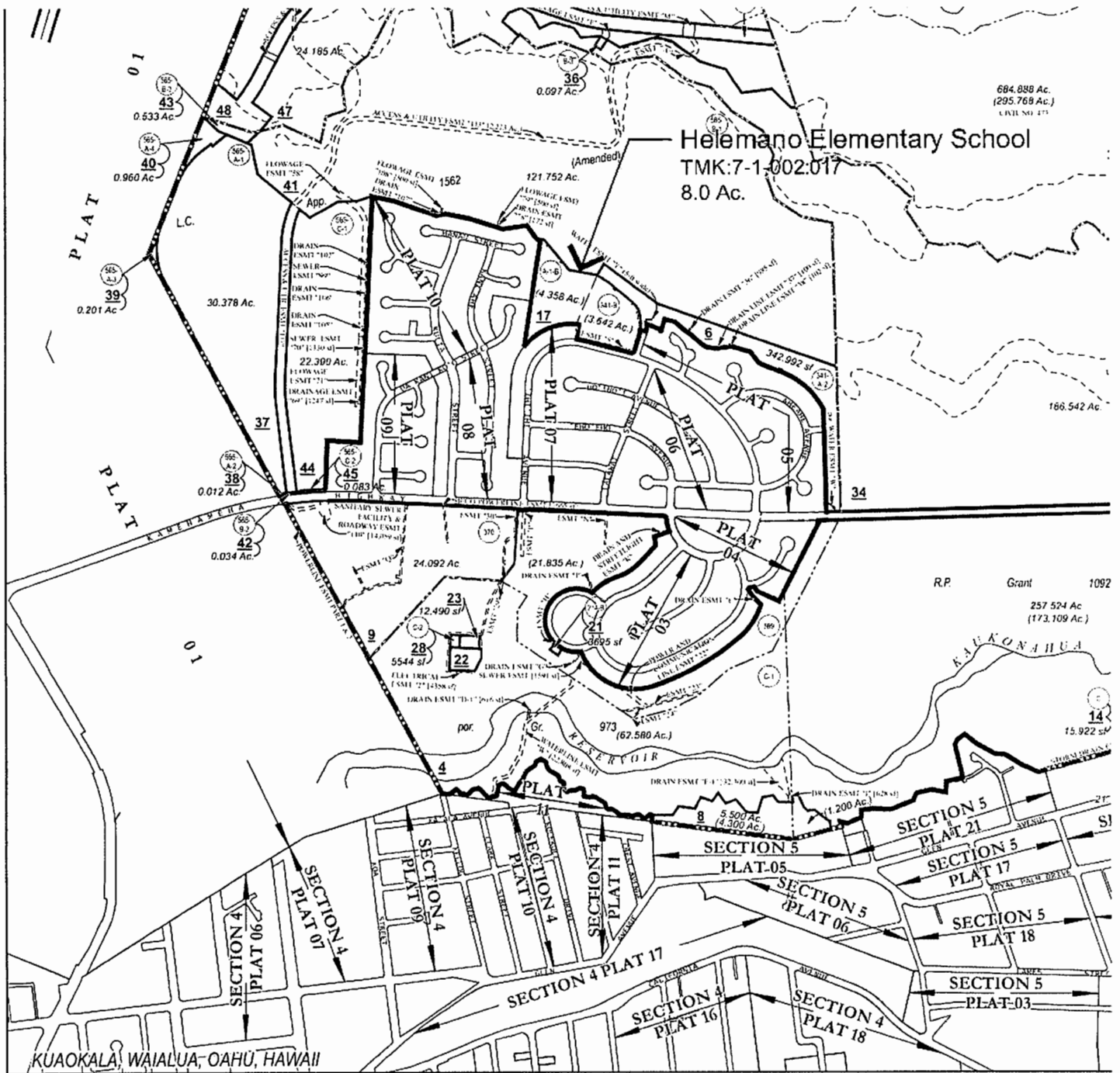
Source: Google Maps 2023 Imagery

Figure 1
 Vicinity Map
 Helemano Elementary School
 New Administration / Library Building



Gerald Park
 Jean Partner
 February 2023
 Whitmore Village, District of Wahiawā, O'ahu, Hawaii

Department of Education, State of Hawaii

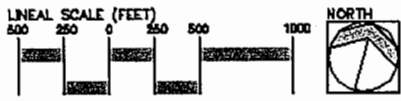


DEPARTMENT OF BUDGET & FISCAL SERVICES
 REAL PROPERTY ASSESSMENT DIVISION
 TAX MAPS BRANCH
 CITY & COUNTY OF HONOLULU
TAX MAP

FIRST TAXATION DIVISION

ZONE	SECTION	PLAT
7	1	002

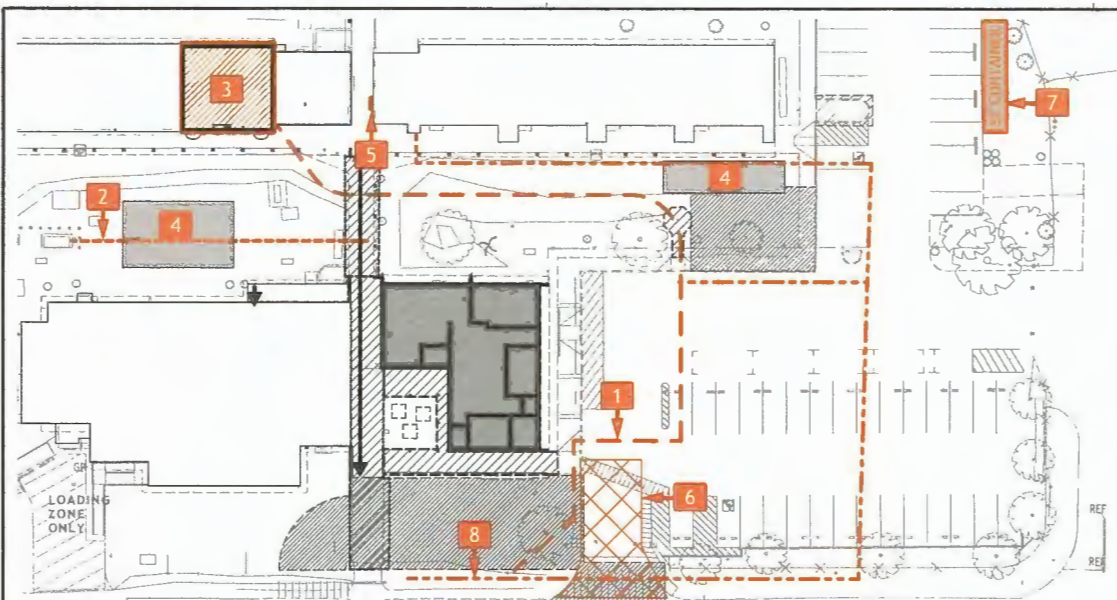
SCALE: 1 INCH = 500 FEET
 Source: Google Maps 2023 Imagery



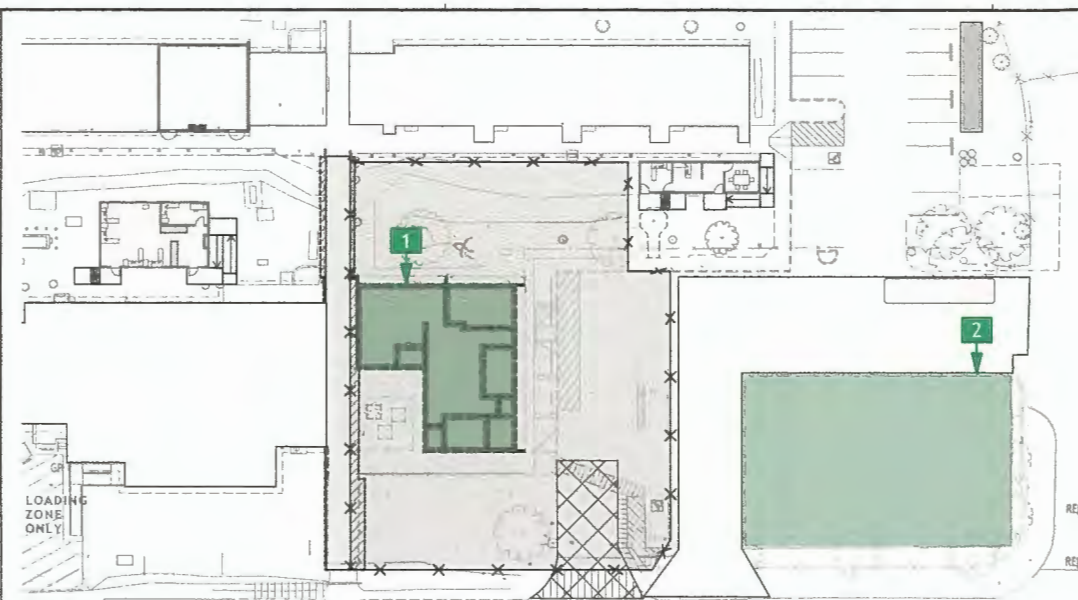
Whitmore Village, District of Wahiawā, O'ahu, Hawaii

Tax Map Helemano Elementary School New Administration / Library Building

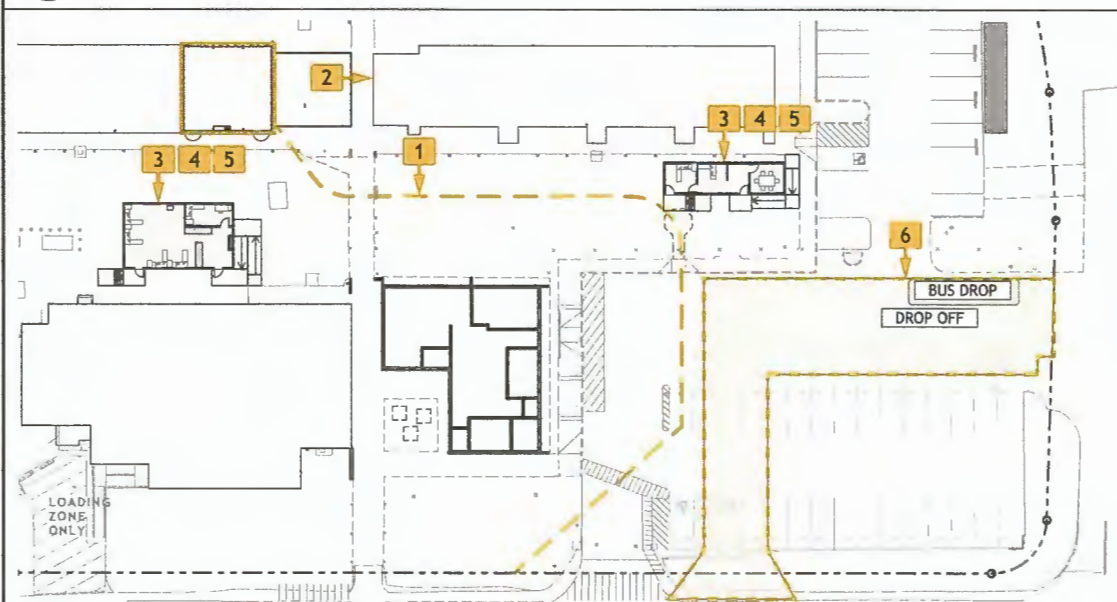
Department of Education, State of Hawaii



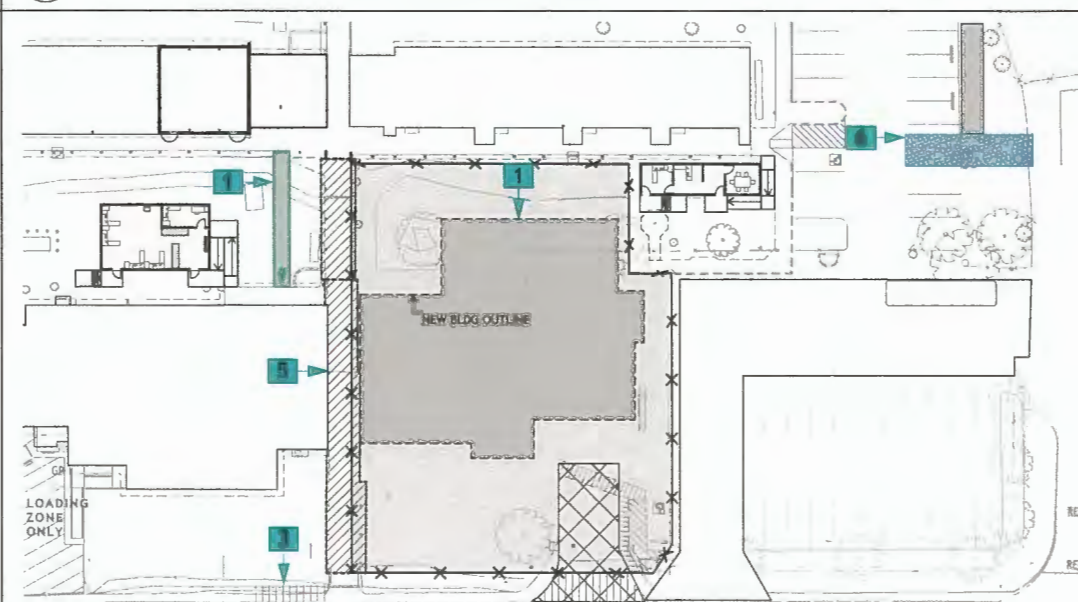
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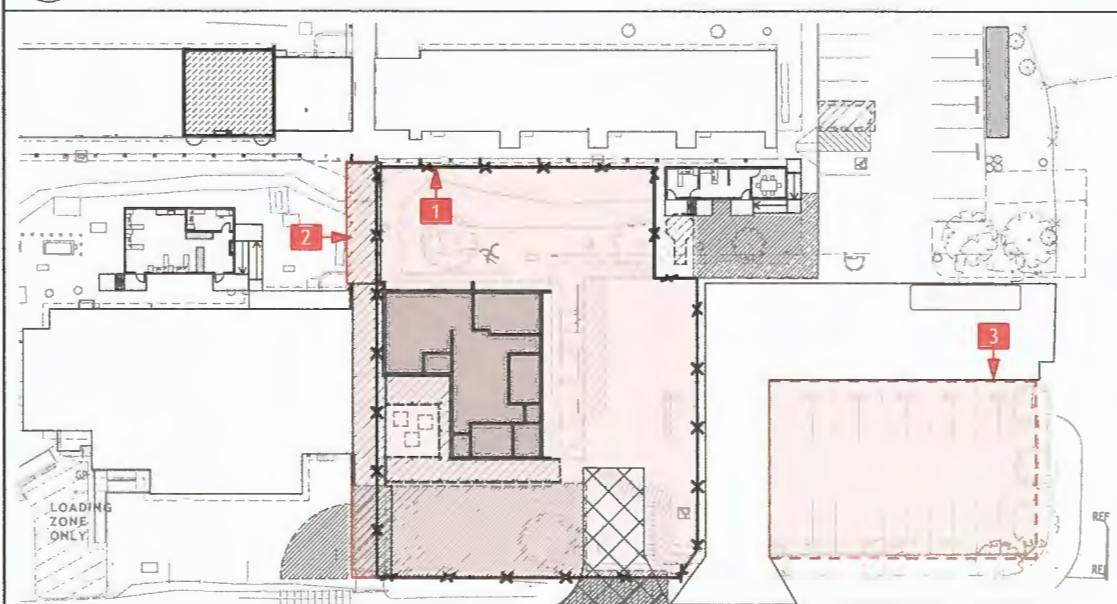
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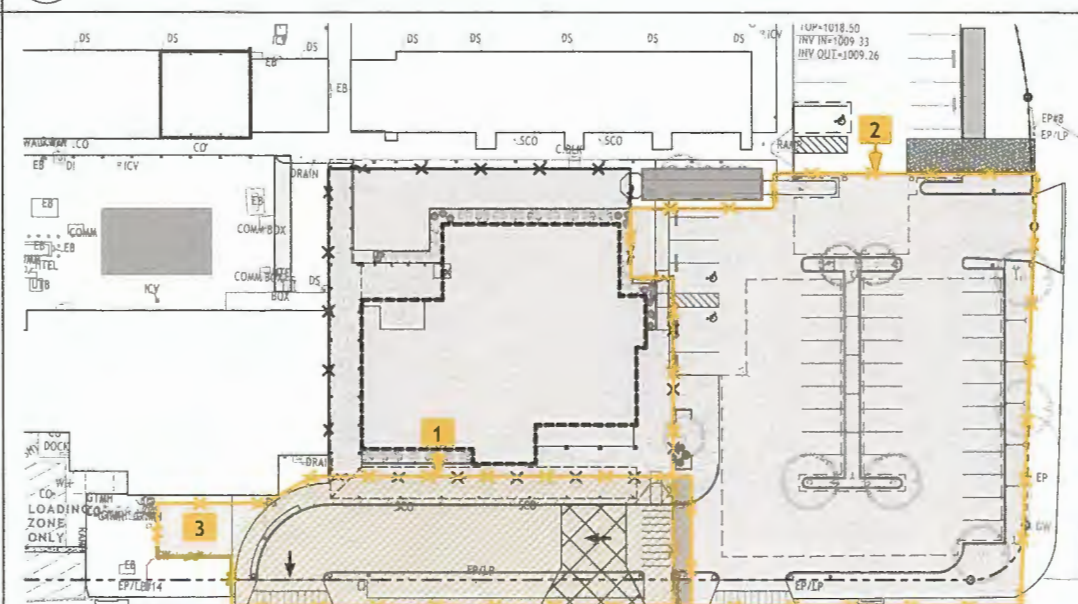
2 PHASE 2
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5 PHASE 5
Scale: 1/32" = 1'-0"
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3 PHASE 3
Scale: 1/32" = 1'-0"
0 16' 32' 64'



6 PHASE 6
Scale: 1/32" = 1'-0"
0 16' 32' 64'

- PHASE 1: (SUMMER BREAK)**
1. TRENCH FOR MDF
 2. PULL ELECTRICAL BEHIND CAFETERIA
 3. PREPARE MDF ROOM (BLDG D)
 4. PULL/PREP UTILITIES FOR TEMP TRAILER(S) (ELECT, TELCOM, AND FIRE ALARM)
 5. MOVE FIRE ALARM PANEL TO TEMP LOCATION
 6. CONSTRUCT CONSTRUCTION ACCESS DRIVEWAYS (2) ON SITE
 8. REROUTE WATERMETER LOCATION
- PHASE 2:**
1. INSTALL NEW MDF AND TRANSFER SERVICE TO NEW
 2. FIRE ALARM OK @ TEMP LOCATION. HOOK UP TO SCHOOL
 3. INSTALL TEMP TRAILERS, STAIRS AND RAMP
 4. CONNECT UTILITIES TO TEMP TRAILERS
 5. ADMIN MOVES IN TRAILERS
 6. CONSTRUCT/PREPARE TEMPORARY DROP OFF & PARKING
 7. INSTALL TEMP STORAGE CONTAINER AND MOVE ITEMS TO STORAGE
- PHASE 3:**
1. GC-INSTALL CONSTRUCTION FENCE
 2. GC-DEMO CANOPIES AND INSTALL TUNNEL FOR WALKING
 3. PREP & CONSTRUCT DROP OFF AND SMALL PARKING LOT
- PHASE 4:**
1. DEMO EXIST ADMIN BUILDING
 2. OPEN SMALL PARKING LOT
 3. DISCONNECT & CAP UTILITIES (WATER/WASTE)
- PHASE 5:**
1. CONSTRUCT TEMP PATH TO CAFE
 2. DEMO TUNNEL AT WALKWAY
 3. EXPAND CONSTRUCTION AREA TO INCLUDE NEW DROP OFF DRIVEWAY AND VEGETATED SWALE
 4. MOVE SEDIMENT TRAP
 5. CONSTRUCT NEW WALKWAY CANOPY
 6. CONSTRUCT TEMP ENTRY INTO BACK PARKING AREA
- PHASE 6: (NEW DROP-OFF AREA)**
1. CONSTRUCT NEW DRIVEWAY ENTRY
 2. NEW PARKING LOT IMPROVEMENTS
 3. CONSTRUCT VEGETATED SWALES
 4. NEW FENCE & CATTLE GATES AROUND PARKING LOT

REVISION NO.	SYM.	DESCRIPTION	BY	DATE	APPROVED:

License Expires 4-30-24

This work was prepared by me or under my supervision, and construction of this project will be under my observation.

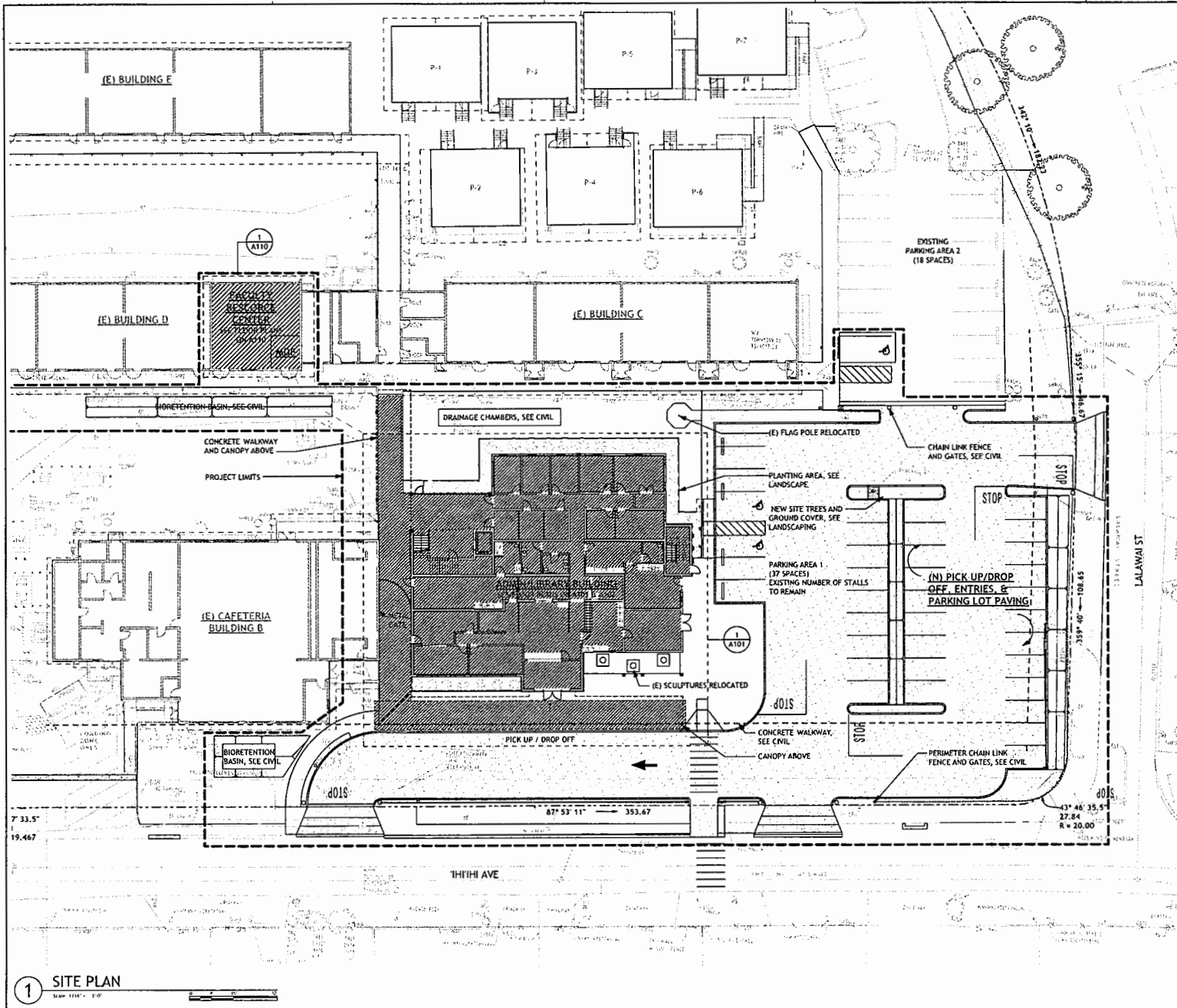
DEPARTMENT OF EDUCATION
STATE OF HAWAII

HELEMANO ELEMENTARY
NEW ADMINISTRATION / LIBRARY BUILDING

WAHAHA OAHU HAWAII

PHASING PLANS

DESIGNED BY: LA	CHECKED BY:	JOB NO. Q72203-18	DRAWING NO. 007
DRAWN BY:	APPROVED BY:	DATE MM/DD/YYYY	SHEET 15
SCALE:		OF 198 SHEETS	



SITE NOTES

- NEW BUILDING & CANOPY STRUCTURE
- NEW PARKING LOT
- EXISTING BUILDING

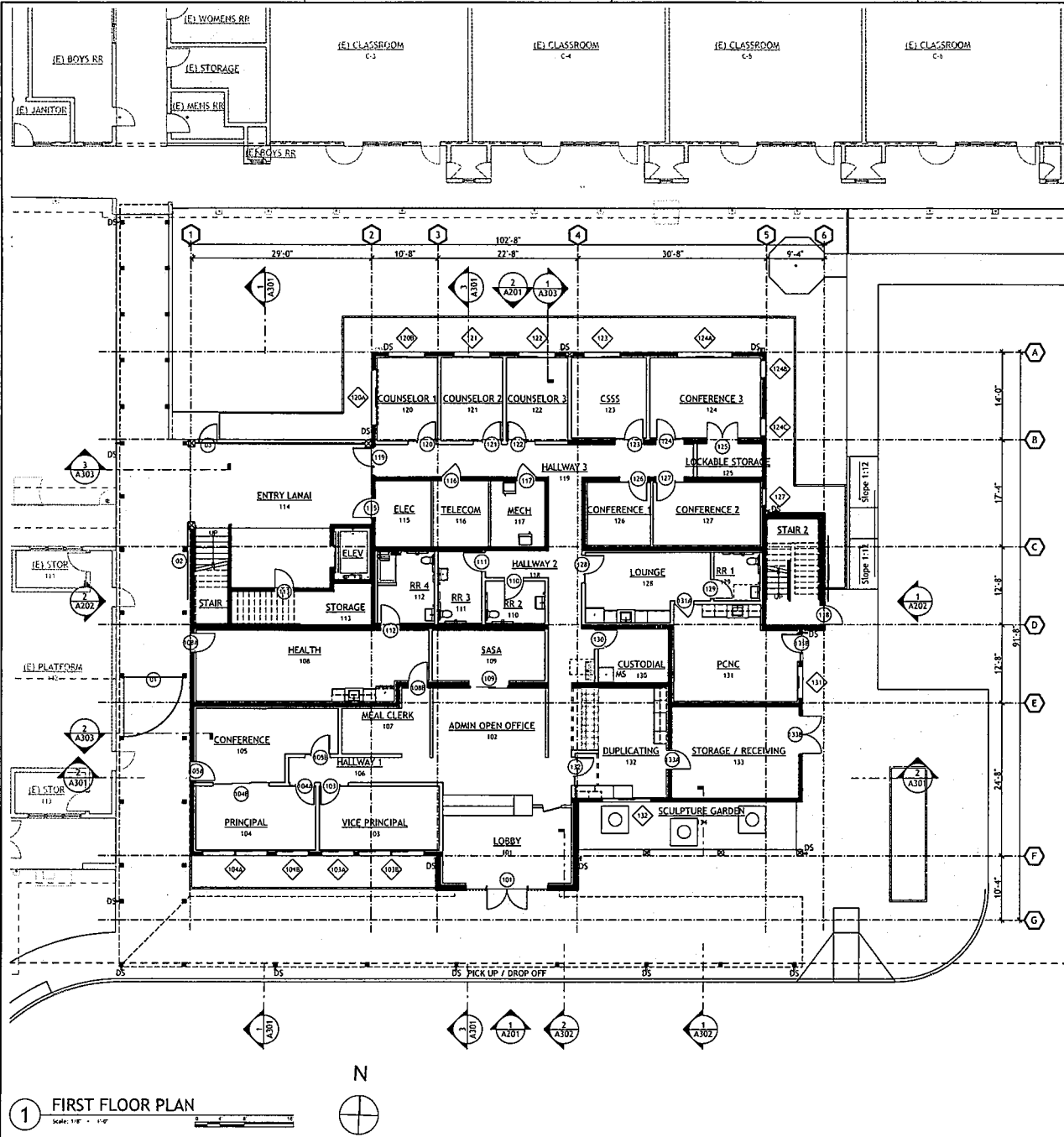
REVISION	BY	DATE	APPROVED

DEPARTMENT OF EDUCATION
STATE OF HAWAII
HELEMANO ELEMENTARY
NEW ADMINISTRATION / LIBRARY BUILDING

SITE PLAN

License Expires 4-30-24		DATE	DATE
DESIGNED BY	DRAWN BY	DATE	DATE
CHECKED BY	PROJECTED BY	DATE	DATE
SCALE	SHEET		OF
	18		18

1 SITE PLAN
Scale: 1/8" = 1'-0"



1 FIRST FLOOR PLAN
Scale: 1/8" = 1'-0"

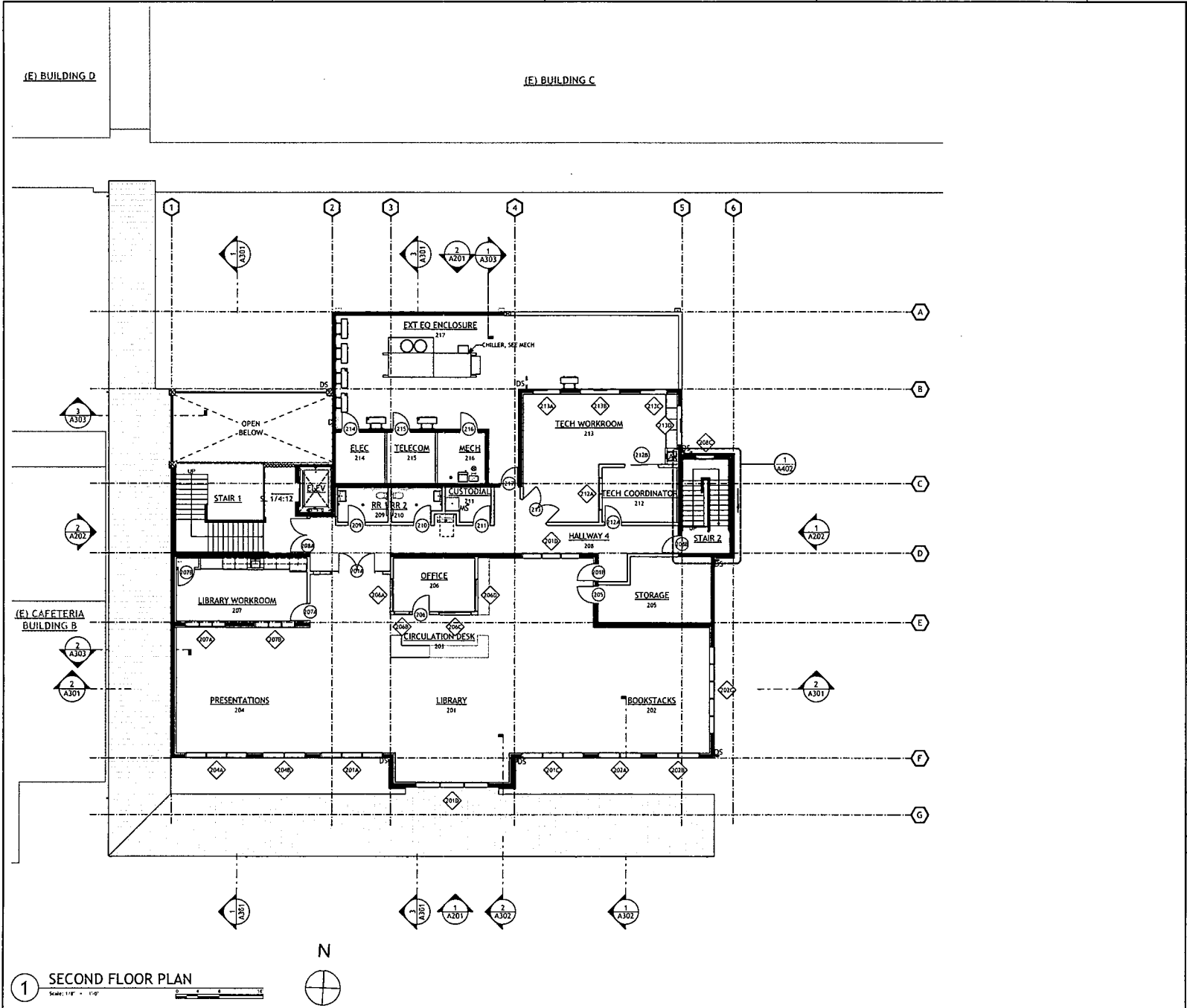
FLOOR PLAN NOTES

1. SEE FINISH & MATERIAL SCHEDULE ON SHEET A601
2. SEE PARTITION SCHEDULE ON SHEET A603
3. SEE DOOR SCHEDULE AND TYPES ON SHEET A701
4. SEE WINDOW SCHEDULE AND TYPES ON SHEET A801

* NOTE: ENLARGED SECTOR PLANS SEE SHEETS A112 & A113

REVISION NO.	BY	DESCRIPTION	DATE	APPROVED

DEPARTMENT OF EDUCATION STATE OF HAWAII			
HELEMANO ELEMENTARY NEW ADMINISTRATION / LIBRARY BUILDING			
WABAWA	GMJ	HWAE	
FIRST FLOOR PLAN			
License Expires 4-30-24			
WHITESPACE ARCHITECTS		ARCH NO.	DRAWING NO.
DESIGNED BY LA	CHECKED BY	Q22603-18	A102
DRAWN BY	APPROVED BY	DATE	SHEET
		05/12/2023	30
SCALE			OF 182 SHEETS



FLOOR PLAN NOTES

1. SEE FINISH & MATERIAL SCHEDULE ON SHEET A601
2. SEE PARTITION SCHEDULE ON SHEET A603
3. SEE DOOR SCHEDULE AND TYPES ON SHEET A701
4. SEE WINDOW SCHEDULE AND TYPES ON SHEET A801

* NOTE: ENLARGED SECTOR PLANS SEE SHEETS A114 & A115

REVISION NO.	BY	DESCRIPTION	DATE	APPROVED

DEPARTMENT OF EDUCATION
STATE OF HAWAII

HELEMANO ELEMENTARY
NEW ADMINISTRATION / LIBRARY BUILDING

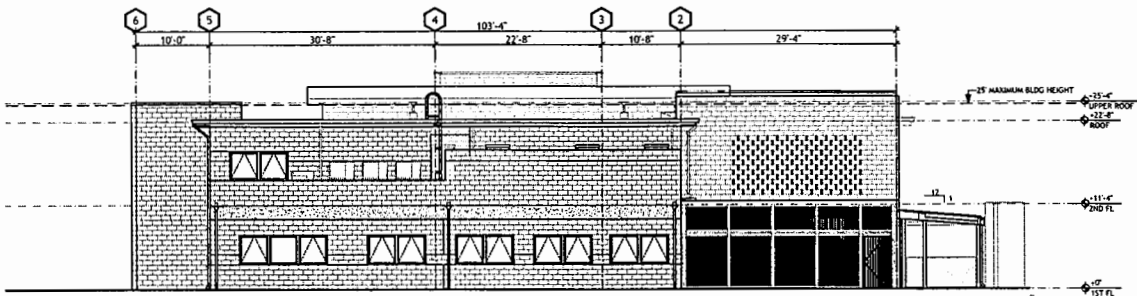
SECOND FLOOR PLAN

<small>License Expires 4-30-24</small> <small>The work was prepared by me or under my supervision, and construction of this project will be under my observation.</small>		DATE 05/12/2023	SHEET 21 OF 182 PAGES
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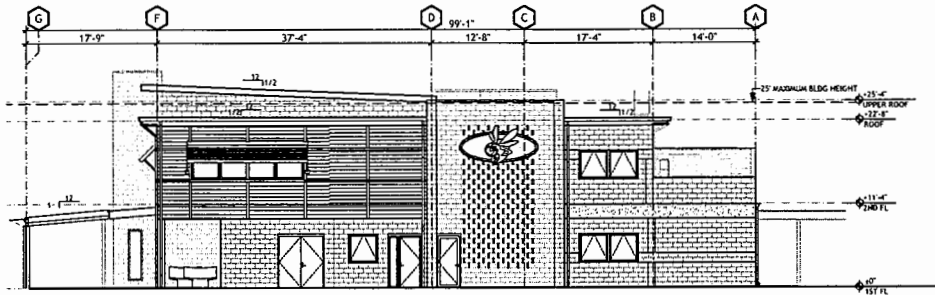
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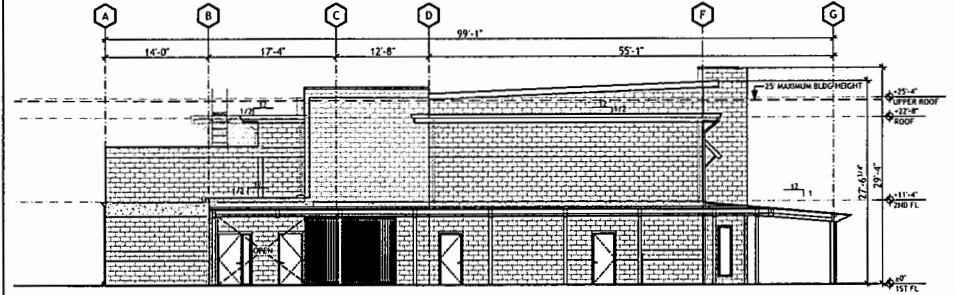
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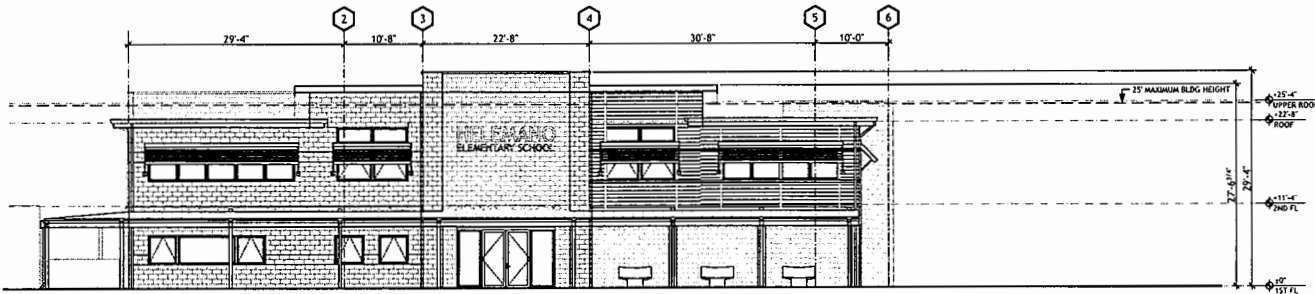
4 REAR ELEVATION
Scale: 1/8" = 1'-0"



2 RIGHT ELEVATION
Scale: 1/8" = 1'-0"



3 LEFT ELEVATION
Scale: 1/8" = 1'-0"

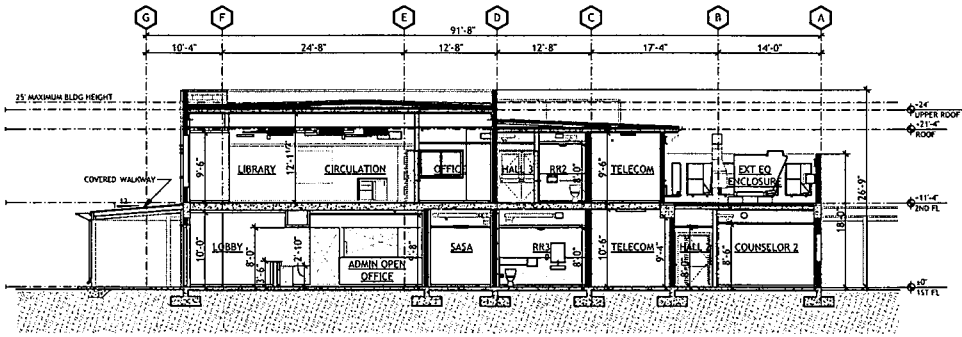


1 FRONT ELEVATION
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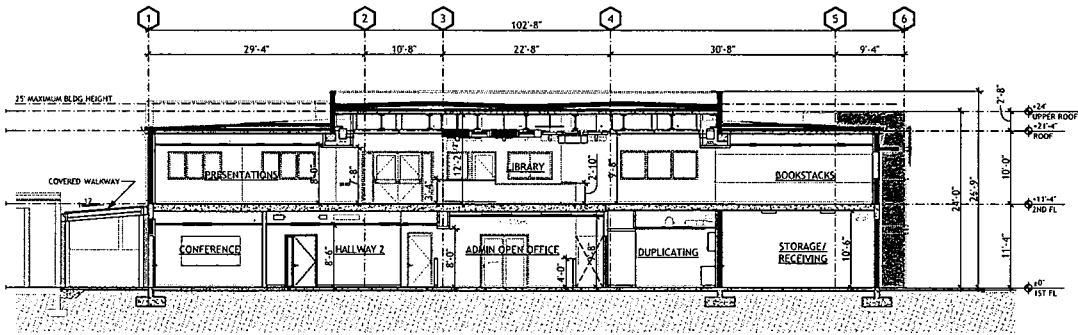
REVISION NO.	BY	DESCRIPTION	DATE	APPROVED

DEPARTMENT OF EDUCATION STATE OF HAWAII			
HELEMANO ELEMENTARY NEW ADMINISTRATION / LIBRARY BUILDING			
HONOLULU	KAHULUI	HAWAII	
EXTERIOR ELEVATIONS			
License Expires 4-30-24			
DESIGNED BY LA	CHECKED BY D72203-18	JUN 10	DRAWING NO A201
DRAWN BY	APPROVED BY	DATE	SHEET
SCALE		MMDD/YYYY	NO
			OF 198 SHEETS

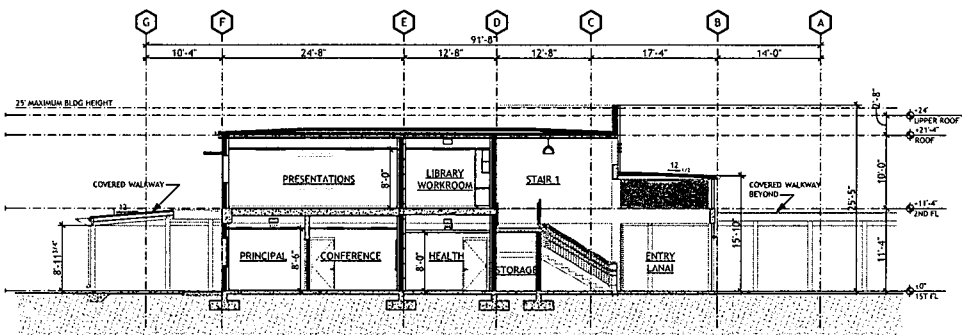
12



3 BUILDING SECTION C
Scale: 1/8" = 1'-0"



2 BUILDING SECTION B
Scale: 1/8" = 1'-0"

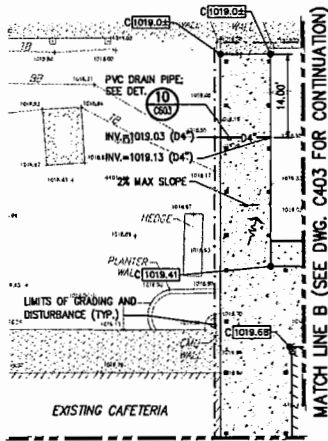


1 BUILDING SECTION A
Scale: 1/8" = 1'-0"

13

REVISION NO.	BY	DESCRIPTION	DATE	APPROVED BY

DEPARTMENT OF EDUCATION STATE OF HAWAII			
HELEMANO ELEMENTARY NEW ADMINISTRATION / LIBRARY BUILDING			
WABAWA	GAHJ	HWAE	
BUILDING SECTIONS			
License Expires 4-30-24		DATE	
DESIGNED BY LA	CHECKED BY GAP	DATE	
DRAWN BY	APPROVED BY	DATE	
SCALE		05/12/2023	

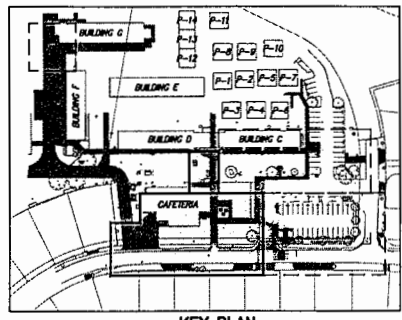


MATCH LINE B (SEE DWG. C-403 FOR CONTINUATION)

HELEMANO ELEMENTARY SCHOOL
 BK 7-1-002.017
 (CITY AND COUNTY OF HONOLULU)

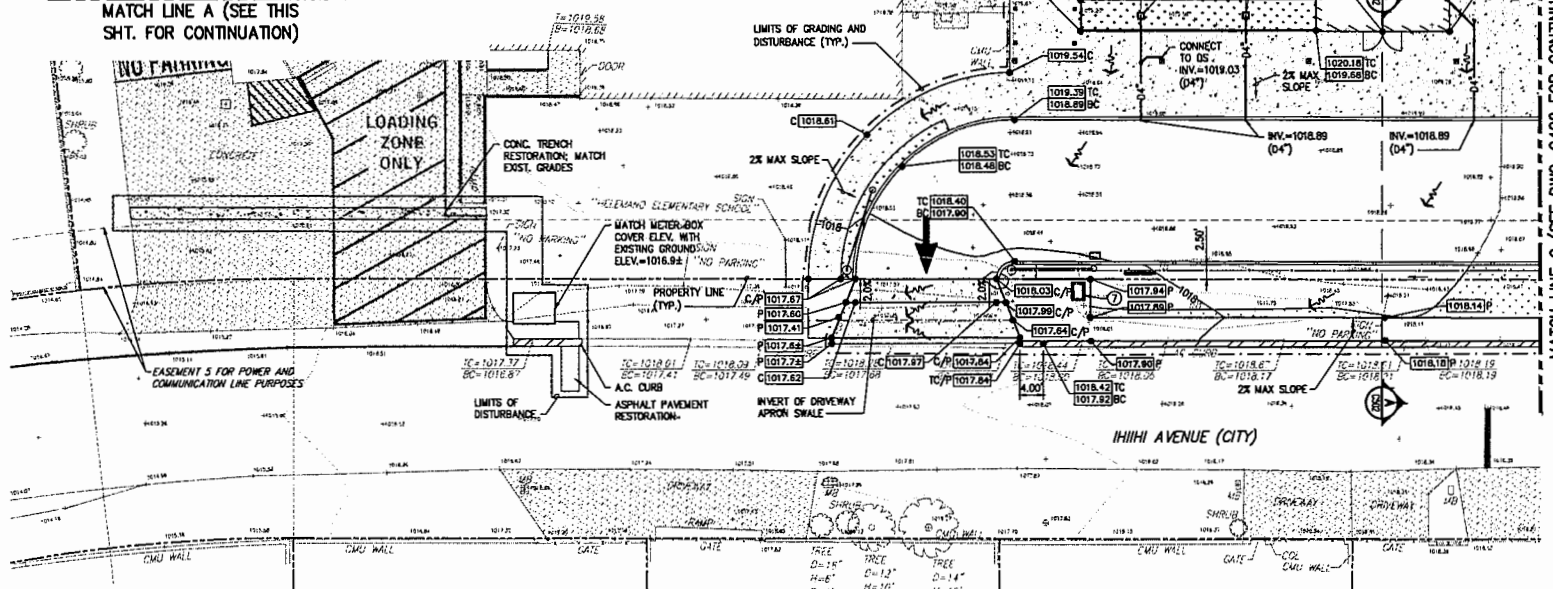
MATCH LINE A (SEE THIS
 SHT. FOR CONTINUATION)

ADMIN/LIBRARY BUILDING
 FTE=1019.68
 (SEE ARCH, STRUCT, PLUMB.,
 MECH. AND ELEC. DWGS)



KEY PLAN

7 WATER METER BOX
 TOP ELEV.=1017.87



MATCH LINE C (SEE DWG. C-402 FOR CONTINUATION)

GRADING & DRAINAGE PLAN - 1
 SCALE: 1"=10'

LEGEND:

- PROPERTY LINE
- - - - - EXIST. CONTOUR
- - - - - PROPOSED CONTOUR
- - - - - LIMITS OF GRADING AND DISTURBANCE
- - - - - LIMITS OF DISTURBANCE (NO GRADING)
- - - - - INVERT OF NEW SWALE
- - - - - NEW DRAIN LINE
- - - - - EXIST. CONCRETE
- - - - - NEW CONCRETE
- - - - - NEW AC PAVEMENT
- - - - - NEW AC CURB
- 1019.68C CONCRETE ELEVATION
- 1019.68TC TOP CURB ELEVATION
- 1019.68BC BOTTOM CURB ELEVATION
- 1019.68P PAVEMENT ELEVATION
- ← FLOW DIRECTION

NOTES:

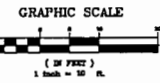
1. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, STRUCTURES, PAVEMENTS, SIDEWALKS, FENCING, CURBS, AND VEGETATION IN WORK AREA, WHETHER OR NOT SHOWN ON PLANS, AT ALL TIMES, UNLESS INDICATED TO BE REMOVED OR RELOCATED.

EARTHWORK QUANTITIES:

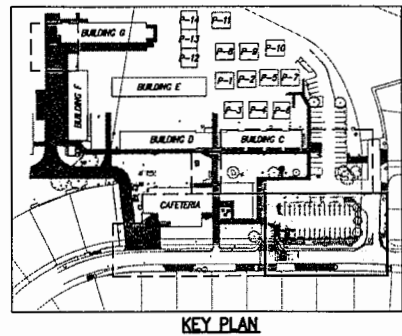
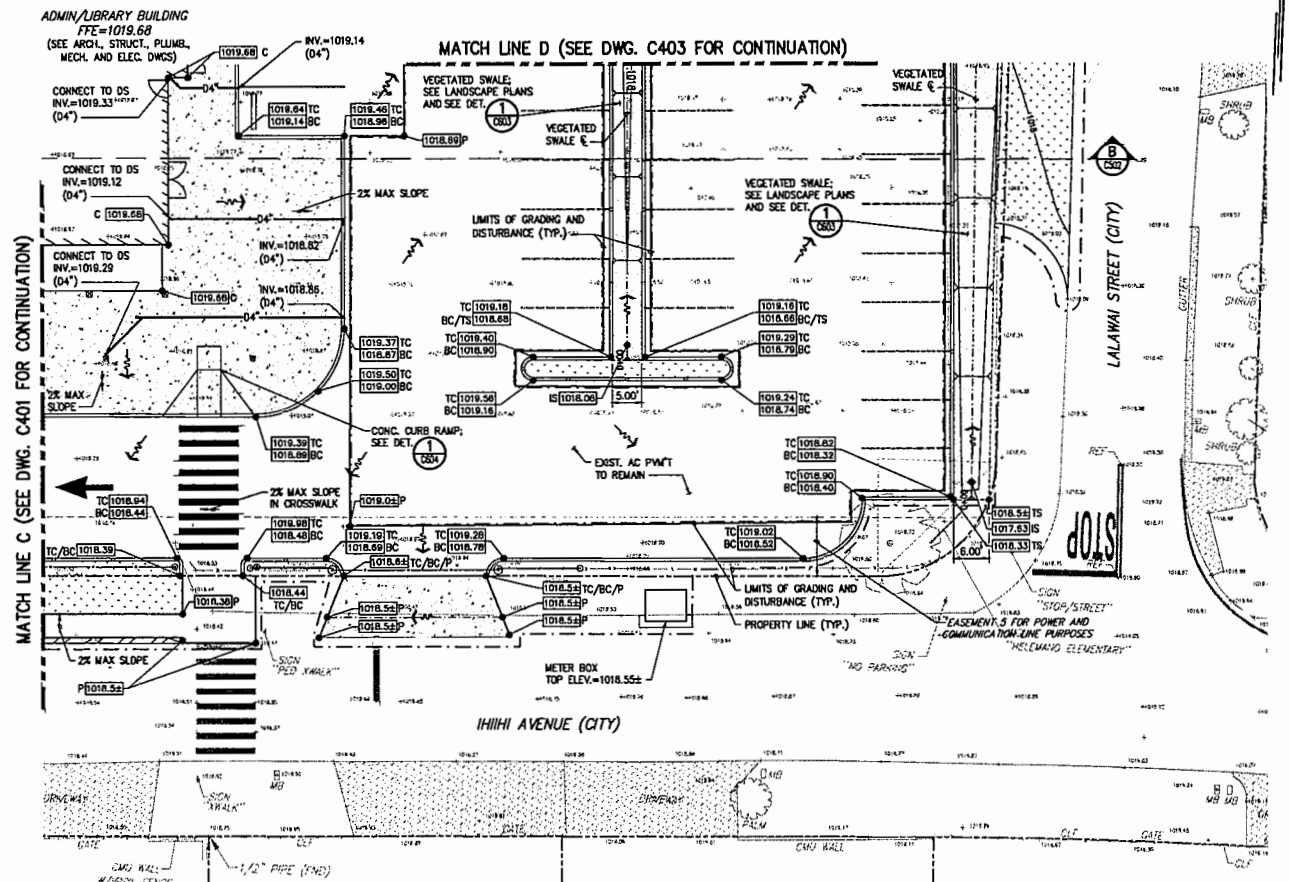
- EXCAVATION = 659 C.Y.
 - EMBANKMENT = 851 C.Y.
 - AREA TO BE GRADED = 0.77 ACRES
 - AREA TO BE DISTURBED = 0.85 ACRES
- NOTE: ESTIMATED EARTHWORK QUANTITIES ARE FOR PERMIT PURPOSES ONLY.

APPROVED:

CHIEF, CIVIL ENGINEERING BRANCH, DPP



REVISION NO.	BY	DATE	APPROVED
DEPARTMENT OF EDUCATION STATE OF HAWAII			
HELEMANO ELEMENTARY LIBRARY AND ADMIN BLDG			
HAWAII OAHU HAWAII			
GRADING & DRAINAGE PLAN - 1			
PREFINAL DRAWINGS NOT FOR CONSTRUCTION	THE HAWAIIAN ENGINEERING GROUP, INC.	JOB NO.	EXAMINING NO.
	DESIGNED BY	07203-18	C401
	DATE	11/11/2013	SHEET
	SCALE	1/8"=1'-0"	17

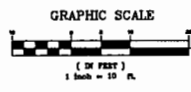


GRADING & DRAINAGE PLAN - 2
SCALE: 1"=10'

- LEGEND:**
- PROPERTY LINE
 - - - - - EXIST. CONTOUR
 - PROPOSED CONTOUR
 - LIMITS OF GRADING AND DISTURBANCE
 - INVERT OF NEW SWALE
 - - - - - NEW DRAIN LINE
 - EXIST. CONCRETE
 - NEW CONCRETE
 - NEW AC PAVEMENT

- NEW AC CURB
- VEGETATED SWALE
- BITUMINOUS SEALING OF EXST. A.C. PAVEMENT
- [1018.68]C CONCRETE ELEVATION
- [1018.22]TS TOP OF SWALE ELEVATION
- [1018.22]S INVERT OF SWALE ELEVATION
- [1019.68]TC TOP CURB ELEVATION
- [1019.68]BC BOTTOM CURB ELEVATION
- [1019.68]P PAVEMENT ELEVATION
- FLOW DIRECTION

- NOTES:**
- CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, STRUCTURES, PAVEMENTS, SIDEWALKS, FENCING, CURBS, AND VEGETATION IN WORK AREA, WHETHER OR NOT SHOWN ON PLANS, AT ALL TIMES, UNLESS INDICATED TO BE REMOVED OR RELOCATED.

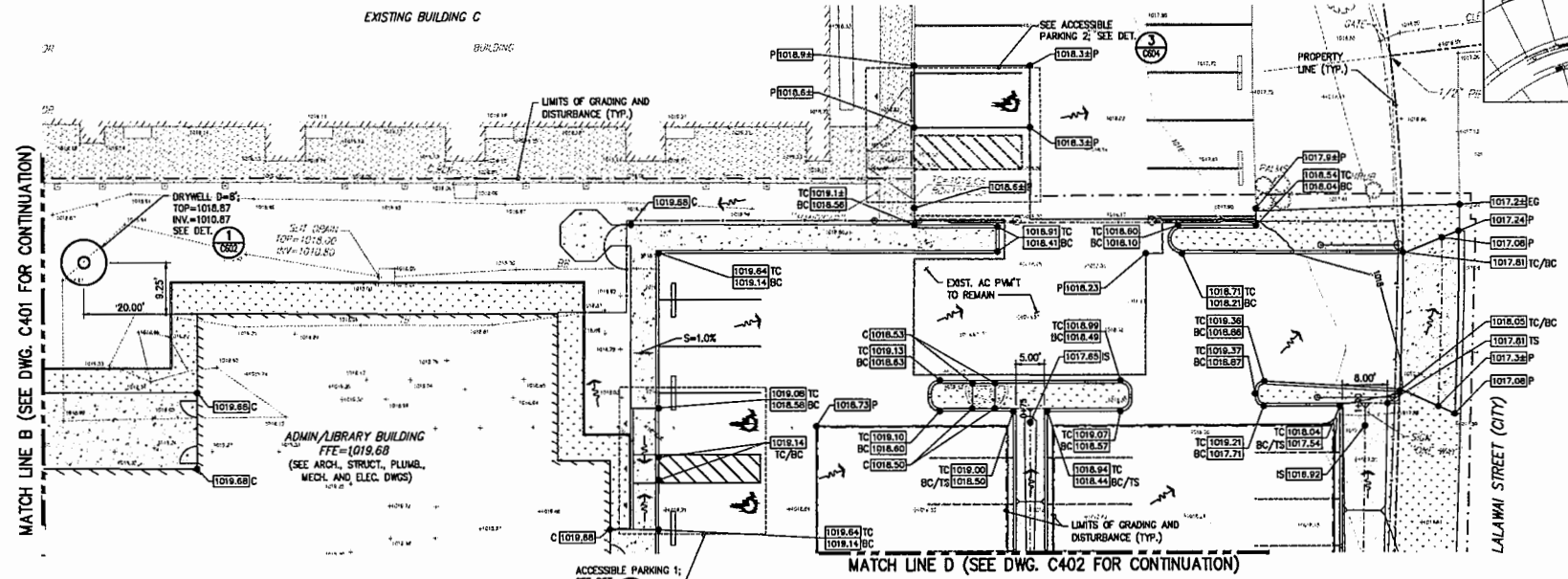
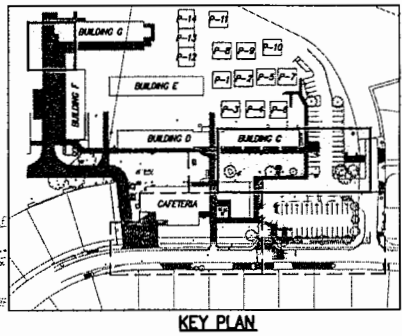


APPROVED: _____ DATE _____
 CHIEF, CIVIL ENGINEERING BRANCH, DPP

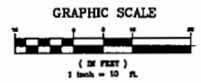
REVISION NO.	BY	DESCRIPTION	DATE	APPROVED BY

DEPARTMENT OF EDUCATION STATE OF HAWAII			
HELEMANO ELEMENTARY LIBRARY AND ADMIN BLDG			
DRAWN BY NHW/RA	DWG NO C402	JOB NO 072207-18	DRAWING NO C402
CHECKED BY TJCG	CHECKED BY 	DATE 05/12/2023	SHEET 18
SCALE	DATE	DATE	

EXISTING FIRE METER REMOVAL GRADING AND DRAINAGE PLAN
SCALE: 1"=10'



GRADING & DRAINAGE PLAN - 3
SCALE: 1"=10'



- LEGEND:**
- PROPERTY LINE
 - - - - - EXIST. CONTOUR
 - - - - - PROPOSED CONTOUR
 - LIMITS OF GRADING AND DISTURBANCE
 - LIMITS OF DISTURBANCE (NO GRADING)
 - INVERT OF NEW SWALE
 - D4- NEW DRAIN LINE
 - EXIST. CONCRETE
 - NEW CONCRETE
 - NEW AC PAVEMENT
 - NEW AC CURB
 - VEGETATED SWALE
 - BITUMINOUS SEALING OF EXIST. A.C. PAVEMENT
 - 1019.60C CONCRETE ELEVATION
 - 1018.22TS TOP OF SWALE ELEVATION
 - 1018.22IS INVERT OF SWALE ELEVATION
 - 1019.60TC TOP CURB ELEVATION
 - 1018.68BC BOTTOM CURB ELEVATION
 - 1018.68P PAVEMENT ELEVATION
 - FLOW DIRECTION

- NOTES:**
- CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, STRUCTURES, PAVEMENTS, SIDEWALKS, FENCING, CURBS, AND VEGETATION IN WORK AREA, WHETHER OR NOT SHOWN ON PLANS, AT ALL TIMES, UNLESS INDICATED TO BE REMOVED OR RELOCATED.

APPROVED: _____ DATE: _____
 CHIEF, CIVIL ENGINEERING BRANCH, DPP

REVISION NO.	DATE	DESCRIPTION	BY	DATE	APPROVED
DEPARTMENT OF EDUCATION STATE OF HAWAII HELEMANO ELEMENTARY LIBRARY AND ADMIN BLDG					
PREFINAL DRAWINGS NOT FOR CONSTRUCTION		HAWAII OAHU MOLOKAI MAUI	HONOLULU HAWAII	GRADING & DRAINAGE PLAN - 3	
THE HAWAIIAN CONSULTING GROUP, INC. CIVIL ENGINEER TLGC	CONSULTED BY DATE 07/22/03-18	DRAWING NO. C403	SHEET 19	DATE 06/12/2003 DWG. 151 10-118	

SECTION 2 DESCRIPTION OF THE AFFECTED ENVIRONMENT

A. Existing Conditions

Located on the northern edge of Whitmore Village, the School is bounded by residences on three sides—along ‘Ihi‘ihi Avenue to the south, Lalawai Street to the east, and its west property boundary. An unknown gulch borders the School to the north.

“Helemano Elementary School has a humble pineapple heritage and was first established in 1957. Located in Wahiawā, Hawai‘i, within the central upland plateau of Oahu, Whitmore Village was established as a place of residence for the plantation employees of the Dole Pineapple Company. The initial enrollment of 270 students in grades kindergarten through eighth grade has grown to the present enrollment of over 620 students in grades preschool through fifth grade” (Helemano Elementary School Web Page). The School opened in 1956.

Whitmore Village has about 990 homes and 4,500 residents. It was established in 1947 and named after Hawaiian Pineapple Co. plantation manager John Whitmore. Few businesses exist in the community today following the demise of plantation agriculture on Oahu in recent decades (Source Unknown).

The US Navy Naval Computer and Telecommunications Area Master Station Pacific (NCTAMS) is located about 0.5 miles northeast of Whitmore Village.

The School’s building inventory consists of seven permanent structures (5 one story and 2 two-story) and 17 portable buildings (See Table 1 and the Campus Map Figure 3).

Table 1. Building Inventory

Building	Function	Levels	Year Built
A	Admin/Library	1	1956
B	Cafeteria	1	1956
C	Classroom	1	1956
D	Classroom	1	1956
E	Classroom	1	1956
F	Classroom	2	1992
G	Classroom	2	1996
Portables (17)	Classroom	1	Various

Source: DOE Facilities Inventory System, 2006.

The School’s Library collection includes Fiction, Non-Fiction Books, Picture Books, Biographies, and Hawaiiana.

Public schools on O‘ahu are organized into four districts — Honolulu, Windward, Central and Leeward — with nine Complex Areas, each with two or three Complexes. A complex is



Source: Google Maps 2023 Imagery

Figure 3
 Campus Map
 Helemano Elementary School
 New Administration / Library Building



Whitmore Village, District of Wahiawā, O'ahu, Hawaii

Department of Education, State of Hawaii

a high school plus the regional elementary and middle schools that feed into it (Department of Education, Oahu Map).

Helemano Elementary is in the Central District, the Leilehua-Mililani-Waialua Complex Area, and the Leilehua Complex. The Leilehua Complex includes Hale Kula, Helemano, 'Iliahi, Ka'ala, Solomon, Wahiwā, and Wheeler Elementary Schools, Wahiwā and Wheeler Middle Schools, and Leilehua High School. The seven Elementary schools "feed" students into the two middle schools which in turn "feed" students into Leilehua High School.

For School Year 2022 – 2023 486 students were enrolled in Kindergarten to Grade 5 and Special Education (DOE, 2023). The design capacity of the School is 650 students (Ibid, 2006).

B. Environmental Characteristics

There are no natural occurring environmental features on the building site as the ground has been extensively modified in support of existing man-made improvements dating back to construction of the Administration Building in 1956.

Topographical features and soil horizons have been modified by concrete foundations and spread footing to support the existing structure. The site is modestly landscaped with introduced species. There are no archaeological resources present but the structure is more than 50 years old and considered 'historic property'.

1. Climate

The climate of Whitmore Village, which is similar to that of nearby Wahiwā Town, can be characterized as temperate, wet, and cool during the winter months. Annual temperatures average about 80° F with lows in the low 60's during the winter which can dip into the low 50s during winter. Cool conditions are attributable to the high elevation of the village (1,000± feet) above sea level. Rainfall average 70 inches annually and the wettest months are December through January (Agribusiness Development Corporation, 2015).

2. Topography

The Administration Building at elevation 1,019 feet and the adjoining parking lot at elevation 1,018 feet are indicative that a) Whitmore Village is situated at a high elevation, and b) the building site was previously graded with minimal grade difference for building the aforementioned improvements.

3. Soils

The Soil Survey Map for the area (Soil Conservation Service, 1972) identifies one soil type underlying the school--Kolekole silty clay loam (Symbol: KuB). This soil is characterized as: moderately permeable, slow runoff, and slight erosion hazard. This soil is (or was) used for sugarcane and pineapple cultivation and pasture.

More than likely mass grading for the school in 1957, construction of permanent buildings, parking areas, walkways, and landscaping altered the surface of the soil type and imported engineered fill and topsoil altered its composition. In addition, soil altering activities

associated with pineapple cultivation pre-Helemano Elementary School also altered the soil composition.

4. Water Resources

a. Groundwater

According to groundwater maps prepared by Mink and Lau (1990), the School overlies the Wahiawa aquifer of the Central aquifer sector (See Table 2). The Wahiawa aquifer is characterized as an unconfined high level aquifer (not in contact with sea water). The dike confined fresh water aquifer is currently used, ecologically important, and highly vulnerable to contamination.

Table 2. Aquifer Classification System

Aquifer Code	30501212
Island Code	3 - Oahu
Aquifer Sector	05 - Central
Aquifer system	01 - Wahiawa
Aquifer Type, hydrogeology	2 - High Level
Aquifer Condition	1 - Unconfined
Aquifer Type, geology	2 - Dike
Status Code	12211
Developmental Stage	1 - Currently Used
Utility	1 - Drinking
Salinity (in mg/L Cl ⁻)	1 - Fresh (<250)
Uniqueness	1 - Irreplaceable
Vulnerability to Contamination	1 - High

Source: Mink and Lau, 1990.

b. Surface Water

There are no freshwater streams, rivers, ponds, or wetlands on-campus. The US Geological Survey map (Haleiwa / Hauula Quadrangles) show an intermittent stream flowing in a gulch or ravine beyond the northern edge of the campus. The stream appears to be an upper branch of Poamoho Stream.

5. Flood Hazard

The Flood Insurance Rate Map places all of Whitmore Village (Figure 4) in Other Flood Areas Zone "D" which is defined as "Unstudied areas where flood hazards are undetermined, but flooding is possible".

6. Biological Resources

Hala, silver buttonwood, tecoma, bougainvillea, and ti are the principal on-site flora. Grassed areas at the front and rear of the building site appear to be a mix of Bermuda and St.



Source: Flood Assessment Tool Website

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

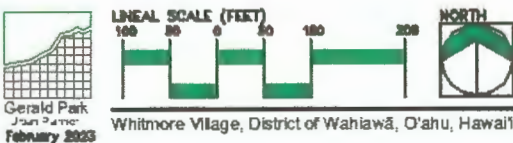


Figure 4
 Flood Assessment Tool Map
 Helemano Elementary School
 New Administration / Library Building

Augustine grasses. Eranthemum groundcover thrives in a sculpture garden at the entry to the Administration Building. The sculpture garden features three birthstones.

Animals and birds were not observed during the field investigation. Given the presence of neighboring residences more than likely domesticated animals populate the neighborhood. Rodents may also be present given the presence of food (waste) and water.

7. Historical Resources

It is not likely subsurface historical resources are buried under the building. Prior pineapple cultivation and mass grading of the site would have removed surface and subsurface features if any were present

Some school structures are 50+ years or older and are defined as historic property.

8. Hazardous Materials

A hazardous material survey was conducted to identify hazardous materials that may be present in building materials and painted surfaces of the existing structure. The surveyed materials and findings are summarized in Table 5.

Table 5. Hazardous Material Collection and Testing

Constituent	Findings
Asbestos Containing Materials	Transite panels, caulking
Lead Based Paint (LBP) on Surfaces	No Sample >1.0 mg/cm ²
Lead Containing Paint (LCP) on Surfaces	Some Surfaces <1 mg/cm ²
Arsenic Containing Materials	Canec Ceilings Throughout
PCB Containing Fluorescent Light Fixtures	None
Mercury Containing Liamps	None

Source: EMET, 2020.

C. Land Use Controls

State and County land use controls are cited below:

- State Land Use Designation: Urban
- O'ahu General Plan: Urban Fringe
- Sustainable Communities Plan: Central O'ahu
- Land Use Map: Residential and Low Density Apartment
- Zoning: R-5 Residential

State Land Use Law

Pursuant to Chapter 205 HRS, the Hawai'i Land Use Law, the State Land Use Commission classifies all land in the State of Hawai'i into one of four classifications: Urban, Agricultural, Conservation, or Rural. Uses and activities in Urban districts are regulated by the respective counties. Use of Conservation District land is under the authority of the Board of Land and

Natural Resources, State of Hawaii. Uses in the Agricultural and Rural districts are regulated by the respective counties.

- Whitmore Village is designated Urban on land use district maps for the area.

Land use in Urban districts on O'ahu is under the authority of the City and County of Honolulu and its applicable plans, ordinances, and regulations. City land use policies and controls for O'ahu are vertically aligned or tiered for managing growth and land uses beginning with the O'ahu General Plan ("General Plan"), community development plans or sustainable community plans, and zoning. Special districts and special management area rules provide supplementary controls for defined areas where man-made features and natural resources should be protected and managed.

The O'ahu General Plan is the first tier. It sets forth broad objectives and policies in eleven "key areas" such as Population, Natural Environment and Resource Stewardship, Transportation and Utilities, Physical Development and Urban Design, and Health and Education.

The Population component and its objectives and policies are keys to managing growth. The component establishes a population distribution pattern for the island identified as Policy Area 1, Policy Areas 2, and Policy Areas 3. Policy 1 Area is the Primary Urban Center, Policy 2 Areas are 'Ewa, and Central O'ahu, and Policy 3 Areas are East Honolulu, Ko'olau Poko, Ko'olau Loa,, North Shore, Wai'anae. The eight development plan areas for O'ahu comprise the three policy areas.

The General Plan includes a Conceptual Development Plan for O'ahu depicting the eight development plan areas and the desired development pattern for the respective plan area. Distribution of the island's 2040 population is presented in table form by percentage for the three Policy Areas and corresponding development plan area. The percent of population is 18% for the Policy 2 area of Central O'ahu.

The General Plan "key area" of Health and Education objective and policy set relative to the proposed action reads:

Objective B To provide a wide range of educational opportunities for the people of O'ahu.

Policy 4 Encourage the construction of school facilities that are designed for flexibility and high levels of use.

Development Plans or Sustainable Communities Plans prepared for the eight geographic areas in the County comprise the second tier. Although encompassing eight areas where each area's values, vision, and policies for accommodating growth are different, the plans collectively support the General Plan. Situate on the uplands of central O'ahu Whitmore Village within the Central O'ahu Sustainable Communities Plan (2021) area.

The Sustainable Communities Plan reaffirms the directed growth policies of the General Plan. The Plan acknowledges that growth will take place and establishes a Community Growth Boundary encircling the entire district. The boundary identifies areas where growth and infill can occur (inside the boundary) and areas where agriculture, open space, and natural resources should be maintained and preserved (areas outside the boundary).

- Whitmore Village is located in the Central O’ahu Sustainable Communities Plan (COSCP) area.
- The Village is entirely within the Community Growth Boundary established by the COSCP.
- The COSCP designates the site of Helemano Elementary School (and all of Whitmore Village) Residential and Low Density Apartment.

The COSCP prescribes several policies and guidelines for school facilities.

- Request DOE to report to DPP if adequate school capacity can be provided as part of the project review and approval process, both at the entitlement and permit approval stages.
- Require developers to comply with DOE school impact fees requirements and/or existing UA school impact conditions
- Design school facilities to facilitate community use during non-school hours and weekends.
- Co-located neighborhood or community parks with elementary and intermediate schools, and coordinate designs of facilities with the State DOE when duplication of parking and of athletic, recreation, and meeting facilities can be avoided.

As written, the policies and guidelines do not apply directly to the proposed project.

Zoning comprises the third tier of the City’s land use management system. As shown on zoning maps, land in the county is zoned for certain uses and density (for example R-5 Residential with a minimum lot size of 5,000 square feet). The Land Use Ordinance (which incorporates the zoning maps) prescribes the types of uses permitted in zoning districts and associated development standards. The LUO also establishes requirements for parking, specific use standards, signs, development in flood districts and special districts, and administration and enforcement procedures.

- Helemano Elementary School is located in an R-5 Residential zoning district (See Figure 4). Residential zoning allows as permitted property uses, “Day care nurseries, museums, churches, libraries, kindergartens, elementary schools, intermediate schools, high schools and universities (Table 21-3, Master Use Table, Land Use Ordinance, 1986).

The School was built in 1957 at this location and precedes adoption of the Land Use Ordinance which was enacted in 1986.

D. Public Facilities

‘Ihi‘ihi Avenue, a paved, two-lane, two-way residential street bounds the School on the south. The street is unimproved lacking curbs, gutters, and sidewalks. The posted speed limit is 25 miles per hour fronting the School.

‘Ihi‘ihi Avenue accesses Whitmore Avenue the only route linking Whitmore Village with Kamehameha Highway about 1.0 mile southwest of the School. From its intersection with



Source: Parcels & Zoning, City & County of Honolulu (DPP) Website

Legend


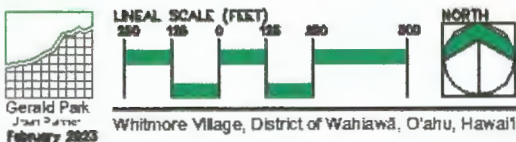
- | | | | |
|--|-------------------------------------|--|-------------------------------|
|  R-5 | RESIDENTIAL (5,000 SF. LOT MINIMUM) |  P-2 | GENERAL PRESERVATION |
|  A-1 | APARTMENTS (LOW DENSITY) |  AG-2 | GENERAL AGRICULTURAL DISTRICT |
|  A-2 | APARTMENTS (MEDIUM DENSITY) | | |
|  B-2 | NEIGHBORHOOD BUSINESS | | |

Figure 5
Zoning
Helemano Elementary School
New Administration / Library Building



Kamehameha Highway Whitmore Village motorists can gain the town of Wahiawā to the south and North Shore communities to the north.

Lalawai Street, a paved, two-lane, two way residential street, bounds the School on the east.

Potable water is supplied by the Board of Water Supply from an 8-inch main in 'Ihi'ahi Avenue. An on-site water system distributes potable water throughout the campus.

Wastewater is collected through an on-site system and discharged into the municipal system in 'Ihi'ahi Avenue.

Police and Fire services originate from their respective facilities in Wahiawā Town about 1.0 mile away to the south.

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 consultants comprising the design team. State and County agencies were contacted for information relative to their jurisdiction and expertise. Field conditions were noted from site visits and from reports prepared by others. Information also was sought from residents living near the school through outreach correspondence. 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:

- Helemano Elementary School has been at this location since 1956;
- There are no archaeological resources on the building site;
- The Administration Building is more than 50 years old and considered historic property;
- There are no rare, threatened, or endangered flora and fauna on the building site;
- There are no surface water bodies on the campus;
- The School is not located in a flood zone susceptible to flooding;
- Existing public infrastructure and utilities are available; and
- A 14-18 month construction schedule is projected.

B. Short-term Impacts

1. Site Work

Approximately 0.77 acres will be grubbed of vegetation and graded for foundations, footings, and utilities. Sewer lines and water lines at the building site will be demolished and terminated at the source. Best Management Practices (BMPs) will be implemented to control construction-related runoff and unwanted soil deposition on adjoining streets and residential properties. Trucks hauling earth will be covered for dust control during transport.

2. 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 Hawaii (and revisions thereto). The site work contractor may implement alternative methods adaptable to the scope of the improvements and features of the site.

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/m³ per annum---which is an annual standard, 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.

3. 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 is completed, reductions in sound levels, frequency, and duration can be expected as the foundation is formed, concrete footings and the ground floor poured, and the structure erected. Exterior walls should also mitigate noise resulting from interior construction activities.

Noise will be audible over the entire construction period. Buildings C, D, and the Cafeteria are nearest the building site and construction noise cannot be avoided entirely. The classroom buildings facing the building site have operable louver windows, which when closed, can aid in noise attenuation.

Plywood panels and/or dust screens will be erected around the building site for dust containment, noise attenuation, and overall safety for students, staff, and construction workers. Walkways near the building site will be relocated during construction for safety reasons. A 6-foot wide tunnel will be constructed adjoining the Cafeteria and building site. The contractor and School administrators will collaborate on a safety plan for the duration of construction.

Residents on 'Ihiihi Avenue and Lalawai Street across the school would be exposed to construction noise and dust. Residences directly opposite the School are about 35-40 feet from the building site and residents will be able to see work activity and hear construction sounds daily. Noise impacts cannot be avoided but can be mitigated to the extent practical by measures disclosed in the assessment.

Community Noise Control regulations establish maximum permissible sound levels for construction activities occurring within "acoustical" zoning districts. The school site is zoned residential and 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). As disclosed above, construction noise occasionally will exceed the 55 dBA threshold. All construction activities will comply with Chapter 46 Community Noise Control, Title 11, Administrative Rules, Department of Health, State of Hawai'i.

In general, construction activities cannot exceed the permissible noise levels for more than ten percent of the time within any twenty-minute period 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.

4. Erosion

Site work will create opportunities for erosion and construction-related runoff. Approximately 0.85 acres will be graded at the building site and adjoining areas. Earthwork quantities are estimated at 659 CY of excavation and 851 CY of embankment. Excavated material will be temporarily stockpiled somewhere on site until hauled away. Site work impacts can be mitigated by adhering to the Erosion and Sediment Control Plan approved for the project and appropriate Best Management Practices (BMPs) as specified in the City's Rules for Water Quality. Such measures will include but not limited to frequent water sprinkling of exposed earth and stockpiled earth, dust fences, stabilized construction ingress/egress, filter sock for drain inlet protection, and silt fences / filter socks to minimize off-site runoff. The proposed Erosion Control Plan is shown on Sheets C102 and C103.

The proposed improvements are less than one (1) acre thus a NPDES General Permit Authorizing Discharges of Storm Water Associated with Construction Activity will not be required from the State Department of Health.

5. Flora

Rare, threatened, or endangered flora or candidates for that status are not found on the building site. Vegetation is primarily a grass lawn

6. Historic Features

Should excavation unearth undocumented archaeological features, artifacts, or cultural deposits, work in the immediate area will cease and the proper authorities notified for disposition of the finds. If *iwi kupuna* are uncovered and appear to be less than 50 years old, the Honolulu Police Department will be notified. If the burials appear to be more than 50 years old, then the State Historic Preservation Officer will be notified. As a matter of protocol, both agencies will be notified for inspection and proper disposition of the finds.

Work may be suspended until such time that the authorities allow for the resumption of construction.

7. Traffic

Construction vehicles hauling workers and material will contribute to traffic on 'Ihi Avenue and Whitmore Avenue the primary road in Whitmore Village. The existing driveway at the front of the School is the principal access for vehicles and buses. To minimize impacts on local and on-campus traffic circulation, material deliveries will be scheduled for after morning drop-offs and before afternoon pick-ups. Construction worker traffic should not be an issue during morning and afternoons because school hours and construction work hours start and end at different times. At this time, the driveway on the south of the building site is designated the primary access to the building site.

LIST OF REQUIRED BMPs

PRE-CONSTRUCTION STRUCTURAL BMPs

- DUST FENCE
- CONSTRUCTION ENTRANCE
- PERMETER CONTROL (FILTER SOCK)
- DRAIN INLET PROTECTION FOR EXIST. INLETS

DURING CONSTRUCTION STRUCTURAL BMPs

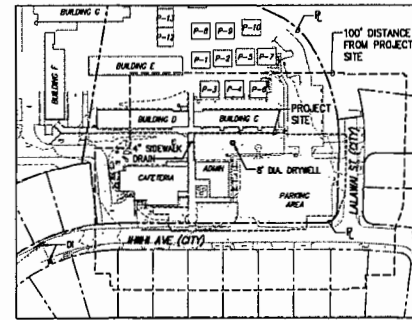
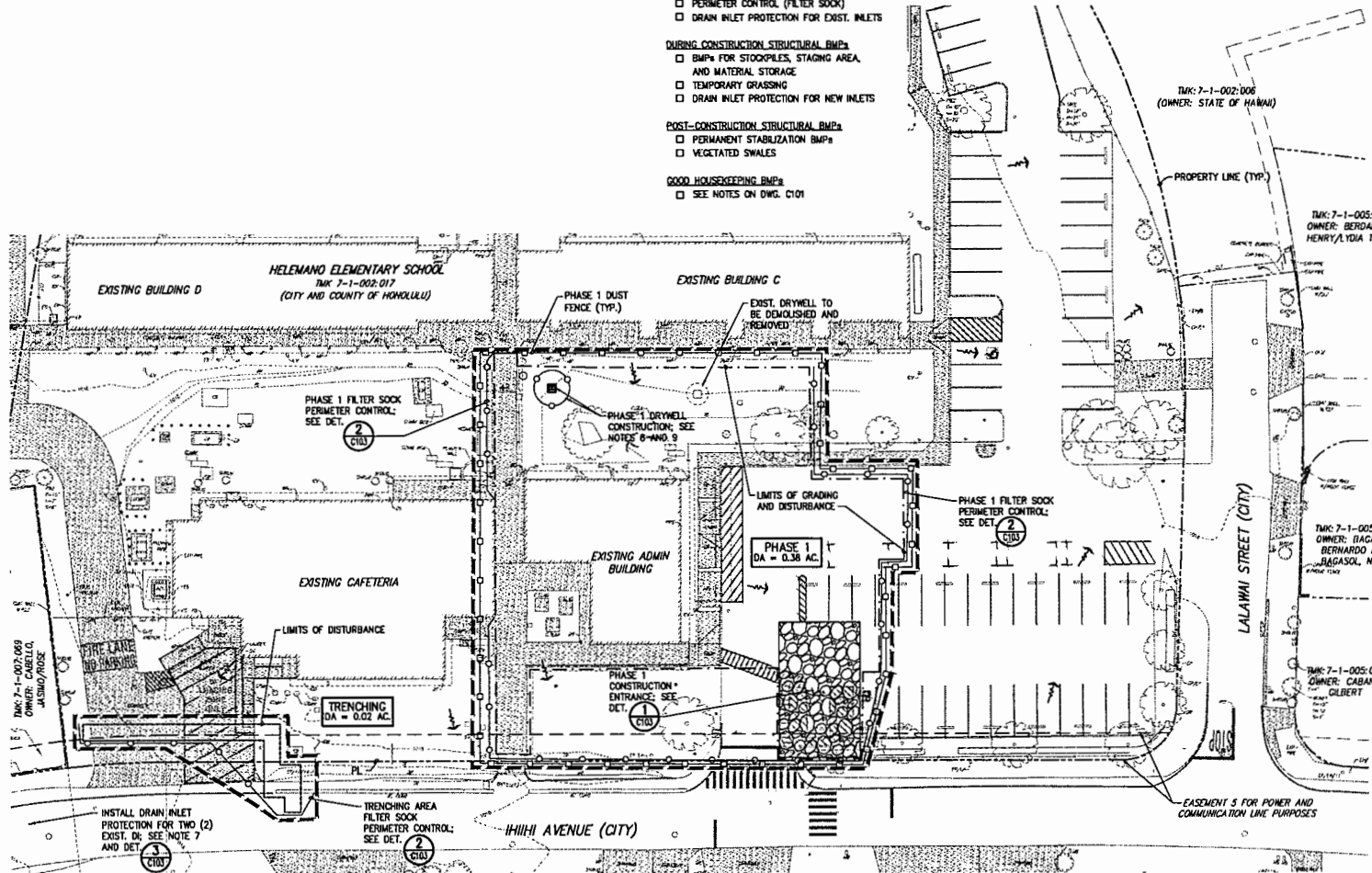
- BMPs FOR STOCKPILES, STAGING AREA, AND MATERIAL STORAGE
- TEMPORARY GRASSING
- DRAIN INLET PROTECTION FOR NEW INLETS

POST-CONSTRUCTION STRUCTURAL BMPs

- PERMANENT STABILIZATION BMPs
- VEGETATED SWALES

GOOD HOUSEKEEPING BMPs

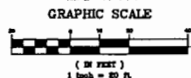
- SEE NOTES ON DWG. C101



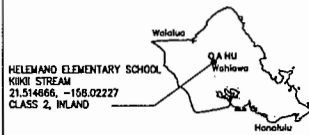
VICINITY MAP OF DRAIN STRUCTURES
SCALE: 1"=100'

- NOTES:**
1. WALKWAYS OUTSIDE OF THE IMMEDIATE WORK AREA SHALL BE MAINTAINED IN PASSABLE CONDITION IN ACCORDANCE WITH 2010 ADAAG 201.3 AND 206.1.
 2. CONTRACTOR SHALL MAINTAIN SAFE PEDESTRIAN AND WHEELCHAIR ACCESS MEETING CURRENT ADAAG REQUIREMENTS TO ALL PUBLICLY-ACCESSIBLE FACILITIES DURING CONSTRUCTION.
 3. CONTRACTOR SHALL MAINTAIN VEHICULAR ACCESS W/10'-WIDE MINIMUM CLEARANCE TO PARKING AREAS OUTSIDE OF PROJECT LIMITS.
 4. CONTRACTOR SHALL PROVIDE BUS-ACCESSIBLE PICK-UP/DROP OFF AT ALL TIMES TO THE SATISFACTION OF THE OFFICER-IN-CHARGE.
 5. CONTRACTOR TO PROVIDE CONSTRUCTION BARRIER TO SEPARATE PUBLIC FROM CONSTRUCTION WORK AT ALL TIMES AND AS DIRECTED BY THE CONTRACTING OFFICER.
 6. SEE ALSO EROSION AND SEDIMENT CONTROL PLAN NOTES, DWG. C101.
 7. INSTALL DRAIN INLET PROTECTION FOR THE TWO (2) EXISTING GRATED DRAIN INLETS APPROX. 100' TO THE EAST OF THE PROJECT SITE FRONTING THE RESIDENCES AT 916 AND 917 IHIHI AVENUE.
 8. INSTALL FILTER SOCK PRIOR TO EXCAVATING FOR DRYWELL; SEE DET. 2.
 9. AFTER CONSTRUCTION OF DRYWELL, MAINTAIN FILTER SOCK AS NECESSARY AND INSTALL DRAIN INLET PROTECTION; SEE DET. 3.

EROSION AND SEDIMENT CONTROL PLAN - PHASE 1 & TRENCHING
SCALE: 1"=20'



RECEIVING WATERS



PROJECT SITE IS LOCATED WITHIN FLOOD ZONE 0

LEGEND:

- CONSTRUCTION ENTRANCE
- EXIST. CONTOUR AND ELEVATION
- LIMITS OF GRADING AND DISTURBANCE
- LIMITS OF DISTURBANCE
- TEMPORARY FILTER SOCK
- TEMPORARY DUST FENCE
- FLOW DIRECTION

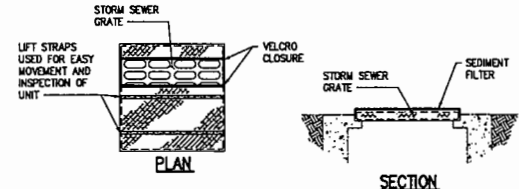
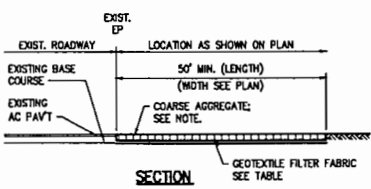
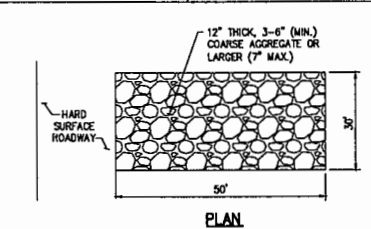
APPROVED:

CHIEF, CIVIL ENGINEERING BRANCH, DPP

DATE

REVISION NO.	DATE	DESCRIPTION	BY	DATE	APPROVED

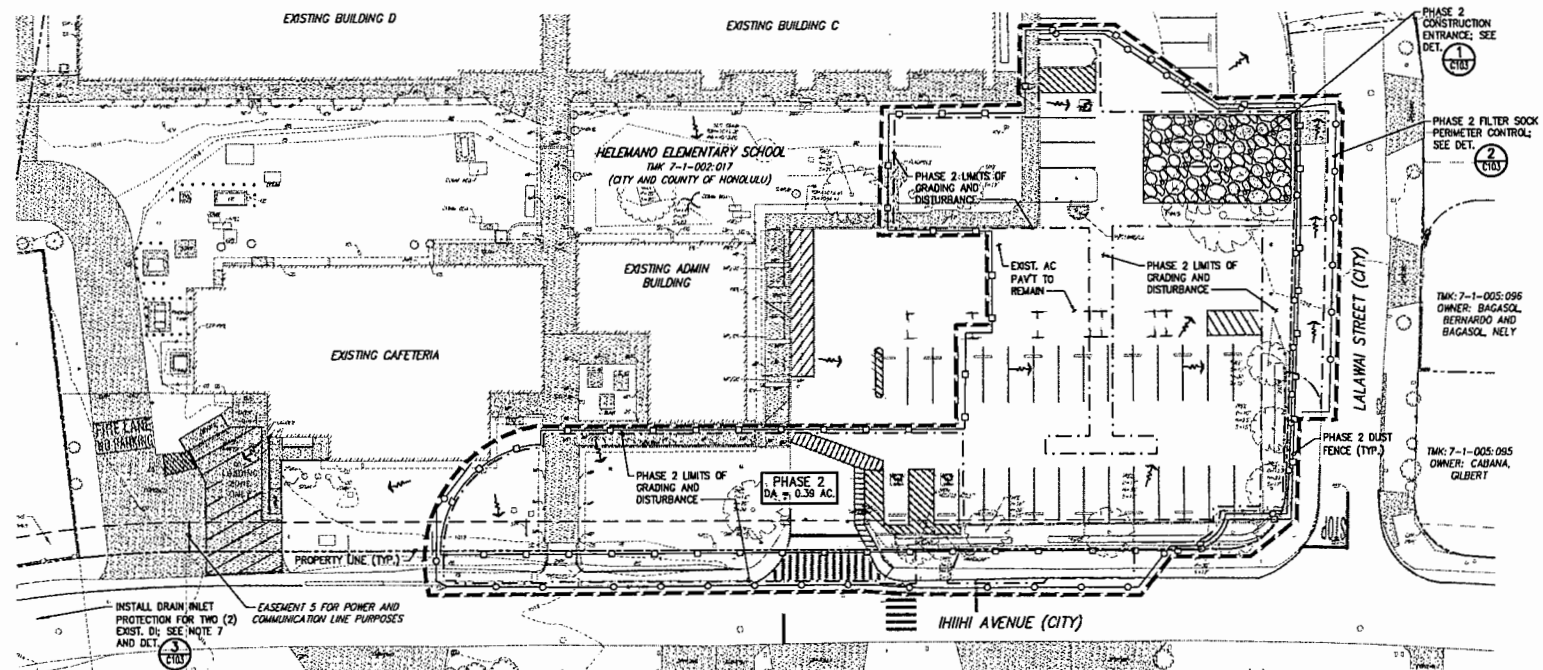
DEPARTMENT OF EDUCATION STATE OF HAWAII			
HELEMANO ELEMENTARY LIBRARY AND ADMIN BLDG			
PROJECT NO.	DATE	JOB NO.	DRAWING NO.
EROSION & SEDIMENT CONTROL PLAN - PHASE 1 & TRENCHING	07/22/2018	C102	C102
THE EMPLOYED CONSULTING ENGINEER	CITY OR DIV.	DATE	SHEET
BY: T.L.C.	BY: T.L.C.	05/12/2023	9
DESIGNED BY:	APPROVED BY:	DATE	SHEET
SCALE:			



1 CONSTRUCTION INGRESS/EGRESS DETAIL
C103 NOT TO SCALE

2 FILTER SOCK DETAIL
C103 NOT TO SCALE

3 SEDIMENT FILTER FOR DRAIN INLET
C103 NOT TO SCALE



- NOTES:**
1. WALKWAYS OUTSIDE OF THE IMMEDIATE WORK AREA SHALL BE MAINTAINED IN PASSABLE CONDITION IN ACCORDANCE WITH 2010 ADAAG 201.3 AND 208.1.
 2. CONTRACTOR SHALL MAINTAIN SAFE PEDESTRIAN AND WHEELCHAIR ACCESS MEETING CURRENT ADAAG REQUIREMENTS TO ALL PUBLICLY-ACCESSIBLE FACILITIES DURING CONSTRUCTION.
 3. CONTRACTOR SHALL MAINTAIN VEHICULAR ACCESS W/10'-WIDE MINIMUM CLEARANCE TO PARKING AREAS OUTSIDE OF PROJECT LIMITS.
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 6. SEE ALSO EROSION AND SEDIMENT CONTROL PLAN NOTES, DWG. C101.
 7. INSTALL DRAIN INLET PROTECTION FOR THE TWO (2) EXISTING GRADED DRAIN INLETS APPROX. 100' TO THE EAST OF THE PROJECT SITE FRONTING THE RESIDENCES AT 916 AND 917 IHIHI AVENUE.

- LEGEND:**
- CONSTRUCTION ENTRANCE
 - EXIST. CONTOUR AND ELEVATION
 - LIMITS OF GRADING AND DISTURBANCE
 - LIMITS OF DISTURBANCE
 - TEMPORARY FILTER SOCK
 - TEMPORARY DUST FENCE
 - FLOW DIRECTION



EROSION AND SEDIMENT CONTROL PLAN - PHASE 2
(CATEGORY 4)

SCALE: 1"=20'

APPROVED:

CHIEF, CIVIL ENGINEERING BRANCH, DPP DATE

REVISION NO.	BY	DESCRIPTION	DATE	APPROVED

DEPARTMENT OF EDUCATION STATE OF HAWAII			
HELEMANO ELEMENTARY LIBRARY AND ADMIN BLDG			
PREFINAL DRAWINGS NOT FOR CONSTRUCTION	DATE: 05/12/2023	DATE: 07/22/2018	DRAWING NO: C103
	SCALE: 1"=20'	DATE: 05/12/2023	SHEET: 10

Materials will be off-loaded at or near the job site and stored in a construction base yard to be located nearby.

School administrators and the contractor will be co-responsible for traffic control. Measures for minimizing traffic impacts during construction include but are not limited to:

- Posting notices alerting drivers of scheduled work on and around the driveways and in the street;
- Positioning traffic cones or other directional devices to guide vehicles around work areas;
- Posting flagmen for traffic control;
- Scheduling work to avoid student drop-off and pick-up times; and
- Providing a safe zone for morning and afternoon student drop offs and pick-ups.
- Coordinating construction activities and traffic movement/mitigation with School administrators.

A Traffic Management Plan can be prepared if required,

Demolishing the Administration Building will inconvenience administrative and office staff, faculty, students, and parents and cannot be avoided. Measures are proposed to house School administrators and staff in trailers to be positioned at two separate campus locations. More than likely key administrative offices and functions will be located near Building C. This location provides ready access for staff and visitors and is close to the temporary drop-off area.

C. Long-term Impacts

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

- Fulfilling School needs for a new Administration Building and a larger Library.
- The improvements are not a precursor for increasing student enrollment
- A 12,000 square foot, two-story structure will be added to the building inventory.
- Administrative office functions, offices for the Principal and Vice-principal, health room, counselors' offices, conference rooms, and records storage.
- A larger Library will foster expansion of the current collection, provide space for Library staff and operations, and establish space for student resource centers, storytelling, and study areas.
- Providing parents and students a safe drop off area off the public roadway.
- Providing a covered waiting area for protecting students from the sun and rain.
- Ambient air quality should not be adversely affected in the long-term. An Administration / Library Building is not a stationary source or generator of air pollution.
- Elementary Schools are not significant noise generators. For this project noise should not be an issue given the uses that will occupy the building.
- Adverse impacts on existing water and wastewater systems are not anticipated. Water demand and wastewater flow should be about equivalent to existing conditions provided there is no increase in School personnel and a significant increase in student enrollment. Water use will be reduced by using low-gallon flush water closets, automatic fixture cut-offs, and water efficient shower heads. Plumbing fixtures will have shut off capabilities to prevent leakage when not in use. Plans will be submitted

to the Department of Water Supply and Department of Planning and Permitting for review and approval.

- Post-development storm water runoff quantity is expected to increase slightly due to the increase in impervious surfaces. The increase cannot be avoided. Surface and roof runoff will be collected and discharged into vegetated swales sited around the improvements.
- Electrical consumption is not anticipated to increase significantly. To help offset the increase the building is designed with insulated materials for walls, energy efficient fixtures, and low-E glazed glass.

PV panels are installed on several building roofs at the School. Electrical rough-ins on the Administration / Library Building will provide for installation of a future rooftop PV system and storage.

- Energy costs cost will increase but can be mitigated by natural lighting and using energy efficient light fixtures/luminaries.
- The structure will present a new object to be seen on the campus and adjoining locations. At a height of 24-feet feet it would be at a height equivalent to the existing two-story classroom buildings and several two-story residential dwellings on the adjoining streets. Over time the structure will become part of the campus building fabric and the “face” of Helemano Elementary School.
- A color palette for the exterior has not yet been selected. It is anticipated that the color scheme will match existing campus buildings.
- The proposed use will not affect land use controls for the property. County zoning regulations allow public uses and structures as permitted uses in the residential zoning district. Elementary schools are defined as a “public use”. Helemano Elementary School is the principal land use for the property and all buildings and improvements are accessory to the principal use.
- Adding a building to an existing school will not alter the character of the school site, surrounding areas, the zoning of adjacent properties, and the uses and zoning of the property.
- The building and building systems will deteriorate gradually over time.
- Regular scheduled maintenance and periodic repairs will sustain the useful life of the building, its components, equipment, and operating systems.
- Repair, renovation, and replacement of building elements, components, and systems can be expected over the building life cycle.
- Long-term costs for maintaining the building 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 would suspend the project until such time that it can be constructed.

B. Alternate Sites

The Department of Education seeks to construct Administration buildings at the front of schools often fronting a street or with ready access from a parking lot at the front of the school. Helemano Elementary School is built on a land parcel with limited public street frontage on 'Ihi Avenue. At its present location the Administration Building is the "face" of the school. Rebuilding on the same site maintains that posture and allowing for convenient pedestrian, vehicle, and bus access. The location also serves as an access control point to the school's grounds.

Open unbuilt space is available at a playfield on the west side of the campus but is not conveniently located along the street.

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
Department of Health
Clean Air Branch

City and County of Honolulu

Board of Water Supply
Department of Planning and Permitting
Department of Transportation Services
Honolulu Fire Department

Other

Hawaiian Electric Company
Wahiawa Public Library (Placement)

An outreach program (or pre-assessment consultation) notified residents along Ihi'ihi Avenue and Lalawai Street fronting the school about the project. Residents also were asked to submit comments they might have about the project and potential environmental impacts for inclusion in an environmental assessment. Consulted residents are listed below. An asterisk * denotes those providing comments.

Gilbert Cabana TR
~~Bernardo and Nely Bagaso~~ TR Not Deliverable
Henry and Lydia Berdadero TR
Gernani and Hermelinda Yutob, TR
~~Wyllie and Mauricia Lum / Elpidio and Helen Armada~~ Not Deliverable
Rozel Bartolome / Alfredo and Rosario Rilveria / Albert G. Morales
Pascua Family
Jarratt and Brooke Basilio
Petrolina and Gilbert Cabana TR
Rodrigo and Elaine Layugan TR / Celerina Adriance Trust
Remedios and Gregoria Castillo
Lloyd Dabaluz TRS
*Jasimo and Rose Cabello TR

SECTION 6 PERMITS AND APPROVALS

Permits required for the project and responsible authorities are identified below. Additional permits and approvals may be required depending on final construction plans.

State of Hawai'i

Department of Health

Disability and Communication Access Board (Facility Access Review)
Variance from Pollution Controls (Noise Permit)

Department of Land and Natural Resources, Historic Sites Division

Historic Site Review (Chapter 6E)

City and County of Honolulu

Board of Water Supply

Water Connection Permit

Department of Planning and Permitting

Building Permit
Grading and Grubbing Permit
Certificate of Occupancy

Department of Transportation Services

Street Usage Permit

Honolulu Fire Department

Plan Check

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 or summarized below.

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

There are no natural or cultural resources on or associated with the building site. The Administration Building is more than 50 years old and considered historic property.

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

The new Administration / Library will be constructed on the same site and serve the same purposes as the existing Administration Building and School Library (albeit in a dedicated space rather than classroom).

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

The project will not conflict with the State's environmental policies or long-term environmental 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 welfare, social welfare, or cultural practices of the community and State 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 secondary impacts are not anticipated.

- 7) Involve a substantial degradation of environmental quality;

Substantial degradation of environmental quality is not anticipated. Environmental quality in the area of the building site will be affected temporarily by construction activities. Measures for mitigating effects on air quality, noise, and erosion are disclosed in this environmental assessment. The contractor can also implement other control measures that would minimize disturbances inside classrooms and disruptions to school activities.

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

The project will not have substantial adverse environmental effects or a commitment for larger actions.

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

Rare, threatened, or endangered species and habitat were not observed.

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

Substantial effects on air quality, ambient noise levels, and water quality are not anticipated. Short-term construction activities will raise fugitive dust, increase ambient noise levels, and generate runoff. Acceptable measures for mitigating dust, noise, and construction runoff are disclosed in this assessment. The contractor could implement other measures as his/her discretion. In the long-term the building is not anticipated to affect the environmental characteristics in this criterion.

- 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;

Helemano Elementary School is not located in an environmentally sensitive area. It is located in flood zone "X" which is areas outside the 0.2% annual chance flood (the 500-year floodplain).

- 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 Building will be a new object on campus and one that will clearly be visible from residences on 'Ihi'ihi Avenue and Lalawai Street. Over time the two-story structure will blend with the other two-story buildings on campus as part of the architectural landscape.

Scenic vistas and view planes are not identified in the Central O'ahu Sustainable Communities Plan.

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

The new structure will increase energy use at the School. Design measures for reducing energy use and creating renewable energy are disclosed in the Description of the Proposed Action.

REFERENCES

- Agribusiness Development Corporation. March 2015. *Draft Environmental Assessment Galbraith Reservoirs*.
- Department of Accounting and General Services. December 1974. *Final Environmental Assessment (Negative Declaration) Helemano Elementary School Six-Classroom building*.
- Department of Education, State of Hawai'i. 2006. *Department of Education Facilities Inventory System Comprehensive Report, Helemano Elementary School*.
- Department of Geography, University of Hawai'i at Hilo. 1998. *Atlas of Hawai'i Third Edition*. University of Hawai'i Press. Honolulu.
- Department of Planning and Permitting, City and County of Honolulu. October 1986. *Land Use Ordinance. Ordinance 86-96 (as amended)*.
- _____. February 2021. Central O'ahu Sustainable Communities Plan. Ordinance 21-6, March 30, 2021.
- _____. O'ahu General Plan. November 2021. Resolution 21-23, CD 1. January 14, 2022.
- Department of Land and Natural Resources, State of Hawaii. September 2004. Flood Hazard Assessment Report. Community Panel No. 15003C0140F
- EnvironMETeo Services, Inc. (EMET). June 2020. *Asbestos, Lead Paint, Waste Characterization, Arsenic, PCB Ballast, and Mercury Lamp Survey Report*. Facility Surveyed: Building A Helemano Elementary School. EMET ID: 1909432. Prepared for Whitespace Architects, 2051 Young Street, Suite 200, Honolulu, Hawaii 96826.
- Mink, John F. and L. Stephen Lau. February 1990 Revised. *Aquifer Identification and Classification for O'ahu: Groundwater Protection Strategy for Hawai'i*. Water Resources Research Center, University of Hawaii at Manoa. Technical Report No. 185.
- Park, Gerald Urban Planner. January 2023. *Site Inspection*
- Pukui, Mary K, Samuel H. Ebert, and Esther T. Mookini. 1974. *Place Names of Hawaii*. University of Hawaii Press.
- U.S. Department of Agriculture, Soil Conservation Service. August 1972. *Soil Survey Report for Islands of Kaua'i, O'ahu, Maui, Moloka'i, and Lāna'i, State of Hawai'i*. In Cooperation with the University of Hawai'i Agricultural Experiment Station.
- WhiteSpace Architects. 2023. *Construction Plans and Drawings*.