DAVID Y. IGE
GOVERNOR

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OCT - 9 2020

DR. CHRISTINA M. KISHIMOTO
SUPERINTENDENT

STATE OF HAWAI`I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI`I 96804

OFFICE OF FACILITIES AND OPERATIONS

September 23, 2020

TO: Keith E. Kawaoka
Acting Director, Office of Environmental Quality Control
Department of Health

FROM: Tracy Okumura
For Public Works Administrator
Facilities Development Branch

SUBJECT: **Draft Environmental Assessment for**
Ala Wai Elementary School Covered Play Court
DOE Job No. Q24001-18
TMK: [1] 2-7-036:007
Portion Waikiki, District of Honolulu, Oahu, Hawaii

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 this determination in the next Environmental Notice.

The project will provide a covered facility where students can engage in outdoor play during inclement weather. Secondarily, the structure will serve as a covered, multi-purpose facility for school activities and functions.

A PDF of the Draft Environmental Assessment will be emailed to the Office of Environmental Quality Control with the Environmental Notice publication form. One printed copy of the Draft Environmental Assessment will be deposited with the Hawaii Documents Center.

Should there be any questions, please contact Mitch Tamayori, Project Coordinator of the Facilities Development Branch, Project Management Section, at 784-5116.

TO:mt
Enclosures

c: Facilities Development Branch

From: webmaster@hawaii.gov
To: HI Office of Environmental Quality Control
Subject: New online submission for The Environmental Notice
Date: Tuesday, September 29, 2020 9:39:23 AM

Action Name

Ala Wai Elementary School Covered Play Court

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

Honolulu, Oʻahu

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

[1] 2-7-036: 007

Action type

Agency

Other required permits and approvals

Numerous

Proposing/determining agency

Department of Education, State of Hawaii

Agency contact name

Mitch Tamayori

Agency contact email (for info about the action)

Mitch.Tamayori@k12.hi.us

Email address or URL for receiving comments

gpark@gpup.biz

Agency contact phone

(808) 784-5116

Agency address

Office of Facilities and Operations
3663 Waialae Avenue
Honolulu, Hawaii 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, Hawaii 96789-1431
United States
Map It

Action summary

The proposed action will provide a permanent structure where students can engage in outdoor play during inclement weather. Secondarily the structure will serve as a covered, multi-purpose facility for school activities and functions.

A rectangular-shaped single-story facility of approximately 8,816 square feet is proposed. One regulation basketball court, two cross basketball courts, one regulation volleyball court and two cross volleyball courts will be provided. The volleyball courts courts also could be used for tennis.

Underlying soil conditions will require the structure to be supported in part by micropiles placed around the perimeter. The height of the structure is approximately 32 feet. A height waiver will be required to exceed the height of the Diamond Head Special District.

Construction costs are estimated at $3.8 million and will be funded by the State of Hawai‘i. A one phase construction timetable is proposed at 8 to12 months.

Reasons supporting determination

See Section 7, DEA

Attached documents (signed agency letter & EA/EIS)

- Ala-Wai-Elem.-School.pdf
- AFONSI.Ala-Wai-ES.pdf

Action location map

- Ala-Wai-Elementary-Figure-1_Submittal-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

ALA WAI ELEMENTARY SCHOOL COVERED PLAY COURT

Portion of Waikīkī, District of Honolulu (Kona), Oʻahu

Source: Ala Wai Elementary School Photo Album

Prepared for

State of Hawaiʻi
Department of Education
Office of Facilities and Operations
Facilities Development Branch
Project Management Section
3663 Waialae Avenue
Honolulu, Hawaiʻi 96816

Iulai 2020

DRAFT ENVIRONMENTAL ASSESSMENT

ALA WAI ELEMENTARY SCHOOL COVERED PLAY COURT

Portion of Waikīkī, District of Honolulu (Kona), O'ahu

Prepared in Partial Fulfillment of the Requirements of Chapter 343, Hawai'i Revised Statutes and Title 11-200.1 Hawai'i Administrative Rules, 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
3663 Waialae Avenue
Honolulu, Hawai'i 96816

Prepared by

Gerald Park Urban Planner
95-595 Kaname'e Street No. 324
Mililani, Hawai'i 96789

And

Pacific Architects, Inc.
2020 South King Street
Honolulu, Hawai'i 96826

Iulai 2020

PROJECT PROFILE

Proposed Action:	Ala Wai Elementary School Covered Play Court DOE Job No. Q24001-18
Location:	Portion Waikīkī, District of Honolulu, O'ahu,
Street Address:	503 Kamoku Street Honolulu, Hawai'i 96826
Proposing/Determining Agency:	Department of Education Office of Facilities and Operations Facilities Development Branch Project Management Section 3633 Waialae Avenue, Room B-201 Honolulu, Hawai'i 96816
Tax Map Key:	[1] 2-7-036: 007
Land Area:	5.39 acres (234,788 square feet)
Landowner:	State of Hawai'i
Existing Use:	Public Elementary School
State Land Use Designation:	Urban
O'ahu General Plan:	Primary Urban Center
Development Plan:	Primary Urban Center
DP Land Use Map PUC East:	*Institutional*
Zoning:	P-2 General Preservation
Special District:	Diamond Head
Special Management Area:	Outside Special Management Area
Need for Assessment:	Chapter 343, Hawai'i Revised Statutes §343-5 (a) (1) Propose the use of state or county lands or the use of state or county funds.
Determination:	Anticipated Finding of No Significant Impact
Contact Person:	Mitch Tamayori, Project Coordinator Department of Education [See Proposing/Determining Agency Above] Telephone: (808) 784-5116 Email: Mitch.Tamayori@k12.hi.us

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1 DESCRIPTION OF THE PROPOSED PROJECT

The Department of Education, State of Hawai'i, proposes to construct a multi-purpose covered play court at Ala Wai Elementary School located in Waikiki, District of Honolulu, City and County of Honolulu, O'ahu, Hawai'i. Ala Wai Elementary School ("Ala Wai Elementary" or "School") is bounded by Hihiwai Street, multi-family dwellings and a private school ('Iolani School) to the north, a softball field to the east, part of Ala Wai Park (a dog park, community garden, and multi-use path) and the Ala Wai Canal to the south, and Ala Wai Neighborhood Park to the west. A Vicinity Map is shown as Figure 1.

The 5.39 acre School property is identified as Tax Map Key [1] 2-7-036: 007. A Tax Map is shown as Figure 2.

A. Purpose and Need for the Project

A purpose of the project is to provide a covered facility where students can engage in outdoor play during inclement weather. Secondarily, the structure will serve as a covered, multi-purpose facility for school activities and functions.

B. Technical Characteristics

1. Demolition

The project limits for construction is approximately 30,000 square feet which includes an existing outdoor basketball court, lawn areas on the north and south, a portion of Hihiwai Street, and an approximately 30-foot wide open area between the court and Buildings A and B. For this assessment, the term building site is equivalent to the "footprint" of the covered play court.

There are no structures *per se* to be demolished. Existing improvements to be demolished or removed are shown on Sheet C-1.2 and generally include:

- The existing basketball court, basketball backboard, and support poles
- All drainage improvements, sidewalks, and lawns in the open area
- Chain link fencing and gates excepting chain link fencing on the east
- Water lines

2. Covered Play Court

The rectangular-shaped covered play court is oriented to fit within a rectangular shaped area between Buildings A and B and the east property line. The structure and supporting improvements will be erected on the demolished court, adjoining lawns to the north and south, and the open area to the west. It will be setback 6.75 feet from the east property line and not encroach into the side yard. A Site Plan is shown as Sheet A-1.0.

A single-story structure with a building footprint of approximately 8,816 square feet (76'-0" X 116-0") is proposed. One regulation basketball court, two cross basketball courts, one regulation volleyball court and two cross volleyball courts will be provided (See Sheet A-2.0, Floor Plan). The courts will overlap each other and striped with different color lines. The

volleyball courts also will be used for tennis with different nets. The court surface will be asphalt with a surface similar to that of tennis courts. Finish floor elevation is set at 4.5 feet.

The structure will be erected on a poured in place concrete foundation, asphalt floor, framed with steel posts and trusses, and topped with a pitched standing seam metal roof. Underlying soil conditions will require micro piles to be placed around the perimeter of the foundation. Twenty-four bore holes will be drilled to a depth of -60 feet. A permanent galvanized steel casing and 51/2" threaded steel bar (the micro pile) will be installed, the casing grouted, and topped with a concrete pile cap.

A unisex restroom, electrical room, storage room, and janitor's closet will be constructed on the north side and framed with cement masonry unit walls. Chain link fencing on the other three side elevations will provide ventilation and visual security.

The height of the structure is approximately 32-feet measured from grade to top of roof. The structure exceeds the building height of the P-2 zoning district by approximately 7+ feet Exterior elevations are shown on Sheet A-3.0. The Department of Education will seek a building height Waiver from the Department of Planning and Permitting City and County of Honolulu to allow the encroachment.

Roof eaves will provide cover and help prevent rain from entering the play court.

Translucent siding around the sides will allow natural light into the interior.

Two major improvements are proposed for the approximately 30-foot wide open area. A concrete ditch approximately 2'-0" wide and 215 feet in length will be constructed to replace an existing concrete swale. It will be constructed between new and existing walkways and uncovered excepting where walkways access the play court. A new grated trench drain at the *mauka* end of the concrete ditch will receive runoff from areas at the north end of the site and discharge into an existing drainage swale at the south end of the property.

The second improvement is construction of a 16-foot wide Americans with Disability Act ("ADA") accessible walkway. The covered walkway will be constructed the length of the new court and connect with walkways from Buildings A and B.

3. Circulation and Off-Street Parking

Changes to on-campus vehicle circulation and parking configurations are not proposed. Short-term modifications may be required to accommodate the movement of construction vehicles.

4. Grading

The building site does not require extensive grading as the site of the covered play is relatively level. Excavation quantities for the detention basin are estimated at 90 cubic yards. Fill quantities for overall project areas have not been determined. Areas disturbed by construction will be restored to pre-construction condition or better. A Grading Plan is shown as Sheet C-1.4).

5. Infrastructure

Domestic water will be supplied from the on-campus water system.

Wastewater from the unisex restroom will discharge into the on-campus wastewater system.

An unlined detention basin will be constructed at the *makai* end of the covered play court to collect and detain roof and on-site runoff. The 2,450 square foot basin will be 1 foot deep and have a projected capacity of 7,310± gallons.

Electrical power will be drawn from an existing switchboard located in an electrical vault near the center of campus. New or existing underground conduits will route electrical cabling to an electrical room at the covered play court. The existing switchboard will be replaced with a new switchboard. If the vault is too small, the new switchboard will be housed in an accessory structure to be constructed adjacent to the vault.

A 48-inch municipal wastewater transmission main is routed from Hihiwai Street into Waikiki. The main is within a 20-foot wide sewer easement aligned north-south through the School in the approximate middle of the building footprint and detention basin. The two facilities will be constructed over the easement.

6. Fire Protection

An 8" fire service line will be installed in the driveway fronting Building A and connect to a new fire hydrant at the end of the driveway and parking area. A secured rolling gate will be installed at the dead end for fire apparatus access.

7. Landscaping

Areas adjoining the covered structure and areas disturbed by construction will be grassed. No other landscaping is proposed.

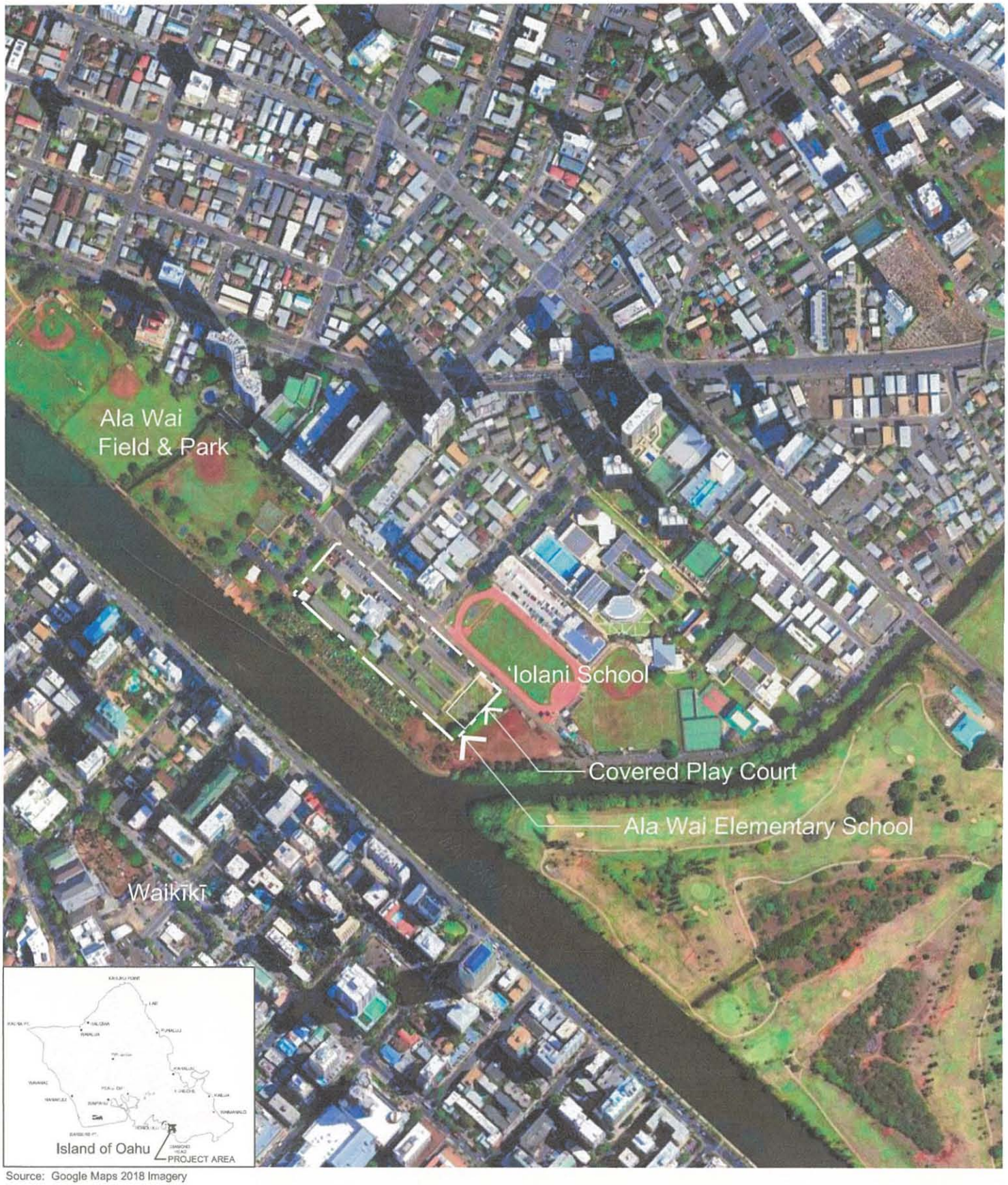
C. Economic Characteristics

Construction costs are estimated at $3.8 million and will be funded by the State of Hawai'i. If funding is approved construction may begin during the Summer of 2021. A one phase construction timetable is proposed with construction projected at 8 to 12 months.

The 5.39 acre parcel (TMK [1] 3-7-036: 007) is owned by the State of Hawaii. Governor's Executive Order No. 2539 (November 1970) set aside public land for "Ala Wai Elementary School to be under the control and management of the Department of Education".

D. Social Characteristics

The covered play court will have a capacity of about 900 persons for special assemblies and/or events. The primary use is for the School's physical education program and recess. Additional staffing is not required. Use of the play court by grade level, day, and time will be scheduled by teachers and school administrators. Custodial staff will maintain the structure and open and secure the facility daily.



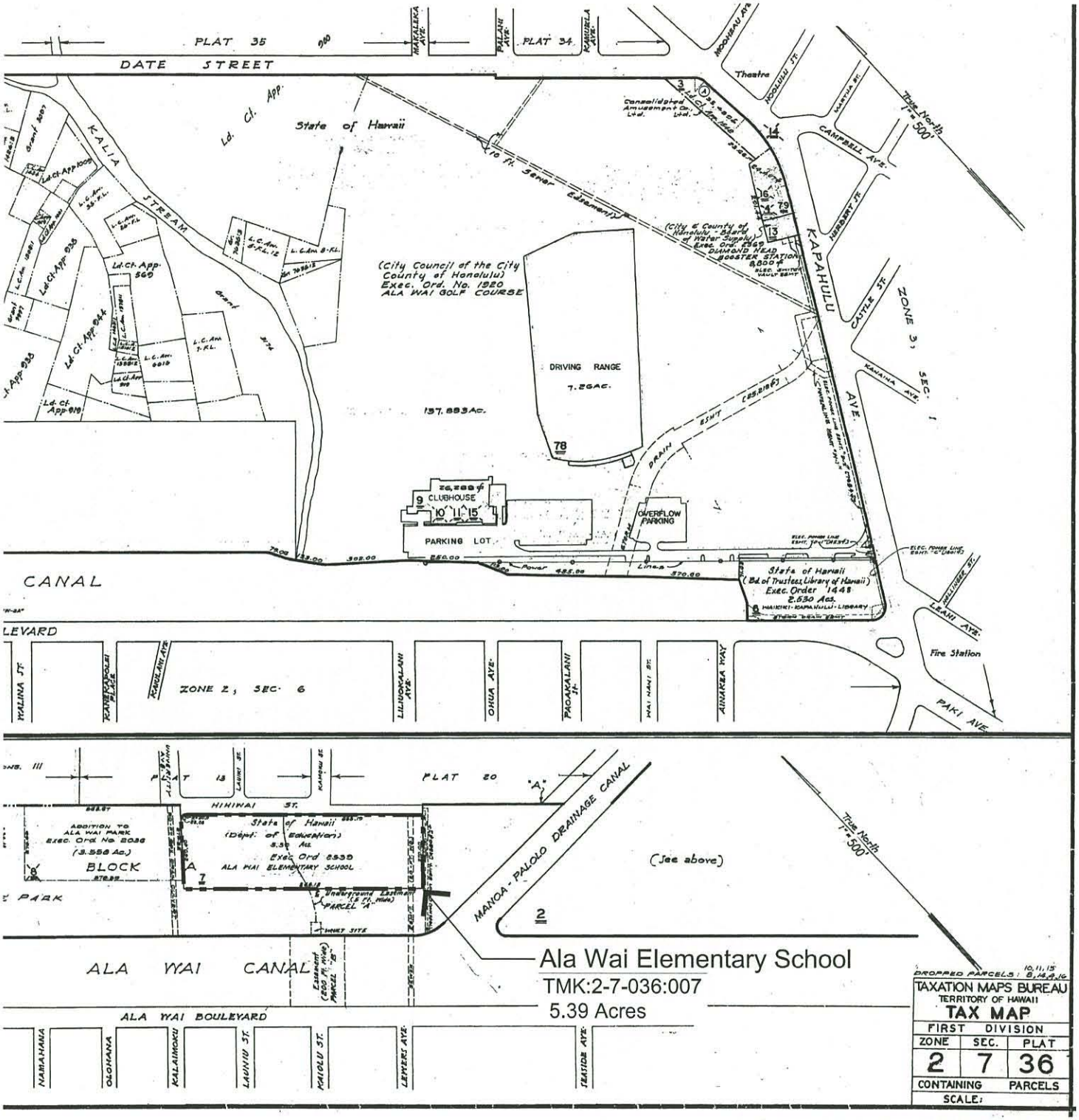
Source: Google Maps 2018 Imagery

LINEAL SCALE (FEET)
250 125 0 125 250 500

NORTH

Gerald Park
Urban Planner
December 2018

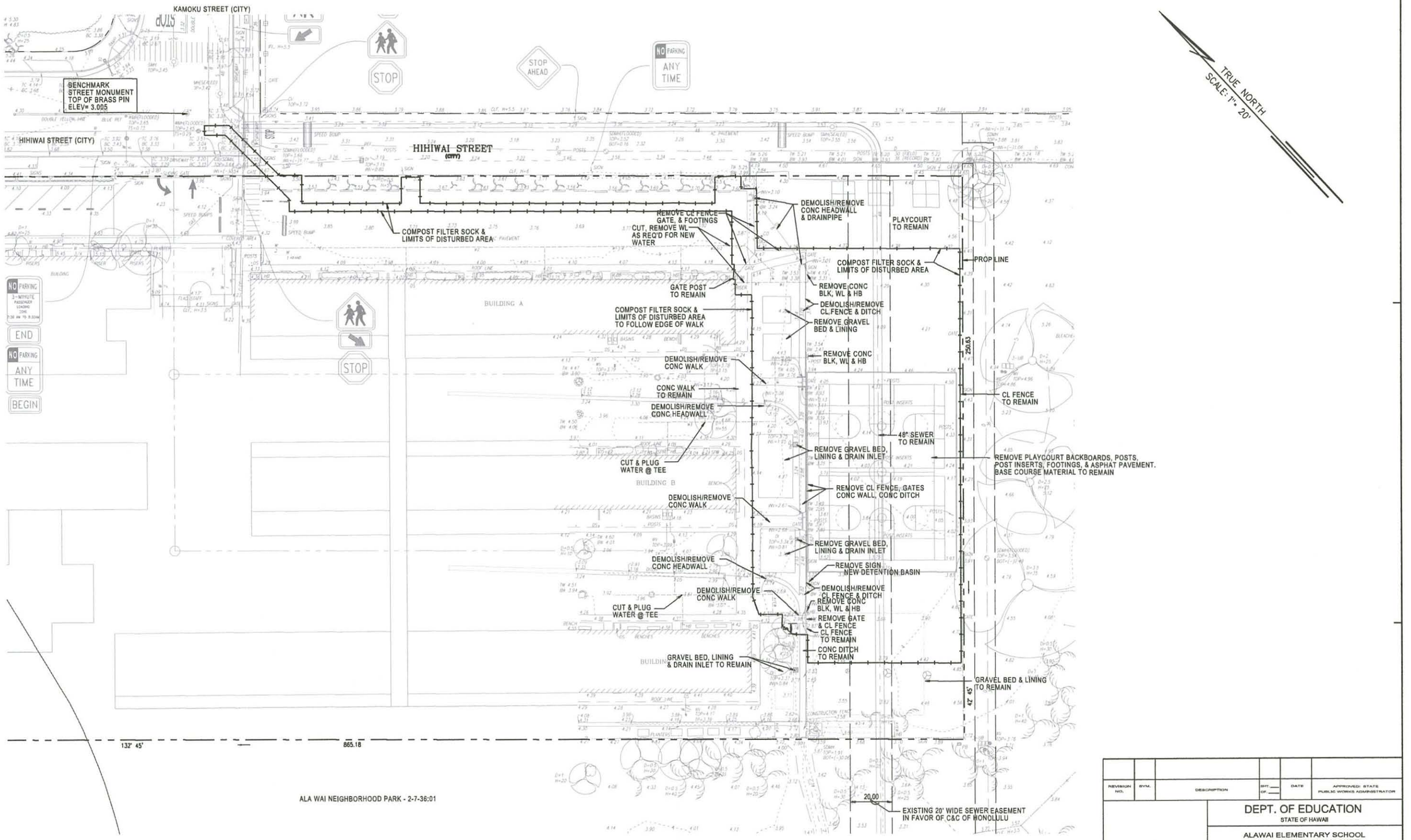
Figure 1
Vicinity Map
Ala Wai Elementary School
Covered Play Court



Source: City & County of Honolulu Database

LINEAL SCALE (FEET) 250 125 0 125 250 500 NORTH

Figure 2
Tax Map
Ala Wai Elementary School
Covered Play Court



EROSION & SEDIMENT CONTROL PLAN, DEMOLITION PLAN

SCALE: 1"= 20'

NOTE:

SEE ESCP NOTES AND DETAILS ON SHT C-0.2
SEE LOCATION MAP ON SHT C-0.1 FOR LOCATION OF RECEIVING WATERS.
THIS IS A CATEGORY 4 PROJECT

APPROVED:

CHIEF, WASTEWATER BRANCH, D.P.P. DATE

APPROVED:

CHIEF, CIVIL ENGINEERING BRANCH, D.P.P. DATE

REVISION NO.	BY/M.	DESCRIPTION	SHT. OF.	DATE	APPROVED: STATE PUBLIC WORKS ADMINISTRATOR

DEPT. OF EDUCATION
STATE OF HAWAII

ALAWAI ELEMENTARY SCHOOL
NEW COVERED PLAYCOURT

HONOLULU OAHU HAWAII

EROSION & SEDIMENT CONTROL PLAN, DEMOLITION PLAN

EXPIRES 4/30/2020

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

KIM & SHIROMA ENGINEERS, INC.		DOE JOB NO.	DRAWING NO.
DESIGNED BY: CTS	CHECKED BY: CTS	Q24001-18	C-1.2
DRAWN BY: KSE	APPROVED BY: CTS	DATE MAY 2019	SHEET ___ OF ___ SHTS
SCALE: AS SHOWN			

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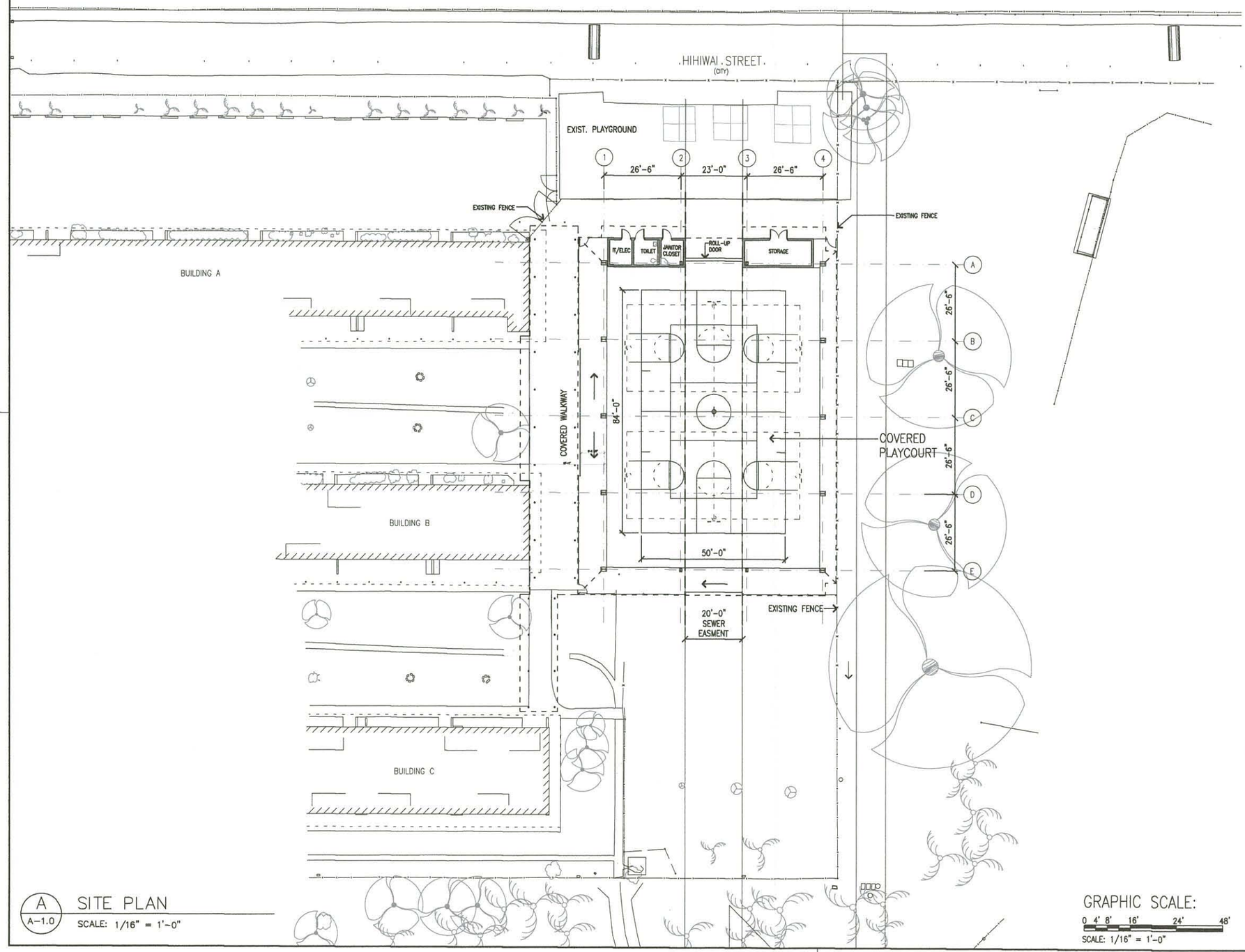

A
A-1.0
SITE PLAN
SCALE: 1/16" = 1'-0"

GRAPHIC SCALE:
0 4' 8' 16' 24' 48'
SCALE: 1/16" = 1'-0"

REVISION NO.	BY/M.	DESCRIPTION	SHT.__ OF__	DATE	APPROVED

CLIFFORD K. MURAKAMI
LICENSED PROFESSIONAL ARCHITECT
NO. 6065
HAWAII, USA

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

Signature
LICENSE EXPIRES : APRIL 30, 2020

DEPARTMENT OF EDUCATION
STATE OF HAWAII

ALA WAI ELEMENTARY SCHOOL
COVERED PLAYCOURT

HONOLULU, HAWAII

SITE PLAN

PACIFIC ARCHITECTS, INC.		JOB NO.	DRAWING NO.
DESIGN BY: CKM	CHECKED BY: CKM	024001-18	A-1.0
DRAWN BY: GA	APPROVED BY: CKM	DATE	SHEET
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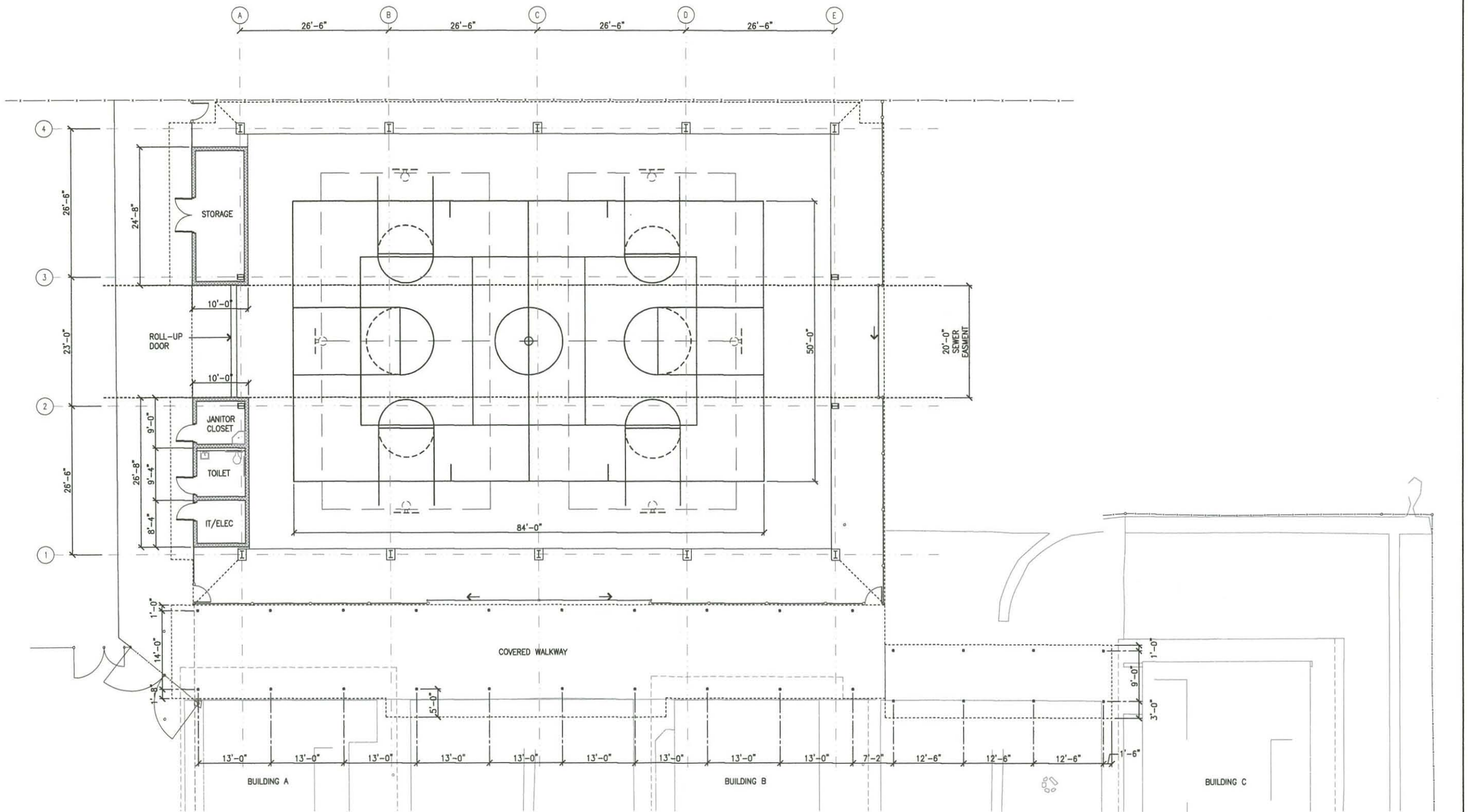

A / A-2.0 FLOOR PLAN

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

GRAPHIC SCALE:

0 2' 4' 8' 16' 24'

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

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED:

CLIFFORD K. MURAKAMI LICENSED PROFESSIONAL ARCHITECT NO. 6065 HAWAII, USA

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

Signature

LICENSE EXPIRES : APRIL 30, 2020

DEPARTMENT OF EDUCATION
STATE OF HAWAII

ALA WAI ELEMENTARY SCHOOL
COVERED PLAYCOURT

HONOLULU, HAWAII

FLOOR PLAN

PACIFIC ARCHITECTS, INC.

DESIGN BY:	CHECKED BY:	JOB NO.	DRAWING NO.
CKM	CKM	Q24001-18	A-2.0
DRAWN BY:	APPROVED BY:	DATE	SHEET
GA	CKM	MAY 2018	00
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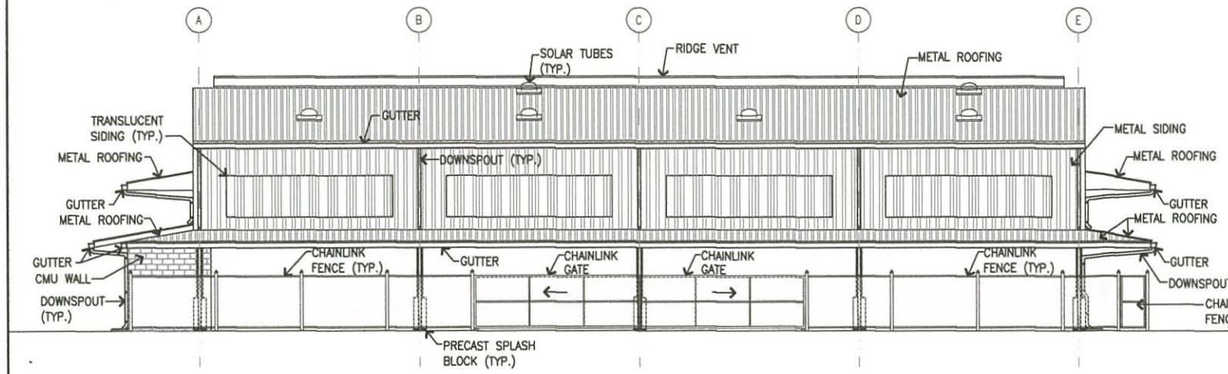
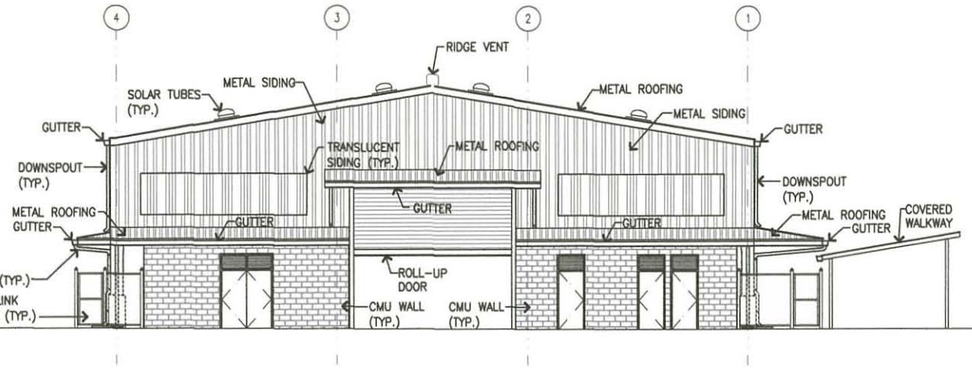
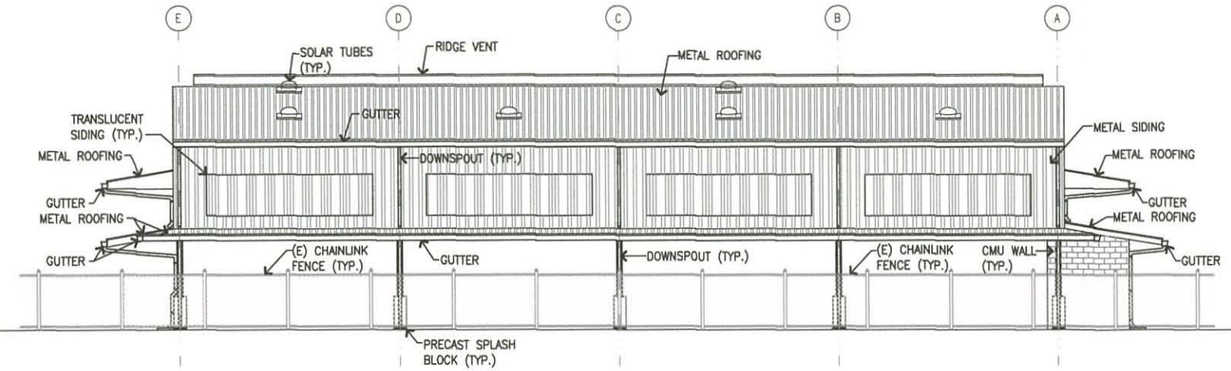


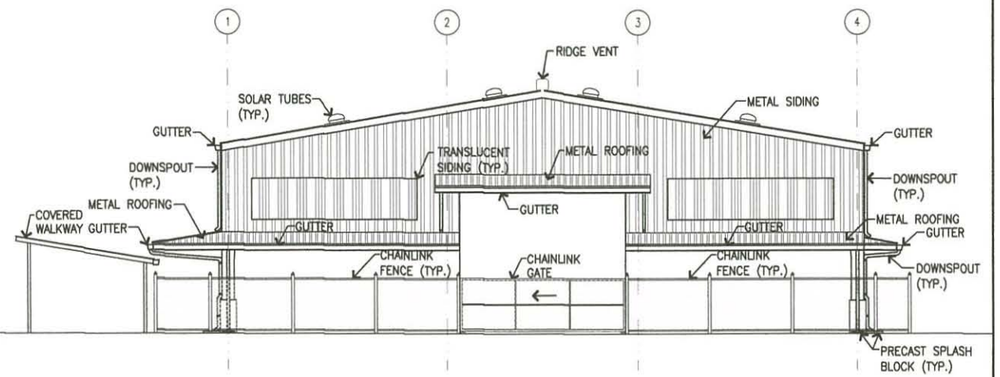
NORTH ELEVATION



EAST ELEVATION



SOUTH ELEVATION



WEST ELEVATION

A / A-3.0 EXTERIOR ELEVATIONS

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

GRAPHIC SCALE:

0 2' 4' 8' 16' 24'

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

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED

CLIFFORD K. MURAKAMI LICENSED PROFESSIONAL ARCHITECT NO. 6065 HAWAII, USA

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

Signature
LICENSE EXPIRES : APRIL 30, 2020

DEPARTMENT OF EDUCATION
STATE OF HAWAII

ALA WAI ELEMENTARY SCHOOL
COVERED PLAYCOURT

HONOLULU, HAWAII

EXTERIOR ELEVATIONS

PACIFIC ARCHITECTS, INC.		JOB NO.	DRAWING NO.
DESIGN BY: CKM	CHECKED BY: CKM	Q24001-18	A-3.0
DRAWN BY: GA	APPROVED BY: CKM	DATE: MAY 2018	SHEET: 00
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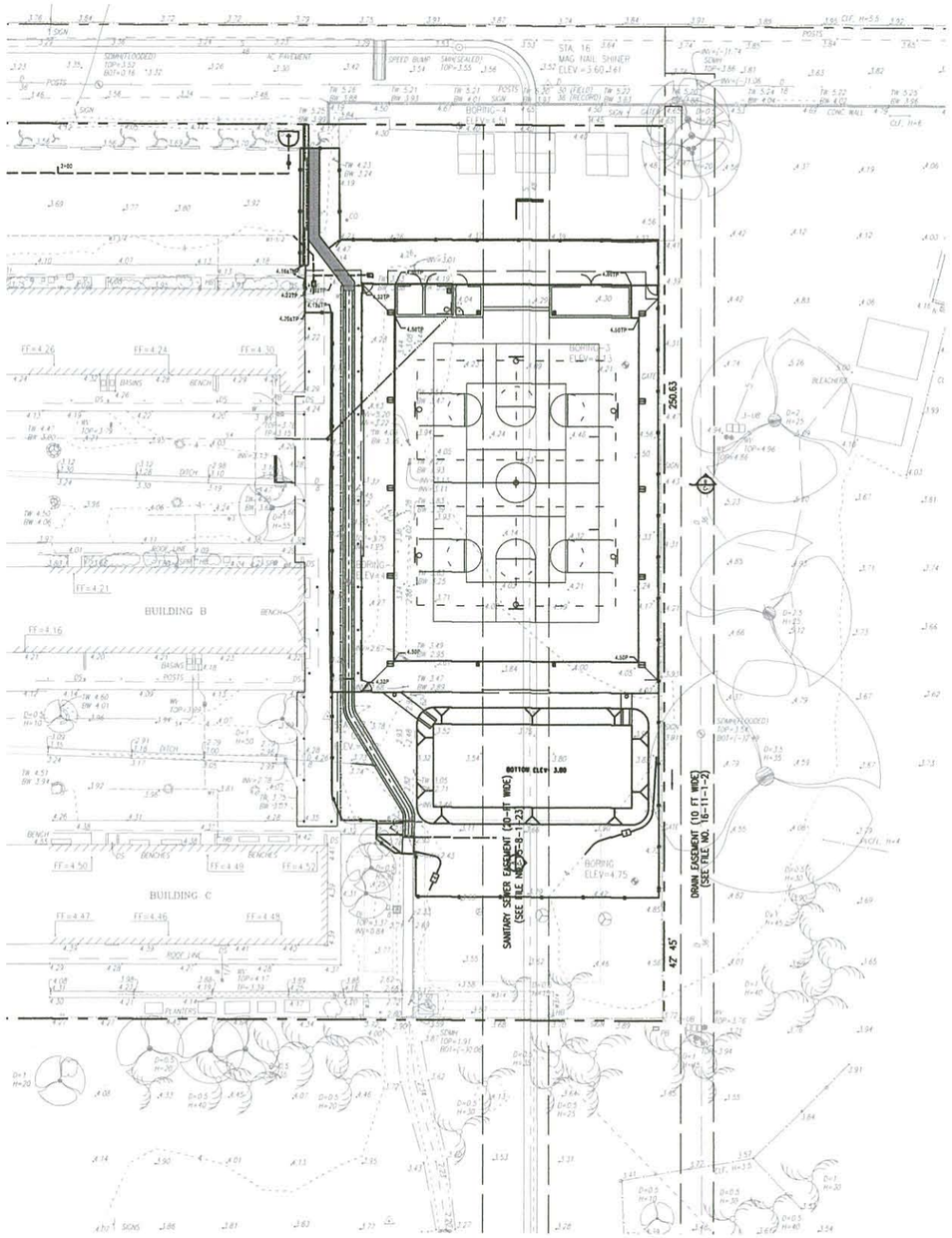


GRADING PLAN
SCALE: 1"= 20'

TRUE NORTH
SCALE: 1" = 20'

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED: STATE PUBLIC WORKS ADMINISTRATOR

DEPT. OF EDUCATION
STATE OF HAWAII

ALAWAI ELEMENTARY SCHOOL
NEW COVERED PLAYCOURT

HONOLULU OAHU HAWAII

GRADING PLAN

EXPIRES 4/30/2020

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

KIM & SHIROMA ENGINEERS, INC.		DOE JOB NO.	DRAWING NO.
DESIGNED BY: CTS	CHECKED BY: CTS	Q24001-18	C-1.4
DRAWN BY: KSE	APPROVED BY: CTS	DATE MAY 2019	SHEET ___ OF ___ SHTS
SCALE: AS SHOWN			

FILE ____ DRAWER ____ FOLDER ____

2 DESCRIPTION OF THE AFFECTED ENVIRONMENT

A. Background Information

Ala Wai Elementary School opened for instruction in 1954 with the construction of two permanent classroom buildings. Six other permanent buildings were later constructed between 1955 and 1970. No permanent structure has been erected since 1970. Portable classrooms were placed on the campus in 1966, 1982, and 1988. Existing structures are identified in Table 1.

Table 1. Structures at Ala Wai Elementary School

Building	Function	Levels	No. Classrooms	Year Built
A	Classroom	1	6	1954
B	Classroom	1	6	1954
C	Classroom	1	8	1955
D	Classroom	1	8	1960
E	Classroom	1	4	1960
F	Library	1	None	1956
G	Cafeteria	1	None	1956
H	Administration	1	None	1970
Portables (5)	Classrooms	1	7	1966 - 1988

Source: Department of Education Facilities Inventory System Report, 2006.

The school is part of the Department of Education's Honolulu District Kaimuki-McKinley-Roosevelt Complex Area. Ala Wai Elementary is part of the Kaimuki Complex which includes Ali'iōlani, Hōkūlani, Jefferson, Kūhiō, Lunalilo, and Pālolo Elementary Schools. Jarret and Washington Middle Schools and Kaimuki High School are upper level schools in the complex. In general, elementary schools "feed" students into the Middle Schools which "feed" students into High School.

Student enrollment students in 2019-2020 totaled 339 in Grades Kindergarten to Grade 5 (DOE, No Date). The design enrollment is 520 students (DOE, 2006).

The proposed play court will be constructed on the eastern end of the campus. The building site is bounded on the west by Buildings A, B, and C which are perpendicular to the building site, a softball field to the east, La'au Street on the north and an open lawn area on the south. The building site is an asphalt paved, uncovered play court with basketball nets, chain link fencing on two sides, and mowed lawns on the north and south A concrete slab in the northeast corner is used as a play surface. A site photo is shown as Photograph 1.

'Iolani School's Kozuki Stadium and Eddie Hamada athletic field are the most prominent and visible features on the north. A one-way driveway and bike path about 20 feet wide and chain link fencing separates the Stadium from Ala Wai Elementary School.

Photograph 1. View Towards Waikīkī from North End of Property.

A softball field is located on the east. Chain link fencing and several monkeypod trees on the field side of the fence line separates it from Ala Wai Elementary School.

Ala Wai Dog Park, Ala Wai Community Gardens, Ala Wai Canal, and a wide multi-use path are prominent public features to the south. Between the Dog Park and Community Gardens a grassed depression appears to function as a detention basin. Runoff from the School discharges into this area. The basin is bounded in part by a two-foot high grass mound along its southern perimeter which suggests the mound is there to contain water. A stamd of coconut palms is planted here.

B. Environmental Characteristics

The description of environmental characteristics is drawn from site inspections and technical reports prepared for the project. Information was also derived from the "Final Environmental Assessment Ala Wai 46KV Underground Cable Relocation" prepared for Hawaiian Electric Company by Belt Collins Hawaii LLC and the Draft Feasibility Report for the Ala Wai Canal Project prepared by the U.S. Army Corps of Engineers.

1. Climate

The climate of Mō'ili'ili can be characterized as semi-tropical with warm summer and winter months. The warmest months are from June to November where daytime temperatures are near 81^0 F. The coolest months are from December to April where nighttime temperatures average 68^0 F. Average annual rainfall is about 25 inches.

2. Topography

The school property has been modified by site work, buildings, walkways, impervious pavements, play areas, grass lawns, and associated improvements.

The building site is relatively level having graded and improved to accommodate the existing basketball court. Ground elevation across this area of the School ranges from a high of 4'± at the *mauka* end of the site to about 3.5'±' at the *makai* end a distance of about 250 feet lineal feet.

3. Soils

Fill Land (Code: FL) comprises both sides of the Ala Wai Canal including Ala Wai Elementary School (Soil Conservation Service, 1972). "This land type occurs mostly near Pearl Harbor and in Honolulu, adjacent to the ocean. It consists of areas filled with material dredged from the ocean or hauled from nearby areas, garbage, and general material from other sources" (Ibid). Because of existing site improvements, surface and part of the subsurface soils are most likely a mixture of fill land, imported engineered fill, and imported soil and topsoil.

4. Hydrology

a. Ground Water

This section of the Mō'ili'ili neighborhood overlies what Mink and Lau (1990) classify the Palolo aquifer system (See Table 2). They further characterize the aquifer as a high level, unconfined, dike aquifer, low in salinity and providing fresh drinking water. It is considered to be irreplaceable as a source of fresh water and highly vulnerable to contamination (See Table 2).

Table 2. Aquifer Classification

Aquifer Code	**30101116**	**30101121**
Island Code	3 - Oahu	3- Oahu
Aquifer Sector	01 - Honolulu	01 - Honolulu
Aquifer System	01 - Palolo	01 - Palolo
Aquifer Type, hydrogeology	1 – Basal	1 - Basal
Aquifer Condition	1 - Unconfined	1- Unconfined
Aquifer Type, geology	6 - Sedimentary	2- Dike
Status Code	**23321**	**11113**
Development Stage	2 - Potential Use	1 - Currently Used
Utility	3 - Neither	1 - Drinking
Salinity (mg/l Cl^{-})	3 - Moderate (1000 to 5000)	1 - Fresh (<250)
Uniqueness	2 - Replaceable	1- Irreplaceable
Vulnerability to Contamination	1 - High	3- Low

Source: Mink and Lau, 1990.

b. Surface Water

There are no surface water features on the premises. The Ala Wai Canal flows east to west about 150 feet south of the school. The Manoa-Pālolo Drainage Channel to the east (beyond an adjoining softball field) flows north to south and discharges into the Ala Wai Canal. The Canal discharges into the Ala Wai Yacht Harbor about 1.25 miles to the east.

5. Flood Hazards

The Flood Insurance Rate Map ("FIRM") designates this area of Mō'ili'ili a Special Flood Hazard Area(s) subject to inundation by the 1% annual chance flood (the 100-year flood) also known as the base flood. The base flood elevation is the water surface elevation of the 1% annual chance flood. The FIRM panel is shown as Figure 3.

Ala Wai Elementary School is within Flood Zone AO which is defined as "flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined". The average depth of flooding is estimated at 2-feet across the entire school (Federal Emergency Management Agency, 2011)."

The Ala Wai Canal and Manoa-Palolo Drainage Channel are designated Flood Zone A, "no base flood elevation determined".

Developed lands *mauka* of the School are designated Zone A and Zone X or "areas determined to be outside the 0.2% annual chance floodplain" (the 500-year floodplain).

Ala Wai Elementary School is not in a coastal high hazard area (See Figure 3) and a tsunami evacuation zone (.

Flooding hazards are also posed by sea level rise. Modeling and analyses of sea level rise for this property, project, and environmental assessment were not performed. In lieu of extensive analyses, the Hawai'i Sea Level Rise Vulnerability and Adaptation Report (December, 2017) was reviewed and its companion tool, the Hawai'i Sea Level Rise Viewer, used to gauge potential sea level rise.

The Report projects sea level rise for four time periods (See Table 3). The projections are not hard and fast but provide parameters for identifying areas vulnerable to global variations in sea level rise. Changes in global climate conditions can influence the projections.

Table 3. Upper Boundaries of Global Sea Level Rise Projections

Global Sea Level Rise Projection		
Year	**Feet**	**Meters**
2030	0.5	0.16601
2050	1.1	0.3224
2075	2	0.5991
2100	3.2	0.9767

Source: Hawai'i Sea Level Rise Vulnerability and Adaptation Report (December 2017).

Source: Federal Emergency Management Agency
Flood Insurance Rate Map
Map Number 15003C0366G
Date: Jan. 19, 2011.

Legend

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1%% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the O.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

LINEAL SCALE (FEET)
500 250 0 250 500 1000

NORTH

Figure 3
FIRM Map
Ala Wai Elementary School Covered Play Court

Gerald Park
Urban Planner
December 2018

The Report models three hazards attributable to sea level rise for the state of Hawai'i---passive flooding, annual high wave flooding, and coastal erosion. The School should not be affected by high wave flooding and coastal erosion because of its location well away from the shoreline and Pacific Ocean. Passive flooding, however, could pose a hazard for the School and surrounding land uses, structures, roads, and associated facilities.

The Sea Level Rise Viewer shows that the School is in a Sea Level Rise Exposure Area. A rise in sea level of 0.5 feet,1.1 feet, and 2 feet would not affect the School. Figure 4 depicts conditions from a 3.2-foot rise in sea level. Almost all the School grounds would be submerged including the site of the new covered play court. The submergence is the result of ground water being pushed up through the ground surface by the rising sea level resulting in standing water. The submergence could be inches or feet.

A major public works improvement project in the vicinity of the School is the Ala Wai Canal Project. The purpose of the Project "is to reduce riverine flood risks in the Ala Wai Watershed. The Ala Wai Watershed is located on the southeastern side of the island of O'ahu and includes Makiki, Mānoa, and Pālolo streams, all of which drain to the Ala Wai Canal. The Canal is a 2-mile-lomg waterway constructed in the 1920s to drain extensive coastal wetlands, thus allowing development of the Waikīkī District. A high risk of flooding exists within the watershed because of the natural geography, coupled with aging and undersized flood conveyance infrastructure. Flooding has occurred within the watershed on multiple occasions, resulting in recorded property damages and health and safety risks. Analyses conducted in support of this project show that the 1-percent annual chance exceedance (ACE) floodplain extends over approximately 1,358 acres of the watershed" (Executive Summary, 2017). The 1-percent ACE flood is the 100-year flood.

Ala Wai Elementary School is located within the Ala Wai Watershed and subject to flooding from the 1-percent ACE.

6. Historical Resources

Cultural Surveys Hawaii (2020) conducted a Literature Review and Field Inspection of the site of the proposed play court. Excerpts from their report are presented below. Figure numbers cited in the excerpt refer to the Literature Review and Field Inspection and not those in the environmental assessment.

> "The entire project area has been graded and is mostly under an at-grade concrete slab in the northeast portion of the project area with a perimeter fence and small areas of mowed lawn (Figure 40 to 46). No historic properties were identified."
>
> "Almost all campus buildings were built between the mid-1950's and early 1960's making them 60+ years old or older. The threshold for historic property is 50 years old thus the School may be a historic property."

7. Biological Resources

Bermuda grass lawns, two Manila palms, and two fern trees (2) comprise the plant palette for the building site. Individual pine trees (Norfolk Island or Cook Island) planted on both sides of Buildings B rise above the rooftop. Outside the School, monkey pod trees line the fence line to the east and a stand of coconut grows in the detention basin to the south.

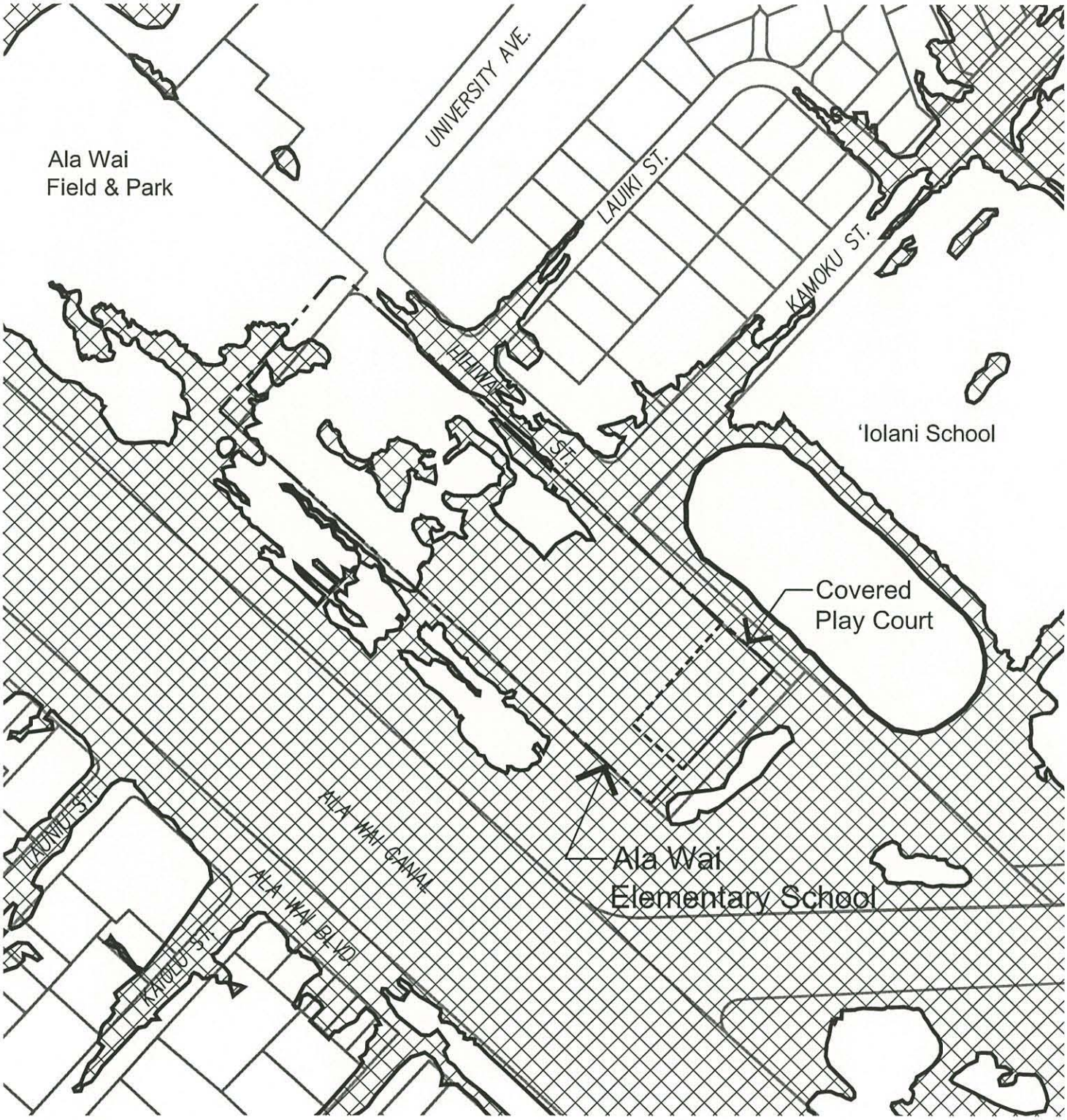


Figure 4
Sea Level Rise Exposure Area
Ala Wai Elementary School Covered Play Court

Gerald Park
Urban Planner
December 2018

LINEAL SCALE (FEET)
100 50 0 50 100 200

NORTH

Waikiki, District of Honolulu, O'ahu, Hawai'i

Department of Education, State of Hawai'i

Common birds such as mynah, barred dove, sparrow, and cattle egret were observed flying overhead, perched in trees, or browsing adjoining areas.

Dog owners were observed exercising their animals at the Dog Park and walking them on the multi-use path. Other terrestrial fauna was not observed.

8. Views

The Primary Urban Center Development Plan (2004) text (Section 3.1.3.3) and plan (Map A.1, Significant Panoramic Views) identify five prominent panoramic view planes that should be preserved. Ala Wai Elementary School is within the visual boundaries of two of them: "From Ala Wai Canal Promenade toward the Ko'olau Range" and "From Punchbowl Lookout toward Diamond Head".

C. Land Use Controls

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.

- Developed areas surrounding and including Ala Wai Elementary School are classified Urban on the state land use map for the area.

The use of Urban designated land 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 General Plan for the City and County of Honolulu ("General Plan"), community development plans and 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 General Plan for the City and County of Honolulu is the first tier. It sets forth broad objectives and policies in eleven functional areas such as Economic Activity, Natural Environment, Energy, Physical Development and Urban Design, and Public Safety. The Population component and its objectives and policies are keys to managing growth. The component establishes a population distribution pattern for eight geographic regions comprising the county. Each region has an upper and lower limit (percentage) of the islandwide population for a targeted year (currently 2025).

The General Plan also includes a General Plan Development Pattern Map depicting the eight districts and the desired development pattern for and within the respective district.

- Honolulu is the principal developed region on O'ahu. The development pattern is to maintain developed areas within the region as "Primary Urban Center".

Development Plans or Sustainable Communities Plans prepared for the eight geographic regions in the County comprise the second tier. Although encompassing eight regions

where each area's values, vision, and policies for accommodating growth are different, the plans collectively support the General Plan. The Primary Urban Center (PUC) Development Plan (2000) 1) describes the role of the PUC in Oahu's development pattern, 2) articulates a vision for the district to the year 2025, 3) prescribes land use development and infrastructure policies, and 4) describes means for implementing the plan (DPP, 2000).

The PUC Development Plan reaffirms the directed grown 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).

- Honolulu is inside the Community Growth Boundary.

- The PUC Land Use Map East (A.6) designates the site of Ala Wai Elementary School Institutional.

The Plan posits general policies and guidelines for school facilities in the PUC. As written, however, the policies and guidelines do not apply directly to the proposed project.

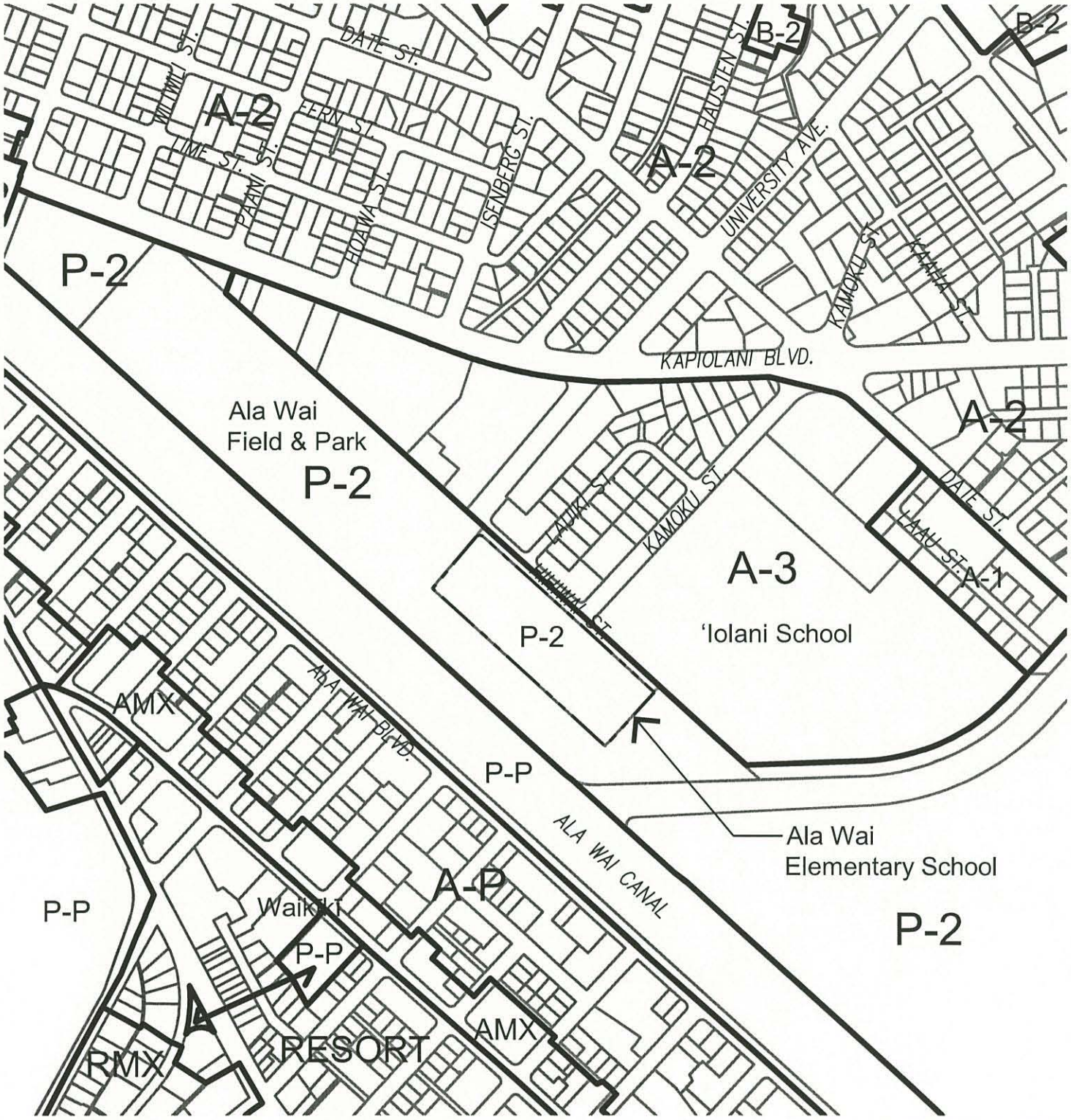
Zoning comprises the third tier of the City's land use management system. As shown on zoning maps, land in the county is zoned for certain uses and density (for example R-5 Residential with a minimum lot size of 5,000 square feet). The Land Use Ordinance (which incorporates the zoning maps) prescribes 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.

- The school property is zoned P-2 General Preservation (See Figure 5). Public uses and structures are permitted in the zoning district pursuant to Article 3, Table 21.3 Master Use Table of the Land Use Ordinance, City and County of Honolulu.

Ala Wai Elementary School is located within the Diamond Head Special District but outside the "core" area demarcated for the Special District. The "core" area encompasses Diamond Head, slopes around the entire crater, and Kapiolani Park. The objectives of the District are "to preserve existing prominent views and the natural appearance of Diamond Head and to preserve and enhance the park-like character of the immediate slopes of the Diamond Head monument, which includes Kapiolani Park". Achieving these objects shall consist primarily of landscaping requirements, height limitations, and architectural design review.

A height limit of 0' feet is established for the Ala Wai Golf Course, Ala Wai Elementary School, and Ala Wai Community and Neighborhood Parks (Figure 6). Existing institutional buildings already exceed this limit (1-story classroom buildings at Ala Wai Elementary School, the Ala Wai Golf Course Clubhouse, comfort facilities at the public parks) and so will the proposed covered play court.

Permit requirements for the Special District are based on the proposed activity or use. For this project, grading and stockpiling and minor above grade infrastructure improvements are



Source: City & County of Honolulu GIS Database

LEGEND

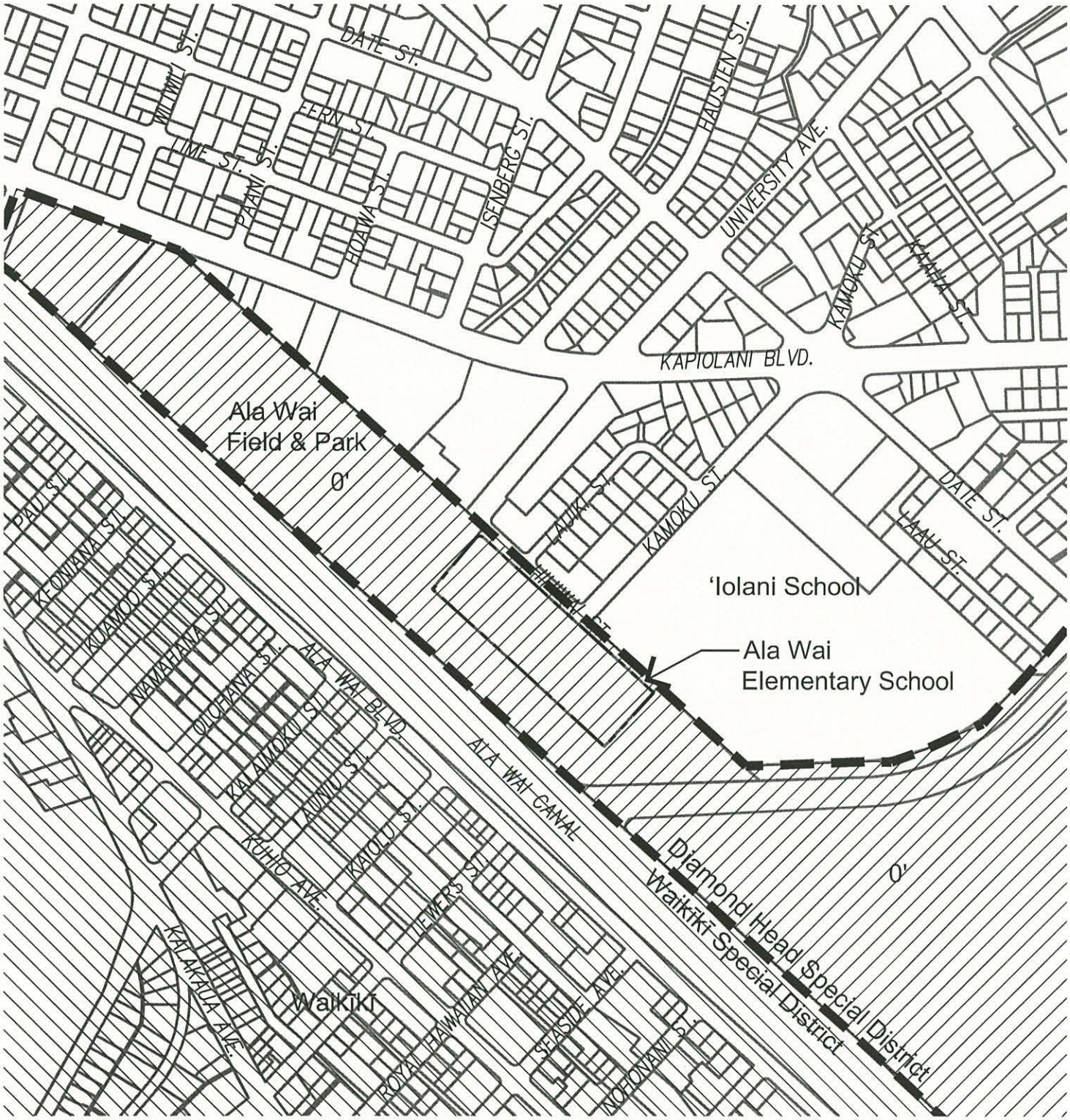
B-2	BUSINESS	A-P	APARTMENT PRECINCT
A-1	APARTMENTS	P-P	PUBLIC PRECINCT
A-2	APARTMENTS	RMX	RESORT MIXED USE
A-3	APARTMENTS	RESORT	WAIKIKI SPECIAL DISTRICT
AMX	APARTMENTS MIXED USE	P-2	PRESERVATION (GENERAL)

LINEAL SCALE (FEET)
500 250 0 250 500 1000

NORTH

Gerald Park
Urban Planner
December 2018

Figure 5
Zoning
Ala Wai Elementary School
Covered Play Court



Source: City & County of Honolulu GIS Database

LEGEND

- DIAMOND HEAD SPECIAL DISTRICT
- WAIKĪKĪ SPECIAL DISTRICT
- 0' WAIKĪKĪ HEIGHT LIMITATION

LINEAL SCALE (FEET)
500 250 0 250 500 1000

NORTH

Gerald Park
Urban Planner
December 2018

Figure 6
Diamond Head / Waikīkī Special Districts
Ala Wai Elementary School
Covered Play Court

Waikiki, District of Honolulu, O'ahu, Hawai'i

Department of Education, State of Hawai'i

exempt. A "minor" permit is required for tree removal over 6" in diameter (caliper) and new buildings outside the "core" area.

D. Public Facilities and Services

Hihiwai Street, a paved two-lane, two-way, undivided, County road passes to the north of the school connecting University Avenue on the east and Kamoku Street on the west. Its right-of-way is fully improved with curbs, gutters, and sidewalks on both sides. On-street parking is permitted on both sides of the street. The posted speed limit is 25 mph fronting the School.

Two, two-way driveways access the campus from Hihiwai Street. One driveway is at the western end and the other at the eastern end of the campus. Between driveways the travel lane is one-way (west to east) for student drop off/pick up at the Administration Building. The western entry also accesses a staff parking lot on the west and two-way traffic flow is allowed in the parking lot. Staff parking also is provided on the eastern side of campus. The driveway for this lot is one way and there is no through driveway to exit on to Hihiwai Street. Vehicles parked in this lot must reverse out of the stall and exit from the driveway on the east.

A shared one-way driveway and bike path passes the play court on the north. The driveway originates near 'Iolani School and Lā'au Street on the east and exits onto Hihiwai Street at its intersection with Kamoku Street.

Domestic water is provided by a Honolulu Board of Water Supply 8" main within the Hihiwai Street right-of-way. From the main, a 4" service lateral connects to a 2" water meter from which water is distributed to the entire school.

The school is served by the municipal wastewater system. Wastewater discharges into one or two sewer manholes along the north property line. The manholes are connected by a 12" VC main.

The building site and adjoining lawn areas are sloped to drain towards the southwest corner of the School grounds. Drainage inlets and piping were not observed on the building site. The entire outdoor play court is raised slightly above grade and sloped to drain onto the grass lawn on the south. In addition to the sloping terrain, a shallow, lined, open swale parallels the outside west edge of the existing court. The swale receives runoff from similar lined swales between Buildings A, B, and C and outlets beyond the School property into an empty "basin-like" depression at Ala Wai Neighborhood Park.

Ala Wai Neighborhood Park, a 15.7-acre park, adjoins the school on the east, south, and partially to the west in a U-shape. Recreational improvements and facilities include a comfort station, two outdoor basketball courts, one volleyball court, softball field, children's play apparatus, picnic facilities, and limited off-street parking (Department of Parks and Recreation, 1977). The basketball and volleyball courts are lighted for night use but the softball field is not.

Improvements on the south side include the Ala Wai Community Garden, a "basin-like" depression that receives / retains runoff, and the Ala Wai Dog Park, a fenced 0.8-acre dog park. A paved multi-use path from La'au Street traverses the Park along the Ala Wai Canal. The path parallels the one-way driveway until the softball field where it continues to and

along the Ala Wai Canal. A posted sign on the path reads "Lei of Parks" suggesting the name of the path or that the path is one in a string of paths, green spaces, greenbelts, and parks.

Ala Wai Community Park borders Ala Wai Neighborhood Park. The 13.98-acre park provides a community center, comfort station/pavilion, two sport fields (baseball overlaid by a soccer field), play cluster, canoe *halau*, off-street parking, and a paved multi-use path along the Ala Wai Canal (Ibid.) One baseball field is lighted for night use.

Originally designed and constructed as a drainage channel the Ala Wai Canal provides recreational opportunities along both banks and within its waters. People walk, jog, fish, crab, sightsee, sit on benches, and bike along the canal. Canoe clubs, kayak organizations, and high school teams practice paddling in the Canal where the flat water is ideal for training and its outlet to the ocean allows for long distance training (Belt Collins Hawaii LLC, 2017).

Police protection is provided from the Main Police Station located on South Beretania Street about 2.6 miles to the west. Fire protection originates from the Mō'ili'ili Fire Station located on Date Street about two city blocks to the north.

Electrical and communication services are provided from distribution systems on Hihiwai Street. Electrical distribution lines from the road into the school grounds are placed underground.

Hawaiian Electric Company is in the process of relocating the route of underground 46KV (kilovolt) sub-transmission cables that connect the utility's Waikiki substation to two utility poles on the *mauka* side of the Canal. The cabling passes under Ala Wai Elementary School and within accumulated sediment at the bottom of the Ala Wai Canal. The cabling is located in a 5-foot wide easement aligned north-south through the middle of the School. The cabling will be relocated to the west of the School in portions of Ala Wai Neighborhood Park and new cabling installed. The old cabling will then be removed (Belt Collins Hawaii LLC).

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

The scope of the project was discussed with the consulting architect and engineer and staff of the Facilities Branch, Department of Education. School administrators provided background information about the campus and student enrollment. State and County agencies were contacted for information relative to their areas of expertise. Time was spent in the field noting conditions at the building site, the school grounds, and in the vicinity of the school. The sum total of the consultations and field investigations helped to identify existing conditions and features that could affect or be affected by the project. These conditions include:

- The building site for the covered play court is an existing uncovered court;
- There are no structures on the building site;
- Rare, threatened, or endangered flora or fauna were not observed on or near the building site;
- Historic properties were not identified within the project area;
- Ala Wai Elementary School is located in a flood hazard area;
- There are no streams, ponds, or wetlands on the school property;
- A sea level rise exposure area is identified for Ala Wai Elementary School
- Water and wastewater services are available from the respective on-site utility system. Adequacy of the facilities will be determined at the time of building permit application.

A. Short-term Impacts

Construction will temporarily affect ambient air quality. Site work activities will raise fugitive dust that can settle in adjoining areas. Site work will be limited to the building site and the limited area to be disturbed should aid in mitigating dust generation and erosion. The general contractor will employ dust control measures to prevent 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, State Department of Health (and revisions thereto).

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---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. Fumes from diesel equipment may be detected but should be dispersed by the prevailing winds.

Like fugitive dust, construction noise 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 would be generated by heavy machinery during site work. After site work is completed, reductions in sound levels, frequency, and duration can be expected.

Drilling for the micro piles should not adversely affect the acoustical environment as drilling sounds may be "masked" by sounds of construction work in adjoining areas.

Schools are considered noise sensitive areas. Buildings A and B are within 30 feet of the building site. The east sides of both are constructed of concrete / cement masonry unit walls which can effectively aid in noise mitigation. Classroom doorways and windows and doors face north-south. These factors should collectively aid in noise attenuation. Construction noise will be heard periodically in the classroom and this cannot be avoided. Building contractors are well aware of acoustical impacts when working while school is in session and will take measures for noise attenuation.

A Summer 2021 start-up is projected thus precluding impacts associated with site work from interfering with classroom instruction. Construction will overlap into the school year and a time / work schedule will be developed in consultation with school administrators.

Community Noise Control regulations (State Department of Health, Title 11, Chapter 46 Noise Control for Oahu) establish maximum permissible sound levels for construction activities occurring within "acoustical" zoning districts. Based on the preservation zoning for the property, the project is classified as a Class A zoning district for noise control purposes. The maximum permissible daytime (7 a.m. to 10 p.m.) sound level in the district is 55 dBA during daytime and 45 dBA during nighttime for stationary noise sources and equipment related to construction (§11-46-4). 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 contractor will be responsible for obtaining and complying with conditions attached to the permit.

Although limited in area, site work will expose soil thus creating opportunities for erosion (fugitive dust and suspended sediment in construction related runoff). Within the project limits the area to be grubbed and graded is estimated at 9,250 square feet. Earthwork quantities are estimated at approximately 90 cubic yards of fill and a yet undetermined excavation quantity. Trenching and stockpiling excavated or imported material will be performed in accordance with Chapter 14, Article 14 of the Revised Ordinances of Honolulu, 1990, as amended.

The project will comply with construction and post-construction Best Management Practices requirements pursuant to the City and County of Honolulu Rules Relating to Water Quality.

Site work is less than one 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.

Areas within the project limits disturbed by construction will be restored to pre-construction conditions or better.

Vehicles carrying workers and material will contribute to traffic on Hihiwai Street and streets leading to the School. Material deliveries will be scheduled during non-peak traffic hours to minimize impact on local and school-related traffic.

A field office and base yard will be set up near the building site at a location to be determined. Material will be unloaded near the building site and/or stockpiled in the base yard. Construction equipment will be stored in the base yard and the yard secured after working hours.

"No historic properties have been identified in the project area. However, studies conducted in the vicinity have found wetland/agricultural deposits associated with taro and subsequently rice production. It is likely similar deposits are present with the current project area. Therefore, the results of this LR/FI indicated that there is potential for [archaeological] historic properties in the project area, but there is currently insufficient information to make a project effect determination. Accordingly, this LR/FI supports consultation with the SHPD to determine the appropriate level of identification, whether in the form of an archaeological inventory survey or archaeological monitoring program, as the next step in the project's historic preservation review process" (Cultural Surveys Hawai'i, 2020).

Should site work activities encounter human remains or other significant subsurface deposits, all work in the immediate area will stop and the authorities promptly notified of the finds.

Some buildings are over 50 years old and the School may be considered historic property.

Construction will effectively preclude use of the site of the play court for outdoor recreation. Alternative recreation areas and facilities are located on the western end of the School. Arrangements could me made with the City Department of Parks and Recreation for use of court facilities at Ala Wai Neighborhood Park.

B. Long-term Impacts

The principal impact of the project is to provide a covered, all-weather structure for year 'round recreational use and school activities. The covered structure will protect students from rain during inclement weather and the sun and heat on "hot" days thus providing for their health and safety.

Noise associated with use of the play court should not be significantly "louder" than noise now emanating from children playing on the existing court. Noise will not be constant during the school day but occur when the play court is used for recess, P.E. classes, and school functions.

Roof runoff will discharge into a new concrete ditch and detention basin. Adverse long-term impacts are not anticipated since the proposed method of drainage control does not substantially differ from how the existing outdoor court and adjoining areas are drained. The benefit of the proposed method is to retain runoff in an on-site basin rather than off-site discharge as currently practiced. The proposed drainage solution complies with post-construction Best Management Practices requirements per City and County of Honolulu Rules Relating to Water Quality.

Increases in energy costs can be mitigated by incorporating natural lighting and energy efficient light fixtures/luminaries into the design of the structure and its electrical system. PV panels could be placed atop the structure at a future time as a further means of mitigating energy consumption and costs.

Fencing should minimize birds and animals from intruding into the covered structure.

The proposed use and structure will not affect existing City and County of Honolulu land use controls for the property and School. The City's Land Use Ordinance defines public schools

as public uses and allows public uses and structures as permitted uses in the preservation zoning district.

The covered play court will present a new object to be seen on campus and from *mauka* and *makai* areas near the School. At a height of 32-feet above grade it would stand above the adjoining one-story classroom buildings (Buildings A, B, and C). Its height would approximate that of two pine trees between the classroom buildings, the height of coconut trees planted in a grove to the south of the School, and monkeypod trees to the east.

From *mauka* areas, views of the Ala Wai Canal already are obscured by a stand of coconut palm (See Photograph 1). Erecting the structure in front of the grove adds an object to be seen at the School but should not adversely affect long distance *makai* views. Views of Wakīkī beyond the Ala Wai Canal are that of tall multi-level buildings creating a man-made skyline of this resort area.

Mauka facing views from the multi-use path, are obscured by the grove of coconut palms.. Lower sections of the structure and roof may be seen through palms. The structure will add to buildings that already partially block views to the Ko'olau Mountain ridgeline (See Photograph 2).

Photograph 2. *Mauka* View from Multi-use Path Along Ala Wai Canal.

The Diamond Head Special District identified three locations adjoining the Ala Wai Canal that provide prominent public views of Diamond Head: Ala Wai Boulevard from McCully Street to Kapahulu Avenure offers significant views from a public street and Ala Wai Park and Ala Wai Elementary School are cited as public viewing sites. Of the three locations, the project will affect views towards Diamond Head from Ala Wai Elementary School.

Diamond Head facing views may be affected depending on one's viewing location and distance from the covered play court. The closer to the play court the less Diamond Head

can be seen; the farther from the play court a more panoramic view of the landmark can be seen. The structure exceeds the 25' height limit of the Preservation zoning district and the 0' height limit for the Diamond Head Special District but its height and form alone should not totally block views of the landmark. The covered play court structure will not set precedence for exceeding the 0' height limit. As noted in an earlier section of this Assessment several existing City-owned structures already exceed the height limit. The Department of Education will apply for the necessary permit to exceed the Diamond Head Special District Height limit.

The height limit for preservation zoning districts is 25-feet. The proposed play court structure has an approximate height of 32-feet and exceeds the building height for the zoning district by 7+ feet. The Department of Education will seek a Waiver to allow the height feet encroachment above the required height limit. The Waiver will neither call into question the use and development standards of the preservation zoning district nor significantly alter the existing use and character of the school.

The structure is not tall enough to interfere with the panoramic view towards Diamond Head from the Punchbowl Lookout (PUC Development Plan, 2004). Moreover, it would be dwarfed by and indistinguishable in the dense building landscape of similar low-rise structures and taller mid-rise and high-rise multi-story buildings.

Over time, the play court will become part of the campus's buildings and facilities and the height of the structure should not be an issue.

Exterior and covered walkways will be lighted. Sensor activated fixtures will provide down lighting and not cast light into the sky and adjoining areas.

Fire flow for the covered play court will be provided from a new fire line and fire hydrant installed at the end of the parking area and driveway near Building A. The hydrant is within adequate distance (to the farthest door) as required by the fire code. Rolling gates at the end of driveway will provide fire apparatus access to the new structure.

The School is located in a flood hazard area and susceptible to flooding at depths up to 2 feet. The finish floor elevation for the covered play court is 4.5 feet and above the projected flood height.

A rise in sea level of 3.2 feet is projected to submerge most of the campus including the area of the play court. The depth of submergence is undetermined and could be inches or feet. The finish floor elevation of the play court surface should not be affected by a rise in sea level. However, water will submerge underground utilities, water and wastewater lines, and walkways associated with the project.

This project does not propose architectural or engineering solutions to future sea level rise at the School. In the long-run policy decisions will determine what measures should be taken to mitigate sea level rise for the entire School.

Located in the Ala Wai Watershed, the 2015 Report by the Corps of Engineers indicated the School will be flooded by the 1% annual chance flood which corroborates the FIRM flood hazard delineation. The Report posited no flood mitigation measures directly for and at the School. The selected plan for reducing flood risk proposed improvements in upper areas of the watershed and "constructing concrete floodwalls ranging up to 4-feet high on one or both

sides for approximately 1.9 miles of the Ala Wai Canal (including three pump stations)". The Corps is currently re-evaluating the selected plan. Construction of flood containing walls along the Ala Wai Canal does not infringe on School property and is under the jurisdiction of the Corps. This project proposes no flood control improvements at the School for the 1% annual chance flood. The finish floor elevation of the play court is above flood elevation and the detention basin provides capacity for retaining project generated runoff. Retained water will be allowed to percolate into the ground.

4 ALTERNATIVES TO THE PROPOSED ACTION

A. No Action

A no action alternative would maintain the status quo of the site thus precluding the occurrence of all environmental impacts, short and long-term, beneficial and adverse disclosed in this Assessment. Resources committed to planning and design of the facility will be foregone and the purpose of the project not achieved.

B. Alternative Location

The campus does not have an alternative location that can accommodate a covered play court as proposed.

5 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

Variance from Pollution Controls (Noise Permit)

Department of Land and Natural Resources, Historic Sites Division

Chapter 6E Historic Site Review

City and County of Honolulu

Board of Water Supply

Cross Connection Control and Backflow Prevention

Department of Planning and Permitting

Building Permit for Building, Electrical, Plumbing Sidewalk/Driveway and Demolition Work
Certificate of Occupancy
Diamond Head Special District
Grubbing, Grading, and Stockpiling Permit
Waiver (Height)

6 AGENCIES AND ORGANIZATIONS TO BE CONSULTED

State of Hawai'i

Department of Land and Natural Resources
Historic Preservation Division

City and County of Honolulu

Board of Water Supply
Department of Environmental Services
Department of Parks and Recreation
Department of Planning and Permitting
Office of Climate Change, Sustainability, and Resiliency
Police Department
Fire Department

Others

Hawaiian Electric Company
'Iolani School
The Honorable Scott Nishimoto, Representative, 21th Representative District
The Honorable Dale Kobayashi, Representative, 23nd Representative District
The Honorable Les Ihara, Jr., Senator, 10rd Senatorial District
The Honorable, Ann H. Kobayashi, Honolulu City Council
McCully-Mō'ili'ili Neighborhood Board No. 8
McCully-Mō'ili'ili Public Library (Placement)

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;

   Cultural Surveys Hawaii (2020) indicated the project area "as having no surface historic properties and as having a very low probability of subsurface historic properties."

   They also concluded that" the prospect for any traditional or on-going Native Hawaiian cultural practices in this project area appears very low."

   In the event subsurface deposits are encountered during the course of development activities all work in the immediate area will stop and authorities notified of the finds.

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

   The project does not change the use of the environment. The new play court will be erected on the site of and serve the same purpose as the existing uncovered play court with the difference being the new play court will have a roof.

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

   The project does not conflict with long-term environmental policies, goals, and guidelines of the State of Hawaii.

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

   The project will not substantially affect the economic or social welfare of the State.

5) Have a substantial adverse effect on public health;

   Public health will not be affected. Short-term environmental impacts in the form of fugitive dust, construction noise, and minor erosion can be expected during construction. These impacts can and will be mitigated by measures described in this Assessment and measures, such as BMPs for erosion control.

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

   Substantial secondary impacts on public facilities are not anticipated.

7) Involve a substantial degradation of environmental quality;

The School grounds were created by fill dredged by construction of the Ala Wai Canal. Fill placement degraded low-lying land to create fast land that we know today as McCully, Mō'ili'ili, Lower University, and Waikīkī. Construction of Ala Wai Elementary School in the late 1950s and subsequent addition of buildings, walkways, paved parking lots, landscaping, and recreational improvements further altered the man-made environment. 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 project does not involve 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 flora and fauna are not present on the building site

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

Site work is the first major activity and grubbing, grading, and excavation will generate noise that will be audible in nearby classrooms. Dust control measures should minimize the quantity of fugitive dust escaping the project limits. The movement of workers and vehicles within the project limits also will contribute general noise. Noise and dust impacts cannot be avoided and the contractor will develop a time / work schedule in consultation with school administrators to minimize interference when school is in session. Construction and post-construction Best Management Practices should mitigate impacts on water quality.

Ambient air quality will be affected by fugitive dust and combustion emissions during construction but can be controlled by measures stipulated in this Assessment. Construction noise will be pronounced during site preparation work but should diminish once the structural improvements are completed. All construction activities will comply with air quality and noise regulations of the State Department of Health.

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;

Ala Wai Elementary School is located in an environmentally sensitive area per the above criterion. The School and its neighboring properties are located in a flood hazard area for the 1% annual chance flood or the 100-year flood. Flooding of the School grounds is estimated at 0' to 2' feet.

The School also is in a sea level rise exposure area. A 3.2 foot rise is sea level would submerge most of the School grounds. The depth of the submergence has not been determined but it could be inches or several feet. The finish floor of the new play court is at 4.5 feet above grade which is above a 3.2 feet rise in sea level. Areas around the play court may be submerged but the court shouldn't be.

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 project will not result in substantial adverse effects on scenic vistas and view planes identified in state and county plans.

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

Substantial energy consumption is not anticipated.

REFERENCES

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EXHIBIT A

Anticipated Finding of No Significant Impact

DAVID Y. IGE
GOVERNOR

DR. CHRISTINA M. KISHIMOTO
SUPERINTENDENT

STATE OF HAWAI`I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
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OFFICE OF FACILITIES AND OPERATIONS

September 23, 2020

TO: Keith E. Kawaoka
Acting Director, Office of Environmental Quality Control
Department of Health

FROM: Tracy Okumura
For Public Works Administrator
Facilities Development Branch

SUBJECT: **Draft Environmental Assessment for**
Ala Wai Elementary School Covered Play Court
DOE Job No. Q24001-18
TMK: [1] 2-7-036:007
Portion Waikiki, District of Honolulu, Oahu, Hawaii

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 this determination in the next Environmental Notice.

The project will provide a covered facility where students can engage in outdoor play during inclement weather. Secondarily, the structure will serve as a covered, multi-purpose facility for school activities and functions.

A PDF of the Draft Environmental Assessment will be emailed to the Office of Environmental Quality Control with the Environmental Notice publication form. One printed copy of the Draft Environmental Assessment will be deposited with the Hawaii Documents Center.

Should there be any questions, please contact Mitch Tamayori, Project Coordinator of the Facilities Development Branch, Project Management Section, at 784-5116.

TO:mt
Enclosures

c: Facilities Development Branch