



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

OFFICE OF FACILITIES AND OPERATIONS
(sent via HICRIS)

January 31, 2023

Scott Glenn, Executive Director
Environmental Review Program
State of Hawaii
235 S. Beretania Street, Rm #702
Honolulu, HI 96813

Dear Mr. Glenn:

Re: Red Hill Elementary School Covered Play Court
1255 Ala Kula Place
Portion of Moanalua, District of Honolulu, Oahu, Hawaii
Tax Map Key: [1] 1-1-012: 028

The Hawai'i Department of Education has reviewed the Draft Environmental Assessment for the Red Hill Elementary School Covered Play Court 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 project will provide a covered facility where students can engage in outdoor play during inclement and hot weather and serve as a covered, multi-purpose facility for school activities and functions.

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

Should you have any questions, please contact William George of the Facilities Development Branch, Project Management Section at (808) 784-5125 or email at william.george@k12.hi.us.

Sincerely,

A handwritten signature in cursive script that reads "Edward S. Ige".

Edward S. Ige
Facilities Director
Facilities Development Branch

ESI:wg

c: Facilities Development Branch

From: webmaster@hawaii.gov
To: [DBEDT OPSD Environmental Review Program](#)
Subject: New online submission for The Environmental Notice
Date: Wednesday, February 1, 2023 4:41:59 PM

Action Name

Red Hill 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, O'ahu

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

[1] 1-1-012: 028

Action type

Agency

Other required permits and approvals

Variance from Pollution Controls (Noise Permit), Chapter 6E Historic Site Review, Cross Connection Control and Backflow Prevention, Building Permit, Grading and Grubbing Permit, Certificate of Occupancy

Proposing/determining agency

Department of Education, State of Hawai'i

Agency contact name

William George

Agency contact email (for info about the action)

william.george@k12.hi.us

Email address or URL for receiving comments

william.george@k12.hi.us

Agency contact phone

(808) 784-5125

Agency address

Office of Facilities and Operation
3633 Waiialae Avenue, Room B-201
Honolulu, HI 96816
United States
[Map It](#)

Was this submittal prepared by a consultant?

Yes

Consultant

Gerald Park Urban Planner

Consultant contact name

Gerald Park

Consultant contact email

gpark@gpup.biz

Consultant contact phone

(808) 625-9626

Consultant address

95-595 Kanamee Street #324
Mililani, HI 96789
United States
[Map It](#)

Action summary

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

Reasons supporting determination

Reasons supporting the agency's determination is found in Section 7 of the Draft Environmental Assessment.

Attached documents (signed agency letter & EA/EIS)

- [Red-Hill-Elementary-School.pdf](#)
- [DEA-FONSI-letter-1-31-2023.pdf](#)

Action location map

- [Red-Hill-Elementary-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

RED HILL ELEMENTARY SCHOOL COVERED PLAY COURT

Moanalua, District of Honolulu (Kona), Oahu



‘Ōlelo No‘eau: Strive to Reach the Summit

Prepared for

State of Hawai‘i
Department of Education
Office of Facilities and Operations
3633 Waialae Avenue
Honolulu, Hawai‘i 96816

Kēkēmapa 2022

DRAFT ENVIRONMENTAL ASSESSMENT

RED HILL ELEMENTARY SCHOOL COVERED PLAY COURT

Moanalua, District of Honolulu (Kona), Oahu

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

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

Prepared by

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

and

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

Kēkēmapa 2022

PROJECT PROFILE

Proposed Action: Red Hill Elementary School
Covered Play Court Phase II
DOE Job No. Q74232-21

Location: Portion of Moanalua, District of Honolulu, O'ahu

Street Address: 1265 Ala Kula Place
Honolulu, Hawai'i 96819

Proposing/Determining Agency: Department of Education
Office of Facilities and Operations
Facilities Development Branch
3633 Waialae Avenue, Room C209
Honolulu, Hawai'i 96813

Tax Map Key: [1] 1-1-012: 028
Land Area: 7.949 acres (346,258 square feet)
Landowner: State of Hawai'i

Existing Use: Public Elementary School
State Land Use Designation: Urban
O'ahu General Plan: Urbanized Area (PUC)
Development Plan: Primary Urban Center
DP Land Use Map PUC West: Medium and Higher Density Residential/Mixed Use
Zoning: A-2 Medium Density Apartment
Special District: None
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: William George, Project Coordinator
Office of Facilities and Operations
Facilities Development Branch
3633 Waialae Avenue Room B-201
Honolulu, Hawai'i 96816

Telephone: (808) 784-5125
Email: william.george@k12.hi.us

TABLE OF CONTENTS

	Project Profile	i
	Table of Contents	ii
	Figures, Tables, and Photographs	iv
SECTION 1	DESCRIPTION OF THE PROPOSED PROJECT	1
	A. Purpose and Need for the Project	1
	B. Technical Characteristics	1
	C. Economic Characteristics	3
	D. Social Characteristics	3
SECTION 2	DESCRIPTION OF THE AFFECTED ENVIRONMENT	13
	A. Background Information	13
	B. Environmental Characteristics	14
	1. Climate	14
	2. Topography	14
	3. Soils	14
	4. Water Resources	14
	a. Surface Water	14
	b. Ground Water	15
	5. Flood Hazard	15
	6. Historical Resources	15
	7. Biological Resources	17
	8. Views	17
	C. Land Use Controls	17
	D. Public Facilities and Services	20
SECTION 3	SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS AND MEASURES TO MITIGATE ADVERSE EFFECTS	22
	A. Short-term Impacts	22
	B. Long-term Impacts	24
SECTION 4	ALTERNATIVES TO THE PROPOSED ACTION	26
	A. No Action	26
	B. Alternatives Sites	26
SECTION 5	PERMITS AND APPROVALS	27
SECTION 6	AGENCIES AND ORGANIZATIONS TO BE CONSULTED IN THE ENVIRONMENTAL ASSESSMENT PROCESS	28

TABLE OF CONTENTS

SECTION 7	DETERMINATION OF SIGNIFICANCE	29
REFERENCES		31

FIGURES

Figure	Title	Page
1	Vicinity Map	4
2	Tax Map	5
3	Campus Map	6
A-1.0	General Site Plan	7
A-2.0	Floor Plan	8
A-3.0	Exterior Elevations	9
A-5.0	Building Sections	10
C-1.2	Demolition and Erosion and Sediment Control Plan	11
C-1.4	Grading Plan	12
4	Flood Insurance Rate Map	16
5	Zoning	20

TABLES

Table	Title	Page
1	Structures at Red Hill Elementary School	13
2	Aquifer Classification	15

PHOTOGRAPHS

Photograph	Title	Page
1	East Facing View. Existing Play Court and Play Apparatus on the Left.	1
2.	West Facing View. Building Site in Foreground, Building D in Background, and Existing Play Court on the Right.	2

The Department of Education, State of Hawai'i, proposes to construct a multi-purpose covered play court at Red Hill Elementary School located in Moanalua (portion), District of Honolulu, City and County of Honolulu, O'ahu, Hawai'i. Red Hill Elementary School ("Red Hill" or "School") is bounded by a Board of Water Supply reservoir tank on the east, a military housing development on the north (Island Palm Communities Red Hill), and a multi-family residential development (Moanalua Hillside Apartments) to the south. A Vicinity Map is shown as Figure 1.

The 7.949 acre School property is identified as Tax Map Key [1] 1-1-012: 028. A Tax Map is shown as Figure 2.

A. Purpose and Need for the Project

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

B. Technical Characteristics

The new play court will be built on well-maintained grass lawn on the south side of the campus (See Figure 3). There are no permanent structures on the building site but it is bounded by an outdoor play court for basketball and volleyball and two play apparatuses to the north. The lawn is used for P.E., recess, and assembly area for school functions. Views of the building site are shown on Photographs 1 and 2.



Photograph 1. East Facing View. Existing Play Court and Play Apparatus on the Left.

The rectangular-shaped covered play court is oriented to fit within a rectangular section of field between the existing play court and the south property line (See Sheet A.1-0).



Photograph 2. West Facing View. Building Site in Foreground, Building D in Background, and Existing Play Court on the Right.

A single-story structure with a building footprint of approximately 12,160 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 main basketball court will feature motorized backboards that can be raised for school events not related to basketball. The courts will overlap each other and striped with different colored lines. A Floor Plan is shown as Sheet A-2.0.

The structure will be erected on a poured in place concrete foundation and floor, framed with rigid steel posts, trusses, and siding, CMU walls at certain locations, and topped with a pitched metal roof. The court surface will be asphalt with a play court surface. Restrooms and a janitor's closet will adjoin the structure on the west side and an electrical/IT room and storage room on the south side.

Ancillary features include roof eaves to provide cover and help prevent rain from entering the play court, translucent panels around all sides to allow natural light into the interior, and chain link fencing on all sides for ventilation, visual security, and to aid in keeping birds and other creatures out of the court area. Bird netting also will be installed under the roof over the play court.

The structure is approximately 32 feet in height measured from existing grade to top of roof and below the building height limit of 90 feet for the zoning district (See Sheets A-3.0 and A-5.0).

Site work will disturb approximately 0.74 acres which includes the site of the covered play court, the lawn area to the east for use as a construction field office and baseyard and to the north for construction of a fire lane (Sheet C1-2). Earthwork quantities are estimated at 400 CY of excavation and 50 CY of embankment (Sheet C-1.4).

A 20-foot wide, grass paved fire lane will be constructed for fire apparatus access to the new play court. Access will be taken from the new 20-foot wide Board of Water Supply access road along the north side of the School and routed through a gated entry at the rear of the field. The fire lane will terminate next to the existing play court.

The lawn area is 8± feet higher in elevation than the nearest School buildings (Buildings D and Cafeteria). Access is provided from a walkway at Building D and an elevator and stairs between Building D and the Cafeteria.

The existing uncovered play court will remain intact.

Underground utility lines will be cut and plugged or abandoned in place.

Except for the proposed fire lane, changes to on-campus vehicle circulation and parking configurations are not proposed. Temporary circulation modifications will be required for construction vehicle access to the building site.

A section of the grass lawn will be grubbed and an existing *Formosan koa* tree near Building D will be demolished. Areas adjoining the completed covered play court and areas disturbed by construction will be grassed. No other landscaping is proposed.

C. Economic Characteristics

Construction costs (\$2022) are estimated at \$4.0 million and will be funded by the State of Hawai'i.

Construction is projected to commence in 2024 after all permits and approvals are received. External factors such as the release of funds by the state, project bidding, contract negotiations, the supply of construction materials, and labor availability can influence the projected schedule.

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. Public use or outside functions are not proposed.

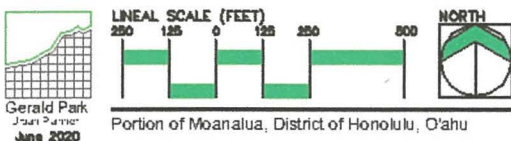
Additional staffing is not required. Use of the play court by grade level, day, and time will be scheduled by teachers and school administrators. Custodial staff will maintain the structure and open and secure the facility daily.

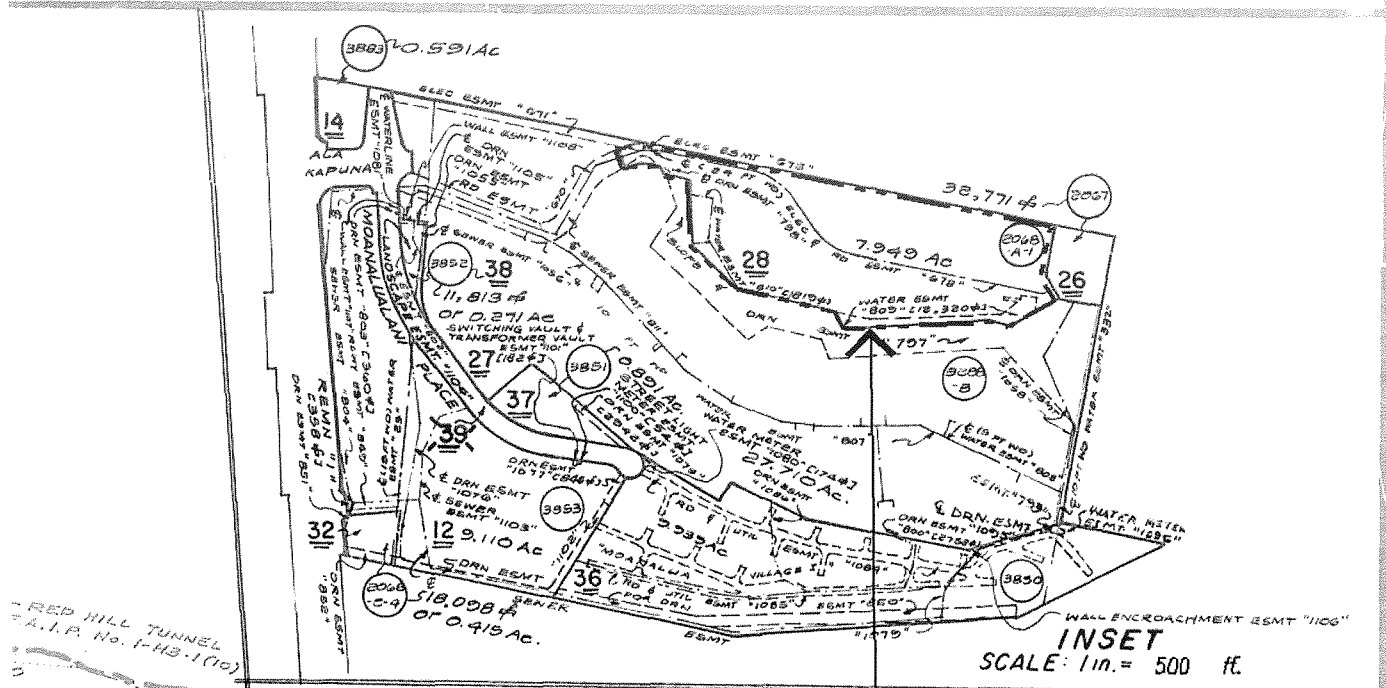
The play field will be closed during construction. The existing outdoor play court will be segregated from construction and will be available for school use for the majority of the construction period.



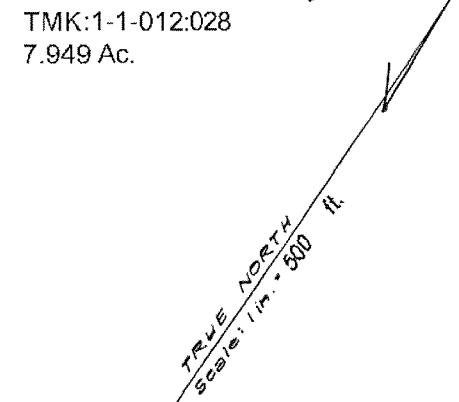
Source: Google Maps 2020 Imagery

Figure 1
Vicinity Map
Red Hill Elementary School
Covered Play Court



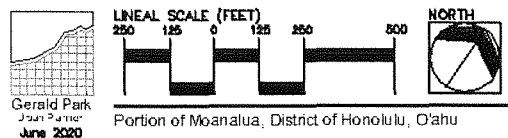


Red Hill Elementary School
 TMK:1-1-012:028
 7.949 Ac.



TAXATION MAPS BUREAU		
STATE OF HAWAII		
TAX MAP		
FIRST DISTRICT		
ZONE	SEC.	PLAT
1	1	12

Source: City & County of Honolulu Website.



Portion of Moanalua, District of Honolulu, O'ahu

Figure 2
 Tax Map
 Red Hill Elementary School
 Covered Play Court



Source: NOAA / ESRI Website.

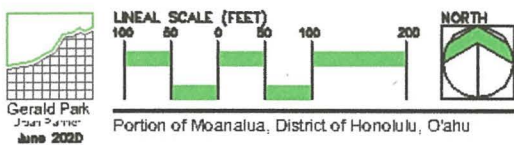
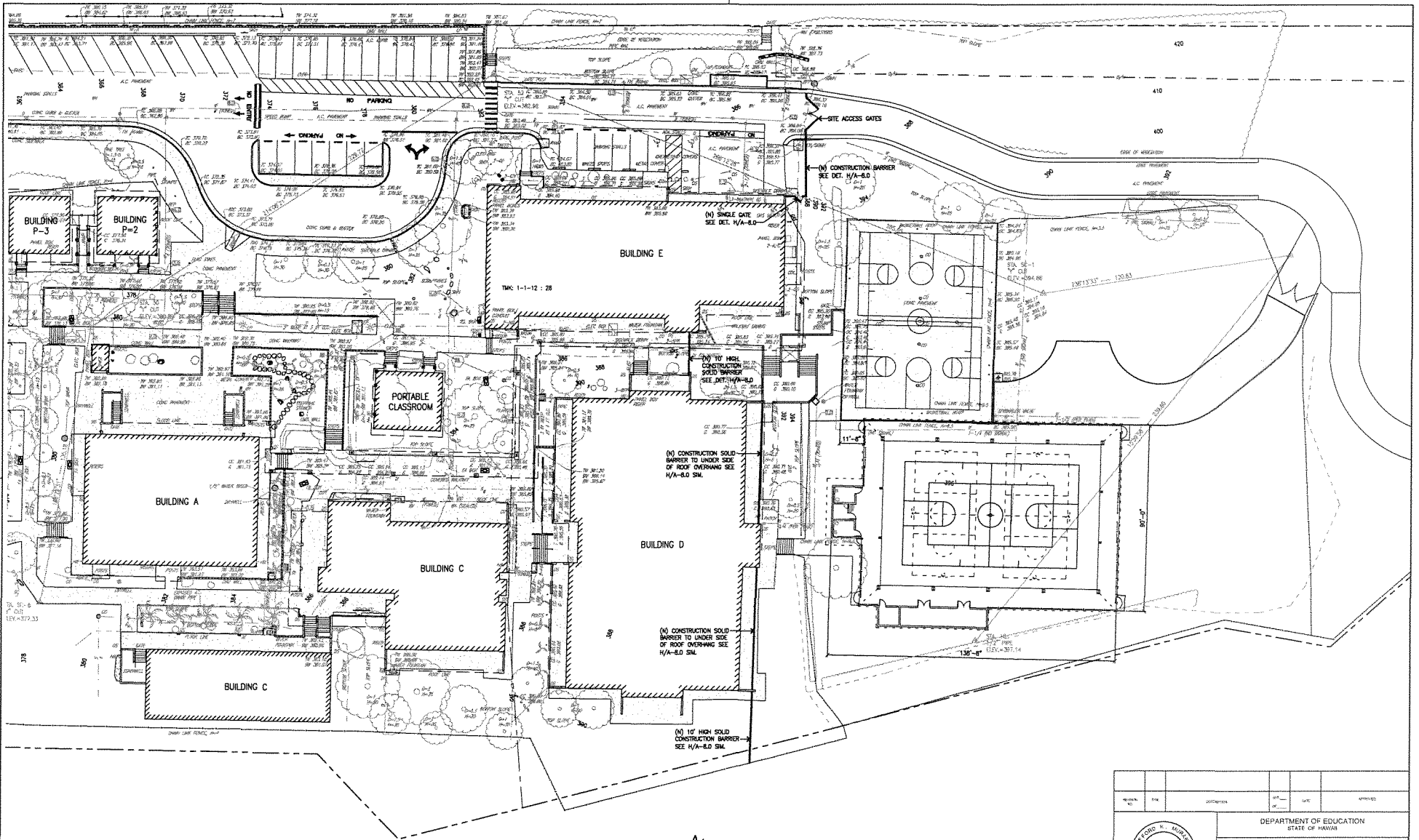
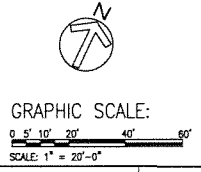


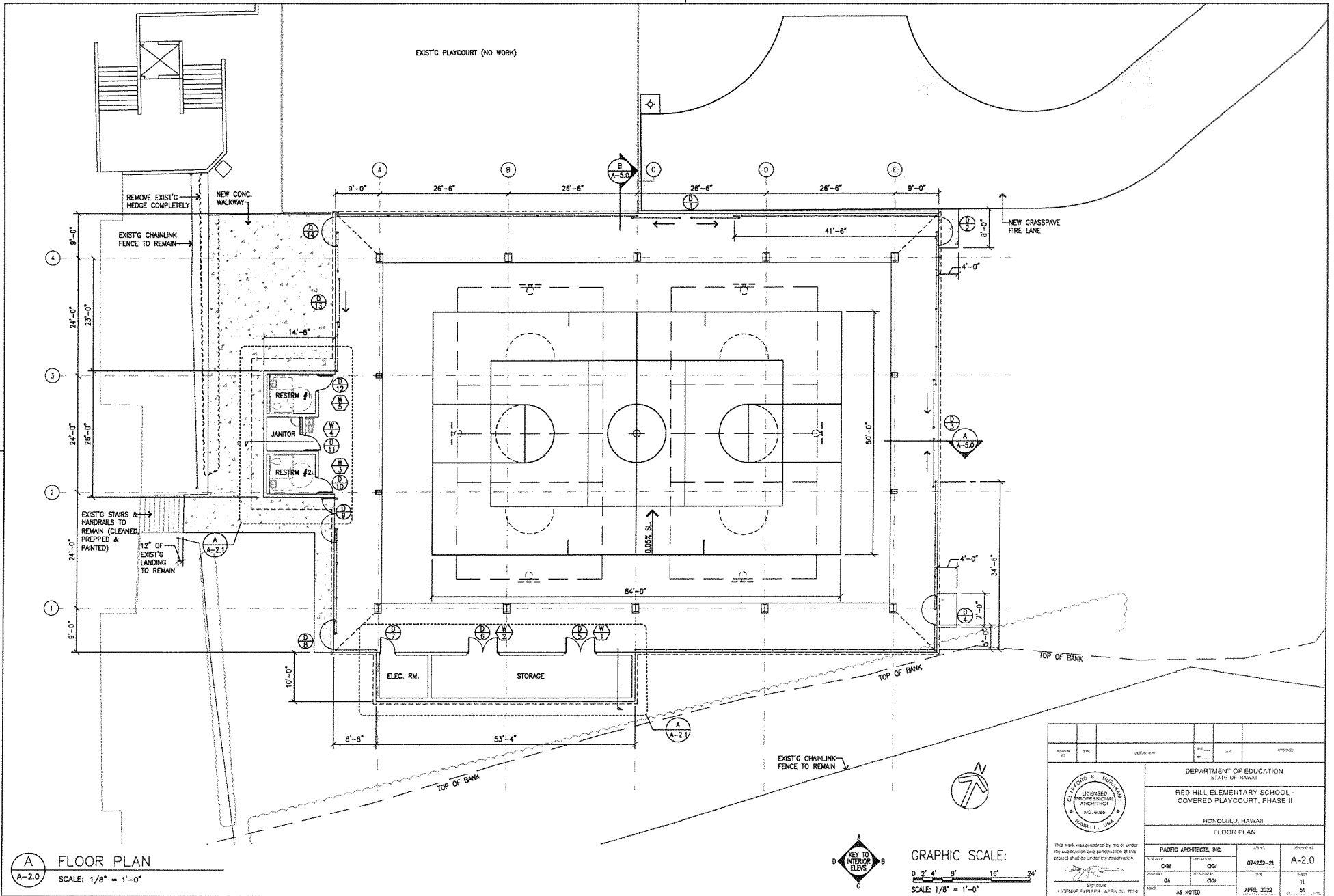
Figure 3
Campus Map
Red Hill Elementary School
Covered Play Court



A SITE PLAN
 A-1.0 SCALE: 1" = 20'-0"

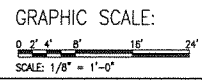


DATE	BY	CHECKED	DATE	APPROVED
DEPARTMENT OF EDUCATION STATE OF HAWAII RED HILL ELEMENTARY SCHOOL - COVERED PLAYCOURT, PHASE II HONOLULU, HAWAII SITE PLAN				
This work was prepared by me or under my supervision and construction of this project shall be under my observation.				
SIGNATURE LICENSE EXPIRES: APRIL 30, 2024				
PACIFIC ARCHITECTS, INC.		DRAWN BY CM		CHECKED BY CM
PROJECT NO. GA		SHEET NO. CS4		DATE 074030-21
SCALE AS NOTED		PROJECT APRIL 2022		SHEET 10
				TOTAL 21

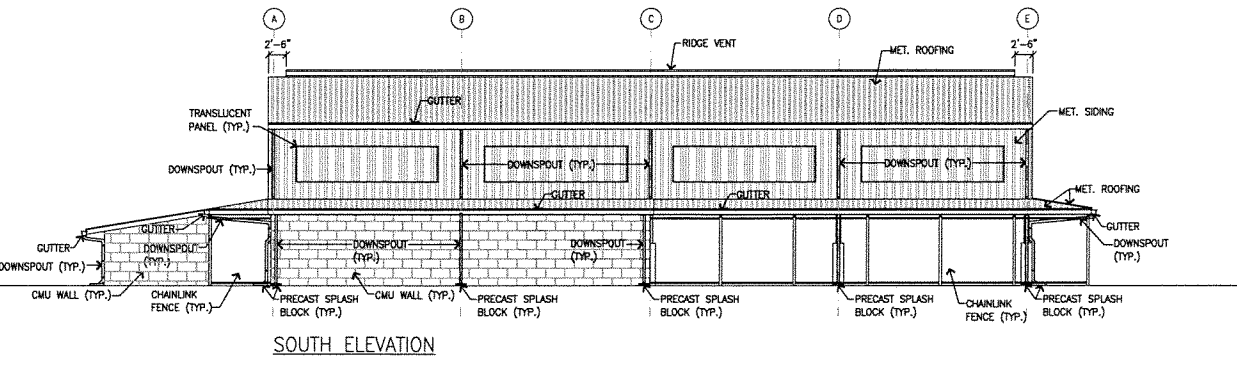
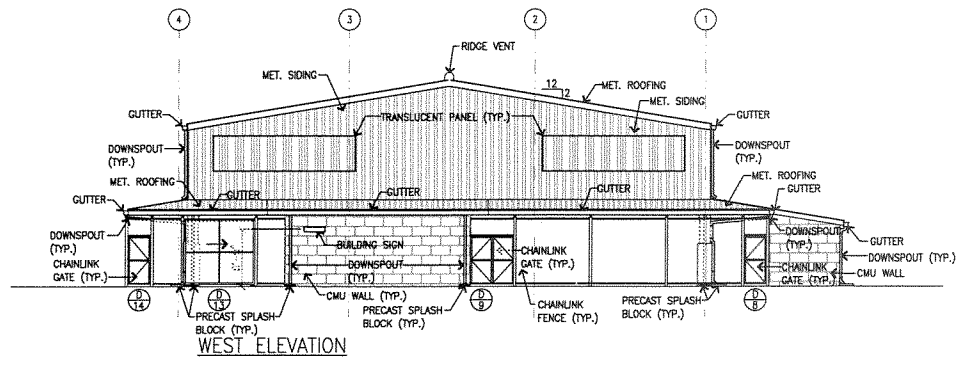
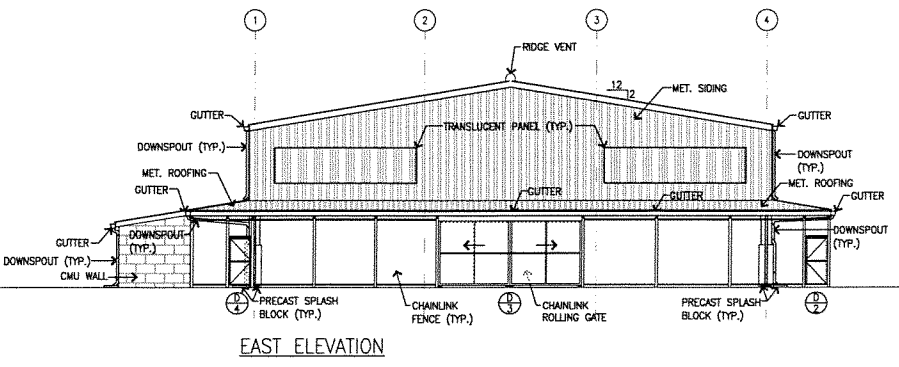
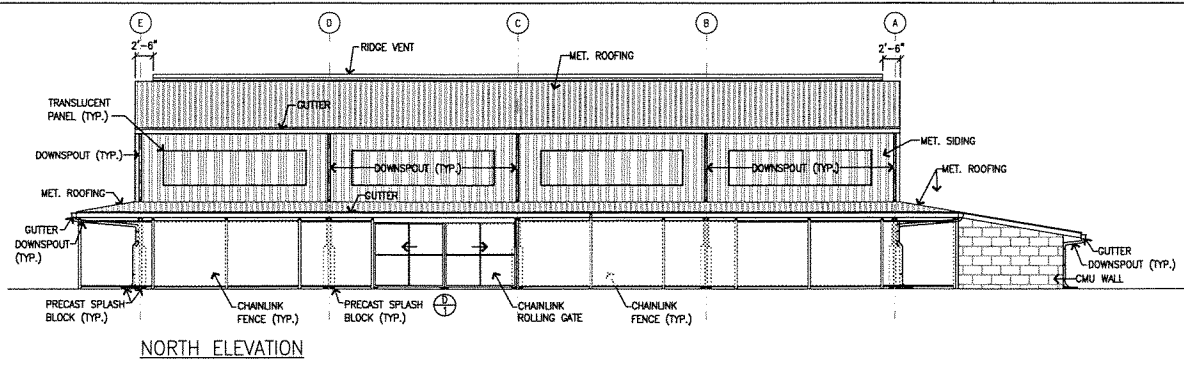


A FLOOR PLAN
A-2.0

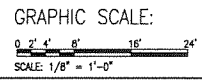
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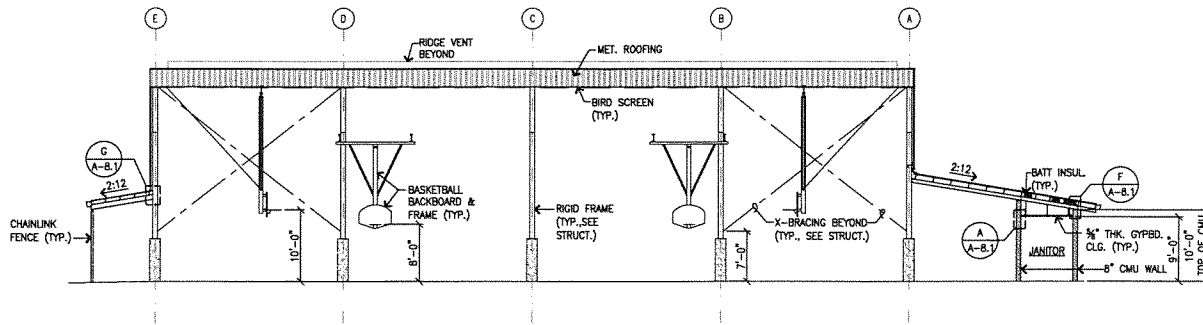
REVISION	DATE	BY	APPROVED
DEPARTMENT OF EDUCATION STATE OF HAWAII RED HILL ELEMENTARY SCHOOL - COVERED PLAYCOURT, PHASE II HONOLULU, HAWAII FLOOR PLAN			
PACIFIC ARCHITECTS, INC. REGISTERED PROFESSIONAL ARCHITECT NO. 4086 HAWAII, U.S.A.		PROJECT NO. 074232-21	DRAWING NO. A-2.0
ARCHITECT DOM	DESIGNER DOM	DATE APRIL 2022	SHEET NO. 11
CHECKED GA	DESIGNER DOM	SCALE AS NOTED	TOTAL SHEETS 51
Signature: _____ LICENSE EXPIRES: APRIL 30, 2024			



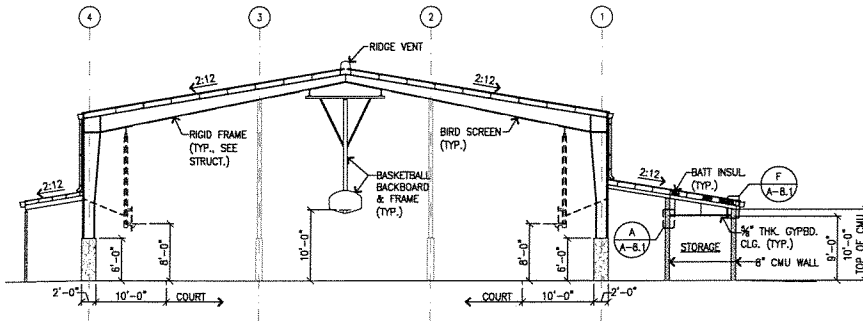
A
A-3.0
EXTERIOR ELEVATIONS
SCALE: 1/8" = 1'-0"



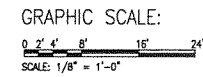
NO. 001	DATE	DESCRIPTION	BY	DATE	APPROVED
DEPARTMENT OF EDUCATION STATE OF HAWAII RED HILL ELEMENTARY SCHOOL - COVERED PLAYCOURT, PHASE II MONOLAHU, HAWAII EXTERIOR ELEVATIONS					
PACIFIC ARCHITECTS, INC. OWNER: ODM ARCHITECT: ODM DATE: AS NOTED LICENSE EXPIRES: APRIL 10, 2024		DRAWING NO.: 07433-21 SCALE: A-3.0 DATE: 15/51		DESIGNED BY: ODM CHECKED BY: ODM DATE: APRIL 2022	




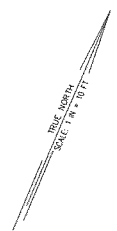
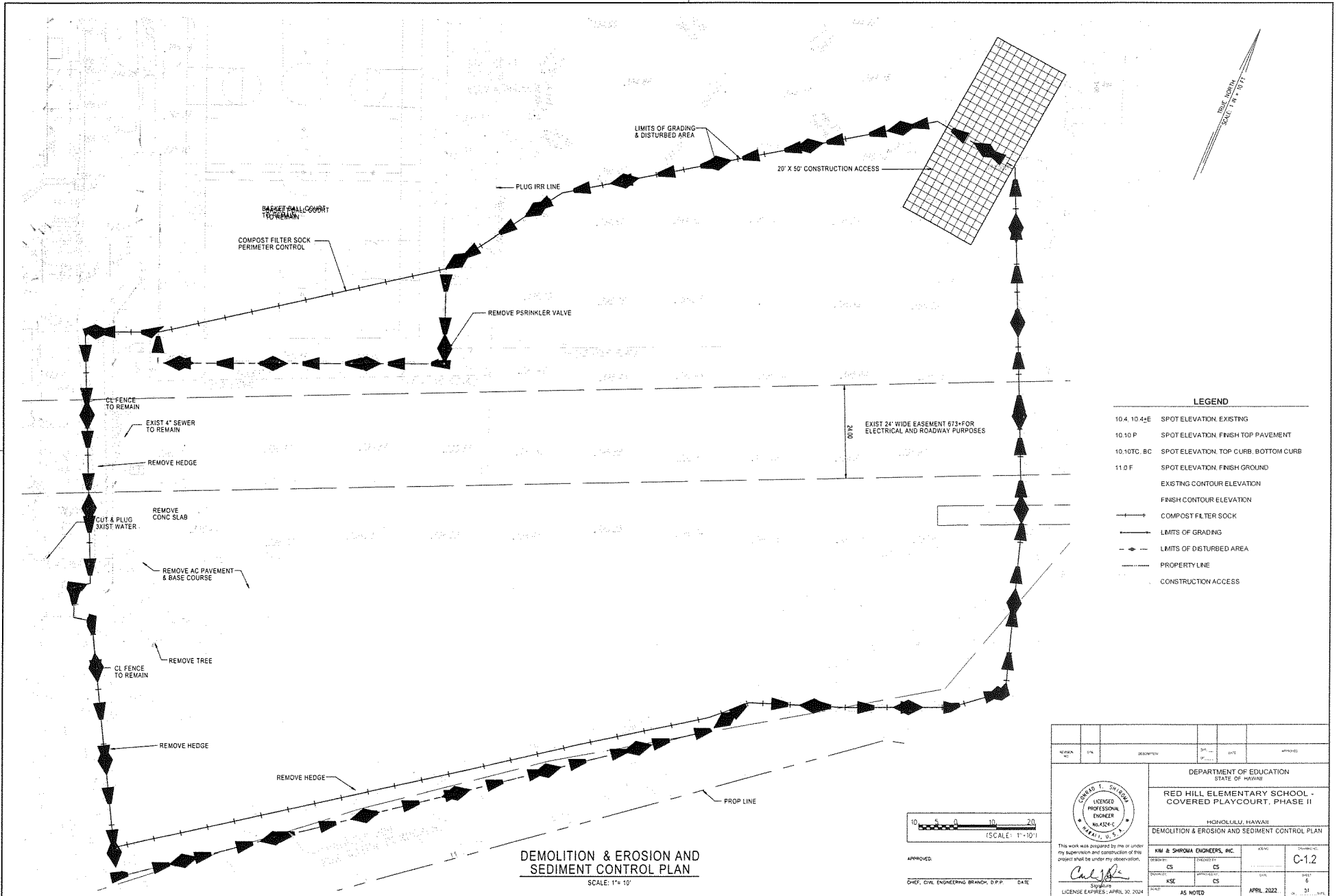
(A) BUILDING SECTION
 A-5.0 SCALE: 1/8" = 1'-0"



(B) BUILDING CROSS SECTION
 A-5.0 SCALE: 1/8" = 1'-0"

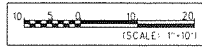


REVISION NO.	DATE	DESCRIPTION	BY	DATE	APPROVED
					
DEPARTMENT OF EDUCATION STATE OF HAWAII RED HILL ELEMENTARY SCHOOL - COVERED PLAYCOURT, PHASE II HONOLULU, HAWAII BUILDING SECTIONS					
This work was prepared by me or under my supervision and coordination at the project shall be under my observation.					
PACIFIC ARCHITECTS, INC.	PROJECT NO.	DATE	DRAWING NO.		
DM	DM	074232-21	A-5.0		
GA	DM		PAGE 17		
SCALE	SIGNATURE	DATE	DATE		
AS NOTED		APRIL 2022	OF 51		
LICENSE EXPIRES: APRIL 30, 2024					



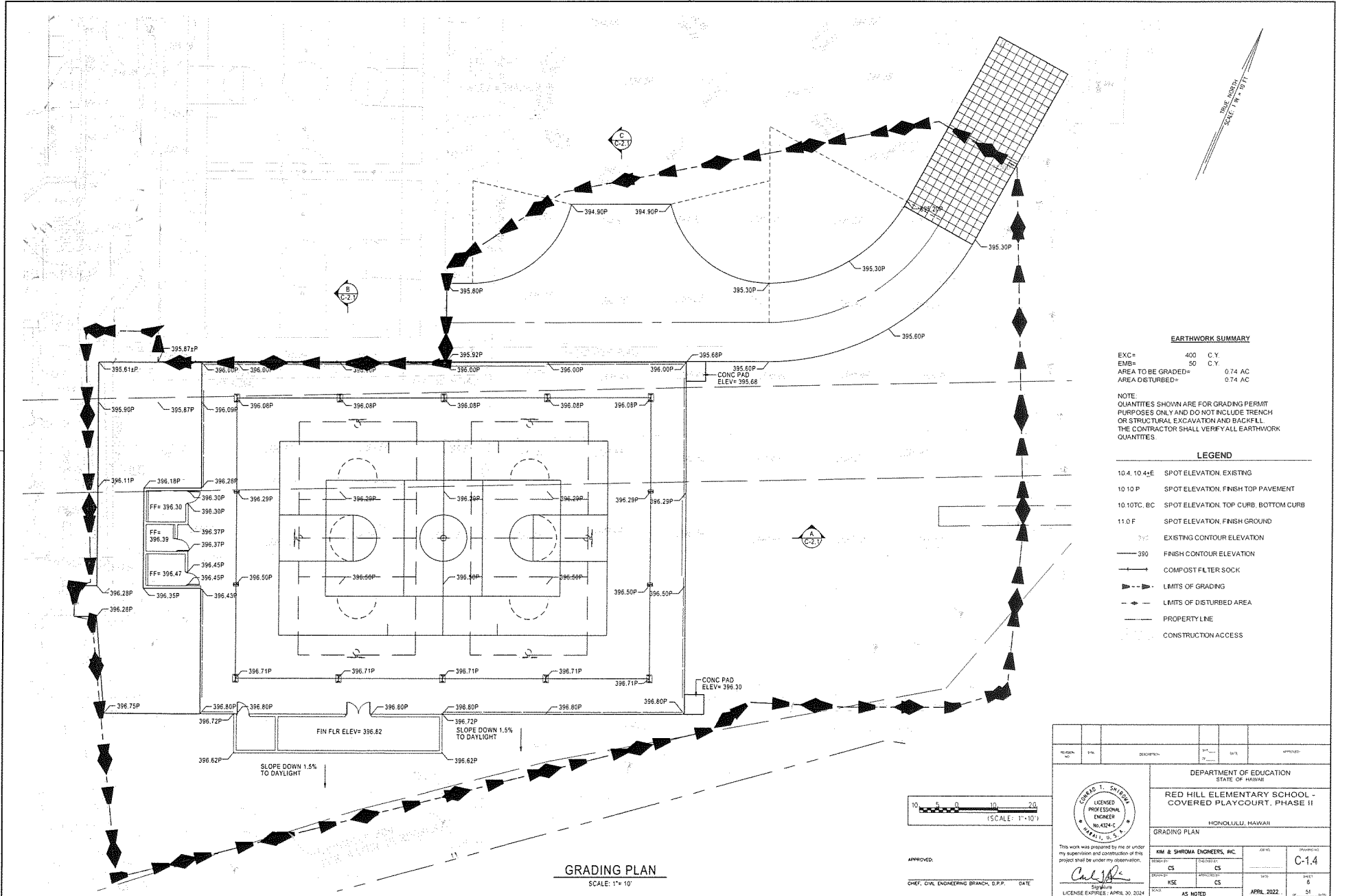
LEGEND

10.4, 10.4E	SPOT ELEVATION: EXISTING
10.10 P	SPOT ELEVATION: FINISH TOP PAVEMENT
10.10TC, BC	SPOT ELEVATION: TOP CURB, BOTTOM CURB
11.0 F	SPOT ELEVATION: FINISH GROUND
(Symbol: Dashed line with triangles)	EXISTING CONTOUR ELEVATION
(Symbol: Solid line with triangles)	FINISH CONTOUR ELEVATION
(Symbol: Line with triangles pointing out)	COMPOST FILTER SOCK
(Symbol: Dashed line)	LIMITS OF GRADING
(Symbol: Line with triangles pointing in)	LIMITS OF DISTURBED AREA
(Symbol: Solid line)	PROPERTY LINE
(Symbol: Dashed line)	CONSTRUCTION ACCESS



**DEMOLITION & EROSION AND
SEDIMENT CONTROL PLAN**
SCALE: 1"= 10'

NO. 1	DATE	APPROVED
DEPARTMENT OF EDUCATION STATE OF HAWAII RED HILL ELEMENTARY SCHOOL - COVERED PLAYCOURT, PHASE II HONOLULU, HAWAII DEMOLITION & EROSION AND SEDIMENT CONTROL PLAN		
This work was prepared by me or under my supervision and construction of this project shall be under my observation.		
APPROVED: <i>Calvin...</i> SIGNATURE LICENSE EXPIRES: APRIL 30, 2024	CHIEF, CIVIL ENGINEERING BRANCH, D.P.P. DATE	DESIGNED BY: CS CHECKED BY: KSE DATE: APRIL 2022
KIM & SHROMA ENGINEERS, INC. AS NOTED		DRAWING NO. C-1.2 SHEET 6 OF 31



GRADING PLAN
SCALE: 1" = 10'

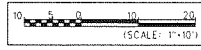
EARTHWORK SUMMARY

EXC#	400	C.Y.
EMB#	50	C.Y.
AREA TO BE GRADED#	0.74	AC
AREA DISTURBED#	0.74	AC

NOTE:
QUANTITIES SHOWN ARE FOR GRADING PERMIT PURPOSES ONLY AND DO NOT INCLUDE TRENCH OR STRUCTURAL EXCAVATION AND BACKFILL. THE CONTRACTOR SHALL VERIFY ALL EARTHWORK QUANTITIES.

LEGEND

- 10.4, 10.4+E SPOT ELEVATION, EXISTING
- 10.10 P SPOT ELEVATION, FINISH TOP PAVEMENT
- 10.10TC, BC SPOT ELEVATION, TOP CURB, BOTTOM CURB
- 11.0 F SPOT ELEVATION, FINISH GROUND
- 7.5 EXISTING CONTOUR ELEVATION
- 390 FINISH CONTOUR ELEVATION
- COMPOST FILTER SOCK
- LIMITS OF GRADING
- LIMITS OF DISTURBED AREA
- PROPERTY LINE
- CONSTRUCTION ACCESS



APPROVED: _____ DATE _____
CHIEF, CIVIL ENGINEERING BRANCH, D.P.P.

REVISION NO.	DATE	DESCRIPTION	BY	DATE	APPROVED
DEPARTMENT OF EDUCATION STATE OF HAWAII RED HILL ELEMENTARY SCHOOL - COVERED PLAYCOURT, PHASE II HONOLULU, HAWAII					
GRADING PLAN					
This work was prepared by me or under my supervision and construction of this project shall be under my observation. <i>Courtney T. Shirota</i>			PROJECT NO.: C-1.4		
DESIGNED BY: CS	CHECKED BY: CS	DRAWN BY: KSE		DATE: APRIL 2022	
LICENSE EXPIRES: APRIL 30, 2024			AS NOTED	SHEET 6 OF 51	

A. Background Information

Red Hill Elementary School opened for instruction at this location c. 1969 with the construction of three permanent buildings. Two other permanent buildings were later constructed between 1970 and 1975. No permanent structure has been erected since 1970. Portable classrooms were placed on the campus between 1985 and 1993. Existing structures are identified in Table 1.

The P.E. field was built in 1968 and the play court in 1985

Table 1. Structures at Red Hill Elementary School

Building	Function	Levels	Year Built
A	Admin/Library	2	1974
B	Classroom	2	1969
C	Classroom	2	1969
D	Classroom	1	1970
E	Cafeteria/Dining Room	1	1969
Portables (3)	Classrooms	1	1965-1993

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

The School is part of the Department of Education's Central District Aiea-Moanalua-Radford Complex Area and assigned to the Moanalua Complex. The Moanalua complex includes Moanalua, Red Hill, Salt Lake, and Shafter Elementary Schools, Moanalua Middle, and Moanalua High Schools. In general, elementary schools "feed" students into the Middle School which "feed" students into High School.

Red Hill Elementary School enrollment in 2022-2023 totaled 428 students in Grades Kindergarten to Grade 6 including Special Education students (DOE Update, 2022). The design enrollment is 750 students (DOE, 2006).

The proposed play court will be constructed on a section of an existing P.E. field at the *mauka* end of the campus. Constructed in 1968, recreation facilities at the field include a paved uncovered play court with basketball nets, two play apparatuses in the northeast corner, and scattered, tree shaded seating and benches around the perimeter. Chain link fencing about 4'-0" high surrounds the play field. The play court also is enclosed by chain link fencing 6' to 9' high.

The field is used for boys and girls P.E. classes, a play area during recess, and for large school functions (e.g. May Day celebration).

The building site is bounded by the existing play court to the north, Building D to the west, and a sloping grass covered hillside to the south. Multi-story residential buildings (part of Moanalua Hillside Apartments) are arranged parallel along the toe of the sloping hillside. In

general, the building rooftops are lower in elevation than field level. The Island Palm Communities Red Hill, a residential subdivision, borders Ala Kula Place on the north and is at a higher elevation than the road. Dense vegetation and tree canopies opposite the Cafeteria (Building E) obscure views of the subdivision from the playfield.

B. Environmental Characteristics

1. Climate

The climate of Moanalua 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 81⁰ F. The coolest months are from December to April where nighttime temperatures average 68⁰ F. Average annual rainfall is about 35 inches.

2. Topography

The natural environment has been modified by site work, permanent buildings, portable structures, walkways, impervious pavements, play areas, grass lawns, and associated improvements.

The building site is relatively level having graded and improved to accommodate the existing lawn area, outdoor basketball / volleyball courts, and play apparatus. Remnants of removed play equipment can be spotted on the ground surface at several locations.

Ground elevation ranges between 395 and 396 feet above sea level over the entire site. At the southern edge of the lot the grade slopes downhill to the Moanalua Hillside Apartments below.

3. Soils

The Soil Conservation Service (1972) maps two soil types---Manana silty clay loam 6 to 12 percent slopes (Symbol: MoC) and Manana silty clay loam, 12 to 25 percent slopes (Symbol: MpD2) underlying the School. In general, MoC soils comprise the eastern half and MpD2 soils the western half of the grounds. The new play court will be constructed in the area of MoC soils. This soil is moderately permeable, runoff is medium, and the erosion hazard slight.

Site improvements probably have blurred the distinctions between surface and subsurface soil layers. Because of grading, backfilling, and landscaping the existing surface material is a mixture of Manana silty loam, imported engineered fill, and imported topsoil.

4. Water Resources

a. Surface Water

There are no surface water features on the premises. Moanalua Stream, a perennial stream, flows about 1,800 feet to the southeast and downslope from the School.

b. Ground Water

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

Table 2. Aquifer Classification

Aquifer Code	30101111
Island Code	3 - Oahu
Aquifer Sector	01 - Honolulu
Aquifer System	01 - Moanalua
Aquifer Type, hydrogeology	1 – Basal
Aquifer Condition	1 - Unconfined
Aquifer Type, geology	1 - Flank
Status Code	11111
Development Stage	1 – Currently Used
Utility	1 - Drinking
Salinity (mg/l Cl ⁻)	1 – Fresh (<250))
Uniqueness	1 - Irreplaceable
Vulnerability to Contamination	1 - High

Source: Mink and Lau, 1990.

5. Flood Hazards

The Flood Hazard Map identifies two flood zones for the campus (See Figure 4). The approximate eastern half is designated Zone X or “areas determined to be outside the 0.2% annual chance floodplain” and the western half where the covered play court is proposed is designated Zone D or “Unstudied areas where flood hazards are undetermined, but flooding is possible”.

6. Historical Resources

Cultural Surveys Hawaii (2020) conducted an archaeological Literature Review and Field Inspection of the playfield and adjoining areas. Excerpts from their report are presented below.

- Traditional Hawaiian habitation and agriculture were located near the natural river mouth and coastline well seaward of the present project area. Although Moanalua was well-populated residence and agriculture were very focused on the “bottom lands” near the mouth of Moanalua Stream well makai of the project area.
- On the basis of a review of the historic record it appears there was little if any traditional Hawaiian or early historic period use of the project area.

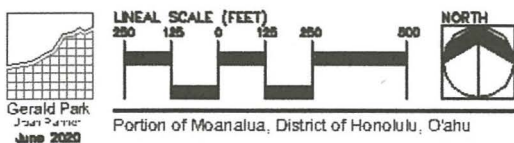


Source: DLNR Flood Assessment Tool Website

Legend

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

Figure 4
 Flood Hazard Assessment Map
 Red Hill Elementary School
 Covered Play Court



- The area is believed to have used for ranching from as early as the 1840's to as late as the 1930s and 1940s when fence lines indicated southeast of the project area are suggested to have been built to keep livestock off the steep cliff.
- Commercial pineapple cultivation was common in the mid-1920's but may not have been developed in the project area until later. By 1952 the entire school campus was in pineapple cultivation which likely would have destroyed any evidence of previous land uses (if any).
- The present school was built after 1968 and appears to have reached its present configuration by 1978.
- No archaeological historic properties were observed in the project area and none are believed to be present.

7. Biological Resources

The play field is planted in Bermuda grass and intermixed with other grasses and weeds. Monkey pod trees and Norfolk Island pine line the perimeter of the field. A single Formosan koa grows in the western part of the field. Silver buttonwood, plumeria, koa haole, and carissa supplement the plant palette. A mix of Guinea grass and buffel grass grows profusely on the sloping hillside to the south.

Common birds such as mynah, barred dove, and sparrow, were observed flying overhead, perched in trees, or browsing the lawn area.

Terrestrial fauna was not seen. More than likely mongoose and species of rat have established habitat in the dense vegetation around the open lawn area.

8. Views

The Primary Urban Center Development Plan (2004) Map A.1, Significant Panoramic Views arrows a significant panoramic view from Punchbowl Crater west between Tripler Hospital and Aliamanu Crater. Red Hill is not labeled on Map A.1. but is mentioned in the PUC text (3.1.1.2 Scenic Views) as a view object within the Primary Urban Center thusly:

“The Koolau and Waianae Mountain Ranges and their foothills (notably Red Hill and Puu Ualaka, or Round Top);”

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 Red Hill 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 O’ahu General Plan 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 Oahu General Plan 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 Oahu, and Policy 3 Areas are East Honolulu, Ko’olau Poko, Koolau Loa,, North Shore, Wai’anae. The policy areas encompass one or more of the eight development plan areas for O’ahu.

The island’s 2040 population is distributed by percentage to the three Policy Areas and identified by development plan area. The population percentage for the Primary Urban Center is 43% of Oahu’s 2040 population.

The General Plan also includes a Conceptual Development Plan on Oahu 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 and designates it as “Urbanized Area (PUC)”.

Under the “key area” Health and Education, an 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 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 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).

- Honolulu is inside the Community Growth Boundary.
- The PUC Land Use Map West (A.4) designates the site of Red Hill Elementary School Medium and Higher Density Residential / Mixed Use

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 A-2 Medium Density Apartment (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.

D. Public Facilities and Services

Ala Kula Place, a paved two-lane, two-way, undivided, road passes to the north of the school connecting with Ala Kapuna Street on the south. Its right-of-way is partially improved with curbs, gutters, and sidewalks on one side. On-street parking is permitted on the Halawa Valley side of the road opposite the School. The posted speed limit is 25 mph.

A small parking area is bounded by a student drop-off area at the front of the School. Parking is also provided at the Cafeteria (Building E) fronting Ala Kula Place.

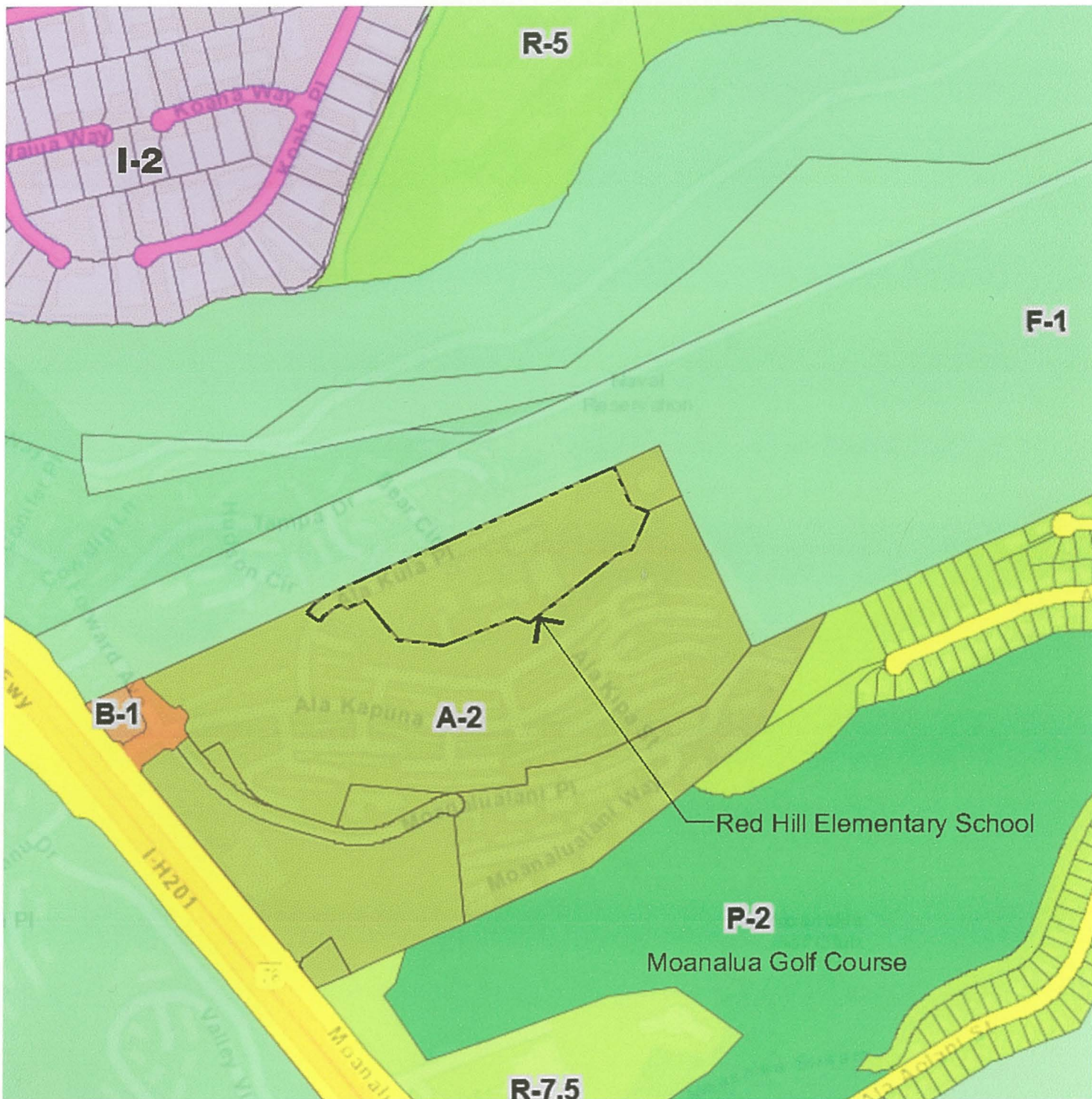
Security checks are provided 24/7 for persons and vehicles entering the residential communities of Moanalua Hillside Apartments and Island Palm Communities Red Hill. The security measures also apply to Red Hill Elementary School.

Domestic water is provided by the U.S. Navy via an 8" main than ends with a water meter across from the Cafeteria.

The school is served by the municipal wastewater system. Wastewater discharges into a 12" VC main in Ala Kula Place.

The building site and play field lawn are sloped to drain in the direction of the Board of Water Supply access driveway. Concrete gutters on both sides of the driveway convey flow to roadside inlets near the Cafeteria.

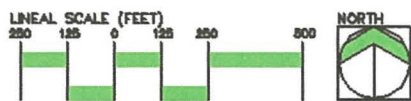
The School is located approximately 700 feet *makai* of the U.S. Navy Underground Bulk Fuel Storage Facility. The facility stores about 187 million gallons of diesel or jet fuel in 18



Source: City & County of Honolulu Website.

LEGEND

B-1	BUSINESS	A-2	APARTMENTS
R-5	RESIDENTIAL (5000 MIN SF LOTS)	I-2	INDUSTRIAL
R-7.5	RESIDENTIAL (7,500 MIN SF LOTS)	P-2	PRESERVATION (GENERAL)
		F-1	MILITARY



Portion of Moanalua, District of Honolulu, Oahu

Figure 5
Zoning
Red Hill Elementary School
Covered Play Court

tanks. Each tank is about 250 feet in height. Two tanks currently are empty and not in use (Board of Water Supply Correspondence, October 2019).

Electrical and communication services are provided from distribution systems on Ala Kula Place. Service lines from the road into the school grounds are placed underground.

Moanalua is part of the Honolulu Police Department's Patrol District 5 with headquarters at the Kalihi Police Station. Fire protection is provided from the Moanalua Fire Station (Station 30), the Aiea Fire Station (Station 10), or the Mokulele Fire Station (Station 8).

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 is a grass field;
- There are no structures on the building site;
- A fenced outdoor court borders the building site to the north;
- 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;
- Red Hill Elementary School is not located in a flood hazard area;
- There are no streams, ponds, or wetlands on the campus;
- Water and wastewater services are available from the respective on-site utility systems. 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/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. 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.

Schools are considered noise sensitive areas. Buildings D and E 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. Cafeteria and Classroom doors and windows face east-west. These factors should collectively aid in noise attenuation. Construction noise will be heard periodically in the classroom and Cafeteria and 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.

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 multi-family zoning for the property, the project is classified as a Class B zoning district for noise control purposes. The maximum permissible daytime (7 a.m. to 10 p.m.) sound level in the district is 60 dBA during daytime and 50 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.

The building site is relatively level thus minimal site work is needed to achieve design elevations. Within the project limits the area to be disturbed by grubbed and graded is estimated at 0.74 acres. Earthwork quantities are estimated at approximately 50 CY of fill and 400 CY of embankment. Site work will create opportunities for erosion (fugitive dust and suspended sediment in runoff). Best Management Practices (BMPs) will be deployed throughout the work area for erosion control. All site work to include trenching and stockpiling excavated or imported material will be performed in accordance with Chapter 14 (Grading, Soil Erosion, and Sediment Control) Articles 13, 14, and 15 of the Revised Ordinances of Honolulu, 1990, as amended. A Sediment and Erosion Control Plan detailing construction and post-construction BMPs will be prepared and submitted to the Department of Planning and Permitting for review and approval.

Performing site work during the summer break will preclude exposing children and school personnel to air quality and noise impacts.

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 disturbed by construction will be restored to pre-construction conditions or better.

Vehicles carrying workers and material will contribute to traffic on Ala Kapuna and Ala Kula Place. Material deliveries will be scheduled during non-peak traffic hours to minimize impact on local and school-related traffic. Access to residential areas around and including the School is secured 24/7. Building contractors will coordinate worker and delivery traffic with security for ease of access.

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.

Historic properties have not been identified on the School campus. The results of the archaeological Literature Review / Field Inspection report support a DOE determination of "No historic properties affected: and no further archaeological work is recommended (CSH, 2020). Should site work activities encounter human remains or subsurface deposits, all work in the immediate area will stop and historic authorities promptly notified of the finds.

Construction will preclude use of the entire play field for recreation. The existing outdoor play court will be segregated from construction and will be available for school use for the majority of the construction period. Safety of the students and faculty will need to be of primary concern for use of the surrounding areas.

Two small open space areas on the western end of the school campus will be the primary recreation field areas during construction.

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 and field. 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. Residential units in the Moanalua Hillside Apartment buildings adjoining the building site are lower in elevation than the play court. Recreation noise should not adversely affect residents over the course of a typical school day.

Roof runoff will flow to the grass field and follow the field gradient to the north. 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. Filter socks and fabrics will be placed where needed. Grassing and landscaping will provide permanent stabilization of graded / exposed areas. The proposed drainage solution is consistent 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.

Chain link fencing will minimize wildlife intrusion and provide security for the facility. Bird netting also will be installed under the roof over the play court.

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 apartment 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 25-feet above grade it would be slightly taller than the adjoining one-story buildings (Buildings D and E) and approximate the height of monkeypod and pine trees on the east.

Residential units in the Moanalua Hillside Apartments are lower in elevation and the new play court should not be visible because of the difference in elevation and trees planted along the east property line. The east facing exterior side and top of roof, however, may be visible through the trees from some but not all apartment units.

The vegetated slope *mauka* of the School should screen views of the covered play court from the Island Palm Communities Red Hill.

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

Fire flow and access to the structure 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. The 20-foot wide gate at the end of driveway will provide fire apparatus access to the new structure.

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 open lawn area where the project is proposed is the only on-campus space with sufficient land area to accommodate a covered play court.

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
Grubbing, Grading, and Stockpiling Permit

6

AGENCIES AND ORGANIZATIONS TO BE CONSULTED

State of Hawai'i

Department of Health
Department of Land and Natural Resources
Historic Preservation Division

City and County of Honolulu

Board of Water Supply
Department of Environmental Services
Department of Facility Maintenance
Department of Planning and Permitting
Fire Department

Others

Hawaiian Electric Company
The Honorable Linda Ichiyama, Representative, 31nd Representative District
The Honorable Micah Aiu, Representative, 32th Representative District
The Honorable Donna Mercado Kim Senator, 14rd Senatorial District
The Honorable Carol Fukunaga, Honolulu City Council
Moanalua Hillside Apartments
Island Palm Communities Red Hill
Salt Lake Public Library (Placement)

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;

Historic properties have not been identified on the School campus. "The results of this study support a DOE determination of "No historic properties affected: and no further archaeological work is recommended (CSH, 2020)". Should site work activities encounter human remains or subsurface deposits, all work in the immediate area will stop and historic authorities promptly 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 an existing play field adjacent to an uncovered play court which will remain intact.

- 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;

Substantial degradation of environmental quality is not anticipated. The site of the School already has been substantially degraded by construction of the School and

adjoining water infrastructure, roads, and multi-family developments on the north, east, and south.

- 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.

Noise from children playing is not anticipated to adversely affect adjoining multi-family residential areas.

- 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;

Red Hill Elementary School is not located in an environmentally sensitive area. The School, however, is located about 750 feet from (below) the U.S. Navy Underground Bulk Fuel Storage Facility at Red Hill.

- 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.

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