

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

Letter No. PMS-226.11

TAPR 08 2011

OFFICE OF SCHOOL FACILITIES AND SUPPORT SERVICES

March 22, 2011

TO:	Mr. Gary Hooser, Director Office of Environmental Quality Control
	Department of Health
FROM:	Michael H. Shigetani, Public Works Manager
	Facilities Development Branch, Project Management Section
SUBJECT:	Finding of No Significant Impact (FONSI)
	Noelani Elementary School Multi-Purpose Playcourt
	Tax Map Key 2-9-023: 023
	Manoa, Oahu, Hawaii

The Department of Education, Facilities Development Branch, has reviewed all comments received during the 30-day public comment period that began on February 8, 2011 and ended on March 9, 2011. The agency has determined that this project will not result in significant adverse environmental effects and has issued a Finding of No Significant Impact (FONSI). Please publish this notice in the next edition of the Environmental Notice.

One printed copy and one CD of the Final Environmental Assessment are attached. A project summary and Environmental Notice publication form in electronic format will be sent by email. Please call Mr. Ryan Yamamoto of my staff at 586-0966 if you have any questions.

MS:RY:lh

Enclosures: Final EA (1 Hard Copy/1 CD)

c: Pacific Architects, Inc. FDB/Project Management Section (RY)

## FINAL ENVIRONMENTAL ASSESSMENT

# NOELANI ELEMENTARY SCHOOL MULTI-PURPOSE PLAYCOURT

Mānoa, Honolulu, Hawaiʻi

Prepared for

#### **Department of Education**

State of Hawai'i Facilities Development Branch Project Management Section 1151 Punchbowl Street, Room 431 Honolulu, Hawai'i 96813

March 2011

### FINAL ENVIRONMENTAL ASSESSMENT

# NOELANI ELEMENTARY SCHOOL MULTI-PURPOSE PLAYCOURT

Mānoa, Honolulu, Hawaiʻi

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

Prepared for

#### **Department of Education**

State of Hawai'i Facilities Development Branch Project Management Section 1151 Punchbowl Street, Room 431 Honolulu, Hawai'i 96813

Prepared by

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

and

Pacific Architects, Inc. 2020 South King Street

Honolulu, Hawai'i 96826

March 2011

## **PROJECT PROFILE**

Proposed Action:	Noelani Elementary School Multi-Purpose Playcourt DOE Job No. P00149-08
Location:	Honolulu, Hawaiʻi
Proposing Agency:	Department of Education Facilities Development Branch 1151 Punchbowl Street, Room 431 Honolulu, Hawaiʻi 96813
Accepting Authority:	Department of Education Facilities Development Branch 1151 Punchbowl Street, Room 431 Honolulu, Hawaiʻi 96813
Tax Map Key: Land Area: Landowner:	(1) 2-9-023: 023 8.57 acres City and County of Honolulu
Existing Use: State Land Use Designation: Development Plan Area: Land Use Map (PUC-East): Zoning: Special Management Area:	Public Elementary School Urban Primary Urban Center Residential R-7.5 Not Within Special Management Area
Need for Assessment:	Use of State lands and funds §11-200-5 (b)
Anticipated Determination:	Finding of No Significant Impact
Contact Person:	Ryan Yamamoto Department of Education Facilities Development Branch 1151 Punchbowl Street, Room 431 Honolulu, Hawaiʻi 96813
	Telephone: 586-0966

Note: Substantive revisions to the text of the Draft Environmental Assessment are shown in **bold italic** type. Deleted text is bracketed with a [strikethrough].

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The Department of Education, State of Hawai'i, proposes to construct a multi-purpose playcourt at Noelani Elementary School located in Mānoa, City and County of Honolulu, Hawai'i. The school is bounded by Woodlawn Drive on the north, residential uses on the west and south, and part of the University of Hawaii Agricultural Experiment Station on the east. A Location/Vicinity Map is shown in Figure 1.

The school site bears Tax Map Key: (1) 2-9-023: 023 encompassing an area of 8.57 acres. The City and County of Honolulu is identified as the property owner. A Tax Map is shown in Figure 2.

#### A. Purpose and Need for the Project

Manoa Valley is well known for its lush greenery and wet conditions. Rainfall originates in the Koolau Mountain and passes through the valley falling on to the Manoa community and sprinkling other neighborhoods at its mouth. The "Manoa Mist" is an almost daily occurrence affecting outdoor recreation activities at Noelani Elementary School. The proposed playcourt will provide a covered space for outdoor activities during inclement weather.

#### **B.** Technical Characteristics

#### 1. Playcourt

1

A building site on the west side of the campus adjacent to an existing playcourt has been selected for the site of the proposed project. An area of approximately 15,700 square feet has been delineated around the proposed playcourt and is referred to as the building site and/or project limits for this Assessment (See **Noelani Elementary School Site Plan and** Sheet 1-1.2, Site Plan).

A covered playcourt of approximately 7,300 square feet (approximately 100' X 70') is proposed. The facility will enclose a regulation basketball court (to be shared with a regulation volleyball court) and four half-size basketball courts. The building includes space for two portable stage locations for school activities and assemblies but there will be only one stage. Space is set aside on the western half for boy's and girl's restrooms, a general utility closet, storage room, and an electrical/storage room. Three sides of the building will be faced with chain link fencing for ventilation and security. Swinging chain link gates will provide access. The court surface will be asphalt concrete.

The single-story structure is approximately 30'-0" in height measured from finished grade to top of roof vent (See Sheet A-4.1, Exterior Elevations). The building height exceeds the height limit for the zoning district by 5+ feet and a height Waiver will be applied for from the Department of Planning and Permitting, City and County of Honolulu.

In general the structure will be supported on steel posts and trusses, framed with metal siding, and topped with a pitched metal roof. Restroom and storage areas will be framed with cement masonry units. Translucent panels on each side will allow natural light to enter the covered space.

1

A covered, concrete walkway will be constructed from the east end of Building "A" to both the existing and proposed playcourts.

#### 2. Circulation and Off-Street Parking

The project does not propose change to existing on-campus vehicle circulation and parking.

#### 3. Demolition and Grading

Approximately 15,700 square feet of lawn area will be disturbed for the new playcourt, walkways, landscaping, drainage control, and associated improvements such as water and wastewater lines. Of the area to be disturbed, grading work is estimated at approximately 6,500 square feet to include earthwork quantities of 78 cubic yards for excavation and 59 cubic yards for embankment.

The lawn area on the north and west sides of the new playcourt will be graded to convey surface flow to a drain inlet located approximately 40 LF to the west of the existing playcourt near Building "A".. Flow will be conveyed by a grass swale rather than underground piping to the drain inlet.

A Demolition, Erosion Control, and Grading Pplan is shown on Sheet C1.1.

No buildings will be demolished as a result of the proposed action.

#### 4. Infrastructure

Domestic water service will be provided from a new 2" line connected to an existing 3" service lateral inside the school grounds. Water use is estimated at 4,200 gallons per day and can be supplied by the existing on-site system.

Wastewater will be discharged into an on-site 15" sewer through a new 6" sewer lateral. Wastewater generation is estimated at 4,200 gallons per day. The new playcourt is sited to avoid a 10-foot wide sewer easement crossing through the existing playcourt.

Roof runoff will discharge into a new 6" roof drain and conveyed to an existing drain inlet for discharge into the municipal drainage system. The existing drain inlet is located in a lawn area approximately 40 LF to the west of the existing playcourt near Building "A"..

Electrical power will be routed in underground conduits from the existing on-campus electrical system.

A Site and Utility Plan is shown on Sheet C1.2.

#### 5. Landscaping

An underground irrigation system will be installed in the areas to be landscaped. Irrigation water will be drawn from an existing irrigation system. A section of approximately 135 LF of existing irrigation line on the west side of the new playcourt will be relocated and reconnected to the existing irrigation system.

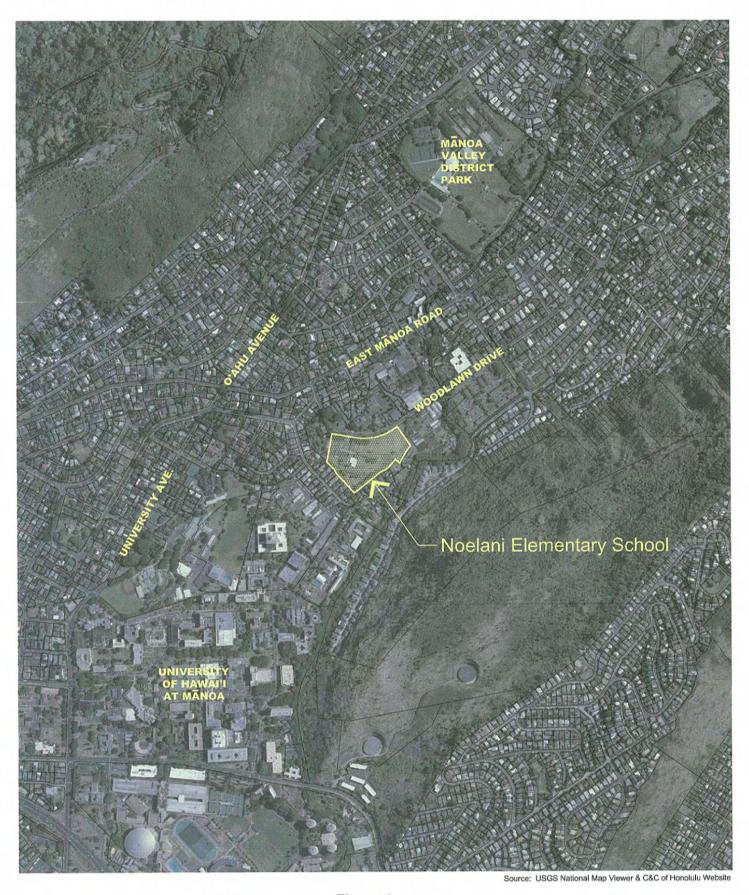
#### 6. Accessibility

Walkways and bathrooms will be designed in compliance with Americans with Disabilities Act ("ADA") requirements.

#### C. Economic Characteristics

Construction costs are estimated at \$1.6 million and will be funded by the State of Hawai'i.

Construction will commence after all design plans are approved and construction permits received. Construction is projected to take 200 calendar days with start-up in June 2011 and completion by December 2011.



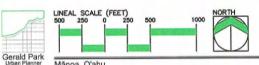
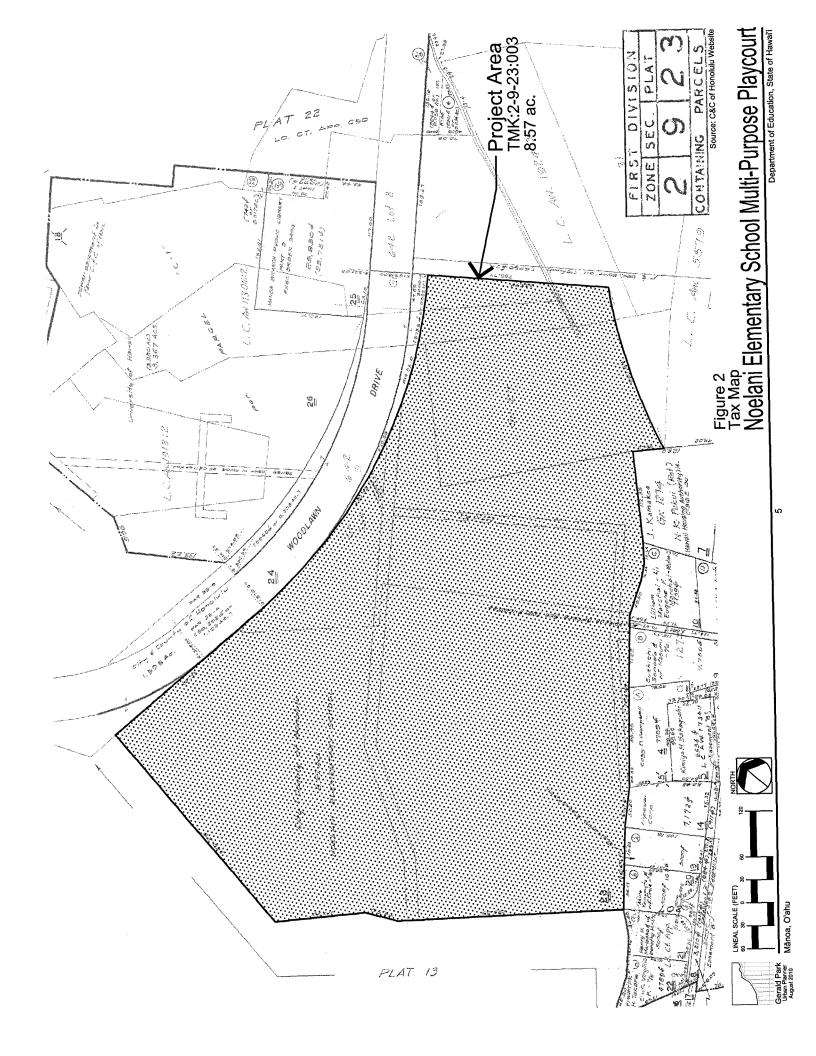
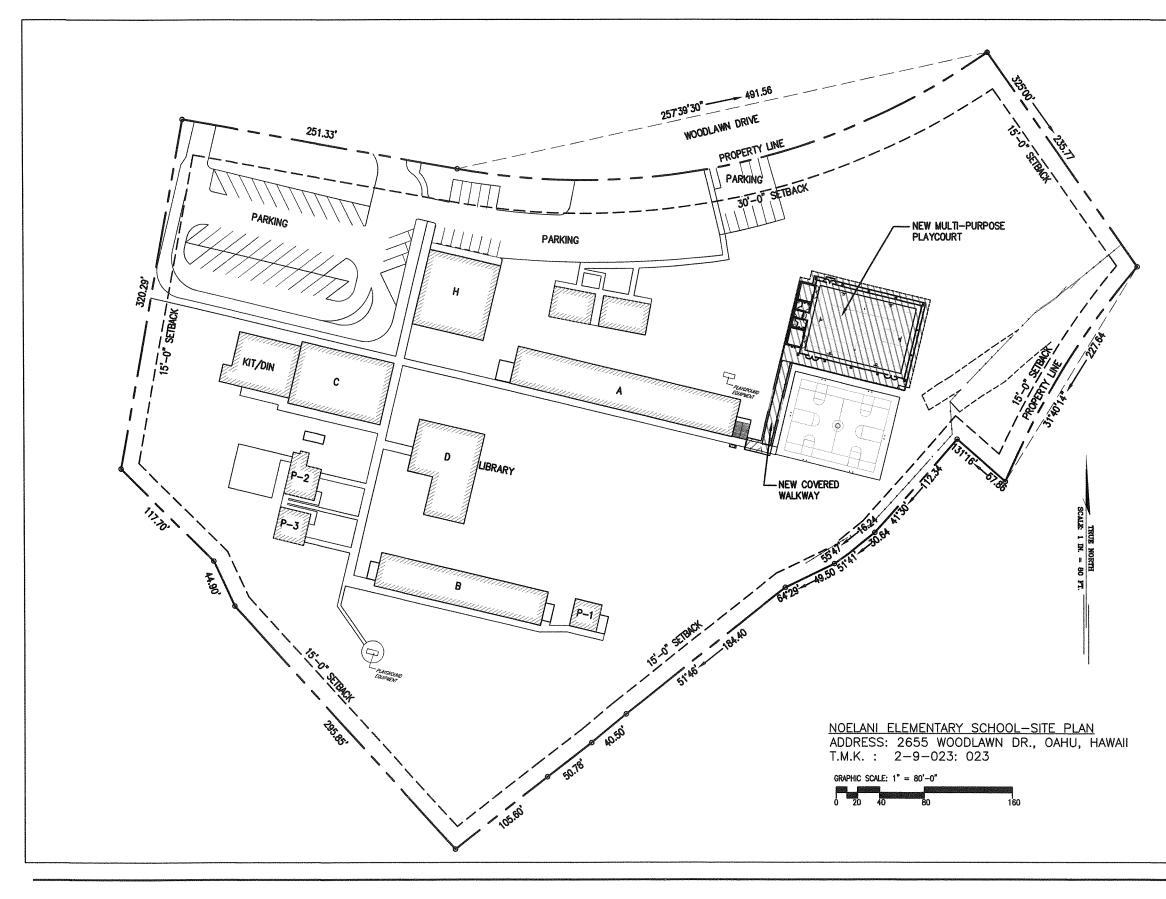


Figure 1 Vicinity Map Noelani Elementary School Multi-Purpose Playcourt

August 2010

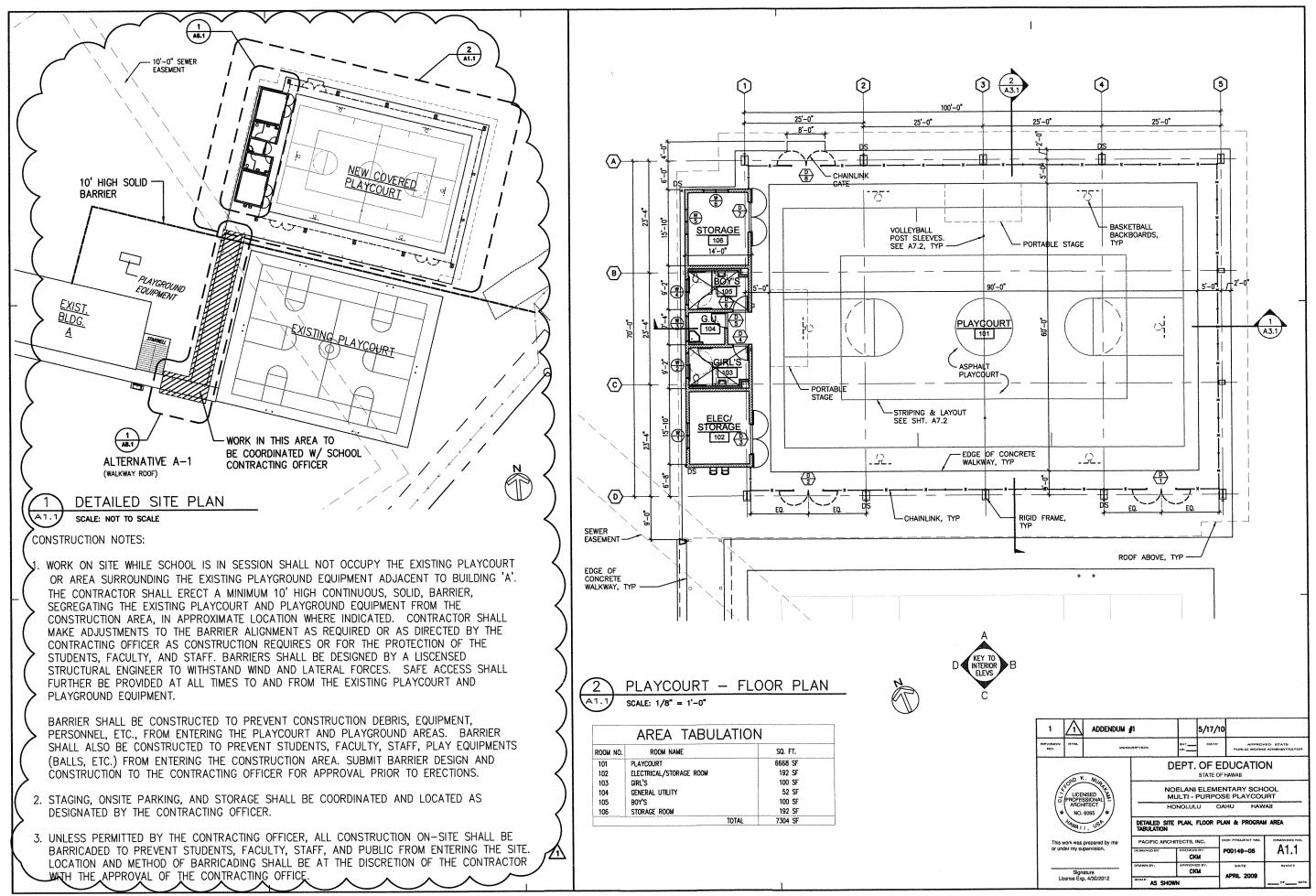
Department of Education, State of Hawai'i

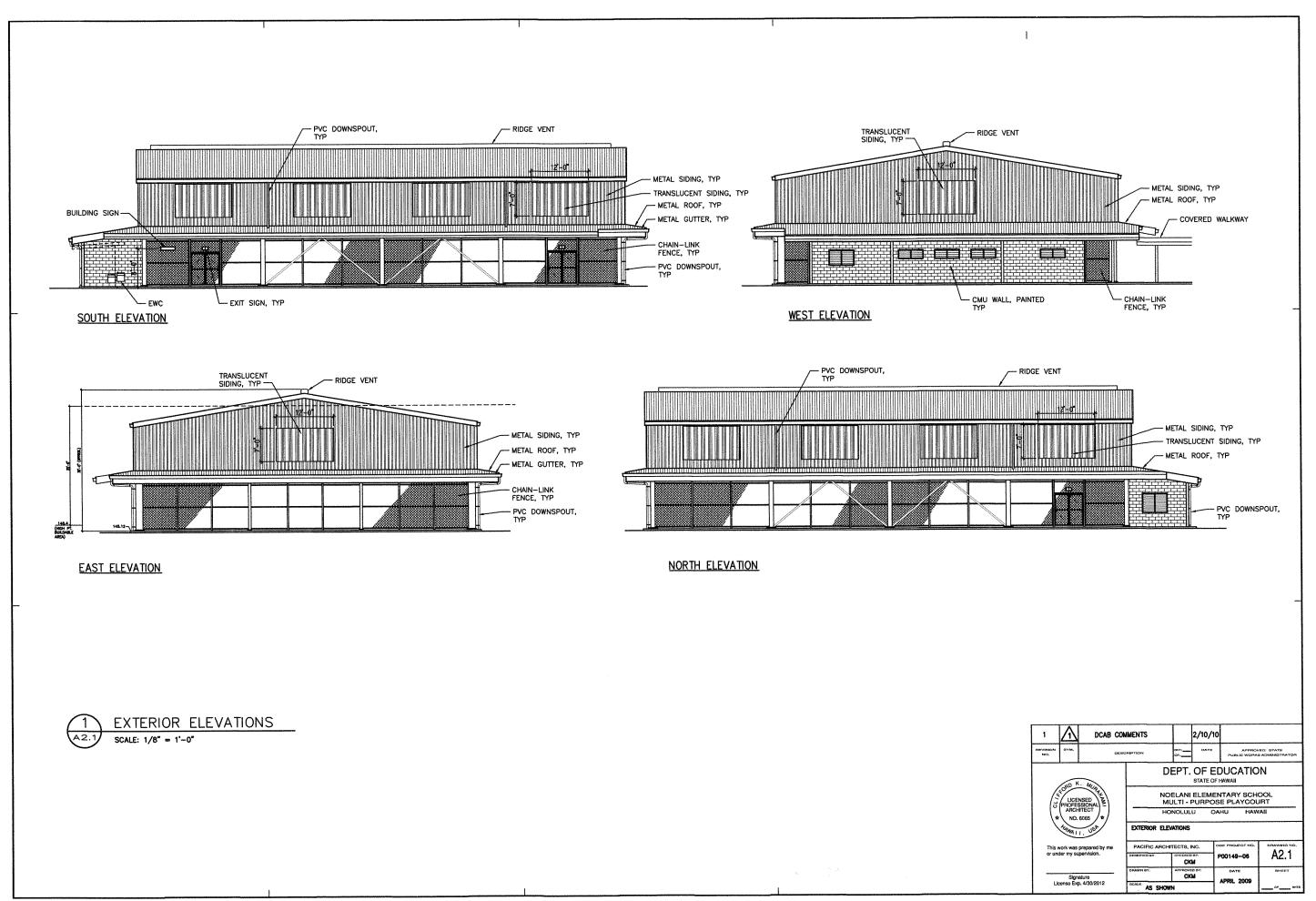


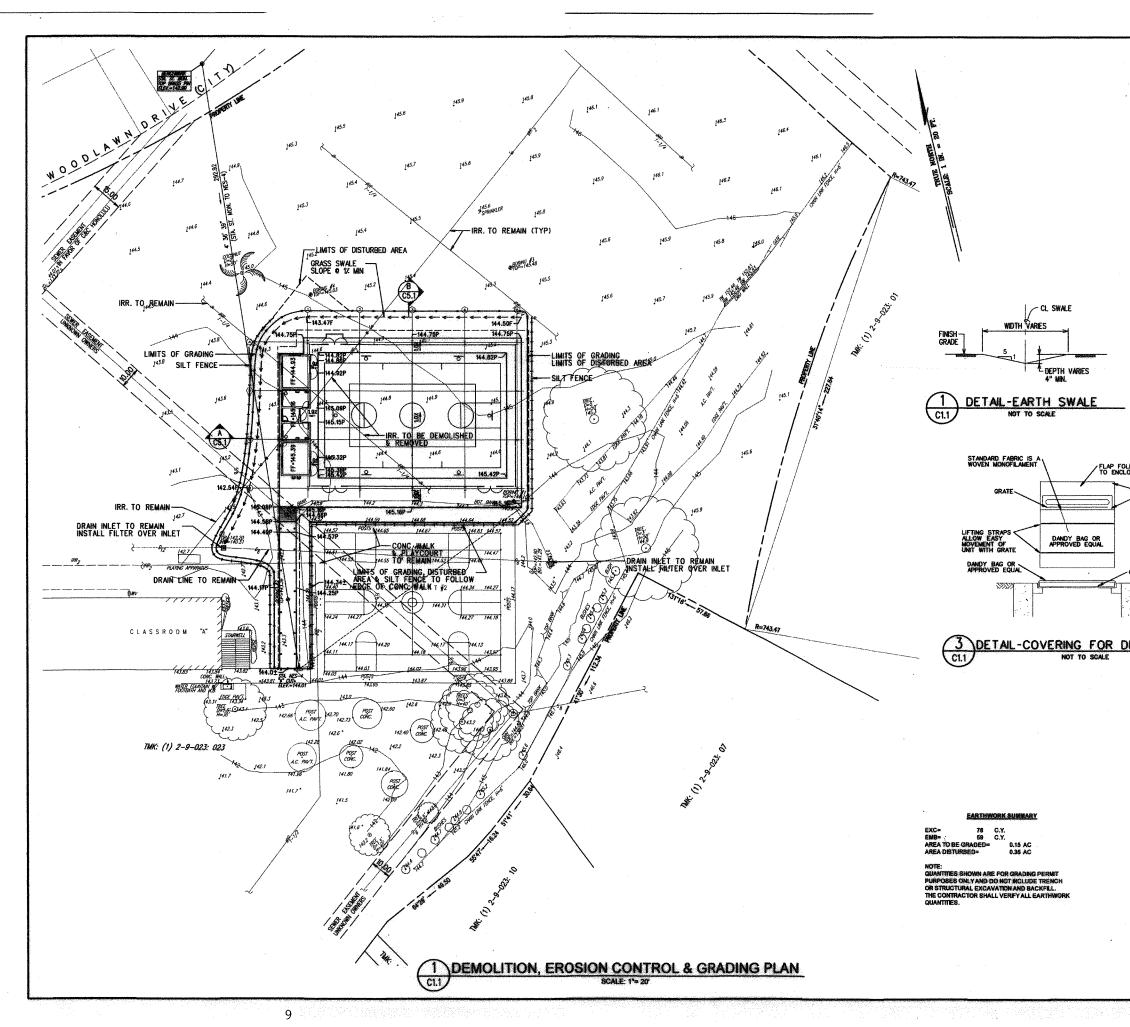




NOELANI MULTI-PURPOSE PLAYCOURT SITE PLAN SCALE : 1" = 80'-0"







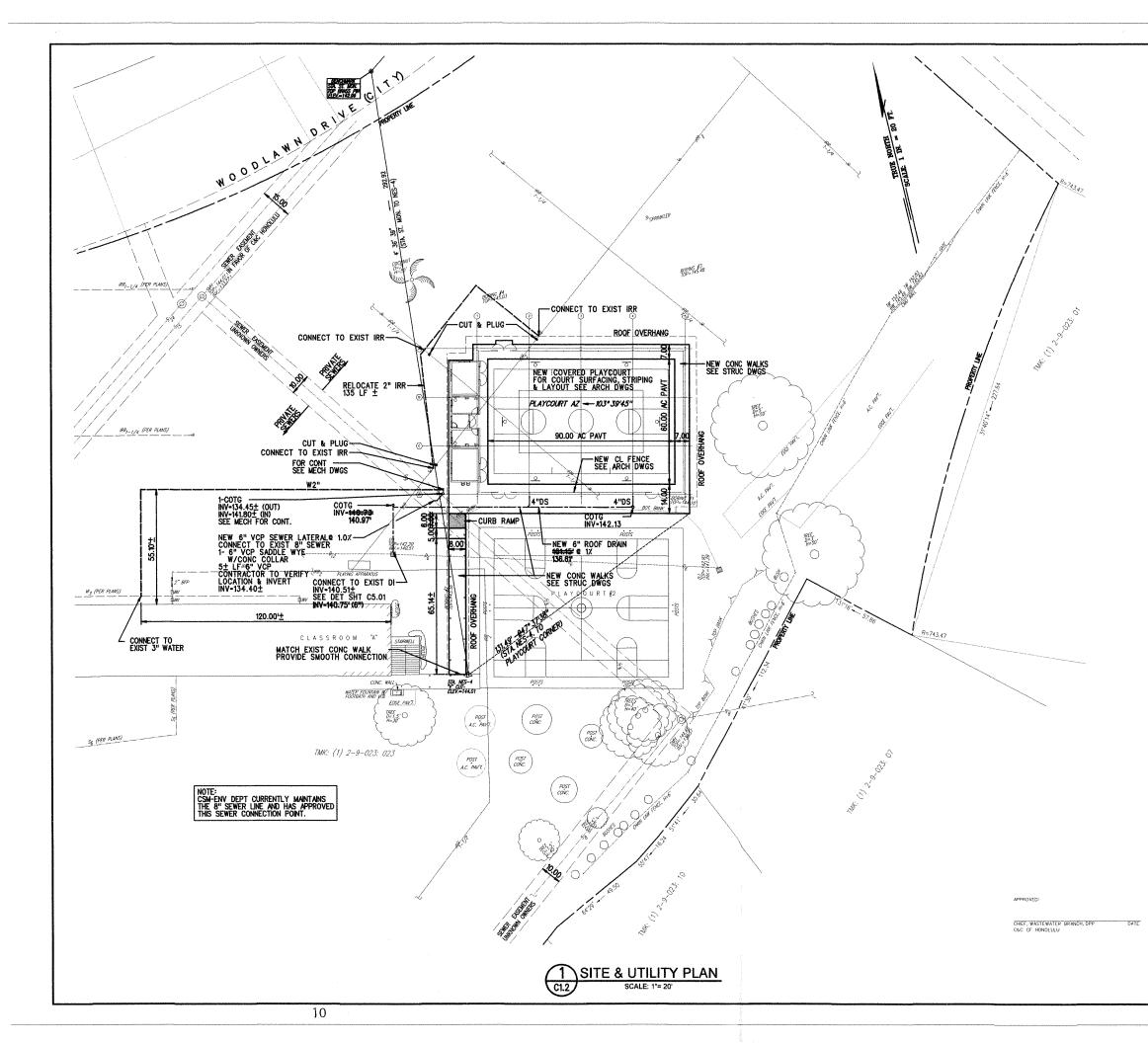
#### BEST MANAGEMENT PRACTICE (BMP) NOTES:

1. INSTALL TEMPORARY SILT FENCES AS SHOWN TO MINIMIZE EROSION FROM STORM RUNOFF DURING GRADING WORK.

- 2. WORK AREAS WILL BE WATERED AND KEPT MOIST OR A GRANULAR BLANKET PROVIDED FOR DUST CONTROL
- THE CONTRACTOR SHALL INSPECT THE EROSION CONTROL FACILITIES NOT MORE THAN EVERY 7 CALENDAR DAYS OR WITHIN 24 HOURS OF A STORM OF 0.5 INCHES OR MORE IN DEPTH. DANGES TO TEMPORARY SILT FERCES SHALL BE REPAIRED.
- 4. AREAS OPENED FOR GRADING AND LEFT EXPOSED FOR MORE THAN 14 DAYS SHALL BE GRASSED.
- 5. STABILIZED CONSTRUCTION ACCESS SHALL BE CONSTRUCTED. THE ACCESS LOCATION SHALL BE COORDINATED WITH THE CONTRACTING OFFICER. THE STABILIZED ENTRANCE SHALL CONSIST OF AN E-INCH THICK A2 CRUSHED ROCK LAYER WITH A WIDTH OF 28-FEET AND A LENGTH OF 20 FEET TO REMOVE MUD, DIRT OR ROCK WHICH MAY BE TRACKED ONTO OR OFF THE CONSTRUCTION ACCESS ROUTE.
- 6. MUD SHALL BE CLEANED FROM ALL VEHICLE TIRES BEFORE THE VEHICLE CAN EXIT ONTO PAVED ROADS.
- 7. INSTALL GEOTEXTILE FILTER FABRIC AROUND DRAIN INLET GRATINGS.

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#### A. Existing Uses and Structures

Noelani Elementary School opened for instruction in 1962 with one classroom building. Today there are 6 buildings comprising the campus in addition to off-street parking. All the improved structures are located on the western two-thirds of the property. The eastern third which includes an existing outdoor multi-purpose court is in open space and devoid of permanent structures.

All standing architecture is less than 50 years old (Cultural Surveys Hawaii, 2010). None of the structures are old enough to meet the criteria for a historic building.

Noelani Elementary School is one of seven elementary schools, two middle schools, and one high school comprising the Roosevelt Complex. The school had an enrollment of 468 elementary school children in Grades K-6 for school year 2009-2010. Forty-five administrators, elementary teachers, and support personnel staff the school.

In 1967, the sitting President of the United States, Barack H. Obama, attended Noelani Elementary School kindergarten. He is the most famous alumnus of the school to date.

In 2009, Mānoa Public Library was relocated to a site at Noelani Elementary School during construction of a new library. The library collection is temporarily housed in portable buildings placed between Building "A" and Woodlawn Drive. A paved off-street parking lot is part of the library facility.

Site conditions are shown on the Site Photographs.

#### B. Climate

Temperature and precipitation measurements for Mānoa are collected at Lyon Arboretum in the back of valley and at the University of Hawaii. Average temperatures range from 69.4 to 75.2 degrees Fahrenheit at Lyon Arboretum and 20 to 58 inches per year at the University of Hawaii at the head of the valley. Trade winds which are typical of the Hawaiian Islands blow predeominantily from a northeast direction and average approximately seven miles per hour. Rainfall and temperatures at Noelani School is probably similar to that at the University of Hawaii and significantly lower than at Lyon Arboretum (Facility/Technics Hawaii, 1996).

#### C. Topography

Most of the school grounds are at about elevation 140 feet above mean sea level. The site of the proposed playcourt is level and was previously graded and grassed.

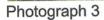
#### D. Soils

The Soil Conservation Service (1972) maps a single soil type---Hanalei silty clay, 0 to 2 percent slopes (HnA)--for the entire school. Hanalei silty clay developed in material derived



Photograph 1







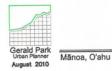
Photograph 3. View of Building Site Looking West.

Photograph 2

Site Photographs Noelani Elementary School Multi-Purpose Playcourt Department of Education, State of Hawal'



Photo Key Map GRAPHIC SCALE IN FEET 200 100 0 200





Photograph 1. View of Building Site Looking East.

Photograph 2. Site of Covered Playcourt in Foreground. Existing Play Court in Background.

Photograph 4. Location of Proposed Grass Drainage Swale between Existing Playcourt on the Left and Building "A" on the Right.

from basic igneous rock and found on stream bottoms and flood plains. The soil is moderately permeable, runoff is very slow, and the erosion hazard is no more than slight.

Owing to the extensive and long development period for Noelani School, more than likely much of the Hanalei silty clay soils have been replaced and covered by engineered fill and/or top soil.

#### E. Water Resources

#### 1. Surface Water

There are no streams, lakes, ponds, open bodies of water, or wetlands on the premises. Mānoa Stream, located about 250 feet to the east of and outside the school grounds, flows *mauka* to *makai* behind the UH Magoon Research and Instructional Facilities and residential lots on Hipawai Place.

#### 2. Ground Water

According to groundwater maps prepared by Mink and Lau (1990), Noelani Elementary School is positioned over a section of the Palolo aquifer of the Honolulu aquifer sector. Characteristics of the Palolo aquifer are presented in Table 1.

Aquifer Code	30101146	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	2 - Confined
Aquifer Type, geology	6 - Sedimentary	1 - Flank
Status Code	23321	11113
Developmental Stage	2 - Potential Use	1 - Currently Used
Utility	3 - Neither	1 - Drinking
Salinity (in mg/L Cl <sup>-</sup> )	3 - Moderate (1,000-5,000)	1 - Fresh (<250)
Uniqueness	2 - Replaceable	1 - Irreplaceable
Vulnerability to Contamination	1 - High	3 - Low

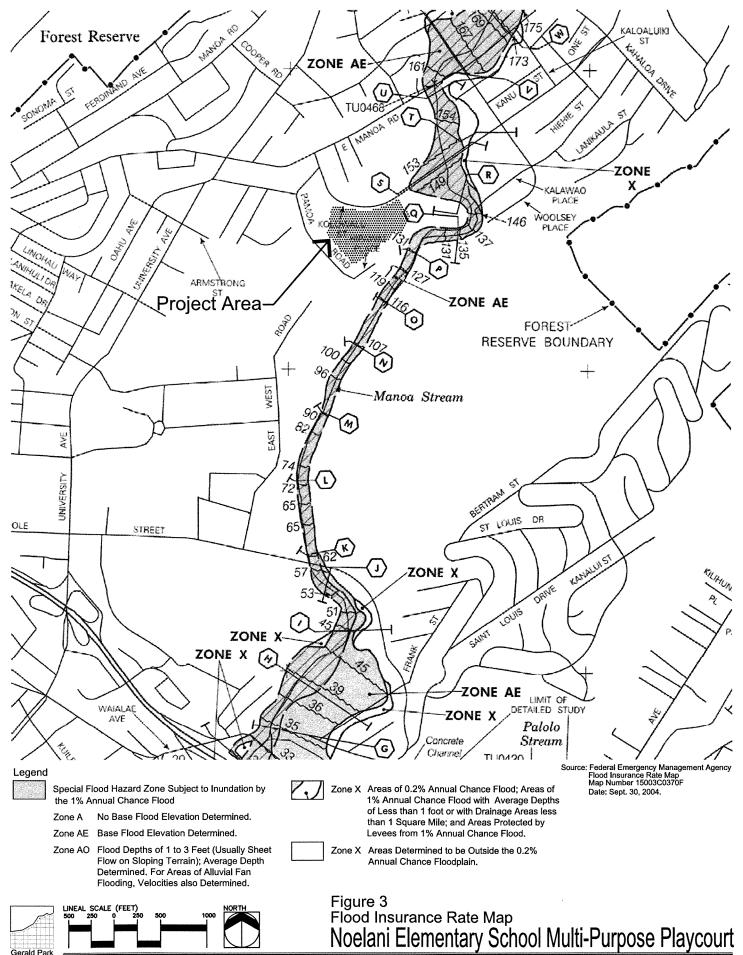
#### Table 1. Aquifer Classification System

Source: Mink and Lau, 1990.

The Palolo aquifer is characterized by an unconfined sedimentary aquifer above a confined flank aquifer. The sedimentary aquifer is comprised of moderately brackish water, has potential use (but not for drinking water), and is highly vulnerable to contamination. The flank-confined aquifer is used for drinking water, has a low vulnerability to contamination, and is irreplaceable.

#### F. Flood Hazard

Noelani Elementary School is located in Flood Hazard Zone "X" (See Figure 3) which is defined as areas "determined to be outside the 0.2% annual chance floodplain (Federal Emergency Management Agency, 2004)."



Mānoa, O'ahu ust 2010

Department of Education, State of Hawai'i

#### G. Historic Resources

An archaeological field investigation (Cultural Surveys Hawaii, 2010) did not reveal the presence of archaeological features within a land area slightly larger than but including the project limits.

The consulting archaeologists pointed out that Hipawai Heiau (or remnants of the *heiau*), a Hawaiian temple of human sacrifice, is located approximately 120 meters south of the proposed playcourt (or closer if measured from the school's south property line). The *heiau* is located on private property and was not accessed as part of this project.

The consulting archaeologists also reported that Hipawai is also the name of a cave. Hipawai Cave, a large underground cavern, has its location under the area of the U.H. Institute of Astronomy across Woodlawn Drive. The cave was not investigated as part of this project.

#### H. Cultural Resources

A more comprehensive discussion of archaeological and cultural resources associated with Noelani Elementary School and Mānoa Valley is found in Appendix A of this environmental Assessment.

#### 1. Plant Resources

Handy's (1940) description of Mānoa; suggests the valley was once home to a substantial Hawaiian population supported by vast taro gardens:

In upper Mānoa the whole of the level land in the valley bottom was developed in broad taro flats. The terraces extended along Mānoa Stream as far as there is a suitable land for irrigating...About 100 terraces are still being cultivated [in the 1930s], but these do not constitute more than one tenth of the total area capable of being planted...Bennett...described the upper valley as "checquered with taro patches." (Handy, 1940).

Legendary accounts also mention a variety of cultivars grown in Mānoa; one recounts the story of Kihanuilūlūmoku-wahine who----in the company of mermaids and *menehune---*went to her garden of taro, sweet potatoes, bananas,  $h\bar{o}$ 'i'o, bamboo,  $k\bar{i}$ , hala, ginger, lehua, and other plants. As they worked they chanted, the mermaids singing as they came from the central spings of Manoa Valley to the mountain freshets, all of which would provide water to the 'auwai used to grow crops (Bouslog et al, 1994). One version of the Legend of the Princess of Mānoa refers to the *maile* and fern gatherers fo Mānoa and Nu'uanu (Nakuina, 1904). An *oli* to honor chief <u>Kūali'i</u> and recount his exploits refers to the "yellow ti leaf on the heights of Wa'ahila {Wa'ahila Ridge]" (Fornander, 1917). *Ti* or  $k\bar{i}$  (*Cordyline fruiticosa*), is a Polynesian introduction, had and has multiple ethnobotanical uses; the roots can be baked as a comestible and used to make the distilled drink, 'okolehao; various parts of the plant are used in hula, fishing, thatching and healing (Abbott, 1992).

While there may be no taro pondfields (*Io'i*) presently in or near Noelani Elementary School, old terraces have been noted in the forested uplands of the vicinity. In addition, the school campus is almost entirely in lawn and landscaping, with school buildings and pavements.

#### 2. Streams and Fresh Water

Given its abundant natural resources---including five tributary streams ('Aihualama, Waihī Nāniu'apo, Lua'alaea, and Waiakeakua) that feed into the main stream and several *pūnāwai* ----Mānoa Valley has been an attractive place to settle and garden for as long as people have lived on O'ahu. Lower Mānoa Vealley, within which the Noelani Elementary School campus is located, represents the prime wet-taro-growing area and agricultural heartland of the entire valley. The school campus lies approximately 200 meters west of Mānoa Stream and it

#### 3. Trails

The approximate present alignment of Mānoa Road and East Mānoa Road follow ancient Hawaiian trails. Noelani Elementary School is set back approximately 150 meters south of East Mānoa Road. It seems probable that there were paths serving Hipawai Heiau just to the east but these access routes are uncertain.

#### 4. Wahi Pana

The vast majority of the historic properties once located in Mānoa Valley have been destroyed and/or partially or entirely covered over by modern development including the construction of the university campus in the lower valley and residential and commercial centers elsewhere. Noelani Elementary School is located in what used to be a prime wet-taro-growing area but little trace of that landscape now remains.

Of the *heiau* in Mānoa, Hipawai Heiau was in closest proximity to the school The Archaeological Literature Review and Field Inspection (Hammatt and Shideler, 2010) summarizes the available information regarding Hipawai Heiau and concludes it may be been located 120 meters south of the proposed playcourt project area on the bank of Mānoa Stream.

Hipawai is also the name of a cave believed to have existed in the vicinity of Noelani Elementary School.

There are a number of storied places (*wahi pana*) in the vicinity including the rock formation called Ka U'i o Mānoa, in Waileele, which is the Mid-Pacific School area, that is referred to in the myths of Kahalaopuna---the beauty of Mānoa. The valley is also home to many *pu'u* peaks, ridges and caves---all associated with *m'olelo* and legendary accounts; these include Waahila Ridge (which defines the eastern border of the valley) and its six peaks [Keanapoi, Pu'u Pia, Pūkele, Paliluahine (also known as Kapaliluahine or Pali Luahine), Akā'ka, and Kumanuna], Ulumalu, P'uu Pueo, and Pu'u Mānoa.

Ka Papa Lo'i o Kānewai is perhaps the best known cultural site in the general vicinity noted for its ongoing and active practice of *kalo* cultivation. From the time the *lo'i* were reopened in 1980, Kānewai has been a *p'uuhonua* (place of refuge) for plants, people, and culture. Ka Papa Lo'i o Kānewai also serves as a living storehouse of different varieties of taro that are today utilized by famers throughout the islands.

#### 5. Burials

No human burials have been documented from the immediate vicinity of Noelani Elementary School. The nearest traditional Hawaiian burials documented were near Keller Hall

approximately a kilometer SSW of the project area and along Dole Street immediately adjacent to the Kānewai Cultural Garden and Kamakūokalani Center for Hawaiian Studies, approximately 1.2 kilometers SSE of the project area. Both burials were located on or near the UH at Mānoa campus.

Thrum described the neighboring Hipawai Heiau as of "*po'okānaka* class" suggesting human sacrifice occurred there. Thrum also indicates that after Hipawai Heiau was partly destroyed it was "then used as a place of burial." This has never been verified.

#### I. Botanical Resources

The building site is covered by lawn. Single specimens of coconut palm and African tulip stand to the north and east of the building site, respectively. A row of bougainvillea grows along a fence line separating the school from a vacant lot to the east.

#### J. Wildlife Resources

Wildlife resources were not observed during a field investigation. Mynah bird and barred were the only two avian species recorded.

#### K. Hazardous Materials

No hazardous materials were observed or known to be associated with the building site.

#### L. Land Use Controls

Pursuant to Chapter 205 HRS, the Hawaii Land Use Law, the State Land Use Commission classifies all land in the State of Hawaii into one of four classifications: Urban, Agricultural, Conservation, or Rural. Noelani Elementary School is within an urban district. Uses and activities in the urban district are regulated by the respective counties.

The Primary Urban Center Development Plan (2004) designates the school grounds "Residential".

The property is zoned R-7.5 for residential uses with a minimum lot size of 7,500 square feet. Elementary schools are a permitted use in the R-7.5 zoning district. The height limit for the zoning district is 25 feet and a height Waiver will be requested to exceed the building height.

The property is not located within the County delineated Special Management Area.

#### M. Public Facilities

#### 1. Circulation

Woodlawn Drive, a two-lane, two-way all weather surface road passes to the north of the school. The road is fully improved with curbs, gutters, and sidewalks on both sides. The posted speed limit fronting the school is 25 miles per hour.

Street parking is permitted on Woodlawn Drive fronting Noelani Elementary School and the University of Hawai'i Institute of Astronomy across the street.

2. Water

The Board of Water Supply supplies potable water to the school from a 12" cast iron water line in Woodlawn Drive. Water service is metered through a 2" water meter.

Fire flow is provided from fire hydrants along Woodlawn Drive.

3. Sewer

Wastewater discharges into several sewer lines of varying size (24", 15" and 8") crossing the school grounds in sewer easements. The two larger lines are part of the Manoa Trunk Sewer and Manoa Trunk Relief Sewer.

4. Power and Communication

Electrical power and communication systems are available from underground systems along Woodlawn Drive.

5. Protective Services

Police protection originates from the Honolulu Police Department headquarters building on Beretania Street.

Fire service is provided from the Manoa Fire Station (Station 22) on East Mānoa Road. The Station is located less than one-half mile from the school.

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

The scope of the project was discussed with the consulting architect, members of the design team, and staff of the Facilities Development Branch, Department of Education. State and County agencies were contacted for information relative to their areas of expertise. Time was spent in the field noting site conditions and conditions in the vicinity of Noelani Elementary 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 new playcourt will be constructed at lawn area adjacent to an existing uncovered playcourt;
- There are no rare, threatened, or endangered flora or fauna on the building site;
- There are no archaeological resources on the building site;
- There are no on-going cultural practices associated with the building site and school grounds;
- The school is not located in a flood hazard area;
- There are no streams, ponds, or wetlands on the school site;
- Water and sewer systems are available to accommodate the proposed use.

#### A. Short-term Impacts

Site work, a necessary function to prepare the land for building the temporary and permanent improvements to follow, is the first and probably the most disruptive construction activity on the environment. Approximately 0.25 acres will be cleared and grubbed. Grubbing will remove vegetation and grading will establish preliminary and final design elevations. The single coconut palm and African tulip tree will remain *in situ*.

Site work is a persistent source of fugitive dust. Site contractors are aware that fugitive dust is a nuisance to construction workers, people living and working near work sites, and in this instance school age children and staff. Because the project is proposed on school grounds, it is imperative for the contractor to maintain stringent dust controls. Water sprinkling is probably the most effective dust control measure given the size of the project site and the scale of the proposed improvements. The contractor, however, may choose to implement other measures and best management practices based on their experience with similar projects and job site conditions.

The contractor will be responsible for general housekeeping of the site and for keeping adjacent streets free of dirt, mud, and construction litter and debris. Pollution control measures shall comply with Chapter 60.1, Air Pollution Control regulations of the State Department of Health.

Site work will expose soil thus creating opportunities for erosion and construction-related runoff. Site work will involve excavation and grading to achieve the desired finish elevation. An area of approximately 6,500 square feet will be graded. Grading quantities are estimated at 78 cubic yards excavation and 59 cubic yards of fill. Site work impacts can be mitigated by complying with Best Management Practices ("BMPs") specified in

An NPDES permit for storm water runoff associated with construction activities will not be required because less than one acre of the total land area will be disturbed during construction.

Schools are considered noise sensitive facilities. Construction noise may be audible in classrooms and buildings near the site but exposure is expected to vary in volume, frequency, and duration. Noise will vary also by construction phase, the duration of each phase, and the type of equipment used during the different phases. For this project, noise will be most pronounced during the early stages when the site is grubbed, graded, and building foundations poured. Noise will diminish as the structure is erected and roofed.

Community Noise Control regulations establish a maximum permissible sound level for construction activities occurring within (acoustical) zoning districts. Land zoned residential is placed in the Class A zoning district. The maximum permissible sound level for excessive noise sources (to include stationary noise sources and construction and industrial activities) in the Class C zoning district is 55 dBA all day (7 a.m. to 10 p.m) and 45 DBA at night (Chapter 46, Community Noise Control, 1996). Construction activities often produce noise in excess of the permissible daytime noise level and a variance (or Noise Permit) may be needed. The contractor will be responsible for obtaining the variance and complying with applicable conditions.

Construction also can be scheduled when school is not in session. This form of mitigation would preclude dust, noise, and construction vehicle traffic from adversely affecting daily school activities and provide for the safety of students, parents, and school staff.

The project is proposed in an area that has been significantly altered by construction activities and improvements. Should excavation unearth subsurface archaeological sites, artifacts, or cultural deposits, work in the immediate area will cease and the proper authorities notified for disposition of the finds. If *iwi kupuna* are uncovered and appear to be less than 50 years old, the County of Maui Police Department will be notified. If the burials appear to be more than 50 years old, then the State Historic Preservation Officer will be notified. As a matter of protocol, both agencies will be notified for inspection and proper disposition of the finds.

Archaeological monitoring is recommended by the consulting archaeologists as an appropriate mitigating measure.

Road construction and/or utility connections within the right-of-way of Woodlawn Drive are not required thus there should be no direct impact on traffic circulation. Vehicles carrying workers and material will contribute to traffic on Woodlawn Drive and streets leading into Mānoa Valley.

Construction material will be off-loaded on the school grounds and will not affect traffic circulation on Woodlawn Drive.

#### B. Long-term Impacts

The principal impact of the project is to provide a multi-purpose space for recreation classes, free play, and school gatherings and functions. 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 covered playcourt should not be significantly different or "louder" than noise now emanating from use of the open play court. Noise will not be constant throughout the school day but occur when the playcourt is in use for court sports and school gatherings. The hours of use will be determined by school administrators.

Average demand for water is estimated at 4,200 gallons per day. Wastewater flow is estimated at 4,200 gallons per day. Both water demand and wastewater flow can be accommodated by the respective system.

Electrical power will be provided from the on-site power system. Electrical consumption and associated costs will be reduced through the use of energy efficient fixtures, natural lighting, and natural ventilation.

The covered playcourt will present a new object to be seen on campus and from off-campus areas. At one-story in height, it will be at about the same height as many campus buildings. Trees and shrubs planted near or alongside the building will "soften" its mass and add a vertical element to its form. Over time, the playcourt will be seen and visually accepted as another structure at Noelani Elementary School.

#### 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 described in this Assessment. Resources committed to plan and build the facility will be foregone and the purpose of the project not achieved.

#### B. Alternative Location

The site for the playcourt discussed in this environmental assessment is the best available for the proposed use. At the proposed location, the facility will help to centralize sport court activities at a central school location. The site is also quite distant from classrooms thus recreation type noises should not interrupt classroom instruction.

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)

#### **City and County of Honolulu**

#### Department of Planning and Permitting

Waiver (Building Height) Building, Electrical, and Plumbing Permits Grubbing, Grading, Excavation and Stockpiling Permit

## AGENCIES AND ORGANIZATIONS CONSULTED IN THE ENVIRONMENTAL ASSESSMENT REVIEW PROCESS

The Draft Environmental Assessment for the Noelani Elementary School Multi-Purpose Playcourt was published in the Office of Environmental Quality Control Environmental Notice of February 8, 2011. Publication initiated a 30-day public review period ending on March 9, 2009. The Draft Environmental Assessment was mailed to the agencies and organizations identified below. An asterisk \* identifies agencies and organizations that submitted written comments during the review period. All comment letters and responses are found in Appendix B.

#### State of Hawaii

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Department of Health \*Indoor and Radiological Health Branch Department of Land and Natural Resources State Historic Preservation Division

#### **City and County of Honolulu**

\*Board of Water Supply \*Department of Planning and Planning \*Fire Department

#### Organizations

Hawaiian Electric Company Manoa Neighborhood Board Mānoa Public Library (Placement) Chapter 200 (Environmental Impact Statement Rules) of Title 11, Administrative Rules of the State Department of Health, establishes criteria for determining whether an action may have significant effects on the environment (§11-200-12). The relationship of the proposed project to these criteria is discussed below.

# 1) Involves an irrevocable commitment to loss or destruction of any natural or cultural resource;

Natural or cultural resources are not associated with the building site and Noelani Elementary School.

#### 2) Curtails the range of beneficial uses of the environment;

The building site is used and maintained as a school yard lawn. The large lawn area on the western side of the school grounds contributes to open space and also serves a recreation function. Converting a small portion of the open lawn area to a covered playcourt will serve a recreation function and protect users from inclement and/or hot weather conditions. The one-story structure will not adversely affect views across the open space and over time will be visually accepted as another structure on campus.

#### 3) Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in chapter 344, Hawaii Revised Statutes, and any revisions thereof and amendments thereto, court decisions or executive orders;

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

#### 4) Substantially affects the economic or social welfare of the community or State;

The project is not anticipated to substantially affect the economic or social welfare of the community or the State.

#### 5) Substantially affects public health;

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Public health will not be adversely affected. Short-term environmental impacts in the form of fugitive dust, noise from construction equipment, 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 best management practices for erosion control, to be submitted with construction plans and documents.

For the safety of children and adults, construction areas will be fenced to control pedestrian access.

# 6) Involves substantial secondary impacts, such as population changes or effects on public facilities;

Substantial secondary impacts are not anticipated.

#### 7) Involves a substantial degradation of environmental quality;

Environmental quality will not be substantially degraded.

# 8) Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions;

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

#### 9) Substantially affects a rare, threatened or endangered species, or its habitat;

Flora and fauna observed within the project limits are not listed or candidates for rare, threatened or endangered status. All observed species are common to the State of Hawai'i.

#### 10) Detrimentally affects air or water quality or ambient noise levels;

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 may 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 pollution regulations of the State Department of Health.

Erosion control measures will be prescribed in grading plans and best management practices prepared for the project.

Construction noise will be audible at different parts of the school for the duration of construction. Construction will commence during summer 2011 when school is not in session and most if not all site work and utility installation should be completed in 2-3 months. The remainder of the construction schedule will coincide when school is back in session but noise will not be as pronounced as during the site work stage.

The contractor will notify and coordinate all construction work with the DOE and the school administration.

# 11) Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters;

Noelani Elementary School is not located in an environmentally sensitive area.

# 12) Substantially affects scenic vistas and view planes identified in county or state plans or studies, or;

The one-story playcourt will not affect scenic vistas and view planes. Following construction, it will be viewed as a new structure but over time it will become one of the permanent campus buildings.

#### 13) Requires substantial energy consumption.

An increase in energy consumption is anticipated because the cafeteria is a larger space than the temporary cafeteria and the cafeteria that was destroyed by fire. Design measures stipulated in this assessment will aid in energy conservation.

#### <u>General</u>

- Department of Health, State of Hawai'i. September 1996. *Title 11, Hawai'i Administrative Rules, Department of Health, Chapter 46, Community Noise Control.*
- Department of Planning and Permitting, City and County of Honolulu. June 2004. *Primary Urban Center Development Plan.*
- Federal Emergency Management Agency. September 2004. *Flood Insurance Rate Map.* Community Panel 15003C370F.
- Hammatt, Hallett H. and David W. Shideler. 2010. Archaeological Literature Review and Field Inspection Report for the Noelani Elementary School Playcourt Project, Mānoa [Waikīkī] Ahupua'a, Kona District, O'ahu Island, TMK [1] 2-9-023: 023. Cultural Surveys Hawaii, Kailua, Hawai'i.
- Mink, John F. and L. Stephen Lau. February 1990. *Aquifer Identification and Classification for O'ahu: Groundwater Protection Strategy for Hawai'i.* Technical Report No. 179. Water Resources Research Center, University of Hawaii at Manoa. Honolulu, Hawaii.
- U.S. Department of Agriculture Soil Conservation Services. August 1972. Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii. In Cooperation with The University of Hawaii Agricultural Experiment Station. U.S. Government Printing Office, Washington D.C.

#### Cultural Resources

- Abbott, Isabella A. 1992. *La'au Lapa'au Hawai'i: Traditional Hawaiian Uses of Plants*. Bishop Museum Press, Honolulu, HI.
- Bouslog, Charles, and other Mānoa Valley Residents. 1994. *Mānoa, The Story of a Valley.* Mutual Publishing, Honolulu, Hawai'i.
- Fornander, Abraham. 1917. Fornander Collection of Hawaiian Antiquities and Folklore. T..G. Thrum edit., Memoirs of the Bernice Pauahi Bishop Museum (Vol. IV, Part II), Bishop Museum Press, Honolulu.
- Handy, Craighill. 1940. *The Hawaiian Planter*, Volume 1. Bishop Museum Bulletin 161, Bishop Museum Press, Honolulu.
- Nakuina, Emma M. 1904. *Hawaii, Its People, Their Legends.* Hawaii Promotion Committee, Honolul.
- Thrum, Thomas G. 1907. *Heiaus and Heiau Sites Throughout the Hawaiian Islands. Hawaiian Almanac and Annual for 1908.* Honolulu, Hawai'i.

Archaeological Literature Review and Field Inspection Report for the Noelani Elementary School Playcourt Project, Mānoa [Waikīkī] Ahupua'a, Kona District, O'ahu Island, TMK [1] 2-9-023: 023.

The Archaeological Literature Review and Field Inspection Report was appended in the Draft Environmental Assessment prepared for the Project but is not printed for the Final Environmental Assessment.

## APPENDIX B

**COMMENTS AND RESPONSES** 

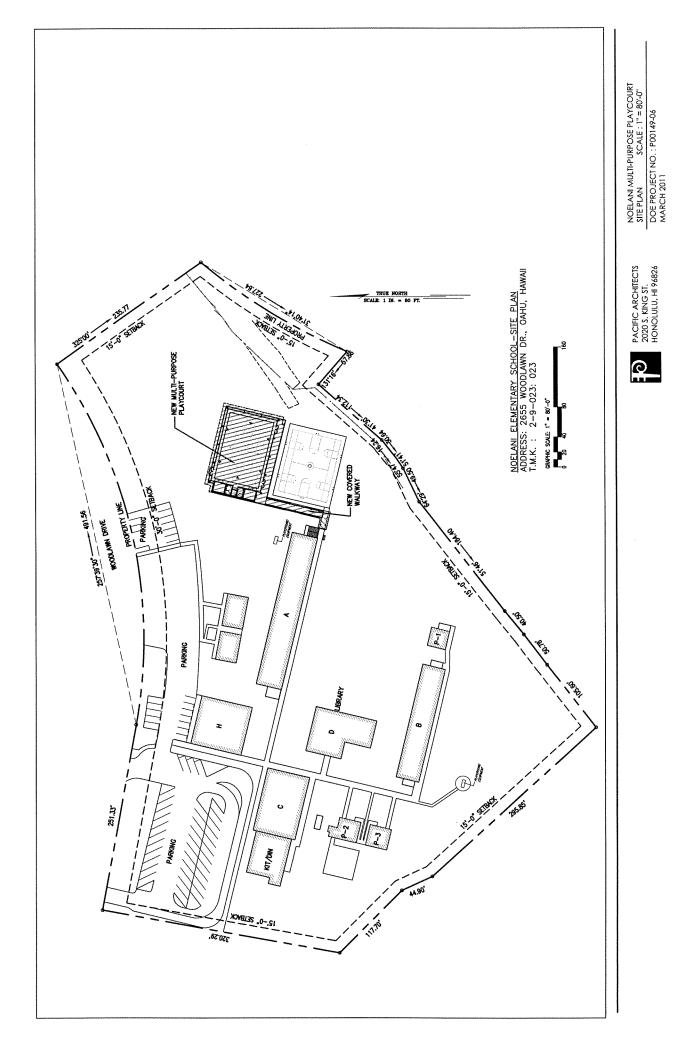
PETER B. CARLISLE, MAYOR RANDALL Y. S. CHUNG, Chaiman MATHONY R. GUERTERO, JR. WILLIANYK, MANUFOO THERESIA C. MANUFOO	ADAM C. WONG GEORGE YEOKI' MIYAMOTO, Ex-Officio GLENN M. OKINOTO, Ex-Officio GLENN M. ANSHINO, P.E. WANNAMA M. ANSHIO, P.E.	Deputy Manager	received 2. 5.1/		mments on the Draft ary School Multi-Purpose	court.	date the proposed	on is based upon current ight to change any position	building permit application. When the building permit	o pay our Water System d daily storage.	d with the Fire Prevention	-5443.	, ź	JCHI al Officer e Division L	·	
BOARD OF WATER SUPPLY CITY AND COUNTY OF HONOLULU 630 SOUTH BENETANIA STREET HONOLULU, HI 96943	February 3, 2011		Mr. Gerald Park Gerald Park Urban Planner 95-595 Kanamee Street, #324 Mililani, Hawaii 96789	. Dear Mr. Park:	Subject: Your Letter Dated January 25, 2011 Requesting Comments on the Draft Environmental Assessment for the Noelani Elementary School Multi-Purpose Playcourt, TMK: 2-9-23:23	Thank you for the opportunity to comment multi-purpose playcourt.	The existing water system is presently adequate to accommodate the proposed	development. However, please be advised that this information is based upon current data and, therefore, the Board of Water Supply reserves the right to change any position	or information stated herein up until the final approval of your building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.	When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.	The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.	If you have any questions, please contact Robert Chun at 748-5443.	Very truly yours, $\mathcal{A} \rightarrow \mathcal{P} \mathcal{C}$	PAUL S. KIKUCHI Chief Financial Officer Customer Care Division 1		Water for Life Ka Wai Ola
LORETTAJ, FUUDY, A.C.S.W., M.P.H. KCING OREFOR GFRALIN	in reacy, declares refer to: File:				X			Department of Health:	shools Tication	rogram						Wa
	STATE OF HAWAII DEPARTMENT OF HEALTH P.O.60043378 HONDOLUT, HI 96801-3378	February 03, 2011	Gerald Park Gerald Park Urban Planner	Jeffrey M. Eckerd, Acting Program Manager	Indoor and Kadiological Health Branch (U UU) Noelani Elementary School Multi-Purpose Playcourt Tax Map Key 2-9-023:023	Manoa, Honolulu, Hawaii	inted as follows:	"Project activities shall comply with the Administrative Rules of the Department of Health:		504 Asbestos Abatement Certification Program	Should there be any questions, please contact me at 586-4701.					
NEIL ABERCROMBIE COGENEE OF ANNAL			TO: Gerald Park Gerald Park (	FROM: Jeffrey M. Ec	Indoor and Ka SUBJECT: Noelani Elen Tax Map Ke	Manoa, Hon	Our comments should be printed as follows:	"Project activities shal.	<ul> <li>Chapter 11-501</li> <li>Chapter 11-502</li> <li>Chapter 11-503</li> </ul>	Chapter 110504	Should there be any question					

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	March 17, 2011	XK David K. Tanoue, Director Department of Planning and Permitting City and County of Honolulu 650 South King Street, 7 <sup>th</sup> Floor Honolulu, Hawai'i 96813	Qubicot Droft Environmental Accordenant		Tax Map Key 2-9-023: 023 2011/ELOG-233 (MS)	Thank you for reviewing the Draft Environmental Assessment prepared for the Noelani Elementary School Multi-Purpose Playcourt. We offer the following responses in the order that your comments were presented.	<ol> <li>This comment is acknowledged. The Department of Education will apply for a zoning waiver for the covered multi-purpose playcourt to exceed the maximum height limit.</li> </ol>	<ol><li>The lot coverage for the the existing school buildings and the proposed playcourt is approximately 43,000 square feet. The school site is 8.57 acres thus lot coverage is less than 12% of the zoning lot.</li></ol>	<ol><li>Graphic scales will be included on plans and drawings submitted for the zoning waiver.</li></ol>	<ol> <li>A site plan will be included in the Final Environmental Assessment depicting the location of the proposed Multi-Purpose Playcourt on the school lot. A copy of the site plan is attached.</li> </ol>	We thank the Department of Planning and Permitting for participating in the environmental assessment review process. Sincerely,	GERALD PARK URBAN PLANNER	Gerald Park	Attachment: Site Plan	c: R. Yamamoto, DOE-FDB C. Murakami, PAI	
		GERALD PARK Urban Planner 8 Planning Land Use Research Research	Environmental	studies B 95-595 Kanamee St	#324 Militani, Hawaii 96789	<ul> <li>Telephone:</li> <li>(808) 625-9626</li> </ul>	e-mail: gpark@gpup.biz									
MITTING VOLULU HAWAII 96813 9041	: www.honolulu.gov	DAVID K. TANOUE DIRECTOA JIRO A. SUMADA DEVITY DIRECTOR	2011/ELOG-233 (MS)	raraivan	9.4.11		pose Playcourt	received on January 27, 2011, for	ti-purpose playcourt	ovided. If the proposed playcourt t, a zoning waiver to exceed the	not include graphic ("bar") wn to practical scale, for the equired on the plans and	<i>is</i> where on the residentially located, and a site plan which tbacks.	our staff at 768-8023.	QC .	David K. Tanoue, Director Department of Planning and Permitting	
DEPARTMENT OF PLANNING AND PERMITTING CITY AND COUNTY OF HONOLULU 650 SOUTH KING STREET 7 <sup>TH</sup> FLOOR + HONOLULU HAWAII 96813 PPHONE: (809) 756-6000 + FAX: (801) 768-9001	DEPT. WEB SITE: <u>www.honoluludop.org</u> • CITY WEB SITE:		ALL OF	March 1, 2011	Mr. Gerald Park 95-595 Kanamee Street, # 324	Mililani, Hawaii 96789 Dear Mr. Park:	Subject: Draft Environmental Assessment Noelani Elementary School Multi-Purpose Playcourt 2655 Woodlawn - Manoa Tax Map Key 2-9-23: 23	We have reviewed the Draft Environmental Assessment (EA), received on January 27, 2011, for the above project, and have the following comments:	A zoning waiver will be required to allow a covered multi-purpose playcourt ("gymnasium") to exceed the maximum height limit.	Building area calculations for the entire site were not provided. If the proposed playcourt increases the lot coverage of the site to over 50 percent, a zoning waiver to exceed the maximum building area will be required.	Multiple plans and drawings included in the Draft EA do not include graphic ("bar") scales. It would be helpful if all plans and drawings, drawn to practical scale, for the Final EA include a graphic scale. Such a scale will be required on the plans and drawings submitted for the zoning waiver application	The Final EA should include a location map which shows where on the residentially zoned site the proposed multi-purpose playcourt will be located, and a site plan which clearly delineates the property lines and the required setbacks.	If you have any questions, please contact Malynne Simeon of our staff at 768-8023.	Very truly yours, Benning 2000	م المراجعة المعاملة الم	G-233
		ETER B. CARLISLE MAYOR			Mr. Gerald Park 95-595 Kaname	Mililani, Hawai Dear Mr. Park		We have the above	1. A 7 ("9	2. inc ma	Аг	4. Th zol cle	If you hav		DKT:nw	DEA/2011ELOG-233

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PETER B. CARLISLE MAYOR





Noelani Elementary School Multipurpose Playcourt Subject: Draft Environmental Assessment Manoa, Honolulu, Hawaii Tax Map Key: 2-9-023: 023

In response to your letter of January 25, 2011, regarding the above-mentioned subject, the Honolulu Fire Department (HFD) reviewed the material provided and requires that the following be complied with:

access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; Uniform Fire Code [UFC]<sup>TM</sup>, 2006 Edition, Section 18.2.3.2.2.) 1. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 ft (46 m) from fire department

provides access to the interior of the building. (NFPA 1; UFC TM, 2006 A fire department access road shall extend to within 50 ft (15 m) of at least one exterior door that can be opened from the outside and that Edition, Section 18.2.3.2.1.)

constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45 720 mm) from a required fire flow for fire protection, shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter A water supply approved by the county, capable of supplying the c,i

Mr. Gerald Park

CITY AND COUNTY OF HONOLULU

HONOLULU FIRE DEPARTMENT

approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ [Authority Having Jurisdiction]. (NFPA 1; UFC  $^{\rm TM}$  , 2006 Edition, Section 18.3.1, as amended.) water supply on a fire apparatus access road, as measured by an

Should you have any questions, please call Acting Battalion Chief Gary Lum of our Fire Prevention Bureau at 723-7152.

**KENNETH G. SILVA** Fire Chief

KGS/KM:bh

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# Gerald Park

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From: Clifford Murakami [cmurakami@pacarchitects.com]

Sent: Monday, March 14, 2011 12:22 PM

Sent: Monday, March 14, 2011 12.22 To: Gerald Park

Cc: Conrad Shiroma

Subject: FW: Noelani ES Multi Purp Playcourt

Hi Gerald,

OK, I got a very timely response from the Fire Department and we are good! See message from Inspector Kevin Mokulehua below.

Thanks,

Clifford

From: Mokulehua, Kevin K [mailto:kmokulehua@honolulu.gov]
 Sent: Monday, March 14, 2011 12:10 PM
 Toi: Clifford Murakami
 Subject: RE: Noelani ES Multi Purp Playcourt

Aloha Mr. Murakami,

After reviewing the site plan and talking to you, it has been determined that water supply and fire apparatus access is not required for this project. I have laken the measurements from Woodlawn Drive instead of the school's parking lot and determined that your building is within the 150 feet requirement. Also, the limited amount of combustible material in the construction (steel roof and chain linked fence as the barrier) is a factor in this determination. A response letter is not required for the Honolulu Fire Department bearing barrier in the construction (steel roof and chain linked fence as the barrier) is a factor in this determination. A response letter is not required for the Honolulu Fire Department because the requirements state 'IF' the structure is not within 150 feet, then water and access is required.

Mahalo,

Fire Inspector Kevin Mokulehua Honolulu Fire Department 723-7096